Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	100	65	80	0	30	245	0	555	245	5	1025	30
Future Volume (vph)	100	65	80	0	30	245	0	555	245	5	1025	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.0		4.3	4.3		4.0	3.5	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00		0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97		1.00	0.99		1.00	1.00	1.00	1.00	0.48
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1715	1810	1488		1810	1516		3438	1538	1719	3438	732
Flt Permitted	0.75	1.00	1.00		1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1362	1810	1488		1810	1516		3438	1538	1719	3438	732
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	68	84	0	32	258	0	584	258	5	1079	32
RTOR Reduction (vph)	0	0	76	0	0	172	0	0	0	0	0	0
Lane Group Flow (vph)	105	68	8	0	32	86	0	584	258	5	1079	32
Confl. Peds. (#/hr)	3		7	7		3	27		25	25		27
Confl. Bikes (#/hr)									33			626
Turn Type	Perm	NA	custom	Perm	NA	custom		NA	custom	Prot	NA	Perm
Protected Phases		4			3			6	16!	5!	2	
Permitted Phases	4		5	3		6	6					2
Actuated Green, G (s)	14.0	14.0	6.9		9.7	22.8		22.8	33.2	6.9	32.4	32.4
Effective Green, g (s)	14.0	14.0	6.9		9.9	23.0		23.3	33.7	5.9	33.2	33.2
Actuated g/C Ratio	0.20	0.20	0.10		0.14	0.33		0.34	0.49	0.09	0.48	0.48
Clearance Time (s)	4.0	4.0	3.0		4.5	4.5		4.5	4.0	3.0	4.8	4.8
Vehicle Extension (s)	1.0	1.0	0.5		0.5	0.5		0.5	3.0	0.5	0.5	0.5
Lane Grp Cap (vph)	274	365	147		258	502		1154	746	146	1644	350
v/s Ratio Prot		0.04			c0.02			0.17	0.17	0.00	c0.31	
v/s Ratio Perm	c0.08		0.01			0.06						0.04
v/c Ratio	0.38	0.19	0.06		0.12	0.17		0.51	0.35	0.03	0.66	0.09
Uniform Delay, d1	24.0	23.0	28.3		26.0	16.4		18.4	11.0	29.1	13.8	9.9
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1	0.1		0.1	0.1		0.1	0.3	0.0	0.7	0.0
Delay (s)	24.3	23.1	28.4		26.0	16.5		18.6	11.3	29.2	14.5	9.9
Level of Service	C	C	C		C	B		B	B	C	B	A
Approach Delay (s)		25.3			17.6			16.3			14.4	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	69.4	Sum of lost time (s)	19.8
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	10	25	60	15	15	5	40	570	25	10	985	50
Future Volume (vph)	10	25	60	15	15	5	40	570	25	10	985	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.5		4.0	4.8	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99		1.00	0.99		1.00	1.00		1.00	0.98	
Flpb, ped/bikes		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.91		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1629		1715	1734		1719	3406		1719	3329	
Flt Permitted		0.97		0.73	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1597		1323	1734		1719	3406		1719	3329	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	26	63	16	16	5	42	600	26	11	1037	53
RTOR Reduction (vph)	0	48	0	0	4	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	52	0	16	17	0	42	624	0	11	1088	0
Confl. Peds. (#/hr)	23		4	4		23	25		18	18		25
Confl. Bikes (#/hr)									28			689
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)		12.6		12.6	12.6		3.3	37.2		2.7	36.3	
Effective Green, g (s)		12.6		12.6	12.6		3.3	37.2		2.7	36.3	
Actuated g/C Ratio		0.19		0.19	0.19		0.05	0.57		0.04	0.56	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.5		4.0	4.8	
Vehicle Extension (s)		1.0		1.0	1.0		0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)		309		256	336		87	1949		71	1859	
v/s Ratio Prot					0.01		c0.02	0.18		0.01	c0.33	
v/s Ratio Perm		c0.03		0.01								
v/c Ratio		0.17		0.06	0.05		0.48	0.32		0.15	0.59	
Uniform Delay, d1		21.8		21.4	21.3		30.0	7.3		30.0	9.4	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1		0.0	0.0		1.5	0.0		0.4	0.3	
Delay (s)		21.9		21.4	21.4		31.6	7.3		30.4	9.7	
Level of Service		C		C	C		C	A		C	A	
Approach Delay (s)		21.9			21.4			8.8			9.9	
Approach LOS		C			C			A			A	

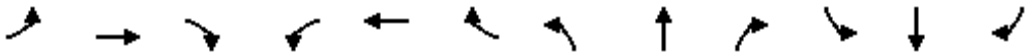
Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.8
Intersection Capacity Utilization	56.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBT	SBT	SER	SER2
Lane Configurations					
Traffic Volume (vph)	145	980	300	780	215
Future Volume (vph)	145	980	300	780	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.5	4.5	4.9
Lane Util. Factor	1.00	0.95	0.95	0.88	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	0.85
Flt Protected	0.95	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1711	3404	3438	2493	1381
Flt Permitted	0.95	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1711	3404	3438	2493	1381
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	153	1032	316	821	226
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	153	1032	316	821	226
Confl. Peds. (#/hr)	5			12	12
Confl. Bikes (#/hr)					
Heavy Vehicles (%)	5%	5%	5%	14%	14%
Bus Blockages (#/hr)	0	5	0	0	0
Turn Type	Perm	NA	NA	Prot	Perm
Protected Phases		6	4	3	
Permitted Phases	6				3
Actuated Green, G (s)	27.6	27.6	9.3	19.1	19.1
Effective Green, g (s)	28.3	28.3	10.2	19.5	19.1
Actuated g/C Ratio	0.40	0.40	0.15	0.28	0.27
Clearance Time (s)	4.7	4.7	4.4	4.9	4.9
Vehicle Extension (s)	3.0	3.0	3.0	2.0	2.0
Lane Grp Cap (vph)	691	1376	500	694	376
v/s Ratio Prot		c0.30	c0.09	c0.33	
v/s Ratio Perm	0.09				0.16
v/c Ratio	0.22	0.75	0.63	1.18	0.60
Uniform Delay, d1	13.6	17.8	28.1	25.2	22.1
Progression Factor	0.42	0.32	1.00	1.00	1.00
Incremental Delay, d2	0.6	3.2	2.6	96.6	1.9
Delay (s)	6.4	8.8	30.7	121.9	24.0
Level of Service	A	A	C	F	C
Approach Delay (s)		8.5	30.7		
Approach LOS		A	C		

Intersection Summary			
HCM 2000 Control Delay	49.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1115	930	10	190	0	0	0	0
Future Volume (vph)	0	0	0	0	1115	930	10	190	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.6		4.0				
Lane Util. Factor					*0.87	0.88		0.95				
Frpb, ped/bikes					1.00	0.92		1.00				
Flpb, ped/bikes					1.00	1.00		1.00				
Frt					1.00	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3149	2482		3429				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3149	2482		3429				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	0	1174	979	11	200	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	67	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1174	979	0	144	0	0	0	0
Confl. Peds. (#/hr)							2		55	55		2
Confl. Bikes (#/hr)						131						
Turn Type					NA	custom	Perm	NA				
Protected Phases					2			4				
Permitted Phases						6	4					
Actuated Green, G (s)					45.4	28.6		15.8				
Effective Green, g (s)					46.0	28.6		16.0				
Actuated g/C Ratio					0.66	0.41		0.23				
Clearance Time (s)					4.6	4.6		4.2				
Vehicle Extension (s)					3.0	3.0		2.0				
Lane Grp Cap (vph)					2069	1014		783				
v/s Ratio Prot					c0.37							
v/s Ratio Perm						c0.39		0.04				
v/c Ratio					0.57	0.97		0.18				
Uniform Delay, d1					6.6	20.2		21.7				
Progression Factor					1.54	1.34		1.00				
Incremental Delay, d2					1.0	18.9		0.0				
Delay (s)					11.1	46.0		21.9				
Level of Service					B	D		C				
Approach Delay (s)		0.0			27.0			21.9			0.0	
Approach LOS		A			C			C			A	

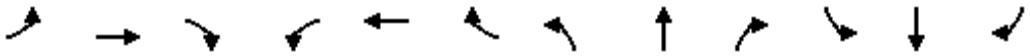
Intersection Summary			
HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.6
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1585	10	865	55	0	0	0	30
Future Volume (vph)	0	0	0	0	1585	10	865	55	0	0	0	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		3.8	4.0				4.0
Lane Util. Factor					0.81		0.95	0.95				1.00
Frpb, ped/bikes					1.00		1.00	1.00				0.98
Flpb, ped/bikes					1.00		1.00	1.00				1.00
Frt					1.00		1.00	1.00				0.86
Flt Protected					1.00		0.95	0.96				1.00
Satd. Flow (prot)					7313		1633	1648				1535
Flt Permitted					1.00		0.95	0.96				1.00
Satd. Flow (perm)					7313		1633	1648				1535
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	0	1668	11	911	58	0	0	0	32
RTOR Reduction (vph)	0	0	0	0	0	0	14	13	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1679	0	542	400	0	0	0	32
Confl. Peds. (#/hr)	28		11	11		28	6		2	2		6
Confl. Bikes (#/hr)						90						
Turn Type					NA		Prot	NA				Perm
Protected Phases					2		1 4	4				
Permitted Phases												4
Actuated Green, G (s)					27.6		33.8	33.8				23.8
Effective Green, g (s)					28.2		30.0	34.0				24.0
Actuated g/C Ratio					0.40		0.43	0.49				0.34
Clearance Time (s)					4.6			4.2				4.2
Vehicle Extension (s)					3.0			2.0				2.0
Lane Grp Cap (vph)					2946		699	800				526
v/s Ratio Prot					c0.23		c0.33	0.24				
v/s Ratio Perm												0.02
v/c Ratio					0.57		0.77	0.50				0.06
Uniform Delay, d1					16.2		17.1	12.2				15.4
Progression Factor					1.13		0.60	0.27				1.00
Incremental Delay, d2					0.7		2.9	0.1				0.0
Delay (s)					19.0		13.3	3.4				15.5
Level of Service					B		B	A				B
Approach Delay (s)		0.0			19.0			9.1			15.5	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		

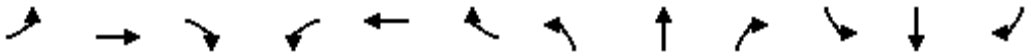
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	15	1385	80	55	110	0	0	20	155
Future Volume (vph)	0	0	0	15	1385	80	55	110	0	0	20	155
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	
Lane Util. Factor					0.91			1.00			1.00	
Frpb, ped/bikes					0.99			1.00			0.97	
Flpb, ped/bikes					1.00			1.00			1.00	
Frt					0.99			1.00			0.88	
Flt Protected					1.00			0.98			1.00	
Satd. Flow (prot)					4863			1772			1550	
Flt Permitted					1.00			0.77			1.00	
Satd. Flow (perm)					4863			1395			1550	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	16	1458	84	58	116	0	0	21	163
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	1553	0	0	174	0	0	181	0
Confl. Peds. (#/hr)	20		20	20		20	18		18	18		18
Confl. Bikes (#/hr)						110						
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			4			4	
Permitted Phases				2			4					
Actuated Green, G (s)					47.2			13.8			13.8	
Effective Green, g (s)					47.2			13.8			13.8	
Actuated g/C Ratio					0.67			0.20			0.20	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					0.2			3.0			3.0	
Lane Grp Cap (vph)					3279			275			305	
v/s Ratio Prot											0.12	
v/s Ratio Perm					0.32			c0.12				
v/c Ratio					0.47			0.63			0.59	
Uniform Delay, d1					5.5			25.8			25.5	
Progression Factor					1.00			0.84			1.00	
Incremental Delay, d2					0.5			4.4			3.1	
Delay (s)					5.9			26.1			28.6	
Level of Service					A			C			C	
Approach Delay (s)		0.0			5.9			26.1			28.6	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	580	5	0	0	0	0	0	0	995	230	0
Future Volume (vph)	0	580	5	0	0	0	0	0	0	995	230	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0							4.1	4.0	
Lane Util. Factor		0.91	1.00							0.91	0.91	
Frpb, ped/bikes		1.00	0.95							1.00	1.00	
Flpb, ped/bikes		1.00	1.00							1.00	1.00	
Frt		1.00	0.85							1.00	1.00	
Flt Protected		1.00	1.00							0.95	0.97	
Satd. Flow (prot)		4940	1464							1564	3160	
Flt Permitted		1.00	1.00							0.95	0.97	
Satd. Flow (perm)		4940	1464							1564	3160	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	0	611	5	0	0	0	0	0	0	1047	242	0
RTOR Reduction (vph)	0	0	3	0	0	0	0	0	0	231	41	0
Lane Group Flow (vph)	0	611	2	0	0	0	0	0	0	397	620	0
Confl. Peds. (#/hr)	16		17	17		16	14					14
Confl. Bikes (#/hr)			23									
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	2%	2%	2%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	5	0
Turn Type		NA	Perm							Prot	NA	
Protected Phases		6								8	4	
Permitted Phases			6									
Actuated Green, G (s)		23.5	23.5							37.4	37.5	
Effective Green, g (s)		24.0	24.0							37.9	38.0	
Actuated g/C Ratio		0.34	0.34							0.54	0.54	
Clearance Time (s)		4.5	4.5							4.6	4.5	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		1693	501							846	1715	
v/s Ratio Prot		c0.12								c0.25	0.20	
v/s Ratio Perm			0.00								0.00	
v/c Ratio		0.36	0.00							0.47	0.36	
Uniform Delay, d1		17.2	15.1							9.9	9.1	
Progression Factor		1.00	1.00							1.34	0.90	
Incremental Delay, d2		0.6	0.0							0.7	0.2	
Delay (s)		17.8	15.1							13.9	8.4	
Level of Service		B	B							B	A	
Approach Delay (s)		17.8			0.0			0.0			11.1	
Approach LOS		B			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.6
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

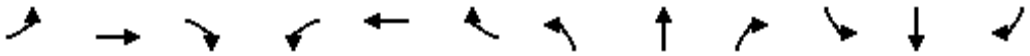
Movement	EBL2	EBT	EBR	NBT	NBR	SBT
Lane Configurations						
Traffic Volume (vph)	190	750	645	0	10	425
Future Volume (vph)	190	750	645	0	10	425
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	4.2	4.2		4.2
Lane Util. Factor		0.95	0.88	1.00		0.95
Frt		1.00	0.85	0.86		1.00
Flt Protected		0.99	1.00	1.00		1.00
Satd. Flow (prot)		3404	2707	1565		3438
Flt Permitted		0.99	1.00	1.00		1.00
Satd. Flow (perm)		3404	2707	1565		3438
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	789	679	0	11	447
RTOR Reduction (vph)	0	35	376	8	0	0
Lane Group Flow (vph)	0	954	303	3	0	447
Turn Type	Split	NA	custom	NA		NA
Protected Phases	2	2		4		4
Permitted Phases			6			
Actuated Green, G (s)		24.2	20.1	11.7		11.7
Effective Green, g (s)		24.2	20.1	11.7		11.7
Actuated g/C Ratio		0.54	0.45	0.26		0.26
Clearance Time (s)		5.0	4.2	4.2		4.2
Vehicle Extension (s)		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		1826	1206	405		891
v/s Ratio Prot		c0.28		0.00		c0.13
v/s Ratio Perm			0.11			
v/c Ratio		0.52	0.25	0.01		0.50
Uniform Delay, d1		6.7	7.8	12.4		14.2
Progression Factor		1.00	1.00	1.00		1.00
Incremental Delay, d2		0.3	0.5	0.0		0.4
Delay (s)		7.0	8.3	12.4		14.7
Level of Service		A	A	B		B
Approach Delay (s)		7.5		12.4		14.7
Approach LOS		A		B		B

Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	45.1	Sum of lost time (s)	11.9
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	745	0	0	0	0	0	905	925	0	0	0
Future Volume (vph)	15	745	0	0	0	0	0	905	925	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0			
Lane Util. Factor		0.91						0.95	0.88			
Frpb, ped/bikes		1.00						1.00	1.00			
Flpb, ped/bikes		1.00						1.00	1.00			
Frt		1.00						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		4932						3223	2538			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		4932						3223	2538			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	16	784	0	0	0	0	0	953	974	0	0	0
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	299	0	0	0
Lane Group Flow (vph)	0	785	0	0	0	0	0	953	675	0	0	0
Confl. Peds. (#/hr)	28		42	42		28	9		2	2		9
Confl. Bikes (#/hr)			6									
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	12%	12%	12%	5%	5%	5%
Turn Type	Perm	NA						NA	Prot			
Protected Phases		6						8	8			
Permitted Phases	6											
Actuated Green, G (s)		35.5						25.1	25.1			
Effective Green, g (s)		36.0						26.0	26.0			
Actuated g/C Ratio		0.51						0.37	0.37			
Clearance Time (s)		4.5						4.9	4.9			
Vehicle Extension (s)		3.5						3.9	3.9			
Lane Grp Cap (vph)		2536						1197	942			
v/s Ratio Prot								c0.30	0.27			
v/s Ratio Perm		0.16										
v/c Ratio		0.31						0.80	0.72			
Uniform Delay, d1		9.8						19.6	18.8			
Progression Factor		0.21						1.00	1.00			
Incremental Delay, d2		0.3						5.5	4.7			
Delay (s)		2.4						25.2	23.5			
Level of Service		A						C	C			
Approach Delay (s)		2.4			0.0			24.3			0.0	
Approach LOS		A			A			C			A	

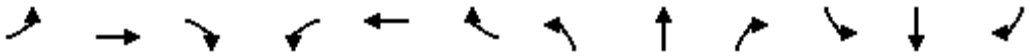
Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	1525	10	0	0	0	0	30	15	25	10	0
Future Volume (vph)	135	1525	10	0	0	0	0	30	15	25	10	0
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	
Lane Util. Factor		0.91						1.00			1.00	
Frpb, ped/bikes		1.00						0.99			1.00	
Flpb, ped/bikes		1.00						1.00			0.99	
Frt		1.00						0.95			1.00	
Flt Protected		1.00						1.00			0.97	
Satd. Flow (prot)		4907						1715			1736	
Flt Permitted		1.00						1.00			0.79	
Satd. Flow (perm)		4907						1715			1414	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	1605	11	0	0	0	0	32	16	26	11	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	1757	0	0	0	0	0	39	0	0	37	0
Confl. Peds. (#/hr)	9		29	29		9	20		11	11		20
Confl. Bikes (#/hr)			7									
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		49.2						10.8			10.8	
Effective Green, g (s)		49.2						10.8			10.8	
Actuated g/C Ratio		0.70						0.15			0.15	
Clearance Time (s)		5.0						5.0			5.0	
Vehicle Extension (s)		0.5						0.5			0.5	
Lane Grp Cap (vph)		3448						264			218	
v/s Ratio Prot								0.02				
v/s Ratio Perm		0.36									c0.03	
v/c Ratio		0.51						0.15			0.17	
Uniform Delay, d1		4.8						25.6			25.7	
Progression Factor		0.75						1.00			0.80	
Incremental Delay, d2		0.4						0.1			0.1	
Delay (s)		4.1						25.7			20.7	
Level of Service		A						C			C	
Approach Delay (s)		4.1			0.0			25.7			20.7	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	5.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		

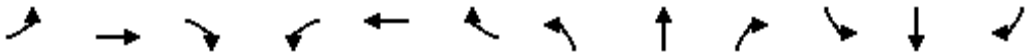
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	10	0	0	150	125	10	390	10	0	0	0
Future Volume (vph)	200	10	0	0	150	125	10	390	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.94			1.00				
Flt Protected		0.95			1.00			1.00				
Satd. Flow (prot)		1727			1698			1801				
Flt Permitted		0.53			1.00			1.00				
Satd. Flow (perm)		968			1698			1801				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	211	11	0	0	158	132	11	411	11	0	0	0
RTOR Reduction (vph)	0	0	0	0	44	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	222	0	0	246	0	0	432	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			2			4				
Permitted Phases	2						4					
Actuated Green, G (s)		13.5			13.5			14.7				
Effective Green, g (s)		13.5			13.5			14.7				
Actuated g/C Ratio		0.37			0.37			0.41				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		0.5			0.5			0.5				
Lane Grp Cap (vph)		360			633			731				
v/s Ratio Prot					0.14							
v/s Ratio Perm		c0.23						0.24				
v/c Ratio		0.62			0.39			0.59				
Uniform Delay, d1		9.2			8.3			8.4				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		2.2			0.1			0.9				
Delay (s)		11.5			8.5			9.3				
Level of Service		B			A			A				
Approach Delay (s)		11.5			8.5			9.3			0.0	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	36.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	210	0	0	160	0	0	0	0	0	300	0
Future Volume (vph)	0	210	0	0	160	0	0	0	0	0	300	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		1.00			1.00						0.95	
Frt		1.00			1.00						1.00	
Flt Protected		1.00			1.00						1.00	
Satd. Flow (prot)		1810			1810						3438	
Flt Permitted		1.00			1.00						1.00	
Satd. Flow (perm)		1810			1810						3438	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	221	0	0	168	0	0	0	0	0	316	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	221	0	0	168	0	0	0	0	0	316	0
Turn Type		NA			NA						NA	
Protected Phases		2			2						4	
Permitted Phases				2						4		
Actuated Green, G (s)		6.0			6.0						10.1	
Effective Green, g (s)		6.0			6.0						10.1	
Actuated g/C Ratio		0.25			0.25						0.42	
Clearance Time (s)		4.0			4.0						4.0	
Vehicle Extension (s)		0.5			0.5						0.5	
Lane Grp Cap (vph)		450			450						1440	
v/s Ratio Prot		c0.12			0.09						c0.09	
v/s Ratio Perm												
v/c Ratio		0.49			0.37						0.22	
Uniform Delay, d1		7.7			7.5						4.5	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		0.3			0.2						0.0	
Delay (s)		8.1			7.7						4.5	
Level of Service		A			A						A	
Approach Delay (s)		8.1			7.7			0.0			4.5	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	24.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	26.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations								
Traffic Volume (vph)	0	20	0	20	0	0	0	235
Future Volume (vph)	0	20	0	20	0	0	0	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0				5.6
Lane Util. Factor		0.88		1.00				0.88
Frt		0.85		1.00				0.85
Flt Protected		1.00		1.00				1.00
Satd. Flow (prot)		2707		1810				2707
Flt Permitted		1.00		1.00				1.00
Satd. Flow (perm)		2707		1810				2707
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	21	0	21	0	0	0	247
RTOR Reduction (vph)	0	21	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	21	0	0	0	247
Turn Type		Perm		NA			Prot	Prot
Protected Phases							4	2
Permitted Phases		4		3				
Actuated Green, G (s)		1.2		2.2				33.7
Effective Green, g (s)		1.2		2.2				33.7
Actuated g/C Ratio		0.02		0.04				0.64
Clearance Time (s)		5.0		5.0				5.6
Vehicle Extension (s)		0.5		1.5				0.5
Lane Grp Cap (vph)		61		75				1731
v/s Ratio Prot								c0.09
v/s Ratio Perm		c0.00		c0.01				
v/c Ratio		0.01		0.28				0.14
Uniform Delay, d1		25.2		24.5				3.8
Progression Factor		1.00		1.00				1.00
Incremental Delay, d2		0.0		0.7				0.0
Delay (s)		25.2		25.2				3.8
Level of Service		C		C				A
Approach Delay (s)	25.2			25.2	0.0		3.8	
Approach LOS	C			C	A		A	

Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.15		
Actuated Cycle Length (s)	52.7	Sum of lost time (s)	15.6
Intersection Capacity Utilization	23.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	70	20	90	0	25	265	0	575	240	5	965	5
Future Volume (vph)	70	20	90	0	25	265	0	575	240	5	965	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.0		4.0	4.0		4.0	3.5	4.0	4.0	3.2
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00		0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97		1.00	0.99		1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1715	1810	1486		1810	1516		3438	1538	1719	3438	1538
Flt Permitted	0.75	1.00	1.00		1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1362	1810	1486		1810	1516		3438	1538	1719	3438	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	21	95	0	26	279	0	605	253	5	1016	5
RTOR Reduction (vph)	0	0	86	0	0	205	0	0	81	0	0	3
Lane Group Flow (vph)	74	21	9	0	26	74	0	605	172	5	1016	2
Confl. Peds. (#/hr)	3		7	7		3	27		25	25		27
Confl. Bikes (#/hr)									33			634
Turn Type	Perm	NA	custom	Perm	NA	Perm		NA	custom	Prot	NA	custom
Protected Phases		4			8			6	16!	5!	2	16
Permitted Phases	4		5	8		8	6					
Actuated Green, G (s)	9.0	9.0	6.7		18.5	18.5		20.8	31.0	6.7	30.2	31.0
Effective Green, g (s)	9.0	9.0	6.7		18.7	18.7		21.3	31.5	5.7	31.0	31.8
Actuated g/C Ratio	0.13	0.13	0.09		0.26	0.26		0.30	0.45	0.08	0.44	0.45
Clearance Time (s)	4.0	4.0	3.0		4.2	4.2		4.5	4.0	3.0	4.8	4.0
Vehicle Extension (s)	1.0	1.0	0.5		1.0	1.0		0.5	3.0	0.5	0.5	3.0
Lane Grp Cap (vph)	173	230	140		478	400		1035	685	138	1507	691
v/s Ratio Prot		0.01			0.01			0.18	0.11	0.00	c0.30	0.00
v/s Ratio Perm	c0.05		0.01			c0.05						
v/c Ratio	0.43	0.09	0.06		0.05	0.18		0.58	0.25	0.04	0.67	0.00
Uniform Delay, d1	28.5	27.2	29.1		19.4	20.1		20.9	12.2	30.0	15.8	10.7
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.1	0.1		0.0	0.1		0.5	0.2	0.0	0.9	0.0
Delay (s)	29.1	27.3	29.2		19.4	20.2		21.5	12.4	30.0	16.8	10.7
Level of Service	C	C	C		B	C		C	B	C	B	B
Approach Delay (s)		29.0			20.1			18.8			16.8	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	70.7	Sum of lost time (s)	19.5
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	10	25	10	15	10	5	55	570	40	5	950	40
Future Volume (vph)	10	25	10	15	10	5	55	570	40	5	950	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.5		4.0	4.8	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00		1.00	0.99		1.00	0.99		1.00	0.98	
Flpb, ped/bikes		0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.97		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1716		1711	1703		1719	3376		1719	3353	
Flt Permitted		0.95		0.76	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1650		1361	1703		1719	3376		1719	3353	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	26	11	16	11	5	58	600	42	5	1000	42
RTOR Reduction (vph)	0	8	0	0	4	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	40	0	16	12	0	58	640	0	5	1040	0
Confl. Peds. (#/hr)	23		4	4		23	33		25	25		33
Confl. Bikes (#/hr)									28			696
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)		18.4		18.4	18.4		6.2	89.7		1.1	84.3	
Effective Green, g (s)		18.4		18.4	18.4		6.2	89.7		1.1	84.3	
Actuated g/C Ratio		0.15		0.15	0.15		0.05	0.74		0.01	0.69	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.5		4.0	4.8	
Vehicle Extension (s)		1.0		1.0	1.0		0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)		249		205	257		87	2488		15	2322	
v/s Ratio Prot					0.01		c0.03	0.19		0.00	c0.31	
v/s Ratio Perm		c0.02		0.01								
v/c Ratio		0.16		0.08	0.05		0.67	0.26		0.33	0.45	
Uniform Delay, d1		44.9		44.4	44.1		56.7	5.2		59.9	8.3	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1		0.1	0.0		13.9	0.3		4.7	0.6	
Delay (s)		45.0		44.4	44.2		70.7	5.4		64.7	9.0	
Level of Service		D		D	D		E	A		E	A	
Approach Delay (s)		45.0			44.3			10.8			9.2	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	121.7	Sum of lost time (s)	12.8
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBT	SBT	SER	SER2
Lane Configurations					
Traffic Volume (vph)	515	750	255	890	275
Future Volume (vph)	515	750	255	890	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.5	4.5	4.9
Lane Util. Factor	*0.52	*0.52	0.95	*0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.84
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	1.00	1.00
Satd. Flow (prot)	890	1843	3438	3167	1184
Flt Permitted	0.95	0.99	1.00	1.00	1.00
Satd. Flow (perm)	890	1843	3438	3167	1184
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	542	789	268	937	289
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	341	990	268	937	289
Confl. Peds. (#/hr)	5			9	9
Confl. Bikes (#/hr)					178
Heavy Vehicles (%)	5%	5%	5%	14%	14%
Bus Blockages (#/hr)	0	5	0	0	0
Turn Type	Perm	NA	NA	Prot	Perm
Protected Phases		6	4	3	
Permitted Phases	6				3
Actuated Green, G (s)	27.7	27.7	9.2	19.1	19.1
Effective Green, g (s)	28.4	28.4	10.1	19.5	19.1
Actuated g/C Ratio	0.41	0.41	0.14	0.28	0.27
Clearance Time (s)	4.7	4.7	4.4	4.9	4.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	361	747	496	882	323
v/s Ratio Prot			c0.08	c0.30	
v/s Ratio Perm	0.38	0.54			0.24
v/c Ratio	0.94	1.33	0.54	1.06	0.89
Uniform Delay, d1	20.0	20.8	27.8	25.2	24.5
Progression Factor	0.54	0.58	1.00	1.00	1.00
Incremental Delay, d2	30.3	153.8	1.2	48.3	25.4
Delay (s)	41.2	165.8	29.0	73.5	49.9
Level of Service	D	F	C	E	D
Approach Delay (s)		133.9	29.0		
Approach LOS		F	C		

Intersection Summary			
HCM 2000 Control Delay	95.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1265	965	0	260	0	0	0	0
Future Volume (vph)	0	0	0	0	1265	965	0	260	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.6		4.0				
Lane Util. Factor					*0.87	0.88		0.91				
Frpb, ped/bikes					1.00	0.93		1.00				
Flpb, ped/bikes					1.00	1.00		1.00				
Frt					1.00	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3149	2504		4940				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3149	2504		4940				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	0	1332	1016	0	274	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1332	1016	0	274	0	0	0	0
Confl. Peds. (#/hr)			24	24			2		55	55		2
Confl. Bikes (#/hr)						138			29			
Turn Type					NA	custom		NA				
Protected Phases					2			4				
Permitted Phases						6	4					
Actuated Green, G (s)					47.7	34.1		13.5				
Effective Green, g (s)					48.3	34.1		13.7				
Actuated g/C Ratio					0.69	0.49		0.20				
Clearance Time (s)					4.6	4.6		4.2				
Vehicle Extension (s)					3.0	3.0		2.0				
Lane Grp Cap (vph)					2172	1219		966				
v/s Ratio Prot					c0.42			c0.06				
v/s Ratio Perm						c0.41						
v/c Ratio					0.61	0.83		0.28				
Uniform Delay, d1					5.8	15.5		24.0				
Progression Factor					0.71	0.97		0.93				
Incremental Delay, d2					1.1	5.9		0.1				
Delay (s)					5.2	21.0		22.4				
Level of Service					A	C		C				
Approach Delay (s)		0.0			12.1			22.4			0.0	
Approach LOS		A			B			C			A	

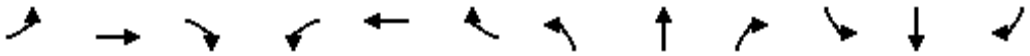
Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.6
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1505	20	700	45	0	0	0	25
Future Volume (vph)	0	0	0	0	1505	20	700	45	0	0	0	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		3.8	4.0				4.0
Lane Util. Factor					0.86		0.95	0.95				1.00
Frpb, ped/bikes					1.00		1.00	1.00				0.98
Flpb, ped/bikes					1.00		1.00	1.00				1.00
Frt					1.00		1.00	1.00				0.86
Flt Protected					1.00		0.95	0.96				1.00
Satd. Flow (prot)					6199		1633	1648				1535
Flt Permitted					1.00		0.95	0.96				1.00
Satd. Flow (perm)					6199		1633	1648				1535
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	0	1584	21	737	47	0	0	0	26
RTOR Reduction (vph)	0	0	0	0	0	0	16	14	0	0	0	18
Lane Group Flow (vph)	0	0	0	0	1605	0	434	320	0	0	0	8
Confl. Peds. (#/hr)	28		11	11		28	6		2	2		6
Confl. Bikes (#/hr)						97						
Turn Type					NA		Prot	NA				Perm
Protected Phases					2		1 4	4				
Permitted Phases												4
Actuated Green, G (s)					31.6		29.8	29.8				21.3
Effective Green, g (s)					32.2		26.0	30.0				21.5
Actuated g/C Ratio					0.46		0.37	0.43				0.31
Clearance Time (s)					4.6			4.2				4.2
Vehicle Extension (s)					3.0			2.0				2.0
Lane Grp Cap (vph)					2851		606	706				471
v/s Ratio Prot					c0.26		c0.27	0.19				
v/s Ratio Perm												0.01
v/c Ratio					0.56		0.72	0.45				0.02
Uniform Delay, d1					13.8		18.8	14.2				16.9
Progression Factor					0.66		0.96	0.60				1.00
Incremental Delay, d2					0.7		1.6	0.1				0.0
Delay (s)					9.8		19.7	8.6				16.9
Level of Service					A		B	A				B
Approach Delay (s)		0.0			9.8			15.0			16.9	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

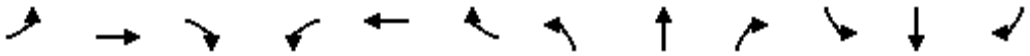
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	15	1300	55	80	125	0	0	5	145
Future Volume (vph)	0	0	0	15	1300	55	80	125	0	0	5	145
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	
Lane Util. Factor					0.91			1.00			1.00	
Frpb, ped/bikes					0.99			1.00			0.97	
Flpb, ped/bikes					1.00			0.99			1.00	
Frt					0.99			1.00			0.87	
Flt Protected					1.00			0.98			1.00	
Satd. Flow (prot)					4880			1765			1526	
Flt Permitted					1.00			0.79			1.00	
Satd. Flow (perm)					4880			1427			1526	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	16	1368	58	84	132	0	0	5	153
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	0	0	0	1438	0	0	216	0	0	154	0
Confl. Peds. (#/hr)	20		20	20		20	18		18	18		18
Confl. Bikes (#/hr)						110						
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			4			4	
Permitted Phases				2			4					
Actuated Green, G (s)					45.2			15.8			15.8	
Effective Green, g (s)					45.2			15.8			15.8	
Actuated g/C Ratio					0.65			0.23			0.23	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					0.2			3.0			3.0	
Lane Grp Cap (vph)					3151			322			344	
v/s Ratio Prot											0.10	
v/s Ratio Perm					0.29			c0.15				
v/c Ratio					0.46			0.67			0.45	
Uniform Delay, d1					6.2			24.7			23.3	
Progression Factor					1.00			0.86			1.00	
Incremental Delay, d2					0.5			5.2			0.9	
Delay (s)					6.7			26.5			24.3	
Level of Service					A			C			C	
Approach Delay (s)		0.0			6.7			26.5			24.3	
Approach LOS		A			A			C			C	

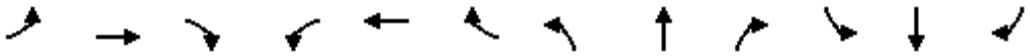
Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	67.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



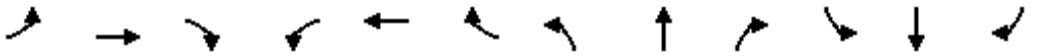
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	325	260	0	0	0	0	0	0	910	750	0
Future Volume (vph)	0	325	260	0	0	0	0	0	0	910	750	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0							3.6	4.0	
Lane Util. Factor		0.91	1.00							0.91	0.91	
Frpb, ped/bikes		1.00	0.95							1.00	1.00	
Flpb, ped/bikes		1.00	1.00							1.00	1.00	
Frt		1.00	0.85							1.00	1.00	
Flt Protected		1.00	1.00							0.95	0.98	
Satd. Flow (prot)		4940	1463							1564	3208	
Flt Permitted		1.00	1.00							0.95	0.98	
Satd. Flow (perm)		4940	1463							1564	3208	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	342	274	0	0	0	0	0	0	958	789	0
RTOR Reduction (vph)	0	0	146	0	0	0	0	0	0	235	74	0
Lane Group Flow (vph)	0	342	128	0	0	0	0	0	0	340	1098	0
Confl. Peds. (#/hr)	18		19	19		18	14					14
Confl. Bikes (#/hr)			23									
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	5	0
Turn Type		NA	Perm							Prot	NA	
Protected Phases		6								8	4	
Permitted Phases			6									
Actuated Green, G (s)		20.5	20.5							40.9	40.9	
Effective Green, g (s)		21.0	21.0							41.4	41.4	
Actuated g/C Ratio		0.30	0.30							0.59	0.59	
Clearance Time (s)		4.5	4.5							4.1	4.5	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		1482	438							924	1897	
v/s Ratio Prot		0.07								0.22	c0.34	
v/s Ratio Perm			c0.09									
v/c Ratio		0.23	0.29							0.37	0.58	
Uniform Delay, d1		18.4	18.8							7.5	8.9	
Progression Factor		1.00	1.00							0.57	0.62	
Incremental Delay, d2		0.4	1.7							0.1	0.1	
Delay (s)		18.8	20.5							4.4	5.6	
Level of Service		B	C							A	A	
Approach Delay (s)		19.5			0.0			0.0			5.2	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	1035	0	0	0	0	0	60	10	0	0	0
Future Volume (vph)	200	1035	0	0	0	0	0	60	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0			
Lane Util. Factor		0.91						0.95	1.00			
Frpb, ped/bikes		1.00						1.00	0.94			
Flpb, ped/bikes		1.00						1.00	1.00			
Frt		1.00						1.00	0.85			
Flt Protected		0.99						1.00	1.00			
Satd. Flow (prot)		4847						3438	1439			
Flt Permitted		0.99						1.00	1.00			
Satd. Flow (perm)		4847						3438	1439			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	211	1089	0	0	0	0	0	63	11	0	0	0
RTOR Reduction (vph)	0	33	0	0	0	0	0	0	9	0	0	0
Lane Group Flow (vph)	0	1267	0	0	0	0	0	63	2	0	0	0
Confl. Peds. (#/hr)	27		49	49		27	31		20	20		31
Confl. Bikes (#/hr)			6						24			
Bus Blockages (#/hr)	0	5	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA						NA	Perm			
Protected Phases		2						4				
Permitted Phases	2								4			
Actuated Green, G (s)		49.8						11.5	11.5			
Effective Green, g (s)		50.3						11.7	11.7			
Actuated g/C Ratio		0.72						0.17	0.17			
Clearance Time (s)		4.5						4.2	4.2			
Vehicle Extension (s)		0.2						0.5	0.5			
Lane Grp Cap (vph)		3482						574	240			
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.26							0.00			
v/c Ratio		0.36						0.11	0.01			
Uniform Delay, d1		3.8						24.7	24.3			
Progression Factor		0.83						1.00	1.00			
Incremental Delay, d2		0.3						0.0	0.0			
Delay (s)		3.4						24.8	24.3			
Level of Service		A						C	C			
Approach Delay (s)		3.4			0.0			24.7			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	4.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	1030	0	0	0	0	0	730	775	0	0	0
Future Volume (vph)	15	1030	0	0	0	0	0	730	775	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0			
Lane Util. Factor		0.91						0.95	1.00			
Frpb, ped/bikes		1.00						1.00	0.99			
Flpb, ped/bikes		1.00						1.00	1.00			
Frt		1.00						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		4933						3223	1421			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		4933						3223	1421			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	16	1084	0	0	0	0	0	768	816	0	0	0
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	346	0	0	0
Lane Group Flow (vph)	0	1088	0	0	0	0	0	768	470	0	0	0
Confl. Peds. (#/hr)	29		44	44		29	9		2	2		9
Confl. Bikes (#/hr)			6									
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	12%	12%	12%	5%	5%	5%
Turn Type	Perm	NA						NA	Perm			
Protected Phases		6						8				
Permitted Phases	6								8			
Actuated Green, G (s)		42.5						18.1	18.1			
Effective Green, g (s)		43.0						19.0	19.0			
Actuated g/C Ratio		0.61						0.27	0.27			
Clearance Time (s)		4.5						4.9	4.9			
Vehicle Extension (s)		3.5						3.9	3.9			
Lane Grp Cap (vph)		3030						874	385			
v/s Ratio Prot								0.24				
v/s Ratio Perm		0.22							c0.33			
v/c Ratio		0.36						0.88	1.22			
Uniform Delay, d1		6.7						24.4	25.5			
Progression Factor		0.60						1.00	1.00			
Incremental Delay, d2		0.3						10.3	120.6			
Delay (s)		4.3						34.7	146.1			
Level of Service		A						C	F			
Approach Delay (s)		4.3			0.0			92.0			0.0	
Approach LOS		A			A			F			A	

Intersection Summary			
HCM 2000 Control Delay	56.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	1550	105	0	0	0	0	55	15	10	10	0
Future Volume (vph)	150	1550	105	0	0	0	0	55	15	10	10	0
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	
Lane Util. Factor		0.86						1.00			1.00	
Frpb, ped/bikes		1.00						1.00			1.00	
Flpb, ped/bikes		1.00						1.00			1.00	
Frt		0.99						0.97			1.00	
Flt Protected		1.00						1.00			0.98	
Satd. Flow (prot)		6109						1748			1757	
Flt Permitted		1.00						1.00			0.88	
Satd. Flow (perm)		6109						1748			1578	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	1632	111	0	0	0	0	58	16	11	11	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	1894	0	0	0	0	0	71	0	0	22	0
Confl. Peds. (#/hr)	9		29	29		9	20		11	11		20
Confl. Bikes (#/hr)			7									
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		48.2						12.8			12.8	
Effective Green, g (s)		48.2						12.8			12.8	
Actuated g/C Ratio		0.69						0.18			0.18	
Clearance Time (s)		4.5						4.5			4.5	
Vehicle Extension (s)		0.5						0.5			0.5	
Lane Grp Cap (vph)		4206						319			288	
v/s Ratio Prot								c0.04				
v/s Ratio Perm		0.31									0.01	
v/c Ratio		0.45						0.22			0.08	
Uniform Delay, d1		4.9						24.4			23.7	
Progression Factor		1.55						1.00			0.87	
Incremental Delay, d2		0.3						0.1			0.0	
Delay (s)		7.9						24.5			20.6	
Level of Service		A						C			C	
Approach Delay (s)		7.9			0.0			24.5			20.6	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	EBR2	NBT	SEL	SET	SER
Lane Configurations							
Traffic Volume (vph)	40	120	60	20	10	915	85
Future Volume (vph)	40	120	60	20	10	915	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0		5.6	5.6
Lane Util. Factor	1.00	0.88		1.00		0.95	1.00
Frt	1.00	0.85		1.00		1.00	0.85
Flt Protected	0.95	1.00		1.00		1.00	1.00
Satd. Flow (prot)	1719	2707		1810		3436	1538
Flt Permitted	0.95	1.00		1.00		1.00	1.00
Satd. Flow (perm)	1719	2707		1810		3436	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	126	63	21	11	963	89
RTOR Reduction (vph)	0	91	0	0	0	35	0
Lane Group Flow (vph)	42	98	0	21	0	939	89
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm	Prot		NA	custom	NA	custom
Protected Phases		4					2
Permitted Phases	4			3	2	2	
Actuated Green, G (s)	5.3	5.3		1.0		34.9	34.9
Effective Green, g (s)	5.3	5.3		1.0		34.9	34.9
Actuated g/C Ratio	0.09	0.09		0.02		0.61	0.61
Clearance Time (s)	5.0	5.0		5.0		5.6	5.6
Vehicle Extension (s)	0.5	0.5		1.5		0.5	0.5
Lane Grp Cap (vph)	160	252		31		2111	945
v/s Ratio Prot		c0.04					0.06
v/s Ratio Perm	0.02			c0.01		c0.27	
v/c Ratio	0.26	0.39		0.68		0.44	0.09
Uniform Delay, d1	23.9	24.2		27.7		5.8	4.5
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	0.3	0.4		37.4		0.7	0.2
Delay (s)	24.3	24.6		65.2		6.5	4.7
Level of Service	C	C		E		A	A
Approach Delay (s)	24.5			65.2		6.3	
Approach LOS	C			E		A	

Intersection Summary			
HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	56.8	Sum of lost time (s)	15.6
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	55	40	65	110	15	270	0	1330	240	20	760	105
Future Volume (vph)	55	40	65	110	15	270	0	1330	240	20	760	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		0.91	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.92	1.00	1.00	0.98		1.00	0.62	1.00	1.00	0.87
Flpb, ped/bikes	0.99	1.00	1.00	0.99	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1738	1845	1449	1741	1845	1536		5036	974	1752	3505	1365
Flt Permitted	0.74	1.00	1.00	0.17	1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1361	1845	1449	307	1845	1536		5036	974	1752	3505	1365
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	42	68	116	16	284	0	1400	253	21	800	111
RTOR Reduction (vph)	0	0	63	0	0	209	0	0	68	0	0	59
Lane Group Flow (vph)	58	42	5	116	16	75	0	1400	185	21	800	52
Confl. Peds. (#/hr)	9		13	13		9	37		22	22		37
Confl. Bikes (#/hr)			2						331			56
Turn Type	Perm	NA	custom	Perm	NA	Perm		NA	Perm	Prot	NA	Perm
Protected Phases		4			8			6		5	2	
Permitted Phases	4		5	8		8	6		6			2
Actuated Green, G (s)	12.2	12.2	6.0	23.7	23.7	23.7		32.9	32.9	6.0	41.6	41.6
Effective Green, g (s)	12.2	12.2	6.0	23.9	23.9	23.9		33.4	33.4	5.0	42.4	42.4
Actuated g/C Ratio	0.13	0.13	0.07	0.26	0.26	0.26		0.37	0.37	0.06	0.47	0.47
Clearance Time (s)	4.0	4.0	3.0	4.2	4.2	4.2		4.5	4.5	3.0	4.8	4.8
Vehicle Extension (s)	1.0	1.0	0.5	1.0	1.0	1.0		0.5	0.5	0.5	0.5	0.5
Lane Grp Cap (vph)	183	248	96	81	487	405		1858	359	96	1642	639
v/s Ratio Prot		0.02			0.01			c0.28		0.01	c0.23	
v/s Ratio Perm	c0.04		0.00	c0.38		0.05			0.19			0.04
v/c Ratio	0.32	0.17	0.05	1.43	0.03	0.19		0.75	0.51	0.22	0.49	0.08
Uniform Delay, d1	35.4	34.7	39.6	33.3	24.7	25.8		25.0	22.2	40.9	16.6	13.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1	0.1	251.4	0.0	0.1		1.6	0.5	0.4	0.1	0.0
Delay (s)	35.7	34.8	39.6	284.7	24.7	25.8		26.5	22.8	41.3	16.6	13.3
Level of Service	D	C	D	F	C	C		C	C	D	B	B
Approach Delay (s)		37.1			98.0			26.0			16.8	
Approach LOS		D			F			C			B	

Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	50	25	15	0	20	25	70	1310	125	70	870	70
Future Volume (vph)	50	25	15	0	20	25	70	1310	125	70	870	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.5		4.0	4.8	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes		0.98			0.93		1.00	0.97		1.00	0.98	
Flpb, ped/bikes		0.94			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.92		1.00	0.99		1.00	0.99	
Flt Protected		0.97			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1619			1580		1752	4822		1752	4885	
Flt Permitted		0.83			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1381			1580		1752	4822		1752	4885	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	26	16	0	21	26	74	1379	132	74	916	74
RTOR Reduction (vph)	0	5	0	0	20	0	0	6	0	0	6	0
Lane Group Flow (vph)	0	90	0	0	27	0	74	1505	0	74	984	0
Confl. Peds. (#/hr)	86		91	91		86	54		37	37		54
Confl. Bikes (#/hr)									338			49
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)		30.0			30.0		7.4	76.8		7.4	76.5	
Effective Green, g (s)		30.0			30.0		7.4	76.8		7.4	76.5	
Actuated g/C Ratio		0.24			0.24		0.06	0.61		0.06	0.60	
Clearance Time (s)		4.0			4.0		4.0	4.5		4.0	4.8	
Vehicle Extension (s)		1.0			1.0		0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)		326			374		102	2922		102	2949	
v/s Ratio Prot					0.02		c0.04	c0.31		0.04	0.20	
v/s Ratio Perm		c0.06										
v/c Ratio		0.28			0.07		0.73	0.51		0.73	0.33	
Uniform Delay, d1		39.5			37.5		58.7	14.3		58.7	12.5	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			0.0		19.4	0.7		19.4	0.3	
Delay (s)		39.6			37.6		78.0	14.9		78.0	12.8	
Level of Service		D			D		E	B		E	B	
Approach Delay (s)		39.6			37.6			17.9			17.3	
Approach LOS		D			D			B			B	

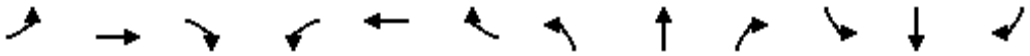
Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	126.7	Sum of lost time (s)	12.8
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBT	SBT	SER	SER2
Lane Configurations					
Traffic Volume (vph)	415	655	315	690	400
Future Volume (vph)	415	655	315	690	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.5	4.5	4.9
Lane Util. Factor	*0.52	*0.52	0.95	*0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.95
Flpb, ped/bikes	0.98	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	1.00	1.00
Satd. Flow (prot)	895	2822	3505	3343	1418
Flt Permitted	0.95	0.99	1.00	1.00	1.00
Satd. Flow (perm)	895	2822	3505	3343	1418
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	437	689	332	726	421
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	275	851	332	726	421
Confl. Peds. (#/hr)	19			18	18
Confl. Bikes (#/hr)					26
Heavy Vehicles (%)	3%	3%	3%	8%	8%
Bus Blockages (#/hr)	0	5	0	0	0
Turn Type	Perm	NA	NA	Prot	Perm
Protected Phases		6	4	3	
Permitted Phases	6				3
Actuated Green, G (s)	27.5	27.5	9.4	19.1	19.1
Effective Green, g (s)	28.2	28.2	10.3	19.5	19.1
Actuated g/C Ratio	0.40	0.40	0.15	0.28	0.27
Clearance Time (s)	4.7	4.7	4.4	4.9	4.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	360	1136	515	931	386
v/s Ratio Prot			c0.09	0.22	
v/s Ratio Perm	c0.31	0.30			c0.30
v/c Ratio	0.76	0.75	0.64	0.78	1.09
Uniform Delay, d1	18.0	17.9	28.1	23.3	25.4
Progression Factor	0.66	0.67	1.00	1.00	1.00
Incremental Delay, d2	12.7	4.0	2.8	4.2	72.4
Delay (s)	24.5	16.0	30.9	27.5	97.9
Level of Service	C	B	C	C	F
Approach Delay (s)		18.1	30.9		
Approach LOS		B	C		

Intersection Summary			
HCM 2000 Control Delay	35.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

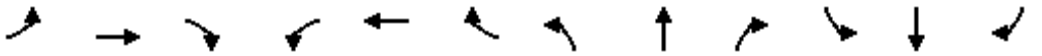
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1030	875	40	370	0	0	0	0
Future Volume (vph)	0	0	0	0	1030	875	40	370	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.6		4.0				
Lane Util. Factor					*0.87	0.88		0.91				
Frpb, ped/bikes					1.00	0.98		1.00				
Flpb, ped/bikes					1.00	1.00		1.00				
Frt					1.00	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3210	2709		5007				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3210	2709		5007				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	0	1084	921	42	389	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	69	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1084	921	0	362	0	0	0	0
Confl. Peds. (#/hr)			80	80			8		144	144		8
Confl. Bikes (#/hr)						16			502			
Turn Type					NA	custom	Perm	NA				
Protected Phases					2			4				
Permitted Phases						6	4					
Actuated Green, G (s)					46.6	40.2		14.6				
Effective Green, g (s)					47.2	40.2		14.8				
Actuated g/C Ratio					0.67	0.57		0.21				
Clearance Time (s)					4.6	4.6		4.2				
Vehicle Extension (s)					3.0	3.0		2.0				
Lane Grp Cap (vph)					2164	1555		1058				
v/s Ratio Prot					c0.34							
v/s Ratio Perm						c0.34		0.07				
v/c Ratio					0.50	0.59		0.34				
Uniform Delay, d1					5.6	9.6		23.5				
Progression Factor					0.49	0.54		1.09				
Incremental Delay, d2					0.8	1.5		0.1				
Delay (s)					3.5	6.7		25.7				
Level of Service					A	A		C				
Approach Delay (s)		0.0			5.0			25.7			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.6
Intersection Capacity Utilization	52.7%	ICU Level of Service	A
Analysis Period (min)	15		

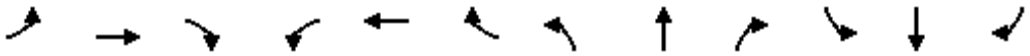
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1410	15	470	110	0	0	0	25
Future Volume (vph)	0	0	0	0	1410	15	470	110	0	0	0	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		3.8	4.0				4.0
Lane Util. Factor					0.86		0.95	0.95				1.00
Frpb, ped/bikes					1.00		1.00	1.00				0.96
Flpb, ped/bikes					1.00		1.00	1.00				1.00
Frt					1.00		1.00	1.00				0.86
Flt Protected					1.00		0.95	0.97				1.00
Satd. Flow (prot)					6324		1665	1699				1532
Flt Permitted					1.00		0.95	0.97				1.00
Satd. Flow (perm)					6324		1665	1699				1532
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	0	1484	16	495	116	0	0	0	26
RTOR Reduction (vph)	0	0	0	0	0	0	18	17	0	0	0	21
Lane Group Flow (vph)	0	0	0	0	1500	0	284	292	0	0	0	5
Confl. Peds. (#/hr)	55		21	21		55	23		36	36		23
Confl. Bikes (#/hr)						31						
Turn Type					NA		Prot	NA				Perm
Protected Phases					2		1 4	4				
Permitted Phases												4
Actuated Green, G (s)					39.2		22.2	22.2				14.0
Effective Green, g (s)					39.8		18.4	22.4				14.2
Actuated g/C Ratio					0.57		0.26	0.32				0.20
Clearance Time (s)					4.6			4.2				4.2
Vehicle Extension (s)					3.0			2.0				2.0
Lane Grp Cap (vph)					3595		437	543				310
v/s Ratio Prot					c0.24		c0.17	c0.17				
v/s Ratio Perm												0.00
v/c Ratio					0.42		0.65	0.54				0.02
Uniform Delay, d1					8.5		22.9	19.5				22.3
Progression Factor					0.96		0.50	0.50				1.00
Incremental Delay, d2					0.3		1.6	0.3				0.0
Delay (s)					8.5		13.1	10.0				22.3
Level of Service					A		B	B				C
Approach Delay (s)		0.0			8.5			11.5			22.3	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		

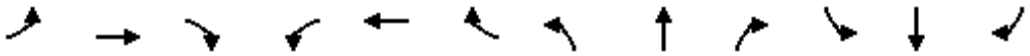
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	20	1365	55	50	35	0	0	10	10
Future Volume (vph)	0	0	0	20	1365	55	50	35	0	0	10	10
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	
Lane Util. Factor					0.86			1.00			1.00	
Frpb, ped/bikes					1.00			1.00			0.98	
Flpb, ped/bikes					1.00			0.98			1.00	
Frt					0.99			1.00			0.93	
Flt Protected					1.00			0.97			1.00	
Satd. Flow (prot)					6282			1760			1683	
Flt Permitted					1.00			0.81			1.00	
Satd. Flow (perm)					6282			1469			1683	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	21	1437	58	53	37	0	0	11	11
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	1512	0	0	90	0	0	19	0
Confl. Peds. (#/hr)	21		18	18		21	30		18	18		30
Confl. Bikes (#/hr)						25						
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			4			4	
Permitted Phases				2			4					
Actuated Green, G (s)					49.5			11.5			11.5	
Effective Green, g (s)					49.5			11.5			11.5	
Actuated g/C Ratio					0.71			0.16			0.16	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					0.2			3.0			3.0	
Lane Grp Cap (vph)					4442			241			276	
v/s Ratio Prot											0.01	
v/s Ratio Perm					0.24			c0.06				
v/c Ratio					0.34			0.37			0.07	
Uniform Delay, d1					4.0			26.0			24.7	
Progression Factor					1.00			1.36			1.00	
Incremental Delay, d2					0.2			1.0			0.1	
Delay (s)					4.2			36.3			24.8	
Level of Service					A			D			C	
Approach Delay (s)		0.0			4.2			36.3			24.8	
Approach LOS		A			A			D			C	

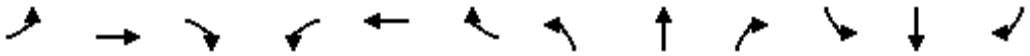
Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1180	200	0	0	0	0	0	0	570	850	0
Future Volume (vph)	0	1180	200	0	0	0	0	0	0	570	850	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0							3.6	4.0	
Lane Util. Factor		0.91	1.00							0.91	0.91	
Frpb, ped/bikes		1.00	0.73							1.00	1.00	
Flpb, ped/bikes		1.00	1.00							1.00	1.00	
Frt		1.00	0.85							1.00	1.00	
Flt Protected		1.00	1.00							0.95	0.99	
Satd. Flow (prot)		5036	1147							1595	3284	
Flt Permitted		1.00	1.00							0.95	0.99	
Satd. Flow (perm)		5036	1147							1595	3284	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1242	211	0	0	0	0	0	0	600	895	0
RTOR Reduction (vph)	0	0	66	0	0	0	0	0	0	182	9	0
Lane Group Flow (vph)	0	1242	145	0	0	0	0	0	0	178	1126	0
Confl. Peds. (#/hr)	49		32	32		49	103		12	12		103
Confl. Bikes (#/hr)			321									
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	5	0
Turn Type		NA	Perm							Prot	NA	
Protected Phases		6								8	4	
Permitted Phases			6									
Actuated Green, G (s)		20.7	20.7							34.2	40.7	
Effective Green, g (s)		21.2	21.2							34.7	41.2	
Actuated g/C Ratio		0.30	0.30							0.50	0.59	
Clearance Time (s)		4.5	4.5							4.1	4.5	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		1525	347							790	1932	
v/s Ratio Prot		c0.25								0.11	c0.29	
v/s Ratio Perm			0.13								0.05	
v/c Ratio		0.81	0.42							0.23	0.58	
Uniform Delay, d1		22.6	19.5							10.0	9.0	
Progression Factor		1.00	1.00							0.93	0.83	
Incremental Delay, d2		4.9	3.7							0.1	0.3	
Delay (s)		27.5	23.1							9.4	7.7	
Level of Service		C	C							A	A	
Approach Delay (s)		26.8			0.0			0.0			8.1	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

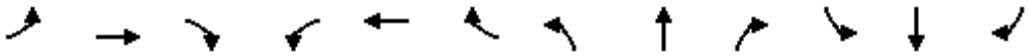


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	335	1415	0	0	0	0	0	75	20	0	0	0
Future Volume (vph)	335	1415	0	0	0	0	0	75	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0			
Lane Util. Factor		0.91						0.95	1.00			
Frpb, ped/bikes		1.00						1.00	0.55			
Flpb, ped/bikes		0.98						1.00	1.00			
Frt		1.00						1.00	0.85			
Flt Protected		0.99						1.00	1.00			
Satd. Flow (prot)		4879						3505	867			
Flt Permitted		0.99						1.00	1.00			
Satd. Flow (perm)		4879						3505	867			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	353	1489	0	0	0	0	0	79	21	0	0	0
RTOR Reduction (vph)	0	49	0	0	0	0	0	0	17	0	0	0
Lane Group Flow (vph)	0	1793	0	0	0	0	0	79	4	0	0	0
Confl. Peds. (#/hr)	84		88	88		84	70		88	88		70
Confl. Bikes (#/hr)			43						313			
Bus Blockages (#/hr)	0	5	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA						NA	Perm			
Protected Phases		2						4				
Permitted Phases	2								4			
Actuated Green, G (s)		49.5						11.8	11.8			
Effective Green, g (s)		50.0						12.0	12.0			
Actuated g/C Ratio		0.71						0.17	0.17			
Clearance Time (s)		4.5						4.2	4.2			
Vehicle Extension (s)		0.2						0.5	0.5			
Lane Grp Cap (vph)		3485						600	148			
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.37							0.00			
v/c Ratio		0.51						0.13	0.02			
Uniform Delay, d1		4.5						24.6	24.1			
Progression Factor		2.00						1.00	1.00			
Incremental Delay, d2		0.4						0.0	0.0			
Delay (s)		9.5						24.6	24.2			
Level of Service		A						C	C			
Approach Delay (s)		9.5			0.0			24.5			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1405	0	0	0	0	0	550	545	0	0	0
Future Volume (vph)	30	1405	0	0	0	0	0	550	545	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0			
Lane Util. Factor		0.91						0.95	1.00			
Frpb, ped/bikes		1.00						1.00	0.97			
Flpb, ped/bikes		1.00						1.00	1.00			
Frt		1.00						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		5018						3252	1414			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		5018						3252	1414			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	1479	0	0	0	0	0	579	574	0	0	0
RTOR Reduction (vph)	0	10	0	0	0	0	0	0	366	0	0	0
Lane Group Flow (vph)	0	1501	0	0	0	0	0	579	208	0	0	0
Confl. Peds. (#/hr)	81		117	117		81	19		12	12		19
Confl. Bikes (#/hr)			60									
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	11%	11%	11%	3%	3%	3%
Turn Type	Perm	NA						NA	Perm			
Protected Phases		6						8				
Permitted Phases	6								8			
Actuated Green, G (s)		45.5						15.1	15.1			
Effective Green, g (s)		46.0						16.0	16.0			
Actuated g/C Ratio		0.66						0.23	0.23			
Clearance Time (s)		4.5						4.9	4.9			
Vehicle Extension (s)		3.5						3.9	3.9			
Lane Grp Cap (vph)		3297						743	323			
v/s Ratio Prot								c0.18				
v/s Ratio Perm		0.30							0.15			
v/c Ratio		0.46						0.78	0.64			
Uniform Delay, d1		5.9						25.3	24.4			
Progression Factor		0.81						1.00	1.00			
Incremental Delay, d2		0.4						5.5	4.8			
Delay (s)		5.1						30.8	29.2			
Level of Service		A						C	C			
Approach Delay (s)		5.1			0.0			30.0			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	1780	135	0	0	0	0	50	15	15	15	0
Future Volume (vph)	35	1780	135	0	0	0	0	50	15	15	15	0
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	
Lane Util. Factor		0.86						1.00			1.00	
Frpb, ped/bikes		0.99						1.00			1.00	
Flpb, ped/bikes		1.00						1.00			1.00	
Frt		0.99						0.97			1.00	
Flt Protected		1.00						1.00			0.98	
Satd. Flow (prot)		6183						1782			1799	
Flt Permitted		1.00						1.00			0.87	
Satd. Flow (perm)		6183						1782			1598	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	37	1874	142	0	0	0	0	53	16	16	16	0
RTOR Reduction (vph)	0	9	0	0	0	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	2044	0	0	0	0	0	68	0	0	32	0
Confl. Peds. (#/hr)	32		83	83		32	34		1	1		34
Confl. Bikes (#/hr)			55									
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		48.2						12.8			12.8	
Effective Green, g (s)		48.2						12.8			12.8	
Actuated g/C Ratio		0.69						0.18			0.18	
Clearance Time (s)		4.5						4.5			4.5	
Vehicle Extension (s)		0.5						0.5			0.5	
Lane Grp Cap (vph)		4257						325			292	
v/s Ratio Prot								c0.04				
v/s Ratio Perm		0.33									0.02	
v/c Ratio		0.48						0.21			0.11	
Uniform Delay, d1		5.1						24.3			23.8	
Progression Factor		0.83						1.00			1.10	
Incremental Delay, d2		0.3						0.1			0.1	
Delay (s)		4.6						24.4			26.2	
Level of Service		A						C			C	
Approach Delay (s)		4.6			0.0			24.4			26.2	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	5.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	EBR2	NBT	SEL	SET	SER
Lane Configurations							
Traffic Volume (vph)	50	270	70	15	30	685	335
Future Volume (vph)	50	270	70	15	30	685	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0		5.6	5.6
Lane Util. Factor	1.00	0.88		1.00		0.95	1.00
Frt	1.00	0.85		1.00		1.00	0.85
Flt Protected	0.95	1.00		1.00		1.00	1.00
Satd. Flow (prot)	1752	2760		1845		3497	1568
Flt Permitted	0.95	1.00		1.00		1.00	1.00
Satd. Flow (perm)	1752	2760		1845		3497	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	284	74	16	32	721	353
RTOR Reduction (vph)	0	98	0	0	0	57	0
Lane Group Flow (vph)	53	260	0	16	0	696	353
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	Prot		NA	custom	NA	custom
Protected Phases		4					2
Permitted Phases	4			3	2	2	
Actuated Green, G (s)	8.0	8.0		0.8		22.5	22.5
Effective Green, g (s)	8.0	8.0		0.8		22.5	22.5
Actuated g/C Ratio	0.17	0.17		0.02		0.48	0.48
Clearance Time (s)	5.0	5.0		5.0		5.6	5.6
Vehicle Extension (s)	0.5	0.5		1.5		0.5	0.5
Lane Grp Cap (vph)	298	470		31		1677	752
v/s Ratio Prot		c0.09					c0.23
v/s Ratio Perm	0.03			c0.01		0.20	
v/c Ratio	0.18	0.55		0.52		0.42	0.47
Uniform Delay, d1	16.6	17.8		22.9		7.9	8.2
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	0.1	0.8		5.9		0.8	2.1
Delay (s)	16.7	18.6		28.8		8.7	10.3
Level of Service	B	B		C		A	B
Approach Delay (s)	18.4			28.8		9.2	
Approach LOS	B			C		A	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	46.9	Sum of lost time (s)	15.6
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	135	320	60	0	25	235	0	1225	280	20	800	30
Future Volume (vph)	135	320	60	0	25	235	0	1225	280	20	800	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.0		4.0	4.0		4.0	4.0	4.0	4.0	3.7
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00		0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.88		1.00	0.97		1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	0.98	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1725	1845	1375		1845	1524		3505	1568	1752	3505	1568
Flt Permitted	0.74	1.00	1.00		1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1350	1845	1375		1845	1524		3505	1568	1752	3505	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	337	63	0	26	247	0	1289	295	21	842	32
RTOR Reduction (vph)	0	0	60	0	0	208	0	0	0	0	0	0
Lane Group Flow (vph)	142	337	3	0	26	39	0	1289	295	21	842	32
Confl. Peds. (#/hr)	12		18	18		12	50		30	30		50
Confl. Bikes (#/hr)									364			79
Turn Type	Perm	NA	custom	Perm	NA	Perm		NA	custom	Prot	NA	custom
Protected Phases		4			8			6	16!	5!	2	16
Permitted Phases	4		5	8		8	6					
Actuated Green, G (s)	27.5	27.5	6.2		20.1	20.1		60.7	69.9	6.2	69.6	69.9
Effective Green, g (s)	27.5	27.5	6.2		20.3	20.3		61.2	70.4	5.2	70.4	70.7
Actuated g/C Ratio	0.21	0.21	0.05		0.16	0.16		0.47	0.54	0.04	0.54	0.54
Clearance Time (s)	4.0	4.0	3.0		4.2	4.2		4.5	4.5	3.0	4.8	4.5
Vehicle Extension (s)	1.0	1.0	0.5		1.0	1.0		0.5	3.0	0.5	0.5	3.0
Lane Grp Cap (vph)	285	389	65		287	237		1647	847	69	1895	851
v/s Ratio Prot		c0.18			0.01			c0.37	0.19	0.01	c0.24	0.02
v/s Ratio Perm	0.11		0.00			c0.03						
v/c Ratio	0.50	0.87	0.05		0.09	0.16		0.78	0.35	0.30	0.44	0.04
Uniform Delay, d1	45.3	49.6	59.2		47.0	47.6		28.9	16.9	60.7	18.1	13.9
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	17.4	0.1		0.0	0.1		2.3	1.1	0.9	0.1	0.1
Delay (s)	45.8	67.0	59.3		47.1	47.7		31.2	18.1	61.7	18.1	14.0
Level of Service	D	E	E		D	D		C	B	E	B	B
Approach Delay (s)		60.5			47.6			28.8			19.0	
Approach LOS		E			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	32.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	130.2	Sum of lost time (s)	20.0
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	15	15	50	0	20	10	120	1135	30	15	800	70
Future Volume (vph)	15	15	50	0	20	10	120	1135	30	15	800	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.5		4.0	4.8	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.93			0.96		1.00	0.99		1.00	0.98	
Flpb, ped/bikes		0.98			1.00		1.00	1.00		1.00	1.00	
Frt		0.92			0.95		1.00	1.00		1.00	0.99	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1535			1688		1752	3458		1752	3403	
Flt Permitted		0.96			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1490			1688		1752	3458		1752	3403	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	16	16	53	0	21	11	126	1195	32	16	842	74
RTOR Reduction (vph)	0	36	0	0	8	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	49	0	0	24	0	126	1225	0	16	911	0
Confl. Peds. (#/hr)	117		124	124		117	58		40	40		58
Confl. Bikes (#/hr)									370			67
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)		25.0			25.0		9.4	39.1		2.3	31.7	
Effective Green, g (s)		25.0			25.0		9.4	39.1		2.3	31.7	
Actuated g/C Ratio		0.32			0.32		0.12	0.50		0.03	0.40	
Clearance Time (s)		4.0			4.0		4.0	4.5		4.0	4.8	
Vehicle Extension (s)		1.0			1.0		0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)		472			534		208	1713		51	1367	
v/s Ratio Prot					0.01		0.07	c0.35		0.01	c0.27	
v/s Ratio Perm		c0.03										
v/c Ratio		0.10			0.05		0.61	0.72		0.31	0.67	
Uniform Delay, d1		19.0			18.7		33.0	15.6		37.5	19.3	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			0.0		3.4	1.2		1.3	1.0	
Delay (s)		19.1			18.7		36.4	16.8		38.8	20.2	
Level of Service		B			B		D	B		D	C	
Approach Delay (s)		19.1			18.7			18.6			20.6	
Approach LOS		B			B			B			C	

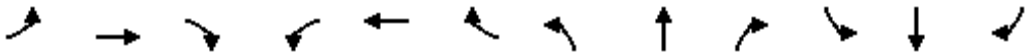
Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	78.9	Sum of lost time (s)	12.8
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBT	SBT	SER	SER2
Lane Configurations					
Traffic Volume (vph)	55	700	250	935	185
Future Volume (vph)	55	700	250	935	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.5	4.5	4.9
Lane Util. Factor	*0.52	*0.52	0.95	*0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.96
Flpb, ped/bikes	0.98	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	1.00
Satd. Flow (prot)	890	1899	3505	3343	1437
Flt Permitted	0.95	1.00	1.00	1.00	1.00
Satd. Flow (perm)	890	1899	3505	3343	1437
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	737	263	984	195
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	58	737	263	984	195
Confl. Peds. (#/hr)	26			25	25
Confl. Bikes (#/hr)					
Heavy Vehicles (%)	3%	3%	3%	8%	8%
Bus Blockages (#/hr)	0	5	0	0	0
Turn Type	Perm	NA	NA	Prot	Perm
Protected Phases		6	4	3	
Permitted Phases	6				3
Actuated Green, G (s)	27.3	27.3	9.6	19.1	19.1
Effective Green, g (s)	28.0	28.0	10.5	19.5	19.1
Actuated g/C Ratio	0.40	0.40	0.15	0.28	0.27
Clearance Time (s)	4.7	4.7	4.4	4.9	4.9
Vehicle Extension (s)	3.0	3.0	3.0	2.0	2.0
Lane Grp Cap (vph)	356	759	525	931	392
v/s Ratio Prot		c0.39	c0.08	c0.29	
v/s Ratio Perm	0.07				0.14
v/c Ratio	0.16	0.97	0.50	1.06	0.50
Uniform Delay, d1	13.5	20.6	27.3	25.2	21.4
Progression Factor	0.55	0.51	1.00	1.00	1.00
Incremental Delay, d2	0.9	25.5	3.4	45.7	4.5
Delay (s)	8.3	36.1	30.7	71.0	25.9
Level of Service	A	D	C	E	C
Approach Delay (s)		34.0	30.7		
Approach LOS		C	C		

Intersection Summary			
HCM 2000 Control Delay	49.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		

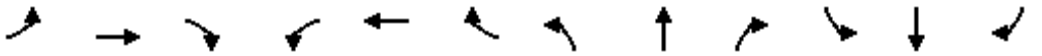
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	740	870	15	330	0	0	0	0
Future Volume (vph)	0	0	0	0	740	870	15	330	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.6		4.0				
Lane Util. Factor					*0.87	0.88		0.95				
Frpb, ped/bikes					1.00	0.98		1.00				
Flpb, ped/bikes					1.00	1.00		1.00				
Frt					1.00	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3210	2697		3494				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3210	2697		3494				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	0	779	916	16	347	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	67	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	779	916	0	296	0	0	0	0
Confl. Peds. (#/hr)			147	147			15		265	265		15
Confl. Bikes (#/hr)						25			421			
Turn Type					NA	custom	Perm	NA				
Protected Phases					2			4				
Permitted Phases						6	4					
Actuated Green, G (s)					45.4	36.6		15.8				
Effective Green, g (s)					46.0	36.6		16.0				
Actuated g/C Ratio					0.66	0.52		0.23				
Clearance Time (s)					4.6	4.6		4.2				
Vehicle Extension (s)					3.0	3.0		2.0				
Lane Grp Cap (vph)					2109	1410		798				
v/s Ratio Prot					c0.24							
v/s Ratio Perm						c0.34		0.08				
v/c Ratio					0.37	0.65		0.37				
Uniform Delay, d1					5.4	12.1		22.8				
Progression Factor					0.84	0.95		1.80				
Incremental Delay, d2					0.4	2.1		0.1				
Delay (s)					5.0	13.5		41.0				
Level of Service					A	B		D				
Approach Delay (s)		0.0			9.6			41.0			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.6
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

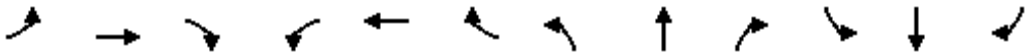
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1125	15	860	160	0	0	0	25
Future Volume (vph)	0	0	0	0	1125	15	860	160	0	0	0	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		3.8	4.0				4.0
Lane Util. Factor					0.81		0.95	0.95				1.00
Frpb, ped/bikes					1.00		1.00	1.00				0.94
Flpb, ped/bikes					1.00		1.00	1.00				1.00
Frt					1.00		1.00	1.00				0.86
Flt Protected					1.00		0.95	0.97				1.00
Satd. Flow (prot)					7426		1665	1695				1495
Flt Permitted					1.00		0.95	0.97				1.00
Satd. Flow (perm)					7426		1665	1695				1495
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	0	1184	16	905	168	0	0	0	26
RTOR Reduction (vph)	0	0	0	0	0	0	11	12	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1200	0	541	509	0	0	0	26
Confl. Peds. (#/hr)	101		39	39		101	42		66	66		42
Confl. Bikes (#/hr)						43						
Turn Type					NA		Prot	NA				Perm
Protected Phases					2		1 4	4				
Permitted Phases												4
Actuated Green, G (s)					22.4		38.8	38.8				18.8
Effective Green, g (s)					23.0		39.0	35.2				19.0
Actuated g/C Ratio					0.33		0.56	0.50				0.27
Clearance Time (s)					4.6			4.2				4.2
Vehicle Extension (s)					3.0			2.0				2.0
Lane Grp Cap (vph)					2439		927	852				405
v/s Ratio Prot					c0.16		c0.32	0.30				
v/s Ratio Perm												0.02
v/c Ratio					0.49		0.58	0.60				0.06
Uniform Delay, d1					18.8		10.2	12.4				18.9
Progression Factor					1.04		0.27	0.21				1.00
Incremental Delay, d2					0.7		0.3	0.4				0.0
Delay (s)					20.2		3.1	3.0				18.9
Level of Service					C		A	A				B
Approach Delay (s)		0.0			20.2			3.0			18.9	
Approach LOS		A			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	20	1005	30	35	195	0	0	10	100
Future Volume (vph)	0	0	0	20	1005	30	35	195	0	0	10	100
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	
Lane Util. Factor					0.91			1.00			1.00	
Frpb, ped/bikes					1.00			1.00			0.94	
Flpb, ped/bikes					1.00			0.99			1.00	
Frt					1.00			1.00			0.88	
Flt Protected					1.00			0.99			1.00	
Satd. Flow (prot)					4983			1817			1519	
Flt Permitted					1.00			0.94			1.00	
Satd. Flow (perm)					4983			1727			1519	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	21	1058	32	37	205	0	0	11	105
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	0	0	0	1108	0	0	242	0	0	105	0
Confl. Peds. (#/hr)	39		33	33		39	55		33	33		55
Confl. Bikes (#/hr)						44						
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			4			4	
Permitted Phases				2			4					
Actuated Green, G (s)					40.7			20.3			20.3	
Effective Green, g (s)					40.7			20.3			20.3	
Actuated g/C Ratio					0.58			0.29			0.29	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					0.2			3.0			3.0	
Lane Grp Cap (vph)					2897			500			440	
v/s Ratio Prot											0.07	
v/s Ratio Perm					0.22			c0.14				
v/c Ratio					0.38			0.48			0.24	
Uniform Delay, d1					7.9			20.5			19.0	
Progression Factor					1.00			0.68			1.00	
Incremental Delay, d2					0.4			0.6			0.3	
Delay (s)					8.3			14.6			19.2	
Level of Service					A			B			B	
Approach Delay (s)		0.0			8.3			14.6			19.2	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1130	30	0	0	0	0	0	0	1115	125	0
Future Volume (vph)	0	1130	30	0	0	0	0	0	0	1115	125	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0							3.6	4.0	
Lane Util. Factor		0.91	1.00							0.91	0.91	
Frpb, ped/bikes		1.00	0.74							1.00	1.00	
Flpb, ped/bikes		1.00	1.00							1.00	0.99	
Frt		1.00	0.85							1.00	1.00	
Flt Protected		1.00	1.00							0.95	0.96	
Satd. Flow (prot)		5036	1167							1595	3176	
Flt Permitted		1.00	1.00							0.95	0.96	
Satd. Flow (perm)		5036	1167							1595	3176	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1189	32	0	0	0	0	0	0	1174	132	0
RTOR Reduction (vph)	0	0	21	0	0	0	0	0	0	300	10	0
Lane Group Flow (vph)	0	1189	11	0	0	0	0	0	0	404	592	0
Confl. Peds. (#/hr)	67		37	37		67	140		16	16		140
Confl. Bikes (#/hr)			327									
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	5	0
Turn Type		NA	Perm							Prot	NA	
Protected Phases		6								8	4	
Permitted Phases			6									
Actuated Green, G (s)		22.8	22.8							23.1	38.6	
Effective Green, g (s)		23.3	23.3							23.6	39.1	
Actuated g/C Ratio		0.33	0.33							0.34	0.56	
Clearance Time (s)		4.5	4.5							4.1	4.5	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		1676	388							537	1774	
v/s Ratio Prot		c0.24								c0.25	c0.11	
v/s Ratio Perm			0.01								0.07	
v/c Ratio		0.71	0.03							0.75	0.33	
Uniform Delay, d1		20.4	15.7							20.6	8.4	
Progression Factor		1.00	1.00							1.39	0.14	
Incremental Delay, d2		2.6	0.1							4.0	0.2	
Delay (s)		23.0	15.9							32.7	1.4	
Level of Service		C	B							C	A	
Approach Delay (s)		22.8			0.0			0.0			18.3	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

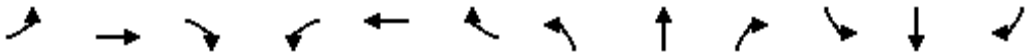
Movement	EBL2	EBT	EBR	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	335	1330	580	0	400
Future Volume (vph)	335	1330	580	0	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	4.2		4.2
Lane Util. Factor		0.95	0.88		0.95
Frt		1.00	0.85		1.00
Flt Protected		0.99	1.00		1.00
Satd. Flow (prot)		3470	2760		3505
Flt Permitted		0.99	1.00		1.00
Satd. Flow (perm)		3470	2760		3505
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	353	1400	611	0	421
RTOR Reduction (vph)	0	33	270	0	0
Lane Group Flow (vph)	0	1720	341	0	421
Turn Type	Split	NA	custom		NA
Protected Phases	2	2		4	4
Permitted Phases			6		
Actuated Green, G (s)		42.8	34.6		16.6
Effective Green, g (s)		42.8	34.6		16.6
Actuated g/C Ratio		0.62	0.50		0.24
Clearance Time (s)		5.0	4.2		4.2
Vehicle Extension (s)		3.0	3.0		3.0
Lane Grp Cap (vph)		2164	1392		848
v/s Ratio Prot		c0.50			c0.12
v/s Ratio Perm			0.12		
v/c Ratio		0.79	0.25		0.50
Uniform Delay, d1		9.6	9.6		22.4
Progression Factor		1.00	1.00		1.00
Incremental Delay, d2		2.1	0.4		0.5
Delay (s)		11.7	10.0		22.9
Level of Service		B	B		C
Approach Delay (s)		11.3		0.0	22.9
Approach LOS		B		A	C

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	68.6	Sum of lost time (s)	11.9
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	1285	0	0	0	0	0	975	620	0	0	0
Future Volume (vph)	45	1285	0	0	0	0	0	975	620	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0			
Lane Util. Factor		0.91						0.95	0.88			
Frpb, ped/bikes		1.00						1.00	1.00			
Flpb, ped/bikes		0.99						1.00	1.00			
Frt		1.00						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		4998						3252	2561			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		4998						3252	2561			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	1353	0	0	0	0	0	1026	653	0	0	0
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	299	0	0	0
Lane Group Flow (vph)	0	1385	0	0	0	0	0	1026	354	0	0	0
Confl. Peds. (#/hr)	143		209	209		143	35		22	22		35
Confl. Bikes (#/hr)			91									
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	11%	11%	11%	3%	3%	3%
Turn Type	Perm	NA						NA	Prot			
Protected Phases		6						8	8			
Permitted Phases	6											
Actuated Green, G (s)		35.5						25.1	25.1			
Effective Green, g (s)		36.0						26.0	26.0			
Actuated g/C Ratio		0.51						0.37	0.37			
Clearance Time (s)		4.5						4.9	4.9			
Vehicle Extension (s)		3.5						3.9	3.9			
Lane Grp Cap (vph)		2570						1207	951			
v/s Ratio Prot								c0.32	0.14			
v/s Ratio Perm		0.28										
v/c Ratio		0.54						0.85	0.37			
Uniform Delay, d1		11.4						20.2	16.1			
Progression Factor		2.09						1.00	1.00			
Incremental Delay, d2		0.6						7.6	1.1			
Delay (s)		24.5						27.8	17.2			
Level of Service		C						C	B			
Approach Delay (s)		24.5			0.0			23.7			0.0	
Approach LOS		C			A			C			A	

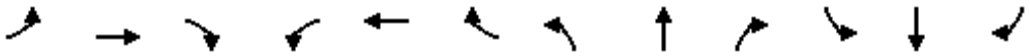
Intersection Summary			
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	1525	180	0	0	0	0	30	15	15	15	0
Future Volume (vph)	200	1525	180	0	0	0	0	30	15	15	15	0
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	
Lane Util. Factor		0.91						1.00			1.00	
Frpb, ped/bikes		0.97						1.00			1.00	
Flpb, ped/bikes		0.99						1.00			1.00	
Frt		0.99						0.95			1.00	
Flt Protected		0.99						1.00			0.98	
Satd. Flow (prot)		4727						1754			1798	
Flt Permitted		0.99						1.00			0.87	
Satd. Flow (perm)		4727						1754			1610	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	211	1605	189	0	0	0	0	32	16	16	16	0
RTOR Reduction (vph)	0	12	0	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	1993	0	0	0	0	0	44	0	0	32	0
Confl. Peds. (#/hr)	59		153	153		59	62		2	2		62
Confl. Bikes (#/hr)			101									
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		45.8						14.2			14.2	
Effective Green, g (s)		45.8						14.2			14.2	
Actuated g/C Ratio		0.65						0.20			0.20	
Clearance Time (s)		5.0						5.0			5.0	
Vehicle Extension (s)		0.5						0.5			0.5	
Lane Grp Cap (vph)		3092						355			326	
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.42									0.02	
v/c Ratio		0.64						0.12			0.10	
Uniform Delay, d1		7.2						22.8			22.7	
Progression Factor		1.28						1.00			0.90	
Incremental Delay, d2		0.9						0.1			0.0	
Delay (s)		10.2						22.9			20.4	
Level of Service		B						C			C	
Approach Delay (s)		10.2			0.0			22.9			20.4	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	265	0	0	90	75	5	475	20	0	0	0
Future Volume (vph)	15	265	0	0	90	75	5	475	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.94			0.99				
Flt Protected		1.00			1.00			1.00				
Satd. Flow (prot)		1840			1732			1834				
Flt Permitted		0.98			1.00			1.00				
Satd. Flow (perm)		1805			1732			1834				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	16	279	0	0	95	79	5	500	21	0	0	0
RTOR Reduction (vph)	0	0	0	0	48	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	295	0	0	126	0	0	524	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			2			4				
Permitted Phases	2						4					
Actuated Green, G (s)		9.6			9.6			13.5				
Effective Green, g (s)		9.6			9.6			13.5				
Actuated g/C Ratio		0.31			0.31			0.43				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		0.5			0.5			0.5				
Lane Grp Cap (vph)		557			534			796				
v/s Ratio Prot					0.07							
v/s Ratio Perm		c0.16						0.29				
v/c Ratio		0.53			0.24			0.66				
Uniform Delay, d1		8.9			8.0			7.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		0.4			0.1			1.5				
Delay (s)		9.3			8.1			8.5				
Level of Service		A			A			A				
Approach Delay (s)		9.3			8.1			8.5			0.0	
Approach LOS		A			A			A			A	

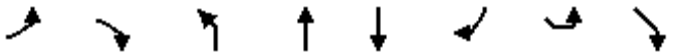
Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	31.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	280	0	0	95	0	0	0	0	0	250	0
Future Volume (vph)	0	280	0	0	95	0	0	0	0	0	250	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		1.00			1.00						0.95	
Frt		1.00			1.00						1.00	
Flt Protected		1.00			1.00						1.00	
Satd. Flow (prot)		1845			1845						3505	
Flt Permitted		1.00			1.00						1.00	
Satd. Flow (perm)		1845			1845						3505	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	295	0	0	100	0	0	0	0	0	263	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	295	0	0	100	0	0	0	0	0	263	0
Turn Type		NA			NA						NA	
Protected Phases		2			2					4	4	
Permitted Phases	2			2								
Actuated Green, G (s)		7.0			7.0						10.0	
Effective Green, g (s)		7.0			7.0						10.0	
Actuated g/C Ratio		0.28			0.28						0.40	
Clearance Time (s)		4.0			4.0						4.0	
Vehicle Extension (s)		0.5			0.5						0.5	
Lane Grp Cap (vph)		516			516						1402	
v/s Ratio Prot		c0.16			0.05						c0.08	
v/s Ratio Perm												
v/c Ratio		0.57			0.19						0.19	
Uniform Delay, d1		7.7			6.9						4.9	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		1.0			0.1						0.0	
Delay (s)		8.7			6.9						4.9	
Level of Service		A			A						A	
Approach Delay (s)		8.7			6.9			0.0			4.9	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	25.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	29.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations								
Traffic Volume (vph)	0	140	0	10	0	0	0	155
Future Volume (vph)	0	140	0	10	0	0	0	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0				5.6
Lane Util. Factor		0.88		1.00				0.88
Frt		0.85		1.00				0.85
Flt Protected		1.00		1.00				1.00
Satd. Flow (prot)		2760		1845				2760
Flt Permitted		1.00		1.00				1.00
Satd. Flow (perm)		2760		1845				2760
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	147	0	11	0	0	0	163
RTOR Reduction (vph)	0	121	0	0	0	0	0	0
Lane Group Flow (vph)	0	26	0	11	0	0	0	163
Turn Type		Perm		NA			Perm	Prot
Protected Phases								2
Permitted Phases		4		3			2	
Actuated Green, G (s)		9.8		2.2				27.2
Effective Green, g (s)		9.8		2.2				27.2
Actuated g/C Ratio		0.18		0.04				0.50
Clearance Time (s)		5.0		5.0				5.6
Vehicle Extension (s)		0.5		1.5				0.5
Lane Grp Cap (vph)		493		74				1369
v/s Ratio Prot								c0.06
v/s Ratio Perm		c0.01		c0.01				
v/c Ratio		0.05		0.15				0.12
Uniform Delay, d1		18.7		25.4				7.4
Progression Factor		1.00		1.00				1.00
Incremental Delay, d2		0.0		0.3				0.0
Delay (s)		18.7		25.7				7.4
Level of Service		B		C				A
Approach Delay (s)	18.7			25.7	0.0		7.4	
Approach LOS	B			C	A		A	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.10		
Actuated Cycle Length (s)	54.8	Sum of lost time (s)	15.6
Intersection Capacity Utilization	23.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	120	235	35	0	25	235	0	1270	280	15	825	20
Future Volume (vph)	120	235	35	0	25	235	0	1270	280	15	825	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.0		4.0	4.0		4.0	3.5	4.0	4.0	3.2
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00		0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.88		1.00	0.97		1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	0.99	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1726	1845	1385		1845	1526		3505	1568	1752	3505	1568
Flt Permitted	0.75	1.00	1.00		1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1357	1845	1385		1845	1526		3505	1568	1752	3505	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	126	247	37	0	26	247	0	1337	295	16	868	21
RTOR Reduction (vph)	0	0	35	0	0	206	0	0	0	0	0	0
Lane Group Flow (vph)	126	247	2	0	26	41	0	1337	295	16	868	21
Confl. Peds. (#/hr)	12		18	18		12	50		30	30		50
Confl. Bikes (#/hr)									364			84
Turn Type	Perm	NA	custom	Perm	NA	Perm		NA	custom	Prot	NA	custom
Protected Phases		4			8			6	16!	5!	2	16
Permitted Phases	4		5	8		8	6					
Actuated Green, G (s)	20.5	20.5	6.2		20.1	20.1		60.5	70.2	6.2	69.4	70.2
Effective Green, g (s)	20.5	20.5	6.2		20.3	20.3		61.0	70.7	5.2	70.2	71.0
Actuated g/C Ratio	0.17	0.17	0.05		0.17	0.17		0.50	0.57	0.04	0.57	0.58
Clearance Time (s)	4.0	4.0	3.0		4.2	4.2		4.5	4.0	3.0	4.8	4.0
Vehicle Extension (s)	1.0	1.0	0.5		1.0	1.0		0.5	3.0	0.5	0.5	3.0
Lane Grp Cap (vph)	226	307	69		304	251		1738	901	74	2000	905
v/s Ratio Prot		c0.13			0.01			c0.38	0.19	0.01	c0.25	0.01
v/s Ratio Perm	0.09		0.00			c0.03						
v/c Ratio	0.56	0.80	0.03		0.09	0.16		0.77	0.33	0.22	0.43	0.02
Uniform Delay, d1	47.1	49.3	55.5		43.5	44.1		25.3	13.7	56.9	15.1	11.1
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.7	13.4	0.1		0.0	0.1		1.9	0.2	0.5	0.1	0.0
Delay (s)	48.8	62.7	55.6		43.5	44.2		27.2	13.9	57.5	15.1	11.2
Level of Service	D	E	E		D	D		C	B	E	B	B
Approach Delay (s)		57.8			44.1			24.8			15.8	
Approach LOS		E			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	28.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	123.0	Sum of lost time (s)	19.5
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	25	25	30	10	25	10	95	965	245	50	820	20
Future Volume (vph)	25	25	30	10	25	10	95	965	245	50	820	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.5		4.0	4.8	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.94		1.00	0.95		1.00	0.92		1.00	0.99	
Flpb, ped/bikes		0.96		0.87	1.00		1.00	1.00		1.00	1.00	
Frt		0.95		1.00	0.96		1.00	0.97		1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1542		1523	1679		1752	3128		1752	3464	
Flt Permitted		0.92		0.68	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1438		1087	1679		1752	3128		1752	3464	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	26	32	11	26	11	100	1016	258	53	863	21
RTOR Reduction (vph)	0	17	0	0	8	0	0	12	0	0	1	0
Lane Group Flow (vph)	0	67	0	11	29	0	100	1262	0	53	883	0
Confl. Peds. (#/hr)	117		124	124		117	74		50	50		74
Confl. Bikes (#/hr)									370			72
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)		30.0		30.0	30.0		10.3	79.4		6.3	75.1	
Effective Green, g (s)		30.0		30.0	30.0		10.3	79.4		6.3	75.1	
Actuated g/C Ratio		0.23		0.23	0.23		0.08	0.62		0.05	0.59	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.5		4.0	4.8	
Vehicle Extension (s)		1.0		1.0	1.0		0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)		336		254	392		140	1937		86	2029	
v/s Ratio Prot					0.02		c0.06	c0.40		0.03	0.25	
v/s Ratio Perm		c0.05		0.01								
v/c Ratio		0.20		0.04	0.07		0.71	0.65		0.62	0.44	
Uniform Delay, d1		39.5		38.0	38.3		57.5	15.6		59.8	14.8	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1		0.0	0.0		13.4	1.7		8.9	0.7	
Delay (s)		39.6		38.0	38.3		70.9	17.3		68.7	15.4	
Level of Service		D		D	D		E	B		E	B	
Approach Delay (s)		39.6			38.2			21.2			18.4	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	21.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	128.2	Sum of lost time (s)	12.8
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBT	SBT	SER	SER2
Lane Configurations					
Traffic Volume (vph)	405	525	355	1030	315
Future Volume (vph)	405	525	355	1030	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.5	4.5	4.9
Lane Util. Factor	*0.52	*0.52	0.95	*0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.94
Flpb, ped/bikes	0.98	0.99	1.00	1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	1.00	1.00
Satd. Flow (prot)	890	1868	3505	3343	1412
Flt Permitted	0.95	0.99	1.00	1.00	1.00
Satd. Flow (perm)	890	1868	3505	3343	1412
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	426	553	374	1084	332
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	268	711	374	1084	332
Confl. Peds. (#/hr)	26			25	25
Confl. Bikes (#/hr)					22
Heavy Vehicles (%)	3%	3%	3%	8%	8%
Bus Blockages (#/hr)	0	5	0	0	0
Turn Type	Perm	NA	NA	Prot	Perm
Protected Phases		6	4	3	
Permitted Phases	6				3
Actuated Green, G (s)	27.3	27.3	9.6	19.1	19.1
Effective Green, g (s)	28.0	28.0	10.5	19.5	19.1
Actuated g/C Ratio	0.40	0.40	0.15	0.28	0.27
Clearance Time (s)	4.7	4.7	4.4	4.9	4.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	356	747	525	931	385
v/s Ratio Prot			c0.11	c0.32	
v/s Ratio Perm	0.30	0.38			0.24
v/c Ratio	0.75	0.95	0.71	1.16	0.86
Uniform Delay, d1	18.0	20.3	28.3	25.2	24.2
Progression Factor	0.32	0.37	1.00	1.00	1.00
Incremental Delay, d2	12.5	21.6	8.0	85.8	21.7
Delay (s)	18.4	29.1	36.3	111.0	45.9
Level of Service	B	C	D	F	D
Approach Delay (s)		26.1	36.3		
Approach LOS		C	D		

Intersection Summary			
HCM 2000 Control Delay	63.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	910	850	20	540	0	0	0	0
Future Volume (vph)	0	0	0	0	910	850	20	540	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.6		4.0				
Lane Util. Factor					*0.87	0.88		0.91				
Frpb, ped/bikes					1.00	0.98		1.00				
Flpb, ped/bikes					1.00	1.00		1.00				
Frt					1.00	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3210	2691		5024				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3210	2691		5024				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	0	958	895	21	568	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	67	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	958	895	0	522	0	0	0	0
Confl. Peds. (#/hr)			147	147			15		265	265		15
Confl. Bikes (#/hr)						30			421			
Turn Type					NA	custom	Perm	NA				
Protected Phases					2			4				
Permitted Phases						6	4					
Actuated Green, G (s)					45.4	36.6		15.8				
Effective Green, g (s)					46.0	36.6		16.0				
Actuated g/C Ratio					0.66	0.52		0.23				
Clearance Time (s)					4.6	4.6		4.2				
Vehicle Extension (s)					3.0	3.0		2.0				
Lane Grp Cap (vph)					2109	1407		1148				
v/s Ratio Prot					c0.30							
v/s Ratio Perm						c0.33		0.10				
v/c Ratio					0.45	0.64		0.45				
Uniform Delay, d1					5.9	11.9		23.2				
Progression Factor					0.89	1.05		1.07				
Incremental Delay, d2					0.7	2.0		0.1				
Delay (s)					5.9	14.6		24.9				
Level of Service					A	B		C				
Approach Delay (s)		0.0			10.1			24.9			0.0	
Approach LOS		A			B			C			A	

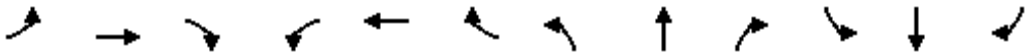
Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.6
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1045	15	680	150	0	0	0	35
Future Volume (vph)	0	0	0	0	1045	15	680	150	0	0	0	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		3.8	4.0				4.0
Lane Util. Factor					0.86		0.95	0.95				1.00
Frpb, ped/bikes					1.00		1.00	1.00				0.94
Flpb, ped/bikes					1.00		1.00	1.00				1.00
Frt					1.00		1.00	1.00				0.86
Flt Protected					1.00		0.95	0.97				1.00
Satd. Flow (prot)					6305		1665	1698				1495
Flt Permitted					1.00		0.95	0.97				1.00
Satd. Flow (perm)					6305		1665	1698				1495
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	0	1100	16	716	158	0	0	0	37
RTOR Reduction (vph)	0	0	0	0	0	0	16	14	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1116	0	421	423	0	0	0	37
Confl. Peds. (#/hr)	101		39	39		101	42		66	66		42
Confl. Bikes (#/hr)						48						
Turn Type					NA		Prot	NA				Perm
Protected Phases					2		1 4	4				
Permitted Phases												4
Actuated Green, G (s)					31.9		29.5	29.5				21.1
Effective Green, g (s)					32.5		25.7	29.7				21.3
Actuated g/C Ratio					0.46		0.37	0.42				0.30
Clearance Time (s)					4.6			4.2				4.2
Vehicle Extension (s)					3.0			2.0				2.0
Lane Grp Cap (vph)					2927		611	720				454
v/s Ratio Prot					c0.18		c0.25	c0.25				
v/s Ratio Perm												0.02
v/c Ratio					0.38		0.69	0.59				0.08
Uniform Delay, d1					12.2		18.8	15.4				17.4
Progression Factor					0.65		0.56	0.56				1.00
Incremental Delay, d2					0.4		1.3	0.4				0.0
Delay (s)					8.3		11.8	9.0				17.4
Level of Service					A		B	A				B
Approach Delay (s)		0.0			8.3			10.4			17.4	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



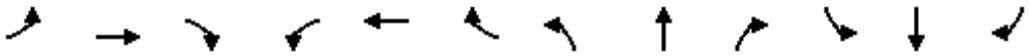
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	20	965	55	25	195	0	0	10	70
Future Volume (vph)	0	0	0	20	965	55	25	195	0	0	10	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5			4.5			4.5	
Lane Util. Factor					0.91			1.00			1.00	
Frpb, ped/bikes					0.99			1.00			0.94	
Flpb, ped/bikes					1.00			0.99			1.00	
Frt					0.99			1.00			0.88	
Flt Protected					1.00			0.99			1.00	
Satd. Flow (prot)					4949			1824			1531	
Flt Permitted					1.00			0.96			1.00	
Satd. Flow (perm)					4949			1764			1531	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	21	1016	58	26	205	0	0	11	74
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	0	0	14	0
Lane Group Flow (vph)	0	0	0	0	1090	0	0	231	0	0	71	0
Confl. Peds. (#/hr)	39		33	33		39	55		33	33		55
Confl. Bikes (#/hr)						44						
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			4			4	
Permitted Phases				2			4					
Actuated Green, G (s)					44.7			16.3			16.3	
Effective Green, g (s)					44.7			16.3			16.3	
Actuated g/C Ratio					0.64			0.23			0.23	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					0.2			3.0			3.0	
Lane Grp Cap (vph)					3160			410			356	
v/s Ratio Prot											0.05	
v/s Ratio Perm					0.22			c0.13				
v/c Ratio					0.34			0.56			0.20	
Uniform Delay, d1					5.9			23.7			21.6	
Progression Factor					1.00			0.92			1.00	
Incremental Delay, d2					0.3			1.6			0.3	
Delay (s)					6.2			23.5			21.9	
Level of Service					A			C			C	
Approach Delay (s)		0.0			6.2			23.5			21.9	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	750	250	0	0	0	0	0	0	1060	730	0
Future Volume (vph)	0	750	250	0	0	0	0	0	0	1060	730	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0							3.6	4.0	
Lane Util. Factor		0.91	1.00							0.91	0.91	
Frpb, ped/bikes		1.00	0.72							1.00	1.00	
Flpb, ped/bikes		1.00	1.00							1.00	1.00	
Frt		1.00	0.85							1.00	1.00	
Flt Protected		1.00	1.00							0.95	0.98	
Satd. Flow (prot)		5036	1129							1595	3252	
Flt Permitted		1.00	1.00							0.95	0.98	
Satd. Flow (perm)		5036	1129							1595	3252	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	789	263	0	0	0	0	0	0	1116	768	0
RTOR Reduction (vph)	0	0	71	0	0	0	0	0	0	236	12	0
Lane Group Flow (vph)	0	789	192	0	0	0	0	0	0	434	1202	0
Confl. Peds. (#/hr)	67		44	44		67	140		16	16		140
Confl. Bikes (#/hr)			327									
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	5	0
Turn Type		NA	Perm							Prot	NA	
Protected Phases		6								8	4	
Permitted Phases			6									
Actuated Green, G (s)		20.7	20.7							34.2	40.7	
Effective Green, g (s)		21.2	21.2							34.7	41.2	
Actuated g/C Ratio		0.30	0.30							0.50	0.59	
Clearance Time (s)		4.5	4.5							4.1	4.5	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		1525	341							790	1914	
v/s Ratio Prot		0.16								0.27	c0.31	
v/s Ratio Perm			c0.17								0.06	
v/c Ratio		0.52	0.56							0.55	0.63	
Uniform Delay, d1		20.2	20.5							12.2	9.4	
Progression Factor		1.00	1.00							0.59	0.68	
Incremental Delay, d2		1.3	6.6							0.6	0.4	
Delay (s)		21.4	27.1							7.9	6.7	
Level of Service		C	C							A	A	
Approach Delay (s)		22.8			0.0			0.0			7.1	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	460	1350	0	0	0	0	0	100	15	0	0	0
Future Volume (vph)	460	1350	0	0	0	0	0	100	15	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0			
Lane Util. Factor		0.91						0.95	1.00			
Frpb, ped/bikes		1.00						1.00	0.55			
Flpb, ped/bikes		0.97						1.00	1.00			
Frt		1.00						1.00	0.85			
Flt Protected		0.99						1.00	1.00			
Satd. Flow (prot)		4802						3505	864			
Flt Permitted		0.99						1.00	1.00			
Satd. Flow (perm)		4802						3505	864			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	484	1421	0	0	0	0	0	105	16	0	0	0
RTOR Reduction (vph)	0	51	0	0	0	0	0	0	13	0	0	0
Lane Group Flow (vph)	0	1854	0	0	0	0	0	105	3	0	0	0
Confl. Peds. (#/hr)	115		120	120		115	95		120	120		95
Confl. Bikes (#/hr)			68						304			
Bus Blockages (#/hr)	0	5	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA						NA	Perm			
Protected Phases		2						4				
Permitted Phases	2								4			
Actuated Green, G (s)		49.5						11.8	11.8			
Effective Green, g (s)		50.0						12.0	12.0			
Actuated g/C Ratio		0.71						0.17	0.17			
Clearance Time (s)		4.5						4.2	4.2			
Vehicle Extension (s)		0.2						0.5	0.5			
Lane Grp Cap (vph)		3430						600	148			
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.39							0.00			
v/c Ratio		0.54						0.17	0.02			
Uniform Delay, d1		4.7						24.8	24.1			
Progression Factor		0.63						1.00	1.00			
Incremental Delay, d2		0.5						0.1	0.0			
Delay (s)		3.4						24.8	24.1			
Level of Service		A						C	C			
Approach Delay (s)		3.4			0.0			24.7			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	4.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	1330	0	0	0	0	0	795	580	0	0	0
Future Volume (vph)	35	1330	0	0	0	0	0	795	580	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0			
Lane Util. Factor		0.91						0.95	1.00			
Frpb, ped/bikes		1.00						1.00	0.96			
Flpb, ped/bikes		1.00						1.00	1.00			
Frt		1.00						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		5006						3252	1401			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		5006						3252	1401			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	37	1400	0	0	0	0	0	837	611	0	0	0
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	333	0	0	0
Lane Group Flow (vph)	0	1425	0	0	0	0	0	837	279	0	0	0
Confl. Peds. (#/hr)	149		215	215		149	35		22	22		35
Confl. Bikes (#/hr)			95									
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	11%	11%	11%	3%	3%	3%
Turn Type	Perm	NA						NA	Perm			
Protected Phases		6						8				
Permitted Phases	6								8			
Actuated Green, G (s)		40.5						20.1	20.1			
Effective Green, g (s)		41.0						21.0	21.0			
Actuated g/C Ratio		0.59						0.30	0.30			
Clearance Time (s)		4.5						4.9	4.9			
Vehicle Extension (s)		3.5						3.9	3.9			
Lane Grp Cap (vph)		2932						975	420			
v/s Ratio Prot								c0.26				
v/s Ratio Perm		0.28							0.20			
v/c Ratio		0.49						0.86	0.66			
Uniform Delay, d1		8.4						23.1	21.4			
Progression Factor		0.39						1.00	1.00			
Incremental Delay, d2		0.5						9.7	8.0			
Delay (s)		3.8						32.8	29.4			
Level of Service		A						C	C			
Approach Delay (s)		3.8			0.0			31.4			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	1500	210	0	0	0	0	20	15	15	15	0
Future Volume (vph)	200	1500	210	0	0	0	0	20	15	15	15	0
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	
Lane Util. Factor		0.86						1.00			1.00	
Frpb, ped/bikes		0.96						0.99			1.00	
Flpb, ped/bikes		0.99						1.00			1.00	
Frt		0.98						0.94			1.00	
Flt Protected		0.99						1.00			0.98	
Satd. Flow (prot)		5910						1727			1798	
Flt Permitted		0.99						1.00			0.89	
Satd. Flow (perm)		5910						1727			1636	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	211	1579	221	0	0	0	0	21	16	16	16	0
RTOR Reduction (vph)	0	19	0	0	0	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	1992	0	0	0	0	0	35	0	0	32	0
Confl. Peds. (#/hr)	59		153	153		59	62		2	2		62
Confl. Bikes (#/hr)			101									
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		45.8						15.2			15.2	
Effective Green, g (s)		45.8						15.2			15.2	
Actuated g/C Ratio		0.65						0.22			0.22	
Clearance Time (s)		4.5						4.5			4.5	
Vehicle Extension (s)		0.5						0.5			0.5	
Lane Grp Cap (vph)		3866						375			355	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.34									0.02	
v/c Ratio		0.52						0.09			0.09	
Uniform Delay, d1		6.3						21.9			21.9	
Progression Factor		1.78						1.00			1.04	
Incremental Delay, d2		0.4						0.0			0.0	
Delay (s)		11.6						21.9			22.9	
Level of Service		B						C			C	
Approach Delay (s)		11.6			0.0			21.9			22.9	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	55.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	EBR2	NBT	SEL	SET	SER
Lane Configurations							
Traffic Volume (vph)	100	240	20	10	5	735	240
Future Volume (vph)	100	240	20	10	5	735	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0		5.6	5.6
Lane Util. Factor	1.00	0.88		1.00		0.95	1.00
Frt	1.00	0.85		1.00		1.00	0.85
Flt Protected	0.95	1.00		1.00		1.00	1.00
Satd. Flow (prot)	1752	2760		1845		3504	1568
Flt Permitted	0.95	1.00		1.00		1.00	1.00
Satd. Flow (perm)	1752	2760		1845		3504	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	253	21	11	5	774	253
RTOR Reduction (vph)	0	83	0	0	0	40	0
Lane Group Flow (vph)	105	191	0	11	0	739	253
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	Prot		NA	custom	NA	custom
Protected Phases		4					2
Permitted Phases	4			3	2	2	
Actuated Green, G (s)	10.2	10.2		0.9		34.2	34.2
Effective Green, g (s)	10.2	10.2		0.9		34.2	34.2
Actuated g/C Ratio	0.17	0.17		0.01		0.56	0.56
Clearance Time (s)	5.0	5.0		5.0		5.6	5.6
Vehicle Extension (s)	0.5	0.5		1.5		0.5	0.5
Lane Grp Cap (vph)	293	462		27		1967	880
v/s Ratio Prot		c0.07					0.16
v/s Ratio Perm	0.06			c0.01		c0.21	
v/c Ratio	0.36	0.41		0.41		0.38	0.29
Uniform Delay, d1	22.5	22.7		29.7		7.4	7.0
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	0.3	0.2		3.6		0.5	0.8
Delay (s)	22.7	22.9		33.4		8.0	7.8
Level of Service	C	C		C		A	A
Approach Delay (s)	22.8			33.4		7.9	
Approach LOS	C			C		A	

Intersection Summary			
HCM 2000 Control Delay	12.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	60.9	Sum of lost time (s)	15.6
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	45	20	45	100	5	305	0	510	105	20	1010	105
Future Volume (vph)	45	20	45	100	5	305	0	510	105	20	1010	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		0.91	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.95	1.00	1.00	0.99		1.00	0.92	1.00	1.00	0.56
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1717	1810	1466	1715	1810	1517		4940	1409	1719	3438	857
Flt Permitted	0.75	1.00	1.00	0.17	1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1349	1810	1466	307	1810	1517		4940	1409	1719	3438	857
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	39	17	39	87	4	266	0	446	92	17	882	92
RTOR Reduction (vph)	0	0	37	0	0	175	0	0	66	0	0	52
Lane Group Flow (vph)	39	17	2	87	4	91	0	446	26	17	882	40
Confl. Peds. (#/hr)	2		5	5		2	20		18	18		20
Confl. Bikes (#/hr)			3						30			424
Turn Type	Perm	NA	custom	Perm	NA	Perm		NA	Perm	Prot	NA	Perm
Protected Phases		4			8			6		5	2	
Permitted Phases	4		5	8		8	6		6			2
Actuated Green, G (s)	6.7	6.7	4.2	23.3	23.3	23.3		18.9	18.9	4.2	25.8	25.8
Effective Green, g (s)	6.7	6.7	4.2	23.5	23.5	23.5		19.4	19.4	3.2	26.6	26.6
Actuated g/C Ratio	0.10	0.10	0.06	0.34	0.34	0.34		0.28	0.28	0.05	0.39	0.39
Clearance Time (s)	4.0	4.0	3.0	4.2	4.2	4.2		4.5	4.5	3.0	4.8	4.8
Vehicle Extension (s)	1.0	1.0	0.5	1.0	1.0	1.0		0.5	0.5	0.5	0.5	0.5
Lane Grp Cap (vph)	131	176	89	104	618	518		1392	397	79	1329	331
v/s Ratio Prot		0.01			0.00			0.09		0.01	c0.26	
v/s Ratio Perm	c0.03		0.00	c0.28		0.06			0.02			0.05
v/c Ratio	0.30	0.10	0.03	0.84	0.01	0.18		0.32	0.07	0.22	0.66	0.12
Uniform Delay, d1	28.9	28.3	30.4	20.9	14.9	15.9		19.5	18.1	31.6	17.4	13.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.1	0.0	39.9	0.0	0.1		0.0	0.0	0.5	1.0	0.1
Delay (s)	29.3	28.4	30.4	60.7	14.9	15.9		19.5	18.1	32.1	18.4	13.6
Level of Service	C	C	C	E	B	B		B	B	C	B	B
Approach Delay (s)		29.6			26.8			19.3			18.2	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	68.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	20	5	10	5	5	15	25	625	5	10	1120	35
Future Volume (vph)	20	5	10	5	5	15	25	625	5	10	1120	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.5		4.0	4.8	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes		1.00		1.00	0.98		1.00	1.00		1.00	0.99	
Flpb, ped/bikes		0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.96		1.00	0.89		1.00	1.00		1.00	1.00	
Flt Protected		0.97		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1662		1713	1564		1719	4931		1719	4869	
Flt Permitted		0.87		0.83	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1479		1493	1564		1719	4931		1719	4869	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	17	4	9	4	4	13	22	546	4	9	979	31
RTOR Reduction (vph)	0	8	0	0	11	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	22	0	4	6	0	22	550	0	9	1008	0
Confl. Peds. (#/hr)	17		3	3		17	24		18	18		24
Confl. Bikes (#/hr)									26			471
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)		14.1		14.1	14.1		2.3	88.0		1.1	86.5	
Effective Green, g (s)		14.1		14.1	14.1		2.3	88.0		1.1	86.5	
Actuated g/C Ratio		0.12		0.12	0.12		0.02	0.76		0.01	0.75	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.5		4.0	4.8	
Vehicle Extension (s)		1.0		1.0	1.0		0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)		180		181	190		34	3750		16	3640	
v/s Ratio Prot					0.00		c0.01	0.11		0.01	c0.21	
v/s Ratio Perm		c0.01		0.00								
v/c Ratio		0.12		0.02	0.03		0.65	0.15		0.56	0.28	
Uniform Delay, d1		45.3		44.7	44.8		56.3	3.7		57.1	4.6	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1		0.0	0.0		27.5	0.1		24.2	0.2	
Delay (s)		45.4		44.7	44.8		83.8	3.8		81.3	4.8	
Level of Service		D		D	D		F	A		F	A	
Approach Delay (s)		45.4			44.8			6.9			5.5	
Approach LOS		D			D			A			A	

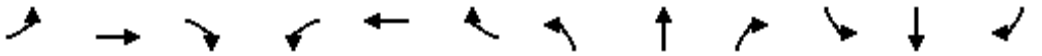
Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	115.7	Sum of lost time (s)	12.8
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBT	SBT	SER	SER2
Lane Configurations					
Traffic Volume (vph)	455	895	345	590	295
Future Volume (vph)	455	895	345	590	295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.5	4.5	4.9
Lane Util. Factor	*0.52	*0.52	0.95	*0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.80
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	1.00	1.00
Satd. Flow (prot)	891	2780	3438	3167	1132
Flt Permitted	0.95	0.99	1.00	1.00	1.00
Satd. Flow (perm)	891	2780	3438	3167	1132
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%
Adj. Flow (vph)	398	782	301	515	258
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	251	929	301	515	258
Confl. Peds. (#/hr)	4			9	9
Confl. Bikes (#/hr)					212
Heavy Vehicles (%)	5%	5%	5%	14%	14%
Bus Blockages (#/hr)	0	5	0	0	0
Turn Type	Perm	NA	NA	Prot	Perm
Protected Phases		6	4	3	
Permitted Phases	6				3
Actuated Green, G (s)	28.6	28.6	9.3	18.1	18.1
Effective Green, g (s)	29.3	29.3	10.2	18.5	18.1
Actuated g/C Ratio	0.42	0.42	0.15	0.26	0.26
Clearance Time (s)	4.7	4.7	4.4	4.9	4.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	372	1163	500	836	292
v/s Ratio Prot			c0.09	0.16	
v/s Ratio Perm	0.28	0.33			c0.23
v/c Ratio	0.67	0.80	0.60	0.62	0.88
Uniform Delay, d1	16.5	17.8	28.0	22.6	24.9
Progression Factor	0.57	0.63	1.00	1.00	1.00
Incremental Delay, d2	8.2	5.1	2.0	1.4	25.4
Delay (s)	17.7	16.2	30.0	24.0	50.4
Level of Service	B	B	C	C	D
Approach Delay (s)		16.5	30.0		
Approach LOS		B	C		

Intersection Summary			
HCM 2000 Control Delay	23.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

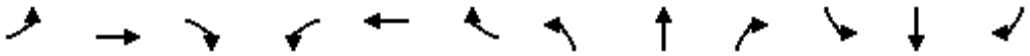
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1330	920	20	185	0	0	0	0
Future Volume (vph)	0	0	0	0	1330	920	20	185	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.6		4.0				
Lane Util. Factor					*0.87	0.88		0.91				
Frpb, ped/bikes					1.00	0.96		1.00				
Flpb, ped/bikes					1.00	1.00		1.00				
Frt					1.00	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3149	2592		4916				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3149	2592		4916				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	0	0	0	0	1162	804	17	162	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	71	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1162	804	0	108	0	0	0	0
Confl. Peds. (#/hr)			13	13			1		30	30		1
Confl. Bikes (#/hr)						74			35			
Turn Type					NA	custom	Perm	NA				
Protected Phases					2			4				
Permitted Phases						6	4					
Actuated Green, G (s)					48.9	37.7		12.3				
Effective Green, g (s)					49.5	37.7		12.5				
Actuated g/C Ratio					0.71	0.54		0.18				
Clearance Time (s)					4.6	4.6		4.2				
Vehicle Extension (s)					3.0	3.0		2.0				
Lane Grp Cap (vph)					2226	1395		877				
v/s Ratio Prot					c0.37							
v/s Ratio Perm						c0.31		0.02				
v/c Ratio					0.52	0.58		0.12				
Uniform Delay, d1					4.8	10.8		24.1				
Progression Factor					0.60	0.52		1.13				
Incremental Delay, d2					0.8	1.6		0.0				
Delay (s)					3.7	7.2		27.2				
Level of Service					A	A		C				
Approach Delay (s)		0.0			5.1			27.2			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.6
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



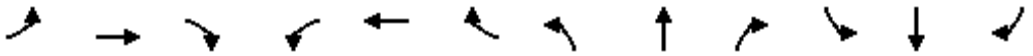
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1810	10	415	45	0	0	0	25
Future Volume (vph)	0	0	0	0	1810	10	415	45	0	0	0	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		3.8	4.0				4.0
Lane Util. Factor					0.86		0.95	0.95				1.00
Frpb, ped/bikes					1.00		1.00	1.00				0.98
Flpb, ped/bikes					1.00		1.00	1.00				1.00
Frt					1.00		1.00	1.00				0.86
Flt Protected					1.00		0.95	0.96				1.00
Satd. Flow (prot)					6216		1633	1654				1541
Flt Permitted					1.00		0.95	0.96				1.00
Satd. Flow (perm)					6216		1633	1654				1541
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	0	0	0	0	1581	9	363	39	0	0	0	22
RTOR Reduction (vph)	0	0	0	0	0	0	19	18	0	0	0	18
Lane Group Flow (vph)	0	0	0	0	1590	0	202	163	0	0	0	4
Confl. Peds. (#/hr)	15		6	6		15	3		1	1		3
Confl. Bikes (#/hr)						63						
Turn Type					NA		Prot	NA				Perm
Protected Phases					2		1 4	4				
Permitted Phases												4
Actuated Green, G (s)					40.7		20.7	20.7				12.5
Effective Green, g (s)					41.3		16.9	20.9				12.7
Actuated g/C Ratio					0.59		0.24	0.30				0.18
Clearance Time (s)					4.6			4.2				4.2
Vehicle Extension (s)					3.0			2.0				2.0
Lane Grp Cap (vph)					3667		394	493				279
v/s Ratio Prot					c0.26		c0.12	c0.10				
v/s Ratio Perm												0.00
v/c Ratio					0.43		0.51	0.33				0.01
Uniform Delay, d1					7.9		23.0	19.1				23.5
Progression Factor					0.98		0.80	0.79				1.00
Incremental Delay, d2					0.4		0.4	0.1				0.0
Delay (s)					8.1		18.9	15.3				23.5
Level of Service					A		B	B				C
Approach Delay (s)		0.0			8.1			17.3			23.5	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	15	1770	60	35	25	0	0	5	15
Future Volume (vph)	0	0	0	15	1770	60	35	25	0	0	5	15
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	
Lane Util. Factor					0.86			1.00			1.00	
Frpb, ped/bikes					1.00			1.00			0.98	
Flpb, ped/bikes					1.00			0.99			1.00	
Frt					1.00			1.00			0.90	
Flt Protected					1.00			0.97			1.00	
Satd. Flow (prot)					6176			1748			1595	
Flt Permitted					1.00			0.81			1.00	
Satd. Flow (perm)					6176			1457			1595	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	0	0	0	13	1546	52	31	22	0	0	4	13
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	0	0	1609	0	0	53	0	0	14	0
Confl. Peds. (#/hr)	11		11	11		11	10		10	10		10
Confl. Bikes (#/hr)						62						
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			4			4	
Permitted Phases				2			4					
Actuated Green, G (s)					53.6			7.4			7.4	
Effective Green, g (s)					53.6			7.4			7.4	
Actuated g/C Ratio					0.77			0.11			0.11	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					0.2			3.0			3.0	
Lane Grp Cap (vph)					4729			154			168	
v/s Ratio Prot											0.01	
v/s Ratio Perm					0.26			c0.04				
v/c Ratio					0.34			0.34			0.09	
Uniform Delay, d1					2.6			29.0			28.2	
Progression Factor					1.00			1.25			1.00	
Incremental Delay, d2					0.2			1.3			0.2	
Delay (s)					2.8			37.6			28.5	
Level of Service					A			D			C	
Approach Delay (s)		0.0			2.8			37.6			28.5	
Approach LOS		A			A			D			C	

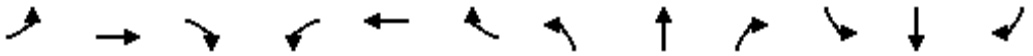
Intersection Summary			
HCM 2000 Control Delay	4.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	450	210	0	0	0	0	0	0	540	850	0
Future Volume (vph)	0	450	210	0	0	0	0	0	0	540	850	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0							3.6	4.0	
Lane Util. Factor		0.91	1.00							0.91	0.91	
Frpb, ped/bikes		1.00	0.96							1.00	1.00	
Flpb, ped/bikes		1.00	1.00							1.00	1.00	
Frt		1.00	0.85							1.00	1.00	
Flt Protected		1.00	1.00							0.95	0.99	
Satd. Flow (prot)		4940	1471							1564	3228	
Flt Permitted		1.00	1.00							0.95	0.99	
Satd. Flow (perm)		4940	1471							1564	3228	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	0	393	183	0	0	0	0	0	0	472	743	0
RTOR Reduction (vph)	0	0	127	0	0	0	0	0	0	118	30	0
Lane Group Flow (vph)	0	393	56	0	0	0	0	0	0	165	902	0
Confl. Peds. (#/hr)	13		14	14		13	10					10
Confl. Bikes (#/hr)			23									
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	5	0
Turn Type		NA	Perm							Prot	NA	
Protected Phases		6								8	4	
Permitted Phases			6									
Actuated Green, G (s)		21.1	21.1							40.3	40.3	
Effective Green, g (s)		21.6	21.6							40.8	40.8	
Actuated g/C Ratio		0.31	0.31							0.58	0.58	
Clearance Time (s)		4.5	4.5							4.1	4.5	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		1524	453							911	1881	
v/s Ratio Prot		c0.08								0.11	c0.28	
v/s Ratio Perm			0.04									
v/c Ratio		0.26	0.12							0.18	0.48	
Uniform Delay, d1		18.2	17.4							6.8	8.5	
Progression Factor		1.00	1.00							1.47	1.01	
Incremental Delay, d2		0.4	0.6							0.1	0.2	
Delay (s)		18.6	18.0							10.1	8.7	
Level of Service		B	B							B	A	
Approach Delay (s)		18.4			0.0			0.0			9.0	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		

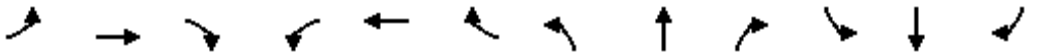
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	175	815	0	0	0	0	0	30	10	0	0	0
Future Volume (vph)	175	815	0	0	0	0	0	30	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0			
Lane Util. Factor		0.91						0.95	1.00			
Frpb, ped/bikes		1.00						1.00	0.93			
Flpb, ped/bikes		1.00						1.00	1.00			
Frt		1.00						1.00	0.85			
Flt Protected		0.99						1.00	1.00			
Satd. Flow (prot)		4848						3438	1431			
Flt Permitted		0.99						1.00	1.00			
Satd. Flow (perm)		4848						3438	1431			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	153	712	0	0	0	0	0	26	9	0	0	0
RTOR Reduction (vph)	0	34	0	0	0	0	0	0	8	0	0	0
Lane Group Flow (vph)	0	831	0	0	0	0	0	26	1	0	0	0
Confl. Peds. (#/hr)	20		36	36		20	23		15	15		23
Confl. Bikes (#/hr)			4						25			
Bus Blockages (#/hr)	0	5	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA						NA	Perm			
Protected Phases		2						4				
Permitted Phases	2								4			
Actuated Green, G (s)		52.4						8.9	8.9			
Effective Green, g (s)		52.9						9.1	9.1			
Actuated g/C Ratio		0.76						0.13	0.13			
Clearance Time (s)		4.5						4.2	4.2			
Vehicle Extension (s)		0.2						0.5	0.5			
Lane Grp Cap (vph)		3663						446	186			
v/s Ratio Prot								c0.01				
v/s Ratio Perm		0.17							0.00			
v/c Ratio		0.23						0.06	0.01			
Uniform Delay, d1		2.5						26.7	26.5			
Progression Factor		2.39						1.00	1.00			
Incremental Delay, d2		0.1						0.0	0.0			
Delay (s)		6.2						26.7	26.5			
Level of Service		A						C	C			
Approach Delay (s)		6.2			0.0			26.7			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		

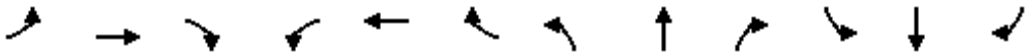
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	810	0	0	0	0	0	445	760	0	0	0
Future Volume (vph)	15	810	0	0	0	0	0	445	760	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0			
Lane Util. Factor		0.91						0.95	1.00			
Frpb, ped/bikes		1.00						1.00	0.99			
Flpb, ped/bikes		1.00						1.00	1.00			
Frt		1.00						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		4933						3223	1423			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		4933						3223	1423			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	13	708	0	0	0	0	0	389	664	0	0	0
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	352	0	0	0
Lane Group Flow (vph)	0	710	0	0	0	0	0	389	313	0	0	0
Confl. Peds. (#/hr)	16		24	24		16	5		1	1		5
Confl. Bikes (#/hr)			4									
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	12%	12%	12%	5%	5%	5%
Turn Type	Perm	NA						NA	Perm			
Protected Phases		6						8				
Permitted Phases	6								8			
Actuated Green, G (s)		43.3						17.3	17.3			
Effective Green, g (s)		43.8						18.2	18.2			
Actuated g/C Ratio		0.63						0.26	0.26			
Clearance Time (s)		4.5						4.9	4.9			
Vehicle Extension (s)		3.5						3.9	3.9			
Lane Grp Cap (vph)		3086						837	369			
v/s Ratio Prot								0.12				
v/s Ratio Perm		0.14							c0.22			
v/c Ratio		0.23						0.46	0.85			
Uniform Delay, d1		5.7						21.8	24.6			
Progression Factor		0.84						1.00	1.00			
Incremental Delay, d2		0.2						0.5	16.8			
Delay (s)		5.0						22.3	41.4			
Level of Service		A						C	D			
Approach Delay (s)		5.0			0.0			34.3			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	1475	70	0	0	0	0	35	15	10	10	0
Future Volume (vph)	25	1475	70	0	0	0	0	35	15	10	10	0
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	
Lane Util. Factor		0.86						1.00			1.00	
Frpb, ped/bikes		1.00						0.99			1.00	
Flpb, ped/bikes		1.00						1.00			1.00	
Frt		0.99						0.96			1.00	
Flt Protected		1.00						1.00			0.98	
Satd. Flow (prot)		6163						1728			1761	
Flt Permitted		1.00						1.00			0.86	
Satd. Flow (perm)		6163						1728			1548	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	22	1289	61	0	0	0	0	31	13	9	9	0
RTOR Reduction (vph)	0	4	0	0	0	0	0	11	0	0	0	0
Lane Group Flow (vph)	0	1368	0	0	0	0	0	33	0	0	18	0
Confl. Peds. (#/hr)	5		16	16		5	11		6	6		11
Confl. Bikes (#/hr)			4									
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		52.6						8.4			8.4	
Effective Green, g (s)		52.6						8.4			8.4	
Actuated g/C Ratio		0.75						0.12			0.12	
Clearance Time (s)		4.5						4.5			4.5	
Vehicle Extension (s)		0.5						0.5			0.5	
Lane Grp Cap (vph)		4631						207			185	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.22									0.01	
v/c Ratio		0.30						0.16			0.10	
Uniform Delay, d1		2.8						27.6			27.4	
Progression Factor		1.24						1.00			0.85	
Incremental Delay, d2		0.1						0.1			0.1	
Delay (s)		3.6						27.8			23.4	
Level of Service		A						C			C	
Approach Delay (s)		3.6			0.0			27.8			23.4	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	4.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	39.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	EBR2	NBT	SEL	SET	SER
Lane Configurations							
Traffic Volume (vph)	10	70	10	10	20	890	150
Future Volume (vph)	10	70	10	10	20	890	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0		5.6	5.6
Lane Util. Factor	1.00	0.88		1.00		0.95	1.00
Frt	1.00	0.85		1.00		1.00	0.85
Flt Protected	0.95	1.00		1.00		1.00	1.00
Satd. Flow (prot)	1719	2707		1810		3434	1538
Flt Permitted	0.95	1.00		1.00		1.00	1.00
Satd. Flow (perm)	1719	2707		1810		3434	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	9	61	9	9	17	778	131
RTOR Reduction (vph)	0	67	0	0	0	41	0
Lane Group Flow (vph)	9	3	0	9	0	754	131
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm	Prot		NA	custom	NA	custom
Protected Phases		4					2
Permitted Phases	4			3	2	2	
Actuated Green, G (s)	2.3	2.3		0.9		31.4	31.4
Effective Green, g (s)	2.3	2.3		0.9		31.4	31.4
Actuated g/C Ratio	0.05	0.05		0.02		0.63	0.63
Clearance Time (s)	5.0	5.0		5.0		5.6	5.6
Vehicle Extension (s)	0.5	0.5		1.5		0.5	0.5
Lane Grp Cap (vph)	78	124		32		2147	962
v/s Ratio Prot		0.00					0.09
v/s Ratio Perm	c0.01			c0.00		c0.22	
v/c Ratio	0.12	0.03		0.28		0.35	0.14
Uniform Delay, d1	23.0	22.9		24.3		4.5	3.8
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	0.2	0.0		1.8		0.5	0.3
Delay (s)	23.2	22.9		26.1		5.0	4.1
Level of Service	C	C		C		A	A
Approach Delay (s)	22.9			26.1		4.8	
Approach LOS	C			C		A	

Intersection Summary			
HCM 2000 Control Delay	6.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	50.2	Sum of lost time (s)	15.6
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	100	65	80	0	30	245	0	555	245	5	1025	30
Future Volume (vph)	100	65	80	0	30	245	0	555	245	5	1025	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.0		4.3	4.3		4.0	3.5	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00		0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.97		1.00	0.99		1.00	1.00	1.00	1.00	0.51
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1716	1810	1487		1810	1516		3438	1538	1719	3438	785
Flt Permitted	0.76	1.00	1.00		1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1364	1810	1487		1810	1516		3438	1538	1719	3438	785
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	87	57	70	0	26	214	0	485	214	4	896	26
RTOR Reduction (vph)	0	0	63	0	0	135	0	0	0	0	0	0
Lane Group Flow (vph)	87	57	7	0	26	79	0	485	214	4	896	26
Confl. Peds. (#/hr)	3		7	7		3	27		25	25		27
Confl. Bikes (#/hr)									33			626
Turn Type	Perm	NA	custom	Perm	NA	custom		NA	custom	Prot	NA	Perm
Protected Phases		4			3			6	16!	5!	2	
Permitted Phases	4		5	3		6	6					2
Actuated Green, G (s)	9.2	9.2	6.2		9.5	23.4		23.4	33.1	6.2	32.3	32.3
Effective Green, g (s)	9.2	9.2	6.2		9.7	23.6		23.9	33.6	5.2	33.1	33.1
Actuated g/C Ratio	0.14	0.14	0.10		0.15	0.37		0.37	0.52	0.08	0.51	0.51
Clearance Time (s)	4.0	4.0	3.0		4.5	4.5		4.5	4.0	3.0	4.8	4.8
Vehicle Extension (s)	1.0	1.0	0.5		0.5	0.5		0.5	3.0	0.5	0.5	0.5
Lane Grp Cap (vph)	195	258	143		273	556		1277	803	139	1769	404
v/s Ratio Prot		0.03			c0.01			0.14	0.14	0.00	c0.26	
v/s Ratio Perm	c0.06		0.00			0.05						0.03
v/c Ratio	0.45	0.22	0.05		0.10	0.14		0.38	0.27	0.03	0.51	0.06
Uniform Delay, d1	25.2	24.4	26.4		23.5	13.6		14.8	8.5	27.2	10.2	7.8
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.2	0.0		0.1	0.0		0.1	0.2	0.0	0.1	0.0
Delay (s)	25.8	24.5	26.4		23.6	13.6		14.8	8.7	27.3	10.3	7.9
Level of Service	C	C	C		C	B		B	A	C	B	A
Approach Delay (s)		25.7			14.7			13.0			10.3	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	64.3	Sum of lost time (s)	19.8
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

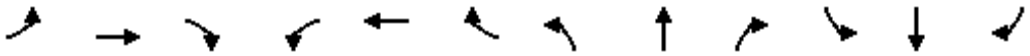
! Phase conflict between lane groups.
c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	10	25	60	15	15	5	40	570	25	10	985	50
Future Volume (vph)	10	25	60	15	15	5	40	570	25	10	985	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.5		4.0	4.8	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.99		1.00	0.99		1.00	1.00		1.00	0.97	
Flpb, ped/bikes		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.92		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1630		1715	1735		1719	3406		1719	3326	
Flt Permitted		0.98		0.80	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1602		1441	1735		1719	3406		1719	3326	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	9	22	52	13	13	4	35	498	22	9	861	44
RTOR Reduction (vph)	0	41	0	0	3	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	42	0	13	14	0	35	518	0	9	903	0
Confl. Peds. (#/hr)	23		4	4		23	25		18	18		25
Confl. Bikes (#/hr)									28			689
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)		12.7		12.7	12.7		3.3	34.0		2.4	32.8	
Effective Green, g (s)		12.7		12.7	12.7		3.3	34.0		2.4	32.8	
Actuated g/C Ratio		0.21		0.21	0.21		0.05	0.55		0.04	0.53	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.5		4.0	4.8	
Vehicle Extension (s)		1.0		1.0	1.0		0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)		330		297	357		92	1879		66	1770	
v/s Ratio Prot					0.01		0.02	c0.15		0.01	c0.27	
v/s Ratio Perm		c0.03		0.01								
v/c Ratio		0.13		0.04	0.04		0.38	0.28		0.14	0.51	
Uniform Delay, d1		19.9		19.6	19.6		28.2	7.3		28.6	9.2	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1		0.0	0.0		1.0	0.0		0.3	0.1	
Delay (s)		20.0		19.6	19.6		29.1	7.3		28.9	9.3	
Level of Service		B		B	B		C	A		C	A	
Approach Delay (s)		20.0			19.6			8.7			9.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	61.6	Sum of lost time (s)	12.8
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBT	SBT	SER	SER2
Lane Configurations					
Traffic Volume (vph)	145	980	300	780	215
Future Volume (vph)	145	980	300	780	215
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.5	4.5	4.9
Lane Util. Factor	1.00	0.95	0.95	0.88	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.98
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	0.85
Flt Protected	0.95	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1711	3404	3438	2493	1381
Flt Permitted	0.95	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1711	3404	3438	2493	1381
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%
Adj. Flow (vph)	127	856	262	681	188
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	127	856	262	681	188
Confl. Peds. (#/hr)	5			12	12
Confl. Bikes (#/hr)					
Heavy Vehicles (%)	5%	5%	5%	14%	14%
Bus Blockages (#/hr)	0	5	0	0	0
Turn Type	Perm	NA	NA	Prot	Perm
Protected Phases		6	4	3	
Permitted Phases	6				3
Actuated Green, G (s)	27.8	27.8	9.1	19.1	19.1
Effective Green, g (s)	28.5	28.5	10.0	19.5	19.1
Actuated g/C Ratio	0.41	0.41	0.14	0.28	0.27
Clearance Time (s)	4.7	4.7	4.4	4.9	4.9
Vehicle Extension (s)	3.0	3.0	3.0	2.0	2.0
Lane Grp Cap (vph)	696	1385	491	694	376
v/s Ratio Prot		c0.25	c0.08	c0.27	
v/s Ratio Perm	0.07				0.14
v/c Ratio	0.18	0.62	0.53	0.98	0.50
Uniform Delay, d1	13.3	16.4	27.8	25.1	21.4
Progression Factor	0.25	0.22	1.00	1.00	1.00
Incremental Delay, d2	0.5	1.9	1.1	29.3	0.4
Delay (s)	3.9	5.4	29.0	54.3	21.8
Level of Service	A	A	C	D	C
Approach Delay (s)		5.2	29.0		
Approach LOS		A	C		

Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1115	930	10	190	0	0	0	0
Future Volume (vph)	0	0	0	0	1115	930	10	190	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.6		4.0				
Lane Util. Factor					*0.87	0.88		0.95				
Frpb, ped/bikes					1.00	0.92		1.00				
Flpb, ped/bikes					1.00	1.00		1.00				
Frt					1.00	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3149	2482		3429				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3149	2482		3429				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	0	0	0	0	974	813	9	166	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	67	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	974	813	0	108	0	0	0	0
Confl. Peds. (#/hr)							2		55	55		2
Confl. Bikes (#/hr)						131						
Turn Type					NA	custom	Perm	NA				
Protected Phases					2			4				
Permitted Phases						6	4					
Actuated Green, G (s)					45.4	28.6		15.8				
Effective Green, g (s)					46.0	28.6		16.0				
Actuated g/C Ratio					0.66	0.41		0.23				
Clearance Time (s)					4.6	4.6		4.2				
Vehicle Extension (s)					3.0	3.0		2.0				
Lane Grp Cap (vph)					2069	1014		783				
v/s Ratio Prot					c0.31							
v/s Ratio Perm						c0.33		0.03				
v/c Ratio					0.47	0.80		0.14				
Uniform Delay, d1					6.0	18.2		21.5				
Progression Factor					1.82	1.46		1.04				
Incremental Delay, d2					0.7	6.2		0.0				
Delay (s)					11.5	32.7		22.4				
Level of Service					B	C		C				
Approach Delay (s)		0.0			21.1			22.4			0.0	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.6
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1585	10	865	55	0	0	0	30
Future Volume (vph)	0	0	0	0	1585	10	865	55	0	0	0	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		3.8	4.0				4.0
Lane Util. Factor					0.81		0.95	0.95				1.00
Frpb, ped/bikes					1.00		1.00	1.00				0.98
Flpb, ped/bikes					1.00		1.00	1.00				1.00
Frt					1.00		1.00	1.00				0.86
Flt Protected					1.00		0.95	0.96				1.00
Satd. Flow (prot)					7314		1633	1648				1535
Flt Permitted					1.00		0.95	0.96				1.00
Satd. Flow (perm)					7314		1633	1648				1535
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	0	0	0	0	1385	9	756	48	0	0	0	26
RTOR Reduction (vph)	0	0	0	0	0	0	16	14	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1394	0	445	329	0	0	0	26
Confl. Peds. (#/hr)	28		11	11		28	6		2	2		6
Confl. Bikes (#/hr)						90						
Turn Type					NA		Prot	NA				Perm
Protected Phases					2		1 4	4				
Permitted Phases												4
Actuated Green, G (s)					31.2		30.2	30.2				21.7
Effective Green, g (s)					31.8		26.4	30.4				21.9
Actuated g/C Ratio					0.45		0.38	0.43				0.31
Clearance Time (s)					4.6			4.2				4.2
Vehicle Extension (s)					3.0			2.0				2.0
Lane Grp Cap (vph)					3322		615	715				480
v/s Ratio Prot					c0.19		c0.27	0.20				
v/s Ratio Perm												0.02
v/c Ratio					0.42		0.72	0.46				0.05
Uniform Delay, d1					12.9		18.7	14.0				16.8
Progression Factor					1.15		0.59	0.39				1.00
Incremental Delay, d2					0.4		2.7	0.1				0.0
Delay (s)					15.2		13.7	5.6				16.8
Level of Service					B		B	A				B
Approach Delay (s)		0.0			15.2			10.3			16.8	
Approach LOS		A			B			B			B	

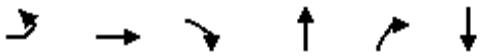
Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	15	1385	80	55	110	0	0	20	155
Future Volume (vph)	0	0	0	15	1385	80	55	110	0	0	20	155
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	
Lane Util. Factor					0.91			1.00			1.00	
Frpb, ped/bikes					0.99			1.00			0.97	
Flpb, ped/bikes					1.00			0.99			1.00	
Frt					0.99			1.00			0.88	
Flt Protected					1.00			0.98			1.00	
Satd. Flow (prot)					4863			1771			1549	
Flt Permitted					1.00			0.84			1.00	
Satd. Flow (perm)					4863			1520			1549	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	0	0	0	13	1210	70	48	96	0	0	17	135
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	0	0	0	1289	0	0	144	0	0	144	0
Confl. Peds. (#/hr)	20		20	20		20	18		18	18		18
Confl. Bikes (#/hr)						110						
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			4			4	
Permitted Phases				2			4					
Actuated Green, G (s)					48.3			12.7			12.7	
Effective Green, g (s)					48.3			12.7			12.7	
Actuated g/C Ratio					0.69			0.18			0.18	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					0.2			3.0			3.0	
Lane Grp Cap (vph)					3355			275			281	
v/s Ratio Prot											0.09	
v/s Ratio Perm					0.27			c0.09				
v/c Ratio					0.38			0.52			0.51	
Uniform Delay, d1					4.6			25.9			25.9	
Progression Factor					1.00			0.87			1.00	
Incremental Delay, d2					0.3			1.7			1.6	
Delay (s)					4.9			24.3			27.4	
Level of Service					A			C			C	
Approach Delay (s)		0.0			4.9			24.3			27.4	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

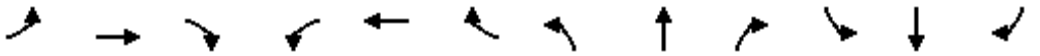
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	580	5	0	0	0	0	0	0	995	230	0
Future Volume (vph)	0	580	5	0	0	0	0	0	0	995	230	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0							4.1	4.0	
Lane Util. Factor		0.91	1.00							0.91	0.91	
Frpb, ped/bikes		1.00	0.95							1.00	1.00	
Flpb, ped/bikes		1.00	1.00							1.00	1.00	
Frt		1.00	0.85							1.00	1.00	
Flt Protected		1.00	1.00							0.95	0.97	
Satd. Flow (prot)		4940	1464							1564	3160	
Flt Permitted		1.00	1.00							0.95	0.97	
Satd. Flow (perm)		4940	1464							1564	3160	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.92	0.92	0.92	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	0	507	4	0	0	0	0	0	0	869	201	0
RTOR Reduction (vph)	0	0	3	0	0	0	0	0	0	239	63	0
Lane Group Flow (vph)	0	507	1	0	0	0	0	0	0	282	486	0
Confl. Peds. (#/hr)	16		17	17		16	14					14
Confl. Bikes (#/hr)			23									
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	2%	2%	2%	5%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	5	0
Turn Type		NA	Perm							Prot	NA	
Protected Phases		6								8	4	
Permitted Phases			6									
Actuated Green, G (s)		23.5	23.5							37.4	37.5	
Effective Green, g (s)		24.0	24.0							37.9	38.0	
Actuated g/C Ratio		0.34	0.34							0.54	0.54	
Clearance Time (s)		4.5	4.5							4.6	4.5	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		1693	501							846	1715	
v/s Ratio Prot		c0.10								c0.18	0.15	
v/s Ratio Perm			0.00								0.00	
v/c Ratio		0.30	0.00							0.33	0.28	
Uniform Delay, d1		16.8	15.1							9.0	8.6	
Progression Factor		1.00	1.00							1.76	0.97	
Incremental Delay, d2		0.5	0.0							0.7	0.3	
Delay (s)		17.3	15.1							16.5	8.6	
Level of Service		B	B							B	A	
Approach Delay (s)		17.3			0.0			0.0			12.4	
Approach LOS		B			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.6
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL2	EBT	EBR	NBT	NBR	SBT
Lane Configurations						
Traffic Volume (vph)	190	750	645	0	10	425
Future Volume (vph)	190	750	645	0	10	425
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	4.2	4.2		4.2
Lane Util. Factor		0.95	0.88	1.00		0.95
Frt		1.00	0.85	0.86		1.00
Flt Protected		0.99	1.00	1.00		1.00
Satd. Flow (prot)		3404	2707	1565		3438
Flt Permitted		0.99	1.00	1.00		1.00
Satd. Flow (perm)		3404	2707	1565		3438
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	166	655	564	0	9	371
RTOR Reduction (vph)	0	35	319	7	0	0
Lane Group Flow (vph)	0	786	245	2	0	371
Turn Type	Split	NA	custom	NA		NA
Protected Phases	2	2		4		4
Permitted Phases			6			
Actuated Green, G (s)		22.5	18.4	10.6		10.6
Effective Green, g (s)		22.5	18.4	10.6		10.6
Actuated g/C Ratio		0.53	0.43	0.25		0.25
Clearance Time (s)		5.0	4.2	4.2		4.2
Vehicle Extension (s)		3.0	3.0	3.0		3.0
Lane Grp Cap (vph)		1810	1177	392		861
v/s Ratio Prot		c0.23		0.00		c0.11
v/s Ratio Perm			0.09			
v/c Ratio		0.43	0.21	0.01		0.43
Uniform Delay, d1		6.0	7.4	11.9		13.3
Progression Factor		1.00	1.00	1.00		1.00
Incremental Delay, d2		0.2	0.4	0.0		0.3
Delay (s)		6.2	7.8	11.9		13.7
Level of Service		A	A	B		B
Approach Delay (s)		6.9		11.9		13.7
Approach LOS		A		B		B

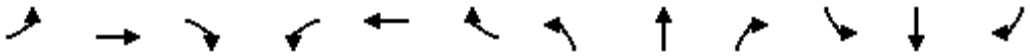
Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	42.3	Sum of lost time (s)	11.9
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	745	0	0	0	0	0	905	925	0	0	0
Future Volume (vph)	15	745	0	0	0	0	0	905	925	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0			
Lane Util. Factor		0.91						0.95	0.88			
Frpb, ped/bikes		1.00						1.00	1.00			
Flpb, ped/bikes		1.00						1.00	1.00			
Frt		1.00						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		4932						3223	2538			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		4932						3223	2538			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	13	651	0	0	0	0	0	791	808	0	0	0
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	299	0	0	0
Lane Group Flow (vph)	0	649	0	0	0	0	0	791	509	0	0	0
Confl. Peds. (#/hr)	28		42	42		28	9		2	2		9
Confl. Bikes (#/hr)			6									
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	12%	12%	12%	5%	5%	5%
Turn Type	Perm	NA						NA	Prot			
Protected Phases		6						8	8			
Permitted Phases	6											
Actuated Green, G (s)		35.5						25.1	25.1			
Effective Green, g (s)		36.0						26.0	26.0			
Actuated g/C Ratio		0.51						0.37	0.37			
Clearance Time (s)		4.5						4.9	4.9			
Vehicle Extension (s)		3.5						3.9	3.9			
Lane Grp Cap (vph)		2536						1197	942			
v/s Ratio Prot								c0.25	0.20			
v/s Ratio Perm		0.13										
v/c Ratio		0.26						0.66	0.54			
Uniform Delay, d1		9.5						18.3	17.3			
Progression Factor		0.22						1.00	1.00			
Incremental Delay, d2		0.2						2.9	2.2			
Delay (s)		2.3						21.2	19.5			
Level of Service		A						C	B			
Approach Delay (s)		2.3			0.0			20.4			0.0	
Approach LOS		A			A			C			A	

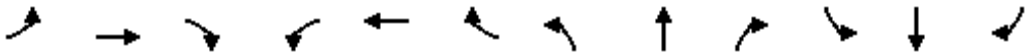
Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



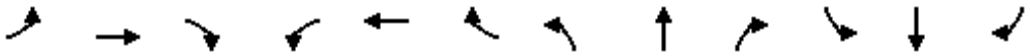
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	1525	10	0	0	0	0	30	15	25	10	0
Future Volume (vph)	135	1525	10	0	0	0	0	30	15	25	10	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0			5.0	
Lane Util. Factor		0.91						1.00			1.00	
Frpb, ped/bikes		1.00						0.99			1.00	
Flpb, ped/bikes		1.00						1.00			0.99	
Frt		1.00						0.95			1.00	
Flt Protected		1.00						1.00			0.97	
Satd. Flow (prot)		4907						1715			1735	
Flt Permitted		1.00						1.00			0.79	
Satd. Flow (perm)		4907						1715			1413	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	118	1332	9	0	0	0	0	26	13	22	9	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	11	0	0	0	0
Lane Group Flow (vph)	0	1458	0	0	0	0	0	28	0	0	31	0
Confl. Peds. (#/hr)	9		29	29		9	20		11	11		20
Confl. Bikes (#/hr)			7									
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		50.2						9.8			9.8	
Effective Green, g (s)		50.2						9.8			9.8	
Actuated g/C Ratio		0.72						0.14			0.14	
Clearance Time (s)		5.0						5.0			5.0	
Vehicle Extension (s)		0.5						0.5			0.5	
Lane Grp Cap (vph)		3519						240			197	
v/s Ratio Prot								0.02				
v/s Ratio Perm		0.30									c0.02	
v/c Ratio		0.41						0.12			0.16	
Uniform Delay, d1		4.0						26.3			26.5	
Progression Factor		0.86						1.00			0.78	
Incremental Delay, d2		0.3						0.1			0.1	
Delay (s)		3.7						26.4			20.8	
Level of Service		A						C			C	
Approach Delay (s)		3.7			0.0			26.4			20.8	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	4.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



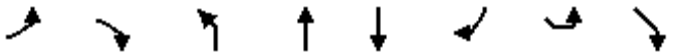
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	10	0	0	150	125	10	390	10	0	0	0
Future Volume (vph)	200	10	0	0	150	125	10	390	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.94			1.00				
Flt Protected		0.95			1.00			1.00				
Satd. Flow (prot)		1727			1699			1801				
Flt Permitted		0.58			1.00			1.00				
Satd. Flow (perm)		1045			1699			1801				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	175	9	0	0	131	109	9	341	9	0	0	0
RTOR Reduction (vph)	0	0	0	0	48	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	184	0	0	192	0	0	358	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			2			4				
Permitted Phases	2						4					
Actuated Green, G (s)		9.1			9.1			11.6				
Effective Green, g (s)		9.1			9.1			11.6				
Actuated g/C Ratio		0.32			0.32			0.40				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		0.5			0.5			0.5				
Lane Grp Cap (vph)		331			538			727				
v/s Ratio Prot					0.11							
v/s Ratio Perm		c0.18						0.20				
v/c Ratio		0.56			0.36			0.49				
Uniform Delay, d1		8.1			7.5			6.4				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		1.2			0.1			0.2				
Delay (s)		9.3			7.7			6.6				
Level of Service		A			A			A				
Approach Delay (s)		9.3			7.7			6.6			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	28.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	210	0	0	160	0	0	0	0	0	300	0
Future Volume (vph)	0	210	0	0	160	0	0	0	0	0	300	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		1.00			1.00						0.95	
Frt		1.00			1.00						1.00	
Flt Protected		1.00			1.00						1.00	
Satd. Flow (prot)		1810			1810						3438	
Flt Permitted		1.00			1.00						1.00	
Satd. Flow (perm)		1810			1810						3438	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	0	183	0	0	140	0	0	0	0	0	262	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	183	0	0	140	0	0	0	0	0	262	0
Turn Type		NA			NA						NA	
Protected Phases		2			2						4	
Permitted Phases				2						4		
Actuated Green, G (s)		5.7			5.7						11.4	
Effective Green, g (s)		5.7			5.7						11.4	
Actuated g/C Ratio		0.23			0.23						0.45	
Clearance Time (s)		4.0			4.0						4.0	
Vehicle Extension (s)		0.5			0.5						0.5	
Lane Grp Cap (vph)		411			411						1561	
v/s Ratio Prot		c0.10			0.08						c0.08	
v/s Ratio Perm												
v/c Ratio		0.45			0.34						0.17	
Uniform Delay, d1		8.3			8.1						4.0	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		0.3			0.2						0.0	
Delay (s)		8.6			8.3						4.1	
Level of Service		A			A						A	
Approach Delay (s)		8.6			8.3			0.0			4.1	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	25.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	24.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations								
Traffic Volume (vph)	0	20	0	20	0	0	0	235
Future Volume (vph)	0	20	0	20	0	0	0	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0				5.6
Lane Util. Factor		0.88		1.00				0.88
Frt		0.85		1.00				0.85
Flt Protected		1.00		1.00				1.00
Satd. Flow (prot)		2707		1810				2707
Flt Permitted		1.00		1.00				1.00
Satd. Flow (perm)		2707		1810				2707
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	0	17	0	17	0	0	0	205
RTOR Reduction (vph)	0	17	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	17	0	0	0	205
Turn Type		Perm		NA			Prot	Prot
Protected Phases							4	2
Permitted Phases		4		3				
Actuated Green, G (s)		1.2		2.2				34.5
Effective Green, g (s)		1.2		2.2				34.5
Actuated g/C Ratio		0.02		0.04				0.64
Clearance Time (s)		5.0		5.0				5.6
Vehicle Extension (s)		0.5		1.5				0.5
Lane Grp Cap (vph)		60		74				1745
v/s Ratio Prot								c0.08
v/s Ratio Perm		c0.00		c0.01				
v/c Ratio		0.01		0.23				0.12
Uniform Delay, d1		25.6		24.8				3.7
Progression Factor		1.00		1.00				1.00
Incremental Delay, d2		0.0		0.6				0.0
Delay (s)		25.6		25.4				3.7
Level of Service		C		C				A
Approach Delay (s)	25.6			25.4	0.0		3.7	
Approach LOS	C			C	A		A	

Intersection Summary			
HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.12		
Actuated Cycle Length (s)	53.5	Sum of lost time (s)	15.6
Intersection Capacity Utilization	23.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	70	20	90	0	25	265	0	575	240	5	965	5
Future Volume (vph)	70	20	90	0	25	265	0	575	240	5	965	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.0		4.0	4.0		4.0	3.5	4.0	4.0	3.2
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00		0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.96		1.00	0.99		1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1715	1810	1484		1810	1516		3438	1538	1719	3438	1538
Flt Permitted	0.76	1.00	1.00		1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1364	1810	1484		1810	1516		3438	1538	1719	3438	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	61	17	79	0	22	232	0	502	210	4	843	4
RTOR Reduction (vph)	0	0	72	0	0	169	0	0	83	0	0	2
Lane Group Flow (vph)	61	17	7	0	22	63	0	502	127	4	843	2
Confl. Peds. (#/hr)	3		7	7		3	27		25	25		27
Confl. Bikes (#/hr)									33			634
Turn Type	Perm	NA	custom	Perm	NA	Perm		NA	custom	Prot	NA	custom
Protected Phases		4			8			6	16!	5!	2	16
Permitted Phases	4		5	8		8	6					
Actuated Green, G (s)	8.8	8.8	6.1		18.4	18.4		19.6	29.2	6.1	28.4	29.2
Effective Green, g (s)	8.8	8.8	6.1		18.6	18.6		20.1	29.7	5.1	29.2	30.0
Actuated g/C Ratio	0.13	0.13	0.09		0.27	0.27		0.29	0.43	0.07	0.43	0.44
Clearance Time (s)	4.0	4.0	3.0		4.2	4.2		4.5	4.0	3.0	4.8	4.0
Vehicle Extension (s)	1.0	1.0	0.5		1.0	1.0		0.5	3.0	0.5	0.5	3.0
Lane Grp Cap (vph)	174	232	131		490	411		1007	665	127	1463	672
v/s Ratio Prot		0.01			0.01			0.15	0.08	0.00	c0.25	0.00
v/s Ratio Perm	c0.04		0.00			c0.04						
v/c Ratio	0.35	0.07	0.05		0.04	0.15		0.50	0.19	0.03	0.58	0.00
Uniform Delay, d1	27.3	26.3	28.6		18.4	19.0		20.1	12.0	29.5	15.0	10.9
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.0	0.1		0.0	0.1		0.1	0.1	0.0	0.3	0.0
Delay (s)	27.7	26.4	28.7		18.5	19.1		20.2	12.2	29.5	15.3	10.9
Level of Service	C	C	C		B	B		C	B	C	B	B
Approach Delay (s)		28.1			19.0			17.8			15.4	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	68.6	Sum of lost time (s)	19.5
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		

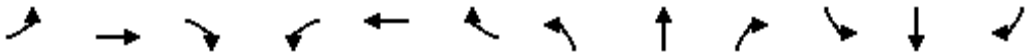
! Phase conflict between lane groups.
c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	10	25	10	15	10	5	55	570	40	5	950	40
Future Volume (vph)	10	25	10	15	10	5	55	570	40	5	950	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.5		4.0	4.8	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		1.00		1.00	0.99		1.00	0.99		1.00	0.98	
Flpb, ped/bikes		0.99		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.97		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1718		1711	1705		1719	3376		1719	3353	
Flt Permitted		0.96		0.79	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1659		1417	1705		1719	3376		1719	3353	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	9	22	9	13	9	4	48	498	35	4	830	35
RTOR Reduction (vph)	0	8	0	0	3	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	32	0	13	10	0	48	531	0	4	863	0
Confl. Peds. (#/hr)	23		4	4		23	33		25	25		33
Confl. Bikes (#/hr)									28			696
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)		18.5		18.5	18.5		5.7	89.1		1.1	84.2	
Effective Green, g (s)		18.5		18.5	18.5		5.7	89.1		1.1	84.2	
Actuated g/C Ratio		0.15		0.15	0.15		0.05	0.74		0.01	0.69	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.5		4.0	4.8	
Vehicle Extension (s)		1.0		1.0	1.0		0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)		253		216	260		80	2481		15	2329	
v/s Ratio Prot					0.01		c0.03	0.16		0.00	c0.26	
v/s Ratio Perm		c0.02		0.01								
v/c Ratio		0.13		0.06	0.04		0.60	0.21		0.27	0.37	
Uniform Delay, d1		44.4		43.9	43.8		56.6	5.0		59.6	7.6	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1		0.0	0.0		7.8	0.2		3.5	0.5	
Delay (s)		44.5		44.0	43.8		64.5	5.2		63.1	8.1	
Level of Service		D		D	D		E	A		E	A	
Approach Delay (s)		44.5			43.9			10.1			8.3	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	121.2	Sum of lost time (s)	12.8
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBT	SBT	SER	SER2
Lane Configurations					
Traffic Volume (vph)	515	750	255	890	275
Future Volume (vph)	515	750	255	890	275
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.5	4.5	4.9
Lane Util. Factor	*0.52	*0.52	0.95	*0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.83
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	1.00	1.00
Satd. Flow (prot)	890	1843	3438	3167	1181
Flt Permitted	0.95	0.99	1.00	1.00	1.00
Satd. Flow (perm)	890	1843	3438	3167	1181
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%
Adj. Flow (vph)	450	655	223	778	240
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	283	822	223	778	240
Confl. Peds. (#/hr)	5			9	9
Confl. Bikes (#/hr)					178
Heavy Vehicles (%)	5%	5%	5%	14%	14%
Bus Blockages (#/hr)	0	5	0	0	0
Turn Type	Perm	NA	NA	Prot	Perm
Protected Phases		6	4	3	
Permitted Phases	6				3
Actuated Green, G (s)	28.3	28.3	8.9	18.8	18.8
Effective Green, g (s)	29.0	29.0	9.8	19.2	18.8
Actuated g/C Ratio	0.41	0.41	0.14	0.27	0.27
Clearance Time (s)	4.7	4.7	4.4	4.9	4.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	368	763	481	868	317
v/s Ratio Prot			c0.06	c0.25	
v/s Ratio Perm	0.32	0.45			0.20
v/c Ratio	0.77	1.08	0.46	0.90	0.76
Uniform Delay, d1	17.6	20.5	27.7	24.4	23.5
Progression Factor	0.40	0.48	1.00	1.00	1.00
Incremental Delay, d2	12.7	53.5	0.7	11.8	9.9
Delay (s)	19.7	63.2	28.4	36.2	33.4
Level of Service	B	E	C	D	C
Approach Delay (s)		52.1	28.4		
Approach LOS		D	C		

Intersection Summary			
HCM 2000 Control Delay	42.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

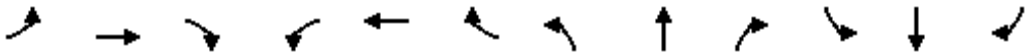


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1265	965	0	260	0	0	0	0
Future Volume (vph)	0	0	0	0	1265	965	0	260	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.6		4.0				
Lane Util. Factor					*0.87	0.88		0.91				
Frpb, ped/bikes					1.00	0.93		1.00				
Flpb, ped/bikes					1.00	1.00		1.00				
Frt					1.00	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3149	2504		4940				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3149	2504		4940				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	0	0	0	0	1105	843	0	227	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1105	843	0	227	0	0	0	0
Confl. Peds. (#/hr)			24	24			2		55	55		2
Confl. Bikes (#/hr)						138			29			
Turn Type					NA	custom		NA				
Protected Phases					2			4				
Permitted Phases						6	4					
Actuated Green, G (s)					47.7	34.1		13.5				
Effective Green, g (s)					48.3	34.1		13.7				
Actuated g/C Ratio					0.69	0.49		0.20				
Clearance Time (s)					4.6	4.6		4.2				
Vehicle Extension (s)					3.0	3.0		2.0				
Lane Grp Cap (vph)					2172	1219		966				
v/s Ratio Prot					c0.35			c0.05				
v/s Ratio Perm						c0.34						
v/c Ratio					0.51	0.69		0.23				
Uniform Delay, d1					5.2	13.9		23.7				
Progression Factor					0.82	1.05		0.89				
Incremental Delay, d2					0.8	3.0		0.0				
Delay (s)					5.0	17.6		21.1				
Level of Service					A	B		C				
Approach Delay (s)		0.0			10.5			21.1			0.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.6
Intersection Capacity Utilization	79.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

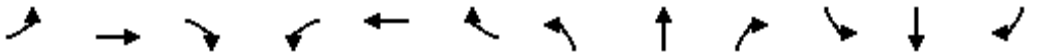
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1505	20	700	45	0	0	0	25
Future Volume (vph)	0	0	0	0	1505	20	700	45	0	0	0	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		3.8	4.0				4.0
Lane Util. Factor					0.86		0.95	0.95				1.00
Frpb, ped/bikes					1.00		1.00	1.00				0.98
Flpb, ped/bikes					1.00		1.00	1.00				1.00
Frt					1.00		1.00	1.00				0.86
Flt Protected					1.00		0.95	0.96				1.00
Satd. Flow (prot)					6201		1633	1648				1535
Flt Permitted					1.00		0.95	0.96				1.00
Satd. Flow (perm)					6201		1633	1648				1535
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	0	0	0	0	1315	17	612	39	0	0	0	22
RTOR Reduction (vph)	0	0	0	0	0	0	17	15	0	0	0	16
Lane Group Flow (vph)	0	0	0	0	1332	0	356	263	0	0	0	6
Confl. Peds. (#/hr)	28		11	11		28	6		2	2		6
Confl. Bikes (#/hr)						97						
Turn Type					NA		Prot	NA				Perm
Protected Phases					2		1 4	4				
Permitted Phases												4
Actuated Green, G (s)					34.5		26.9	26.9				18.6
Effective Green, g (s)					35.1		23.1	27.1				18.8
Actuated g/C Ratio					0.50		0.33	0.39				0.27
Clearance Time (s)					4.6			4.2				4.2
Vehicle Extension (s)					3.0			2.0				2.0
Lane Grp Cap (vph)					3109		538	638				412
v/s Ratio Prot					c0.21		c0.22	0.16				
v/s Ratio Perm												0.00
v/c Ratio					0.43		0.66	0.41				0.01
Uniform Delay, d1					11.1		20.1	15.6				18.8
Progression Factor					0.69		1.02	0.71				1.00
Incremental Delay, d2					0.4		1.6	0.1				0.0
Delay (s)					8.1		22.2	11.2				18.8
Level of Service					A		C	B				B
Approach Delay (s)		0.0			8.1			17.5			18.8	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	15	1300	55	80	125	0	0	5	145
Future Volume (vph)	0	0	0	15	1300	55	80	125	0	0	5	145
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	
Lane Util. Factor					0.91			1.00			1.00	
Frpb, ped/bikes					1.00			1.00			0.97	
Flpb, ped/bikes					1.00			0.99			1.00	
Frt					0.99			1.00			0.87	
Flt Protected					1.00			0.98			1.00	
Satd. Flow (prot)					4881			1764			1526	
Flt Permitted					1.00			0.82			1.00	
Satd. Flow (perm)					4881			1474			1526	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	0	0	0	13	1136	48	70	109	0	0	4	127
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	10	0
Lane Group Flow (vph)	0	0	0	0	1194	0	0	179	0	0	121	0
Confl. Peds. (#/hr)	20		20	20		20	18		18	18		18
Confl. Bikes (#/hr)						110						
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			4			4	
Permitted Phases				2			4					
Actuated Green, G (s)					47.2			13.8			13.8	
Effective Green, g (s)					47.2			13.8			13.8	
Actuated g/C Ratio					0.67			0.20			0.20	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					0.2			3.0			3.0	
Lane Grp Cap (vph)					3291			290			300	
v/s Ratio Prot											0.08	
v/s Ratio Perm					0.24			c0.12				
v/c Ratio					0.36			0.62			0.40	
Uniform Delay, d1					4.9			25.7			24.5	
Progression Factor					1.00			0.88			1.00	
Incremental Delay, d2					0.3			3.8			0.9	
Delay (s)					5.2			26.4			25.4	
Level of Service					A			C			C	
Approach Delay (s)		0.0			5.2			26.4			25.4	
Approach LOS		A			A			C			C	

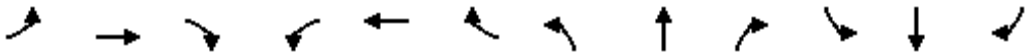
Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	325	260	0	0	0	0	0	0	910	750	0
Future Volume (vph)	0	325	260	0	0	0	0	0	0	910	750	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0							3.6	4.0	
Lane Util. Factor		0.91	1.00							0.91	0.91	
Frpb, ped/bikes		1.00	0.95							1.00	1.00	
Flpb, ped/bikes		1.00	1.00							1.00	1.00	
Frt		1.00	0.85							1.00	1.00	
Flt Protected		1.00	1.00							0.95	0.98	
Satd. Flow (prot)		4940	1464							1564	3208	
Flt Permitted		1.00	1.00							0.95	0.98	
Satd. Flow (perm)		4940	1464							1564	3208	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	0	284	227	0	0	0	0	0	0	795	655	0
RTOR Reduction (vph)	0	0	156	0	0	0	0	0	0	200	76	0
Lane Group Flow (vph)	0	284	71	0	0	0	0	0	0	277	897	0
Confl. Peds. (#/hr)	18		19	19		18	14					14
Confl. Bikes (#/hr)			23									
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	5	0
Turn Type		NA	Perm							Prot	NA	
Protected Phases		6								8	4	
Permitted Phases			6									
Actuated Green, G (s)		21.3	21.3							40.1	40.1	
Effective Green, g (s)		21.8	21.8							40.6	40.6	
Actuated g/C Ratio		0.31	0.31							0.58	0.58	
Clearance Time (s)		4.5	4.5							4.1	4.5	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		1538	455							907	1860	
v/s Ratio Prot		c0.06								0.18	c0.28	
v/s Ratio Perm			0.05									
v/c Ratio		0.18	0.16							0.31	0.48	
Uniform Delay, d1		17.6	17.4							7.5	8.6	
Progression Factor		1.00	1.00							0.67	0.67	
Incremental Delay, d2		0.3	0.7							0.1	0.1	
Delay (s)		17.9	18.2							5.1	5.9	
Level of Service		B	B							A	A	
Approach Delay (s)		18.0			0.0			0.0			5.6	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		

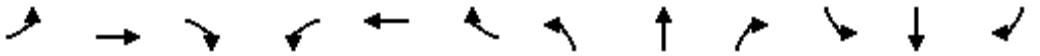
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	1035	0	0	0	0	0	60	10	0	0	0
Future Volume (vph)	200	1035	0	0	0	0	0	60	10	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0			
Lane Util. Factor		0.91						0.95	1.00			
Frpb, ped/bikes		1.00						1.00	0.93			
Flpb, ped/bikes		1.00						1.00	1.00			
Frt		1.00						1.00	0.85			
Flt Protected		0.99						1.00	1.00			
Satd. Flow (prot)		4847						3438	1426			
Flt Permitted		0.99						1.00	1.00			
Satd. Flow (perm)		4847						3438	1426			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	175	904	0	0	0	0	0	52	9	0	0	0
RTOR Reduction (vph)	0	29	0	0	0	0	0	0	8	0	0	0
Lane Group Flow (vph)	0	1050	0	0	0	0	0	52	1	0	0	0
Confl. Peds. (#/hr)	27		49	49		27	31		20	20		31
Confl. Bikes (#/hr)			6						24			
Bus Blockages (#/hr)	0	5	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA						NA	Perm			
Protected Phases		2						4				
Permitted Phases	2								4			
Actuated Green, G (s)		52.4						8.9	8.9			
Effective Green, g (s)		52.9						9.1	9.1			
Actuated g/C Ratio		0.76						0.13	0.13			
Clearance Time (s)		4.5						4.2	4.2			
Vehicle Extension (s)		0.2						0.5	0.5			
Lane Grp Cap (vph)		3662						446	185			
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.22							0.00			
v/c Ratio		0.29						0.12	0.01			
Uniform Delay, d1		2.7						26.9	26.5			
Progression Factor		0.81						1.00	1.00			
Incremental Delay, d2		0.2						0.0	0.0			
Delay (s)		2.3						26.9	26.5			
Level of Service		A						C	C			
Approach Delay (s)		2.3			0.0			26.9			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	3.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		

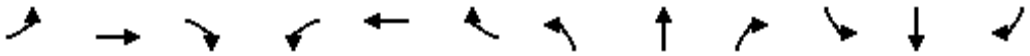
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	1030	0	0	0	0	0	730	775	0	0	0
Future Volume (vph)	15	1030	0	0	0	0	0	730	775	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0			
Lane Util. Factor		0.91						0.95	1.00			
Frpb, ped/bikes		1.00						1.00	0.99			
Flpb, ped/bikes		1.00						1.00	1.00			
Frt		1.00						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		4933						3223	1421			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		4933						3223	1421			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	13	900	0	0	0	0	0	638	677	0	0	0
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	346	0	0	0
Lane Group Flow (vph)	0	901	0	0	0	0	0	638	331	0	0	0
Confl. Peds. (#/hr)	29		44	44		29	9		2	2		9
Confl. Bikes (#/hr)			6									
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	12%	12%	12%	5%	5%	5%
Turn Type	Perm	NA						NA	Perm			
Protected Phases		6						8				
Permitted Phases	6								8			
Actuated Green, G (s)		42.5						18.1	18.1			
Effective Green, g (s)		43.0						19.0	19.0			
Actuated g/C Ratio		0.61						0.27	0.27			
Clearance Time (s)		4.5						4.9	4.9			
Vehicle Extension (s)		3.5						3.9	3.9			
Lane Grp Cap (vph)		3030						874	385			
v/s Ratio Prot								0.20				
v/s Ratio Perm		0.18							c0.23			
v/c Ratio		0.30						0.73	0.86			
Uniform Delay, d1		6.4						23.2	24.2			
Progression Factor		0.61						1.00	1.00			
Incremental Delay, d2		0.2						3.3	17.6			
Delay (s)		4.1						26.4	41.9			
Level of Service		A						C	D			
Approach Delay (s)		4.1			0.0			34.4			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	150	1550	105	0	0	0	0	55	15	10	10	0
Future Volume (vph)	150	1550	105	0	0	0	0	55	15	10	10	0
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	
Lane Util. Factor		0.86						1.00			1.00	
Frpb, ped/bikes		1.00						1.00			1.00	
Flpb, ped/bikes		1.00						1.00			1.00	
Frt		0.99						0.97			1.00	
Flt Protected		1.00						1.00			0.98	
Satd. Flow (prot)		6109						1749			1757	
Flt Permitted		1.00						1.00			0.87	
Satd. Flow (perm)		6109						1749			1573	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	131	1354	92	0	0	0	0	48	13	9	9	0
RTOR Reduction (vph)	0	6	0	0	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	1571	0	0	0	0	0	52	0	0	18	0
Confl. Peds. (#/hr)	9		29	29		9	20		11	11		20
Confl. Bikes (#/hr)			7									
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		50.2						10.8			10.8	
Effective Green, g (s)		50.2						10.8			10.8	
Actuated g/C Ratio		0.72						0.15			0.15	
Clearance Time (s)		4.5						4.5			4.5	
Vehicle Extension (s)		0.5						0.5			0.5	
Lane Grp Cap (vph)		4381						269			242	
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.26									0.01	
v/c Ratio		0.36						0.19			0.07	
Uniform Delay, d1		3.8						25.8			25.3	
Progression Factor		1.47						1.00			0.94	
Incremental Delay, d2		0.2						0.1			0.0	
Delay (s)		5.7						25.9			23.8	
Level of Service		A						C			C	
Approach Delay (s)		5.7			0.0			25.9			23.8	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	EBR2	NBT	SEL	SET	SER
Lane Configurations							
Traffic Volume (vph)	40	120	60	20	10	915	85
Future Volume (vph)	40	120	60	20	10	915	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0		5.6	5.6
Lane Util. Factor	1.00	0.88		1.00		0.95	1.00
Frt	1.00	0.85		1.00		1.00	0.85
Flt Protected	0.95	1.00		1.00		1.00	1.00
Satd. Flow (prot)	1719	2707		1810		3436	1538
Flt Permitted	0.95	1.00		1.00		1.00	1.00
Satd. Flow (perm)	1719	2707		1810		3436	1538
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	83%	83%	83%	83%	83%	83%	83%
Adj. Flow (vph)	35	105	52	17	9	799	74
RTOR Reduction (vph)	0	92	0	0	0	34	0
Lane Group Flow (vph)	35	65	0	17	0	774	74
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	5%
Turn Type	Perm	Prot		NA	custom	NA	custom
Protected Phases		4					2
Permitted Phases	4			3	2	2	
Actuated Green, G (s)	4.7	4.7		1.0		35.7	35.7
Effective Green, g (s)	4.7	4.7		1.0		35.7	35.7
Actuated g/C Ratio	0.08	0.08		0.02		0.63	0.63
Clearance Time (s)	5.0	5.0		5.0		5.6	5.6
Vehicle Extension (s)	0.5	0.5		1.5		0.5	0.5
Lane Grp Cap (vph)	141	223		31		2152	963
v/s Ratio Prot		c0.02					0.05
v/s Ratio Perm	0.02			c0.01		c0.23	
v/c Ratio	0.25	0.29		0.55		0.36	0.08
Uniform Delay, d1	24.5	24.6		27.8		5.1	4.2
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	0.3	0.3		10.2		0.5	0.2
Delay (s)	24.8	24.9		38.0		5.6	4.3
Level of Service	C	C		D		A	A
Approach Delay (s)	24.8			38.0		5.5	
Approach LOS	C			D		A	

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	57.0	Sum of lost time (s)	15.6
Intersection Capacity Utilization	42.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	55	40	65	110	15	270	0	1330	240	20	760	105
Future Volume (vph)	55	40	65	110	15	270	0	1330	240	20	760	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00		0.91	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.93	1.00	1.00	0.98		1.00	0.61	1.00	1.00	0.87
Flpb, ped/bikes	0.99	1.00	1.00	0.99	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1738	1845	1451	1741	1845	1536		5036	953	1752	3505	1365
Flt Permitted	0.74	1.00	1.00	0.17	1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1362	1845	1451	305	1845	1536		5036	953	1752	3505	1365
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	56	40	66	111	15	273	0	1344	243	20	768	106
RTOR Reduction (vph)	0	0	62	0	0	199	0	0	70	0	0	58
Lane Group Flow (vph)	56	40	4	111	15	74	0	1344	173	20	768	48
Confl. Peds. (#/hr)	9		13	13		9	37		22	22		37
Confl. Bikes (#/hr)			2						331			56
Turn Type	Perm	NA	custom	Perm	NA	Perm		NA	Perm	Prot	NA	Perm
Protected Phases		4			8			6		5	2	
Permitted Phases	4		5	8		8	6		6			2
Actuated Green, G (s)	12.2	12.2	6.0	23.8	23.8	23.8		30.8	30.8	6.0	39.5	39.5
Effective Green, g (s)	12.2	12.2	6.0	24.0	24.0	24.0		31.3	31.3	5.0	40.3	40.3
Actuated g/C Ratio	0.14	0.14	0.07	0.27	0.27	0.27		0.35	0.35	0.06	0.46	0.46
Clearance Time (s)	4.0	4.0	3.0	4.2	4.2	4.2		4.5	4.5	3.0	4.8	4.8
Vehicle Extension (s)	1.0	1.0	0.5	1.0	1.0	1.0		0.5	0.5	0.5	0.5	0.5
Lane Grp Cap (vph)	187	254	98	82	500	416		1781	337	98	1596	621
v/s Ratio Prot		0.02			0.01			c0.27		0.01	c0.22	
v/s Ratio Perm	c0.04		0.00	c0.36		0.05			0.18			0.04
v/c Ratio	0.30	0.16	0.05	1.35	0.03	0.18		0.75	0.51	0.20	0.48	0.08
Uniform Delay, d1	34.3	33.6	38.6	32.2	23.7	24.7		25.2	22.6	39.9	16.8	13.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.1	0.1	219.9	0.0	0.1		1.7	0.6	0.4	0.1	0.0
Delay (s)	34.6	33.7	38.6	252.2	23.7	24.8		26.9	23.1	40.2	16.9	13.6
Level of Service	C	C	D	F	C	C		C	C	D	B	B
Approach Delay (s)		36.0			88.0			26.3			17.0	
Approach LOS		D			F			C			B	

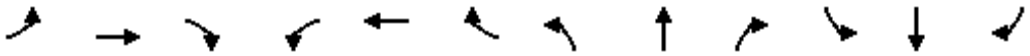
Intersection Summary			
HCM 2000 Control Delay	32.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	88.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	50	25	15	0	20	25	70	1310	125	70	870	70
Future Volume (vph)	50	25	15	0	20	25	70	1310	125	70	870	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.5		4.0	4.8	
Lane Util. Factor		1.00			1.00		1.00	0.91		1.00	0.91	
Frpb, ped/bikes		0.98			0.93		1.00	0.97		1.00	0.98	
Flpb, ped/bikes		0.94			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.92		1.00	0.99		1.00	0.99	
Flt Protected		0.97			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1620			1580		1752	4824		1752	4885	
Flt Permitted		0.83			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1386			1580		1752	4824		1752	4885	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	51	25	15	0	20	25	71	1324	126	71	879	71
RTOR Reduction (vph)	0	5	0	0	19	0	0	6	0	0	6	0
Lane Group Flow (vph)	0	86	0	0	26	0	71	1444	0	71	944	0
Confl. Peds. (#/hr)	86		91	91		86	54		37	37		54
Confl. Bikes (#/hr)									338			49
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)		30.0			30.0		7.2	76.8		7.2	76.5	
Effective Green, g (s)		30.0			30.0		7.2	76.8		7.2	76.5	
Actuated g/C Ratio		0.24			0.24		0.06	0.61		0.06	0.60	
Clearance Time (s)		4.0			4.0		4.0	4.5		4.0	4.8	
Vehicle Extension (s)		1.0			1.0		0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)		328			374		99	2928		99	2954	
v/s Ratio Prot					0.02		c0.04	c0.30		0.04	0.19	
v/s Ratio Perm		c0.06										
v/c Ratio		0.26			0.07		0.72	0.49		0.72	0.32	
Uniform Delay, d1		39.2			37.4		58.6	13.9		58.6	12.2	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			0.0		18.5	0.6		18.5	0.3	
Delay (s)		39.4			37.5		77.2	14.5		77.2	12.5	
Level of Service		D			D		E	B		E	B	
Approach Delay (s)		39.4			37.5			17.5			17.0	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	126.5	Sum of lost time (s)	12.8
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

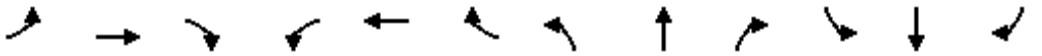
Movement	WBL	WBT	SBT	SER	SER2
Lane Configurations					
Traffic Volume (vph)	415	655	315	690	400
Future Volume (vph)	415	655	315	690	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.5	4.5	4.9
Lane Util. Factor	*0.52	*0.52	0.95	*0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.95
Flpb, ped/bikes	0.98	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	1.00	1.00
Satd. Flow (prot)	895	2822	3505	3343	1418
Flt Permitted	0.95	0.99	1.00	1.00	1.00
Satd. Flow (perm)	895	2822	3505	3343	1418
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%
Adj. Flow (vph)	419	662	318	697	404
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	264	817	318	697	404
Confl. Peds. (#/hr)	19			18	18
Confl. Bikes (#/hr)					26
Heavy Vehicles (%)	3%	3%	3%	8%	8%
Bus Blockages (#/hr)	0	5	0	0	0
Turn Type	Perm	NA	NA	Prot	Perm
Protected Phases		6	4	3	
Permitted Phases	6				3
Actuated Green, G (s)	27.5	27.5	9.4	19.1	19.1
Effective Green, g (s)	28.2	28.2	10.3	19.5	19.1
Actuated g/C Ratio	0.40	0.40	0.15	0.28	0.27
Clearance Time (s)	4.7	4.7	4.4	4.9	4.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	360	1136	515	931	386
v/s Ratio Prot			c0.09	0.21	
v/s Ratio Perm	c0.29	0.29			c0.28
v/c Ratio	0.73	0.72	0.62	0.75	1.05
Uniform Delay, d1	17.7	17.6	28.0	23.0	25.4
Progression Factor	0.66	0.67	1.00	1.00	1.00
Incremental Delay, d2	11.2	3.5	2.2	3.3	58.5
Delay (s)	22.9	15.3	30.2	26.4	84.0
Level of Service	C	B	C	C	F
Approach Delay (s)		17.2	30.2		
Approach LOS		B	C		

Intersection Summary			
HCM 2000 Control Delay	32.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



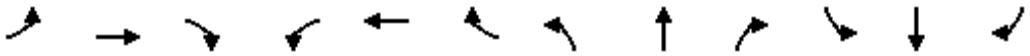
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1030	875	40	370	0	0	0	0
Future Volume (vph)	0	0	0	0	1030	875	40	370	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.6		4.0				
Lane Util. Factor					*0.87	0.88		0.91				
Frpb, ped/bikes					1.00	0.98		1.00				
Flpb, ped/bikes					1.00	1.00		1.00				
Frt					1.00	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3210	2709		5007				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3210	2709		5007				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	0	0	0	0	1041	884	40	374	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	69	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1041	884	0	345	0	0	0	0
Confl. Peds. (#/hr)			80	80			8		144	144		8
Confl. Bikes (#/hr)						16			502			
Turn Type					NA	custom	Perm	NA				
Protected Phases					2			4				
Permitted Phases						6	4					
Actuated Green, G (s)					46.6	40.2		14.6				
Effective Green, g (s)					47.2	40.2		14.8				
Actuated g/C Ratio					0.67	0.57		0.21				
Clearance Time (s)					4.6	4.6		4.2				
Vehicle Extension (s)					3.0	3.0		2.0				
Lane Grp Cap (vph)					2164	1555		1058				
v/s Ratio Prot					c0.32							
v/s Ratio Perm						c0.33		0.07				
v/c Ratio					0.48	0.57		0.33				
Uniform Delay, d1					5.5	9.4		23.4				
Progression Factor					0.50	0.55		1.07				
Incremental Delay, d2					0.7	1.4		0.1				
Delay (s)					3.5	6.6		25.0				
Level of Service					A	A		C				
Approach Delay (s)		0.0			4.9			25.0			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.6
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



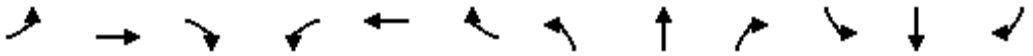
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1410	15	470	110	0	0	0	25
Future Volume (vph)	0	0	0	0	1410	15	470	110	0	0	0	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		3.8	4.0				4.0
Lane Util. Factor					0.86		0.95	0.95				1.00
Frpb, ped/bikes					1.00		1.00	1.00				0.96
Flpb, ped/bikes					1.00		1.00	1.00				1.00
Frt					1.00		1.00	1.00				0.86
Flt Protected					1.00		0.95	0.97				1.00
Satd. Flow (prot)					6324		1665	1699				1532
Flt Permitted					1.00		0.95	0.97				1.00
Satd. Flow (perm)					6324		1665	1699				1532
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	0	0	0	0	1425	15	475	111	0	0	0	25
RTOR Reduction (vph)	0	0	0	0	0	0	19	17	0	0	0	20
Lane Group Flow (vph)	0	0	0	0	1440	0	272	279	0	0	0	5
Confl. Peds. (#/hr)	55		21	21		55	23		36	36		23
Confl. Bikes (#/hr)						31						
Turn Type					NA		Prot	NA				Perm
Protected Phases					2		1 4	4				
Permitted Phases												4
Actuated Green, G (s)					39.4		22.0	22.0				13.8
Effective Green, g (s)					40.0		18.2	22.2				14.0
Actuated g/C Ratio					0.57		0.26	0.32				0.20
Clearance Time (s)					4.6			4.2				4.2
Vehicle Extension (s)					3.0			2.0				2.0
Lane Grp Cap (vph)					3613		432	538				306
v/s Ratio Prot					c0.23		c0.16	c0.16				
v/s Ratio Perm												0.00
v/c Ratio					0.40		0.63	0.52				0.02
Uniform Delay, d1					8.3		22.9	19.5				22.5
Progression Factor					0.95		0.50	0.49				1.00
Incremental Delay, d2					0.3		1.4	0.2				0.0
Delay (s)					8.2		12.8	9.9				22.5
Level of Service					A		B	A				C
Approach Delay (s)		0.0			8.2			11.3			22.5	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	20	1365	55	50	35	0	0	10	10
Future Volume (vph)	0	0	0	20	1365	55	50	35	0	0	10	10
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	
Lane Util. Factor					0.86			1.00			1.00	
Frpb, ped/bikes					1.00			1.00			0.98	
Flpb, ped/bikes					1.00			0.98			1.00	
Frt					0.99			1.00			0.93	
Flt Protected					1.00			0.97			1.00	
Satd. Flow (prot)					6282			1759			1683	
Flt Permitted					1.00			0.81			1.00	
Satd. Flow (perm)					6282			1471			1683	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	0	0	0	20	1379	56	51	35	0	0	10	10
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	0	0	0	1452	0	0	86	0	0	16	0
Confl. Peds. (#/hr)	21		18	18		21	30		18	18		30
Confl. Bikes (#/hr)						25						
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			4			4	
Permitted Phases				2			4					
Actuated Green, G (s)					49.6			11.4			11.4	
Effective Green, g (s)					49.6			11.4			11.4	
Actuated g/C Ratio					0.71			0.16			0.16	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					0.2			3.0			3.0	
Lane Grp Cap (vph)					4451			239			274	
v/s Ratio Prot											0.01	
v/s Ratio Perm					0.23			c0.06				
v/c Ratio					0.33			0.36			0.06	
Uniform Delay, d1					3.9			26.1			24.8	
Progression Factor					1.00			1.35			1.00	
Incremental Delay, d2					0.2			0.9			0.1	
Delay (s)					4.1			36.1			24.8	
Level of Service					A			D			C	
Approach Delay (s)		0.0			4.1			36.1			24.8	
Approach LOS		A			A			D			C	

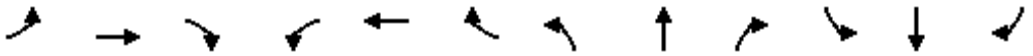
Intersection Summary			
HCM 2000 Control Delay	6.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	43.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1180	200	0	0	0	0	0	0	570	850	0
Future Volume (vph)	0	1180	200	0	0	0	0	0	0	570	850	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0							3.6	4.0	
Lane Util. Factor		0.91	1.00							0.91	0.91	
Frpb, ped/bikes		1.00	0.73							1.00	1.00	
Flpb, ped/bikes		1.00	1.00							1.00	1.00	
Frt		1.00	0.85							1.00	1.00	
Flt Protected		1.00	1.00							0.95	0.99	
Satd. Flow (prot)		5036	1147							1595	3284	
Flt Permitted		1.00	1.00							0.95	0.99	
Satd. Flow (perm)		5036	1147							1595	3284	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	0	1192	202	0	0	0	0	0	0	576	859	0
RTOR Reduction (vph)	0	0	71	0	0	0	0	0	0	174	9	0
Lane Group Flow (vph)	0	1192	131	0	0	0	0	0	0	172	1080	0
Confl. Peds. (#/hr)	49		32	32		49	103		12	12		103
Confl. Bikes (#/hr)			321									
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	5	0
Turn Type		NA	Perm							Prot	NA	
Protected Phases		6								8	4	
Permitted Phases			6									
Actuated Green, G (s)		20.7	20.7							34.2	40.7	
Effective Green, g (s)		21.2	21.2							34.7	41.2	
Actuated g/C Ratio		0.30	0.30							0.50	0.59	
Clearance Time (s)		4.5	4.5							4.1	4.5	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		1525	347							790	1932	
v/s Ratio Prot		c0.24								0.11	c0.28	
v/s Ratio Perm			0.11								0.05	
v/c Ratio		0.78	0.38							0.22	0.56	
Uniform Delay, d1		22.3	19.2							10.0	8.8	
Progression Factor		1.00	1.00							0.95	0.84	
Incremental Delay, d2		4.1	3.1							0.1	0.2	
Delay (s)		26.3	22.3							9.6	7.6	
Level of Service		C	C							A	A	
Approach Delay (s)		25.8			0.0			0.0			8.1	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		

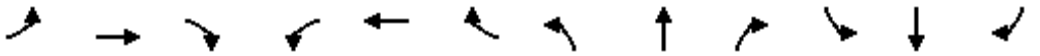
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	335	1415	0	0	0	0	0	75	20	0	0	0
Future Volume (vph)	335	1415	0	0	0	0	0	75	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0			
Lane Util. Factor		0.91						0.95	1.00			
Frpb, ped/bikes		1.00						1.00	0.55			
Flpb, ped/bikes		0.98						1.00	1.00			
Frt		1.00						1.00	0.85			
Flt Protected		0.99						1.00	1.00			
Satd. Flow (prot)		4879						3505	867			
Flt Permitted		0.99						1.00	1.00			
Satd. Flow (perm)		4879						3505	867			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	339	1430	0	0	0	0	0	76	20	0	0	0
RTOR Reduction (vph)	0	49	0	0	0	0	0	0	17	0	0	0
Lane Group Flow (vph)	0	1720	0	0	0	0	0	76	3	0	0	0
Confl. Peds. (#/hr)	84		88	88		84	70		88	88		70
Confl. Bikes (#/hr)			43						313			
Bus Blockages (#/hr)	0	5	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA						NA	Perm			
Protected Phases		2						4				
Permitted Phases	2								4			
Actuated Green, G (s)		49.5						11.8	11.8			
Effective Green, g (s)		50.0						12.0	12.0			
Actuated g/C Ratio		0.71						0.17	0.17			
Clearance Time (s)		4.5						4.2	4.2			
Vehicle Extension (s)		0.2						0.5	0.5			
Lane Grp Cap (vph)		3485						600	148			
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.35							0.00			
v/c Ratio		0.49						0.13	0.02			
Uniform Delay, d1		4.4						24.6	24.1			
Progression Factor		1.98						1.00	1.00			
Incremental Delay, d2		0.4						0.0	0.0			
Delay (s)		9.1						24.6	24.1			
Level of Service		A						C	C			
Approach Delay (s)		9.1			0.0			24.5			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

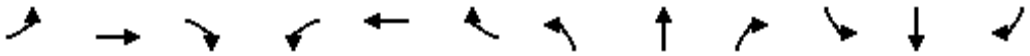
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1405	0	0	0	0	0	550	545	0	0	0
Future Volume (vph)	30	1405	0	0	0	0	0	550	545	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0			
Lane Util. Factor		0.91						0.95	1.00			
Frpb, ped/bikes		1.00						1.00	0.97			
Flpb, ped/bikes		1.00						1.00	1.00			
Frt		1.00						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		5018						3252	1414			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		5018						3252	1414			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	30	1420	0	0	0	0	0	556	551	0	0	0
RTOR Reduction (vph)	0	10	0	0	0	0	0	0	366	0	0	0
Lane Group Flow (vph)	0	1440	0	0	0	0	0	556	185	0	0	0
Confl. Peds. (#/hr)	81		117	117		81	19		12	12		19
Confl. Bikes (#/hr)			60									
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	11%	11%	11%	3%	3%	3%
Turn Type	Perm	NA						NA	Perm			
Protected Phases		6						8				
Permitted Phases	6								8			
Actuated Green, G (s)		45.5						15.1	15.1			
Effective Green, g (s)		46.0						16.0	16.0			
Actuated g/C Ratio		0.66						0.23	0.23			
Clearance Time (s)		4.5						4.9	4.9			
Vehicle Extension (s)		3.5						3.9	3.9			
Lane Grp Cap (vph)		3297						743	323			
v/s Ratio Prot								c0.17				
v/s Ratio Perm		0.29							0.13			
v/c Ratio		0.44						0.75	0.57			
Uniform Delay, d1		5.8						25.1	24.0			
Progression Factor		0.83						1.00	1.00			
Incremental Delay, d2		0.4						4.4	2.9			
Delay (s)		5.2						29.5	26.8			
Level of Service		A						C	C			
Approach Delay (s)		5.2			0.0			28.2			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	1780	135	0	0	0	0	50	15	15	15	0
Future Volume (vph)	35	1780	135	0	0	0	0	50	15	15	15	0
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	
Lane Util. Factor		0.86						1.00			1.00	
Frpb, ped/bikes		0.99						1.00			1.00	
Flpb, ped/bikes		1.00						1.00			1.00	
Frt		0.99						0.97			1.00	
Flt Protected		1.00						1.00			0.98	
Satd. Flow (prot)		6183						1783			1799	
Flt Permitted		1.00						1.00			0.87	
Satd. Flow (perm)		6183						1783			1603	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	35	1799	136	0	0	0	0	51	15	15	15	0
RTOR Reduction (vph)	0	9	0	0	0	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	1961	0	0	0	0	0	64	0	0	30	0
Confl. Peds. (#/hr)	32		83	83		32	34		1	1		34
Confl. Bikes (#/hr)			55									
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		48.2						12.8			12.8	
Effective Green, g (s)		48.2						12.8			12.8	
Actuated g/C Ratio		0.69						0.18			0.18	
Clearance Time (s)		4.5						4.5			4.5	
Vehicle Extension (s)		0.5						0.5			0.5	
Lane Grp Cap (vph)		4257						326			293	
v/s Ratio Prot								c0.04				
v/s Ratio Perm		0.32									0.02	
v/c Ratio		0.46						0.20			0.10	
Uniform Delay, d1		5.0						24.2			23.8	
Progression Factor		0.84						1.00			1.11	
Incremental Delay, d2		0.3						0.1			0.1	
Delay (s)		4.5						24.4			26.5	
Level of Service		A						C			C	
Approach Delay (s)		4.5			0.0			24.4			26.5	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	5.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	EBR2	NBT	SEL	SET	SER
Lane Configurations							
Traffic Volume (vph)	50	270	70	15	30	685	335
Future Volume (vph)	50	270	70	15	30	685	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0		5.6	5.6
Lane Util. Factor	1.00	0.88		1.00		0.95	1.00
Frt	1.00	0.85		1.00		1.00	0.85
Flt Protected	0.95	1.00		1.00		1.00	1.00
Satd. Flow (prot)	1752	2760		1845		3498	1568
Flt Permitted	0.95	1.00		1.00		1.00	1.00
Satd. Flow (perm)	1752	2760		1845		3498	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	51	273	71	15	30	692	339
RTOR Reduction (vph)	0	98	0	0	0	56	0
Lane Group Flow (vph)	51	246	0	15	0	666	339
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	Prot		NA	custom	NA	custom
Protected Phases		4					2
Permitted Phases	4			3	2	2	
Actuated Green, G (s)	7.8	7.8		0.8		22.7	22.7
Effective Green, g (s)	7.8	7.8		0.8		22.7	22.7
Actuated g/C Ratio	0.17	0.17		0.02		0.48	0.48
Clearance Time (s)	5.0	5.0		5.0		5.6	5.6
Vehicle Extension (s)	0.5	0.5		1.5		0.5	0.5
Lane Grp Cap (vph)	291	459		31		1693	758
v/s Ratio Prot		c0.09					c0.22
v/s Ratio Perm	0.03			c0.01		0.19	
v/c Ratio	0.18	0.54		0.48		0.39	0.45
Uniform Delay, d1	16.8	17.9		22.8		7.7	8.0
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	0.1	0.6		4.3		0.7	1.9
Delay (s)	16.9	18.5		27.1		8.4	9.9
Level of Service	B	B		C		A	A
Approach Delay (s)	18.3			27.1		8.9	
Approach LOS	B			C		A	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	46.9	Sum of lost time (s)	15.6
Intersection Capacity Utilization	46.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	135	320	60	0	25	235	0	1225	280	20	800	30
Future Volume (vph)	135	320	60	0	25	235	0	1225	280	20	800	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.0		4.0	4.0		4.0	4.0	4.0	4.0	3.7
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00		0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.88		1.00	0.97		1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	0.98	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1726	1845	1383		1845	1525		3505	1568	1752	3505	1568
Flt Permitted	0.74	1.00	1.00		1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1352	1845	1383		1845	1525		3505	1568	1752	3505	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	136	323	61	0	25	237	0	1238	283	20	808	30
RTOR Reduction (vph)	0	0	58	0	0	198	0	0	0	0	0	0
Lane Group Flow (vph)	136	323	3	0	25	39	0	1238	283	20	808	30
Confl. Peds. (#/hr)	12		18	18		12	50		30	30		50
Confl. Bikes (#/hr)									364			79
Turn Type	Perm	NA	custom	Perm	NA	Perm		NA	custom	Prot	NA	custom
Protected Phases		4			8			6	16!	5!	2	16
Permitted Phases	4		5	8		8	6					
Actuated Green, G (s)	26.3	26.3	6.2		20.1	20.1		56.1	65.3	6.2	65.0	65.3
Effective Green, g (s)	26.3	26.3	6.2		20.3	20.3		56.6	65.8	5.2	65.8	66.1
Actuated g/C Ratio	0.21	0.21	0.05		0.16	0.16		0.45	0.53	0.04	0.53	0.53
Clearance Time (s)	4.0	4.0	3.0		4.2	4.2		4.5	4.5	3.0	4.8	4.5
Vehicle Extension (s)	1.0	1.0	0.5		1.0	1.0		0.5	3.0	0.5	0.5	3.0
Lane Grp Cap (vph)	285	390	68		301	248		1594	829	73	1853	833
v/s Ratio Prot		c0.18			0.01			c0.35	0.18	0.01	c0.23	0.02
v/s Ratio Perm	0.10		0.00			c0.03						
v/c Ratio	0.48	0.83	0.04		0.08	0.16		0.78	0.34	0.27	0.44	0.04
Uniform Delay, d1	43.0	46.9	56.3		44.2	44.7		28.6	16.8	57.8	17.9	13.9
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	12.9	0.1		0.0	0.1		2.2	1.1	0.7	0.1	0.1
Delay (s)	43.5	59.8	56.4		44.2	44.8		30.8	18.0	58.5	18.0	14.0
Level of Service	D	E	E		D	D		C	B	E	B	B
Approach Delay (s)		55.1			44.7			28.4			18.8	
Approach LOS		E			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	124.4	Sum of lost time (s)	20.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	15	15	50	0	20	10	120	1135	30	15	800	70
Future Volume (vph)	15	15	50	0	20	10	120	1135	30	15	800	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.5		4.0	4.8	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.93			0.97		1.00	0.99		1.00	0.98	
Flpb, ped/bikes		0.98			1.00		1.00	1.00		1.00	1.00	
Frt		0.92			0.95		1.00	1.00		1.00	0.99	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1536			1694		1752	3459		1752	3403	
Flt Permitted		0.96			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1494			1694		1752	3459		1752	3403	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	15	15	51	0	20	10	121	1147	30	15	808	71
RTOR Reduction (vph)	0	34	0	0	7	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	47	0	0	23	0	121	1176	0	15	874	0
Confl. Peds. (#/hr)	117		124	124		117	58		40	40		58
Confl. Bikes (#/hr)									370			67
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)		25.0			25.0		9.1	38.6		1.1	30.3	
Effective Green, g (s)		25.0			25.0		9.1	38.6		1.1	30.3	
Actuated g/C Ratio		0.32			0.32		0.12	0.50		0.01	0.39	
Clearance Time (s)		4.0			4.0		4.0	4.5		4.0	4.8	
Vehicle Extension (s)		1.0			1.0		0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)		483			548		206	1729		24	1335	
v/s Ratio Prot					0.01		0.07	c0.34		0.01	c0.26	
v/s Ratio Perm		c0.03										
v/c Ratio		0.10			0.04		0.59	0.68		0.62	0.65	
Uniform Delay, d1		18.2			17.9		32.3	14.6		37.8	19.2	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			0.0		2.7	0.8		31.2	0.9	
Delay (s)		18.2			17.9		35.0	15.5		69.1	20.1	
Level of Service		B			B		D	B		E	C	
Approach Delay (s)		18.2			17.9			17.3			20.9	
Approach LOS		B			B			B			C	

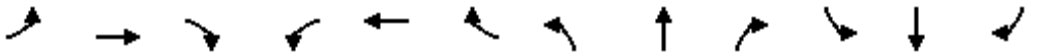
Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	77.2	Sum of lost time (s)	12.8
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	WBL	WBT	SBT	SER	SER2
Lane Configurations					
Traffic Volume (vph)	55	700	250	935	185
Future Volume (vph)	55	700	250	935	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.5	4.5	4.9
Lane Util. Factor	*0.52	*0.52	0.95	*0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.96
Flpb, ped/bikes	0.98	1.00	1.00	1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	1.00
Satd. Flow (prot)	890	1899	3505	3343	1437
Flt Permitted	0.95	1.00	1.00	1.00	1.00
Satd. Flow (perm)	890	1899	3505	3343	1437
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%
Adj. Flow (vph)	56	707	253	945	187
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	56	707	253	945	187
Confl. Peds. (#/hr)	26			25	25
Confl. Bikes (#/hr)					
Heavy Vehicles (%)	3%	3%	3%	8%	8%
Bus Blockages (#/hr)	0	5	0	0	0
Turn Type	Perm	NA	NA	Prot	Perm
Protected Phases		6	4	3	
Permitted Phases	6				3
Actuated Green, G (s)	27.3	27.3	9.6	19.1	19.1
Effective Green, g (s)	28.0	28.0	10.5	19.5	19.1
Actuated g/C Ratio	0.40	0.40	0.15	0.28	0.27
Clearance Time (s)	4.7	4.7	4.4	4.9	4.9
Vehicle Extension (s)	3.0	3.0	3.0	2.0	2.0
Lane Grp Cap (vph)	356	759	525	931	392
v/s Ratio Prot		c0.37	c0.07	c0.28	
v/s Ratio Perm	0.06				0.13
v/c Ratio	0.16	0.93	0.48	1.02	0.48
Uniform Delay, d1	13.4	20.1	27.3	25.2	21.3
Progression Factor	0.52	0.50	1.00	1.00	1.00
Incremental Delay, d2	0.9	19.0	3.1	33.3	4.1
Delay (s)	7.9	29.0	30.4	58.5	25.4
Level of Service	A	C	C	E	C
Approach Delay (s)		27.4	30.4		
Approach LOS		C	C		

Intersection Summary			
HCM 2000 Control Delay	41.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	740	870	15	330	0	0	0	0
Future Volume (vph)	0	0	0	0	740	870	15	330	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.6		4.0				
Lane Util. Factor					*0.87	0.88		0.95				
Frpb, ped/bikes					1.00	0.98		1.00				
Flpb, ped/bikes					1.00	1.00		1.00				
Frt					1.00	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3210	2697		3495				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3210	2697		3495				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	0	0	0	0	748	879	15	333	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	67	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	748	879	0	281	0	0	0	0
Confl. Peds. (#/hr)			147	147			15		265	265		15
Confl. Bikes (#/hr)						25			421			
Turn Type					NA	custom	Perm	NA				
Protected Phases					2			4				
Permitted Phases						6	4					
Actuated Green, G (s)					45.4	36.6		15.8				
Effective Green, g (s)					46.0	36.6		16.0				
Actuated g/C Ratio					0.66	0.52		0.23				
Clearance Time (s)					4.6	4.6		4.2				
Vehicle Extension (s)					3.0	3.0		2.0				
Lane Grp Cap (vph)					2109	1410		798				
v/s Ratio Prot					c0.23							
v/s Ratio Perm						c0.33		0.08				
v/c Ratio					0.35	0.62		0.35				
Uniform Delay, d1					5.4	11.8		22.7				
Progression Factor					0.76	0.89		1.81				
Incremental Delay, d2					0.4	1.9		0.1				
Delay (s)					4.5	12.4		41.2				
Level of Service					A	B		D				
Approach Delay (s)		0.0			8.8			41.2			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.6
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

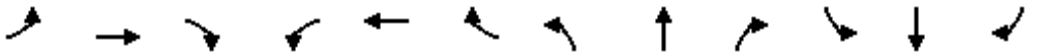


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1125	15	860	160	0	0	0	25
Future Volume (vph)	0	0	0	0	1125	15	860	160	0	0	0	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		3.8	4.0				4.0
Lane Util. Factor					0.81		0.95	0.95				1.00
Frpb, ped/bikes					1.00		1.00	1.00				0.94
Flpb, ped/bikes					1.00		1.00	1.00				1.00
Frt					1.00		1.00	1.00				0.86
Flt Protected					1.00		0.95	0.97				1.00
Satd. Flow (prot)					7427		1665	1695				1495
Flt Permitted					1.00		0.95	0.97				1.00
Satd. Flow (perm)					7427		1665	1695				1495
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	0	0	0	0	1137	15	869	162	0	0	0	25
RTOR Reduction (vph)	0	0	0	0	0	0	11	13	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1152	0	519	488	0	0	0	25
Confl. Peds. (#/hr)	101		39	39		101	42		66	66		42
Confl. Bikes (#/hr)						43						
Turn Type					NA		Prot	NA				Perm
Protected Phases					2		1 4	4				
Permitted Phases												4
Actuated Green, G (s)					22.7		38.5	38.5				18.5
Effective Green, g (s)					23.3		38.7	34.9				18.7
Actuated g/C Ratio					0.33		0.55	0.50				0.27
Clearance Time (s)					4.6			4.2				4.2
Vehicle Extension (s)					3.0			2.0				2.0
Lane Grp Cap (vph)					2472		920	845				399
v/s Ratio Prot					c0.16		c0.31	0.29				
v/s Ratio Perm												0.02
v/c Ratio					0.47		0.56	0.58				0.06
Uniform Delay, d1					18.4		10.2	12.4				19.1
Progression Factor					1.04		0.25	0.19				1.00
Incremental Delay, d2					0.6		0.3	0.3				0.0
Delay (s)					19.8		2.9	2.7				19.1
Level of Service					B		A	A				B
Approach Delay (s)		0.0			19.8			2.8			19.1	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	20	1005	30	35	195	0	0	10	100
Future Volume (vph)	0	0	0	20	1005	30	35	195	0	0	10	100
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	
Lane Util. Factor					0.91			1.00			1.00	
Frpb, ped/bikes					1.00			1.00			0.94	
Flpb, ped/bikes					1.00			0.99			1.00	
Frt					1.00			1.00			0.88	
Flt Protected					1.00			0.99			1.00	
Satd. Flow (prot)					4984			1817			1517	
Flt Permitted					1.00			0.95			1.00	
Satd. Flow (perm)					4984			1731			1517	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	0	0	0	20	1016	30	35	197	0	0	10	101
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	0	0	0	1063	0	0	232	0	0	98	0
Confl. Peds. (#/hr)	39		33	33		39	55		33	33		55
Confl. Bikes (#/hr)						44						
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			4			4	
Permitted Phases				2			4					
Actuated Green, G (s)					40.9			20.1			20.1	
Effective Green, g (s)					40.9			20.1			20.1	
Actuated g/C Ratio					0.58			0.29			0.29	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					0.2			3.0			3.0	
Lane Grp Cap (vph)					2912			497			435	
v/s Ratio Prot											0.06	
v/s Ratio Perm					0.21			c0.13				
v/c Ratio					0.37			0.47			0.23	
Uniform Delay, d1					7.7			20.5			19.0	
Progression Factor					1.00			0.66			1.00	
Incremental Delay, d2					0.4			0.6			0.3	
Delay (s)					8.0			14.1			19.3	
Level of Service					A			B			B	
Approach Delay (s)		0.0			8.0			14.1			19.3	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



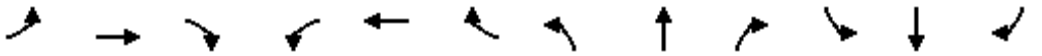
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1130	30	0	0	0	0	0	0	1115	125	0
Future Volume (vph)	0	1130	30	0	0	0	0	0	0	1115	125	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0							3.6	4.0	
Lane Util. Factor		0.91	1.00							0.91	0.91	
Frpb, ped/bikes		1.00	0.74							1.00	1.00	
Flpb, ped/bikes		1.00	1.00							1.00	0.99	
Frt		1.00	0.85							1.00	1.00	
Flt Protected		1.00	1.00							0.95	0.96	
Satd. Flow (prot)		5036	1167							1595	3176	
Flt Permitted		1.00	1.00							0.95	0.96	
Satd. Flow (perm)		5036	1167							1595	3176	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	0	1142	30	0	0	0	0	0	0	1127	126	0
RTOR Reduction (vph)	0	0	20	0	0	0	0	0	0	301	10	0
Lane Group Flow (vph)	0	1142	10	0	0	0	0	0	0	375	567	0
Confl. Peds. (#/hr)	67		37	37		67	140		16	16		140
Confl. Bikes (#/hr)			327									
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	5	0
Turn Type		NA	Perm							Prot	NA	
Protected Phases		6								8	4	
Permitted Phases			6									
Actuated Green, G (s)		22.8	22.8							23.1	38.6	
Effective Green, g (s)		23.3	23.3							23.6	39.1	
Actuated g/C Ratio		0.33	0.33							0.34	0.56	
Clearance Time (s)		4.5	4.5							4.1	4.5	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		1676	388							537	1774	
v/s Ratio Prot		c0.23								c0.24	c0.11	
v/s Ratio Perm			0.01								0.07	
v/c Ratio		0.68	0.03							0.70	0.32	
Uniform Delay, d1		20.1	15.7							20.1	8.3	
Progression Factor		1.00	1.00							1.42	0.13	
Incremental Delay, d2		2.3	0.1							3.5	0.2	
Delay (s)		22.4	15.8							32.0	1.3	
Level of Service		C	B							C	A	
Approach Delay (s)		22.2			0.0			0.0			17.9	
Approach LOS		C			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	63.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL2	EBT	EBR	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	335	1330	580	0	400
Future Volume (vph)	335	1330	580	0	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)		5.0	4.2		4.2
Lane Util. Factor		0.95	0.88		0.95
Frt		1.00	0.85		1.00
Flt Protected		0.99	1.00		1.00
Satd. Flow (prot)		3470	2760		3505
Flt Permitted		0.99	1.00		1.00
Satd. Flow (perm)		3470	2760		3505
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%
Adj. Flow (vph)	339	1344	586	0	404
RTOR Reduction (vph)	0	34	272	0	0
Lane Group Flow (vph)	0	1649	314	0	404
Turn Type	Split	NA	custom		NA
Protected Phases	2	2		4	4
Permitted Phases			6		
Actuated Green, G (s)		41.8	33.7		16.5
Effective Green, g (s)		41.8	33.7		16.5
Actuated g/C Ratio		0.62	0.50		0.24
Clearance Time (s)		5.0	4.2		4.2
Vehicle Extension (s)		3.0	3.0		3.0
Lane Grp Cap (vph)		2148	1377		856
v/s Ratio Prot		c0.48			c0.12
v/s Ratio Perm			0.11		
v/c Ratio		0.77	0.23		0.47
Uniform Delay, d1		9.3	9.6		21.8
Progression Factor		1.00	1.00		1.00
Incremental Delay, d2		1.7	0.4		0.4
Delay (s)		11.0	9.9		22.2
Level of Service		B	A		C
Approach Delay (s)		10.7		0.0	22.2
Approach LOS		B		A	C

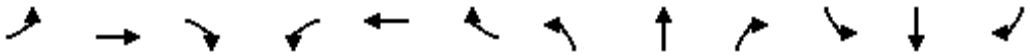
Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	67.5	Sum of lost time (s)	11.9
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	1285	0	0	0	0	0	975	620	0	0	0
Future Volume (vph)	45	1285	0	0	0	0	0	975	620	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0			
Lane Util. Factor		0.91						0.95	0.88			
Frpb, ped/bikes		1.00						1.00	1.00			
Flpb, ped/bikes		0.99						1.00	1.00			
Frt		1.00						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		4998						3252	2561			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		4998						3252	2561			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	45	1299	0	0	0	0	0	985	627	0	0	0
RTOR Reduction (vph)	0	15	0	0	0	0	0	0	299	0	0	0
Lane Group Flow (vph)	0	1329	0	0	0	0	0	985	328	0	0	0
Confl. Peds. (#/hr)	143		209	209		143	35		22	22		35
Confl. Bikes (#/hr)			91									
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	11%	11%	11%	3%	3%	3%
Turn Type	Perm	NA						NA	Prot			
Protected Phases		6						8	8			
Permitted Phases	6											
Actuated Green, G (s)		35.5						25.1	25.1			
Effective Green, g (s)		36.0						26.0	26.0			
Actuated g/C Ratio		0.51						0.37	0.37			
Clearance Time (s)		4.5						4.9	4.9			
Vehicle Extension (s)		3.5						3.9	3.9			
Lane Grp Cap (vph)		2570						1207	951			
v/s Ratio Prot								c0.30	0.13			
v/s Ratio Perm		0.27										
v/c Ratio		0.52						0.82	0.35			
Uniform Delay, d1		11.3						19.8	15.9			
Progression Factor		2.10						1.00	1.00			
Incremental Delay, d2		0.6						6.2	1.0			
Delay (s)		24.3						26.0	16.9			
Level of Service		C						C	B			
Approach Delay (s)		24.3			0.0			22.4			0.0	
Approach LOS		C			A			C			A	

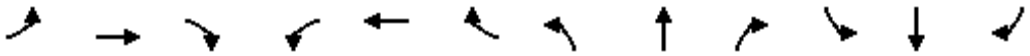
Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



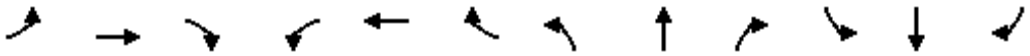
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	1525	180	0	0	0	0	30	15	15	15	0
Future Volume (vph)	200	1525	180	0	0	0	0	30	15	15	15	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0						5.0			5.0	
Lane Util. Factor		0.91						1.00			1.00	
Frpb, ped/bikes		0.97						1.00			1.00	
Flpb, ped/bikes		0.99						1.00			1.00	
Frt		0.99						0.95			1.00	
Flt Protected		0.99						1.00			0.98	
Satd. Flow (prot)		4727						1754			1798	
Flt Permitted		0.99						1.00			0.88	
Satd. Flow (perm)		4727						1754			1616	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	202	1541	182	0	0	0	0	30	15	15	15	0
RTOR Reduction (vph)	0	12	0	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	1913	0	0	0	0	0	39	0	0	30	0
Confl. Peds. (#/hr)	59		153	153		59	62		2	2		62
Confl. Bikes (#/hr)			101									
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		45.8						14.2			14.2	
Effective Green, g (s)		45.8						14.2			14.2	
Actuated g/C Ratio		0.65						0.20			0.20	
Clearance Time (s)		5.0						5.0			5.0	
Vehicle Extension (s)		0.5						0.5			0.5	
Lane Grp Cap (vph)		3092						355			327	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.40									0.02	
v/c Ratio		0.62						0.11			0.09	
Uniform Delay, d1		7.0						22.8			22.7	
Progression Factor		1.27						1.00			0.86	
Incremental Delay, d2		0.8						0.1			0.0	
Delay (s)		9.7						22.8			19.5	
Level of Service		A						C			B	
Approach Delay (s)		9.7			0.0			22.8			19.5	
Approach LOS		A			A			C			B	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



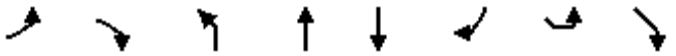
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	265	0	0	90	75	5	475	20	0	0	0
Future Volume (vph)	15	265	0	0	90	75	5	475	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0				
Lane Util. Factor		1.00			1.00			1.00				
Frt		1.00			0.94			0.99				
Flt Protected		1.00			1.00			1.00				
Satd. Flow (prot)		1840			1731			1834				
Flt Permitted		0.98			1.00			1.00				
Satd. Flow (perm)		1805			1731			1834				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	15	268	0	0	91	76	5	480	20	0	0	0
RTOR Reduction (vph)	0	0	0	0	49	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	283	0	0	118	0	0	503	0	0	0	0
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		2			2			4				
Permitted Phases	2						4					
Actuated Green, G (s)		9.1			9.1			12.9				
Effective Green, g (s)		9.1			9.1			12.9				
Actuated g/C Ratio		0.30			0.30			0.43				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		0.5			0.5			0.5				
Lane Grp Cap (vph)		547			525			788				
v/s Ratio Prot					0.07							
v/s Ratio Perm		c0.16						0.27				
v/c Ratio		0.52			0.23			0.64				
Uniform Delay, d1		8.6			7.8			6.7				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		0.3			0.1			1.3				
Delay (s)		9.0			7.9			8.0				
Level of Service		A			A			A				
Approach Delay (s)		9.0			7.9			8.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	30.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	280	0	0	95	0	0	0	0	0	250	0
Future Volume (vph)	0	280	0	0	95	0	0	0	0	0	250	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0						4.0	
Lane Util. Factor		1.00			1.00						0.95	
Frt		1.00			1.00						1.00	
Flt Protected		1.00			1.00						1.00	
Satd. Flow (prot)		1845			1845						3505	
Flt Permitted		1.00			1.00						1.00	
Satd. Flow (perm)		1845			1845						3505	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	0	283	0	0	96	0	0	0	0	0	253	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	283	0	0	96	0	0	0	0	0	253	0
Turn Type		NA			NA						NA	
Protected Phases		2			2					4	4	
Permitted Phases	2			2								
Actuated Green, G (s)		6.8			6.8						10.1	
Effective Green, g (s)		6.8			6.8						10.1	
Actuated g/C Ratio		0.27			0.27						0.41	
Clearance Time (s)		4.0			4.0						4.0	
Vehicle Extension (s)		0.5			0.5						0.5	
Lane Grp Cap (vph)		503			503						1421	
v/s Ratio Prot		c0.15			0.05						c0.07	
v/s Ratio Perm												
v/c Ratio		0.56			0.19						0.18	
Uniform Delay, d1		7.8			6.9						4.7	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		0.9			0.1						0.0	
Delay (s)		8.6			7.0						4.8	
Level of Service		A			A						A	
Approach Delay (s)		8.6			7.0			0.0			4.8	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	24.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	29.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR	SEL	SER
Lane Configurations								
Traffic Volume (vph)	0	140	0	10	0	0	0	155
Future Volume (vph)	0	140	0	10	0	0	0	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0		5.0				5.6
Lane Util. Factor		0.88		1.00				0.88
Frt		0.85		1.00				0.85
Flt Protected		1.00		1.00				1.00
Satd. Flow (prot)		2760		1845				2760
Flt Permitted		1.00		1.00				1.00
Satd. Flow (perm)		2760		1845				2760
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	0	141	0	10	0	0	0	157
RTOR Reduction (vph)	0	116	0	0	0	0	0	0
Lane Group Flow (vph)	0	25	0	10	0	0	0	157
Turn Type		Perm		NA			Perm	Prot
Protected Phases								2
Permitted Phases		4		3			2	
Actuated Green, G (s)		9.8		2.2				27.6
Effective Green, g (s)		9.8		2.2				27.6
Actuated g/C Ratio		0.18		0.04				0.50
Clearance Time (s)		5.0		5.0				5.6
Vehicle Extension (s)		0.5		1.5				0.5
Lane Grp Cap (vph)		490		73				1380
v/s Ratio Prot								c0.06
v/s Ratio Perm		c0.01		c0.01				
v/c Ratio		0.05		0.14				0.11
Uniform Delay, d1		18.8		25.6				7.3
Progression Factor		1.00		1.00				1.00
Incremental Delay, d2		0.0		0.3				0.0
Delay (s)		18.9		25.9				7.3
Level of Service		B		C				A
Approach Delay (s)	18.9			25.9	0.0		7.3	
Approach LOS	B			C	A		A	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.10		
Actuated Cycle Length (s)	55.2	Sum of lost time (s)	15.6
Intersection Capacity Utilization	23.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	120	235	35	0	25	235	0	1270	280	15	825	20
Future Volume (vph)	120	235	35	0	25	235	0	1270	280	15	825	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.0		4.0	4.0		4.0	3.5	4.0	4.0	3.2
Lane Util. Factor	1.00	1.00	1.00		1.00	1.00		0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	1.00	0.89		1.00	0.97		1.00	1.00	1.00	1.00	1.00
Flpb, ped/bikes	0.99	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00		1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1727	1845	1388		1845	1526		3505	1568	1752	3505	1568
Flt Permitted	0.75	1.00	1.00		1.00	1.00		1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1359	1845	1388		1845	1526		3505	1568	1752	3505	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	121	237	35	0	25	237	0	1283	283	15	834	20
RTOR Reduction (vph)	0	0	33	0	0	197	0	0	0	0	0	0
Lane Group Flow (vph)	121	237	2	0	25	40	0	1283	283	15	834	20
Confl. Peds. (#/hr)	12		18	18		12	50		30	30		50
Confl. Bikes (#/hr)									364			84
Turn Type	Perm	NA	custom	Perm	NA	Perm		NA	custom	Prot	NA	custom
Protected Phases		4			8			6	16!	5!	2	16
Permitted Phases	4		5	8		8	6					
Actuated Green, G (s)	20.0	20.0	6.2		20.1	20.1		58.5	68.2	6.2	67.4	68.2
Effective Green, g (s)	20.0	20.0	6.2		20.3	20.3		59.0	68.7	5.2	68.2	69.0
Actuated g/C Ratio	0.17	0.17	0.05		0.17	0.17		0.49	0.57	0.04	0.57	0.57
Clearance Time (s)	4.0	4.0	3.0		4.2	4.2		4.5	4.0	3.0	4.8	4.0
Vehicle Extension (s)	1.0	1.0	0.5		1.0	1.0		0.5	3.0	0.5	0.5	3.0
Lane Grp Cap (vph)	225	306	71		310	257		1716	893	75	1983	897
v/s Ratio Prot		c0.13			0.01			c0.37	0.18	0.01	c0.24	0.01
v/s Ratio Perm	0.09		0.00			c0.03						
v/c Ratio	0.54	0.77	0.03		0.08	0.16		0.75	0.32	0.20	0.42	0.02
Uniform Delay, d1	46.0	48.1	54.3		42.2	42.8		24.8	13.6	55.6	14.9	11.1
Progression Factor	1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	10.6	0.1		0.0	0.1		1.6	0.2	0.5	0.1	0.0
Delay (s)	47.3	58.7	54.3		42.3	42.9		26.4	13.8	56.1	14.9	11.2
Level of Service	D	E	D		D	D		C	B	E	B	B
Approach Delay (s)		54.8			42.8			24.1			15.6	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	120.5	Sum of lost time (s)	19.5
Intersection Capacity Utilization	72.9%	ICU Level of Service	C
Analysis Period (min)	15		

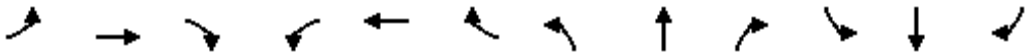
! Phase conflict between lane groups.
c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	25	25	30	10	25	10	95	965	245	50	820	20
Future Volume (vph)	25	25	30	10	25	10	95	965	245	50	820	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0	4.0		4.0	4.5		4.0	4.8	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frpb, ped/bikes		0.94		1.00	0.95		1.00	0.92		1.00	0.99	
Flpb, ped/bikes		0.96		0.87	1.00		1.00	1.00		1.00	1.00	
Frt		0.95		1.00	0.96		1.00	0.97		1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1544		1521	1686		1752	3127		1752	3464	
Flt Permitted		0.92		0.69	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1442		1098	1686		1752	3127		1752	3464	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	25	25	30	10	25	10	96	975	248	51	829	20
RTOR Reduction (vph)	0	16	0	0	8	0	0	12	0	0	1	0
Lane Group Flow (vph)	0	64	0	10	27	0	96	1211	0	51	848	0
Confl. Peds. (#/hr)	117		124	124		117	74		50	50		74
Confl. Bikes (#/hr)									370			72
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			4		5	2		1	6	
Permitted Phases	4			4								
Actuated Green, G (s)		30.0		30.0	30.0		10.1	79.3		6.2	75.1	
Effective Green, g (s)		30.0		30.0	30.0		10.1	79.3		6.2	75.1	
Actuated g/C Ratio		0.23		0.23	0.23		0.08	0.62		0.05	0.59	
Clearance Time (s)		4.0		4.0	4.0		4.0	4.5		4.0	4.8	
Vehicle Extension (s)		1.0		1.0	1.0		0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)		337		257	395		138	1937		84	2032	
v/s Ratio Prot					0.02		c0.05	c0.39		0.03	0.24	
v/s Ratio Perm		c0.04		0.01								
v/c Ratio		0.19		0.04	0.07		0.70	0.63		0.61	0.42	
Uniform Delay, d1		39.3		37.9	38.1		57.5	15.1		59.7	14.5	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1		0.0	0.0		11.6	1.5		8.2	0.6	
Delay (s)		39.4		37.9	38.2		69.1	16.7		67.9	15.1	
Level of Service		D		D	D		E	B		E	B	
Approach Delay (s)		39.4			38.1			20.5			18.1	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	128.0	Sum of lost time (s)	12.8
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

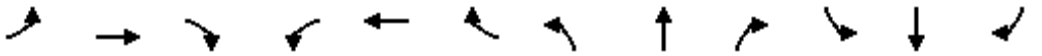
Movement	WBL	WBT	SBT	SER	SER2
Lane Configurations					
Traffic Volume (vph)	405	525	355	1030	315
Future Volume (vph)	405	525	355	1030	315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	3.5	4.5	4.9
Lane Util. Factor	*0.52	*0.52	0.95	*0.95	1.00
Frpb, ped/bikes	1.00	1.00	1.00	1.00	0.94
Flpb, ped/bikes	0.98	0.99	1.00	1.00	1.00
Frt	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	0.99	1.00	1.00	1.00
Satd. Flow (prot)	890	1869	3505	3343	1412
Flt Permitted	0.95	0.99	1.00	1.00	1.00
Satd. Flow (perm)	890	1869	3505	3343	1412
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%
Adj. Flow (vph)	409	531	359	1041	318
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	258	682	359	1041	318
Confl. Peds. (#/hr)	26			25	25
Confl. Bikes (#/hr)					22
Heavy Vehicles (%)	3%	3%	3%	8%	8%
Bus Blockages (#/hr)	0	5	0	0	0
Turn Type	Perm	NA	NA	Prot	Perm
Protected Phases		6	4	3	
Permitted Phases	6				3
Actuated Green, G (s)	27.3	27.3	9.6	19.1	19.1
Effective Green, g (s)	28.0	28.0	10.5	19.5	19.1
Actuated g/C Ratio	0.40	0.40	0.15	0.28	0.27
Clearance Time (s)	4.7	4.7	4.4	4.9	4.9
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	356	747	525	931	385
v/s Ratio Prot			c0.10	c0.31	
v/s Ratio Perm	0.29	0.36			0.23
v/c Ratio	0.72	0.91	0.68	1.12	0.83
Uniform Delay, d1	17.7	19.8	28.2	25.2	23.9
Progression Factor	0.34	0.38	1.00	1.00	1.00
Incremental Delay, d2	11.2	16.3	7.1	67.6	18.0
Delay (s)	17.1	24.0	35.2	92.8	41.9
Level of Service	B	C	D	F	D
Approach Delay (s)		22.1	35.2		
Approach LOS		C	D		

Intersection Summary			
HCM 2000 Control Delay	53.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



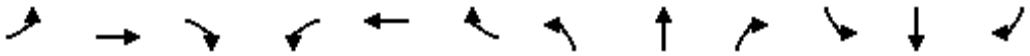
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	910	850	20	540	0	0	0	0
Future Volume (vph)	0	0	0	0	910	850	20	540	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.6		4.0				
Lane Util. Factor					*0.87	0.88		0.91				
Frpb, ped/bikes					1.00	0.98		1.00				
Flpb, ped/bikes					1.00	1.00		1.00				
Frt					1.00	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3210	2691		5024				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3210	2691		5024				
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	0	0	0	0	920	859	20	546	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	67	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	920	859	0	499	0	0	0	0
Confl. Peds. (#/hr)			147	147			15		265	265		15
Confl. Bikes (#/hr)						30			421			
Turn Type					NA	custom	Perm	NA				
Protected Phases					2			4				
Permitted Phases						6	4					
Actuated Green, G (s)					45.4	36.6		15.8				
Effective Green, g (s)					46.0	36.6		16.0				
Actuated g/C Ratio					0.66	0.52		0.23				
Clearance Time (s)					4.6	4.6		4.2				
Vehicle Extension (s)					3.0	3.0		2.0				
Lane Grp Cap (vph)					2109	1407		1148				
v/s Ratio Prot					c0.29							
v/s Ratio Perm						c0.32		0.10				
v/c Ratio					0.44	0.61		0.43				
Uniform Delay, d1					5.8	11.7		23.1				
Progression Factor					0.91	1.07		1.05				
Incremental Delay, d2					0.6	1.8		0.1				
Delay (s)					5.9	14.3		24.4				
Level of Service					A	B		C				
Approach Delay (s)		0.0			10.0			24.4			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.6
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



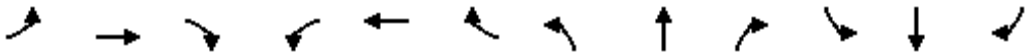
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	1045	15	680	150	0	0	0	35
Future Volume (vph)	0	0	0	0	1045	15	680	150	0	0	0	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0		3.8	4.0				4.0
Lane Util. Factor					0.86		0.95	0.95				1.00
Frpb, ped/bikes					1.00		1.00	1.00				0.94
Flpb, ped/bikes					1.00		1.00	1.00				1.00
Frt					1.00		1.00	1.00				0.86
Flt Protected					1.00		0.95	0.97				1.00
Satd. Flow (prot)					6306		1665	1698				1495
Flt Permitted					1.00		0.95	0.97				1.00
Satd. Flow (perm)					6306		1665	1698				1495
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	0	0	0	0	1056	15	687	152	0	0	0	35
RTOR Reduction (vph)	0	0	0	0	0	0	16	15	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	1071	0	403	405	0	0	0	35
Confl. Peds. (#/hr)	101		39	39		101	42		66	66		42
Confl. Bikes (#/hr)						48						
Turn Type					NA		Prot	NA				Perm
Protected Phases					2		1 4	4				
Permitted Phases												4
Actuated Green, G (s)					32.6		28.8	28.8				20.4
Effective Green, g (s)					33.2		25.0	29.0				20.6
Actuated g/C Ratio					0.47		0.36	0.41				0.29
Clearance Time (s)					4.6			4.2				4.2
Vehicle Extension (s)					3.0			2.0				2.0
Lane Grp Cap (vph)					2990		594	703				439
v/s Ratio Prot					c0.17		c0.24	c0.24				
v/s Ratio Perm												0.02
v/c Ratio					0.36		0.68	0.58				0.08
Uniform Delay, d1					11.7		19.1	15.8				17.8
Progression Factor					0.66		0.57	0.58				1.00
Incremental Delay, d2					0.3		1.4	0.4				0.0
Delay (s)					8.0		12.3	9.5				17.9
Level of Service					A		B	A				B
Approach Delay (s)		0.0			8.0			10.9			17.9	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.8
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	20	965	55	25	195	0	0	10	70
Future Volume (vph)	0	0	0	20	965	55	25	195	0	0	10	70
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	
Lane Util. Factor					0.91			1.00			1.00	
Frpb, ped/bikes					0.99			1.00			0.94	
Flpb, ped/bikes					1.00			0.99			1.00	
Frt					0.99			1.00			0.88	
Flt Protected					1.00			0.99			1.00	
Satd. Flow (prot)					4948			1824			1529	
Flt Permitted					1.00			0.96			1.00	
Satd. Flow (perm)					4948			1766			1529	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	0	0	0	20	975	56	25	197	0	0	10	71
RTOR Reduction (vph)	0	0	0	0	5	0	0	0	0	0	16	0
Lane Group Flow (vph)	0	0	0	0	1046	0	0	222	0	0	65	0
Confl. Peds. (#/hr)	39		33	33		39	55		33	33		55
Confl. Bikes (#/hr)						44						
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			4			4	
Permitted Phases				2			4					
Actuated Green, G (s)					44.9			16.1			16.1	
Effective Green, g (s)					44.9			16.1			16.1	
Actuated g/C Ratio					0.64			0.23			0.23	
Clearance Time (s)					4.5			4.5			4.5	
Vehicle Extension (s)					0.2			3.0			3.0	
Lane Grp Cap (vph)					3173			406			351	
v/s Ratio Prot											0.04	
v/s Ratio Perm					0.21			c0.13				
v/c Ratio					0.33			0.55			0.18	
Uniform Delay, d1					5.7			23.7			21.7	
Progression Factor					1.00			0.90			1.00	
Incremental Delay, d2					0.3			1.4			0.3	
Delay (s)					6.0			22.8			21.9	
Level of Service					A			C			C	
Approach Delay (s)		0.0			6.0			22.8			21.9	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	750	250	0	0	0	0	0	0	1060	730	0
Future Volume (vph)	0	750	250	0	0	0	0	0	0	1060	730	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0							3.6	4.0	
Lane Util. Factor		0.91	1.00							0.91	0.91	
Frpb, ped/bikes		1.00	0.72							1.00	1.00	
Flpb, ped/bikes		1.00	1.00							1.00	1.00	
Frt		1.00	0.85							1.00	1.00	
Flt Protected		1.00	1.00							0.95	0.98	
Satd. Flow (prot)		5036	1129							1595	3253	
Flt Permitted		1.00	1.00							0.95	0.98	
Satd. Flow (perm)		5036	1129							1595	3253	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	0	758	253	0	0	0	0	0	0	1071	738	0
RTOR Reduction (vph)	0	0	75	0	0	0	0	0	0	237	13	0
Lane Group Flow (vph)	0	758	178	0	0	0	0	0	0	406	1153	0
Confl. Peds. (#/hr)	67		44	44		67	140		16	16		140
Confl. Bikes (#/hr)			327									
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	5	0
Turn Type		NA	Perm							Prot	NA	
Protected Phases		6								8	4	
Permitted Phases			6									
Actuated Green, G (s)		20.7	20.7							34.2	40.7	
Effective Green, g (s)		21.2	21.2							34.7	41.2	
Actuated g/C Ratio		0.30	0.30							0.50	0.59	
Clearance Time (s)		4.5	4.5							4.1	4.5	
Vehicle Extension (s)		3.0	3.0							3.0	3.0	
Lane Grp Cap (vph)		1525	341							790	1914	
v/s Ratio Prot		0.15								0.25	c0.30	
v/s Ratio Perm			c0.16								0.06	
v/c Ratio		0.50	0.52							0.51	0.60	
Uniform Delay, d1		20.0	20.2							11.9	9.2	
Progression Factor		1.00	1.00							0.59	0.69	
Incremental Delay, d2		1.2	5.6							0.7	0.4	
Delay (s)		21.2	25.8							7.8	6.7	
Level of Service		C	C							A	A	
Approach Delay (s)		22.3			0.0			0.0			7.1	
Approach LOS		C			A			A			A	

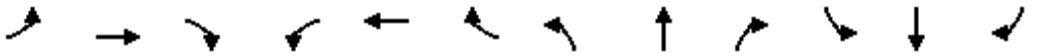
Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	11.1
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	460	1350	0	0	0	0	0	100	15	0	0	0
Future Volume (vph)	460	1350	0	0	0	0	0	100	15	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0			
Lane Util. Factor		0.91						0.95	1.00			
Frpb, ped/bikes		1.00						1.00	0.55			
Flpb, ped/bikes		0.97						1.00	1.00			
Frt		1.00						1.00	0.85			
Flt Protected		0.99						1.00	1.00			
Satd. Flow (prot)		4802						3505	864			
Flt Permitted		0.99						1.00	1.00			
Satd. Flow (perm)		4802						3505	864			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	465	1364	0	0	0	0	0	101	15	0	0	0
RTOR Reduction (vph)	0	52	0	0	0	0	0	0	12	0	0	0
Lane Group Flow (vph)	0	1777	0	0	0	0	0	101	3	0	0	0
Confl. Peds. (#/hr)	115		120	120		115	95		120	120		95
Confl. Bikes (#/hr)			68						304			
Bus Blockages (#/hr)	0	5	0	0	0	0	0	0	0	0	0	0
Turn Type	Perm	NA						NA	Perm			
Protected Phases		2						4				
Permitted Phases	2								4			
Actuated Green, G (s)		49.5						11.8	11.8			
Effective Green, g (s)		50.0						12.0	12.0			
Actuated g/C Ratio		0.71						0.17	0.17			
Clearance Time (s)		4.5						4.2	4.2			
Vehicle Extension (s)		0.2						0.5	0.5			
Lane Grp Cap (vph)		3430						600	148			
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.37							0.00			
v/c Ratio		0.52						0.17	0.02			
Uniform Delay, d1		4.5						24.7	24.1			
Progression Factor		0.61						1.00	1.00			
Incremental Delay, d2		0.5						0.0	0.0			
Delay (s)		3.2						24.8	24.1			
Level of Service		A						C	C			
Approach Delay (s)		3.2			0.0			24.7			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	4.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		

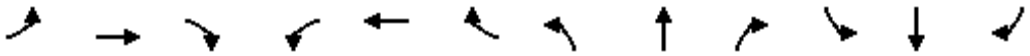
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	1330	0	0	0	0	0	795	580	0	0	0
Future Volume (vph)	35	1330	0	0	0	0	0	795	580	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0						4.0	4.0			
Lane Util. Factor		0.91						0.95	1.00			
Frpb, ped/bikes		1.00						1.00	0.96			
Flpb, ped/bikes		1.00						1.00	1.00			
Frt		1.00						1.00	0.85			
Flt Protected		1.00						1.00	1.00			
Satd. Flow (prot)		5006						3252	1401			
Flt Permitted		1.00						1.00	1.00			
Satd. Flow (perm)		5006						3252	1401			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	35	1344	0	0	0	0	0	803	586	0	0	0
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	333	0	0	0
Lane Group Flow (vph)	0	1367	0	0	0	0	0	803	254	0	0	0
Confl. Peds. (#/hr)	149		215	215		149	35		22	22		35
Confl. Bikes (#/hr)			95									
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	11%	11%	11%	3%	3%	3%
Turn Type	Perm	NA						NA	Perm			
Protected Phases		6						8				
Permitted Phases	6								8			
Actuated Green, G (s)		40.5						20.1	20.1			
Effective Green, g (s)		41.0						21.0	21.0			
Actuated g/C Ratio		0.59						0.30	0.30			
Clearance Time (s)		4.5						4.9	4.9			
Vehicle Extension (s)		3.5						3.9	3.9			
Lane Grp Cap (vph)		2932						975	420			
v/s Ratio Prot								c0.25				
v/s Ratio Perm		0.27							0.18			
v/c Ratio		0.47						0.82	0.60			
Uniform Delay, d1		8.3						22.8	20.9			
Progression Factor		0.40						1.00	1.00			
Incremental Delay, d2		0.5						7.8	6.3			
Delay (s)		3.7						30.6	27.2			
Level of Service		A						C	C			
Approach Delay (s)		3.7			0.0			29.2			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	200	1500	210	0	0	0	0	20	15	15	15	0
Future Volume (vph)	200	1500	210	0	0	0	0	20	15	15	15	0
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	
Lane Util. Factor		0.86						1.00			1.00	
Frpb, ped/bikes		0.96						0.99			1.00	
Flpb, ped/bikes		0.99						1.00			1.00	
Frt		0.98						0.94			1.00	
Flt Protected		0.99						1.00			0.98	
Satd. Flow (prot)		5911						1728			1798	
Flt Permitted		0.99						1.00			0.89	
Satd. Flow (perm)		5911						1728			1641	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	202	1516	212	0	0	0	0	20	15	15	15	0
RTOR Reduction (vph)	0	19	0	0	0	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	1911	0	0	0	0	0	33	0	0	30	0
Confl. Peds. (#/hr)	59		153	153		59	62		2	2		62
Confl. Bikes (#/hr)			101									
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		2						4			4	
Permitted Phases	2									4		
Actuated Green, G (s)		45.8						15.2			15.2	
Effective Green, g (s)		45.8						15.2			15.2	
Actuated g/C Ratio		0.65						0.22			0.22	
Clearance Time (s)		4.5						4.5			4.5	
Vehicle Extension (s)		0.5						0.5			0.5	
Lane Grp Cap (vph)		3867						375			356	
v/s Ratio Prot								c0.02				
v/s Ratio Perm		0.32									0.02	
v/c Ratio		0.49						0.09			0.08	
Uniform Delay, d1		6.2						21.9			21.9	
Progression Factor		1.78						1.00			1.03	
Incremental Delay, d2		0.4						0.0			0.0	
Delay (s)		11.4						21.9			22.6	
Level of Service		B						C			C	
Approach Delay (s)		11.4			0.0			21.9			22.6	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	EBR2	NBT	SEL	SET	SER
Lane Configurations							
Traffic Volume (vph)	100	240	20	10	5	735	240
Future Volume (vph)	100	240	20	10	5	735	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0		5.0		5.6	5.6
Lane Util. Factor	1.00	0.88		1.00		0.95	1.00
Frt	1.00	0.85		1.00		1.00	0.85
Flt Protected	0.95	1.00		1.00		1.00	1.00
Satd. Flow (prot)	1752	2760		1845		3504	1568
Flt Permitted	0.95	1.00		1.00		1.00	1.00
Satd. Flow (perm)	1752	2760		1845		3504	1568
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Growth Factor (vph)	96%	96%	96%	96%	96%	96%	96%
Adj. Flow (vph)	101	243	20	10	5	743	243
RTOR Reduction (vph)	0	83	0	0	0	40	0
Lane Group Flow (vph)	101	180	0	10	0	708	243
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	3%
Turn Type	Perm	Prot		NA	custom	NA	custom
Protected Phases		4					2
Permitted Phases	4			3	2	2	
Actuated Green, G (s)	10.1	10.1		0.8		34.4	34.4
Effective Green, g (s)	10.1	10.1		0.8		34.4	34.4
Actuated g/C Ratio	0.17	0.17		0.01		0.56	0.56
Clearance Time (s)	5.0	5.0		5.0		5.6	5.6
Vehicle Extension (s)	0.5	0.5		1.5		0.5	0.5
Lane Grp Cap (vph)	290	457		24		1979	885
v/s Ratio Prot		c0.07					0.15
v/s Ratio Perm	0.06			c0.01		c0.20	
v/c Ratio	0.35	0.39		0.42		0.36	0.27
Uniform Delay, d1	22.5	22.7		29.8		7.2	6.8
Progression Factor	1.00	1.00		1.00		1.00	1.00
Incremental Delay, d2	0.3	0.2		4.2		0.5	0.8
Delay (s)	22.8	22.9		34.0		7.7	7.6
Level of Service	C	C		C		A	A
Approach Delay (s)	22.8			34.0		7.7	
Approach LOS	C			C		A	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	60.9	Sum of lost time (s)	15.6
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group