Appendix J

Fresno Synchro Files

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	142	637	130	400	252	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00
Frt		1.00	0.90		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		2031	1840		1947	1742
Flt Permitted		0.74	1.00		0.95	1.00
Satd. Flow (perm)		1526	1840		1947	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	154	692	141	435	274	50
RTOR Reduction (vph)	0	0	49	0	0	40
Lane Group Flow (vph)	0	846	527	0	274	10
Turn Type	Perm	NA	NA		NA	custom
Protected Phases		6	2			
Permitted Phases	6				8	8
Actuated Green, G (s)		80.6	80.6		21.4	21.4
Effective Green, g (s)		80.6	80.6		21.4	21.4
Actuated g/C Ratio		0.73	0.73		0.19	0.19
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1118	1348		378	338
v/s Ratio Prot			0.29			
v/s Ratio Perm		c0.55			c0.14	0.01
v/c Ratio		0.76	0.39		0.72	0.03
Uniform Delay, d1		8.8	5.5		41.5	35.9
Progression Factor		1.00	1.00		0.70	0.63
Incremental Delay, d2		4.8	0.9		6.5	0.0
Delay (s)		13.6	6.4		35.5	22.5
Level of Service		B	A		D	C
Approach Delay (s)		13.6	6.4		33.5	
Approach LOS		B	A		C	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	14	57	14	14	78	21	21	402	21	14	864	14
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		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1988			1985		1947	2034		1947	2044	
Flt Permitted		0.93			0.95		0.25	1.00		0.46	1.00	
Satd. Flow (perm)		1872			1905		512	2034		945	2044	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	62	15	15	85	23	23	437	23	15	939	15
RTOR Reduction (vph)	0	12	0	0	18	0	0	4	0	0	1	0
Lane Group Flow (vph)	0	80	0	0	105	0	23	456	0	15	953	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)		7.1			7.1		16.0	16.0		16.0	16.0	
Effective Green, g (s)		7.1			7.1		16.0	16.0		16.0	16.0	
Actuated g/C Ratio		0.23			0.23		0.51	0.51		0.51	0.51	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		427			434		263	1046		486	1051	
v/s Ratio Prot								0.22			c0.47	
v/s Ratio Perm		0.04			c0.06		0.04			0.02		
v/c Ratio		0.19			0.24		0.09	0.44		0.03	0.91	
Uniform Delay, d1		9.7			9.8		3.8	4.7		3.7	6.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			0.3		0.1	0.3		0.0	11.1	
Delay (s)		9.9			10.1		4.0	5.0		3.8	17.9	
Level of Service		A			B		A	A		A	B	
Approach Delay (s)		9.9			10.1			5.0			17.7	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	31.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.6%	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												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
Turn Type	Perm											
Protected Phases		6			2			4				
Permitted Phases	6											
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations										
Volume (vph)	95	14	370	209	14	0	0	0	536	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0					4.0	4.0
Lane Util. Factor	1.00			0.91					1.00	1.00
Frt	0.98			1.00					1.00	0.85
Flt Protected	0.96			0.97					0.95	1.00
Satd. Flow (prot)	1930			5406					1947	1742
Flt Permitted	0.96			0.97					0.95	1.00
Satd. Flow (perm)	1930			5406					1947	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	15	402	227	15	0	0	0	583	77
RTOR Reduction (vph)	16	0	0	7	0	0	0	0	0	0
Lane Group Flow (vph)	102	0	0	637	0	0	0	0	583	77
Turn Type	NA		Perm	NA					NA	Prot
Protected Phases	4!			6					8!	8
Permitted Phases			6							
Actuated Green, G (s)	13.7			10.6					13.7	13.7
Effective Green, g (s)	13.7			10.6					13.7	13.7
Actuated g/C Ratio	0.42			0.33					0.42	0.42
Clearance Time (s)	4.0			4.0					4.0	4.0
Vehicle Extension (s)	3.0			3.0					3.0	3.0
Lane Grp Cap (vph)	818			1774					825	738
v/s Ratio Prot	0.05								c0.30	0.04
v/s Ratio Perm				0.12						
v/c Ratio	0.13			0.36					0.71	0.10
Uniform Delay, d1	5.7			8.3					7.6	5.6
Progression Factor	1.00			1.00					1.00	1.00
Incremental Delay, d2	0.1			0.1					2.8	0.1
Delay (s)	5.7			8.4					10.4	5.7
Level of Service	A			A					B	A
Approach Delay (s)	5.7			8.4			0.0		9.9	
Approach LOS	A			A			A		A	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	32.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.3%	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												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
Turn Type	Perm					custom						
Protected Phases		6						4				
Permitted Phases	6					2						
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	28	80	21	21	423	21	131	579	182
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	
Lane Util. Factor					1.00			1.00		1.00	1.00	
Frt					0.98			0.99		1.00	0.96	
Flt Protected					0.99			1.00		0.95	1.00	
Satd. Flow (prot)					1982			2032		1947	1975	
Flt Permitted					0.99			0.88		0.51	1.00	
Satd. Flow (perm)					1982			1792		1045	1975	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	30	87	23	23	460	23	142	629	198
RTOR Reduction (vph)	0	0	0	0	18	0	0	3	0	0	23	0
Lane Group Flow (vph)	0	0	0	0	122	0	0	503	0	142	804	0
Turn Type				Perm	NA		Perm	NA		Perm	NA	
Protected Phases					2			4			8	
Permitted Phases				2			4			8		
Actuated Green, G (s)					7.3			16.0		16.0	16.0	
Effective Green, g (s)					7.3			16.0		16.0	16.0	
Actuated g/C Ratio					0.23			0.51		0.51	0.51	
Clearance Time (s)					4.0			4.0		4.0	4.0	
Vehicle Extension (s)					3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)					462			916		534	1009	
v/s Ratio Prot											c0.41	
v/s Ratio Perm					0.06			0.28		0.14		
v/c Ratio					0.26			0.55		0.27	0.80	
Uniform Delay, d1					9.8			5.2		4.3	6.3	
Progression Factor					1.00			1.00		1.00	1.00	
Incremental Delay, d2					0.3			0.7		0.3	4.4	
Delay (s)					10.1			5.9		4.6	10.8	
Level of Service					B			A		A	B	
Approach Delay (s)		0.0			10.1			5.9			9.9	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	31.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
Turn Type	Perm											
Protected Phases		6			2			4				
Permitted Phases	6											
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	57	150	0	0	115	68	267	441	69	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.91				
Frt		1.00			0.94			0.99				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		3491			3342			4933				
Flt Permitted		0.79			1.00			0.98				
Satd. Flow (perm)		2793			3342			4933				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	62	163	0	0	125	74	290	479	75	0	0	0
RTOR Reduction (vph)	0	0	0	0	61	0	0	7	0	0	0	0
Lane Group Flow (vph)	0	225	0	0	138	0	0	837	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		8			4		2	2				
Permitted Phases	8											
Actuated Green, G (s)		19.0			19.0			81.0				
Effective Green, g (s)		19.0			19.0			81.0				
Actuated g/C Ratio		0.17			0.17			0.74				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		0.2			0.2			0.2				
Lane Grp Cap (vph)		482			577			3632				
v/s Ratio Prot					0.04			c0.17				
v/s Ratio Perm		c0.08										
v/c Ratio		0.47			0.24			0.23				
Uniform Delay, d1		40.9			39.3			4.6				
Progression Factor		0.99			1.00			0.16				
Incremental Delay, d2		0.2			0.1			0.1				
Delay (s)		40.8			39.3			0.9				
Level of Service		D			D			A				
Approach Delay (s)		40.8			39.3			0.9			0.0	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.0%	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												
Volume (vph)	176	145	128	35	65	25	106	380	56	15	155	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6			4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.93			1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00			0.98	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1732			1831	1583	1770	1863	1583	1770	1811	
Flt Permitted	0.95	1.00			0.98	1.00	0.51	1.00	1.00	0.20	1.00	
Satd. Flow (perm)	1770	1732			1831	1583	944	1863	1583	365	1811	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	191	158	139	38	71	27	115	413	61	16	168	38
RTOR Reduction (vph)	0	19	0	0	0	24	0	0	42	0	7	0
Lane Group Flow (vph)	191	278	0	0	109	3	115	413	19	16	199	0
Turn Type	Split	NA		Split	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	2	2		1	1			8			8	
Permitted Phases						1	8		8	8		
Actuated Green, G (s)	54.8	54.8			11.2	11.2	31.0	31.0	31.0	31.0	31.0	
Effective Green, g (s)	54.8	54.8			11.2	11.2	31.0	31.0	31.0	31.0	31.0	
Actuated g/C Ratio	0.50	0.50			0.10	0.10	0.28	0.28	0.28	0.28	0.28	
Clearance Time (s)	4.6	4.6			4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Vehicle Extension (s)	3.8	3.8			2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	881	862			186	161	266	525	446	102	510	
v/s Ratio Prot	0.11	c0.16			c0.06			c0.22			0.11	
v/s Ratio Perm						0.00	0.12		0.01	0.04		
v/c Ratio	0.22	0.32			0.59	0.02	0.43	0.79	0.04	0.16	0.39	
Uniform Delay, d1	15.5	16.5			47.2	44.4	32.3	36.4	28.7	29.7	31.9	
Progression Factor	1.20	1.18			1.00	1.00	1.21	1.18	2.17	0.59	0.56	
Incremental Delay, d2	0.4	0.6			3.0	0.0	0.4	6.2	0.0	0.3	0.2	
Delay (s)	19.0	20.2			50.2	44.5	39.5	49.4	62.3	17.8	17.9	
Level of Service	B	C			D	D	D	D	E	B	B	
Approach Delay (s)		19.7			49.1			48.8			17.9	
Approach LOS		B			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	71.5%	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												
Volume (vph)	104	323	130	150	494	121	61	536	116	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2		4.2	4.2		4.2	4.2				
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00				
Frt	1.00	0.96		1.00	0.97		1.00	0.97				
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00				
Satd. Flow (prot)	1770	1783		1770	1808		1770	1813				
Flt Permitted	0.21	1.00		0.35	1.00		0.95	1.00				
Satd. Flow (perm)	393	1783		647	1808		1770	1813				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	113	351	141	163	537	132	66	583	126	0	0	0
RTOR Reduction (vph)	0	12	0	0	7	0	0	8	0	0	0	0
Lane Group Flow (vph)	113	480	0	163	662	0	66	701	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		2			6		8	8				
Permitted Phases	2			6								
Actuated Green, G (s)	56.5	56.5		56.5	56.5		45.1	45.1				
Effective Green, g (s)	56.5	56.5		56.5	56.5		45.1	45.1				
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.41	0.41				
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2				
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2				
Lane Grp Cap (vph)	201	915		332	928		725	743				
v/s Ratio Prot		0.27			c0.37		0.04	c0.39				
v/s Ratio Perm	0.29			0.25								
v/c Ratio	0.56	0.52		0.49	0.71		0.09	0.94				
Uniform Delay, d1	18.3	17.8		17.4	20.5		19.9	31.2				
Progression Factor	1.06	1.08		1.00	1.00		0.72	0.96				
Incremental Delay, d2	1.0	0.2		5.1	4.7		0.0	19.4				
Delay (s)	20.3	19.4		22.5	25.2		14.4	49.4				
Level of Service	C	B		C	C		B	D				
Approach Delay (s)		19.6			24.7			46.4			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM 2000 Control Delay	30.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	101.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	68	452	185	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2			
Lane Util. Factor		1.00	0.95			
Frt		0.86	0.96			
Flt Protected		1.00	1.00			
Satd. Flow (prot)		1611	3385			
Flt Permitted		1.00	1.00			
Satd. Flow (perm)		1611	3385			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	74	491	201	0	0
RTOR Reduction (vph)	0	28	79	0	0	0
Lane Group Flow (vph)	0	46	613	0	0	0
Turn Type		custom	NA			
Protected Phases			8			
Permitted Phases		2				
Actuated Green, G (s)		68.1	33.5			
Effective Green, g (s)		68.1	33.5			
Actuated g/C Ratio		0.62	0.30			
Clearance Time (s)		4.2	4.2			
Vehicle Extension (s)		0.2	6.0			
Lane Grp Cap (vph)		997	1030			
v/s Ratio Prot			c0.18			
v/s Ratio Perm		c0.03				
v/c Ratio		0.05	0.60			
Uniform Delay, d1		8.2	32.5			
Progression Factor		1.00	0.87			
Incremental Delay, d2		0.1	1.7			
Delay (s)		8.3	30.0			
Level of Service		A	C			
Approach Delay (s)	8.3		30.0		0.0	
Approach LOS	A		C		A	

Intersection Summary			
HCM 2000 Control Delay	27.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	29.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	100	117	197	53	297	32	30	627	39	51	1053	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.4			5.4		4.0	4.0		4.0	5.4	
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	0.95	
Frt		0.93			0.99		1.00	0.99		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3247			3470		1770	1847		1770	3455	
Flt Permitted		0.70			0.81		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2294			2847		1770	1847		1770	3455	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	127	214	58	323	35	33	682	42	55	1145	217
RTOR Reduction (vph)	0	103	0	0	6	0	0	2	0	0	15	0
Lane Group Flow (vph)	0	347	0	0	410	0	33	722	0	55	1347	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			2		7	4		3	8	
Permitted Phases	2			2								
Actuated Green, G (s)		38.9			38.9		3.6	50.9		6.8	52.7	
Effective Green, g (s)		38.9			38.9		3.6	50.9		6.8	52.7	
Actuated g/C Ratio		0.35			0.35		0.03	0.46		0.06	0.48	
Clearance Time (s)		5.4			5.4		4.0	4.0		4.0	5.4	
Vehicle Extension (s)		0.2			0.2		3.0	3.0		3.0	0.2	
Lane Grp Cap (vph)		811			1006		57	854		109	1655	
v/s Ratio Prot							0.02	c0.39		c0.03	c0.39	
v/s Ratio Perm		c0.15			0.14							
v/c Ratio		0.43			0.41		0.58	0.85		0.50	0.81	
Uniform Delay, d1		27.1			26.8		52.5	26.1		50.0	24.5	
Progression Factor		1.00			1.66		0.92	0.88		0.72	0.89	
Incremental Delay, d2		1.6			1.2		12.9	7.4		3.4	2.8	
Delay (s)		28.7			45.8		60.9	30.4		39.4	24.6	
Level of Service		C			D		E	C		D	C	
Approach Delay (s)		28.7			45.8			31.8			25.2	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	35	249	96	127	76	53	100	685	75	124	1014	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.2		4.0	4.2		4.0	4.2	4.2	4.0	4.2	4.2
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1785		1770	1748		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1785		1770	1748		1770	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	271	104	138	83	58	109	745	82	135	1102	130
RTOR Reduction (vph)	0	11	0	0	21	0	0	0	55	0	0	88
Lane Group Flow (vph)	38	364	0	138	120	0	109	745	27	135	1102	42
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			8
Actuated Green, G (s)	5.4	36.9		13.9	45.4		7.0	36.8	36.8	6.0	35.8	35.8
Effective Green, g (s)	5.4	36.9		13.9	45.4		7.0	36.8	36.8	6.0	35.8	35.8
Actuated g/C Ratio	0.05	0.34		0.13	0.41		0.06	0.33	0.33	0.05	0.33	0.33
Clearance Time (s)	4.0	4.2		4.0	4.2		4.0	4.2	4.2	4.0	4.2	4.2
Vehicle Extension (s)	3.0	0.2		3.0	0.2		3.0	0.2	0.2	3.0	0.2	0.2
Lane Grp Cap (vph)	86	598		223	721		112	623	529	96	606	515
v/s Ratio Prot	0.02	c0.20		c0.08	0.07		0.06	0.40		c0.08	c0.59	
v/s Ratio Perm									0.02			0.03
v/c Ratio	0.44	0.61		0.62	0.17		0.97	1.20	0.05	1.41	1.82	0.08
Uniform Delay, d1	50.8	30.5		45.5	20.4		51.4	36.6	24.8	52.0	37.1	25.7
Progression Factor	1.00	1.00		0.73	1.88		1.25	0.72	2.38	1.28	0.92	1.27
Incremental Delay, d2	3.6	4.6		4.9	0.5		67.8	100.6	0.0	198.4	370.0	0.0
Delay (s)	54.4	35.1		38.3	38.8		132.1	126.8	59.1	264.9	404.2	32.6
Level of Service	D	D		D	D		F	F	E	F	F	C
Approach Delay (s)		36.9			38.6			121.5			355.1	
Approach LOS		D			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	208.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	98.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	75	247	18	197	280	78	37	613	133	176	1084	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		4.2	4.2		4.0	4.2		4.2	4.2	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.99		1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1829		1770	1802		1770	1813		1770	1824	
Flt Permitted		0.50		0.40	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		931		738	1802		1770	1813		1770	1824	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	268	20	214	304	85	40	666	145	191	1178	188
RTOR Reduction (vph)	0	2	0	0	10	0	0	7	0	0	5	0
Lane Group Flow (vph)	0	368	0	214	379	0	40	804	0	191	1361	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2			6								
Actuated Green, G (s)		34.0		34.0	34.0		3.6	41.4		22.0	60.0	
Effective Green, g (s)		34.0		34.0	34.0		3.6	41.4		22.0	60.0	
Actuated g/C Ratio		0.31		0.31	0.31		0.03	0.38		0.20	0.55	
Clearance Time (s)		4.2		4.2	4.2		4.0	4.2		4.2	4.2	
Vehicle Extension (s)		0.2		0.2	0.2		3.0	0.2		0.2	0.2	
Lane Grp Cap (vph)		287		228	556		57	682		354	994	
v/s Ratio Prot					0.21		0.02	0.44		c0.11	c0.75	
v/s Ratio Perm		c0.40		0.29								
v/c Ratio		1.28		0.94	0.68		0.70	1.18		0.54	1.37	
Uniform Delay, d1		38.0		37.0	33.3		52.7	34.3		39.5	25.0	
Progression Factor		1.00		0.89	0.91		1.31	0.39		1.33	0.47	
Incremental Delay, d2		150.9		35.2	2.1		27.8	93.2		0.1	166.7	
Delay (s)		188.9		68.0	32.4		96.6	106.4		52.4	178.5	
Level of Service		F		E	C		F	F		D	F	
Approach Delay (s)		188.9			45.0			106.0			163.0	
Approach LOS		F			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	130.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.6
Intersection Capacity Utilization	131.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL2	SBL	SBR	SBR2	SEL	SET	SER	NWL	NWT	NWR	NET	NER
Lane Configurations												
Volume (vph)	25	294	1641	3	40	25	40	23	30	17	526	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.9	4.9			4.2			4.0		4.6	
Lane Util. Factor		1.00	0.88			1.00			1.00		1.00	
Frt		1.00	0.85			0.95			0.97		0.99	
Flt Protected		0.95	1.00			0.98			0.98		1.00	
Satd. Flow (prot)		1770	2787			1734			1774		1841	
Flt Permitted		0.95	1.00			0.84			0.98		1.00	
Satd. Flow (perm)		1770	2787			1489			1774		1841	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	320	1784	3	43	27	43	25	33	18	572	54
RTOR Reduction (vph)	0	0	65	0	0	20	0	0	0	0	3	0
Lane Group Flow (vph)	0	347	1722	0	0	93	0	0	76	0	623	0
Turn Type	Perm	NA	Prot		Perm	NA		Split	NA		NA	
Protected Phases		2	2			3		1	1		4	
Permitted Phases	2				3							
Actuated Green, G (s)		35.9	35.9			6.0			6.0		44.4	
Effective Green, g (s)		35.9	35.9			6.0			6.0		44.4	
Actuated g/C Ratio		0.33	0.33			0.05			0.05		0.40	
Clearance Time (s)		4.9	4.9			4.2			4.0		4.6	
Vehicle Extension (s)		4.0	4.0			2.0			2.0		4.0	
Lane Grp Cap (vph)		577	909			81			96		743	
v/s Ratio Prot			c0.62						c0.04		0.34	
v/s Ratio Perm		0.20				c0.06						
v/c Ratio		0.60	1.89			1.15			0.79		0.84	
Uniform Delay, d1		31.1	37.0			52.0			51.4		29.6	
Progression Factor		1.00	1.00			1.00			1.00		0.55	
Incremental Delay, d2		4.6	406.5			146.2			32.7		7.5	
Delay (s)		35.6	443.5			198.2			84.1		23.7	
Level of Service		D	F			F			F		C	
Approach Delay (s)		377.2				198.2			84.1		23.7	
Approach LOS		F				F			F		C	

Intersection Summary			
HCM 2000 Control Delay	263.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.7
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SWL	SWT
Lane Configurations		
Volume (vph)	97	221
Ideal Flow (vphpl)	1900	1900
Lane Width	12	12
Total Lost time (s)	4.6	4.6
Lane Util. Factor	1.00	1.00
Frt	1.00	1.00
Flt Protected	0.95	1.00
Satd. Flow (prot)	1770	1863
Flt Permitted	0.13	1.00
Satd. Flow (perm)	251	1863
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	105	240
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	105	240
Turn Type	Perm	NA
Protected Phases		4
Permitted Phases	4	
Actuated Green, G (s)	44.4	44.4
Effective Green, g (s)	44.4	44.4
Actuated g/C Ratio	0.40	0.40
Clearance Time (s)	4.6	4.6
Vehicle Extension (s)	4.0	4.0
Lane Grp Cap (vph)	101	751
v/s Ratio Prot		0.13
v/s Ratio Perm	c0.42	
v/c Ratio	1.04	0.32
Uniform Delay, d1	32.8	22.5
Progression Factor	1.00	1.00
Incremental Delay, d2	100.7	0.3
Delay (s)	133.5	22.8
Level of Service	F	C
Approach Delay (s)		56.5
Approach LOS		E

Intersection Summary

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	212	33	93	150	293	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	0.98			1.00	1.00	0.85
Flt Protected	1.00			0.98	0.95	1.00
Satd. Flow (prot)	3814			3820	1947	1742
Flt Permitted	1.00			0.75	0.95	1.00
Satd. Flow (perm)	3814			2911	1947	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	230	36	101	163	318	208
RTOR Reduction (vph)	5	0	0	0	0	161
Lane Group Flow (vph)	261	0	0	264	318	47
Turn Type	NA		Perm	NA	NA	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	76.9			76.9	25.1	25.1
Effective Green, g (s)	76.9			76.9	25.1	25.1
Actuated g/C Ratio	0.70			0.70	0.23	0.23
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2666			2035	444	397
v/s Ratio Prot	0.07				c0.16	
v/s Ratio Perm				c0.09		0.03
v/c Ratio	0.10			0.13	0.72	0.12
Uniform Delay, d1	5.3			5.5	39.2	33.7
Progression Factor	1.00			1.00	1.50	5.33
Incremental Delay, d2	0.1			0.1	5.3	0.1
Delay (s)	5.4			5.6	64.1	179.6
Level of Service	A			A	E	F
Approach Delay (s)	5.4			5.6	109.8	
Approach LOS	A			A	F	

Intersection Summary			
HCM 2000 Control Delay	57.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	329	276	286	0	0	0	0	387	50	302	606	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			4.0	
Lane Util. Factor	0.97	1.00						1.00			1.00	
Frt	1.00	0.92						0.98			1.00	
Flt Protected	0.95	1.00						1.00			0.98	
Satd. Flow (prot)	3776	1893						2018			2016	
Flt Permitted	0.95	1.00						1.00			0.57	
Satd. Flow (perm)	3776	1893						2018			1172	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	358	300	311	0	0	0	0	421	54	328	659	0
RTOR Reduction (vph)	0	35	0	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	358	576	0	0	0	0	0	471	0	0	987	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		6						4			8	
Permitted Phases	6									8		
Actuated Green, G (s)	37.6	37.6						64.4			64.4	
Effective Green, g (s)	37.6	37.6						64.4			64.4	
Actuated g/C Ratio	0.34	0.34						0.59			0.59	
Clearance Time (s)	4.0	4.0						4.0			4.0	
Vehicle Extension (s)	3.0	3.0						3.0			3.0	
Lane Grp Cap (vph)	1290	647						1181			686	
v/s Ratio Prot		c0.30						0.23				
v/s Ratio Perm	0.09										c0.84	
v/c Ratio	0.28	0.89						0.40			1.44	
Uniform Delay, d1	26.3	34.3						12.3			22.8	
Progression Factor	1.00	1.00						1.00			0.61	
Incremental Delay, d2	0.5	16.9						0.2			203.6	
Delay (s)	26.9	51.1						12.6			217.6	
Level of Service	C	D						B			F	
Approach Delay (s)		42.1			0.0			12.6			217.6	
Approach LOS		D			A			B			F	

Intersection Summary			
HCM 2000 Control Delay	107.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	23	222	35	50	666	0	0	885	419
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
Lane Util. Factor					0.95			0.95			0.95	0.95
Frt					0.98			1.00			0.99	0.85
Flt Protected					1.00			1.00			1.00	1.00
Satd. Flow (prot)					3804			3880			1933	1655
Flt Permitted					1.00			0.73			1.00	1.00
Satd. Flow (perm)					3804			2838			1933	1655
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	25	241	38	54	724	0	0	962	455
RTOR Reduction (vph)	0	0	0	0	10	0	0	0	0	0	2	46
Lane Group Flow (vph)	0	0	0	0	294	0	0	778	0	0	1006	363
Turn Type				Perm	NA		Perm	NA			NA	Perm
Protected Phases					2			4			8	
Permitted Phases				2			4					8
Actuated Green, G (s)					21.1			80.9			80.9	80.9
Effective Green, g (s)					21.1			80.9			80.9	80.9
Actuated g/C Ratio					0.19			0.74			0.74	0.74
Clearance Time (s)					4.0			4.0			4.0	4.0
Vehicle Extension (s)					3.0			3.0			3.0	3.0
Lane Grp Cap (vph)					729			2087			1421	1217
v/s Ratio Prot											c0.52	
v/s Ratio Perm					0.08			0.27				0.22
v/c Ratio					0.40			0.37			0.71	0.30
Uniform Delay, d1					38.9			5.3			8.0	4.9
Progression Factor					1.42			1.28			0.93	1.01
Incremental Delay, d2					1.6			0.1			1.2	0.1
Delay (s)					56.8			6.9			8.7	5.1
Level of Service					E			A			A	A
Approach Delay (s)		0.0			56.8			6.9			7.6	
Approach LOS		A			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.0%	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												
Volume (vph)	232	396	0	0	0	0	0	700	34	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				
Lane Util. Factor		0.95						0.91				
Frt		1.00						0.99				
Flt Protected		0.98						1.00				
Satd. Flow (prot)		3823						5555				
Flt Permitted		0.98						1.00				
Satd. Flow (perm)		3823						5555				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	252	430	0	0	0	0	0	761	37	0	0	0
RTOR Reduction (vph)	0	36	0	0	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	646	0	0	0	0	0	789	0	0	0	0
Turn Type	Split	NA						NA				
Protected Phases	6	6						4				
Permitted Phases												
Actuated Green, G (s)		77.9						24.1				
Effective Green, g (s)		77.9						24.1				
Actuated g/C Ratio		0.71						0.22				
Clearance Time (s)		4.0						4.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		2707						1217				
v/s Ratio Prot		c0.17						c0.14				
v/s Ratio Perm												
v/c Ratio		0.24						0.65				
Uniform Delay, d1		5.6						39.1				
Progression Factor		1.34						1.00				
Incremental Delay, d2		0.0						1.2				
Delay (s)		7.6						40.3				
Level of Service		A						D				
Approach Delay (s)		7.6			0.0			40.3			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	25.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	38.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	0	35	55	210	722	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			4.0				
Lane Util. Factor					0.95			0.91				
Frt					0.91			1.00				
Flt Protected					1.00			0.99				
Satd. Flow (prot)					3536			5532				
Flt Permitted					1.00			0.99				
Satd. Flow (perm)					3536			5532				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	38	60	228	785	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	20	0	0	114	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	78	0	0	899	0	0	0	0
Turn Type					NA		Split	NA				
Protected Phases					2		4	4				
Permitted Phases												
Actuated Green, G (s)					73.3			28.7				
Effective Green, g (s)					73.3			28.7				
Actuated g/C Ratio					0.67			0.26				
Clearance Time (s)					4.0			4.0				
Vehicle Extension (s)					3.0			3.0				
Lane Grp Cap (vph)					2356			1443				
v/s Ratio Prot					c0.02			c0.16				
v/s Ratio Perm												
v/c Ratio					0.03			0.62				
Uniform Delay, d1					6.3			35.9				
Progression Factor					1.00			0.35				
Incremental Delay, d2					0.0			0.8				
Delay (s)					6.3			13.4				
Level of Service					A			B				
Approach Delay (s)		0.0			6.3			13.4			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	28.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	106	169	716	39	80	1197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	0.95
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1947	1742	2035		1947	3893
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1947	1742	2035		1947	3893
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	115	184	778	42	87	1301
RTOR Reduction (vph)	0	129	2	0	0	0
Lane Group Flow (vph)	115	55	818	0	87	1301
Turn Type	NA	Prot	NA		Prot	NA
Protected Phases	2	2	4		3	8
Permitted Phases						
Actuated Green, G (s)	33.0	33.0	56.1		8.9	69.0
Effective Green, g (s)	33.0	33.0	56.1		8.9	69.0
Actuated g/C Ratio	0.30	0.30	0.51		0.08	0.63
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	584	522	1037		157	2441
v/s Ratio Prot	c0.06	0.03	c0.40		0.04	c0.33
v/s Ratio Perm						
v/c Ratio	0.20	0.11	0.79		0.55	0.53
Uniform Delay, d1	28.6	27.8	22.1		48.6	11.5
Progression Factor	1.30	3.10	1.67		1.14	1.94
Incremental Delay, d2	0.7	0.4	2.8		0.4	0.0
Delay (s)	38.0	86.7	39.7		55.7	22.3
Level of Service	D	F	D		E	C
Approach Delay (s)	67.9		39.7			24.4
Approach LOS	E		D			C

Intersection Summary			
HCM 2000 Control Delay	34.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	94	25	0	0	80	50	120	331	115	50	0	76
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	4.0	4.0	4.0		4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00	1.00	1.00		1.00
Frt	1.00	1.00			0.95		1.00	1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (prot)	1947	2049			1943		1947	2049	1742	1947		1742
Flt Permitted	0.67	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (perm)	1367	2049			1943		1947	2049	1742	1947		1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	102	27	0	0	87	54	130	360	125	54	0	83
RTOR Reduction (vph)	0	0	0	0	11	0	0	0	95	0	0	69
Lane Group Flow (vph)	102	27	0	0	130	0	130	360	30	54	0	14
Turn Type	Perm	NA			NA		Prot	NA	Perm	Prot		custom
Protected Phases		6			2		7	4		3		8
Permitted Phases	6								4			
Actuated Green, G (s)	64.2	64.2			64.2		14.6	26.5	26.5	7.3		19.2
Effective Green, g (s)	64.2	64.2			64.2		14.6	26.5	26.5	7.3		19.2
Actuated g/C Ratio	0.58	0.58			0.58		0.13	0.24	0.24	0.07		0.17
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	797	1195			1134		258	493	419	129		304
v/s Ratio Prot		0.01			0.07		c0.07	c0.18		0.03		0.01
v/s Ratio Perm	c0.07								0.02			
v/c Ratio	0.13	0.02			0.11		0.50	0.73	0.07	0.42		0.05
Uniform Delay, d1	10.3	9.7			10.2		44.3	38.5	32.3	49.3		37.8
Progression Factor	0.33	0.33			1.00		1.41	0.88	0.61	0.99		1.31
Incremental Delay, d2	0.3	0.0			0.0		1.5	5.4	0.1	2.2		0.1
Delay (s)	3.7	3.2			10.3		63.9	39.2	19.8	51.2		49.7
Level of Service	A	A			B		E	D	B	D		D
Approach Delay (s)		3.6			10.3			40.5			50.3	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	33.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	25	75	39	50	15	75	50	671	50	75	1169	55
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		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	1945		1947	1792		1947	2028		1947	2035	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1947	1945		1947	1792		1947	2028		1947	2035	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	82	42	54	16	82	54	729	54	82	1271	60
RTOR Reduction (vph)	0	18	0	0	72	0	0	2	0	0	1	0
Lane Group Flow (vph)	27	106	0	54	26	0	54	781	0	82	1330	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	3.0	11.6		4.8	13.4		7.3	69.1		8.5	70.3	
Effective Green, g (s)	3.0	11.6		4.8	13.4		7.3	69.1		8.5	70.3	
Actuated g/C Ratio	0.03	0.11		0.04	0.12		0.07	0.63		0.08	0.64	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	53	205		84	218		129	1273		150	1300	
v/s Ratio Prot	0.01	c0.05		c0.03	0.01		0.03	0.39		c0.04	c0.65	
v/s Ratio Perm												
v/c Ratio	0.51	0.52		0.64	0.12		0.42	0.61		0.55	1.02	
Uniform Delay, d1	52.8	46.6		51.8	43.0		49.3	12.4		48.9	19.9	
Progression Factor	1.00	1.00		1.22	3.34		1.24	0.28		0.92	0.85	
Incremental Delay, d2	7.5	9.0		15.5	1.1		0.2	0.1		0.4	14.4	
Delay (s)	60.3	55.6		78.4	144.7		61.5	3.6		45.3	31.3	
Level of Service	E	E		E	F		E	A		D	C	
Approach Delay (s)		56.4			121.2			7.3			32.1	
Approach LOS		E			F			A			C	

Intersection Summary			
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	170	30	60	543	220	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1947	1742	1947	2049	1978	
Flt Permitted	0.95	1.00	0.43	1.00	1.00	
Satd. Flow (perm)	1947	1742	874	2049	1978	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	33	65	590	239	82
RTOR Reduction (vph)	0	15	0	0	20	0
Lane Group Flow (vph)	185	18	65	590	301	0
Turn Type	NA	Perm	Perm	NA	NA	
Protected Phases	6			4	8	
Permitted Phases		6	4			
Actuated Green, G (s)	59.1	59.1	42.9	42.9	42.9	
Effective Green, g (s)	59.1	59.1	42.9	42.9	42.9	
Actuated g/C Ratio	0.54	0.54	0.39	0.39	0.39	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	1046	935	340	799	771	
v/s Ratio Prot	c0.10			c0.29	0.15	
v/s Ratio Perm		0.01	0.07			
v/c Ratio	0.18	0.02	0.19	0.74	0.39	
Uniform Delay, d1	13.0	11.9	22.1	28.7	24.1	
Progression Factor	2.06	3.66	1.67	1.59	0.24	
Incremental Delay, d2	0.3	0.0	0.2	3.0	0.3	
Delay (s)	27.2	43.6	37.1	48.9	6.1	
Level of Service	C	D	D	D	A	
Approach Delay (s)	29.7			47.7	6.1	
Approach LOS	C			D	A	

Intersection Summary			
HCM 2000 Control Delay	33.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	44	6	35	46	25	25	641	100	172	1392	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		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.97		1.00	0.98		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1999			1952		1947	2007		1947	2041	
Flt Permitted		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1999			1952		1947	2007		1947	2041	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	48	7	38	50	27	27	697	109	187	1513	38
RTOR Reduction (vph)	0	4	0	0	11	0	0	5	0	0	1	0
Lane Group Flow (vph)	0	67	0	0	104	0	27	801	0	187	1550	0
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	6	6		2	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)		9.1			9.5		4.6	56.6		18.8	70.8	
Effective Green, g (s)		9.1			9.5		4.6	56.6		18.8	70.8	
Actuated g/C Ratio		0.08			0.09		0.04	0.51		0.17	0.64	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		165			168		81	1032		332	1313	
v/s Ratio Prot		c0.03			c0.05		0.01	0.40		c0.10	c0.76	
v/s Ratio Perm												
v/c Ratio		0.41			0.62		0.33	0.78		0.56	1.18	
Uniform Delay, d1		47.9			48.5		51.2	21.6		41.8	19.6	
Progression Factor		1.00			1.34		0.91	0.72		1.21	0.52	
Incremental Delay, d2		1.6			15.6		0.2	0.3		0.2	82.1	
Delay (s)		49.5			80.8		47.0	15.8		50.8	92.3	
Level of Service		D			F		D	B		D	F	
Approach Delay (s)		49.5			80.8			16.8			87.9	
Approach LOS		D			F			B			F	

Intersection Summary			
HCM 2000 Control Delay	65.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	97.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	41	275	0	0	35	15	71	611	59	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			0.95				
Frt		1.00			0.96			0.99				
Flt Protected		0.99			1.00			1.00				
Satd. Flow (prot)		2036			1967			3828				
Flt Permitted		0.96			1.00			1.00				
Satd. Flow (perm)		1967			1967			3828				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	299	0	0	38	16	77	664	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	6	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	344	0	0	48	0	0	796	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		6			2		4	4				
Permitted Phases	6											
Actuated Green, G (s)		70.2			70.2			31.8				
Effective Green, g (s)		70.2			70.2			31.8				
Actuated g/C Ratio		0.64			0.64			0.29				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			3.0				
Lane Grp Cap (vph)		1255			1255			1106				
v/s Ratio Prot					0.02			c0.21				
v/s Ratio Perm		c0.17										
v/c Ratio		0.27			0.04			0.72				
Uniform Delay, d1		8.7			7.4			35.1				
Progression Factor		1.36			1.00			1.22				
Incremental Delay, d2		0.4			0.1			1.3				
Delay (s)		12.3			7.4			44.1				
Level of Service		B			A			D				
Approach Delay (s)		12.3			7.4			44.1			0.0	
Approach LOS		B			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	33.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	29	32	0	0	0	25	571	85	135	1673	15
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	4.0	
Lane Util. Factor		1.00					1.00	1.00		1.00	1.00	
Frt		0.94					1.00	0.98		1.00	1.00	
Flt Protected		0.99					0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1914					1947	2009		1947	2046	
Flt Permitted		0.99					0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1914					1947	2009		1947	2046	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	32	35	0	0	0	27	621	92	147	1818	16
RTOR Reduction (vph)	0	27	0	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	56	0	0	0	0	27	709	0	147	1834	0
Turn Type	Perm	NA					Prot	NA		Prot	NA	
Protected Phases		6					7	4		3	8	
Permitted Phases	6											
Actuated Green, G (s)		7.4					4.7	77.1		13.5	85.9	
Effective Green, g (s)		7.4					4.7	77.1		13.5	85.9	
Actuated g/C Ratio		0.07					0.04	0.70		0.12	0.78	
Clearance Time (s)		4.0					4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0					3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		128					83	1408		238	1597	
v/s Ratio Prot							0.01	0.35		c0.08	c0.90	
v/s Ratio Perm		0.03										
v/c Ratio		0.44					0.33	0.50		0.62	1.15	
Uniform Delay, d1		49.3					51.1	7.6		45.8	12.0	
Progression Factor		1.00					0.79	0.76		1.25	0.37	
Incremental Delay, d2		10.5					1.4	0.2		0.4	67.5	
Delay (s)		59.8					42.0	5.9		57.6	72.0	
Level of Service		E					D	A		E	E	
Approach Delay (s)		59.8			0.0			7.3			70.9	
Approach LOS		E			A			A			E	

Intersection Summary			
HCM 2000 Control Delay	53.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	43	206	0	0	0	0	0	622	65	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				
Lane Util. Factor		0.95						0.95				
Frt		1.00						0.99				
Flt Protected		0.99						1.00				
Satd. Flow (prot)		3860						3838				
Flt Permitted		0.99						1.00				
Satd. Flow (perm)		3860						3838				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	224	0	0	0	0	0	676	71	0	0	0
RTOR Reduction (vph)	0	8	0	0	0	0	0	13	0	0	0	0
Lane Group Flow (vph)	0	263	0	0	0	0	0	734	0	0	0	0
Turn Type	Perm	NA						NA				
Protected Phases		6						4				
Permitted Phases	6											
Actuated Green, G (s)		72.1						29.9				
Effective Green, g (s)		72.1						29.9				
Actuated g/C Ratio		0.66						0.27				
Clearance Time (s)		4.0						4.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		2530						1043				
v/s Ratio Prot								c0.19				
v/s Ratio Perm		0.07										
v/c Ratio		0.10						0.70				
Uniform Delay, d1		7.0						36.1				
Progression Factor		1.96						0.84				
Incremental Delay, d2		0.1						2.1				
Delay (s)		13.8						32.2				
Level of Service		B						C				
Approach Delay (s)		13.8			0.0			32.2			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	27.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	71	21	53	39	25	25	536	25	207	1643	75
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		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.94		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	1978		1947	1929		1947	2035		1947	2036	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1947	1978		1947	1929		1947	2035		1947	2036	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	77	23	58	42	27	27	583	27	225	1786	82
RTOR Reduction (vph)	0	11	0	0	22	0	0	1	0	0	1	0
Lane Group Flow (vph)	16	89	0	58	47	0	27	609	0	225	1867	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	1.6	9.6		4.0	12.0		4.3	62.6		17.8	76.1	
Effective Green, g (s)	1.6	9.6		4.0	12.0		4.3	62.6		17.8	76.1	
Actuated g/C Ratio	0.01	0.09		0.04	0.11		0.04	0.57		0.16	0.69	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	28	172		70	210		76	1158		315	1408	
v/s Ratio Prot	0.01	c0.05		c0.03	0.02		0.01	0.30		c0.12	c0.92	
v/s Ratio Perm												
v/c Ratio	0.57	0.52		0.83	0.22		0.36	0.53		0.71	1.33	
Uniform Delay, d1	53.9	48.0		52.7	44.7		51.5	14.6		43.7	17.0	
Progression Factor	1.00	1.00		1.03	1.28		0.92	1.02		0.86	1.47	
Incremental Delay, d2	25.2	10.7		52.2	2.4		2.5	0.4		0.7	147.1	
Delay (s)	79.0	58.7		106.6	59.7		49.8	15.3		38.2	172.1	
Level of Service	E	E		F	E		D	B		D	F	
Approach Delay (s)		61.5			81.1			16.7			157.7	
Approach LOS		E			F			B			F	

Intersection Summary			
HCM 2000 Control Delay	120.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	114.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	70	233	0	0	63	24	54	543	48	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	4.0		4.0				
Lane Util. Factor	1.00	1.00			1.00	1.00		0.95				
Frt	1.00	1.00			1.00	0.85		0.99				
Flt Protected	0.95	1.00			1.00	1.00		1.00				
Satd. Flow (prot)	1947	2049			2049	1742		3834				
Flt Permitted	0.71	1.00			1.00	1.00		1.00				
Satd. Flow (perm)	1460	2049			2049	1742		3834				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	253	0	0	68	26	59	590	52	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	8	0	8	0	0	0	0
Lane Group Flow (vph)	76	253	0	0	68	18	0	693	0	0	0	0
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		6			2			4				
Permitted Phases	6					2	4					
Actuated Green, G (s)	74.1	74.1			74.1	74.1		27.9				
Effective Green, g (s)	74.1	74.1			74.1	74.1		27.9				
Actuated g/C Ratio	0.67	0.67			0.67	0.67		0.25				
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				
Lane Grp Cap (vph)	983	1380			1380	1173		972				
v/s Ratio Prot		c0.12			0.03							
v/s Ratio Perm	0.05					0.01		0.18				
v/c Ratio	0.08	0.18			0.05	0.01		0.71				
Uniform Delay, d1	6.2	6.7			6.1	5.9		37.4				
Progression Factor	2.67	2.86			1.00	1.00		0.80				
Incremental Delay, d2	0.1	0.3			0.1	0.0		2.4				
Delay (s)	16.6	19.4			6.1	5.9		32.3				
Level of Service	B	B			A	A		C				
Approach Delay (s)		18.7			6.1			32.3			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	26.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	65	687	162	599	183	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00
Frt		1.00	0.89		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2040	1831		1947	1742
Flt Permitted		0.87	1.00		0.95	1.00
Satd. Flow (perm)		1792	1831		1947	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	71	747	176	651	199	71
RTOR Reduction (vph)	0	0	54	0	0	60
Lane Group Flow (vph)	0	818	773	0	199	11
Turn Type	Perm	NA	NA		NA	Perm
Protected Phases		6	2		8	
Permitted Phases	6					8
Actuated Green, G (s)		80.7	80.7		16.3	16.3
Effective Green, g (s)		80.7	80.7		16.3	16.3
Actuated g/C Ratio		0.77	0.77		0.16	0.16
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1377	1407		302	270
v/s Ratio Prot			0.42		c0.10	
v/s Ratio Perm		c0.46				0.01
v/c Ratio		0.59	0.55		0.66	0.04
Uniform Delay, d1		5.2	4.9		41.7	37.7
Progression Factor		1.00	1.00		0.67	0.66
Incremental Delay, d2		1.9	1.5		5.0	0.1
Delay (s)		7.1	6.4		32.8	25.1
Level of Service		A	A		C	C
Approach Delay (s)		7.1	6.4		30.8	
Approach LOS		A	A		C	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	105.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
Turn Type	Perm											
Protected Phases		6			2			4				
Permitted Phases	6											
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	47	101	70	54	101	39	23	298	47	39	712	39
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		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.97		1.00	0.98		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1939			1966		1947	2007		1947	2033	
Flt Permitted		0.91			0.88		0.25	1.00		0.53	1.00	
Satd. Flow (perm)		1780			1761		509	2007		1079	2033	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	110	76	59	110	42	25	324	51	42	774	42
RTOR Reduction (vph)	0	52	0	0	27	0	0	12	0	0	4	0
Lane Group Flow (vph)	0	185	0	0	184	0	25	363	0	42	812	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)		8.6			8.6		16.1	16.1		16.1	16.1	
Effective Green, g (s)		8.6			8.6		16.1	16.1		16.1	16.1	
Actuated g/C Ratio		0.26			0.26		0.49	0.49		0.49	0.49	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		468			463		250	988		531	1000	
v/s Ratio Prot								0.18			c0.40	
v/s Ratio Perm		0.10			c0.10		0.05			0.04		
v/c Ratio		0.39			0.40		0.10	0.37		0.08	0.81	
Uniform Delay, d1		9.9			9.9		4.4	5.1		4.4	7.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.6			0.6		0.2	0.2		0.1	5.1	
Delay (s)		10.5			10.5		4.6	5.4		4.4	12.1	
Level of Service		B			B		A	A		A	B	
Approach Delay (s)		10.5			10.5			5.3			11.7	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	32.7	Sum of lost time (s)	8.0
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												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
Turn Type	Perm											
Protected Phases		6			2			4				
Permitted Phases	6											
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	31	124	16	6	352	12	180	419	267
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	
Lane Util. Factor					1.00			1.00		1.00	1.00	
Frt					0.99			1.00		1.00	0.94	
Flt Protected					0.99			1.00		0.95	1.00	
Satd. Flow (prot)					2005			2038		1947	1929	
Flt Permitted					0.99			0.99		0.58	1.00	
Satd. Flow (perm)					2005			2014		1185	1929	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	34	135	17	7	383	13	196	455	290
RTOR Reduction (vph)	0	0	0	0	11	0	0	3	0	0	49	0
Lane Group Flow (vph)	0	0	0	0	175	0	0	400	0	196	696	0
Turn Type				Perm	NA		Perm	NA		Perm	NA	
Protected Phases					2			4			8	
Permitted Phases				2			4			8		
Actuated Green, G (s)					7.9			15.1		15.1	15.1	
Effective Green, g (s)					7.9			15.1		15.1	15.1	
Actuated g/C Ratio					0.25			0.49		0.49	0.49	
Clearance Time (s)					4.0			4.0		4.0	4.0	
Vehicle Extension (s)					3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)					510			981		577	939	
v/s Ratio Prot											c0.36	
v/s Ratio Perm					0.09			0.20		0.17		
v/c Ratio					0.34			0.41		0.34	0.74	
Uniform Delay, d1					9.4			5.1		4.9	6.4	
Progression Factor					1.00			1.00		1.00	1.00	
Incremental Delay, d2					0.4			0.3		0.4	3.2	
Delay (s)					9.8			5.4		5.2	9.6	
Level of Service					A			A		A	A	
Approach Delay (s)		0.0			9.8			5.4			8.7	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	31.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
Turn Type	Perm					custom						
Protected Phases		6						4				
Permitted Phases	6					2						
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations										
Volume (vph)	63	23	308	208	23	0	0	0	334	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0					4.0	4.0
Lane Util. Factor	1.00			0.91					1.00	1.00
Frt	0.96			0.99					1.00	0.85
Flt Protected	0.96			0.97					0.95	1.00
Satd. Flow (prot)	1905			5404					1947	1742
Flt Permitted	0.96			0.97					0.95	1.00
Satd. Flow (perm)	1905			5404					1947	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	25	335	226	25	0	0	0	363	126
RTOR Reduction (vph)	17	0	0	12	0	0	0	0	0	0
Lane Group Flow (vph)	76	0	0	574	0	0	0	0	363	126
Turn Type	NA		Perm	NA					NA	Prot
Protected Phases	4!			6					8!	8
Permitted Phases			6							
Actuated Green, G (s)	10.8			11.4					10.8	10.8
Effective Green, g (s)	10.8			11.4					10.8	10.8
Actuated g/C Ratio	0.36			0.38					0.36	0.36
Clearance Time (s)	4.0			4.0					4.0	4.0
Vehicle Extension (s)	3.0			3.0					3.0	3.0
Lane Grp Cap (vph)	681			2039					696	622
v/s Ratio Prot	0.04								c0.19	0.07
v/s Ratio Perm				0.11						
v/c Ratio	0.11			0.28					0.52	0.20
Uniform Delay, d1	6.5			6.5					7.7	6.7
Progression Factor	1.00			1.00					1.00	1.00
Incremental Delay, d2	0.1			0.1					0.7	0.2
Delay (s)	6.6			6.6					8.4	6.9
Level of Service	A			A					A	A
Approach Delay (s)	6.6			6.6			0.0		8.0	
Approach LOS	A			A			A		A	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	30.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
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												
Volume (vph)	92	156	0	0	114	28	223	379	29	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.91				
Frt		1.00			0.97			0.99				
Flt Protected		0.98			1.00			0.98				
Satd. Flow (prot)		3475			3436			4962				
Flt Permitted		0.79			1.00			0.98				
Satd. Flow (perm)		2779			3436			4962				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	100	170	0	0	124	30	242	412	32	0	0	0
RTOR Reduction (vph)	0	0	0	0	25	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	270	0	0	129	0	0	683	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		8			4		2	2				
Permitted Phases	8											
Actuated Green, G (s)		19.0			19.0			76.0				
Effective Green, g (s)		19.0			19.0			76.0				
Actuated g/C Ratio		0.18			0.18			0.72				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		0.2			0.2			0.2				
Lane Grp Cap (vph)		502			621			3591				
v/s Ratio Prot					0.04			c0.14				
v/s Ratio Perm		c0.10										
v/c Ratio		0.54			0.21			0.19				
Uniform Delay, d1		39.0			36.6			4.6				
Progression Factor		0.84			1.00			0.26				
Incremental Delay, d2		0.3			0.1			0.1				
Delay (s)		33.3			36.7			1.3				
Level of Service		C			D			A				
Approach Delay (s)		33.3			36.7			1.3			0.0	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.0%	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												
Volume (vph)	161	29	58	50	163	37	380	251	33	50	140	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6			4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.90			1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1677			1841	1583	1770	1863	1583	1770	1790	
Flt Permitted	0.95	1.00			0.99	1.00	0.58	1.00	1.00	0.51	1.00	
Satd. Flow (perm)	1770	1677			1841	1583	1088	1863	1583	956	1790	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	175	32	63	54	177	40	413	273	36	54	152	54
RTOR Reduction (vph)	0	45	0	0	0	34	0	0	20	0	16	0
Lane Group Flow (vph)	175	50	0	0	231	6	413	273	16	54	190	0
Turn Type	Split	NA		Split	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	2	2		1	1			8			8	
Permitted Phases						1	8		8	8		
Actuated Green, G (s)	29.7	29.7			15.5	15.5	46.8	46.8	46.8	46.8	46.8	
Effective Green, g (s)	29.7	29.7			15.5	15.5	46.8	46.8	46.8	46.8	46.8	
Actuated g/C Ratio	0.28	0.28			0.15	0.15	0.45	0.45	0.45	0.45	0.45	
Clearance Time (s)	4.6	4.6			4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Vehicle Extension (s)	3.8	3.8			2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	500	474			271	233	484	830	705	426	797	
v/s Ratio Prot	c0.10	0.03			c0.13			0.15			0.11	
v/s Ratio Perm						0.00	c0.38		0.01	0.06		
v/c Ratio	0.35	0.11			0.85	0.03	0.85	0.33	0.02	0.13	0.24	
Uniform Delay, d1	30.0	27.8			43.6	38.3	26.0	18.9	16.3	17.1	18.1	
Progression Factor	1.30	1.69			1.00	1.00	1.28	1.34	3.70	0.74	0.67	
Incremental Delay, d2	1.3	0.3			21.2	0.0	11.2	0.1	0.0	0.0	0.1	
Delay (s)	40.4	47.3			64.9	38.3	44.6	25.5	60.3	12.7	12.1	
Level of Service	D	D			E	D	D	C	E	B	B	
Approach Delay (s)		42.8			60.9			38.1			12.2	
Approach LOS		D			E			D			B	

Intersection Summary			
HCM 2000 Control Delay	38.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	71.5%	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												
Volume (vph)	63	243	50	100	774	67	76	238	105	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2		4.2	4.2		4.2	4.2				
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00				
Frt	1.00	0.97		1.00	0.99		1.00	0.95				
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00				
Satd. Flow (prot)	1770	1815		1770	1840		1770	1777				
Flt Permitted	0.18	1.00		0.54	1.00		0.95	1.00				
Satd. Flow (perm)	337	1815		1009	1840		1770	1777				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	264	54	109	841	73	83	259	114	0	0	0
RTOR Reduction (vph)	0	5	0	0	2	0	0	20	0	0	0	0
Lane Group Flow (vph)	68	313	0	109	912	0	83	353	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		2			6		8	8				
Permitted Phases	2			6								
Actuated Green, G (s)	70.5	70.5		70.5	70.5		26.1	26.1				
Effective Green, g (s)	70.5	70.5		70.5	70.5		26.1	26.1				
Actuated g/C Ratio	0.67	0.67		0.67	0.67		0.25	0.25				
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2				
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2				
Lane Grp Cap (vph)	226	1218		677	1235		439	441				
v/s Ratio Prot		0.17			c0.50		0.05	c0.20				
v/s Ratio Perm	0.20			0.11								
v/c Ratio	0.30	0.26		0.16	0.74		0.19	0.80				
Uniform Delay, d1	7.1	6.9		6.4	11.2		31.1	37.0				
Progression Factor	1.44	1.56		1.00	1.00		0.70	0.78				
Incremental Delay, d2	0.3	0.0		0.5	4.0		0.1	9.4				
Delay (s)	10.5	10.8		6.9	15.2		21.9	38.5				
Level of Service	B	B		A	B		C	D				
Approach Delay (s)		10.7			14.3			35.5			0.0	
Approach LOS		B			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	96.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	112	237	200	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2			
Lane Util. Factor		1.00	0.95			
Frt		0.86	0.93			
Flt Protected		1.00	1.00			
Satd. Flow (prot)		1611	3297			
Flt Permitted		1.00	1.00			
Satd. Flow (perm)		1611	3297			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	122	258	217	0	0
RTOR Reduction (vph)	0	32	177	0	0	0
Lane Group Flow (vph)	0	90	298	0	0	0
Turn Type		custom	NA			
Protected Phases			8			
Permitted Phases		2				
Actuated Green, G (s)		77.1	19.5			
Effective Green, g (s)		77.1	19.5			
Actuated g/C Ratio		0.73	0.19			
Clearance Time (s)		4.2	4.2			
Vehicle Extension (s)		0.2	6.0			
Lane Grp Cap (vph)		1182	612			
v/s Ratio Prot			c0.09			
v/s Ratio Perm		c0.06				
v/c Ratio		0.08	0.49			
Uniform Delay, d1		3.9	38.3			
Progression Factor		1.00	2.26			
Incremental Delay, d2		0.1	1.7			
Delay (s)		4.0	88.2			
Level of Service		A	F			
Approach Delay (s)	4.0		88.2		0.0	
Approach LOS	A		F		A	

Intersection Summary			
HCM 2000 Control Delay	71.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.16		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	26.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	150	145	475	98	232	22	30	456	44	91	1864	259
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.4			5.4		4.0	4.0		5.4	5.4	
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	0.95	
Frt		0.91			0.99		1.00	0.99		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3181			3458		1770	1838		1770	3474	
Flt Permitted		0.71			0.56		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2269			1971		1770	1838		1770	3474	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	158	516	107	252	24	33	496	48	99	2026	282
RTOR Reduction (vph)	0	90	0	0	5	0	0	2	0	0	9	0
Lane Group Flow (vph)	0	747	0	0	378	0	33	542	0	99	2299	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			2		7	4		3	8	
Permitted Phases	2			2								
Actuated Green, G (s)		24.0			24.0		3.6	58.4		7.8	62.6	
Effective Green, g (s)		24.0			24.0		3.6	58.4		7.8	62.6	
Actuated g/C Ratio		0.23			0.23		0.03	0.56		0.07	0.60	
Clearance Time (s)		5.4			5.4		4.0	4.0		5.4	5.4	
Vehicle Extension (s)		0.2			0.2		3.0	3.0		0.2	0.2	
Lane Grp Cap (vph)		518			450		60	1022		131	2071	
v/s Ratio Prot							0.02	0.29		c0.06	c0.66	
v/s Ratio Perm		c0.33			0.19							
v/c Ratio		1.44			1.34dl		0.55	0.53		0.76	1.11	
Uniform Delay, d1		40.5			38.7		49.9	14.7		47.7	21.2	
Progression Factor		1.00			1.42		1.00	1.00		1.11	0.91	
Incremental Delay, d2		209.5			17.0		10.5	0.5		13.1	54.6	
Delay (s)		250.0			72.0		60.4	15.2		65.9	73.9	
Level of Service		F			E		E	B		E	E	
Approach Delay (s)		250.0			72.0			17.8			73.6	
Approach LOS		F			E			B			E	

Intersection Summary			
HCM 2000 Control Delay	100.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	113.6%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	50	121	382	299	241	53	105	497	83	45	1397	342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.2		4.0	4.2		4.0	4.2	4.2	4.2	4.2	4.2
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.89		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1651		1770	1812		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1651		1770	1812		1770	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	132	415	325	262	58	114	540	90	49	1518	372
RTOR Reduction (vph)	0	76	0	0	8	0	0	0	51	0	0	41
Lane Group Flow (vph)	54	471	0	325	312	0	114	540	39	49	1518	331
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			8
Actuated Green, G (s)	3.2	19.7		5.0	21.5		4.0	45.1	45.1	18.6	59.9	59.9
Effective Green, g (s)	3.2	19.7		5.0	21.5		4.0	45.1	45.1	18.6	59.9	59.9
Actuated g/C Ratio	0.03	0.19		0.05	0.20		0.04	0.43	0.43	0.18	0.57	0.57
Clearance Time (s)	4.0	4.2		4.0	4.2		4.0	4.2	4.2	4.2	4.2	4.2
Vehicle Extension (s)	3.0	0.2		3.0	0.2		3.0	0.2	0.2	0.2	0.2	0.2
Lane Grp Cap (vph)	53	309		84	371		67	800	679	313	1062	903
v/s Ratio Prot	0.03	c0.29		c0.18	0.17		c0.06	0.29		0.03	c0.81	
v/s Ratio Perm									0.02			0.21
v/c Ratio	1.02	1.52		3.87	0.84		1.70	0.68	0.06	0.16	1.43	0.37
Uniform Delay, d1	50.9	42.6		50.0	40.1		50.5	24.1	17.5	36.6	22.6	12.2
Progression Factor	1.00	1.00		0.82	1.27		1.05	0.94	1.54	1.29	0.61	0.62
Incremental Delay, d2	129.1	251.3		1312.1	15.6		366.3	1.6	0.0	0.0	193.7	0.0
Delay (s)	180.0	293.9		1352.9	66.3		419.5	24.1	27.0	47.2	207.5	7.6
Level of Service	F	F		F	E		F	C	C	D	F	A
Approach Delay (s)		283.7			714.6			85.1			165.1	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	258.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.59		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.6
Intersection Capacity Utilization	139.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	50	153	19	265	505	106	53	579	90	124	1380	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		4.2	4.2		4.0	4.2		4.2	4.2	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.99		1.00	0.97		1.00	0.98		1.00	0.99	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1820		1770	1814		1770	1825		1770	1847	
Flt Permitted		0.23		0.53	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		417		993	1814		1770	1825		1770	1847	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	166	21	288	549	115	58	629	98	135	1500	88
RTOR Reduction (vph)	0	3	0	0	7	0	0	5	0	0	2	0
Lane Group Flow (vph)	0	238	0	288	657	0	58	722	0	135	1586	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2			6								
Actuated Green, G (s)		36.8		36.8	36.8		4.8	33.6		22.0	51.0	
Effective Green, g (s)		36.8		36.8	36.8		4.8	33.6		22.0	51.0	
Actuated g/C Ratio		0.35		0.35	0.35		0.05	0.32		0.21	0.49	
Clearance Time (s)		4.2		4.2	4.2		4.0	4.2		4.2	4.2	
Vehicle Extension (s)		0.2		0.2	0.2		3.0	0.2		0.2	0.2	
Lane Grp Cap (vph)		146		348	635		80	584		370	897	
v/s Ratio Prot					0.36		c0.03	0.40		0.08	c0.86	
v/s Ratio Perm		c0.57		0.29								
v/c Ratio		1.63		0.83	1.03		0.72	1.24		0.36	1.77	
Uniform Delay, d1		34.1		31.2	34.1		49.4	35.7		35.5	27.0	
Progression Factor		1.00		0.82	0.83		1.17	1.10		1.36	0.51	
Incremental Delay, d2		311.8		10.9	40.0		15.1	113.6		0.0	346.0	
Delay (s)		345.9		36.5	68.2		72.7	152.9		48.3	359.7	
Level of Service		F		D	E		E	F		D	F	
Approach Delay (s)		345.9			58.6			147.0			335.3	
Approach LOS		F			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	224.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.66		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.6
Intersection Capacity Utilization	144.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL2	SBL	SBR	SBR2	SEL	SET	SER	NWL	NWT	NWR	NET	NER
Lane Configurations												
Volume (vph)	25	452	1395	5	35	8	24	15	30	17	500	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.9	4.9			4.6			4.0		4.6	
Lane Util. Factor		1.00	0.88			1.00			1.00		1.00	
Frt		1.00	0.85			0.95			0.96		0.99	
Flt Protected		0.95	1.00			0.97			0.99		1.00	
Satd. Flow (prot)		1770	2787			1728			1774		1840	
Flt Permitted		0.95	1.00			0.80			0.99		1.00	
Satd. Flow (perm)		1770	2787			1420			1774		1840	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	491	1516	5	38	9	26	16	33	18	543	54
RTOR Reduction (vph)	0	0	49	0	0	20	0	0	0	0	3	0
Lane Group Flow (vph)	0	518	1472	0	0	53	0	0	67	0	594	0
Turn Type	Perm	NA	Prot		Perm	NA		Split	NA		NA	
Protected Phases		2	2			3		1	1		4	
Permitted Phases	2				3							
Actuated Green, G (s)		56.5	56.5			9.0			6.0		15.4	
Effective Green, g (s)		56.5	56.5			9.0			6.0		15.4	
Actuated g/C Ratio		0.54	0.54			0.09			0.06		0.15	
Clearance Time (s)		4.9	4.9			4.6			4.0		4.6	
Vehicle Extension (s)		4.0	4.0			4.0			2.0		4.0	
Lane Grp Cap (vph)		952	1499			121			101		269	
v/s Ratio Prot			c0.53						c0.04		c0.32	
v/s Ratio Perm		0.29				c0.04						
v/c Ratio		0.54	0.98			0.44			0.66		2.21	
Uniform Delay, d1		15.8	23.8			45.6			48.5		44.8	
Progression Factor		1.00	1.00			1.00			1.00		0.86	
Incremental Delay, d2		2.2	19.3			3.4			12.0		554.0	
Delay (s)		18.1	43.1			49.0			60.5		592.7	
Level of Service		B	D			D			E		F	
Approach Delay (s)		36.7				49.0			60.5		592.7	
Approach LOS		D				D			E		F	

Intersection Summary			
HCM 2000 Control Delay	161.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.1
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SWL	SWT
Lane Configurations		
Volume (vph)	114	191
Ideal Flow (vphpl)	1900	1900
Lane Width	12	12
Total Lost time (s)	4.6	4.6
Lane Util. Factor	1.00	1.00
Frt	1.00	1.00
Flt Protected	0.95	1.00
Satd. Flow (prot)	1770	1863
Flt Permitted	0.26	1.00
Satd. Flow (perm)	484	1863
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	124	208
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	124	208
Turn Type	Perm	NA
Protected Phases		4
Permitted Phases	4	
Actuated Green, G (s)	15.4	15.4
Effective Green, g (s)	15.4	15.4
Actuated g/C Ratio	0.15	0.15
Clearance Time (s)	4.6	4.6
Vehicle Extension (s)	4.0	4.0
Lane Grp Cap (vph)	70	273
v/s Ratio Prot		0.11
v/s Ratio Perm	0.26	
v/c Ratio	1.77	0.76
Uniform Delay, d1	44.8	43.0
Progression Factor	1.00	1.00
Incremental Delay, d2	398.6	12.5
Delay (s)	443.4	55.6
Level of Service	F	E
Approach Delay (s)		200.4
Approach LOS		F

Intersection Summary

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	532	75	186	386	330	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	0.98			1.00	1.00	0.85
Flt Protected	1.00			0.98	0.95	1.00
Satd. Flow (prot)	3821			3831	1947	1742
Flt Permitted	1.00			0.61	0.95	1.00
Satd. Flow (perm)	3821			2374	1947	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	578	82	202	420	359	110
RTOR Reduction (vph)	5	0	0	0	0	55
Lane Group Flow (vph)	655	0	0	622	359	55
Turn Type	NA		Perm	NA	NA	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	70.4			70.4	26.6	26.6
Effective Green, g (s)	70.4			70.4	26.6	26.6
Actuated g/C Ratio	0.67			0.67	0.25	0.25
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2561			1591	493	441
v/s Ratio Prot	0.17				c0.18	
v/s Ratio Perm				c0.26		0.03
v/c Ratio	0.26			0.39	0.73	0.12
Uniform Delay, d1	6.9			7.7	35.9	30.2
Progression Factor	1.00			1.00	0.54	0.37
Incremental Delay, d2	0.2			0.7	5.2	0.1
Delay (s)	7.1			8.5	24.5	11.2
Level of Service	A			A	C	B
Approach Delay (s)	7.1			8.5	21.4	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.5%	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												
Volume (vph)	169	87	286	0	0	0	0	332	50	260	534	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			4.0	
Lane Util. Factor	0.97	1.00						1.00			1.00	
Frt	1.00	0.89						0.98			1.00	
Flt Protected	0.95	1.00						1.00			0.98	
Satd. Flow (prot)	3776	1814						2013			2016	
Flt Permitted	0.95	1.00						1.00			0.65	
Satd. Flow (perm)	3776	1814						2013			1336	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.81	0.81	0.81
Adj. Flow (vph)	184	95	311	0	0	0	0	361	54	321	659	0
RTOR Reduction (vph)	0	85	0	0	0	0	0	12	0	0	0	0
Lane Group Flow (vph)	184	321	0	0	0	0	0	403	0	0	980	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		6						4			8	
Permitted Phases	6									8		
Actuated Green, G (s)	11.3	11.3						16.2			16.2	
Effective Green, g (s)	11.3	11.3						16.2			16.2	
Actuated g/C Ratio	0.32	0.32						0.46			0.46	
Clearance Time (s)	4.0	4.0						4.0			4.0	
Vehicle Extension (s)	3.0	3.0						3.0			3.0	
Lane Grp Cap (vph)	1201	577						918			609	
v/s Ratio Prot		c0.18						0.20				
v/s Ratio Perm	0.05										c0.73	
v/c Ratio	0.15	0.56						0.44			1.61	
Uniform Delay, d1	8.7	10.0						6.6			9.7	
Progression Factor	1.00	1.00						1.00			1.00	
Incremental Delay, d2	0.1	1.2						0.3			281.7	
Delay (s)	8.7	11.2						6.9			291.4	
Level of Service	A	B						A			F	
Approach Delay (s)		10.4			0.0			6.9			291.4	
Approach LOS		B			A			A			F	

Intersection Summary			
HCM 2000 Control Delay	148.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	35.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	33	215	45	65	436	0	0	761	1683
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
Lane Util. Factor					0.95			0.95			0.95	0.95
Frt					0.98			1.00			0.94	0.85
Flt Protected					0.99			0.99			1.00	1.00
Satd. Flow (prot)					3782			3868			1828	1655
Flt Permitted					0.99			0.54			1.00	1.00
Satd. Flow (perm)					3782			2105			1828	1655
Peak-hour factor, PHF	0.92	0.92	0.92	0.78	0.78	0.78	0.92	0.92	0.92	0.71	0.71	0.71
Adj. Flow (vph)	0	0	0	42	276	58	71	474	0	0	1072	2370
RTOR Reduction (vph)	0	0	0	0	14	0	0	0	0	0	18	18
Lane Group Flow (vph)	0	0	0	0	362	0	0	545	0	0	1789	1617
Turn Type				Perm	NA		Perm	NA			NA	Perm
Protected Phases					2			4			8	
Permitted Phases				2			4					8
Actuated Green, G (s)					14.6			86.0			86.0	86.0
Effective Green, g (s)					14.6			86.0			86.0	86.0
Actuated g/C Ratio					0.13			0.79			0.79	0.79
Clearance Time (s)					4.0			4.0			4.0	4.0
Vehicle Extension (s)					3.0			3.0			3.0	3.0
Lane Grp Cap (vph)					508			1666			1447	1310
v/s Ratio Prot											c0.98	
v/s Ratio Perm					0.10			0.26				0.98
v/c Ratio					0.71			0.93dl			1.24	1.23
Uniform Delay, d1					45.0			3.2			11.3	11.3
Progression Factor					1.00			1.00			1.00	1.00
Incremental Delay, d2					4.7			0.1			112.5	112.2
Delay (s)					49.7			3.3			123.8	123.5
Level of Service					D			A			F	F
Approach Delay (s)		0.0			49.7			3.3			123.7	
Approach LOS		A			D			A			F	

Intersection Summary			
HCM 2000 Control Delay	102.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	108.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.8%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	165	233	0	0	0	0	0	631	70	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				
Lane Util. Factor		0.95						0.91				
Frt		1.00						0.98				
Flt Protected		0.98						1.00				
Satd. Flow (prot)		3814						5510				
Flt Permitted		0.98						1.00				
Satd. Flow (perm)		3814						5510				
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	183	259	0	0	0	0	0	709	79	0	0	0
RTOR Reduction (vph)	0	54	0	0	0	0	0	23	0	0	0	0
Lane Group Flow (vph)	0	388	0	0	0	0	0	765	0	0	0	0
Turn Type	Split	NA						NA				
Protected Phases	6	6						4				
Permitted Phases												
Actuated Green, G (s)		74.1						22.9				
Effective Green, g (s)		74.1						22.9				
Actuated g/C Ratio		0.71						0.22				
Clearance Time (s)		4.0						4.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		2691						1201				
v/s Ratio Prot		c0.10						c0.14				
v/s Ratio Perm												
v/c Ratio		0.14						0.64				
Uniform Delay, d1		5.1						37.3				
Progression Factor		1.00						1.00				
Incremental Delay, d2		0.1						1.1				
Delay (s)		5.2						38.4				
Level of Service		A						D				
Approach Delay (s)		5.2			0.0			38.4			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	31.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	0	36	60	225	571	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			4.0				
Lane Util. Factor					0.95			0.91				
Frt					0.91			1.00				
Flt Protected					1.00			0.99				
Satd. Flow (prot)					3528			5516				
Flt Permitted					1.00			0.99				
Satd. Flow (perm)					3528			5516				
Peak-hour factor, PHF	0.92	0.92	0.92	0.73	0.73	0.73	0.90	0.90	0.90	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	49	82	250	634	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	24	0	0	147	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	107	0	0	737	0	0	0	0
Turn Type					NA		Split	NA				
Protected Phases					2		4	4				
Permitted Phases												
Actuated Green, G (s)					74.1			22.9				
Effective Green, g (s)					74.1			22.9				
Actuated g/C Ratio					0.71			0.22				
Clearance Time (s)					4.0			4.0				
Vehicle Extension (s)					3.0			3.0				
Lane Grp Cap (vph)					2489			1203				
v/s Ratio Prot					c0.03			c0.13				
v/s Ratio Perm												
v/c Ratio					0.04			0.61				
Uniform Delay, d1					4.7			37.0				
Progression Factor					1.00			0.24				
Incremental Delay, d2					0.0			0.9				
Delay (s)					4.7			9.9				
Level of Service					A			A				
Approach Delay (s)		0.0			4.7			9.9			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	25.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	199	150	549	72	58	2015
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	0.95
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1947	1742	2017		1947	3893
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1947	1742	2017		1947	3893
Peak-hour factor, PHF	0.89	0.89	0.92	0.92	0.89	0.89
Adj. Flow (vph)	224	169	597	78	65	2264
RTOR Reduction (vph)	0	132	5	0	0	0
Lane Group Flow (vph)	224	37	670	0	65	2264
Turn Type	NA	Perm	NA		Prot	NA
Protected Phases	2		4		3	8
Permitted Phases		2				
Actuated Green, G (s)	14.3	14.3	64.8		13.9	82.7
Effective Green, g (s)	14.3	14.3	64.8		13.9	82.7
Actuated g/C Ratio	0.14	0.14	0.62		0.13	0.79
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	265	237	1244		257	3066
v/s Ratio Prot	c0.12		0.33		0.03	c0.58
v/s Ratio Perm		0.02				
v/c Ratio	0.85	0.16	0.54		0.25	0.74
Uniform Delay, d1	44.3	40.0	11.5		40.9	5.7
Progression Factor	1.26	2.26	1.11		1.08	1.44
Incremental Delay, d2	26.5	1.4	0.3		0.0	0.1
Delay (s)	82.2	91.6	13.1		44.1	8.2
Level of Service	F	F	B		D	A
Approach Delay (s)	86.3		13.1			9.2
Approach LOS	F		B			A

Intersection Summary			
HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	65	65	0	0	62	50	87	317	95	50	0	200
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	4.0	4.0	4.0		4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00	1.00	1.00		1.00
Frt	1.00	1.00			0.94		1.00	1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (prot)	1947	2049			1926		1947	2049	1742	1947		1742
Flt Permitted	0.66	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (perm)	1351	2049			1926		1947	2049	1742	1947		1742
Peak-hour factor, PHF	0.75	0.75	0.75	0.73	0.73	0.73	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	87	87	0	0	85	68	94	341	102	54	0	217
RTOR Reduction (vph)	0	0	0	0	15	0	0	0	78	0	0	171
Lane Group Flow (vph)	87	87	0	0	138	0	94	341	24	54	0	46
Turn Type	Perm	NA			NA		Prot	NA	Perm	Prot		custom
Protected Phases		6			2		7	4		3		8
Permitted Phases	6								4			
Actuated Green, G (s)	61.6	61.6			61.6		9.1	24.2	24.2	7.2		22.3
Effective Green, g (s)	61.6	61.6			61.6		9.1	24.2	24.2	7.2		22.3
Actuated g/C Ratio	0.59	0.59			0.59		0.09	0.23	0.23	0.07		0.21
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	792	1202			1129		168	472	401	133		369
v/s Ratio Prot		0.04			c0.07		c0.05	c0.17		0.03		0.03
v/s Ratio Perm	0.06								0.01			
v/c Ratio	0.11	0.07			0.12		0.56	0.72	0.06	0.41		0.12
Uniform Delay, d1	9.6	9.4			9.7		46.0	37.3	31.5	46.9		33.5
Progression Factor	0.56	0.56			1.00		1.38	0.78	0.68	0.78		5.01
Incremental Delay, d2	0.3	0.1			0.0		4.0	5.4	0.1	1.9		0.1
Delay (s)	5.6	5.4			9.7		67.6	34.5	21.5	38.7		167.7
Level of Service	A	A			A		E	C	C	D		F
Approach Delay (s)		5.5			9.7			37.8			142.0	
Approach LOS		A			A			D			F	

Intersection Summary			
HCM 2000 Control Delay	54.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	175	168	297	83	55	95	75	452	75	50	1404	147
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		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.91		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	1853		1947	1855		1947	2005		1947	2020	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1947	1853		1947	1855		1947	2005		1947	2020	
Peak-hour factor, PHF	0.82	0.82	0.82	0.48	0.48	0.48	0.92	0.92	0.92	0.75	0.75	0.75
Adj. Flow (vph)	213	205	362	173	115	198	82	491	82	67	1872	196
RTOR Reduction (vph)	0	61	0	0	60	0	0	5	0	0	4	0
Lane Group Flow (vph)	213	506	0	173	253	0	82	568	0	67	2064	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	7.0	21.2		6.0	20.2		4.0	54.0		7.8	57.8	
Effective Green, g (s)	7.0	21.2		6.0	20.2		4.0	54.0		7.8	57.8	
Actuated g/C Ratio	0.07	0.20		0.06	0.19		0.04	0.51		0.07	0.55	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	129	374		111	356		74	1031		144	1111	
v/s Ratio Prot	c0.11	c0.27		0.09	0.14		c0.04	0.28		0.03	c1.02	
v/s Ratio Perm												
v/c Ratio	1.65	1.35		1.56	0.71		1.11	0.55		0.47	1.86	
Uniform Delay, d1	49.0	41.9		49.5	39.7		50.5	17.3		46.6	23.6	
Progression Factor	1.00	1.00		1.16	1.71		0.96	0.98		0.97	0.95	
Incremental Delay, d2	324.9	175.0		290.4	11.4		120.4	0.5		0.2	386.5	
Delay (s)	373.9	216.9		347.8	79.1		169.1	17.3		45.4	408.8	
Level of Service	F	F		F	E		F	B		D	F	
Approach Delay (s)		259.8			174.7			36.3			397.4	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	286.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.71		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	124.5%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	143	150	188	276	100	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1947	1742	1947	2049	1957	
Flt Permitted	0.95	1.00	0.56	1.00	1.00	
Satd. Flow (perm)	1947	1742	1144	2049	1957	
Peak-hour factor, PHF	0.81	0.81	0.83	0.83	0.92	0.92
Adj. Flow (vph)	177	185	227	333	109	54
RTOR Reduction (vph)	0	60	0	0	40	0
Lane Group Flow (vph)	177	125	227	333	123	0
Turn Type	NA	Perm	Perm	NA	NA	
Protected Phases	6			4	8	
Permitted Phases		6	4			
Actuated Green, G (s)	70.7	70.7	26.3	26.3	26.3	
Effective Green, g (s)	70.7	70.7	26.3	26.3	26.3	
Actuated g/C Ratio	0.67	0.67	0.25	0.25	0.25	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	1310	1172	286	513	490	
v/s Ratio Prot	c0.09			0.16	0.06	
v/s Ratio Perm		0.07	c0.20			
v/c Ratio	0.14	0.11	0.79	0.65	0.25	
Uniform Delay, d1	6.2	6.0	36.8	35.2	31.5	
Progression Factor	2.17	6.28	1.19	1.19	0.65	
Incremental Delay, d2	0.1	0.1	13.8	2.8	0.3	
Delay (s)	13.4	38.0	57.7	44.8	20.8	
Level of Service	B	D	E	D	C	
Approach Delay (s)	26.0			50.0	20.8	
Approach LOS	C			D	C	

Intersection Summary			
HCM 2000 Control Delay	37.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	20	17	55	74	45	25	630	100	31	1490	25
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		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.97		1.00	0.98		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1931			1947		1947	2007		1947	2044	
Flt Permitted		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1931			1947		1947	2007		1947	2044	
Peak-hour factor, PHF	0.77	0.77	0.77	0.75	0.75	0.75	0.92	0.92	0.92	0.81	0.81	0.81
Adj. Flow (vph)	19	26	22	73	99	60	27	685	109	38	1840	31
RTOR Reduction (vph)	0	18	0	0	12	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	49	0	0	220	0	27	790	0	38	1871	0
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	6	6		2	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)		8.1			13.3		4.7	62.6		5.0	62.9	
Effective Green, g (s)		8.1			13.3		4.7	62.6		5.0	62.9	
Actuated g/C Ratio		0.08			0.13		0.04	0.60		0.05	0.60	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		148			246		87	1196		92	1224	
v/s Ratio Prot		c0.03			c0.11		0.01	0.39		c0.02	c0.92	
v/s Ratio Perm												
v/c Ratio		0.33			0.89		0.31	0.66		0.41	1.53	
Uniform Delay, d1		45.9			45.2		48.6	14.1		48.6	21.1	
Progression Factor		1.00			1.12		0.93	0.99		1.28	0.53	
Incremental Delay, d2		1.3			35.2		0.2	0.1		0.3	238.1	
Delay (s)		47.2			85.7		45.2	14.1		62.5	249.2	
Level of Service		D			F		D	B		E	F	
Approach Delay (s)		47.2			85.7			15.1			245.5	
Approach LOS		D			F			B			F	

Intersection Summary			
HCM 2000 Control Delay	166.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	99.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	45	106	0	0	128	51	42	298	18	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			0.95				
Frt		1.00			0.96			0.99				
Flt Protected		0.99			1.00			0.99				
Satd. Flow (prot)		2019			1970			3841				
Flt Permitted		0.86			1.00			0.99				
Satd. Flow (perm)		1763			1970			3841				
Peak-hour factor, PHF	0.79	0.79	0.79	0.74	0.74	0.74	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	57	134	0	0	173	69	44	310	19	0	0	0
RTOR Reduction (vph)	0	0	0	0	5	0	0	7	0	0	0	0
Lane Group Flow (vph)	0	191	0	0	237	0	0	366	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		6			2		4	4				
Permitted Phases	6											
Actuated Green, G (s)		81.2			81.2			15.8				
Effective Green, g (s)		81.2			81.2			15.8				
Actuated g/C Ratio		0.77			0.77			0.15				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			3.0				
Lane Grp Cap (vph)		1363			1523			577				
v/s Ratio Prot					c0.12			c0.10				
v/s Ratio Perm		0.11										
v/c Ratio		0.14			0.16			0.63				
Uniform Delay, d1		3.0			3.1			41.9				
Progression Factor		0.23			1.00			1.05				
Incremental Delay, d2		0.2			0.2			2.0				
Delay (s)		0.9			3.3			45.9				
Level of Service		A			A			D				
Approach Delay (s)		0.9			3.3			45.9			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	29	34	0	0	0	50	575	100	124	1566	11
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	4.0	
Lane Util. Factor		1.00					1.00	1.00		1.00	1.00	
Frt		0.93					1.00	0.98		1.00	1.00	
Flt Protected		1.00					0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1900					1947	2003		1947	2047	
Flt Permitted		1.00					0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1900					1947	2003		1947	2047	
Peak-hour factor, PHF	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.92	0.92	0.84	0.84	0.84
Adj. Flow (vph)	0	35	41	0	0	0	54	625	109	148	1864	13
RTOR Reduction (vph)	0	38	0	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	38	0	0	0	0	54	729	0	148	1877	0
Turn Type	Perm	NA					Prot	NA		Prot	NA	
Protected Phases		6					7	4		3	8	
Permitted Phases	6											
Actuated Green, G (s)		7.0					7.1	72.8		13.2	78.9	
Effective Green, g (s)		7.0					7.1	72.8		13.2	78.9	
Actuated g/C Ratio		0.07					0.07	0.69		0.13	0.75	
Clearance Time (s)		4.0					4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0					3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		126					131	1388		244	1538	
v/s Ratio Prot		c0.02					0.03	0.36		c0.08	c0.92	
v/s Ratio Perm												
v/c Ratio		0.30					0.41	0.53		0.61	1.22	
Uniform Delay, d1		46.7					46.9	7.8		43.4	13.0	
Progression Factor		1.00					0.80	0.87		1.16	0.53	
Incremental Delay, d2		6.0					1.6	0.3		0.4	99.7	
Delay (s)		52.7					39.3	7.0		51.0	106.6	
Level of Service		D					D	A		D	F	
Approach Delay (s)		52.7			0.0			9.2			102.5	
Approach LOS		D			A			A			F	

Intersection Summary			
HCM 2000 Control Delay	75.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	57	196	0	0	0	0	0	356	77	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				
Lane Util. Factor		0.95						0.95				
Frt		1.00						0.97				
Flt Protected		0.99						1.00				
Satd. Flow (prot)		3850						3789				
Flt Permitted		0.99						1.00				
Satd. Flow (perm)		3850						3789				
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	63	218	0	0	0	0	0	383	83	0	0	0
RTOR Reduction (vph)	0	9	0	0	0	0	0	38	0	0	0	0
Lane Group Flow (vph)	0	272	0	0	0	0	0	428	0	0	0	0
Turn Type	Perm	NA						NA				
Protected Phases		6						4				
Permitted Phases	6											
Actuated Green, G (s)		78.9						18.1				
Effective Green, g (s)		78.9						18.1				
Actuated g/C Ratio		0.75						0.17				
Clearance Time (s)		4.0						4.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		2893						653				
v/s Ratio Prot								c0.11				
v/s Ratio Perm		0.07										
v/c Ratio		0.09						0.66				
Uniform Delay, d1		3.5						40.5				
Progression Factor		1.66						0.78				
Incremental Delay, d2		0.1						2.4				
Delay (s)		5.8						34.0				
Level of Service		A						C				
Approach Delay (s)		5.8			0.0			34.0			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	26.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	25	100	25	106	64	50	50	421	50	42	1569	57
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		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.93		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	1988		1947	1914		1947	2017		1947	2038	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1947	1988		1947	1914		1947	2017		1947	2038	
Peak-hour factor, PHF	0.55	0.55	0.55	0.57	0.57	0.57	0.92	0.92	0.92	0.85	0.85	0.85
Adj. Flow (vph)	45	182	45	186	112	88	54	458	54	49	1846	67
RTOR Reduction (vph)	0	9	0	0	28	0	0	4	0	0	1	0
Lane Group Flow (vph)	45	218	0	186	172	0	54	508	0	49	1912	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	4.0	14.4		7.0	17.4		3.8	62.6		5.0	63.8	
Effective Green, g (s)	4.0	14.4		7.0	17.4		3.8	62.6		5.0	63.8	
Actuated g/C Ratio	0.04	0.14		0.07	0.17		0.04	0.60		0.05	0.61	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	272		129	317		70	1202		92	1238	
v/s Ratio Prot	0.02	c0.11		c0.10	c0.09		c0.03	0.25		0.03	c0.94	
v/s Ratio Perm												
v/c Ratio	0.61	0.80		1.44	0.54		0.77	0.42		0.53	1.54	
Uniform Delay, d1	49.7	43.9		49.0	40.2		50.2	11.4		48.9	20.6	
Progression Factor	1.00	1.00		1.00	1.10		1.06	0.96		1.11	1.06	
Incremental Delay, d2	13.3	21.7		236.8	6.5		35.3	0.2		3.1	247.1	
Delay (s)	63.1	65.6		285.7	50.7		88.4	11.2		57.4	268.9	
Level of Service	E	E		F	D		F	B		E	F	
Approach Delay (s)		65.2			163.9			18.6			263.6	
Approach LOS		E			F			B			F	

Intersection Summary			
HCM 2000 Control Delay	191.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	108.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	100	75	0	0	160	44	60	279	35	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	4.0		4.0				
Lane Util. Factor	1.00	1.00			1.00	1.00		0.95				
Frt	1.00	1.00			1.00	0.85		0.99				
Flt Protected	0.95	1.00			1.00	1.00		0.99				
Satd. Flow (prot)	1947	2049			2049	1742		3808				
Flt Permitted	0.59	1.00			1.00	1.00		0.99				
Satd. Flow (perm)	1199	2049			2049	1742		3808				
Peak-hour factor, PHF	0.72	0.72	0.72	0.59	0.59	0.59	0.75	0.75	0.75	0.92	0.92	0.92
Adj. Flow (vph)	139	104	0	0	271	75	80	372	47	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	14	0	13	0	0	0	0
Lane Group Flow (vph)	139	104	0	0	271	61	0	486	0	0	0	0
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		6			2			4				
Permitted Phases	6					2	4					
Actuated Green, G (s)	77.1	77.1			77.1	77.1		19.9				
Effective Green, g (s)	77.1	77.1			77.1	77.1		19.9				
Actuated g/C Ratio	0.73	0.73			0.73	0.73		0.19				
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				
Lane Grp Cap (vph)	880	1504			1504	1279		721				
v/s Ratio Prot		0.05			c0.13							
v/s Ratio Perm	0.12					0.04		0.13				
v/c Ratio	0.16	0.07			0.18	0.05		0.67				
Uniform Delay, d1	4.2	3.9			4.3	3.8		39.5				
Progression Factor	3.76	3.55			1.00	1.00		0.74				
Incremental Delay, d2	0.3	0.1			0.3	0.1		2.5				
Delay (s)	16.1	13.9			4.5	3.9		31.6				
Level of Service	B	B			A	A		C				
Approach Delay (s)		15.1			4.4			31.6			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	30	110	77	315	84	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00
Frt		1.00	0.89		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		2027	1827		1947	1742
Flt Permitted		0.88	1.00		0.95	1.00
Satd. Flow (perm)		1794	1827		1947	1742
Peak-hour factor, PHF	0.81	0.81	0.78	0.78	0.60	0.60
Adj. Flow (vph)	37	136	99	404	140	25
RTOR Reduction (vph)	0	0	173	0	0	21
Lane Group Flow (vph)	0	173	330	0	140	4
Turn Type	Perm	NA	NA		NA	Perm
Protected Phases		6	2		8	
Permitted Phases	6					8
Actuated Green, G (s)		17.0	17.0		4.7	4.7
Effective Green, g (s)		17.0	17.0		4.7	4.7
Actuated g/C Ratio		0.57	0.57		0.16	0.16
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1026	1045		308	275
v/s Ratio Prot			c0.18		c0.07	
v/s Ratio Perm		0.10				0.00
v/c Ratio		0.17	0.32		0.45	0.01
Uniform Delay, d1		3.0	3.3		11.3	10.5
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.1	0.2		1.1	0.0
Delay (s)		3.1	3.5		12.4	10.6
Level of Service		A	A		B	B
Approach Delay (s)		3.1	3.5		12.1	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	5.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	29.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	188	120	16	0	0	12	0	256	4	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				1.00		0.91				
Frt		0.99				0.86		1.00				
Flt Protected		0.97				1.00		1.00				
Satd. Flow (prot)		5396				1772		5582				
Flt Permitted		0.97				1.00		1.00				
Satd. Flow (perm)		5396				1772		5582				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	204	130	17	0	0	13	0	278	4	0	0	0
RTOR Reduction (vph)	0	131	0	0	0	8	0	3	0	0	0	0
Lane Group Flow (vph)	0	220	0	0	0	5	0	279	0	0	0	0
Turn Type	Perm	NA				custom		NA				
Protected Phases		6						4				
Permitted Phases	6					2						
Actuated Green, G (s)		9.4				9.4		5.6				
Effective Green, g (s)		9.4				9.4		5.6				
Actuated g/C Ratio		0.41				0.41		0.24				
Clearance Time (s)		4.0				4.0		4.0				
Vehicle Extension (s)		3.0				3.0		3.0				
Lane Grp Cap (vph)		2205				724		1359				
v/s Ratio Prot								c0.05				
v/s Ratio Perm		0.04				0.00						
v/c Ratio		0.10				0.01		0.21				
Uniform Delay, d1		4.2				4.0		6.9				
Progression Factor		1.00				1.00		1.00				
Incremental Delay, d2		0.0				0.0		0.1				
Delay (s)		4.2				4.0		7.0				
Level of Service		A				A		A				
Approach Delay (s)		4.2			4.0			7.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.14		
Actuated Cycle Length (s)	23.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	28.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
Turn Type	Perm											
Protected Phases		6			2			4				
Permitted Phases	6											
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	10	40	10	10	55	15	15	142	15	10	387	10
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		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1985			1986		1947	2020		1947	2041	
Flt Permitted		0.94			0.96		0.47	1.00		0.65	1.00	
Satd. Flow (perm)		1889			1917		969	2020		1331	2041	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	11	43	11	11	60	16	16	154	16	11	421	11
RTOR Reduction (vph)	0	8	0	0	12	0	0	9	0	0	2	0
Lane Group Flow (vph)	0	57	0	0	75	0	16	161	0	11	430	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)		7.2			7.2		10.7	10.7		10.7	10.7	
Effective Green, g (s)		7.2			7.2		10.7	10.7		10.7	10.7	
Actuated g/C Ratio		0.28			0.28		0.41	0.41		0.41	0.41	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		525			532		400	834		549	843	
v/s Ratio Prot								0.08			c0.21	
v/s Ratio Perm		0.03			c0.04		0.02			0.01		
v/c Ratio		0.11			0.14		0.04	0.19		0.02	0.51	
Uniform Delay, d1		7.0			7.0		4.5	4.8		4.5	5.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			0.1		0.0	0.1		0.0	0.5	
Delay (s)		7.1			7.2		4.6	5.0		4.5	6.1	
Level of Service		A			A		A	A		A	A	
Approach Delay (s)		7.1			7.2			4.9			6.1	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	25.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
Turn Type	Perm											
Protected Phases		6			2			4				
Permitted Phases	6											
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	20	56	15	15	157	15	92	195	128
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	
Lane Util. Factor					1.00			1.00		1.00	1.00	
Frt					0.98			0.99		1.00	0.94	
Flt Protected					0.99			1.00		0.95	1.00	
Satd. Flow (prot)					1982			2019		1947	1927	
Flt Permitted					0.99			0.95		0.63	1.00	
Satd. Flow (perm)					1982			1936		1292	1927	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	22	61	16	16	171	16	100	212	139
RTOR Reduction (vph)	0	0	0	0	11	0	0	8	0	0	62	0
Lane Group Flow (vph)	0	0	0	0	88	0	0	195	0	100	289	0
Turn Type				Perm	NA		Perm	NA		Perm	NA	
Protected Phases					2			4			8	
Permitted Phases				2			4			8		
Actuated Green, G (s)					7.8			9.2		9.2	9.2	
Effective Green, g (s)					7.8			9.2		9.2	9.2	
Actuated g/C Ratio					0.31			0.37		0.37	0.37	
Clearance Time (s)					4.0			4.0		4.0	4.0	
Vehicle Extension (s)					3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)					618			712		475	709	
v/s Ratio Prot											c0.15	
v/s Ratio Perm					0.04			0.10		0.08		
v/c Ratio					0.14			0.27		0.21	0.41	
Uniform Delay, d1					6.2			5.6		5.4	5.9	
Progression Factor					1.00			1.00		1.00	1.00	
Incremental Delay, d2					0.1			0.2		0.2	0.4	
Delay (s)					6.3			5.8		5.6	6.3	
Level of Service					A			A		A	A	
Approach Delay (s)		0.0			6.3			5.8			6.1	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	25.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	42	100	0	0	115	57	121	267	34	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.91				
Frt		1.00			0.95			0.99				
Flt Protected		0.99			1.00			0.99				
Satd. Flow (prot)		3487			3363			4953				
Flt Permitted		0.83			1.00			0.99				
Satd. Flow (perm)		2933			3363			4953				
Peak-hour factor, PHF	0.78	0.78	0.78	0.88	0.88	0.88	0.82	0.82	0.82	0.92	0.92	0.92
Adj. Flow (vph)	54	128	0	0	131	65	148	326	41	0	0	0
RTOR Reduction (vph)	0	0	0	0	44	0	0	20	0	0	0	0
Lane Group Flow (vph)	0	182	0	0	152	0	0	495	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		8			4		2	2				
Permitted Phases	8											
Actuated Green, G (s)		12.7			12.7			16.7				
Effective Green, g (s)		12.7			12.7			16.7				
Actuated g/C Ratio		0.32			0.32			0.42				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		0.2			0.2			0.2				
Lane Grp Cap (vph)		945			1084			2099				
v/s Ratio Prot					0.05			c0.10				
v/s Ratio Perm		c0.06										
v/c Ratio		0.19			0.14			0.24				
Uniform Delay, d1		9.6			9.5			7.3				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		0.0			0.0			0.0				
Delay (s)		9.7			9.5			7.3				
Level of Service		A			A			A				
Approach Delay (s)		9.7			9.5			7.3			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	0.22		
Actuated Cycle Length (s)	39.4	Sum of lost time (s)	10.0
Intersection Capacity Utilization	64.5%	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												
Volume (vph)	108	97	53	15	13	8	57	200	51	15	15	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6			4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.95			1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00			0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1764			1814	1583	1770	1863	1583	1770	1723	
Flt Permitted	0.95	1.00			0.97	1.00	0.74	1.00	1.00	0.63	1.00	
Satd. Flow (perm)	1770	1764			1814	1583	1372	1863	1583	1169	1723	
Peak-hour factor, PHF	0.80	0.80	0.80	0.75	0.75	0.75	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	135	121	66	20	17	11	59	208	53	16	16	16
RTOR Reduction (vph)	0	30	0	0	0	10	0	0	34	0	10	0
Lane Group Flow (vph)	135	157	0	0	37	1	59	208	19	16	22	0
Turn Type	Split	NA		Split	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	2	2		1	1			8			8	
Permitted Phases						1	8		8	8		
Actuated Green, G (s)	10.9	10.9			2.2	2.2	14.1	14.1	14.1	14.1	14.1	
Effective Green, g (s)	10.9	10.9			2.2	2.2	14.1	14.1	14.1	14.1	14.1	
Actuated g/C Ratio	0.27	0.27			0.05	0.05	0.35	0.35	0.35	0.35	0.35	
Clearance Time (s)	4.6	4.6			4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Vehicle Extension (s)	3.8	3.8			2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	479	478			99	86	481	653	555	410	604	
v/s Ratio Prot	0.08	c0.09			c0.02			c0.11			0.01	
v/s Ratio Perm						0.00	0.04		0.01	0.01		
v/c Ratio	0.28	0.33			0.37	0.01	0.12	0.32	0.03	0.04	0.04	
Uniform Delay, d1	11.6	11.7			18.3	18.0	8.9	9.5	8.6	8.6	8.6	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	0.5			0.9	0.0	0.0	0.1	0.0	0.0	0.0	
Delay (s)	12.0	12.2			19.2	18.0	8.9	9.6	8.6	8.6	8.6	
Level of Service	B	B			B	B	A	A	A	A	A	
Approach Delay (s)		12.1			18.9			9.3			8.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	40.2	Sum of lost time (s)	13.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	18	445	15	15	347	58	58	370	102	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2		4.2	4.2		4.2	4.2				
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00				
Frt	1.00	1.00		1.00	0.98		1.00	0.97				
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00				
Satd. Flow (prot)	1770	1854		1770	1823		1770	1802				
Flt Permitted	0.39	1.00		0.31	1.00		0.95	1.00				
Satd. Flow (perm)	726	1854		584	1823		1770	1802				
Peak-hour factor, PHF	0.87	0.87	0.87	0.91	0.91	0.91	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	21	511	17	16	381	64	68	435	120	0	0	0
RTOR Reduction (vph)	0	2	0	0	10	0	0	13	0	0	0	0
Lane Group Flow (vph)	21	526	0	16	435	0	68	542	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		2			6		8	8				
Permitted Phases	2			6								
Actuated Green, G (s)	27.0	27.0		27.0	27.0		23.2	23.2				
Effective Green, g (s)	27.0	27.0		27.0	27.0		23.2	23.2				
Actuated g/C Ratio	0.46	0.46		0.46	0.46		0.40	0.40				
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2				
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2				
Lane Grp Cap (vph)	334	854		269	839		700	713				
v/s Ratio Prot		c0.28			0.24		0.04	c0.30				
v/s Ratio Perm	0.03			0.03								
v/c Ratio	0.06	0.62		0.06	0.52		0.10	0.76				
Uniform Delay, d1	8.8	11.9		8.8	11.2		11.1	15.3				
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00				
Incremental Delay, d2	0.0	0.9		0.0	0.2		0.0	4.2				
Delay (s)	8.8	12.8		8.8	11.4		11.1	19.4				
Level of Service	A	B		A	B		B	B				
Approach Delay (s)		12.7			11.3			18.5			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	58.6	Sum of lost time (s)	8.4
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	42	290	100	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2			
Lane Util. Factor		1.00	0.95			
Frt		0.86	0.96			
Flt Protected		1.00	1.00			
Satd. Flow (prot)		1611	3403			
Flt Permitted		1.00	1.00			
Satd. Flow (perm)		1611	3403			
Peak-hour factor, PHF	0.81	0.81	0.86	0.86	0.92	0.92
Adj. Flow (vph)	0	52	337	116	0	0
RTOR Reduction (vph)	0	45	55	0	0	0
Lane Group Flow (vph)	0	7	398	0	0	0
Turn Type		custom	NA			
Protected Phases			8			
Permitted Phases		2				
Actuated Green, G (s)		3.5	12.4			
Effective Green, g (s)		3.5	12.4			
Actuated g/C Ratio		0.14	0.51			
Clearance Time (s)		4.2	4.2			
Vehicle Extension (s)		0.2	6.0			
Lane Grp Cap (vph)		232	1736			
v/s Ratio Prot			c0.12			
v/s Ratio Perm		c0.00				
v/c Ratio		0.03	0.23			
Uniform Delay, d1		8.9	3.3			
Progression Factor		1.00	1.00			
Incremental Delay, d2		0.0	0.2			
Delay (s)		9.0	3.5			
Level of Service		A	A			
Approach Delay (s)	9.0		3.5		0.0	
Approach LOS	A		A		A	

Intersection Summary			
HCM 2000 Control Delay	4.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.19		
Actuated Cycle Length (s)	24.3	Sum of lost time (s)	8.4
Intersection Capacity Utilization	21.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	25	117	124	18	204	15	75	397	26	25	253	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.4			5.4		4.0	4.0			5.4	
Lane Util. Factor		0.95			0.95		1.00	1.00			0.95	
Frt		0.93			0.99		1.00	0.99			0.97	
Flt Protected		1.00			1.00		0.95	1.00			1.00	
Satd. Flow (prot)		3276			3493		1770	1846			3410	
Flt Permitted		0.89			0.90		0.95	1.00			0.90	
Satd. Flow (perm)		2929			3142		1770	1846			3084	
Peak-hour factor, PHF	0.84	0.84	0.84	0.86	0.86	0.86	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	30	139	148	21	237	17	82	432	28	27	272	85
RTOR Reduction (vph)	0	123	0	0	7	0	0	2	0	0	47	0
Lane Group Flow (vph)	0	194	0	0	268	0	82	458	0	0	337	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			2		7	4		3	8	
Permitted Phases	2			2								
Actuated Green, G (s)		6.4			6.4		4.2	22.7			13.1	
Effective Green, g (s)		6.4			6.4		4.2	22.7			13.1	
Actuated g/C Ratio		0.17			0.17		0.11	0.59			0.34	
Clearance Time (s)		5.4			5.4		4.0	4.0			5.4	
Vehicle Extension (s)		0.2			0.2		3.0	3.0			0.2	
Lane Grp Cap (vph)		486			522		193	1088			1049	
v/s Ratio Prot							0.05	c0.25				
v/s Ratio Perm		0.07			c0.09						0.11	
v/c Ratio		0.40			0.51		0.42	0.42			1.20dr	
Uniform Delay, d1		14.3			14.6		16.0	4.3			9.4	
Progression Factor		1.00			1.00		1.00	1.00			1.00	
Incremental Delay, d2		0.2			0.4		1.5	0.3			0.1	
Delay (s)		14.5			15.0		17.5	4.6			9.5	
Level of Service		B			B		B	A			A	
Approach Delay (s)		14.5			15.0			6.5			9.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	38.5	Sum of lost time (s)	14.8
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	119	44	5	41	17	15	496	15	124	237	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.2		4.0	4.2		4.0	4.2	4.2	4.0	4.2	4.2
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1787		1770	1782		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1787		1770	1782		1770	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.85	0.85	0.85	0.58	0.58	0.58	0.92	0.92	0.92	0.96	0.96	0.96
Adj. Flow (vph)	18	140	52	9	71	29	16	539	16	129	247	3
RTOR Reduction (vph)	0	18	0	0	20	0	0	0	9	0	0	1
Lane Group Flow (vph)	18	174	0	9	80	0	16	539	7	129	247	2
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			8
Actuated Green, G (s)	0.7	19.0		0.7	19.0		0.7	34.3	34.3	4.0	37.6	37.6
Effective Green, g (s)	0.7	19.0		0.7	19.0		0.7	34.3	34.3	4.0	37.6	37.6
Actuated g/C Ratio	0.01	0.26		0.01	0.26		0.01	0.46	0.46	0.05	0.51	0.51
Clearance Time (s)	4.0	4.2		4.0	4.2		4.0	4.2	4.2	4.0	4.2	4.2
Vehicle Extension (s)	3.0	0.2		3.0	0.2		3.0	0.2	0.2	3.0	0.2	0.2
Lane Grp Cap (vph)	16	456		16	455		16	858	729	95	941	800
v/s Ratio Prot	c0.01	c0.10		0.01	0.04		0.01	c0.29		c0.07	c0.13	
v/s Ratio Perm									0.00			0.00
v/c Ratio	1.12	0.38		0.56	0.18		1.00	0.63	0.01	1.36	0.26	0.00
Uniform Delay, d1	36.9	22.9		36.7	21.6		36.9	15.2	10.9	35.2	10.5	9.1
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	268.4	0.2		38.3	0.1		225.0	1.0	0.0	214.9	0.1	0.0
Delay (s)	305.3	23.0		75.0	21.7		261.9	16.3	10.9	250.1	10.5	9.1
Level of Service	F	C		E	C		F	B	B	F	B	A
Approach Delay (s)		47.2			26.1			23.0			92.1	
Approach LOS		D			C			C			F	

Intersection Summary			
HCM 2000 Control Delay	47.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	74.4	Sum of lost time (s)	16.4
Intersection Capacity Utilization	59.1%	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												
Volume (vph)	10	206	8	76	311	18	17	336	15	257	200	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		4.2	4.2		4.0	4.2		4.2	4.2	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		1.00		1.00	0.99		1.00	0.99		1.00	0.99	
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1850		1770	1848		1770	1851		1770	1853	
Flt Permitted		0.98		0.48	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1816		895	1848		1770	1851		1770	1853	
Peak-hour factor, PHF	0.86	0.86	0.86	0.93	0.93	0.93	0.92	0.92	0.92	0.81	0.81	0.81
Adj. Flow (vph)	12	240	9	82	334	19	18	365	16	317	247	9
RTOR Reduction (vph)	0	1	0	0	3	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	260	0	82	350	0	18	379	0	317	255	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2			6								
Actuated Green, G (s)		28.0		28.0	28.0		1.6	24.4		22.0	45.0	
Effective Green, g (s)		28.0		28.0	28.0		1.6	24.4		22.0	45.0	
Actuated g/C Ratio		0.32		0.32	0.32		0.02	0.28		0.25	0.52	
Clearance Time (s)		4.2		4.2	4.2		4.0	4.2		4.2	4.2	
Vehicle Extension (s)		0.2		0.2	0.2		3.0	0.2		0.2	0.2	
Lane Grp Cap (vph)		584		288	594		32	519		447	958	
v/s Ratio Prot					c0.19		0.01	c0.20		c0.18	0.14	
v/s Ratio Perm		0.14		0.09								
v/c Ratio		0.44		0.28	0.59		0.56	0.73		0.71	0.27	
Uniform Delay, d1		23.3		22.0	24.7		42.4	28.3		29.6	11.8	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2		0.2	1.0		20.7	4.3		4.2	0.1	
Delay (s)		23.5		22.2	25.7		63.0	32.7		33.8	11.8	
Level of Service		C		C	C		E	C		C	B	
Approach Delay (s)		23.5			25.0			34.0			24.0	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	87.0	Sum of lost time (s)	12.6
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBR	SBR2	SEL	SET	SER	NWL	NWT	NWR	NET	NER	SWL
Lane Configurations												
Volume (vph)	167	765	2	10	15	9	23	30	17	294	15	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.9	4.9			4.2			4.0		4.6		4.6
Lane Util. Factor	1.00	0.88			1.00			1.00		1.00		1.00
Frt	1.00	0.85			0.96			0.97		0.99		1.00
Flt Protected	0.95	1.00			0.99			0.98		1.00		0.95
Satd. Flow (prot)	1770	2787			1770			1773		1851		1770
Flt Permitted	0.95	1.00			0.86			0.98		1.00		0.32
Satd. Flow (perm)	1770	2787			1547			1773		1851		587
Peak-hour factor, PHF	0.73	0.73	0.73	0.45	0.45	0.45	0.63	0.63	0.63	0.92	0.92	0.65
Adj. Flow (vph)	229	1048	3	22	33	20	37	48	27	320	16	149
RTOR Reduction (vph)	0	112	0	0	19	0	0	0	0	3	0	0
Lane Group Flow (vph)	229	939	0	0	56	0	0	112	0	333	0	149
Turn Type	NA	Prot		Perm	NA		Split	NA		NA		Perm
Protected Phases	2	2			3		1	1		4		
Permitted Phases				3								4
Actuated Green, G (s)	20.4	20.4			4.6			6.0		15.1		15.1
Effective Green, g (s)	20.4	20.4			4.6			6.0		15.1		15.1
Actuated g/C Ratio	0.32	0.32			0.07			0.09		0.24		0.24
Clearance Time (s)	4.9	4.9			4.2			4.0		4.6		4.6
Vehicle Extension (s)	4.0	4.0			2.0			2.0		4.0		4.0
Lane Grp Cap (vph)	565	891			111			166		438		138
v/s Ratio Prot	0.13	c0.34						c0.06		0.18		
v/s Ratio Perm					c0.04							c0.25
v/c Ratio	0.41	1.05			0.51			0.67		0.76		1.08
Uniform Delay, d1	17.0	21.7			28.5			28.0		22.7		24.3
Progression Factor	1.00	1.00			1.00			1.00		1.00		1.00
Incremental Delay, d2	0.6	45.5			1.3			8.2		8.0		99.5
Delay (s)	17.6	67.2			29.8			36.2		30.7		123.9
Level of Service	B	E			C			D		C		F
Approach Delay (s)	58.3				29.8			36.2		30.7		
Approach LOS	E				C			D		C		

Intersection Summary			
HCM 2000 Control Delay	53.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	63.8	Sum of lost time (s)	17.7
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SWT
Lane Configurations	↑
Volume (vph)	102
Ideal Flow (vphpl)	1900
Lane Width	12
Total Lost time (s)	4.6
Lane Util. Factor	1.00
Frt	1.00
Flt Protected	1.00
Satd. Flow (prot)	1863
Flt Permitted	1.00
Satd. Flow (perm)	1863
Peak-hour factor, PHF	0.65
Adj. Flow (vph)	157
RTOR Reduction (vph)	0
Lane Group Flow (vph)	157
Turn Type	NA
Protected Phases	4
Permitted Phases	
Actuated Green, G (s)	15.1
Effective Green, g (s)	15.1
Actuated g/C Ratio	0.24
Clearance Time (s)	4.6
Vehicle Extension (s)	4.0
Lane Grp Cap (vph)	440
v/s Ratio Prot	0.08
v/s Ratio Perm	
v/c Ratio	0.36
Uniform Delay, d1	20.3
Progression Factor	1.00
Incremental Delay, d2	0.7
Delay (s)	21.0
Level of Service	C
Approach Delay (s)	71.1
Approach LOS	E

Intersection Summary

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	NEL2	NEL
Right Turn Channelized												
Volume (veh/h)	108	308	41	72	97	50	110	36	246	11	100	146
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	117	335	45	78	105	54	120	39	267	12	109	159
Approach Volume (veh/h)		497			238				438			316
Crossing Volume (veh/h)		198			811				768			452
High Capacity (veh/h)		1186			727				752			970
High v/c (veh/h)		0.42			0.33				0.58			0.33
Low Capacity (veh/h)		981			573				595			787
Low v/c (veh/h)		0.51			0.42				0.74			0.40

Intersection Summary			
Maximum v/c High	0.58		
Maximum v/c Low	0.74		
Intersection Capacity Utilization	67.2%	ICU Level of Service	C

Movement	NER
Right Turn Channelized	
Volume (veh/h)	45
Peak Hour Factor	0.92
Hourly flow rate (vph)	49
Approach Volume (veh/h)	
Crossing Volume (veh/h)	
High Capacity (veh/h)	
High v/c (veh/h)	
Low Capacity (veh/h)	
Low v/c (veh/h)	

Intersection Summary

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	65	30	78	61	98	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	0.95			1.00	1.00	0.85
Flt Protected	1.00			0.97	0.95	1.00
Satd. Flow (prot)	3708			3787	1947	1742
Flt Permitted	1.00			0.81	0.95	1.00
Satd. Flow (perm)	3708			3149	1947	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	71	33	85	66	107	103
RTOR Reduction (vph)	17	0	0	0	0	80
Lane Group Flow (vph)	87	0	0	151	107	23
Turn Type	NA		Perm	NA	NA	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	12.7			12.7	5.8	5.8
Effective Green, g (s)	12.7			12.7	5.8	5.8
Actuated g/C Ratio	0.48			0.48	0.22	0.22
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1777			1509	426	381
v/s Ratio Prot	0.02				c0.05	
v/s Ratio Perm				c0.05		0.01
v/c Ratio	0.05			0.10	0.25	0.06
Uniform Delay, d1	3.7			3.8	8.6	8.2
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.0			0.0	0.3	0.1
Delay (s)	3.7			3.8	8.9	8.3
Level of Service	A			A	A	A
Approach Delay (s)	3.7			3.8	8.6	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	5.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.15		
Actuated Cycle Length (s)	26.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	23.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	372	186	286	0	0	0	0	152	15	142	124	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			4.0	
Lane Util. Factor	1.00	1.00						1.00			1.00	
Frt	1.00	0.91						0.99			1.00	
Flt Protected	0.95	1.00						1.00			0.97	
Satd. Flow (prot)	1947	1863						2025			1996	
Flt Permitted	0.95	1.00						1.00			0.74	
Satd. Flow (perm)	1947	1863						2025			1512	
Peak-hour factor, PHF	0.88	0.88	0.88	0.92	0.92	0.92	0.92	0.92	0.92	0.85	0.85	0.85
Adj. Flow (vph)	423	211	325	0	0	0	0	165	16	167	146	0
RTOR Reduction (vph)	0	129	0	0	0	0	0	10	0	0	0	0
Lane Group Flow (vph)	423	407	0	0	0	0	0	171	0	0	313	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		6						4			8	
Permitted Phases	6									8		
Actuated Green, G (s)	15.6	15.6						11.9			11.9	
Effective Green, g (s)	15.6	15.6						11.9			11.9	
Actuated g/C Ratio	0.44	0.44						0.34			0.34	
Clearance Time (s)	4.0	4.0						4.0			4.0	
Vehicle Extension (s)	3.0	3.0						3.0			3.0	
Lane Grp Cap (vph)	855	818						678			506	
v/s Ratio Prot		c0.22						0.08				
v/s Ratio Perm	0.22										c0.21	
v/c Ratio	0.49	0.50						0.25			0.62	
Uniform Delay, d1	7.1	7.1						8.6			9.9	
Progression Factor	1.00	1.00						1.00			1.00	
Incremental Delay, d2	0.5	0.5						0.2			2.3	
Delay (s)	7.6	7.6						8.8			12.2	
Level of Service	A	A						A			B	
Approach Delay (s)		7.6			0.0			8.8			12.2	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	35.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.6%	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												
Volume (vph)	0	0	0	23	168	25	25	496	0	0	265	160
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
Lane Util. Factor					0.95			0.95			1.00	1.00
Frt					0.98			1.00			1.00	0.85
Flt Protected					0.99			1.00			1.00	1.00
Satd. Flow (prot)					3806			3884			2049	1742
Flt Permitted					0.99			0.93			1.00	1.00
Satd. Flow (perm)					3806			3622			2049	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.82	0.82	0.82	0.92	0.92	0.92	0.80	0.80	0.80
Adj. Flow (vph)	0	0	0	28	205	30	27	539	0	0	331	200
RTOR Reduction (vph)	0	0	0	0	22	0	0	0	0	0	0	119
Lane Group Flow (vph)	0	0	0	0	241	0	0	566	0	0	331	81
Turn Type				Perm	NA		Perm	NA			NA	Perm
Protected Phases					2			4			8	
Permitted Phases				2			4					8
Actuated Green, G (s)					7.1			10.3			10.3	10.3
Effective Green, g (s)					7.1			10.3			10.3	10.3
Actuated g/C Ratio					0.28			0.41			0.41	0.41
Clearance Time (s)					4.0			4.0			4.0	4.0
Vehicle Extension (s)					3.0			3.0			3.0	3.0
Lane Grp Cap (vph)					1063			1468			830	706
v/s Ratio Prot											c0.16	
v/s Ratio Perm					0.06			0.16				0.05
v/c Ratio					0.23			0.39			0.40	0.11
Uniform Delay, d1					7.0			5.3			5.4	4.7
Progression Factor					1.00			1.00			1.00	1.00
Incremental Delay, d2					0.1			0.2			0.3	0.1
Delay (s)					7.1			5.5			5.7	4.8
Level of Service					A			A			A	A
Approach Delay (s)		0.0			7.1			5.5			5.3	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	25.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	181	164	0	0	0	0	0	338	34	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.91	0.91	0.91	0.92	0.92	0.92	0.85	0.85	0.85	0.92	0.92	0.92
Hourly flow rate (vph)	199	180	0	0	0	0	0	398	40	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								319			576	
pX, platoon unblocked												
vC, conflicting volume	133	438	0	508	418	153	0			438		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	133	438	0	508	418	153	0			438		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	76	65	100	100	100	100	100			100		
cM capacity (veh/h)	826	511	1084	325	525	866	1622			1119		

Direction, Lane #	SE 1	SE 2	NE 1	NE 2	NE 3
Volume Total	259	120	159	159	120
Volume Left	199	0	0	0	0
Volume Right	0	0	0	0	40
cSH	723	511	1700	1700	1700
Volume to Capacity	0.36	0.24	0.09	0.09	0.07
Queue Length 95th (ft)	41	23	0	0	0
Control Delay (s)	12.7	14.2	0.0	0.0	0.0
Lane LOS	B	B			
Approach Delay (s)	13.2		0.0		
Approach LOS	B				

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	24.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	0	0	0	0	17	55	153	367	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.75	0.75	0.75	0.93	0.93	0.93	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	23	73	165	395	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								603			292	
pX, platoon unblocked												
vC, conflicting volume	545	724	0	724	724	132	0			395		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	545	724	0	724	724	132	0			395		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	93	92	90			100		
cM capacity (veh/h)	337	315	1084	289	315	894	1622			1160		

Direction, Lane #	NW 1	NW 2	NE 1	NE 2	NE 3
Volume Total	15	81	243	158	158
Volume Left	0	0	165	0	0
Volume Right	0	73	0	0	0
cSH	315	763	1622	1700	1700
Volume to Capacity	0.05	0.11	0.10	0.09	0.09
Queue Length 95th (ft)	4	9	8	0	0
Control Delay (s)	17.0	10.3	5.3	0.0	0.0
Lane LOS	C	B	A		
Approach Delay (s)	11.3		2.3		
Approach LOS	B				

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	20.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (veh/h)	67	226	367	63	27	281
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.47	0.47	0.92	0.92	0.85	0.85
Hourly flow rate (vph)	143	481	399	68	32	331
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		4				
Median type			None			None
Median storage veh)						
Upstream signal (ft)			442			
pX, platoon unblocked	0.92	0.92			0.92	
vC, conflicting volume	662	433			467	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	584	334			372	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	64	21			97	
cM capacity (veh/h)	393	605			1083	

Direction, Lane #	NW 1	NE 1	SW 1	SW 2	SW 3
Volume Total	623	467	32	165	165
Volume Left	143	0	32	0	0
Volume Right	481	68	0	0	0
cSH	785	1700	1083	1700	1700
Volume to Capacity	0.79	0.27	0.03	0.10	0.10
Queue Length 95th (ft)	206	0	2	0	0
Control Delay (s)	27.6	0.0	8.4	0.0	0.0
Lane LOS	D		A		
Approach Delay (s)	27.6	0.0	0.7		
Approach LOS	D				

Intersection Summary			
Average Delay	12.0		
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	41	11	0	0	48	15	178	137	53	15	0	93
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	4.0	4.0	4.0		4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00	1.00	1.00		1.00
Frt	1.00	1.00			0.97		1.00	1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (prot)	1947	2049			1983		1947	2049	1742	1947		1742
Flt Permitted	0.69	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (perm)	1419	2049			1983		1947	2049	1742	1947		1742
Peak-hour factor, PHF	0.57	0.57	0.57	0.63	0.63	0.63	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	72	19	0	0	76	24	200	154	60	16	0	101
RTOR Reduction (vph)	0	0	0	0	16	0	0	0	41	0	0	88
Lane Group Flow (vph)	72	19	0	0	84	0	200	154	19	16	0	13
Turn Type	Perm	NA			NA		Prot	NA	Perm	Prot		custom
Protected Phases		6			2		7	4		3		8
Permitted Phases	6								4			
Actuated Green, G (s)	11.2	11.2			11.2		7.4	11.2	11.2	0.6		4.4
Effective Green, g (s)	11.2	11.2			11.2		7.4	11.2	11.2	0.6		4.4
Actuated g/C Ratio	0.32	0.32			0.32		0.21	0.32	0.32	0.02		0.13
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	454	655			634		411	655	557	33		218
v/s Ratio Prot		0.01			0.04		c0.10	c0.08		0.01		0.01
v/s Ratio Perm	c0.05								0.01			
v/c Ratio	0.16	0.03			0.13		0.49	0.24	0.03	0.48		0.06
Uniform Delay, d1	8.5	8.2			8.4		12.1	8.8	8.2	17.0		13.5
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	0.2	0.0			0.1		0.9	0.2	0.0	10.8		0.1
Delay (s)	8.7	8.2			8.5		13.0	8.9	8.2	27.8		13.6
Level of Service	A	A			A		B	A	A	C		B
Approach Delay (s)		8.6			8.5			10.8			15.5	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	35.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	29.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	75	39	7	9	15	15	337	175	13	230	9
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		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.91		1.00	0.95		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	1944		1947	1854		1947	1944		1947	2038	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1947	1944		1947	1854		1947	1944		1947	2038	
Peak-hour factor, PHF	0.65	0.65	0.65	0.80	0.80	0.80	0.92	0.92	0.92	0.81	0.81	0.81
Adj. Flow (vph)	23	115	60	9	11	19	16	366	190	16	284	11
RTOR Reduction (vph)	0	37	0	0	15	0	0	26	0	0	2	0
Lane Group Flow (vph)	23	138	0	9	15	0	16	530	0	16	293	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	0.5	8.0		0.5	8.0		0.5	16.6		0.5	16.6	
Effective Green, g (s)	0.5	8.0		0.5	8.0		0.5	16.6		0.5	16.6	
Actuated g/C Ratio	0.01	0.19		0.01	0.19		0.01	0.40		0.01	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	23	373		23	356		23	775		23	813	
v/s Ratio Prot	c0.01	c0.07		0.00	0.01		c0.01	c0.27		0.01	0.14	
v/s Ratio Perm												
v/c Ratio	1.00	0.37		0.39	0.04		0.70	0.68		0.70	0.36	
Uniform Delay, d1	20.6	14.6		20.4	13.7		20.5	10.3		20.5	8.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	187.7	0.6		10.7	0.0		63.9	2.5		63.9	0.3	
Delay (s)	208.2	15.2		31.1	13.7		84.4	12.8		84.4	9.0	
Level of Service	F	B		C	B		F	B		F	A	
Approach Delay (s)		37.6			17.7			14.8			12.9	
Approach LOS		D			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	41.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	256	15	31	275	25	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.95	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1947	1742	1947	2049	1946	
Flt Permitted	0.95	1.00	0.73	1.00	1.00	
Satd. Flow (perm)	1947	1742	1494	2049	1946	
Peak-hour factor, PHF	0.70	0.70	0.84	0.84	0.92	0.92
Adj. Flow (vph)	366	21	37	327	27	16
RTOR Reduction (vph)	0	12	0	0	11	0
Lane Group Flow (vph)	366	9	37	327	32	0
Turn Type	NA	Perm	Perm	NA	NA	
Protected Phases	6			4	8	
Permitted Phases		6	4			
Actuated Green, G (s)	13.3	13.3	10.6	10.6	10.6	
Effective Green, g (s)	13.3	13.3	10.6	10.6	10.6	
Actuated g/C Ratio	0.42	0.42	0.33	0.33	0.33	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	811	726	496	680	646	
v/s Ratio Prot	c0.19			c0.16	0.02	
v/s Ratio Perm		0.01	0.02			
v/c Ratio	0.45	0.01	0.07	0.48	0.05	
Uniform Delay, d1	6.7	5.4	7.3	8.5	7.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.4	0.0	0.1	0.5	0.0	
Delay (s)	7.1	5.5	7.4	9.0	7.3	
Level of Service	A	A	A	A	A	
Approach Delay (s)	7.0			8.8	7.3	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	7.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	31.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	15	44	6	16	46	15	15	309	15	72	433	6
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.83	0.83	0.83	0.91	0.91	0.91	0.92	0.92	0.92	0.82	0.82	0.82
Hourly flow rate (vph)	18	53	7	18	51	16	16	336	16	88	528	7
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								344			414	
pX, platoon unblocked	0.91	0.91	0.83	0.91	0.91	0.83	0.83			0.83		
vC, conflicting volume	1118	1092	532	1114	1088	344	535			352		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	659	631	330	655	626	105	334			114		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	84	99	94	85	98	98			93		
cM capacity (veh/h)	279	332	589	281	334	787	1014			1222		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2
Volume Total	78	85	16	352	88	535
Volume Left	18	18	16	0	88	0
Volume Right	7	16	0	16	0	7
cSH	331	361	1014	1700	1222	1700
Volume to Capacity	0.24	0.23	0.02	0.21	0.07	0.31
Queue Length 95th (ft)	23	22	1	0	6	0
Control Delay (s)	19.2	18.0	8.6	0.0	8.2	0.0
Lane LOS	C	C	A		A	
Approach Delay (s)	19.2	18.0	0.4		1.2	
Approach LOS	C	C				

Intersection Summary			
Average Delay	3.4		
Intersection Capacity Utilization	41.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	23	108	0	0	15	15	62	355	29	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.78	0.78	0.78	0.63	0.63	0.63	0.89	0.89	0.89	0.92	0.92	0.92
Hourly flow rate (vph)	29	138	0	0	24	24	70	399	33	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								318			425	
pX, platoon unblocked												
vC, conflicting volume	374	571	0	624	554	216	0			431		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	374	571	0	624	554	216	0			431		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	66	100	100	94	97	96			100		
cM capacity (veh/h)	500	411	1084	265	420	789	1622			1124		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2
Volume Total	168	48	269	232
Volume Left	29	0	70	0
Volume Right	0	24	0	33
cSH	424	548	1622	1700
Volume to Capacity	0.40	0.09	0.04	0.14
Queue Length 95th (ft)	46	7	3	0
Control Delay (s)	18.9	12.2	2.2	0.0
Lane LOS	C	B	A	
Approach Delay (s)	18.9	12.2	1.2	
Approach LOS	C	B		

Intersection Summary				
Average Delay		6.1		
Intersection Capacity Utilization		32.8%	ICU Level of Service	A
Analysis Period (min)		15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	29	32	0	0	0	15	309	15	185	503	4
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	4.0	
Lane Util. Factor		1.00					1.00	1.00		1.00	1.00	
Frt		0.94					1.00	0.99		1.00	1.00	
Flt Protected		0.99					0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1913					1947	2035		1947	2047	
Flt Permitted		0.99					0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1913					1947	2035		1947	2047	
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.92	0.92	0.92	0.89	0.89	0.89
Adj. Flow (vph)	17	32	36	0	0	0	16	336	16	208	565	4
RTOR Reduction (vph)	0	30	0	0	0	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	55	0	0	0	0	16	349	0	208	569	0
Turn Type	Perm	NA					Prot	NA		Prot	NA	
Protected Phases		6					7	4		3	8	
Permitted Phases	6											
Actuated Green, G (s)		6.6					0.7	14.5		6.1	19.9	
Effective Green, g (s)		6.6					0.7	14.5		6.1	19.9	
Actuated g/C Ratio		0.17					0.02	0.37		0.16	0.51	
Clearance Time (s)		4.0					4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0					3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		322					34	752		302	1039	
v/s Ratio Prot							0.01	0.17		c0.11	c0.28	
v/s Ratio Perm		0.03										
v/c Ratio		0.17					0.47	0.46		0.69	0.55	
Uniform Delay, d1		14.0					19.1	9.4		15.7	6.6	
Progression Factor		1.00					1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3					9.9	0.5		6.4	0.6	
Delay (s)		14.2					29.0	9.8		22.1	7.2	
Level of Service		B					C	A		C	A	
Approach Delay (s)		14.2			0.0			10.7			11.2	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	39.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	33	197	0	0	0	0	0	333	70	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				
Lane Util. Factor		0.95						0.95				
Frt		1.00						0.97				
Flt Protected		0.99						1.00				
Satd. Flow (prot)		3865						3792				
Flt Permitted		0.99						1.00				
Satd. Flow (perm)		3865						3792				
Peak-hour factor, PHF	0.88	0.88	0.88	0.92	0.92	0.92	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	38	224	0	0	0	0	0	366	77	0	0	0
RTOR Reduction (vph)	0	27	0	0	0	0	0	35	0	0	0	0
Lane Group Flow (vph)	0	235	0	0	0	0	0	408	0	0	0	0
Turn Type	Perm	NA						NA				
Protected Phases		6						4				
Permitted Phases	6											
Actuated Green, G (s)		6.9						8.2				
Effective Green, g (s)		6.9						8.2				
Actuated g/C Ratio		0.30						0.35				
Clearance Time (s)		4.0						4.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		1154						1346				
v/s Ratio Prot								c0.11				
v/s Ratio Perm		0.06										
v/c Ratio		0.20						0.30				
Uniform Delay, d1		6.0						5.4				
Progression Factor		1.00						1.00				
Incremental Delay, d2		0.1						0.1				
Delay (s)		6.1						5.5				
Level of Service		A						A				
Approach Delay (s)		6.1			0.0			5.5			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	23.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	24.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	15	71	14	53	39	15	15	279	15	162	632	13
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.85	0.85	0.85	0.79	0.79	0.79	0.92	0.92	0.92	0.84	0.84	0.84
Hourly flow rate (vph)	18	84	16	67	49	19	16	303	16	193	752	15
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								404			496	
pX, platoon unblocked	0.91	0.91		0.91	0.91	0.91				0.91		
vC, conflicting volume	1525	1498	760	1540	1498	311	768			320		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1528	1498	760	1544	1497	198	768			207		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	60	10	96	0	47	98	98			85		
cM capacity (veh/h)	44	93	406	16	93	769	846			1245		

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1	NE 2	SW 1	SW 2
Volume Total	18	100	67	68	16	320	193	768
Volume Left	18	0	67	0	16	0	193	0
Volume Right	0	16	0	19	0	16	0	15
cSH	44	106	16	123	846	1700	1245	1700
Volume to Capacity	0.40	0.94	4.14	0.56	0.02	0.19	0.15	0.45
Queue Length 95th (ft)	35	144	Err	68	1	0	14	0
Control Delay (s)	134.8	146.6	Err	66.2	9.3	0.0	8.4	0.0
Lane LOS	F	F	F	F	A		A	
Approach Delay (s)	144.8		4986.2		0.5		1.7	
Approach LOS	F		F					

Intersection Summary			
Average Delay	447.9		
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	69	179	0	0	73	24	34	297	18	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	4.0		4.0				
Lane Util. Factor	1.00	1.00			1.00	1.00		0.95				
Frt	1.00	1.00			1.00	0.85		0.99				
Flt Protected	0.95	1.00			1.00	1.00		1.00				
Satd. Flow (prot)	1947	2049			2049	1742		3844				
Flt Permitted	0.70	1.00			1.00	1.00		1.00				
Satd. Flow (perm)	1445	2049			2049	1742		3844				
Peak-hour factor, PHF	0.82	0.82	0.82	0.91	0.91	0.91	0.83	0.83	0.83	0.92	0.92	0.92
Adj. Flow (vph)	84	218	0	0	80	26	41	358	22	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	17	0	8	0	0	0	0
Lane Group Flow (vph)	84	218	0	0	80	9	0	413	0	0	0	0
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		6			2			4				
Permitted Phases	6					2	4					
Actuated Green, G (s)	8.5	8.5			8.5	8.5		8.4				
Effective Green, g (s)	8.5	8.5			8.5	8.5		8.4				
Actuated g/C Ratio	0.34	0.34			0.34	0.34		0.34				
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				
Lane Grp Cap (vph)	493	699			699	594		1296				
v/s Ratio Prot		c0.11			0.04							
v/s Ratio Perm	0.06					0.01		0.11				
v/c Ratio	0.17	0.31			0.11	0.01		0.32				
Uniform Delay, d1	5.7	6.0			5.6	5.4		6.1				
Progression Factor	1.00	1.00			1.00	1.00		1.00				
Incremental Delay, d2	0.2	0.3			0.1	0.0		0.1				
Delay (s)	5.9	6.3			5.7	5.4		6.3				
Level of Service	A	A			A	A		A				
Approach Delay (s)		6.2			5.6			6.3			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	24.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	26.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations										
Volume (vph)	65	10	122	147	10	0	0	0	167	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0					4.0	4.0
Lane Util. Factor	1.00			0.91					1.00	1.00
Frt	0.98			0.99					1.00	0.85
Flt Protected	0.96			0.98					0.95	1.00
Satd. Flow (prot)	1928			5444					1947	1742
Flt Permitted	0.96			0.98					0.95	1.00
Satd. Flow (perm)	1928			5444					1947	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	71	11	133	160	11	0	0	0	182	52
RTOR Reduction (vph)	20	0	0	6	0	0	0	0	0	0
Lane Group Flow (vph)	62	0	0	298	0	0	0	0	182	52
Turn Type	NA		Perm	NA					NA	Perm
Protected Phases	4!			6					8!	
Permitted Phases			6							8
Actuated Green, G (s)	6.4			10.9					6.4	6.4
Effective Green, g (s)	6.4			10.9					6.4	6.4
Actuated g/C Ratio	0.25			0.43					0.25	0.25
Clearance Time (s)	4.0			4.0					4.0	4.0
Vehicle Extension (s)	3.0			3.0					3.0	3.0
Lane Grp Cap (vph)	487			2345					492	440
v/s Ratio Prot	0.03								c0.09	
v/s Ratio Perm				0.05						0.03
v/c Ratio	0.13			0.13					0.37	0.12
Uniform Delay, d1	7.3			4.3					7.8	7.3
Progression Factor	1.00			1.00					1.00	1.00
Incremental Delay, d2	0.1			0.0					0.5	0.1
Delay (s)	7.4			4.4					8.3	7.4
Level of Service	A			A					A	A
Approach Delay (s)	7.4			4.4			0.0		8.1	
Approach LOS	A			A			A		A	

Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	25.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.2%	ICU Level of Service	A
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	35	144	60	232	46	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00
Frt		1.00	0.89		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		2029	1829		1947	1742
Flt Permitted		0.92	1.00		0.95	1.00
Satd. Flow (perm)		1877	1829		1947	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	157	65	252	50	49
RTOR Reduction (vph)	0	0	94	0	0	45
Lane Group Flow (vph)	0	195	223	0	50	4
Turn Type	Perm	NA	NA		NA	Perm
Protected Phases		6	2		8	
Permitted Phases	6					8
Actuated Green, G (s)		17.9	17.9		2.6	2.6
Effective Green, g (s)		17.9	17.9		2.6	2.6
Actuated g/C Ratio		0.63	0.63		0.09	0.09
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1178	1148		177	158
v/s Ratio Prot			c0.12		c0.03	
v/s Ratio Perm		0.10				0.00
v/c Ratio		0.17	0.19		0.28	0.03
Uniform Delay, d1		2.2	2.2		12.1	11.8
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.1	0.1		0.9	0.1
Delay (s)		2.3	2.3		13.0	11.9
Level of Service		A	A		B	B
Approach Delay (s)		2.3	2.3		12.4	
Approach LOS		A	A		B	

Intersection Summary			
HCM 2000 Control Delay	3.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	28.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	236	112	16	0	0	8	0	144	8	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				1.00		0.91				
Frt		0.99				0.86		0.99				
Flt Protected		0.97				1.00		1.00				
Satd. Flow (prot)		5383				1772		5548				
Flt Permitted		0.97				1.00		1.00				
Satd. Flow (perm)		5383				1772		5548				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	257	122	17	0	0	9	0	157	9	0	0	0
RTOR Reduction (vph)	0	136	0	0	0	4	0	7	0	0	0	0
Lane Group Flow (vph)	0	260	0	0	0	5	0	159	0	0	0	0
Turn Type	Perm	NA				custom		NA				
Protected Phases		6						4				
Permitted Phases	6					2						
Actuated Green, G (s)		13.2				13.2		5.1				
Effective Green, g (s)		13.2				13.2		5.1				
Actuated g/C Ratio		0.50				0.50		0.19				
Clearance Time (s)		4.0				4.0		4.0				
Vehicle Extension (s)		3.0				3.0		3.0				
Lane Grp Cap (vph)		2701				889		1075				
v/s Ratio Prot								c0.03				
v/s Ratio Perm		0.05				0.00						
v/c Ratio		0.10				0.01		0.15				
Uniform Delay, d1		3.4				3.3		8.8				
Progression Factor		1.00				1.00		1.00				
Incremental Delay, d2		0.0				0.0		0.1				
Delay (s)		3.4				3.3		8.9				
Level of Service		A				A		A				
Approach Delay (s)		3.4			3.3			8.9			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.11		
Actuated Cycle Length (s)	26.3	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	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
Turn Type	Perm											
Protected Phases		6			2			4				
Permitted Phases	6											
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	30	65	45	35	65	25	15	101	30	25	432	25
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		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.97		1.00	0.97		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1940			1967		1947	1978		1947	2032	
Flt Permitted		0.91			0.87		0.40	1.00		0.67	1.00	
Satd. Flow (perm)		1776			1742		827	1978		1364	2032	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	71	49	38	71	27	16	110	33	27	470	27
RTOR Reduction (vph)	0	36	0	0	20	0	0	19	0	0	5	0
Lane Group Flow (vph)	0	117	0	0	116	0	16	124	0	27	492	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)		7.5			7.5		11.8	11.8		11.8	11.8	
Effective Green, g (s)		7.5			7.5		11.8	11.8		11.8	11.8	
Actuated g/C Ratio		0.27			0.27		0.43	0.43		0.43	0.43	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		487			478		357	854		589	878	
v/s Ratio Prot								0.06			c0.24	
v/s Ratio Perm		0.07			c0.07		0.02			0.02		
v/c Ratio		0.24			0.24		0.04	0.15		0.05	0.56	
Uniform Delay, d1		7.7			7.7		4.5	4.7		4.5	5.8	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3			0.3		0.1	0.1		0.0	0.8	
Delay (s)		7.9			8.0		4.5	4.8		4.5	6.6	
Level of Service		A			A		A	A		A	A	
Approach Delay (s)		7.9			8.0			4.8			6.5	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	27.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
Turn Type	Perm											
Protected Phases		6			2			4				
Permitted Phases	6											
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	24.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	20	80	10	4	136	8	116	266	172
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	
Lane Util. Factor					1.00			1.00		1.00	1.00	
Frt					0.99			0.99		1.00	0.94	
Flt Protected					0.99			1.00		0.95	1.00	
Satd. Flow (prot)					2005			2031		1947	1928	
Flt Permitted					0.99			0.99		0.66	1.00	
Satd. Flow (perm)					2005			2006		1342	1928	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	22	87	11	4	148	9	126	289	187
RTOR Reduction (vph)	0	0	0	0	8	0	0	5	0	0	57	0
Lane Group Flow (vph)	0	0	0	0	112	0	0	156	0	126	419	0
Turn Type				Perm	NA		Perm	NA		Perm	NA	
Protected Phases					2			4			8	
Permitted Phases				2			4			8		
Actuated Green, G (s)					7.3			10.9		10.9	10.9	
Effective Green, g (s)					7.3			10.9		10.9	10.9	
Actuated g/C Ratio					0.28			0.42		0.42	0.42	
Clearance Time (s)					4.0			4.0		4.0	4.0	
Vehicle Extension (s)					3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)					558			834		558	802	
v/s Ratio Prot											c0.22	
v/s Ratio Perm					0.06			0.08		0.09		
v/c Ratio					0.20			0.19		0.23	0.52	
Uniform Delay, d1					7.2			4.8		4.9	5.7	
Progression Factor					1.00			1.00		1.00	1.00	
Incremental Delay, d2					0.2			0.1		0.2	0.6	
Delay (s)					7.4			5.0		5.1	6.3	
Level of Service					A			A		A	A	
Approach Delay (s)		0.0			7.4			5.0			6.1	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	26.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	38	156	0	0	114	22	99	182	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.91				
Frt		1.00			0.98			0.99				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		3505			3452			4954				
Flt Permitted		0.87			1.00			0.98				
Satd. Flow (perm)		3093			3452			4954				
Peak-hour factor, PHF	0.85	0.85	0.85	0.77	0.77	0.77	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	45	184	0	0	148	29	111	204	22	0	0	0
RTOR Reduction (vph)	0	0	0	0	19	0	0	12	0	0	0	0
Lane Group Flow (vph)	0	229	0	0	158	0	0	325	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		8			4		2	2				
Permitted Phases	8											
Actuated Green, G (s)		19.0			19.0			25.0				
Effective Green, g (s)		19.0			19.0			25.0				
Actuated g/C Ratio		0.35			0.35			0.46				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		0.2			0.2			0.2				
Lane Grp Cap (vph)		1088			1214			2293				
v/s Ratio Prot					0.05			c0.07				
v/s Ratio Perm		c0.07										
v/c Ratio		0.21			0.13			0.14				
Uniform Delay, d1		12.2			11.9			8.3				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		0.0			0.0			0.0				
Delay (s)		12.3			11.9			8.3				
Level of Service		B			B			A				
Approach Delay (s)		12.3			11.9			8.3			0.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.17		
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	61.0%	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												
Volume (vph)	63	29	25	25	62	37	39	156	29	25	25	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6			4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.93			1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1734			1836	1583	1770	1863	1583	1770	1723	
Flt Permitted	0.95	1.00			0.99	1.00	0.72	1.00	1.00	0.65	1.00	
Satd. Flow (perm)	1770	1734			1836	1583	1345	1863	1583	1217	1723	
Peak-hour factor, PHF	0.85	0.85	0.85	0.52	0.52	0.52	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	74	34	29	48	119	71	41	164	31	27	27	27
RTOR Reduction (vph)	0	24	0	0	0	59	0	0	20	0	18	0
Lane Group Flow (vph)	74	39	0	0	167	12	41	164	11	27	36	0
Turn Type	Split	NA		Split	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	2	2		1	1			8			8	
Permitted Phases						1	8		8	8		
Actuated Green, G (s)	6.1	6.1			6.8	6.8	13.3	13.3	13.3	13.3	13.3	
Effective Green, g (s)	6.1	6.1			6.8	6.8	13.3	13.3	13.3	13.3	13.3	
Actuated g/C Ratio	0.16	0.16			0.17	0.17	0.34	0.34	0.34	0.34	0.34	
Clearance Time (s)	4.6	4.6			4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Vehicle Extension (s)	3.8	3.8			2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	275	269			318	274	456	632	537	412	584	
v/s Ratio Prot	c0.04	0.02			c0.09			c0.09			0.02	
v/s Ratio Perm						0.01	0.03		0.01	0.02		
v/c Ratio	0.27	0.14			0.53	0.04	0.09	0.26	0.02	0.07	0.06	
Uniform Delay, d1	14.6	14.3			14.7	13.5	8.8	9.4	8.6	8.8	8.7	
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.7	0.3			0.7	0.0	0.0	0.1	0.0	0.0	0.0	
Delay (s)	15.3	14.6			15.5	13.5	8.9	9.5	8.6	8.8	8.8	
Level of Service	B	B			B	B	A	A	A	A	A	
Approach Delay (s)		15.0			14.9			9.2			8.8	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	39.2	Sum of lost time (s)	13.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	9	298	50	25	731	109	50	237	79	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2		4.2	4.2		4.2	4.2				
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00				
Frt	1.00	0.98		1.00	0.98		1.00	0.96				
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00				
Satd. Flow (prot)	1770	1823		1770	1826		1770	1793				
Flt Permitted	0.11	1.00		0.46	1.00		0.95	1.00				
Satd. Flow (perm)	208	1823		853	1826		1770	1793				
Peak-hour factor, PHF	0.87	0.87	0.87	0.86	0.86	0.86	0.76	0.76	0.76	0.92	0.92	0.92
Adj. Flow (vph)	10	343	57	29	850	127	66	312	104	0	0	0
RTOR Reduction (vph)	0	8	0	0	7	0	0	18	0	0	0	0
Lane Group Flow (vph)	10	392	0	29	970	0	66	398	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		2			6		8	8				
Permitted Phases	2			6								
Actuated Green, G (s)	35.8	35.8		35.8	35.8		22.6	22.6				
Effective Green, g (s)	35.8	35.8		35.8	35.8		22.6	22.6				
Actuated g/C Ratio	0.54	0.54		0.54	0.54		0.34	0.34				
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2				
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2				
Lane Grp Cap (vph)	111	976		457	978		598	606				
v/s Ratio Prot		0.22			c0.53		0.04	c0.22				
v/s Ratio Perm	0.05			0.03								
v/c Ratio	0.09	0.40		0.06	0.99		0.11	0.66				
Uniform Delay, d1	7.6	9.2		7.4	15.3		15.2	18.8				
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00				
Incremental Delay, d2	0.1	0.1		0.0	26.5		0.0	2.0				
Delay (s)	7.7	9.3		7.5	41.9		15.2	20.8				
Level of Service	A	A		A	D		B	C				
Approach Delay (s)		9.2			40.9			20.0			0.0	
Approach LOS		A			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	28.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	66.8	Sum of lost time (s)	8.4
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	112	379	49	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2			
Lane Util. Factor		1.00	0.95			
Frt		0.86	0.98			
Flt Protected		1.00	1.00			
Satd. Flow (prot)		1611	3478			
Flt Permitted		1.00	1.00			
Satd. Flow (perm)		1611	3478			
Peak-hour factor, PHF	0.85	0.85	0.69	0.69	0.92	0.92
Adj. Flow (vph)	0	132	549	71	0	0
RTOR Reduction (vph)	0	117	14	0	0	0
Lane Group Flow (vph)	0	15	606	0	0	0
Turn Type		custom	NA			
Protected Phases			8			
Permitted Phases		2				
Actuated Green, G (s)		3.1	15.7			
Effective Green, g (s)		3.1	15.7			
Actuated g/C Ratio		0.11	0.58			
Clearance Time (s)		4.2	4.2			
Vehicle Extension (s)		0.2	6.0			
Lane Grp Cap (vph)		183	2007			
v/s Ratio Prot			c0.17			
v/s Ratio Perm		c0.01				
v/c Ratio		0.08	0.30			
Uniform Delay, d1		10.8	2.9			
Progression Factor		1.00	1.00			
Incremental Delay, d2		0.1	0.2			
Delay (s)		10.8	3.2			
Level of Service		B	A			
Approach Delay (s)	10.8		3.2		0.0	
Approach LOS	B		A		A	

Intersection Summary			
HCM 2000 Control Delay	4.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	27.2	Sum of lost time (s)	8.4
Intersection Capacity Utilization	26.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	25	141	337	42	159	25	25	339	31	39	620	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.4			5.4		4.0	4.0		5.4	5.4	
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	0.95	
Frt		0.90			0.98		1.00	0.99		1.00	0.98	
Flt Protected		1.00			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3176			3449		1770	1839		1770	3476	
Flt Permitted		0.92			0.65		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2929			2263		1770	1839		1770	3476	
Peak-hour factor, PHF	0.78	0.78	0.78	0.85	0.85	0.85	0.92	0.92	0.92	0.74	0.74	0.74
Adj. Flow (vph)	32	181	432	49	187	29	27	368	34	53	838	114
RTOR Reduction (vph)	0	184	0	0	10	0	0	2	0	0	15	0
Lane Group Flow (vph)	0	461	0	0	255	0	27	400	0	53	937	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			2		7	4		3	8	
Permitted Phases	2			2								
Actuated Green, G (s)		10.1			10.1		0.6	18.7		2.7	20.8	
Effective Green, g (s)		10.1			10.1		0.6	18.7		2.7	20.8	
Actuated g/C Ratio		0.22			0.22		0.01	0.40		0.06	0.45	
Clearance Time (s)		5.4			5.4		4.0	4.0		5.4	5.4	
Vehicle Extension (s)		0.2			0.2		3.0	3.0		0.2	0.2	
Lane Grp Cap (vph)		638			493		22	742		103	1561	
v/s Ratio Prot							0.02	0.22		c0.03	c0.27	
v/s Ratio Perm		c0.16			0.11							
v/c Ratio		0.72			0.52		1.23	0.54		0.51	0.60	
Uniform Delay, d1		16.8			16.0		22.8	10.5		21.2	9.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		3.4			0.4		269.8	0.8		1.8	0.4	
Delay (s)		20.2			16.3		292.6	11.3		23.0	10.0	
Level of Service		C			B		F	B		C	B	
Approach Delay (s)		20.2			16.3			29.0			10.7	
Approach LOS		C			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	46.3	Sum of lost time (s)	14.8
Intersection Capacity Utilization	61.9%	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												
Volume (vph)	25	48	76	75	53	28	25	380	25	35	534	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.2		4.0	4.2		4.0	4.2	4.2	4.2	4.2	4.2
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.91		1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1691		1770	1766		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1691		1770	1766		1770	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.91	0.91	0.91	0.69	0.69	0.69	0.92	0.92	0.92	0.78	0.78	0.78
Adj. Flow (vph)	27	53	84	109	77	41	27	413	27	45	685	46
RTOR Reduction (vph)	0	51	0	0	16	0	0	0	18	0	0	24
Lane Group Flow (vph)	27	86	0	109	102	0	27	413	9	45	685	22
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			8
Actuated Green, G (s)	2.1	21.9		7.3	27.1		3.1	32.3	32.3	16.1	45.5	45.5
Effective Green, g (s)	2.1	21.9		7.3	27.1		3.1	32.3	32.3	16.1	45.5	45.5
Actuated g/C Ratio	0.02	0.23		0.08	0.29		0.03	0.34	0.34	0.17	0.48	0.48
Clearance Time (s)	4.0	4.2		4.0	4.2		4.0	4.2	4.2	4.2	4.2	4.2
Vehicle Extension (s)	3.0	0.2		3.0	0.2		3.0	0.2	0.2	0.2	0.2	0.2
Lane Grp Cap (vph)	39	393		137	508		58	638	542	302	899	764
v/s Ratio Prot	0.02	0.05		c0.06	c0.06		c0.02	0.22		0.03	c0.37	
v/s Ratio Perm									0.01			0.01
v/c Ratio	0.69	0.22		0.80	0.20		0.47	0.65	0.02	0.15	0.76	0.03
Uniform Delay, d1	45.7	29.2		42.7	25.4		44.7	26.1	20.5	33.2	19.9	12.8
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	41.8	0.1		26.5	0.1		5.8	1.7	0.0	0.1	3.5	0.0
Delay (s)	87.5	29.3		69.2	25.4		50.5	27.8	20.5	33.3	23.4	12.8
Level of Service	F	C		E	C		D	C	C	C	C	B
Approach Delay (s)		38.9			46.4			28.7			23.3	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	94.2	Sum of lost time (s)	16.6
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	25	119	7	122	654	31	28	300	25	188	412	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		4.2	4.2		4.0	4.2		4.2	4.2	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.99		1.00	0.99		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)		1835		1770	1850		1770	1841		1770	1839	
Flt Permitted		0.37		0.62	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		683		1147	1850		1770	1841		1770	1839	
Peak-hour factor, PHF	0.92	0.92	0.92	0.81	0.81	0.81	0.92	0.92	0.92	0.80	0.80	0.80
Adj. Flow (vph)	27	129	8	151	807	38	30	326	27	235	515	48
RTOR Reduction (vph)	0	2	0	0	2	0	0	4	0	0	3	0
Lane Group Flow (vph)	0	162	0	151	843	0	30	349	0	235	560	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2			6								
Actuated Green, G (s)		28.4		28.4	28.4		1.6	24.4		22.0	45.0	
Effective Green, g (s)		28.4		28.4	28.4		1.6	24.4		22.0	45.0	
Actuated g/C Ratio		0.32		0.32	0.32		0.02	0.28		0.25	0.51	
Clearance Time (s)		4.2		4.2	4.2		4.0	4.2		4.2	4.2	
Vehicle Extension (s)		0.2		0.2	0.2		3.0	0.2		0.2	0.2	
Lane Grp Cap (vph)		221		372	601		32	513		445	946	
v/s Ratio Prot					c0.46		0.02	c0.19		c0.13	c0.30	
v/s Ratio Perm		0.24		0.13								
v/c Ratio		0.73		0.41	1.40		0.94	0.68		0.53	0.59	
Uniform Delay, d1		26.1		22.9	29.5		42.9	28.0		28.2	14.8	
Progression Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		10.3		0.3	191.1		131.8	3.0		0.5	0.7	
Delay (s)		36.4		23.2	220.6		174.6	31.0		28.7	15.5	
Level of Service		D		C	F		F	C		C	B	
Approach Delay (s)		36.4			190.7			42.3			19.4	
Approach LOS		D			F			D			B	

Intersection Summary			
HCM 2000 Control Delay	97.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	87.4	Sum of lost time (s)	12.6
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL2	SBL	SBR	SBR2	SEL	SET	SER	NWL	NWT	NWR	NET	NER
Lane Configurations												
Volume (vph)	12	89	399	1	15	5	9	15	26	10	281	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.9	4.9			4.6			4.0		4.6	
Lane Util. Factor		1.00	0.88			1.00			1.00		1.00	
Frt		1.00	0.85			0.96			0.97		0.99	
Flt Protected		0.95	1.00			0.97			0.99		1.00	
Satd. Flow (prot)		1770	2787			1741			1787		1842	
Flt Permitted		0.95	1.00			0.78			0.99		1.00	
Satd. Flow (perm)		1770	2787			1399			1787		1842	
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.63	0.63	0.63	0.51	0.51	0.51	0.92	0.92
Adj. Flow (vph)	14	103	464	1	24	8	14	29	51	20	305	27
RTOR Reduction (vph)	0	0	112	0	0	13	0	0	0	0	4	0
Lane Group Flow (vph)	0	117	353	0	0	33	0	0	100	0	328	0
Turn Type	Perm	NA	Prot		Perm	NA		Split	NA		NA	
Protected Phases		2	2			3		1	1		4	
Permitted Phases	2				3							
Actuated Green, G (s)		14.1	14.1			4.7			6.2		15.6	
Effective Green, g (s)		14.1	14.1			4.7			6.2		15.6	
Actuated g/C Ratio		0.24	0.24			0.08			0.11		0.27	
Clearance Time (s)		4.9	4.9			4.6			4.0		4.6	
Vehicle Extension (s)		4.0	4.0			4.0			2.0		4.0	
Lane Grp Cap (vph)		425	669			112			188		489	
v/s Ratio Prot			c0.13						c0.06		c0.18	
v/s Ratio Perm		0.07				c0.02						
v/c Ratio		0.28	0.53			0.30			0.53		0.67	
Uniform Delay, d1		18.1	19.4			25.4			24.9		19.3	
Progression Factor		1.00	1.00			1.00			1.00		1.00	
Incremental Delay, d2		0.5	1.0			2.0			1.4		3.9	
Delay (s)		18.6	20.4			27.5			26.3		23.2	
Level of Service		B	C			C			C		C	
Approach Delay (s)		20.0				27.5			26.3		23.2	
Approach LOS		C				C			C		C	

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	58.7	Sum of lost time (s)	18.1
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SWL	SWT
Lane Configurations		
Volume (vph)	70	118
Ideal Flow (vphpl)	1900	1900
Lane Width	12	12
Total Lost time (s)	4.6	4.6
Lane Util. Factor	1.00	1.00
Frt	1.00	1.00
Flt Protected	0.95	1.00
Satd. Flow (prot)	1770	1863
Flt Permitted	0.38	1.00
Satd. Flow (perm)	699	1863
Peak-hour factor, PHF	0.64	0.64
Adj. Flow (vph)	109	184
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	109	184
Turn Type	Perm	NA
Protected Phases		4
Permitted Phases	4	
Actuated Green, G (s)	15.6	15.6
Effective Green, g (s)	15.6	15.6
Actuated g/C Ratio	0.27	0.27
Clearance Time (s)	4.6	4.6
Vehicle Extension (s)	4.0	4.0
Lane Grp Cap (vph)	185	495
v/s Ratio Prot		0.10
v/s Ratio Perm	0.16	
v/c Ratio	0.59	0.37
Uniform Delay, d1	18.8	17.6
Progression Factor	1.00	1.00
Incremental Delay, d2	5.6	0.6
Delay (s)	24.3	18.2
Level of Service	C	B
Approach Delay (s)		20.5
Approach LOS		C

Intersection Summary

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	NEL
Right Turn Channelized											
Volume (veh/h)	220	249	7	68	195	209	104	117	729	13	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	239	271	8	74	212	227	113	127	792	14	0
Approach Volume (veh/h)		517			513				1047		0
Crossing Volume (veh/h)		187			1272#				510		510
High Capacity (veh/h)		1196			497				926		926
High v/c (veh/h)		0.43			1.03				1.13		0.00
Low Capacity (veh/h)		990			376				748		748
Low v/c (veh/h)		0.52			1.36				1.40		0.00

Intersection Summary			
Maximum v/c High	1.13		
Maximum v/c Low	1.40		
Intersection Capacity Utilization	89.5%	ICU Level of Service	E

Crossing flow exceeds 1200, method is not applicable

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	84	60	140	41	89	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	0.94			1.00	1.00	0.85
Flt Protected	1.00			0.96	0.95	1.00
Satd. Flow (prot)	3650			3749	1947	1742
Flt Permitted	1.00			0.72	0.95	1.00
Satd. Flow (perm)	3650			2817	1947	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	91	65	152	45	97	122
RTOR Reduction (vph)	33	0	0	0	0	96
Lane Group Flow (vph)	123	0	0	197	97	26
Turn Type	NA		Perm	NA	NA	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	12.8			12.8	5.6	5.6
Effective Green, g (s)	12.8			12.8	5.6	5.6
Actuated g/C Ratio	0.48			0.48	0.21	0.21
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1769			1365	413	369
v/s Ratio Prot	0.03				c0.05	
v/s Ratio Perm				c0.07		0.01
v/c Ratio	0.07			0.14	0.23	0.07
Uniform Delay, d1	3.6			3.8	8.6	8.3
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.0			0.0	0.3	0.1
Delay (s)	3.6			3.8	8.9	8.4
Level of Service	A			A	A	A
Approach Delay (s)	3.6			3.8	8.6	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	5.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.17		
Actuated Cycle Length (s)	26.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	26.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	306	180	286	0	0	0	0	116	25	260	146	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			4.0	
Lane Util. Factor	0.97	1.00						1.00			1.00	
Frt	1.00	0.91						0.98			1.00	
Flt Protected	0.95	1.00						1.00			0.97	
Satd. Flow (prot)	3776	1860						2000			1985	
Flt Permitted	0.95	1.00						1.00			0.72	
Satd. Flow (perm)	3776	1860						2000			1468	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.81	0.81	0.81
Adj. Flow (vph)	333	196	311	0	0	0	0	126	27	321	180	0
RTOR Reduction (vph)	0	156	0	0	0	0	0	15	0	0	0	0
Lane Group Flow (vph)	333	351	0	0	0	0	0	138	0	0	501	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		6						4			8	
Permitted Phases	6									8		
Actuated Green, G (s)	12.2	12.2						15.0			15.0	
Effective Green, g (s)	12.2	12.2						15.0			15.0	
Actuated g/C Ratio	0.35	0.35						0.43			0.43	
Clearance Time (s)	4.0	4.0						4.0			4.0	
Vehicle Extension (s)	3.0	3.0						3.0			3.0	
Lane Grp Cap (vph)	1308	644						852			625	
v/s Ratio Prot		c0.19						0.07				
v/s Ratio Perm	0.09										c0.34	
v/c Ratio	0.25	0.55						0.16			0.80	
Uniform Delay, d1	8.2	9.3						6.2			8.8	
Progression Factor	1.00	1.00						1.00			1.00	
Incremental Delay, d2	0.1	0.9						0.1			7.3	
Delay (s)	8.3	10.2						6.3			16.1	
Level of Service	A	B						A			B	
Approach Delay (s)		9.5			0.0			6.3			16.1	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	35.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.7%	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												
Volume (vph)	0	0	0	33	215	25	40	382	0	0	375	683
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
Lane Util. Factor					0.95			0.95			0.95	0.95
Frt					0.99			1.00			0.95	0.85
Flt Protected					0.99			1.00			1.00	1.00
Satd. Flow (prot)					3817			3875			1850	1655
Flt Permitted					0.99			0.78			1.00	1.00
Satd. Flow (perm)					3817			3052			1850	1655
Peak-hour factor, PHF	0.92	0.92	0.92	0.78	0.78	0.78	0.92	0.92	0.92	0.71	0.71	0.71
Adj. Flow (vph)	0	0	0	42	276	32	43	415	0	0	528	962
RTOR Reduction (vph)	0	0	0	0	24	0	0	0	0	0	37	225
Lane Group Flow (vph)	0	0	0	0	326	0	0	458	0	0	751	477
Turn Type				Perm	NA		Perm	NA			NA	Perm
Protected Phases					2			4			8	
Permitted Phases				2			4					8
Actuated Green, G (s)					8.1			16.0			16.0	16.0
Effective Green, g (s)					8.1			16.0			16.0	16.0
Actuated g/C Ratio					0.25			0.50			0.50	0.50
Clearance Time (s)					4.0			4.0			4.0	4.0
Vehicle Extension (s)					3.0			3.0			3.0	3.0
Lane Grp Cap (vph)					963			1521			922	824
v/s Ratio Prot											c0.41	
v/s Ratio Perm					0.09			0.15				0.29
v/c Ratio					0.34			0.30			0.81	0.58
Uniform Delay, d1					9.8			4.8			6.8	5.7
Progression Factor					1.00			1.00			1.00	1.00
Incremental Delay, d2					0.2			0.1			5.6	1.0
Delay (s)					10.0			4.9			12.4	6.7
Level of Service					B			A			B	A
Approach Delay (s)		0.0			10.0			4.9			9.7	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	32.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.6%	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												
Volume (veh/h)	189	265	0	0	0	0	0	262	35	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.89	0.89	0.89	0.92	0.92	0.92
Hourly flow rate (vph)	210	294	0	0	0	0	0	294	39	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								343			576	
pX, platoon unblocked												
vC, conflicting volume	98	334	0	461	314	118	0			334		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	98	334	0	461	314	118	0			334		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	76	50	100	100	100	100	100			100		
cM capacity (veh/h)	873	585	1084	292	600	912	1622			1222		

Direction, Lane #	SE 1	SE 2	NE 1	NE 2	NE 3
Volume Total	308	196	118	118	98
Volume Left	210	0	0	0	0
Volume Right	0	0	0	0	39
cSH	755	585	1700	1700	1700
Volume to Capacity	0.41	0.34	0.07	0.07	0.06
Queue Length 95th (ft)	50	37	0	0	0
Control Delay (s)	13.0	14.2	0.0	0.0	0.0
Lane LOS	B	B			
Approach Delay (s)	13.5		0.0		
Approach LOS	B				

Intersection Summary			
Average Delay	8.1		
Intersection Capacity Utilization	25.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	0	0	0	0	36	60	210	241	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.73	0.73	0.73	0.90	0.90	0.90	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	49	82	233	268	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								627			292	
pX, platoon unblocked												
vC, conflicting volume	663	734	0	734	734	89	0			268		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	663	734	0	734	734	89	0			268		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	100	83	91	86			100		
cM capacity (veh/h)	247	296	1084	274	296	951	1622			1293		

Direction, Lane #	NW 1	NW 2	NE 1	NE 2	NE 3
Volume Total	33	99	287	107	107
Volume Left	0	0	233	0	0
Volume Right	0	82	0	0	0
cSH	296	695	1622	1700	1700
Volume to Capacity	0.11	0.14	0.14	0.06	0.06
Queue Length 95th (ft)	9	12	13	0	0
Control Delay (s)	18.7	11.0	6.4	0.0	0.0
Lane LOS	C	B	A		
Approach Delay (s)	12.9		3.7		
Approach LOS	B				

Intersection Summary			
Average Delay	5.6		
Intersection Capacity Utilization	21.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (veh/h)	75	225	350	35	19	669
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.89	0.89	0.92	0.92	0.89	0.89
Hourly flow rate (vph)	84	253	380	38	21	752
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		4				
Median type			None			None
Median storage veh)						
Upstream signal (ft)			442			
pX, platoon unblocked	0.87	0.87			0.87	
vC, conflicting volume	818	399			418	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	715	233			255	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	73	62			98	
cM capacity (veh/h)	311	668			1135	

Direction, Lane #	NW 1	NE 1	SW 1	SW 2	SW 3
Volume Total	337	418	21	376	376
Volume Left	84	0	21	0	0
Volume Right	253	38	0	0	0
cSH	890	1700	1135	1700	1700
Volume to Capacity	0.38	0.25	0.02	0.22	0.22
Queue Length 95th (ft)	45	0	1	0	0
Control Delay (s)	15.4	0.0	8.2	0.0	0.0
Lane LOS	C		A		
Approach Delay (s)	15.4	0.0	0.2		
Approach LOS	C				

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	46	15	0	0	47	25	103	128	38	25	0	175
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	4.0	4.0	4.0		4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00	1.00	1.00		1.00
Frt	1.00	1.00			0.95		1.00	1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (prot)	1947	2049			1953		1947	2049	1742	1947		1742
Flt Permitted	0.69	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (perm)	1421	2049			1953		1947	2049	1742	1947		1742
Peak-hour factor, PHF	0.75	0.75	0.75	0.73	0.73	0.73	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	61	20	0	0	64	34	111	138	41	27	0	190
RTOR Reduction (vph)	0	0	0	0	23	0	0	0	29	0	0	150
Lane Group Flow (vph)	61	20	0	0	75	0	111	138	12	27	0	40
Turn Type	Perm	NA			NA		Prot	NA	Perm	Prot		custom
Protected Phases		6			2		7	4		3		8
Permitted Phases	6								4			
Actuated Green, G (s)	10.4	10.4			10.4		3.2	9.4	9.4	0.6		6.8
Effective Green, g (s)	10.4	10.4			10.4		3.2	9.4	9.4	0.6		6.8
Actuated g/C Ratio	0.32	0.32			0.32		0.10	0.29	0.29	0.02		0.21
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	456	657			626		192	594	505	36		365
v/s Ratio Prot		0.01			0.04		c0.06	c0.07		0.01		0.02
v/s Ratio Perm	c0.04								0.01			
v/c Ratio	0.13	0.03			0.12		0.58	0.23	0.02	0.75		0.11
Uniform Delay, d1	7.8	7.5			7.8		14.0	8.8	8.2	15.8		10.4
Progression Factor	1.00	1.00			1.00		1.00	1.00	1.00	1.00		1.00
Incremental Delay, d2	0.1	0.0			0.1		4.2	0.2	0.0	59.8		0.1
Delay (s)	7.9	7.6			7.9		18.1	9.0	8.2	75.6		10.5
Level of Service	A	A			A		B	A	A	E		B
Approach Delay (s)		7.8			7.9			12.4			18.6	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	32.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	30.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	25	58	31	30	18	25	25	303	99	25	539	19
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		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.91		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	1942		1947	1871		1947	1973		1947	2039	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1947	1942		1947	1871		1947	1973		1947	2039	
Peak-hour factor, PHF	0.82	0.82	0.82	0.48	0.48	0.48	0.92	0.92	0.92	0.75	0.75	0.75
Adj. Flow (vph)	30	71	38	62	38	52	27	329	108	33	719	25
RTOR Reduction (vph)	0	32	0	0	43	0	0	13	0	0	2	0
Lane Group Flow (vph)	30	77	0	62	47	0	27	424	0	33	742	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	1.3	8.5		2.0	9.2		1.3	22.0		2.4	23.1	
Effective Green, g (s)	1.3	8.5		2.0	9.2		1.3	22.0		2.4	23.1	
Actuated g/C Ratio	0.03	0.17		0.04	0.18		0.03	0.43		0.05	0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	49	324		76	338		49	852		91	925	
v/s Ratio Prot	0.02	c0.04		c0.03	0.03		0.01	0.21		c0.02	c0.36	
v/s Ratio Perm												
v/c Ratio	0.61	0.24		0.82	0.14		0.55	0.50		0.36	0.80	
Uniform Delay, d1	24.6	18.4		24.3	17.5		24.5	10.5		23.5	11.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	20.5	0.4		46.7	0.2		12.7	0.5		2.5	5.1	
Delay (s)	45.1	18.8		71.0	17.7		37.2	10.9		26.0	17.0	
Level of Service	D	B		E	B		D	B		C	B	
Approach Delay (s)		24.5			39.4			12.4			17.4	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	50.9	Sum of lost time (s)	16.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	157	25	47	209	50	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.95	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1947	1742	1947	2049	1957	
Flt Permitted	0.95	1.00	0.70	1.00	1.00	
Satd. Flow (perm)	1947	1742	1443	2049	1957	
Peak-hour factor, PHF	0.81	0.81	0.83	0.83	0.92	0.92
Adj. Flow (vph)	194	31	57	252	54	27
RTOR Reduction (vph)	0	18	0	0	20	0
Lane Group Flow (vph)	194	13	57	252	61	0
Turn Type	NA	Perm	Perm	NA	NA	
Protected Phases	6			4	8	
Permitted Phases		6	4			
Actuated Green, G (s)	11.1	11.1	7.3	7.3	7.3	
Effective Green, g (s)	11.1	11.1	7.3	7.3	7.3	
Actuated g/C Ratio	0.42	0.42	0.28	0.28	0.28	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	818	732	399	566	541	
v/s Ratio Prot	c0.10			c0.12	0.03	
v/s Ratio Perm		0.01	0.04			
v/c Ratio	0.24	0.02	0.14	0.45	0.11	
Uniform Delay, d1	4.9	4.5	7.2	7.9	7.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.2	0.0	0.2	0.6	0.1	
Delay (s)	5.1	4.5	7.4	8.4	7.2	
Level of Service	A	A	A	A	A	
Approach Delay (s)	5.0			8.2	7.2	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	26.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	25	20	17	55	74	25	25	306	25	31	459	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.77	0.77	0.77	0.75	0.75	0.75	0.92	0.92	0.92	0.81	0.81	0.81
Hourly flow rate (vph)	32	26	22	73	99	33	27	333	27	38	567	2
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								344			414	
pX, platoon unblocked	0.92	0.92	0.86	0.92	0.92	0.85	0.86			0.85		
vC, conflicting volume	1114	1059	568	1079	1046	346	569			360		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	727	666	411	688	653	135	413			151		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	85	92	96	74	70	96	97			97		
cM capacity (veh/h)	220	328	548	285	334	772	981			1209		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2
Volume Total	81	205	27	360	38	569
Volume Left	32	73	27	0	38	0
Volume Right	22	33	0	27	0	2
cSH	302	345	981	1700	1209	1700
Volume to Capacity	0.27	0.60	0.03	0.21	0.03	0.33
Queue Length 95th (ft)	26	91	2	0	2	0
Control Delay (s)	21.2	29.7	8.8	0.0	8.1	0.0
Lane LOS	C	D	A		A	
Approach Delay (s)	21.2	29.7	0.6		0.5	
Approach LOS	C	D				

Intersection Summary			
Average Delay	6.5		
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	18	36	0	0	108	51	22	329	18	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.79	0.79	0.79	0.74	0.74	0.74	0.96	0.96	0.96	0.92	0.92	0.92
Hourly flow rate (vph)	23	46	0	0	146	69	23	343	19	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								318			425	
pX, platoon unblocked												
vC, conflicting volume	359	407	0	421	398	181	0			361		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	359	407	0	421	398	181	0			361		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	94	91	100	100	73	92	99			100		
cM capacity (veh/h)	409	524	1084	477	531	831	1622			1194		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2
Volume Total	68	215	194	190
Volume Left	23	0	23	0
Volume Right	0	69	0	19
cSH	479	600	1622	1700
Volume to Capacity	0.14	0.36	0.01	0.11
Queue Length 95th (ft)	12	40	1	0
Control Delay (s)	13.8	14.3	1.0	0.0
Lane LOS	B	B	A	
Approach Delay (s)	13.8	14.3	0.5	
Approach LOS	B	B		

Intersection Summary			
Average Delay	6.3		
Intersection Capacity Utilization	32.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	29	34	0	0	0	25	306	25	124	390	11
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	4.0	
Lane Util. Factor		1.00					1.00	1.00		1.00	1.00	
Frt		0.94					1.00	0.99		1.00	1.00	
Flt Protected		0.99					0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1910					1947	2026		1947	2041	
Flt Permitted		0.99					0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1910					1947	2026		1947	2041	
Peak-hour factor, PHF	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.92	0.92	0.84	0.84	0.84
Adj. Flow (vph)	18	35	41	0	0	0	27	333	27	148	464	13
RTOR Reduction (vph)	0	33	0	0	0	0	0	6	0	0	2	0
Lane Group Flow (vph)	0	61	0	0	0	0	27	354	0	148	475	0
Turn Type	Perm	NA					Prot	NA		Prot	NA	
Protected Phases		6					7	4		3	8	
Permitted Phases	6											
Actuated Green, G (s)		6.9					0.6	13.7		4.4	17.5	
Effective Green, g (s)		6.9					0.6	13.7		4.4	17.5	
Actuated g/C Ratio		0.19					0.02	0.37		0.12	0.47	
Clearance Time (s)		4.0					4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0					3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		356					31	750		231	965	
v/s Ratio Prot							0.01	0.17		c0.08	c0.23	
v/s Ratio Perm		0.03										
v/c Ratio		0.17					0.87	0.47		0.64	0.49	
Uniform Delay, d1		12.6					18.2	8.9		15.5	6.7	
Progression Factor		1.00					1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2					108.3	0.5		6.0	0.4	
Delay (s)		12.9					126.5	9.4		21.5	7.1	
Level of Service		B					F	A		C	A	
Approach Delay (s)		12.9			0.0			17.5			10.5	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	37.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	57	94	0	0	0	0	0	289	77	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				
Lane Util. Factor		0.95						0.95				
Frt		1.00						0.97				
Flt Protected		0.98						1.00				
Satd. Flow (prot)		3821						3770				
Flt Permitted		0.98						1.00				
Satd. Flow (perm)		3821						3770				
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	63	104	0	0	0	0	0	311	83	0	0	0
RTOR Reduction (vph)	0	44	0	0	0	0	0	50	0	0	0	0
Lane Group Flow (vph)	0	123	0	0	0	0	0	344	0	0	0	0
Turn Type	Perm	NA						NA				
Protected Phases		6						4				
Permitted Phases	6											
Actuated Green, G (s)		6.6						7.5				
Effective Green, g (s)		6.6						7.5				
Actuated g/C Ratio		0.30						0.34				
Clearance Time (s)		4.0						4.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		1141						1279				
v/s Ratio Prot								c0.09				
v/s Ratio Perm		0.03										
v/c Ratio		0.11						0.27				
Uniform Delay, d1		5.6						5.3				
Progression Factor		1.00						1.00				
Incremental Delay, d2		0.0						0.1				
Delay (s)		5.7						5.4				
Level of Service		A						A				
Approach Delay (s)		5.7			0.0			5.4			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.19		
Actuated Cycle Length (s)	22.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	21.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	25	22	9	106	64	25	25	256	25	42	456	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.55	0.55	0.55	0.57	0.57	0.57	0.92	0.92	0.92	0.85	0.85	0.85
Hourly flow rate (vph)	45	40	16	186	112	44	27	278	27	49	536	29
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								404			489	
pX, platoon unblocked	0.93	0.93	1.00	0.93	0.93	0.93	1.00			0.93		
vC, conflicting volume	1083	1010	551	1018	1011	292	566			305		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1053	975	551	984	977	207	566			222		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	56	82	97	0	49	94	97			96		
cM capacity (veh/h)	103	220	534	169	219	779	1006			1259		

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1	NE 2	SW 1	SW 2
Volume Total	45	56	186	156	27	305	49	566
Volume Left	45	0	186	0	27	0	49	0
Volume Right	0	16	0	44	0	27	0	29
cSH	103	265	169	275	1006	1700	1259	1700
Volume to Capacity	0.44	0.21	1.10	0.57	0.03	0.18	0.04	0.33
Queue Length 95th (ft)	47	20	237	81	2	0	3	0
Control Delay (s)	65.5	22.2	154.8	34.1	8.7	0.0	8.0	0.0
Lane LOS	F	C	F	D	A		A	
Approach Delay (s)	41.5		99.7		0.7		0.6	
Approach LOS	E		F					

Intersection Summary			
Average Delay	28.0		
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	30	42	0	0	120	44	18	354	7	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	4.0		4.0				
Lane Util. Factor	1.00	1.00			1.00	1.00		0.95				
Frt	1.00	1.00			1.00	0.85		1.00				
Flt Protected	0.95	1.00			1.00	1.00		1.00				
Satd. Flow (prot)	1947	2049			2049	1742		3874				
Flt Permitted	0.63	1.00			1.00	1.00		1.00				
Satd. Flow (perm)	1292	2049			2049	1742		3874				
Peak-hour factor, PHF	0.72	0.72	0.72	0.59	0.59	0.59	0.75	0.75	0.75	0.92	0.92	0.92
Adj. Flow (vph)	42	58	0	0	203	75	24	472	9	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	51	0	3	0	0	0	0
Lane Group Flow (vph)	42	58	0	0	203	24	0	502	0	0	0	0
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		6			2			4				
Permitted Phases	6					2	4					
Actuated Green, G (s)	8.2	8.2			8.2	8.2		9.3				
Effective Green, g (s)	8.2	8.2			8.2	8.2		9.3				
Actuated g/C Ratio	0.32	0.32			0.32	0.32		0.36				
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				
Lane Grp Cap (vph)	415	658			658	560		1412				
v/s Ratio Prot		0.03			c0.10							
v/s Ratio Perm	0.03					0.01		0.13				
v/c Ratio	0.10	0.09			0.31	0.04		0.36				
Uniform Delay, d1	6.1	6.0			6.5	6.0		5.9				
Progression Factor	1.00	1.00			1.00	1.00		1.00				
Incremental Delay, d2	0.1	0.1			0.3	0.0		0.2				
Delay (s)	6.2	6.1			6.8	6.0		6.1				
Level of Service	A	A			A	A		A				
Approach Delay (s)		6.1			6.6			6.1			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	25.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	27.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations										
Volume (vph)	40	15	108	134	15	0	0	0	215	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0					4.0	4.0
Lane Util. Factor	1.00			0.91					1.00	1.00
Frt	0.96			0.99					1.00	0.85
Flt Protected	0.96			0.98					0.95	1.00
Satd. Flow (prot)	1905			5432					1947	1742
Flt Permitted	0.96			0.98					0.95	1.00
Satd. Flow (perm)	1905			5432					1947	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	16	117	146	16	0	0	0	234	77
RTOR Reduction (vph)	20	0	0	9	0	0	0	0	0	0
Lane Group Flow (vph)	39	0	0	270	0	0	0	0	234	77
Turn Type	NA		Perm	NA					NA	Perm
Protected Phases	4!			6					8!	
Permitted Phases			6							8
Actuated Green, G (s)	6.9			10.3					6.9	6.9
Effective Green, g (s)	6.9			10.3					6.9	6.9
Actuated g/C Ratio	0.27			0.41					0.27	0.27
Clearance Time (s)	4.0			4.0					4.0	4.0
Vehicle Extension (s)	3.0			3.0					3.0	3.0
Lane Grp Cap (vph)	521			2220					533	476
v/s Ratio Prot	0.02								c0.12	
v/s Ratio Perm				0.05						0.04
v/c Ratio	0.08			0.12					0.44	0.16
Uniform Delay, d1	6.8			4.6					7.6	7.0
Progression Factor	1.00			1.00					1.00	1.00
Incremental Delay, d2	0.1			0.0					0.6	0.2
Delay (s)	6.8			4.7					8.1	7.1
Level of Service	A			A					A	A
Approach Delay (s)	6.8			4.7			0.0		7.9	
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	0.25		
Actuated Cycle Length (s)	25.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	31.2%	ICU Level of Service	A
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
1: Broadway St & Monterey St.

9/10/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	0	58	0	0	92	0	0	0	0	0	0	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.73	0.73	0.73	0.82	0.82	0.82	0.92	0.92	0.92	0.92	0.92	0.40
Hourly flow rate (vph)	0	79	0	0	112	0	0	0	0	0	0	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	112			79			192	192	79	192	192	112
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	112			79			192	192	79	192	192	112
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	98
cM capacity (veh/h)	1477			1519			752	703	981	768	703	941

Direction, Lane #	SE 1	NW 1	NE 1	SW 1	SW 2
Volume Total	79	112	0	0	20
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	20
cSH	1477	1519	1700	1700	941
Volume to Capacity	0.00	0.00	0.00	0.00	0.02
Queue Length 95th (ft)	0	0	0	0	2
Control Delay (s)	0.0	0.0	0.0	0.0	8.9
Lane LOS			A	A	A
Approach Delay (s)	0.0	0.0	0.0	8.9	
Approach LOS			A	A	

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	14.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	19	269	0	0	199	47	233	82	62	0	0	0
Peak Hour Factor	0.85	0.85	0.85	0.90	0.90	0.90	0.85	0.85	0.85	0.92	0.92	0.92
Hourly flow rate (vph)	22	316	0	0	221	52	274	96	73	0	0	0

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1	NE 2
Volume Total (vph)	128	211	147	126	322	121
Volume Left (vph)	22	0	0	0	274	0
Volume Right (vph)	0	0	0	52	0	73
Hadj (s)	0.12	0.03	0.03	-0.26	0.46	-0.39
Departure Headway (s)	6.4	6.4	6.5	6.2	6.6	5.8
Degree Utilization, x	0.23	0.37	0.26	0.22	0.59	0.19
Capacity (veh/h)	531	543	529	552	527	595
Control Delay (s)	10.2	11.9	10.6	9.7	17.6	9.0
Approach Delay (s)	11.2		10.2		15.2	
Approach LOS	B		B		C	

Intersection Summary			
Delay	12.6		
Level of Service	B		
Intersection Capacity Utilization	37.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	0	126	59	0	6	6
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.81	0.81	0.78	0.78	0.60	0.60
Hourly flow rate (vph)	0	156	76	0	10	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1131				
pX, platoon unblocked						
vC, conflicting volume	76				231	76
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	76				231	76
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	99
cM capacity (veh/h)	1523				757	986

Direction, Lane #	SE 1	NW 1	SW 1	SW 2
Volume Total	156	76	10	10
Volume Left	0	0	10	0
Volume Right	0	0	0	10
cSH	1700	1700	757	986
Volume to Capacity	0.09	0.04	0.01	0.01
Queue Length 95th (ft)	0	0	1	1
Control Delay (s)	0.0	0.0	9.8	8.7
Lane LOS			A	A
Approach Delay (s)	0.0	0.0	9.3	
Approach LOS			A	

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	16.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	0	119	2	3	427	0	0	0	0	170	13	410
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.76	0.76	0.76	0.84	0.84	0.84	0.92	0.92	0.92	0.71	0.71	0.71
Hourly flow rate (vph)	0	157	3	4	508	0	0	0	0	239	18	577
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		735										
pX, platoon unblocked												
vC, conflicting volume	508			159			428	673	158	673	675	254
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	508			159			428	673	158	673	675	254
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	30	95	23
cM capacity (veh/h)	1053			1418			110	374	859	340	373	745

Direction, Lane #	SE 1	NW 1	NW 2	SW 1	SW 2
Volume Total	159	173	339	450	385
Volume Left	0	4	0	239	0
Volume Right	3	0	0	192	385
cSH	1700	1418	1700	445	745
Volume to Capacity	0.09	0.00	0.20	1.01	0.52
Queue Length 95th (ft)	0	0	0	333	75
Control Delay (s)	0.0	0.2	0.0	76.4	14.9
Lane LOS		A		F	B
Approach Delay (s)	0.0	0.1		48.0	
Approach LOS				E	

Intersection Summary			
Average Delay	26.7		
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	294	0	317	0	0	0	0	598	56	44	314	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2						5.2		5.2	5.2	
Lane Util. Factor	1.00	1.00						0.95		1.00	0.95	
Frt	1.00	0.85						0.99		1.00	1.00	
Flt Protected	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (prot)	1770	1583						3494		1770	3539	
Flt Permitted	0.95	1.00						1.00		0.28	1.00	
Satd. Flow (perm)	1770	1583						3494		518	3539	
Peak-hour factor, PHF	0.83	0.83	0.83	0.92	0.92	0.92	0.72	0.72	0.72	0.78	0.78	0.78
Adj. Flow (vph)	354	0	382	0	0	0	0	831	78	56	403	0
RTOR Reduction (vph)	0	278	0	0	0	0	0	15	0	0	0	0
Lane Group Flow (vph)	354	104	0	0	0	0	0	894	0	56	403	0
Turn Type	Split	NA						NA		Perm	NA	
Protected Phases	4	4						2			2	
Permitted Phases										2		
Actuated Green, G (s)	12.2	12.2						23.0		23.0	23.0	
Effective Green, g (s)	12.2	12.2						23.0		23.0	23.0	
Actuated g/C Ratio	0.27	0.27						0.52		0.52	0.52	
Clearance Time (s)	4.2	4.2						5.2		5.2	5.2	
Vehicle Extension (s)	5.2	5.2						0.2		0.2	0.2	
Lane Grp Cap (vph)	484	433						1801		267	1825	
v/s Ratio Prot	c0.20	0.07						c0.26			0.11	
v/s Ratio Perm										0.11		
v/c Ratio	0.73	0.24						0.50		0.21	0.22	
Uniform Delay, d1	14.7	12.6						7.0		5.9	5.9	
Progression Factor	1.00	1.00						1.00		1.00	1.00	
Incremental Delay, d2	7.0	0.6						0.1		0.1	0.0	
Delay (s)	21.7	13.2						7.1		6.0	5.9	
Level of Service	C	B						A		A	A	
Approach Delay (s)		17.3			0.0			7.1			5.9	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	44.6	Sum of lost time (s)	9.4
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												
Volume (veh/h)	0	0	0	31	7	83	326	561	0	0	324	105
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.70	0.70	0.70	0.76	0.76	0.76	0.86	0.86	0.86
Hourly flow rate (vph)	0	0	0	44	10	119	429	738	0	0	377	122
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								284			1117	
pX, platoon unblocked												
vC, conflicting volume	1788	2034	249	1784	2095	369	499			738		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1788	2034	249	1784	2095	369	499			738		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	0	67	81	60			100		
cM capacity (veh/h)	22	34	750	35	31	628	1061			864		

Direction, Lane #	NW 1	NW 2	NE 1	NE 2	NE 3	SW 1	SW 2
Volume Total	49	124	429	369	369	251	248
Volume Left	44	0	429	0	0	0	0
Volume Right	0	119	0	0	0	0	122
cSH	35	352	1061	1700	1700	1700	1700
Volume to Capacity	1.42	0.35	0.40	0.22	0.22	0.15	0.15
Queue Length 95th (ft)	133	39	50	0	0	0	0
Control Delay (s)	476.7	20.7	10.7	0.0	0.0	0.0	0.0
Lane LOS	F	C	B				
Approach Delay (s)	150.7		3.9			0.0	
Approach LOS	F						

Intersection Summary			
Average Delay	16.7		
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	21	4	27	14	10	13	41	612	3	1	383	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.81	0.81	0.81	0.93	0.93	0.93	0.71	0.71	0.71	0.84	0.84	0.84
Hourly flow rate (vph)	26	5	33	15	11	14	58	862	4	1	456	30
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								595			806	
pX, platoon unblocked												
vC, conflicting volume	1039	1455	243	1246	1468	433	486			866		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1039	1455	243	1246	1468	433	486			866		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	84	96	96	87	91	98	95			100		
cM capacity (veh/h)	161	122	758	116	120	571	1073			773		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2
Volume Total	64	40	489	435	229	258
Volume Left	26	15	58	0	1	0
Volume Right	33	14	0	4	0	30
cSH	261	163	1073	1700	773	1700
Volume to Capacity	0.25	0.24	0.05	0.26	0.00	0.15
Queue Length 95th (ft)	24	23	4	0	0	0
Control Delay (s)	23.2	34.2	1.6	0.0	0.1	0.0
Lane LOS	C	D	A		A	
Approach Delay (s)	23.2	34.2	0.8		0.0	
Approach LOS	C	D				

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	74	0	0	185	0	0	653	0	0	379	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5			4.2			4.2	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		1.00			1.00			1.00			1.00	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		1863			1863			3539			3539	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		1863			1863			3539			3539	
Peak-hour factor, PHF	0.75	0.75	0.75	0.88	0.88	0.88	0.81	0.81	0.81	0.91	0.91	0.91
Adj. Flow (vph)	0	99	0	0	210	0	0	806	0	0	416	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	99	0	0	210	0	0	806	0	0	416	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Actuated Green, G (s)		18.2			18.2			26.3			26.3	
Effective Green, g (s)		18.2			18.2			26.3			26.3	
Actuated g/C Ratio		0.34			0.34			0.49			0.49	
Clearance Time (s)		4.5			4.5			4.2			4.2	
Vehicle Extension (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		637			637			1749			1749	
v/s Ratio Prot		0.05			c0.11			c0.23			0.12	
v/s Ratio Perm												
v/c Ratio		0.16			0.33			0.46			0.24	
Uniform Delay, d1		12.2			13.0			8.8			7.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.2			0.6			0.4			0.1	
Delay (s)		12.4			13.6			9.2			7.9	
Level of Service		B			B			A			A	
Approach Delay (s)		12.4			13.6			9.2			7.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	53.2	Sum of lost time (s)	8.7
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	47	17	37	77	38	7	87	422	151	11	338	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	5.6	5.6		5.6	5.6		4.0	4.2		4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.90		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3178		1770	1820		1770	3399		1770	3403	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3178		1770	1820		1770	3399		1770	3403	
Peak-hour factor, PHF	0.79	0.79	0.79	0.76	0.76	0.76	0.79	0.79	0.79	0.95	0.95	0.95
Adj. Flow (vph)	59	22	47	101	50	9	110	534	191	12	356	123
RTOR Reduction (vph)	0	41	0	0	6	0	0	22	0	0	25	0
Lane Group Flow (vph)	59	28	0	101	53	0	110	703	0	12	454	0
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	8.2	8.2		8.3	8.3		6.8	27.7		1.2	22.1	
Effective Green, g (s)	8.2	8.2		8.3	8.3		6.8	27.7		1.2	22.1	
Actuated g/C Ratio	0.13	0.13		0.13	0.13		0.10	0.43		0.02	0.34	
Clearance Time (s)	5.6	5.6		5.6	5.6		4.0	4.2		4.0	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	223	402		226	233		185	1452		32	1160	
v/s Ratio Prot	c0.03	0.01		c0.06	0.03		c0.06	c0.21		0.01	0.13	
v/s Ratio Perm												
v/c Ratio	0.26	0.07		0.45	0.23		0.59	0.48		0.38	0.39	
Uniform Delay, d1	25.6	24.9		26.1	25.4		27.7	13.4		31.4	16.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.0		0.5	0.2		3.4	0.1		2.7	0.1	
Delay (s)	25.8	25.0		26.6	25.6		31.1	13.5		34.1	16.3	
Level of Service	C	C		C	C		C	B		C	B	
Approach Delay (s)		25.4			26.2			15.8			16.8	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	64.8	Sum of lost time (s)	19.4
Intersection Capacity Utilization	45.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	23	76	33	218	572	137	55	382	43	38	255	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.0	4.2		4.0	4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	1.00	0.85	1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1778		1770	1863	1583	1770	3485		1770	3409	
Flt Permitted	0.22	1.00		0.67	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	403	1778		1245	1863	1583	1770	3485		1770	3409	
Peak-hour factor, PHF	0.78	0.78	0.78	0.87	0.87	0.87	0.80	0.80	0.80	0.83	0.83	0.83
Adj. Flow (vph)	29	97	42	251	657	157	69	478	54	46	307	100
RTOR Reduction (vph)	0	14	0	0	0	49	0	8	0	0	31	0
Lane Group Flow (vph)	29	125	0	251	657	108	69	524	0	46	376	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	39.0	39.0		39.0	39.0	39.0	9.0	23.3		4.1	18.4	
Effective Green, g (s)	39.0	39.0		39.0	39.0	39.0	9.0	23.3		4.1	18.4	
Actuated g/C Ratio	0.49	0.49		0.49	0.49	0.49	0.11	0.30		0.05	0.23	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.0	4.2		4.0	4.2	
Vehicle Extension (s)	4.8	4.8		4.8	4.8	4.8	2.0	4.8		2.0	4.8	
Lane Grp Cap (vph)	199	879		616	922	783	202	1030		92	796	
v/s Ratio Prot		0.07			c0.35		0.04	c0.15		0.03	c0.11	
v/s Ratio Perm	0.07			0.20		0.07						
v/c Ratio	0.15	0.14		0.41	0.71	0.14	0.34	0.51		0.50	0.47	
Uniform Delay, d1	10.8	10.8		12.6	15.5	10.8	32.2	23.0		36.4	26.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.1		0.9	3.2	0.2	0.4	0.8		1.6	0.9	
Delay (s)	11.5	11.0		13.4	18.7	10.9	32.5	23.8		37.9	26.9	
Level of Service	B	B		B	B	B	C	C		D	C	
Approach Delay (s)		11.0			16.3			24.8			28.0	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	78.8	Sum of lost time (s)	12.4
Intersection Capacity Utilization	57.4%	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												
Volume (vph)	38	183	19	0	0	0	0	397	20	24	426	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2					4.2		4.2	4.2	
Lane Util. Factor		0.91	1.00					0.95		1.00	0.95	
Frt		1.00	0.85					0.99		1.00	1.00	
Flt Protected		0.99	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		5042	1583					3513		1770	3539	
Flt Permitted		0.99	1.00					1.00		0.45	1.00	
Satd. Flow (perm)		5042	1583					3513		832	3539	
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.81	0.81	0.81	0.84	0.84	0.84
Adj. Flow (vph)	42	203	21	0	0	0	0	490	25	29	507	0
RTOR Reduction (vph)	0	0	13	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	245	8	0	0	0	0	510	0	29	507	0
Turn Type	Split	NA	Perm					NA		Perm	NA	
Protected Phases	4	4						2			6	
Permitted Phases			4							6		
Actuated Green, G (s)		20.0	20.0					25.0		25.0	25.0	
Effective Green, g (s)		20.0	20.0					25.0		25.0	25.0	
Actuated g/C Ratio		0.37	0.37					0.47		0.47	0.47	
Clearance Time (s)		4.2	4.2					4.2		4.2	4.2	
Vehicle Extension (s)		2.0	2.0					2.0		2.0	2.0	
Lane Grp Cap (vph)		1888	592					1644		389	1656	
v/s Ratio Prot		c0.05						c0.15			0.14	
v/s Ratio Perm			0.00							0.03		
v/c Ratio		0.13	0.01					0.31		0.07	0.31	
Uniform Delay, d1		11.0	10.5					8.8		7.8	8.8	
Progression Factor		1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2		0.0	0.0					0.0		0.0	0.0	
Delay (s)		11.0	10.5					8.9		7.9	8.9	
Level of Service		B	B					A		A	A	
Approach Delay (s)		11.0			0.0			8.9			8.8	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	53.4	Sum of lost time (s)	8.4
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	24	12	16	82	313	6	85	349	4	8	356	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2	4.2	4.2	4.2	4.2	4.0	4.2	4.2	4.0	4.2	4.2
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1681	1767	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1681	1767	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.65	0.65	0.65	0.86	0.86	0.86	0.82	0.82	0.82	0.82	0.82	0.82
Adj. Flow (vph)	37	18	25	95	364	7	104	426	5	10	434	43
RTOR Reduction (vph)	0	0	23	0	0	4	0	0	3	0	0	32
Lane Group Flow (vph)	37	18	2	85	374	3	104	426	2	10	434	11
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	5		6	6		3	8		7	4	
Permitted Phases			5			6			8			4
Actuated Green, G (s)	7.4	7.4	7.4	36.1	36.1	36.1	10.1	32.1	32.1	1.1	23.1	23.1
Effective Green, g (s)	7.4	7.4	7.4	36.1	36.1	36.1	10.1	32.1	32.1	1.1	23.1	23.1
Actuated g/C Ratio	0.08	0.08	0.08	0.39	0.39	0.39	0.11	0.34	0.34	0.01	0.25	0.25
Clearance Time (s)	4.2	4.2	4.2	4.2	4.2	4.2	4.0	4.2	4.2	4.0	4.2	4.2
Vehicle Extension (s)	4.9	4.9	4.9	4.9	4.9	4.9	2.0	4.9	4.9	2.0	4.9	4.9
Lane Grp Cap (vph)	140	147	125	650	683	612	191	1217	544	20	876	391
v/s Ratio Prot	c0.02	0.01		0.05	c0.21		c0.06	0.12		0.01	c0.12	
v/s Ratio Perm			0.00			0.00			0.00			0.01
v/c Ratio	0.26	0.12	0.02	0.13	0.55	0.00	0.54	0.35	0.00	0.50	0.50	0.03
Uniform Delay, d1	40.4	39.9	39.6	18.5	22.2	17.6	39.4	22.8	20.1	45.8	30.1	26.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	0.8	0.1	0.2	1.5	0.0	1.7	0.4	0.0	7.0	0.9	0.1
Delay (s)	42.4	40.7	39.7	18.7	23.8	17.6	41.1	23.2	20.1	52.8	31.0	26.6
Level of Service	D	D	D	B	C	B	D	C	C	D	C	C
Approach Delay (s)		41.2			22.8			26.6			31.1	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	93.3	Sum of lost time (s)	16.6
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	35	89	112	40	348	0	0	384	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)					4.2	4.2	4.2	4.2			4.2	
Lane Util. Factor					0.95	1.00	1.00	0.95			0.95	
Frt					1.00	0.85	1.00	1.00			0.97	
Flt Protected					0.99	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					3490	1583	1770	3539			3416	
Flt Permitted					0.99	1.00	0.44	1.00			1.00	
Satd. Flow (perm)					3490	1583	812	3539			3416	
Peak-hour factor, PHF	0.92	0.92	0.92	0.69	0.69	0.69	0.81	0.81	0.81	0.87	0.87	0.87
Adj. Flow (vph)	0	0	0	51	129	162	49	430	0	0	441	133
RTOR Reduction (vph)	0	0	0	0	0	126	0	0	0	0	34	0
Lane Group Flow (vph)	0	0	0	0	180	36	49	430	0	0	540	0
Turn Type				Split	NA	Perm	Perm	NA			NA	
Protected Phases				8	8			2			6	
Permitted Phases						8	2					
Actuated Green, G (s)					8.0	8.0	20.0	20.0			20.0	
Effective Green, g (s)					8.0	8.0	20.0	20.0			20.0	
Actuated g/C Ratio					0.22	0.22	0.55	0.55			0.55	
Clearance Time (s)					4.2	4.2	4.2	4.2			4.2	
Vehicle Extension (s)					2.0	2.0	2.0	2.0			2.0	
Lane Grp Cap (vph)					767	347	446	1944			1876	
v/s Ratio Prot					c0.05			0.12			c0.16	
v/s Ratio Perm						0.02	0.06					
v/c Ratio					0.23	0.10	0.11	0.22			0.29	
Uniform Delay, d1					11.7	11.3	3.9	4.2			4.4	
Progression Factor					1.00	1.00	1.00	1.00			1.00	
Incremental Delay, d2					0.1	0.0	0.0	0.0			0.0	
Delay (s)					11.7	11.4	4.0	4.2			4.4	
Level of Service					B	B	A	A			A	
Approach Delay (s)		0.0			11.6			4.2			4.4	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	36.4	Sum of lost time (s)	8.4
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	303	4	12	409	153	6	142	5	130	103	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.6		4.0	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3533		1770	3539	1583	1770	3520		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.67	1.00		0.63	1.00	1.00
Satd. Flow (perm)	1770	3533		1770	3539	1583	1255	3520		1171	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.81	0.81	0.81	0.75	0.75	0.75	0.79	0.79	0.79
Adj. Flow (vph)	73	329	4	15	505	189	8	189	7	165	130	81
RTOR Reduction (vph)	0	0	0	0	0	87	0	3	0	0	0	63
Lane Group Flow (vph)	73	333	0	15	505	102	8	193	0	165	130	18
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	4.4	30.8		1.0	27.4	27.4	12.9	12.9		12.9	12.9	12.9
Effective Green, g (s)	4.4	30.8		1.0	27.4	27.4	12.9	12.9		12.9	12.9	12.9
Actuated g/C Ratio	0.08	0.53		0.02	0.47	0.47	0.22	0.22		0.22	0.22	0.22
Clearance Time (s)	4.0	4.6		4.0	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	134	1879		30	1674	749	279	784		260	415	352
v/s Ratio Prot	c0.04	c0.09		0.01	c0.14			0.05			0.07	
v/s Ratio Perm						0.06	0.01			c0.14		0.01
v/c Ratio	0.54	0.18		0.50	0.30	0.14	0.03	0.25		0.63	0.31	0.05
Uniform Delay, d1	25.8	7.0		28.2	9.4	8.6	17.6	18.5		20.4	18.8	17.7
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	2.4	0.0		4.7	0.0	0.0	0.0	0.1		3.7	0.2	0.0
Delay (s)	28.2	7.0		32.9	9.4	8.6	17.6	18.6		24.1	19.0	17.7
Level of Service	C	A		C	A	A	B	B		C	B	B
Approach Delay (s)		10.8			9.7			18.5			20.9	
Approach LOS		B			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	57.9	Sum of lost time (s)	13.2
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	112	0	7	150	5	4
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.89	0.89	0.56	0.56
Hourly flow rate (vph)	124	0	8	169	9	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	484			1038		
pX, platoon unblocked						
vC, conflicting volume			124		309	124
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			124		309	124
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		99	99
cM capacity (veh/h)			1462		680	926

Direction, Lane #	SE 1	NW 1	NE 1
Volume Total	124	176	16
Volume Left	0	8	9
Volume Right	0	0	7
cSH	1700	1462	771
Volume to Capacity	0.07	0.01	0.02
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.4	9.8
Lane LOS		A	A
Approach Delay (s)	0.0	0.4	9.8
Approach LOS			A

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	23.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	443	137	0	0	251	14	0	0	0	5	0	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	15	15	12	12	15	15	15	12	15	12
Total Lost time (s)	4.0	4.2			4.2	4.2					4.0	4.2
Lane Util. Factor	1.00	1.00			1.00	1.00					1.00	1.00
Frt	1.00	1.00			1.00	0.85					1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00					0.95	1.00
Satd. Flow (prot)	1770	1863			1863	1583					1947	1583
Flt Permitted	0.95	1.00			1.00	1.00					1.00	1.00
Satd. Flow (perm)	1770	1863			1863	1583					2049	1583
Peak-hour factor, PHF	0.80	0.80	0.92	0.92	0.80	0.80	0.92	0.92	0.92	0.59	0.92	0.59
Adj. Flow (vph)	554	171	0	0	314	18	0	0	0	8	0	300
RTOR Reduction (vph)	0	0	0	0	0	13	0	0	0	0	0	252
Lane Group Flow (vph)	554	171	0	0	314	5	0	0	0	0	8	48
Turn Type	Prot	NA			NA	Perm	Perm			Prot	NA	custom
Protected Phases	5	2			6			4!		4!	8	
Permitted Phases						6	4					4
Actuated Green, G (s)	16.3	36.3			16.0	16.0					8.8	8.6
Effective Green, g (s)	16.3	36.3			16.0	16.0					8.8	8.6
Actuated g/C Ratio	0.31	0.68			0.30	0.30					0.17	0.16
Clearance Time (s)	4.0	4.2			4.2	4.2					4.0	4.2
Vehicle Extension (s)	3.0	4.8			4.8	4.8					3.0	2.0
Lane Grp Cap (vph)	541	1268			559	475					338	255
v/s Ratio Prot	c0.31	0.09			c0.17						0.00	
v/s Ratio Perm						0.00					0.00	c0.03
v/c Ratio	1.02	0.13			0.56	0.01					0.02	0.19
Uniform Delay, d1	18.5	3.0			15.7	13.1					18.6	19.3
Progression Factor	1.00	1.00			1.00	1.00					1.00	1.00
Incremental Delay, d2	44.9	0.1			2.0	0.0					0.0	0.1
Delay (s)	63.4	3.1			17.7	13.1					18.7	19.5
Level of Service	E	A			B	B					B	B
Approach Delay (s)		49.2			17.5			0.0			19.4	
Approach LOS		D			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	34.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	53.3	Sum of lost time (s)	12.4
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
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												
Volume (vph)	5	102	43	126	480	54	37	53	36	6	28	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2	4.2	4.2	4.2		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.94		1.00	0.95	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1834		1770	1751		1770	1762	
Flt Permitted	0.32	1.00	1.00	0.67	1.00		0.72	1.00		0.68	1.00	
Satd. Flow (perm)	588	1863	1583	1253	1834		1332	1751		1264	1762	
Peak-hour factor, PHF	0.77	0.77	0.77	0.89	0.89	0.89	0.73	0.73	0.73	0.69	0.69	0.69
Adj. Flow (vph)	6	132	56	142	539	61	51	73	49	9	41	23
RTOR Reduction (vph)	0	0	26	0	6	0	0	34	0	0	16	0
Lane Group Flow (vph)	6	132	30	142	594	0	51	88	0	9	48	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	28.5	28.5	28.5	28.5	28.5		15.9	15.9		15.9	15.9	
Effective Green, g (s)	28.5	28.5	28.5	28.5	28.5		15.9	15.9		15.9	15.9	
Actuated g/C Ratio	0.54	0.54	0.54	0.54	0.54		0.30	0.30		0.30	0.30	
Clearance Time (s)	4.2	4.2	4.2	4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	0.2	0.2	0.2	0.2	0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	317	1005	854	676	989		401	527		380	530	
v/s Ratio Prot		0.07			c0.32			c0.05			0.03	
v/s Ratio Perm	0.01		0.02	0.11			0.04			0.01		
v/c Ratio	0.02	0.13	0.04	0.21	0.60		0.13	0.17		0.02	0.09	
Uniform Delay, d1	5.6	6.0	5.7	6.3	8.3		13.4	13.6		13.0	13.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.0	0.0	0.1	0.7		0.1	0.1		0.0	0.0	
Delay (s)	5.7	6.0	5.7	6.4	9.0		13.5	13.6		13.0	13.3	
Level of Service	A	A	A	A	A		B	B		B	B	
Approach Delay (s)		5.9			8.5			13.6			13.2	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	52.8	Sum of lost time (s)	8.4
Intersection Capacity Utilization	72.2%	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												
Volume (vph)	36	157	46	0	0	0	0	50	18	6	37	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5						4.5		4.5	4.5	
Lane Util. Factor		0.91						1.00		1.00	1.00	
Frt		0.97						0.96		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		4901						1797		1770	1863	
Flt Permitted		0.99						1.00		0.70	1.00	
Satd. Flow (perm)		4901						1797		1295	1863	
Peak-hour factor, PHF	0.77	0.77	0.77	0.92	0.92	0.92	0.71	0.71	0.71	0.90	0.90	0.90
Adj. Flow (vph)	47	204	60	0	0	0	0	70	25	7	41	0
RTOR Reduction (vph)	0	40	0	0	0	0	0	16	0	0	0	0
Lane Group Flow (vph)	0	271	0	0	0	0	0	79	0	7	41	0
Turn Type	Split	NA						NA		Perm	NA	
Protected Phases	2	2						8			4	
Permitted Phases										4		
Actuated Green, G (s)		9.7						9.7		9.7	9.7	
Effective Green, g (s)		9.7						9.7		9.7	9.7	
Actuated g/C Ratio		0.34						0.34		0.34	0.34	
Clearance Time (s)		4.5						4.5		4.5	4.5	
Vehicle Extension (s)		0.2						0.2		0.2	0.2	
Lane Grp Cap (vph)		1673						613		442	636	
v/s Ratio Prot		c0.06						c0.04			0.02	
v/s Ratio Perm										0.01		
v/c Ratio		0.16						0.13		0.02	0.06	
Uniform Delay, d1		6.5						6.4		6.2	6.3	
Progression Factor		1.00						1.00		1.00	1.00	
Incremental Delay, d2		0.0						0.0		0.0	0.0	
Delay (s)		6.5						6.5		6.2	6.3	
Level of Service		A						A		A	A	
Approach Delay (s)		6.5			0.0			6.5			6.3	
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	0.15		
Actuated Cycle Length (s)	28.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	68.8%	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												
Volume (veh/h)	0	0	0	26	210	7	14	8	0	0	8	7
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.82	0.82	0.82	0.79	0.79	0.79	0.42	0.42	0.42
Hourly flow rate (vph)	0	0	0	32	256	9	18	10	0	0	19	17
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1000			1010							
pX, platoon unblocked												
vC, conflicting volume	265			0			218	328	0	329	324	132
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	265			0			218	328	0	329	324	132
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			97	98	100	100	97	98
cM capacity (veh/h)	1296			1622			678	578	1084	584	581	893

Direction, Lane #	NW 1	NW 2	NE 1	NE 2	SW 1
Volume Total	160	137	18	10	36
Volume Left	32	0	18	0	0
Volume Right	0	9	0	0	17
cSH	1622	1700	678	578	694
Volume to Capacity	0.02	0.08	0.03	0.02	0.05
Queue Length 95th (ft)	1	0	2	1	4
Control Delay (s)	1.6	0.0	10.4	11.3	10.5
Lane LOS	A		B	B	B
Approach Delay (s)	0.8		10.8		10.5
Approach LOS			B		B

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	60	27	34	124	2	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.8			4.8	4.8	
Lane Util. Factor	0.95			0.95	1.00	
Frt	0.95			1.00	0.87	
Flt Protected	1.00			0.99	1.00	
Satd. Flow (prot)	3373			3502	1617	
Flt Permitted	1.00			0.95	1.00	
Satd. Flow (perm)	3373			3380	1617	
Peak-hour factor, PHF	0.78	0.78	0.84	0.84	0.88	0.88
Adj. Flow (vph)	77	35	40	148	2	55
RTOR Reduction (vph)	30	0	0	0	52	0
Lane Group Flow (vph)	82	0	0	188	5	0
Turn Type	NA		Perm	NA	NA	
Protected Phases	2			2		
Permitted Phases			2		4	
Actuated Green, G (s)	1.8			1.8	0.6	
Effective Green, g (s)	1.8			1.8	0.6	
Actuated g/C Ratio	0.15			0.15	0.05	
Clearance Time (s)	4.8			4.8	4.8	
Vehicle Extension (s)	0.2			0.2	0.2	
Lane Grp Cap (vph)	505			507	80	
v/s Ratio Prot	0.02					
v/s Ratio Perm				c0.06	c0.00	
v/c Ratio	0.16			0.37	0.06	
Uniform Delay, d1	4.4			4.6	5.4	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.1			0.2	0.1	
Delay (s)	4.5			4.8	5.5	
Level of Service	A			A	A	
Approach Delay (s)	4.5			4.8	5.5	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	4.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	12.0	Sum of lost time (s)	9.6
Intersection Capacity Utilization	19.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	236	60	151	370	11	17
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.79	0.79	0.86	0.86	0.70	0.70
Hourly flow rate (vph)	299	76	176	430	16	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	537			471		
pX, platoon unblocked			0.95		0.90	0.95
vC, conflicting volume			375		1118	337
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			317		954	277
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			85		93	97
cM capacity (veh/h)			1182		220	725

Direction, Lane #	SE 1	NW 1	NE 1
Volume Total	375	606	40
Volume Left	0	176	16
Volume Right	76	0	24
cSH	1700	1182	381
Volume to Capacity	0.22	0.15	0.10
Queue Length 95th (ft)	0	13	9
Control Delay (s)	0.0	3.7	15.5
Lane LOS		A	C
Approach Delay (s)	0.0	3.7	15.5
Approach LOS			C

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	57.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	19	44	5	3	38	6	9	79	4	3	62	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2		4.2	4.2		4.2	4.2	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.98		1.00	0.99		1.00	0.96	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1820			1826		1770	1849		1770	1792	
Flt Permitted		0.92			0.99		0.69	1.00		0.69	1.00	
Satd. Flow (perm)		1706			1806		1287	1849		1291	1792	
Peak-hour factor, PHF	0.93	0.93	0.93	0.73	0.73	0.73	0.84	0.84	0.84	0.82	0.82	0.82
Adj. Flow (vph)	20	47	5	4	52	8	11	94	5	4	76	26
RTOR Reduction (vph)	0	4	0	0	6	0	0	2	0	0	11	0
Lane Group Flow (vph)	0	68	0	0	58	0	11	97	0	4	91	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)		11.7			11.7		21.4	21.4		21.4	21.4	
Effective Green, g (s)		11.7			11.7		21.4	21.4		21.4	21.4	
Actuated g/C Ratio		0.28			0.28		0.52	0.52		0.52	0.52	
Clearance Time (s)		4.2			4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)		0.2			0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		480			509		663	953		665	924	
v/s Ratio Prot								c0.05			0.05	
v/s Ratio Perm		c0.04			0.03		0.01			0.00		
v/c Ratio		0.14			0.11		0.02	0.10		0.01	0.10	
Uniform Delay, d1		11.1			11.1		4.9	5.1		4.9	5.1	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			0.0		0.0	0.0		0.0	0.0	
Delay (s)		11.2			11.1		4.9	5.2		4.9	5.1	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		11.2			11.1			5.1			5.1	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.12		
Actuated Cycle Length (s)	41.5	Sum of lost time (s)	8.4
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	32	42	10	8	25	46	18	65	20	28	71	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2		4.2	4.2		4.2	4.2	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.92		1.00	0.96		1.00	0.94	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1798			1708		1770	1797		1770	1756	
Flt Permitted		0.86			0.97		0.67	1.00		0.69	1.00	
Satd. Flow (perm)		1577			1661		1245	1797		1292	1756	
Peak-hour factor, PHF	0.59	0.59	0.59	0.75	0.75	0.75	0.87	0.87	0.87	0.83	0.83	0.83
Adj. Flow (vph)	54	71	17	11	33	61	21	75	23	34	86	53
RTOR Reduction (vph)	0	9	0	0	44	0	0	11	0	0	25	0
Lane Group Flow (vph)	0	133	0	0	61	0	21	87	0	34	114	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)		12.4			12.4		22.7	22.7		22.7	22.7	
Effective Green, g (s)		12.4			12.4		22.7	22.7		22.7	22.7	
Actuated g/C Ratio		0.29			0.29		0.52	0.52		0.52	0.52	
Clearance Time (s)		4.2			4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)		0.2			0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		449			473		649	937		674	916	
v/s Ratio Prot								0.05			c0.06	
v/s Ratio Perm		c0.08			0.04		0.02			0.03		
v/c Ratio		0.30			0.13		0.03	0.09		0.05	0.12	
Uniform Delay, d1		12.1			11.5		5.1	5.2		5.1	5.3	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			0.0		0.0	0.0		0.0	0.0	
Delay (s)		12.3			11.6		5.1	5.2		5.1	5.3	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		12.3			11.6			5.2			5.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.19		
Actuated Cycle Length (s)	43.5	Sum of lost time (s)	8.4
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	76	0	0	114	0	0	171	0	0	336	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2			4.2			4.2	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			1.00			1.00			1.00	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		3539			3539			1863			1863	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		3539			3539			1863			1863	
Peak-hour factor, PHF	0.78	0.78	0.78	0.83	0.83	0.83	0.86	0.86	0.86	0.96	0.96	0.96
Adj. Flow (vph)	0	97	0	0	137	0	0	199	0	0	350	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	97	0	0	137	0	0	199	0	0	350	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)		20.0			20.0			12.7			12.7	
Effective Green, g (s)		20.0			20.0			12.7			12.7	
Actuated g/C Ratio		0.49			0.49			0.31			0.31	
Clearance Time (s)		4.2			4.2			4.2			4.2	
Vehicle Extension (s)		0.2			0.2			0.2			0.2	
Lane Grp Cap (vph)		1722			1722			575			575	
v/s Ratio Prot		0.03			c0.04			0.11			c0.19	
v/s Ratio Perm												
v/c Ratio		0.06			0.08			0.35			0.61	
Uniform Delay, d1		5.6			5.6			11.0			12.1	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.0			0.0			0.1			1.3	
Delay (s)		5.6			5.6			11.1			13.3	
Level of Service		A			A			B			B	
Approach Delay (s)		5.6			5.6			11.1			13.3	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	41.1	Sum of lost time (s)	8.4
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	259	230	96	176	221	48	31	124	69	43	131	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.95		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1813		1770	3349		1770	3305	
Flt Permitted	0.52	1.00	1.00	0.52	1.00		0.58	1.00		0.61	1.00	
Satd. Flow (perm)	965	1863	1583	961	1813		1081	3349		1128	3305	
Peak-hour factor, PHF	0.74	0.74	0.74	0.87	0.87	0.87	0.82	0.82	0.82	0.84	0.84	0.84
Adj. Flow (vph)	350	311	130	202	254	55	38	151	84	51	156	123
RTOR Reduction (vph)	0	0	73	0	12	0	0	49	0	0	72	0
Lane Group Flow (vph)	350	311	57	202	297	0	38	186	0	51	207	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	26.1	26.1	26.1	26.1	26.1		25.0	25.0		25.0	25.0	
Effective Green, g (s)	26.1	26.1	26.1	26.1	26.1		25.0	25.0		25.0	25.0	
Actuated g/C Ratio	0.44	0.44	0.44	0.44	0.44		0.42	0.42		0.42	0.42	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	0.2	0.2	0.2	0.2	0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	421	813	690	419	791		451	1400		471	1381	
v/s Ratio Prot		0.17			0.16			0.06			c0.06	
v/s Ratio Perm	c0.36		0.04	0.21			0.04			0.05		
v/c Ratio	0.83	0.38	0.08	0.48	0.38		0.08	0.13		0.11	0.15	
Uniform Delay, d1	14.9	11.4	9.8	12.0	11.4		10.5	10.7		10.6	10.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	12.6	0.1	0.0	0.3	0.1		0.0	0.0		0.0	0.0	
Delay (s)	27.5	11.5	9.9	12.3	11.5		10.5	10.7		10.6	10.8	
Level of Service	C	B	A	B	B		B	B		B	B	
Approach Delay (s)		18.3			11.8			10.7			10.8	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	59.8	Sum of lost time (s)	8.7
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	40	108	158	49	410	59	103	267	21	67	218	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.2		4.0	4.2		4.0	4.2		4.0	4.2	
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.91		1.00	0.98		1.00	0.99		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1696		1770	3473		1770	3501		1770	3318	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1696		1770	3473		1770	3501		1770	3318	
Peak-hour factor, PHF	0.96	0.96	0.96	0.89	0.89	0.89	0.74	0.74	0.74	0.74	0.74	0.74
Adj. Flow (vph)	42	112	165	55	461	66	139	361	28	91	295	211
RTOR Reduction (vph)	0	62	0	0	13	0	0	7	0	0	145	0
Lane Group Flow (vph)	42	215	0	55	514	0	139	382	0	91	361	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	3.5	18.5		3.8	18.8		7.3	16.7		6.3	15.7	
Effective Green, g (s)	3.5	18.5		3.8	18.8		7.3	16.7		6.3	15.7	
Actuated g/C Ratio	0.06	0.30		0.06	0.30		0.12	0.27		0.10	0.25	
Clearance Time (s)	4.0	4.2		4.0	4.2		4.0	4.2		4.0	4.2	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	5.0		2.0	5.0	
Lane Grp Cap (vph)	100	508		109	1058		209	947		180	844	
v/s Ratio Prot	0.02	0.13		c0.03	c0.15		c0.08	c0.11		0.05	0.11	
v/s Ratio Perm												
v/c Ratio	0.42	0.42		0.50	0.49		0.67	0.40		0.51	0.43	
Uniform Delay, d1	28.1	17.3		28.0	17.5		26.0	18.4		26.2	19.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	1.2		1.3	0.7		6.1	0.6		0.8	0.7	
Delay (s)	29.2	18.5		29.4	18.2		32.1	19.0		27.0	20.0	
Level of Service	C	B		C	B		C	B		C	B	
Approach Delay (s)		19.9			19.3			22.5			21.1	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	61.7	Sum of lost time (s)	16.4
Intersection Capacity Utilization	49.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	129	183	180	0	0	0	0	336	58	77	636	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5	4.5					4.5		4.5	4.5	
Lane Util. Factor		0.91	1.00					0.95		1.00	0.95	
Frt		1.00	0.85					0.98		1.00	1.00	
Flt Protected		0.98	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		4982	1583					3462		1770	3539	
Flt Permitted		0.98	1.00					1.00		0.49	1.00	
Satd. Flow (perm)		4982	1583					3462		909	3539	
Peak-hour factor, PHF	0.85	0.85	0.85	0.92	0.92	0.92	0.86	0.86	0.86	0.91	0.91	0.91
Adj. Flow (vph)	152	215	212	0	0	0	0	391	67	85	699	0
RTOR Reduction (vph)	0	0	105	0	0	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	367	107	0	0	0	0	433	0	85	699	0
Turn Type	Split	NA	Perm					NA		Perm	NA	
Protected Phases	2	2						4			4	
Permitted Phases			2							4		
Actuated Green, G (s)		19.0	19.0					26.0		26.0	26.0	
Effective Green, g (s)		19.0	19.0					26.0		26.0	26.0	
Actuated g/C Ratio		0.35	0.35					0.48		0.48	0.48	
Clearance Time (s)		4.5	4.5					4.5		4.5	4.5	
Vehicle Extension (s)		0.2	0.2					0.2		0.2	0.2	
Lane Grp Cap (vph)		1752	556					1666		437	1703	
v/s Ratio Prot		c0.07						0.12			c0.20	
v/s Ratio Perm			0.07							0.09		
v/c Ratio		0.21	0.19					0.26		0.19	0.41	
Uniform Delay, d1		12.2	12.2					8.3		8.0	9.0	
Progression Factor		1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2		0.0	0.1					0.0		0.1	0.1	
Delay (s)		12.3	12.2					8.3		8.1	9.1	
Level of Service		B	B					A		A	A	
Approach Delay (s)		12.3			0.0			8.3			9.0	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	70.4%	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												
Volume (vph)	0	0	0	36	148	43	41	269	0	0	1041	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)				4.2	4.2	4.2	4.2	4.2			4.2	4.2
Lane Util. Factor				1.00	1.00	1.00	1.00	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1770	1863	1583	1770	3539			3539	1583
Flt Permitted				0.95	1.00	1.00	0.19	1.00			1.00	1.00
Satd. Flow (perm)				1770	1863	1583	358	3539			3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.82	0.82	0.82	0.83	0.83	0.83	0.80	0.80	0.80
Adj. Flow (vph)	0	0	0	44	180	52	49	324	0	0	1301	129
RTOR Reduction (vph)	0	0	0	0	0	42	0	0	0	0	0	55
Lane Group Flow (vph)	0	0	0	44	180	10	49	324	0	0	1301	74
Turn Type				Split	NA	Perm	Perm	NA			NA	Perm
Protected Phases				6	6			8			4	
Permitted Phases						6	8					4
Actuated Green, G (s)				7.1	7.1	7.1	20.8	20.8			20.8	20.8
Effective Green, g (s)				7.1	7.1	7.1	20.8	20.8			20.8	20.8
Actuated g/C Ratio				0.20	0.20	0.20	0.57	0.57			0.57	0.57
Clearance Time (s)				4.2	4.2	4.2	4.2	4.2			4.2	4.2
Vehicle Extension (s)				3.0	3.0	3.0	5.0	5.0			5.0	5.0
Lane Grp Cap (vph)				346	364	309	205	2027			2027	907
v/s Ratio Prot				0.02	c0.10			0.09			c0.37	
v/s Ratio Perm						0.01	0.14					0.05
v/c Ratio				0.13	0.49	0.03	0.24	0.16			0.64	0.08
Uniform Delay, d1				12.0	13.0	11.8	3.8	3.6			5.2	3.5
Progression Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2				0.2	1.1	0.0	1.3	0.1			1.0	0.1
Delay (s)				12.2	14.1	11.9	5.1	3.7			6.2	3.6
Level of Service				B	B	B	A	A			A	A
Approach Delay (s)		0.0			13.4			3.9			6.0	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	36.3	Sum of lost time (s)	8.4
Intersection Capacity Utilization	70.4%	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												
Volume (vph)	37	156	43	63	210	81	31	254	20	90	1063	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3500		1770	3491	
Flt Permitted	0.53	1.00	1.00	0.62	1.00	1.00	0.13	1.00		0.57	1.00	
Satd. Flow (perm)	993	1863	1583	1147	1863	1583	247	3500		1058	3491	
Peak-hour factor, PHF	0.76	0.76	0.76	0.80	0.80	0.80	0.91	0.91	0.91	0.82	0.82	0.82
Adj. Flow (vph)	49	205	57	79	262	101	34	279	22	110	1296	130
RTOR Reduction (vph)	0	0	24	0	0	68	0	10	0	0	12	0
Lane Group Flow (vph)	49	205	33	79	262	33	34	291	0	110	1414	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	19.0	19.0	19.0	19.0	19.0	19.0	30.2	30.2		30.2	30.2	
Effective Green, g (s)	19.0	19.0	19.0	19.0	19.0	19.0	30.2	30.2		30.2	30.2	
Actuated g/C Ratio	0.33	0.33	0.33	0.33	0.33	0.33	0.52	0.52		0.52	0.52	
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	325	610	518	375	610	518	128	1822		550	1817	
v/s Ratio Prot		0.11			c0.14			0.08			c0.40	
v/s Ratio Perm	0.05		0.02	0.07		0.02	0.14			0.10		
v/c Ratio	0.15	0.34	0.06	0.21	0.43	0.06	0.27	0.16		0.20	0.78	
Uniform Delay, d1	13.8	14.7	13.4	14.1	15.3	13.4	7.7	7.3		7.4	11.2	
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	0.1	0.1	0.0	0.1	0.2	0.0	0.4	0.0		0.1	2.0	
Delay (s)	13.9	14.9	13.4	14.2	15.4	13.4	8.1	7.3		7.5	13.2	
Level of Service	B	B	B	B	B	B	A	A		A	B	
Approach Delay (s)		14.4			14.8			7.4			12.8	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	8.8
Intersection Capacity Utilization	104.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	30	79	38	0	0	0	21	340	42	169	1226	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.6	4.6				4.6	4.6		4.6	4.6	
Lane Util. Factor		1.00	1.00				1.00	0.95		1.00	0.95	
Frt		1.00	0.85				1.00	0.98		1.00	0.98	
Flt Protected		0.99	1.00				0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1837	1583				1770	3481		1770	3478	
Flt Permitted		0.99	1.00				0.13	1.00		0.51	1.00	
Satd. Flow (perm)		1837	1583				243	3481		955	3478	
Peak-hour factor, PHF	0.74	0.74	0.74	0.92	0.92	0.92	0.94	0.94	0.94	0.87	0.87	0.87
Adj. Flow (vph)	41	107	51	0	0	0	22	362	45	194	1409	184
RTOR Reduction (vph)	0	0	23	0	0	0	0	9	0	0	10	0
Lane Group Flow (vph)	0	148	28	0	0	0	22	398	0	194	1583	0
Turn Type	Split	NA	Perm				Perm	NA		Perm	NA	
Protected Phases	4	4						2			6	
Permitted Phases			4				2			6		
Actuated Green, G (s)		6.3	6.3				30.7	30.7		30.7	30.7	
Effective Green, g (s)		6.3	6.3				30.7	30.7		30.7	30.7	
Actuated g/C Ratio		0.14	0.14				0.66	0.66		0.66	0.66	
Clearance Time (s)		4.6	4.6				4.6	4.6		4.6	4.6	
Vehicle Extension (s)		0.2	0.2				4.1	4.1		4.1	4.1	
Lane Grp Cap (vph)		250	215				161	2313		634	2311	
v/s Ratio Prot		c0.08						0.11			c0.46	
v/s Ratio Perm			0.02				0.09			0.20		
v/c Ratio		0.59	0.13				0.14	0.17		0.31	0.69	
Uniform Delay, d1		18.7	17.5				2.9	2.9		3.3	4.8	
Progression Factor		1.00	1.00				1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.5	0.1				0.6	0.1		0.4	0.9	
Delay (s)		21.2	17.6				3.4	3.0		3.7	5.7	
Level of Service		C	B				A	A		A	A	
Approach Delay (s)		20.3			0.0			3.0			5.5	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	46.2	Sum of lost time (s)	9.2
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	0	903	0	370	632	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)		4.1		4.1	4.6	
Lane Util. Factor		0.88		0.95	0.95	
Frt		0.85		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		2787		3539	3539	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		2787		3539	3539	
Peak-hour factor, PHF	0.85	0.85	0.89	0.89	0.77	0.77
Adj. Flow (vph)	0	1062	0	416	821	0
RTOR Reduction (vph)	0	543	0	0	0	0
Lane Group Flow (vph)	0	519	0	416	821	0
Turn Type		custom		NA	NA	
Protected Phases				6	4	
Permitted Phases		7				
Actuated Green, G (s)		18.8		11.5	18.3	
Effective Green, g (s)		18.8		11.5	18.3	
Actuated g/C Ratio		0.49		0.30	0.48	
Clearance Time (s)		4.1		4.1	4.6	
Vehicle Extension (s)		1.2		3.0	4.0	
Lane Grp Cap (vph)		1360		1057	1682	
v/s Ratio Prot				c0.12	c0.23	
v/s Ratio Perm		0.19				
v/c Ratio		0.38		0.39	0.49	
Uniform Delay, d1		6.2		10.7	6.9	
Progression Factor		1.00		1.00	1.00	
Incremental Delay, d2		0.1		0.2	0.3	
Delay (s)		6.3		11.0	7.2	
Level of Service		A		B	A	
Approach Delay (s)	6.3			11.0	7.2	
Approach LOS	A			B	A	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	38.5	Sum of lost time (s)	8.7
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												
Volume (vph)	0	503	17	0	294	0	0	0	0	434	920	897
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0					4.0	4.0	4.0
Lane Util. Factor		0.95			0.95					0.91	0.91	1.00
Frt		1.00			1.00					1.00	1.00	0.85
Flt Protected		1.00			1.00					0.95	1.00	1.00
Satd. Flow (prot)		3522			3539					1610	3383	1583
Flt Permitted		1.00			1.00					0.95	1.00	1.00
Satd. Flow (perm)		3522			3539					1610	3383	1583
Peak-hour factor, PHF	0.86	0.86	0.86	0.72	0.72	0.72	0.92	0.92	0.92	0.91	0.91	0.91
Adj. Flow (vph)	0	585	20	0	408	0	0	0	0	477	1011	986
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	161
Lane Group Flow (vph)	0	598	0	0	408	0	0	0	0	429	1059	825
Turn Type		NA			NA					Perm	NA	Perm
Protected Phases		4			8						2	
Permitted Phases										2		2
Actuated Green, G (s)		12.0			12.0					16.1	16.1	16.1
Effective Green, g (s)		12.0			12.0					16.1	16.1	16.1
Actuated g/C Ratio		0.33			0.33					0.45	0.45	0.45
Clearance Time (s)		4.0			4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1170			1176					718	1508	705
v/s Ratio Prot		c0.17			0.12							
v/s Ratio Perm										0.27	0.31	c0.52
v/c Ratio		0.51			0.35					0.60	0.70	1.17
Uniform Delay, d1		9.7			9.1					7.6	8.1	10.0
Progression Factor		1.00			1.00					1.00	1.00	1.00
Incremental Delay, d2		0.4			0.2					1.3	1.5	91.5
Delay (s)		10.1			9.3					8.9	9.6	101.5
Level of Service		B			A					A	A	F
Approach Delay (s)		10.1			9.3			0.0			46.1	
Approach LOS		B			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	35.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	36.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	138	226	0	422	212	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.1	4.1		4.1	4.1	4.1
Lane Util. Factor	0.95	1.00		0.95	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3539	1583		3539	1770	1583
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3539	1583		3539	1770	1583
Peak-hour factor, PHF	0.83	0.83	0.75	0.75	0.82	0.82
Adj. Flow (vph)	166	272	0	563	259	206
RTOR Reduction (vph)	0	179	0	0	0	99
Lane Group Flow (vph)	166	93	0	563	259	107
Turn Type	NA	Perm		NA	NA	Perm
Protected Phases	6			6	8	
Permitted Phases		6				8
Actuated Green, G (s)	20.3	20.3		20.3	30.9	30.9
Effective Green, g (s)	20.3	20.3		20.3	30.9	30.9
Actuated g/C Ratio	0.34	0.34		0.34	0.52	0.52
Clearance Time (s)	4.1	4.1		4.1	4.1	4.1
Vehicle Extension (s)	3.0	3.0		3.0	0.2	0.2
Lane Grp Cap (vph)	1209	540		1209	920	823
v/s Ratio Prot	0.05			c0.16	c0.15	
v/s Ratio Perm		0.06				0.07
v/c Ratio	0.14	0.17		0.47	0.28	0.13
Uniform Delay, d1	13.5	13.7		15.3	8.0	7.3
Progression Factor	1.00	1.00		0.64	1.00	1.00
Incremental Delay, d2	0.1	0.2		0.3	0.1	0.0
Delay (s)	13.6	13.8		10.0	8.1	7.4
Level of Service	B	B		A	A	A
Approach Delay (s)	13.7			10.0	7.8	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	59.4	Sum of lost time (s)	11.9
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	104	603	116	93	726	52	388	274	27	186	283	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.6	4.6	4.0	4.9		4.0	4.6	4.6	4.0	4.9	4.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	3433	3503		3433	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	3433	3503		3433	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.92	0.92	0.92	0.85	0.85	0.85	0.69	0.69	0.69
Adj. Flow (vph)	112	648	125	101	789	57	456	322	32	270	410	239
RTOR Reduction (vph)	0	0	79	0	8	0	0	0	26	0	0	214
Lane Group Flow (vph)	112	648	46	101	838	0	456	322	6	270	410	25
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8						6			2
Actuated Green, G (s)	5.2	23.1	23.1	5.1	22.7		11.1	11.8	11.8	6.1	6.5	6.5
Effective Green, g (s)	5.2	23.1	23.1	5.1	22.7		11.1	11.8	11.8	6.1	6.5	6.5
Actuated g/C Ratio	0.08	0.36	0.36	0.08	0.36		0.18	0.19	0.19	0.10	0.10	0.10
Clearance Time (s)	4.0	4.6	4.6	4.0	4.9		4.0	4.6	4.6	4.0	4.9	4.9
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.2		2.0	5.0	5.0	2.0	5.2	5.2
Lane Grp Cap (vph)	282	1291	577	276	1256		601	659	295	330	363	162
v/s Ratio Prot	c0.03	0.18		0.03	c0.24		c0.13	0.09		0.08	c0.12	
v/s Ratio Perm			0.03						0.00			0.02
v/c Ratio	0.40	0.50	0.08	0.37	0.67		0.76	0.49	0.02	0.82	1.13	0.15
Uniform Delay, d1	27.6	15.6	13.1	27.6	17.1		24.8	23.0	21.0	28.1	28.4	25.9
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	0.6	0.1	0.3	1.9		4.9	1.2	0.1	13.8	87.2	1.0
Delay (s)	27.9	16.3	13.3	27.9	19.0		29.7	24.2	21.1	41.9	115.6	26.9
Level of Service	C	B	B	C	B		C	C	C	D	F	C
Approach Delay (s)		17.3			19.9			27.2			70.9	
Approach LOS		B			B			C			E	

Intersection Summary			
HCM 2000 Control Delay	34.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	63.3	Sum of lost time (s)	17.8
Intersection Capacity Utilization	58.8%	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												
Volume (vph)	4	345	8	26	117	23	6	28	9	83	11	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5			4.5			4.5			4.5	
Lane Util. Factor	1.00	0.95			1.00			1.00			1.00	
Frt	1.00	1.00			0.98			0.97			0.95	
Flt Protected	0.95	1.00			0.99			0.99			0.97	
Satd. Flow (prot)	1770	3527			1814			1796			1726	
Flt Permitted	0.70	1.00			0.92			0.96			0.79	
Satd. Flow (perm)	1312	3527			1682			1731			1410	
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.77	0.77	0.77	0.78	0.78	0.78
Adj. Flow (vph)	4	383	9	28	127	25	8	36	12	106	14	63
RTOR Reduction (vph)	0	2	0	0	8	0	0	9	0	0	30	0
Lane Group Flow (vph)	4	390	0	0	172	0	0	47	0	0	153	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	30.3	30.3			30.3			15.4			15.4	
Effective Green, g (s)	30.3	30.3			30.3			15.4			15.4	
Actuated g/C Ratio	0.55	0.55			0.55			0.28			0.28	
Clearance Time (s)	4.5	4.5			4.5			4.5			4.5	
Vehicle Extension (s)	0.2	0.2			0.2			0.2			0.2	
Lane Grp Cap (vph)	726	1953			931			487			396	
v/s Ratio Prot		c0.11										
v/s Ratio Perm	0.00				0.10			0.03			c0.11	
v/c Ratio	0.01	0.20			0.19			0.10			0.39	
Uniform Delay, d1	5.5	6.1			6.1			14.5			15.8	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	0.0	0.0			0.0			0.0			0.2	
Delay (s)	5.5	6.1			6.1			14.5			16.1	
Level of Service	A	A			A			B			B	
Approach Delay (s)		6.1			6.1			14.5			16.1	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	54.7	Sum of lost time (s)	9.0
Intersection Capacity Utilization	55.2%	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												
Volume (vph)	55	21	10	40	25	39	11	410	31	93	447	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.2	4.2	4.0	4.2		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.91		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1694		1770	3502		1770	3483	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.44	1.00		0.43	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1694		811	3502		795	3483	
Peak-hour factor, PHF	0.83	0.83	0.83	0.84	0.84	0.84	0.74	0.74	0.74	0.87	0.87	0.87
Adj. Flow (vph)	66	25	12	48	30	46	15	554	42	107	514	61
RTOR Reduction (vph)	0	0	11	0	42	0	0	8	0	0	13	0
Lane Group Flow (vph)	66	25	1	48	34	0	15	588	0	107	562	0
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8			4		
Actuated Green, G (s)	3.1	5.0	5.0	2.0	3.9		20.9	20.9		20.9	20.9	
Effective Green, g (s)	3.1	5.0	5.0	2.0	3.9		20.9	20.9		20.9	20.9	
Actuated g/C Ratio	0.08	0.12	0.12	0.05	0.10		0.52	0.52		0.52	0.52	
Clearance Time (s)	4.0	4.2	4.2	4.0	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		6.0	6.0		6.0	6.0	
Lane Grp Cap (vph)	136	231	196	87	163		420	1816		412	1806	
v/s Ratio Prot	c0.04	0.01		0.03	c0.02			c0.17			0.16	
v/s Ratio Perm			0.00				0.02			0.13		
v/c Ratio	0.49	0.11	0.01	0.55	0.21		0.04	0.32		0.26	0.31	
Uniform Delay, d1	17.8	15.7	15.5	18.7	16.8		4.8	5.6		5.4	5.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	0.1	0.0	4.2	0.2		0.1	0.3		0.9	0.3	
Delay (s)	18.8	15.7	15.5	23.0	17.0		4.9	5.9		6.3	5.8	
Level of Service	B	B	B	C	B		A	A		A	A	
Approach Delay (s)		17.7			19.3			5.9			5.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	40.3	Sum of lost time (s)	12.4
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	595	118	291	0	0	0	0	435	64	95	299	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.7	4.7	4.7					5.2		5.2	5.2	
Lane Util. Factor	1.00	1.00	1.00					0.95		1.00	0.95	
Frt	1.00	1.00	0.85					0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583					3471		1770	3539	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583					3471		1770	3539	
Peak-hour factor, PHF	0.76	0.76	0.76	0.92	0.92	0.92	0.74	0.74	0.74	0.87	0.87	0.87
Adj. Flow (vph)	783	155	383	0	0	0	0	588	86	109	344	0
RTOR Reduction (vph)	0	0	214	0	0	0	0	16	0	0	0	0
Lane Group Flow (vph)	783	155	169	0	0	0	0	658	0	109	344	0
Turn Type	Split	NA	Perm					NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	30.3	30.3	30.3					17.3		6.0	28.5	
Effective Green, g (s)	30.3	30.3	30.3					17.3		6.0	28.5	
Actuated g/C Ratio	0.44	0.44	0.44					0.25		0.09	0.41	
Clearance Time (s)	4.7	4.7	4.7					5.2		5.2	5.2	
Vehicle Extension (s)	6.2	6.2	6.2					0.2		2.0	0.2	
Lane Grp Cap (vph)	780	821	698					874		154	1468	
v/s Ratio Prot	c0.44	0.08						c0.19		c0.06	0.10	
v/s Ratio Perm			0.11									
v/c Ratio	1.00	0.19	0.24					0.75		0.71	0.23	
Uniform Delay, d1	19.2	11.7	12.0					23.7		30.5	13.0	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	33.2	0.3	0.5					3.3		11.5	0.0	
Delay (s)	52.4	12.0	12.6					27.0		42.0	13.1	
Level of Service	D	B	B					C		D	B	
Approach Delay (s)		36.1			0.0			27.0			20.0	
Approach LOS		D			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	68.7	Sum of lost time (s)	15.1
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	91	156	507	178	804	0	0	322	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)					5.4	5.4	3.7	5.2			5.2	5.2
Lane Util. Factor					0.95	1.00	1.00	0.95			0.95	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.98	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					3475	1583	1770	3539			3539	1583
Flt Permitted					0.98	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					3475	1583	1770	3539			3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.91	0.91	0.91	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	100	171	557	187	846	0	0	350	170
RTOR Reduction (vph)	0	0	0	0	0	60	0	0	0	0	0	130
Lane Group Flow (vph)	0	0	0	0	271	497	187	846	0	0	350	40
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)					28.2	28.2	10.3	30.2			16.2	16.2
Effective Green, g (s)					28.2	28.2	10.3	30.2			16.2	16.2
Actuated g/C Ratio					0.41	0.41	0.15	0.44			0.23	0.23
Clearance Time (s)					5.4	5.4	3.7	5.2			5.2	5.2
Vehicle Extension (s)					5.0	5.0	2.0	0.2			0.2	0.2
Lane Grp Cap (vph)					1420	646	264	1548			830	371
v/s Ratio Prot					0.08		c0.11	c0.24			0.10	
v/s Ratio Perm						c0.31						0.03
v/c Ratio					0.19	0.77	0.71	0.55			0.42	0.11
Uniform Delay, d1					13.1	17.6	27.9	14.3			22.4	20.7
Progression Factor					1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2					0.1	6.5	6.9	0.2			0.1	0.0
Delay (s)					13.2	24.1	34.8	14.6			22.5	20.8
Level of Service					B	C	C	B			C	C
Approach Delay (s)		0.0			20.5			18.2			22.0	
Approach LOS		A			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	69.0	Sum of lost time (s)	14.3
Intersection Capacity Utilization	96.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	191	0	0	145	0	0	834	0	0	270	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5			4.2			4.2	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		1.00			1.00			1.00			1.00	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		3539			3539			3539			3539	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		3539			3539			3539			3539	
Peak-hour factor, PHF	0.75	0.75	0.75	0.77	0.77	0.77	0.78	0.78	0.78	0.90	0.90	0.90
Adj. Flow (vph)	0	255	0	0	188	0	0	1069	0	0	300	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	255	0	0	188	0	0	1069	0	0	300	0
Turn Type	Perm	NA	Perm	Perm	NA			NA			NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4								2
Actuated Green, G (s)		8.2			8.2			30.5			30.5	
Effective Green, g (s)		8.2			8.2			30.5			30.5	
Actuated g/C Ratio		0.17			0.17			0.64			0.64	
Clearance Time (s)		4.5			4.5			4.2			4.2	
Vehicle Extension (s)		2.0			2.0			5.0			5.0	
Lane Grp Cap (vph)		612			612			2277			2277	
v/s Ratio Prot		c0.07			0.05			c0.30			0.08	
v/s Ratio Perm												
v/c Ratio		0.42			0.31			0.47			0.13	
Uniform Delay, d1		17.5			17.1			4.3			3.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.2			0.1			0.3			0.1	
Delay (s)		17.6			17.2			4.6			3.3	
Level of Service		B			B			A			A	
Approach Delay (s)		17.6			17.2			4.6			3.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	47.4	Sum of lost time (s)	8.7
Intersection Capacity Utilization	36.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	2	310	324	56	83	96	22	863	60	190	244	13
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	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.92		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	2049	1742	1947	3580		1947	3855		1947	3864	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1947	2049	1742	1947	3580		1947	3855		1947	3864	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2	337	352	61	90	104	24	938	65	207	265	14
RTOR Reduction (vph)	0	0	260	0	74	0	0	9	0	0	5	0
Lane Group Flow (vph)	2	337	92	61	120	0	24	994	0	207	274	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6									
Actuated Green, G (s)	0.7	14.7	14.7	2.1	16.1		0.7	19.4		4.1	22.8	
Effective Green, g (s)	0.7	14.7	14.7	2.1	16.1		0.7	19.4		4.1	22.8	
Actuated g/C Ratio	0.01	0.26	0.26	0.04	0.29		0.01	0.34		0.07	0.40	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	24	534	454	72	1023		24	1328		141	1564	
v/s Ratio Prot	0.00	c0.16		c0.03	0.03		0.01	c0.26		c0.11	c0.07	
v/s Ratio Perm			0.05									
v/c Ratio	0.08	0.63	0.20	0.85	0.12		1.00	0.75		1.47	0.17	
Uniform Delay, d1	27.5	18.4	16.2	26.9	14.8		27.8	16.3		26.1	10.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	2.4	0.2	56.6	0.1		183.7	2.4		245.1	0.1	
Delay (s)	29.0	20.8	16.4	83.5	14.9		211.5	18.7		271.2	10.8	
Level of Service	C	C	B	F	B		F	B		F	B	
Approach Delay (s)		18.6			31.3			23.2			121.7	
Approach LOS		B			C			C			F	

Intersection Summary			
HCM 2000 Control Delay	42.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	56.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.3%	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												
Volume (vph)	83	23	19	13	3	35	72	390	79	54	193	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.8	4.8		4.8	4.8			4.8		4.8	4.8	4.8
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95		1.00	1.00	1.00
Frt	1.00	0.93		1.00	0.86			0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (prot)	1770	1737		1770	1607			3439		1770	1863	1583
Flt Permitted	1.00	1.00		1.00	1.00			0.87		0.52	1.00	1.00
Satd. Flow (perm)	1863	1737		1863	1607			3018		968	1863	1583
Peak-hour factor, PHF	0.82	0.82	0.82	0.79	0.79	0.79	0.96	0.96	0.96	0.77	0.77	0.77
Adj. Flow (vph)	101	28	23	16	4	44	75	406	82	70	251	152
RTOR Reduction (vph)	0	20	0	0	38	0	0	25	0	0	0	93
Lane Group Flow (vph)	101	31	0	16	10	0	0	538	0	70	251	59
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		2
Actuated Green, G (s)	2.7	2.7		2.7	2.7			7.7		7.7	7.7	7.7
Effective Green, g (s)	2.7	2.7		2.7	2.7			7.7		7.7	7.7	7.7
Actuated g/C Ratio	0.14	0.14		0.14	0.14			0.39		0.39	0.39	0.39
Clearance Time (s)	4.8	4.8		4.8	4.8			4.8		4.8	4.8	4.8
Vehicle Extension (s)	0.2	0.2		0.2	0.2			0.2		0.2	0.2	0.2
Lane Grp Cap (vph)	251	234		251	216			1161		372	717	609
v/s Ratio Prot		0.02			0.01						0.13	
v/s Ratio Perm	c0.05			0.01				c0.18		0.07		0.04
v/c Ratio	0.40	0.13		0.06	0.05			0.46		0.19	0.35	0.10
Uniform Delay, d1	7.9	7.6		7.5	7.5			4.6		4.1	4.4	3.9
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	0.4	0.1		0.0	0.0			0.1		0.1	0.1	0.0
Delay (s)	8.3	7.7		7.6	7.6			4.7		4.2	4.5	4.0
Level of Service	A	A		A	A			A		A	A	A
Approach Delay (s)		8.1			7.6			4.7			4.3	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	20.0	Sum of lost time (s)	9.6
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	69	250	201	124	270	207	187	452	92	69	322	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.1	4.2		4.1	4.2		4.1	4.2		4.1	4.2	
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.93		1.00	0.93		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1738		1770	3309		1770	3449		1770	3459	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1738		1770	3309		1770	3449		1770	3459	
Peak-hour factor, PHF	0.84	0.84	0.84	0.85	0.85	0.85	0.96	0.96	0.96	0.80	0.80	0.80
Adj. Flow (vph)	82	298	239	146	318	244	195	471	96	86	402	72
RTOR Reduction (vph)	0	28	0	0	135	0	0	17	0	0	16	0
Lane Group Flow (vph)	82	509	0	146	427	0	195	550	0	86	458	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	7.6	23.2		11.9	27.5		13.3	25.5		8.0	20.2	
Effective Green, g (s)	7.6	23.2		11.9	27.5		13.3	25.5		8.0	20.2	
Actuated g/C Ratio	0.09	0.27		0.14	0.32		0.16	0.30		0.09	0.24	
Clearance Time (s)	4.1	4.2		4.1	4.2		4.1	4.2		4.1	4.2	
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	157	473		247	1068		276	1032		166	820	
v/s Ratio Prot	0.05	c0.29		c0.08	0.13		c0.11	c0.16		0.05	0.13	
v/s Ratio Perm												
v/c Ratio	0.52	1.08		0.59	0.40		0.71	0.53		0.52	0.56	
Uniform Delay, d1	37.1	31.0		34.4	22.4		34.1	24.9		36.8	28.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.1	63.1		3.8	0.5		8.0	1.0		2.7	1.4	
Delay (s)	40.2	94.1		38.1	23.0		42.1	25.9		39.5	30.0	
Level of Service	D	F		D	C		D	C		D	C	
Approach Delay (s)		86.9			26.1			30.0			31.4	
Approach LOS		F			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	42.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	85.2	Sum of lost time (s)	16.6
Intersection Capacity Utilization	67.3%	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												
Volume (vph)	39	247	44	0	0	0	0	441	182	113	511	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2					4.2		4.2	4.2	
Lane Util. Factor		0.91	1.00					0.95		1.00	0.95	
Frt		1.00	0.85					0.96		1.00	1.00	
Flt Protected		0.99	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		5051	1583					3384		1770	3539	
Flt Permitted		0.99	1.00					1.00		0.29	1.00	
Satd. Flow (perm)		5051	1583					3384		549	3539	
Peak-hour factor, PHF	0.80	0.80	0.80	0.92	0.92	0.92	0.77	0.77	0.77	0.94	0.94	0.94
Adj. Flow (vph)	49	309	55	0	0	0	0	573	236	120	544	0
RTOR Reduction (vph)	0	0	36	0	0	0	0	75	0	0	0	0
Lane Group Flow (vph)	0	358	19	0	0	0	0	734	0	120	544	0
Turn Type	Split	NA	Perm					NA		Perm	NA	
Protected Phases	4	4						2			2	
Permitted Phases			4							2		
Actuated Green, G (s)		20.0	20.0					31.0		31.0	31.0	
Effective Green, g (s)		20.0	20.0					31.0		31.0	31.0	
Actuated g/C Ratio		0.34	0.34					0.52		0.52	0.52	
Clearance Time (s)		4.2	4.2					4.2		4.2	4.2	
Vehicle Extension (s)		0.2	0.2					0.2		0.2	0.2	
Lane Grp Cap (vph)		1700	532					1766		286	1846	
v/s Ratio Prot		c0.07						0.22			0.15	
v/s Ratio Perm			0.01							c0.22		
v/c Ratio		0.21	0.03					0.42		0.42	0.29	
Uniform Delay, d1		14.1	13.2					8.7		8.7	8.0	
Progression Factor		1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2		0.0	0.0					0.1		0.4	0.0	
Delay (s)		14.1	13.2					8.7		9.1	8.1	
Level of Service		B	B					A		A	A	
Approach Delay (s)		14.0			0.0			8.7			8.2	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	59.4	Sum of lost time (s)	8.4
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	46	136	33	66	325	0	0	669	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	15	12	15	15	15	12	12	15	15	12	12
Total Lost time (s)					4.2		4.2	4.2			4.2	
Lane Util. Factor					0.95		1.00	0.95			0.95	
Frt					0.98		1.00	1.00			0.98	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					3763		1770	3539			3473	
Flt Permitted					0.99		0.25	1.00			1.00	
Satd. Flow (perm)					3763		470	3539			3473	
Peak-hour factor, PHF	0.92	0.92	0.92	0.75	0.75	0.75	0.97	0.97	0.97	0.88	0.88	0.88
Adj. Flow (vph)	0	0	0	61	181	44	68	335	0	0	760	109
RTOR Reduction (vph)	0	0	0	0	27	0	0	0	0	0	22	0
Lane Group Flow (vph)	0	0	0	0	259	0	68	335	0	0	847	0
Turn Type				Split	NA		Perm	NA			NA	
Protected Phases				2	2			4			4	
Permitted Phases							4					
Actuated Green, G (s)					19.8		23.8	23.8			23.8	
Effective Green, g (s)					19.8		23.8	23.8			23.8	
Actuated g/C Ratio					0.38		0.46	0.46			0.46	
Clearance Time (s)					4.2		4.2	4.2			4.2	
Vehicle Extension (s)					0.2		0.2	0.2			0.2	
Lane Grp Cap (vph)					1432		215	1619			1589	
v/s Ratio Prot					c0.07			0.09			c0.24	
v/s Ratio Perm							0.14					
v/c Ratio					0.18		0.32	0.21			0.53	
Uniform Delay, d1					10.7		8.9	8.4			10.1	
Progression Factor					1.00		1.00	1.00			1.00	
Incremental Delay, d2					0.0		0.3	0.0			0.2	
Delay (s)					10.7		9.3	8.5			10.3	
Level of Service					B		A	A			B	
Approach Delay (s)		0.0			10.7			8.6			10.3	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	52.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	104	183	25	83	180	53	24	227	32	68	560	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1799		1770	3539	1583	1770	3539	1583
Flt Permitted	0.58	1.00	1.00	0.62	1.00		0.35	1.00	1.00	0.58	1.00	1.00
Satd. Flow (perm)	1084	1863	1583	1150	1799		652	3539	1583	1080	3539	1583
Peak-hour factor, PHF	0.85	0.85	0.85	0.95	0.95	0.95	0.81	0.81	0.81	0.86	0.86	0.86
Adj. Flow (vph)	122	215	29	87	189	56	30	280	40	79	651	172
RTOR Reduction (vph)	0	0	17	0	15	0	0	0	23	0	0	97
Lane Group Flow (vph)	122	215	12	87	230	0	30	280	17	79	651	75
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			2			4			4	
Permitted Phases	2	2	2	2			4		4	4		4
Actuated Green, G (s)	25.0	25.0	25.0	25.0	25.0		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	25.0	25.0	25.0	25.0	25.0		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.42	0.42	0.42	0.42	0.42		0.43	0.43	0.43	0.43	0.43	0.43
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	0.2	0.2	0.2	0.2	0.2		0.2	0.2	0.2	0.2	0.2	0.2
Lane Grp Cap (vph)	451	776	659	479	749		282	1533	685	468	1533	685
v/s Ratio Prot		0.12			c0.13			0.08			c0.18	
v/s Ratio Perm	0.11		0.01	0.08			0.05		0.01	0.07		0.05
v/c Ratio	0.27	0.28	0.02	0.18	0.31		0.11	0.18	0.03	0.17	0.42	0.11
Uniform Delay, d1	11.5	11.5	10.3	11.0	11.7		10.1	10.5	9.7	10.4	11.8	10.1
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	0.1	0.1	0.0	0.1	0.1		0.1	0.0	0.0	0.1	0.1	0.0
Delay (s)	11.6	11.6	10.3	11.1	11.8		10.2	10.5	9.7	10.5	11.9	10.1
Level of Service	B	B	B	B	B		B	B	A	B	B	B
Approach Delay (s)		11.5			11.6			10.4			11.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	100.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL2	NEL	NER
Lane Configurations												
Volume (vph)	17	84	6	459	189	367	234	292	17	31	150	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6		4.6	4.6	4.6	4.0	4.6	4.6	4.0	4.6	4.6
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.88	1.00	1.00	0.97	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	0.98	1.00	0.95	1.00	1.00	0.95	0.95	1.00
Satd. Flow (prot)	1770	1844		1681	1730	1583	1770	2787	1583	1770	3433	1583
Flt Permitted	0.32	1.00		0.66	0.78	1.00	0.95	1.00	1.00	0.95	0.95	1.00
Satd. Flow (perm)	592	1844		1169	1383	1583	1770	2787	1583	1770	3433	1583
Peak-hour factor, PHF	0.59	0.59	0.59	0.87	0.87	0.87	0.88	0.88	0.88	0.89	0.89	0.89
Adj. Flow (vph)	29	142	10	528	217	422	266	332	19	35	169	234
RTOR Reduction (vph)	0	3	0	0	0	285	0	0	11	0	0	184
Lane Group Flow (vph)	29	149	0	348	397	137	266	332	8	35	169	50
Turn Type	Perm	NA		Perm	NA	Perm	NA	custom	custom	Prot	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4		4			2			6
Actuated Green, G (s)	18.7	18.7		18.7	18.7	18.7	13.5	24.8	24.8	1.1	12.4	12.4
Effective Green, g (s)	18.7	18.7		18.7	18.7	18.7	13.5	24.8	24.8	1.1	12.4	12.4
Actuated g/C Ratio	0.32	0.32		0.32	0.32	0.32	0.23	0.43	0.43	0.02	0.21	0.21
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6	4.0	4.6	4.6	4.0	4.6	4.6
Vehicle Extension (s)	3.0	3.0		3.5	3.5	3.5	3.0	4.8	4.8	2.0	4.8	4.8
Lane Grp Cap (vph)	191	596		378	447	512	413	1195	679	33	736	339
v/s Ratio Prot		0.08					c0.15	c0.12		0.02	0.05	
v/s Ratio Perm	0.05			c0.30	0.29	0.09			0.01			0.03
v/c Ratio	0.15	0.25		0.92	0.89	0.27	0.64	0.28	0.01	1.06	0.23	0.15
Uniform Delay, d1	13.9	14.4		18.8	18.6	14.5	20.0	10.7	9.5	28.3	18.8	18.4
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	0.2		27.6	19.2	0.3	3.4	0.2	0.0	175.6	0.3	0.4
Delay (s)	14.3	14.6		46.5	37.7	14.8	23.4	10.9	9.5	203.9	19.1	18.8
Level of Service	B	B		D	D	B	C	B	A	F	B	B
Approach Delay (s)		14.6			32.1		16.3				33.7	
Approach LOS		B			C		B				C	

Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	57.8	Sum of lost time (s)	13.2
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (vph)	7	134	110	599	84	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.65	1.00	0.68	1.00	1.00	1.00
Satd. Flow (perm)	1211	1583	1273	1863	1863	1583
Peak-hour factor, PHF	0.94	0.94	0.65	0.65	0.74	0.74
Adj. Flow (vph)	7	143	169	922	114	20
RTOR Reduction (vph)	0	96	0	0	0	10
Lane Group Flow (vph)	7	47	169	922	114	10
Turn Type	NA	custom	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	19.0	19.0	30.1	30.1	30.1	30.1
Effective Green, g (s)	19.0	19.0	30.1	30.1	30.1	30.1
Actuated g/C Ratio	0.33	0.33	0.52	0.52	0.52	0.52
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	0.2	0.2	0.2	0.2	0.2	0.2
Lane Grp Cap (vph)	396	517	659	965	965	820
v/s Ratio Prot				c0.49	0.06	
v/s Ratio Perm	0.01	c0.03	0.13			0.01
v/c Ratio	0.02	0.09	0.26	0.96	0.12	0.01
Uniform Delay, d1	13.2	13.6	7.8	13.4	7.2	6.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.0	0.1	18.8	0.0	0.0
Delay (s)	13.2	13.6	7.9	32.1	7.2	6.8
Level of Service	B	B	A	C	A	A
Approach Delay (s)	13.6			28.4	7.1	
Approach LOS	B			C	A	

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	58.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	31	100	0	0	115	57	180	597	34	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.91				
Frt		1.00			0.95			0.99				
Flt Protected		0.99			1.00			0.99				
Satd. Flow (prot)		3498			3363			4998				
Flt Permitted		0.85			1.00			0.99				
Satd. Flow (perm)		3018			3363			4998				
Peak-hour factor, PHF	0.78	0.78	0.78	0.88	0.88	0.88	0.82	0.82	0.82	0.92	0.92	0.92
Adj. Flow (vph)	40	128	0	0	131	65	220	728	41	0	0	0
RTOR Reduction (vph)	0	0	0	0	47	0	0	8	0	0	0	0
Lane Group Flow (vph)	0	168	0	0	149	0	0	981	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		8			4		2	2				
Permitted Phases	8											
Actuated Green, G (s)		13.8			13.8			26.4				
Effective Green, g (s)		13.8			13.8			26.4				
Actuated g/C Ratio		0.27			0.27			0.53				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		0.2			0.2			0.2				
Lane Grp Cap (vph)		829			924			2628				
v/s Ratio Prot					0.04			c0.20				
v/s Ratio Perm		c0.06										
v/c Ratio		0.20			0.16			0.37				
Uniform Delay, d1		14.0			13.8			7.0				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		0.0			0.0			0.0				
Delay (s)		14.0			13.8			7.1				
Level of Service		B			B			A				
Approach Delay (s)		14.0			13.8			7.1			0.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	50.2	Sum of lost time (s)	10.0
Intersection Capacity Utilization	55.2%	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												
Volume (vph)	108	97	0	0	13	8	52	495	51	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6			4.2	4.2		4.2	4.2			
Lane Util. Factor	0.95	0.95			1.00	1.00		0.91	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	0.99			1.00	1.00		1.00	1.00			
Satd. Flow (prot)	1681	1760			1863	1583		5061	1583			
Flt Permitted	0.95	0.99			1.00	1.00		1.00	1.00			
Satd. Flow (perm)	1681	1760			1863	1583		5061	1583			
Peak-hour factor, PHF	0.80	0.80	0.80	0.75	0.75	0.75	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	135	121	0	0	17	11	54	516	53	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	10	0	0	28	0	0	0
Lane Group Flow (vph)	121	135	0	0	17	1	0	570	25	0	0	0
Turn Type	Split	NA			NA	Perm	Split	NA	Perm			
Protected Phases	2	2			1		8	8				
Permitted Phases						1			8			
Actuated Green, G (s)	7.5	7.5			2.2	2.2		20.6	20.6			
Effective Green, g (s)	7.5	7.5			2.2	2.2		20.6	20.6			
Actuated g/C Ratio	0.17	0.17			0.05	0.05		0.48	0.48			
Clearance Time (s)	4.6	4.6			4.2	4.2		4.2	4.2			
Vehicle Extension (s)	3.8	3.8			2.0	2.0		2.0	2.0			
Lane Grp Cap (vph)	291	304			94	80		2407	753			
v/s Ratio Prot	0.07	c0.08			c0.01			c0.11				
v/s Ratio Perm						0.00			0.02			
v/c Ratio	0.42	0.44			0.18	0.01		0.24	0.03			
Uniform Delay, d1	15.9	16.0			19.7	19.5		6.7	6.0			
Progression Factor	1.00	1.00			1.00	1.00		1.00	1.00			
Incremental Delay, d2	1.2	1.3			0.3	0.0		0.0	0.0			
Delay (s)	17.2	17.4			20.0	19.5		6.7	6.1			
Level of Service	B	B			C	B		A	A			
Approach Delay (s)		17.3			19.8			6.7			0.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	43.3	Sum of lost time (s)	13.0
Intersection Capacity Utilization	58.7%	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												
Volume (vph)	18	455	0	0	350	64	42	426	102	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2			4.2			4.2				
Lane Util. Factor	1.00	1.00			1.00			0.91				
Frt	1.00	1.00			0.98			0.97				
Flt Protected	0.95	1.00			1.00			1.00				
Satd. Flow (prot)	1770	1863			1824			4931				
Flt Permitted	0.39	1.00			1.00			1.00				
Satd. Flow (perm)	722	1863			1824			4931				
Peak-hour factor, PHF	0.87	0.87	0.87	0.91	0.91	0.91	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	21	523	0	0	385	70	49	501	120	0	0	0
RTOR Reduction (vph)	0	0	0	0	10	0	0	48	0	0	0	0
Lane Group Flow (vph)	21	523	0	0	445	0	0	622	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		2			6		8	8				
Permitted Phases	2											
Actuated Green, G (s)	27.0	27.0			27.0			22.0				
Effective Green, g (s)	27.0	27.0			27.0			22.0				
Actuated g/C Ratio	0.47	0.47			0.47			0.38				
Clearance Time (s)	4.2	4.2			4.2			4.2				
Vehicle Extension (s)	0.2	0.2			0.2			0.2				
Lane Grp Cap (vph)	339	876			857			1889				
v/s Ratio Prot		c0.28			0.24			c0.13				
v/s Ratio Perm	0.03											
v/c Ratio	0.06	0.60			0.52			0.33				
Uniform Delay, d1	8.3	11.2			10.7			12.5				
Progression Factor	1.00	1.00			1.00			1.00				
Incremental Delay, d2	0.0	0.7			0.2			0.0				
Delay (s)	8.3	11.9			10.9			12.5				
Level of Service	A	B			B			B				
Approach Delay (s)		11.8			10.9			12.5			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	57.4	Sum of lost time (s)	8.4
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	42	266	92	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2			
Lane Util. Factor		1.00	0.91			
Frt		0.86	0.96			
Flt Protected		1.00	1.00			
Satd. Flow (prot)		1611	4889			
Flt Permitted		1.00	1.00			
Satd. Flow (perm)		1611	4889			
Peak-hour factor, PHF	0.81	0.81	0.86	0.86	0.92	0.92
Adj. Flow (vph)	0	52	309	107	0	0
RTOR Reduction (vph)	0	44	55	0	0	0
Lane Group Flow (vph)	0	8	361	0	0	0
Turn Type		custom	NA			
Protected Phases			8			
Permitted Phases		2				
Actuated Green, G (s)		3.7	11.6			
Effective Green, g (s)		3.7	11.6			
Actuated g/C Ratio		0.16	0.49			
Clearance Time (s)		4.2	4.2			
Vehicle Extension (s)		0.2	6.0			
Lane Grp Cap (vph)		251	2392			
v/s Ratio Prot			c0.07			
v/s Ratio Perm		c0.01				
v/c Ratio		0.03	0.15			
Uniform Delay, d1		8.5	3.3			
Progression Factor		1.00	1.00			
Incremental Delay, d2		0.0	0.1			
Delay (s)		8.5	3.4			
Level of Service		A	A			
Approach Delay (s)	8.5		3.4		0.0	
Approach LOS	A		A		A	

Intersection Summary			
HCM 2000 Control Delay	4.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.12		
Actuated Cycle Length (s)	23.7	Sum of lost time (s)	8.4
Intersection Capacity Utilization	17.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	117	124	18	262	0	0	0	0	25	230	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.4			5.4						5.4	5.4
Lane Util. Factor		0.95			0.95						0.91	1.00
Frt		0.92			1.00						1.00	0.85
Flt Protected		1.00			1.00						1.00	1.00
Satd. Flow (prot)		3265			3528						5060	1583
Flt Permitted		1.00			0.91						1.00	1.00
Satd. Flow (perm)		3265			3232						5060	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.86	0.86	0.86	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	0	139	148	21	305	0	0	0	0	27	247	85
RTOR Reduction (vph)	0	117	0	0	0	0	0	0	0	0	0	70
Lane Group Flow (vph)	0	170	0	0	326	0	0	0	0	0	274	15
Turn Type		NA		Perm	NA					Split	NA	Perm
Protected Phases		2			2					8	8	
Permitted Phases				2								8
Actuated Green, G (s)		3.7			3.7						3.1	3.1
Effective Green, g (s)		3.7			3.7						3.1	3.1
Actuated g/C Ratio		0.21			0.21						0.18	0.18
Clearance Time (s)		5.4			5.4						5.4	5.4
Vehicle Extension (s)		0.2			0.2						0.2	0.2
Lane Grp Cap (vph)		686			679						891	278
v/s Ratio Prot		0.05									c0.05	
v/s Ratio Perm					c0.10							0.01
v/c Ratio		0.25			0.48						0.31	0.05
Uniform Delay, d1		5.8			6.1						6.3	6.0
Progression Factor		1.00			1.00						1.00	1.00
Incremental Delay, d2		0.1			0.2						0.1	0.0
Delay (s)		5.9			6.3						6.4	6.1
Level of Service		A			A						A	A
Approach Delay (s)		5.9			6.3			0.0			6.3	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	17.6	Sum of lost time (s)	10.8
Intersection Capacity Utilization	33.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	112	44	5	37	0	0	0	0	115	238	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		4.2	4.2					4.2	4.2	4.2
Lane Util. Factor		0.95		1.00	1.00					1.00	0.95	1.00
Frt		0.96		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3389		1770	1863					1770	3539	1583
Flt Permitted		1.00		0.64	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3389		1184	1863					1770	3539	1583
Peak-hour factor, PHF	0.85	0.85	0.85	0.58	0.58	0.58	0.92	0.92	0.92	0.96	0.96	0.96
Adj. Flow (vph)	0	132	52	9	64	0	0	0	0	120	248	3
RTOR Reduction (vph)	0	38	0	0	0	0	0	0	0	0	0	1
Lane Group Flow (vph)	0	146	0	9	64	0	0	0	0	120	248	2
Turn Type		NA		Perm	NA					Split	NA	Perm
Protected Phases		2			2					4	4	
Permitted Phases				2								4
Actuated Green, G (s)		14.4		14.4	14.4					31.4	31.4	31.4
Effective Green, g (s)		14.4		14.4	14.4					31.4	31.4	31.4
Actuated g/C Ratio		0.27		0.27	0.27					0.58	0.58	0.58
Clearance Time (s)		4.2		4.2	4.2					4.2	4.2	4.2
Vehicle Extension (s)		0.2		0.2	0.2					0.2	0.2	0.2
Lane Grp Cap (vph)		900		314	494					1025	2050	917
v/s Ratio Prot		c0.04			0.03					0.07	c0.07	
v/s Ratio Perm				0.01								0.00
v/c Ratio		0.16		0.03	0.13					0.12	0.12	0.00
Uniform Delay, d1		15.3		14.7	15.1					5.1	5.2	4.8
Progression Factor		1.00		1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		0.0		0.0	0.0					0.0	0.0	0.0
Delay (s)		15.3		14.7	15.2					5.2	5.2	4.8
Level of Service		B		B	B					A	A	A
Approach Delay (s)		15.3			15.1			0.0			5.2	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.13		
Actuated Cycle Length (s)	54.2	Sum of lost time (s)	8.4
Intersection Capacity Utilization	58.7%	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												
Volume (vph)	0	211	5	77	313	0	0	0	0	263	194	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		4.2	4.2						4.2	
Lane Util. Factor		1.00		1.00	1.00						0.91	
Frt		1.00		1.00	1.00						1.00	
Flt Protected		1.00		0.95	1.00						0.97	
Satd. Flow (prot)		1857		1770	1863						4934	
Flt Permitted		1.00		0.59	1.00						0.97	
Satd. Flow (perm)		1857		1097	1863						4934	
Peak-hour factor, PHF	0.86	0.86	0.86	0.93	0.93	0.93	0.92	0.92	0.92	0.81	0.81	0.81
Adj. Flow (vph)	0	245	6	83	337	0	0	0	0	325	240	9
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	249	0	83	337	0	0	0	0	0	571	0
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		2			6					4	4	
Permitted Phases				6								
Actuated Green, G (s)		29.6		29.6	29.6						22.0	
Effective Green, g (s)		29.6		29.6	29.6						22.0	
Actuated g/C Ratio		0.49		0.49	0.49						0.37	
Clearance Time (s)		4.2		4.2	4.2						4.2	
Vehicle Extension (s)		0.2		0.2	0.2						0.2	
Lane Grp Cap (vph)		916		541	919						1809	
v/s Ratio Prot		0.13			c0.18						c0.12	
v/s Ratio Perm				0.08								
v/c Ratio		0.27		0.15	0.37						0.32	
Uniform Delay, d1		8.9		8.3	9.4						13.6	
Progression Factor		1.00		1.00	1.00						1.00	
Incremental Delay, d2		0.7		0.0	0.1						0.0	
Delay (s)		9.6		8.4	9.5						13.6	
Level of Service		A		A	A						B	
Approach Delay (s)		9.6			9.3			0.0			13.6	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBR	SBR2	SER	NWL	NWT	SWL	SWT
Lane Configurations								
Volume (vph)	167	765	2	9	23	47	97	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12
Total Lost time (s)	4.9	4.9		4.2		4.0	4.6	4.6
Lane Util. Factor	1.00	0.88		1.00		1.00	1.00	0.95
Frt	1.00	0.85		0.86		1.00	1.00	1.00
Flt Protected	0.95	1.00		1.00		0.98	0.95	1.00
Satd. Flow (prot)	1770	2787		1611		1832	1770	3539
Flt Permitted	0.95	1.00		1.00		0.98	0.95	1.00
Satd. Flow (perm)	1770	2787		1611		1832	1770	3539
Peak-hour factor, PHF	0.73	0.73	0.73	0.45	0.63	0.63	0.65	0.65
Adj. Flow (vph)	229	1048	3	20	37	75	149	157
RTOR Reduction (vph)	0	104	0	20	0	0	0	0
Lane Group Flow (vph)	229	947	0	0	0	112	149	157
Turn Type	NA	Prot		custom	Split	NA	Split	NA
Protected Phases	2	2		8	1	1	4	4
Permitted Phases								
Actuated Green, G (s)	20.6	20.6		1.0		6.1	10.7	10.7
Effective Green, g (s)	20.6	20.6		1.0		6.1	10.7	10.7
Actuated g/C Ratio	0.37	0.37		0.02		0.11	0.19	0.19
Clearance Time (s)	4.9	4.9		4.2		4.0	4.6	4.6
Vehicle Extension (s)	4.0	4.0		2.0		2.0	4.0	4.0
Lane Grp Cap (vph)	649	1023		28		199	337	674
v/s Ratio Prot	0.13	c0.34		c0.00		c0.06	c0.08	0.04
v/s Ratio Perm								
v/c Ratio	0.35	0.93		0.01		0.56	0.44	0.23
Uniform Delay, d1	12.9	17.0		27.1		23.7	20.1	19.2
Progression Factor	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	13.8		0.1		2.2	1.3	0.2
Delay (s)	13.4	30.8		27.1		25.9	21.3	19.5
Level of Service	B	C		C		C	C	B
Approach Delay (s)	27.7					25.9		20.4
Approach LOS	C					C		C

Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	56.1	Sum of lost time (s)	17.7
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NWL2	NWL	NWR	NWR2
Lane Configurations										
Volume (vph)	108	299	17	72	103	77	110	36	246	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	5.2	5.2		5.2	5.2			5.2	5.2	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	0.76	
Frt	1.00	0.99		1.00	0.94			1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	
Satd. Flow (prot)	1770	3511		1770	3313			1770	3610	
Flt Permitted	0.60	1.00		0.53	1.00			0.95	1.00	
Satd. Flow (perm)	1126	3511		988	3313			1770	3610	
Peak-hour factor, PHF	0.85	0.85	0.85	0.76	0.76	0.76	0.86	0.86	0.86	0.86
Adj. Flow (vph)	127	352	20	95	136	101	128	42	286	13
RTOR Reduction (vph)	0	24	0	0	60	0	0	0	24	0
Lane Group Flow (vph)	127	348	0	95	177	0	0	170	275	0
Turn Type	Perm	NA		Perm	NA		Split	NA	Perm	
Protected Phases		4			4		2	2		
Permitted Phases	4			4					2	
Actuated Green, G (s)	23.0	23.0		23.0	23.0			23.0	23.0	
Effective Green, g (s)	23.0	23.0		23.0	23.0			23.0	23.0	
Actuated g/C Ratio	0.41	0.41		0.41	0.41			0.41	0.41	
Clearance Time (s)	5.2	5.2		5.2	5.2			5.2	5.2	
Vehicle Extension (s)	0.2	0.2		0.2	0.2			0.2	0.2	
Lane Grp Cap (vph)	459	1431		402	1351			721	1472	
v/s Ratio Prot		0.10			0.05			c0.10		
v/s Ratio Perm	c0.11			0.10					0.08	
v/c Ratio	0.28	0.24		0.24	0.13			0.24	0.19	
Uniform Delay, d1	11.1	11.0		10.9	10.4			10.9	10.7	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	
Incremental Delay, d2	0.1	0.0		0.1	0.0			0.1	0.0	
Delay (s)	11.3	11.0		11.1	10.5			11.0	10.7	
Level of Service	B	B		B	B			B	B	
Approach Delay (s)		11.1			10.6			10.8		
Approach LOS		B			B			B		

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	56.4	Sum of lost time (s)	10.4
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	361	31	0	139	0	0	0	0	65	901	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5					4.9	4.9	4.9
Lane Util. Factor		0.95			0.95					1.00	0.95	1.00
Frt		0.99			1.00					1.00	1.00	0.85
Flt Protected		1.00			1.00					0.95	1.00	1.00
Satd. Flow (prot)		3497			3539					1770	3539	1583
Flt Permitted		1.00			1.00					0.95	1.00	1.00
Satd. Flow (perm)		3497			3539					1770	3539	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.86	0.86	0.86	0.92	0.92	0.92	0.77	0.77	0.77
Adj. Flow (vph)	0	430	37	0	162	0	0	0	0	84	1170	144
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	0	0	0	60
Lane Group Flow (vph)	0	459	0	0	162	0	0	0	0	84	1170	84
Turn Type		NA			NA					Split	NA	Perm
Protected Phases		4			4					2	2	
Permitted Phases												2
Actuated Green, G (s)		25.5			25.5					20.1	20.1	20.1
Effective Green, g (s)		25.5			25.5					20.1	20.1	20.1
Actuated g/C Ratio		0.46			0.46					0.37	0.37	0.37
Clearance Time (s)		4.5			4.5					4.9	4.9	4.9
Vehicle Extension (s)		5.0			5.0					5.0	5.0	5.0
Lane Grp Cap (vph)		1621			1640					646	1293	578
v/s Ratio Prot		c0.13			0.05					0.05	c0.33	
v/s Ratio Perm												0.05
v/c Ratio		0.28			0.10					0.13	0.90	0.15
Uniform Delay, d1		9.1			8.3					11.6	16.5	11.7
Progression Factor		1.00			1.00					1.00	1.00	1.00
Incremental Delay, d2		0.2			0.1					0.2	9.7	0.2
Delay (s)		9.3			8.3					11.8	26.3	11.9
Level of Service		A			A					B	C	B
Approach Delay (s)		9.3			8.3			0.0			23.9	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	9.4
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	5	757	77	77	5	3
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.64	0.64	0.75	0.75	0.50	0.50
Hourly flow rate (vph)	8	1183	103	103	10	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	205				1352	154
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	205				1352	154
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				94	99
cM capacity (veh/h)	1366				164	892

Direction, Lane #	SE 1	NW 1	SW 1
Volume Total	1191	205	16
Volume Left	8	0	10
Volume Right	0	103	6
cSH	1366	1700	237
Volume to Capacity	0.01	0.12	0.07
Queue Length 95th (ft)	0	0	5
Control Delay (s)	0.2	0.0	21.3
Lane LOS	A		C
Approach Delay (s)	0.2	0.0	21.3
Approach LOS			C

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	53.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	294	128	7	177	15	2	11	14	13	58	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.4	5.4		5.4		5.4	5.4		5.4	5.4	
Lane Util. Factor		0.95	1.00		0.95		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.99		1.00	0.92		1.00	0.97	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3534	1583		3494		1770	1704		1770	1812	
Flt Permitted		0.95	1.00		0.94		0.69	1.00		0.74	1.00	
Satd. Flow (perm)		3347	1583		3288		1285	1704		1374	1812	
Peak-hour factor, PHF	0.64	0.64	0.64	0.91	0.91	0.91	0.84	0.84	0.84	0.68	0.68	0.68
Adj. Flow (vph)	14	459	200	8	195	16	2	13	17	19	85	19
RTOR Reduction (vph)	0	0	87	0	7	0	0	13	0	0	14	0
Lane Group Flow (vph)	0	473	113	0	212	0	2	17	0	19	90	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2			4			4		
Actuated Green, G (s)		31.9	31.9		31.9		13.7	13.7		13.7	13.7	
Effective Green, g (s)		31.9	31.9		31.9		13.7	13.7		13.7	13.7	
Actuated g/C Ratio		0.57	0.57		0.57		0.24	0.24		0.24	0.24	
Clearance Time (s)		5.4	5.4		5.4		5.4	5.4		5.4	5.4	
Vehicle Extension (s)		0.2	0.2		0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		1893	895		1859		312	413		333	440	
v/s Ratio Prot								0.01			c0.05	
v/s Ratio Perm		c0.14	0.07		0.06		0.00			0.01		
v/c Ratio		0.25	0.13		0.11		0.01	0.04		0.06	0.20	
Uniform Delay, d1		6.2	5.7		5.7		16.2	16.3		16.4	17.0	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0	0.0		0.0		0.0	0.0		0.0	0.1	
Delay (s)		6.2	5.8		5.7		16.2	16.3		16.4	17.1	
Level of Service		A	A		A		B	B		B	B	
Approach Delay (s)		6.1			5.7			16.3			17.0	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	7.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	56.4	Sum of lost time (s)	10.8
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	5	727	68	7	38	6
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.64	0.64	0.76	0.76	0.65	0.65
Hourly flow rate (vph)	8	1136	89	9	58	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	99				1246	94
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	99				1246	94
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				69	99
cM capacity (veh/h)	1494				191	963

Direction, Lane #	SE 1	NW 1	SW 1
Volume Total	1144	99	68
Volume Left	8	0	58
Volume Right	0	9	9
cSH	1494	1700	214
Volume to Capacity	0.01	0.06	0.32
Queue Length 95th (ft)	0	0	32
Control Delay (s)	0.2	0.0	29.4
Lane LOS	A		D
Approach Delay (s)	0.2	0.0	29.4
Approach LOS			D

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	43	29	182	13	4	123
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5	4.9		4.9	4.9
Lane Util. Factor	1.00	1.00	0.95		1.00	1.00
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	3504		1770	1863
Flt Permitted	1.00	1.00	1.00		0.70	1.00
Satd. Flow (perm)	1863	1583	3504		1307	1863
Peak-hour factor, PHF	0.82	0.82	0.86	0.86	0.92	0.92
Adj. Flow (vph)	52	35	212	15	4	134
RTOR Reduction (vph)	0	28	6	0	0	0
Lane Group Flow (vph)	52	7	221	0	4	134
Turn Type	NA	custom	NA		Perm	NA
Protected Phases			2			2
Permitted Phases	4	4			2	
Actuated Green, G (s)	3.8	3.8	5.7		5.7	5.7
Effective Green, g (s)	3.8	3.8	5.7		5.7	5.7
Actuated g/C Ratio	0.20	0.20	0.30		0.30	0.30
Clearance Time (s)	4.5	4.5	4.9		4.9	4.9
Vehicle Extension (s)	5.0	5.0	4.0		4.0	4.0
Lane Grp Cap (vph)	374	318	1056		394	561
v/s Ratio Prot			0.06			c0.07
v/s Ratio Perm	c0.03	0.00			0.00	
v/c Ratio	0.14	0.02	0.21		0.01	0.24
Uniform Delay, d1	6.2	6.1	4.9		4.6	5.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.4	0.1	0.1		0.0	0.3
Delay (s)	6.6	6.1	5.1		4.6	5.3
Level of Service	A	A	A		A	A
Approach Delay (s)	6.4		5.1			5.3
Approach LOS	A		A			A

Intersection Summary			
HCM 2000 Control Delay	5.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	18.9	Sum of lost time (s)	9.4
Intersection Capacity Utilization	27.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBR2	SEL
Lane Configurations												
Volume (vph)	21	4	4	10	241	1	9	71	0	9	3	444
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6			4.6	4.6				4.6	4.6	4.2	4.6
Lane Util. Factor	1.00			0.95	0.95				0.95	1.00	1.00	0.97
Frt	0.98			0.87	0.85				1.00	0.85	0.86	0.91
Flt Protected	1.00			1.00	1.00				0.95	1.00	1.00	0.98
Satd. Flow (prot)	1821			1531	1504				3362	1583	1611	3221
Flt Permitted	1.00			0.99	1.00				0.95	1.00	1.00	0.46
Satd. Flow (perm)	1821			1525	1504				3362	1583	1611	1494
Peak-hour factor, PHF	0.84	0.84	0.83	0.83	0.83	0.83	0.86	0.86	0.86	0.86	0.75	0.71
Adj. Flow (vph)	25	5	5	12	290	1	10	83	0	10	4	625
RTOR Reduction (vph)	3	0	0	0	92	0	0	0	0	9	4	56
Lane Group Flow (vph)	27	0	0	156	60	0	0	0	93	1	0	1538
Turn Type	NA		Perm	NA	Perm		Perm	Perm	NA	Perm	custom	NA
Protected Phases	6			6					4		8	5
Permitted Phases			6		6		4	4		4		2
Actuated Green, G (s)	20.2			20.2	20.2				6.5	6.5	6.9	18.2
Effective Green, g (s)	20.2			20.2	20.2				6.5	6.5	6.9	18.2
Actuated g/C Ratio	0.34			0.34	0.34				0.11	0.11	0.12	0.31
Clearance Time (s)	4.6			4.6	4.6				4.6	4.6	4.2	4.6
Vehicle Extension (s)	5.0			5.0	5.0				4.0	4.0	2.0	5.0
Lane Grp Cap (vph)	626			524	517				372	175	189	998
v/s Ratio Prot	0.01										0.00	c0.48
v/s Ratio Perm				c0.10	0.04				0.03	0.00		
v/c Ratio	0.04			0.30	0.12				0.25	0.01	0.00	1.72dr
Uniform Delay, d1	12.8			14.1	13.1				23.9	23.2	22.9	20.2
Progression Factor	1.00			1.00	1.00				1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1			0.7	0.2				0.5	0.0	0.0	248.6
Delay (s)	12.9			14.7	13.4				24.4	23.2	22.9	268.8
Level of Service	B			B	B				C	C	C	F
Approach Delay (s)	12.9			14.1					24.2			268.8
Approach LOS	B			B					C			F

Intersection Summary			
HCM 2000 Control Delay	213.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	58.7	Sum of lost time (s)	18.4
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

Movement	SER	SER2
Lane Configurations		
Volume (vph)	687	1
Ideal Flow (vphpl)	1900	1900
Lane Width	12	12
Total Lost time (s)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Peak-hour factor, PHF	0.71	0.71
Adj. Flow (vph)	968	1
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	0
Turn Type		
Protected Phases		
Permitted Phases		
Actuated Green, G (s)		
Effective Green, g (s)		
Actuated g/C Ratio		
Clearance Time (s)		
Vehicle Extension (s)		
Lane Grp Cap (vph)		
v/s Ratio Prot		
v/s Ratio Perm		
v/c Ratio		
Uniform Delay, d1		
Progression Factor		
Incremental Delay, d2		
Delay (s)		
Level of Service		
Approach Delay (s)		
Approach LOS		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	17	385	67	12	245	16	36	67	14	10	30	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.6	4.6		4.6		4.6	4.6		4.6	4.6	
Lane Util. Factor		0.95	1.00		0.95		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.99		1.00	0.97		1.00	0.97	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3532	1583		3500		1770	1813		1770	1802	
Flt Permitted		0.94	1.00		0.93		0.72	1.00		0.70	1.00	
Satd. Flow (perm)		3317	1583		3272		1348	1813		1301	1802	
Peak-hour factor, PHF	0.92	0.92	0.92	0.96	0.96	0.96	0.90	0.90	0.90	0.75	0.75	0.75
Adj. Flow (vph)	18	418	73	12	255	17	40	74	16	13	40	11
RTOR Reduction (vph)	0	0	43	0	10	0	0	11	0	0	7	0
Lane Group Flow (vph)	0	436	30	0	274	0	40	79	0	13	44	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4			2			2		
Actuated Green, G (s)		14.8	14.8		14.8		11.7	11.7		11.7	11.7	
Effective Green, g (s)		14.8	14.8		14.8		11.7	11.7		11.7	11.7	
Actuated g/C Ratio		0.41	0.41		0.41		0.33	0.33		0.33	0.33	
Clearance Time (s)		4.6	4.6		4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)		0.2	0.2		0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		1375	656		1356		441	594		426	590	
v/s Ratio Prot								c0.04			0.02	
v/s Ratio Perm		c0.13	0.02		0.08		0.03			0.01		
v/c Ratio		0.32	0.05		0.20		0.09	0.13		0.03	0.07	
Uniform Delay, d1		7.0	6.2		6.7		8.3	8.4		8.1	8.3	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Delay (s)		7.1	6.2		6.7		8.3	8.5		8.2	8.3	
Level of Service		A	A		A		A	A		A	A	
Approach Delay (s)		7.0			6.7			8.4			8.3	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	35.7	Sum of lost time (s)	9.2
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	472	18	8	134	0	9	0	16	300	505	146
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5		4.5		4.5	4.5	4.5	
Lane Util. Factor		0.95			0.95		1.00		1.00	1.00	0.95	
Frt		0.99			1.00		1.00		0.85	1.00	0.97	
Flt Protected		1.00			1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		3519			3529		1770		1583	1770	3420	
Flt Permitted		1.00			0.92		0.31		1.00	0.95	1.00	
Satd. Flow (perm)		3519			3260		569		1583	1770	3420	
Peak-hour factor, PHF	0.70	0.70	0.70	0.87	0.87	0.87	0.78	0.78	0.78	0.90	0.90	0.90
Adj. Flow (vph)	0	674	26	9	154	0	12	0	21	333	561	162
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	12	0	45	0
Lane Group Flow (vph)	0	695	0	0	163	0	12	0	9	333	678	0
Turn Type		NA		Perm	NA		D.Pm		custom	Perm	NA	
Protected Phases		4			4				2		2	
Permitted Phases				4			2		2	2		
Actuated Green, G (s)		25.0			25.0		24.3		24.3	24.3	24.3	
Effective Green, g (s)		25.0			25.0		24.3		24.3	24.3	24.3	
Actuated g/C Ratio		0.43			0.43		0.42		0.42	0.42	0.42	
Clearance Time (s)		4.5			4.5		4.5		4.5	4.5	4.5	
Vehicle Extension (s)		2.0			2.0		2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)		1509			1397		237		659	737	1425	
v/s Ratio Prot		c0.20							0.01		c0.20	
v/s Ratio Perm					0.05		0.02			0.19		
v/c Ratio		0.46			0.12		0.05		0.01	0.45	0.48	
Uniform Delay, d1		11.9			10.0		10.1		10.0	12.2	12.4	
Progression Factor		1.00			1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.1			0.0		0.0		0.0	0.2	0.1	
Delay (s)		11.9			10.0		10.2		10.0	12.4	12.5	
Level of Service		B			B		B		A	B	B	
Approach Delay (s)		11.9			10.0			10.0			12.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	58.3	Sum of lost time (s)	9.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	465	221	6	116	52	31	196	15	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5			4.2				
Lane Util. Factor		0.95			0.95			0.95				
Frt		0.95			0.96			0.99				
Flt Protected		1.00			1.00			0.99				
Satd. Flow (prot)		3368			3375			3484				
Flt Permitted		0.92			0.92			0.99				
Satd. Flow (perm)		3118			3126			3484				
Peak-hour factor, PHF	0.69	0.69	0.69	0.81	0.81	0.81	0.94	0.94	0.94	0.92	0.92	0.92
Adj. Flow (vph)	61	674	320	7	143	64	33	209	16	0	0	0
RTOR Reduction (vph)	0	78	0	0	35	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	977	0	0	179	0	0	249	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		8			4		6	6				
Permitted Phases	8			4								
Actuated Green, G (s)		25.5			25.5			22.0				
Effective Green, g (s)		25.5			25.5			22.0				
Actuated g/C Ratio		0.45			0.45			0.39				
Clearance Time (s)		4.5			4.5			4.2				
Vehicle Extension (s)		0.2			0.2			0.2				
Lane Grp Cap (vph)		1414			1418			1363				
v/s Ratio Prot								c0.07				
v/s Ratio Perm		c0.31			0.06							
v/c Ratio		0.69			0.13			0.18				
Uniform Delay, d1		12.2			8.9			11.2				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		1.2			0.0			0.0				
Delay (s)		13.4			8.9			11.2				
Level of Service		B			A			B				
Approach Delay (s)		13.4			8.9			11.2			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	56.2	Sum of lost time (s)	8.7
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	17	0	3	12	0	0	1	1099	24	24	284	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6			4.6			4.2	4.2		4.2	
Lane Util. Factor	1.00	1.00			1.00			0.95	1.00		0.95	
Frt	1.00	0.85			1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00			0.95			1.00	1.00		1.00	
Satd. Flow (prot)	1770	1583			1770			3539	1583		3514	
Flt Permitted	0.73	1.00			0.76			0.95	1.00		0.84	
Satd. Flow (perm)	1352	1583			1407			3379	1583		2979	
Peak-hour factor, PHF	0.77	0.77	0.77	0.25	0.25	0.25	0.85	0.85	0.85	0.90	0.90	0.90
Adj. Flow (vph)	22	0	4	48	0	0	1	1293	28	27	316	8
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	8	0	1	0
Lane Group Flow (vph)	22	1	0	0	48	0	0	1294	20	0	350	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4		4	4		
Actuated Green, G (s)	13.6	13.6			13.6			34.1	34.1		34.1	
Effective Green, g (s)	13.6	13.6			13.6			34.1	34.1		34.1	
Actuated g/C Ratio	0.24	0.24			0.24			0.60	0.60		0.60	
Clearance Time (s)	4.6	4.6			4.6			4.2	4.2		4.2	
Vehicle Extension (s)	5.0	5.0			5.0			4.0	4.0		4.0	
Lane Grp Cap (vph)	325	381			338			2039	955		1797	
v/s Ratio Prot		0.00										
v/s Ratio Perm	0.02				c0.03			c0.38	0.01		0.12	
v/c Ratio	0.07	0.00			0.14			0.63	0.02		0.19	
Uniform Delay, d1	16.6	16.3			16.9			7.2	4.5		5.0	
Progression Factor	1.00	1.00			1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.2	0.0			0.4			0.7	0.0		0.1	
Delay (s)	16.7	16.3			17.3			7.9	4.5		5.1	
Level of Service	B	B			B			A	A		A	
Approach Delay (s)		16.7			17.3			7.9			5.1	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	56.5	Sum of lost time (s)	8.8
Intersection Capacity Utilization	61.7%	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												
Volume (vph)	0	52	27	33	35	0	0	0	0	81	1115	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2						4.9	
Lane Util. Factor		1.00			1.00						0.91	
Frt		0.95			1.00						0.99	
Flt Protected		1.00			0.98						1.00	
Satd. Flow (prot)		1777			1818						5042	
Flt Permitted		1.00			0.80						1.00	
Satd. Flow (perm)		1777			1489						5042	
Peak-hour factor, PHF	0.86	0.86	0.86	0.89	0.89	0.89	0.92	0.92	0.92	0.79	0.79	0.79
Adj. Flow (vph)	0	60	31	37	39	0	0	0	0	103	1411	54
RTOR Reduction (vph)	0	14	0	0	0	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	77	0	0	76	0	0	0	0	0	1562	0
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		8			8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		6.7			6.7						23.7	
Effective Green, g (s)		6.7			6.7						23.7	
Actuated g/C Ratio		0.17			0.17						0.60	
Clearance Time (s)		4.2			4.2						4.9	
Vehicle Extension (s)		4.0			4.0						5.0	
Lane Grp Cap (vph)		301			252						3025	
v/s Ratio Prot		0.04									c0.31	
v/s Ratio Perm					c0.05							
v/c Ratio		0.26			0.30						0.52	
Uniform Delay, d1		14.2			14.4						4.6	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		0.6			0.9						0.3	
Delay (s)		14.8			15.3						4.9	
Level of Service		B			B						A	
Approach Delay (s)		14.8			15.3			0.0			4.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	39.5	Sum of lost time (s)	9.1
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	90	0	0	50	49	17	442	23	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2			4.9				
Lane Util. Factor		1.00			1.00			0.91				
Frt		1.00			0.93			0.99				
Flt Protected		0.98			1.00			1.00				
Satd. Flow (prot)		1834			1738			5041				
Flt Permitted		0.85			1.00			1.00				
Satd. Flow (perm)		1587			1738			5041				
Peak-hour factor, PHF	0.78	0.78	0.78	0.80	0.80	0.80	0.84	0.84	0.84	0.92	0.92	0.92
Adj. Flow (vph)	53	115	0	0	62	61	20	526	27	0	0	0
RTOR Reduction (vph)	0	0	0	0	48	0	0	8	0	0	0	0
Lane Group Flow (vph)	0	168	0	0	75	0	0	565	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)		7.9			7.9			19.7				
Effective Green, g (s)		7.9			7.9			19.7				
Actuated g/C Ratio		0.22			0.22			0.54				
Clearance Time (s)		4.2			4.2			4.9				
Vehicle Extension (s)		4.0			4.0			0.2				
Lane Grp Cap (vph)		341			374			2705				
v/s Ratio Prot					0.04			c0.11				
v/s Ratio Perm		c0.11										
v/c Ratio		0.49			0.20			0.21				
Uniform Delay, d1		12.6			11.8			4.4				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		1.5			0.4			0.0				
Delay (s)		14.2			12.2			4.4				
Level of Service		B			B			A				
Approach Delay (s)		14.2			12.2			4.4			0.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	36.7	Sum of lost time (s)	9.1
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	195	202	0	0	0	0	0	0	343	842	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2									4.6	
Lane Util. Factor		0.95									0.95	
Frt		0.92									1.00	
Flt Protected		1.00									0.99	
Satd. Flow (prot)		3269									3489	
Flt Permitted		1.00									0.99	
Satd. Flow (perm)		3269									3489	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.80	0.80	0.80
Adj. Flow (vph)	0	212	220	0	0	0	0	0	0	429	1052	0
RTOR Reduction (vph)	0	37	0	0	0	0	0	0	0	0	58	0
Lane Group Flow (vph)	0	395	0	0	0	0	0	0	0	0	1423	0
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Actuated Green, G (s)		16.5									30.6	
Effective Green, g (s)		16.5									30.6	
Actuated g/C Ratio		0.30									0.55	
Clearance Time (s)		4.2									4.6	
Vehicle Extension (s)		6.4									5.6	
Lane Grp Cap (vph)		964									1909	
v/s Ratio Prot		c0.12										
v/s Ratio Perm											0.41	
v/c Ratio		0.41									0.75	
Uniform Delay, d1		15.8									9.7	
Progression Factor		1.00									1.00	
Incremental Delay, d2		0.9									2.1	
Delay (s)		16.7									11.8	
Level of Service		B									B	
Approach Delay (s)		16.7			0.0			0.0			11.8	
Approach LOS		B			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	55.9	Sum of lost time (s)	8.8
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations											
Volume (vph)	198	339	0	0	190	141	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6			4.6	4.6					
Lane Util. Factor	1.00	1.00			0.95	1.00					
Frt	1.00	1.00			1.00	0.85					
Flt Protected	0.95	0.95			1.00	1.00					
Satd. Flow (prot)	1770	1770			3539	1583					
Flt Permitted	0.95	0.95			1.00	1.00					
Satd. Flow (perm)	1770	1770			3539	1583					
Peak-hour factor, PHF	0.89	0.89	0.89	0.88	0.88	0.88	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	222	381	0	0	216	160	0	0	0	0	0
RTOR Reduction (vph)	141	0	0	0	0	113	0	0	0	0	0
Lane Group Flow (vph)	81	381	0	0	216	47	0	0	0	0	0
Turn Type	Split	NA			NA	Perm					
Protected Phases	4	4			2						
Permitted Phases						2					
Actuated Green, G (s)	9.8	9.8			7.9	7.9					
Effective Green, g (s)	9.8	9.8			7.9	7.9					
Actuated g/C Ratio	0.36	0.36			0.29	0.29					
Clearance Time (s)	4.6	4.6			4.6	4.6					
Vehicle Extension (s)	5.0	5.0			4.5	4.5					
Lane Grp Cap (vph)	644	644			1039	464					
v/s Ratio Prot	0.05	c0.22			c0.06						
v/s Ratio Perm						0.03					
v/c Ratio	0.13	0.59			0.21	0.10					
Uniform Delay, d1	5.7	6.9			7.1	6.9					
Progression Factor	1.00	1.00			1.00	1.00					
Incremental Delay, d2	0.2	2.2			0.2	0.2					
Delay (s)	5.9	9.1			7.3	7.1					
Level of Service	A	A			A	A					
Approach Delay (s)		7.9			7.2			0.0		0.0	
Approach LOS		A			A			A		A	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	26.9	Sum of lost time (s)	9.2
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	277	563	4	60	0	0	0	0	0	657	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		3.7	3.7		3.7						4.1	
Lane Util. Factor		1.00	1.00		1.00						0.95	
Frt		1.00	0.85		1.00						0.98	
Flt Protected		1.00	1.00		1.00						1.00	
Satd. Flow (prot)		1863	1583		1857						3452	
Flt Permitted		1.00	1.00		0.98						1.00	
Satd. Flow (perm)		1863	1583		1826						3452	
Peak-hour factor, PHF	0.82	0.82	0.82	0.50	0.50	0.50	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	0	338	687	8	120	0	0	0	0	0	755	149
RTOR Reduction (vph)	0	0	75	0	0	0	0	0	0	0	28	0
Lane Group Flow (vph)	0	338	612	0	128	0	0	0	0	0	876	0
Turn Type		NA	Perm	Perm	NA						NA	
Protected Phases		4			8						6	
Permitted Phases			4	8								
Actuated Green, G (s)		26.2	26.2		26.2						25.2	
Effective Green, g (s)		26.2	26.2		26.2						25.2	
Actuated g/C Ratio		0.44	0.44		0.44						0.43	
Clearance Time (s)		3.7	3.7		3.7						4.1	
Vehicle Extension (s)		5.0	5.0		4.8						4.6	
Lane Grp Cap (vph)		824	700		808						1469	
v/s Ratio Prot		0.18									c0.25	
v/s Ratio Perm			c0.39		0.07							
v/c Ratio		0.41	0.87		0.16						0.60	
Uniform Delay, d1		11.2	15.0		9.9						13.1	
Progression Factor		1.00	1.00		1.00						1.00	
Incremental Delay, d2		0.7	12.7		0.2						0.9	
Delay (s)		11.9	27.7		10.1						14.0	
Level of Service		B	C		B						B	
Approach Delay (s)		22.5			10.1			0.0			14.0	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	59.2	Sum of lost time (s)	7.8
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	288	0	76	347	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.6			4.6		
Lane Util. Factor	1.00			0.95		
Frt	1.00			1.00		
Flt Protected	0.95			0.99		
Satd. Flow (prot)	1770			3508		
Flt Permitted	0.95			0.99		
Satd. Flow (perm)	1770			3508		
Peak-hour factor, PHF	0.87	0.87	0.85	0.85	0.92	0.92
Adj. Flow (vph)	331	0	89	408	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	331	0	0	497	0	0
Turn Type	NA		Split	NA		
Protected Phases	4		2	2		
Permitted Phases						
Actuated Green, G (s)	12.4			14.2		
Effective Green, g (s)	12.4			14.2		
Actuated g/C Ratio	0.35			0.40		
Clearance Time (s)	4.6			4.6		
Vehicle Extension (s)	3.3			4.9		
Lane Grp Cap (vph)	613			1391		
v/s Ratio Prot	c0.19			c0.14		
v/s Ratio Perm						
v/c Ratio	0.54			0.36		
Uniform Delay, d1	9.4			7.6		
Progression Factor	1.00			1.00		
Incremental Delay, d2	1.0			0.3		
Delay (s)	10.4			7.9		
Level of Service	B			A		
Approach Delay (s)	10.4			7.9	0.0	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	35.8	Sum of lost time (s)	9.2
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	283	48	89	180	0	0	0	0	149	1120	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		3.7	4.2						4.9	
Lane Util. Factor		0.95		1.00	0.95						0.91	
Frt		0.98		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3463		1770	3539						4994	
Flt Permitted		1.00		0.95	1.00						0.99	
Satd. Flow (perm)		3463		1770	3539						4994	
Peak-hour factor, PHF	0.90	0.90	0.90	0.77	0.77	0.77	0.92	0.92	0.92	0.79	0.79	0.79
Adj. Flow (vph)	0	314	53	116	234	0	0	0	0	189	1418	149
RTOR Reduction (vph)	0	16	0	0	0	0	0	0	0	0	10	0
Lane Group Flow (vph)	0	351	0	116	234	0	0	0	0	0	1746	0
Turn Type		NA		Prot	NA					Split	NA	
Protected Phases		4		3	8					6	6	
Permitted Phases												
Actuated Green, G (s)		17.1		7.5	28.3						30.6	
Effective Green, g (s)		17.1		7.5	28.3						30.6	
Actuated g/C Ratio		0.25		0.11	0.42						0.45	
Clearance Time (s)		4.2		3.7	4.2						4.9	
Vehicle Extension (s)		6.8		2.0	6.8						0.2	
Lane Grp Cap (vph)		870		195	1472						2247	
v/s Ratio Prot		c0.10		c0.07	0.07						c0.35	
v/s Ratio Perm												
v/c Ratio		0.40		0.59	0.16						0.78	
Uniform Delay, d1		21.2		28.8	12.4						15.8	
Progression Factor		1.00		1.00	1.00						1.00	
Incremental Delay, d2		1.0		3.2	0.2						1.6	
Delay (s)		22.2		32.0	12.6						17.4	
Level of Service		C		C	B						B	
Approach Delay (s)		22.2			19.0			0.0			17.4	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	68.0	Sum of lost time (s)	12.8
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												
Volume (vph)	124	309	0	0	245	100	23	468	25	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.7	4.2			4.2	4.2		4.9	4.9			
Lane Util. Factor	1.00	0.95			0.95	1.00		0.91	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		1.00	1.00			
Satd. Flow (prot)	1770	3539			3539	1583		5074	1583			
Flt Permitted	0.95	1.00			1.00	1.00		1.00	1.00			
Satd. Flow (perm)	1770	3539			3539	1583		5074	1583			
Peak-hour factor, PHF	0.88	0.88	0.88	0.81	0.81	0.81	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	141	351	0	0	302	123	25	514	27	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	92	0	0	17	0	0	0
Lane Group Flow (vph)	141	351	0	0	302	31	0	539	10	0	0	0
Turn Type	Prot	NA			NA	Perm	Split	NA	Perm			
Protected Phases	7	4			8		2	2				
Permitted Phases						8			2			
Actuated Green, G (s)	7.3	24.2			13.2	13.2		19.6	19.6			
Effective Green, g (s)	7.3	24.2			13.2	13.2		19.6	19.6			
Actuated g/C Ratio	0.14	0.46			0.25	0.25		0.37	0.37			
Clearance Time (s)	3.7	4.2			4.2	4.2		4.9	4.9			
Vehicle Extension (s)	2.0	5.1			5.1	5.1		0.2	0.2			
Lane Grp Cap (vph)	244	1618			883	395		1879	586			
v/s Ratio Prot	c0.08	0.10			c0.09			c0.11				
v/s Ratio Perm						0.02			0.01			
v/c Ratio	0.58	0.22			0.34	0.08		0.29	0.02			
Uniform Delay, d1	21.4	8.6			16.3	15.2		11.7	10.5			
Progression Factor	1.00	1.00			1.00	1.00		1.00	1.00			
Incremental Delay, d2	2.1	0.1			0.5	0.2		0.0	0.0			
Delay (s)	23.4	8.8			16.8	15.4		11.8	10.6			
Level of Service	C	A			B	B		B	B			
Approach Delay (s)		13.0			16.4			11.7			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	52.9	Sum of lost time (s)	12.8
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												
Volume (vph)	55	206	34	128	295	38	31	183	38	68	353	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.6		4.0	4.6		4.0	14.6		4.0	4.6	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3464		1770	3479		1770	3448		1770	3463	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3464		1770	3479		1770	3448		1770	3463	
Peak-hour factor, PHF	0.85	0.85	0.85	0.84	0.84	0.84	0.72	0.72	0.72	0.72	0.72	0.72
Adj. Flow (vph)	65	242	40	152	351	45	43	254	53	94	490	82
RTOR Reduction (vph)	0	15	0	0	10	0	0	18	0	0	13	0
Lane Group Flow (vph)	65	267	0	152	386	0	43	289	0	94	559	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases												
Actuated Green, G (s)	6.0	15.3		10.1	19.4		4.0	15.0		6.9	27.9	
Effective Green, g (s)	6.0	15.3		10.1	19.4		4.0	15.0		6.9	27.9	
Actuated g/C Ratio	0.08	0.21		0.14	0.26		0.05	0.20		0.09	0.37	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.0	14.6		4.0	4.6	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	5.0		2.0	5.0	
Lane Grp Cap (vph)	142	711		239	905		95	694		163	1296	
v/s Ratio Prot	0.04	0.08		c0.09	c0.11		0.02	0.08		c0.05	c0.16	
v/s Ratio Perm												
v/c Ratio	0.46	0.38		0.64	0.43		0.45	0.42		0.58	0.43	
Uniform Delay, d1	32.7	25.5		30.5	22.9		34.2	25.9		32.4	17.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.9	0.7		4.0	0.7		1.2	0.8		3.1	0.5	
Delay (s)	33.6	26.2		34.5	23.6		35.4	26.8		35.5	17.9	
Level of Service	C	C		C	C		D	C		D	B	
Approach Delay (s)		27.6			26.6			27.8			20.4	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	74.5	Sum of lost time (s)	27.2
Intersection Capacity Utilization	46.6%	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												
Volume (vph)	68	224	74	92	299	91	115	336	39	79	388	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9		4.0	4.9	4.9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3415		1770	3484		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3415		1770	3484		1770	3539	1583
Peak-hour factor, PHF	0.83	0.83	0.83	0.92	0.92	0.92	0.80	0.80	0.80	0.78	0.78	0.78
Adj. Flow (vph)	82	270	89	100	325	99	144	420	49	101	497	113
RTOR Reduction (vph)	0	0	68	0	36	0	0	10	0	0	0	83
Lane Group Flow (vph)	82	270	21	100	388	0	144	459	0	101	497	30
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4									2
Actuated Green, G (s)	6.0	15.3	15.3	6.5	15.8		7.4	17.9		6.5	17.0	17.0
Effective Green, g (s)	6.0	15.3	15.3	6.5	15.8		7.4	17.9		6.5	17.0	17.0
Actuated g/C Ratio	0.09	0.24	0.24	0.10	0.25		0.12	0.28		0.10	0.27	0.27
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.5		2.0	5.0		2.0	5.0	5.0
Lane Grp Cap (vph)	165	846	378	179	843		204	974		179	940	420
v/s Ratio Prot	0.05	0.08		c0.06	c0.11		c0.08	0.13		0.06	c0.14	
v/s Ratio Perm			0.01									0.02
v/c Ratio	0.50	0.32	0.06	0.56	0.46		0.71	0.47		0.56	0.53	0.07
Uniform Delay, d1	27.6	20.1	18.8	27.4	20.5		27.3	19.1		27.4	20.1	17.6
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	0.9	0.4	0.1	2.1	0.7		8.7	0.8		2.4	1.0	0.2
Delay (s)	28.4	20.4	18.9	29.5	21.2		36.0	19.9		29.8	21.1	17.7
Level of Service	C	C	B	C	C		D	B		C	C	B
Approach Delay (s)		21.6			22.8			23.7			21.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	64.0	Sum of lost time (s)	17.8
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	128	0	0	0	173	1266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.2					4.9
Lane Util. Factor	1.00					0.91
Frt	1.00					1.00
Flt Protected	0.95					0.99
Satd. Flow (prot)	1770					5055
Flt Permitted	0.95					0.99
Satd. Flow (perm)	1770					5055
Peak-hour factor, PHF	0.59	0.59	0.92	0.92	0.82	0.82
Adj. Flow (vph)	217	0	0	0	211	1544
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	217	0	0	0	0	1755
Turn Type	NA				Split	NA
Protected Phases	8				6	6
Permitted Phases						
Actuated Green, G (s)	13.1					30.2
Effective Green, g (s)	13.1					30.2
Actuated g/C Ratio	0.25					0.58
Clearance Time (s)	4.2					4.9
Vehicle Extension (s)	4.8					5.4
Lane Grp Cap (vph)	442					2913
v/s Ratio Prot	c0.12					c0.35
v/s Ratio Perm						
v/c Ratio	0.49					0.60
Uniform Delay, d1	16.8					7.2
Progression Factor	1.00					1.00
Incremental Delay, d2	1.7					0.6
Delay (s)	18.5					7.8
Level of Service	B					A
Approach Delay (s)	18.5		0.0			7.8
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	52.4	Sum of lost time (s)	9.1
Intersection Capacity Utilization	42.6%	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												
Volume (vph)	7	170	0	0	128	217	2	415	278	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2			4.2	4.2		4.9	4.9			
Lane Util. Factor	1.00	1.00			1.00	1.00		0.91	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		1.00	1.00			
Satd. Flow (prot)	1770	1863			1863	1583		5084	1583			
Flt Permitted	0.64	1.00			1.00	1.00		1.00	1.00			
Satd. Flow (perm)	1196	1863			1863	1583		5084	1583			
Peak-hour factor, PHF	0.79	0.79	0.79	0.70	0.70	0.70	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	9	215	0	0	183	310	2	451	302	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	185	0	0	183	0	0	0
Lane Group Flow (vph)	9	215	0	0	183	125	0	453	119	0	0	0
Turn Type	Perm	NA			NA	Perm	Split	NA	Perm			
Protected Phases		4			4		2	2				
Permitted Phases	4					4			2			
Actuated Green, G (s)	17.6	17.6			17.6	17.6		17.3	17.3			
Effective Green, g (s)	17.6	17.6			17.6	17.6		17.3	17.3			
Actuated g/C Ratio	0.40	0.40			0.40	0.40		0.39	0.39			
Clearance Time (s)	4.2	4.2			4.2	4.2		4.9	4.9			
Vehicle Extension (s)	5.7	5.7			5.7	5.7		5.2	5.2			
Lane Grp Cap (vph)	478	745			745	633		1998	622			
v/s Ratio Prot		c0.12			0.10			c0.09				
v/s Ratio Perm	0.01					0.08			0.07			
v/c Ratio	0.02	0.29			0.25	0.20		0.23	0.19			
Uniform Delay, d1	8.0	9.0			8.8	8.6		8.9	8.8			
Progression Factor	1.00	1.00			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.0	0.6			0.4	0.4		0.1	0.3			
Delay (s)	8.0	9.5			9.2	9.0		9.0	9.1			
Level of Service	A	A			A	A		A	A			
Approach Delay (s)		9.5			9.1			9.1			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	44.0	Sum of lost time (s)	9.1
Intersection Capacity Utilization	42.6%	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												
Volume (vph)	0	322	710	94	72	0	0	0	0	3	645	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		3.7	4.2						4.9	4.9
Lane Util. Factor		1.00		1.00	1.00						0.95	1.00
Frt		0.91		1.00	1.00						1.00	0.85
Flt Protected		1.00		0.95	1.00						1.00	1.00
Satd. Flow (prot)		1690		1770	1863						3538	1583
Flt Permitted		1.00		0.95	1.00						1.00	1.00
Satd. Flow (perm)		1690		1770	1863						3538	1583
Peak-hour factor, PHF	0.82	0.82	0.82	0.84	0.84	0.84	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	0	393	866	112	86	0	0	0	0	4	777	134
RTOR Reduction (vph)	0	79	0	0	0	0	0	0	0	0	0	86
Lane Group Flow (vph)	0	1180	0	112	86	0	0	0	0	0	781	48
Turn Type		NA		Prot	NA					Split	NA	Perm
Protected Phases		4		3	8					6	6	
Permitted Phases												6
Actuated Green, G (s)		26.5		7.6	37.8						26.5	26.5
Effective Green, g (s)		26.5		7.6	37.8						26.5	26.5
Actuated g/C Ratio		0.36		0.10	0.51						0.36	0.36
Clearance Time (s)		4.2		3.7	4.2						4.9	4.9
Vehicle Extension (s)		4.9		2.0	4.6						5.2	5.2
Lane Grp Cap (vph)		610		183	959						1277	571
v/s Ratio Prot		c0.70		c0.06	0.05						c0.22	
v/s Ratio Perm												0.03
v/c Ratio		1.93		0.61	0.09						0.61	0.08
Uniform Delay, d1		23.5		31.5	9.1						19.2	15.5
Progression Factor		1.00		1.00	1.00						1.00	1.00
Incremental Delay, d2		426.3		4.2	0.1						1.3	0.1
Delay (s)		449.8		35.7	9.1						20.5	15.6
Level of Service		F		D	A						C	B
Approach Delay (s)		449.8			24.2			0.0			19.8	
Approach LOS		F			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	248.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	73.4	Sum of lost time (s)	12.8
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	7	139	18	2	25	6	5	14	1	9	24	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.78	0.78	0.78	0.67	0.67	0.67	0.75	0.75	0.75
Hourly flow rate (vph)	7	146	19	3	32	8	7	21	1	12	32	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1300										
pX, platoon unblocked												
vC, conflicting volume	40			165			232	215	83	141	221	36
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	40			165			232	215	83	141	221	36
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			99	97	100	98	95	100
cM capacity (veh/h)	1568			1410			672	677	960	791	672	1029

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total	81	92	42	30	48
Volume Left	7	0	3	7	12
Volume Right	0	19	8	1	4
cSH	1568	1700	1410	686	720
Volume to Capacity	0.00	0.05	0.00	0.04	0.07
Queue Length 95th (ft)	0	0	0	3	5
Control Delay (s)	0.7	0.0	0.5	10.5	10.4
Lane LOS	A		A	B	B
Approach Delay (s)	0.3		0.5	10.5	10.4
Approach LOS				B	B

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	15.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	4	124	7	3	22	5	0	6	5	8	7	2
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.83	0.83	0.83	0.55	0.55	0.55	0.47	0.47	0.47
Hourly flow rate (vph)	4	132	7	4	27	6	0	11	9	17	15	4
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					1008							
pX, platoon unblocked												
vC, conflicting volume	33			139			193	184	70	126	185	30
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	33			139			193	184	70	126	185	30
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	98	99	98	98	100
cM capacity (veh/h)	1578			1442			732	706	979	814	705	1038

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total	70	73	36	20	36
Volume Left	4	0	4	0	17
Volume Right	0	7	6	9	4
cSH	1578	1700	1442	808	784
Volume to Capacity	0.00	0.04	0.00	0.02	0.05
Queue Length 95th (ft)	0	0	0	2	4
Control Delay (s)	0.5	0.0	0.8	9.6	9.8
Lane LOS	A		A	A	A
Approach Delay (s)	0.2		0.8	9.6	9.8
Approach LOS				A	A

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	18.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	8	9	94	87	32	30	77	803	117	62	272	17
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	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	2049	1742	1947	2049	1742	1947	3819		1947	3859	
Flt Permitted	0.72	1.00	1.00	0.75	1.00	1.00	0.55	1.00		0.27	1.00	
Satd. Flow (perm)	1472	2049	1742	1536	2049	1742	1134	3819		561	3859	
Peak-hour factor, PHF	0.75	0.75	0.75	0.54	0.54	0.54	0.89	0.89	0.89	0.88	0.88	0.88
Adj. Flow (vph)	11	12	125	161	59	56	87	902	131	70	309	19
RTOR Reduction (vph)	0	0	90	0	0	38	0	26	0	0	10	0
Lane Group Flow (vph)	11	12	35	161	59	18	87	1007	0	70	318	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6		6	2		2	4			8		
Actuated Green, G (s)	8.8	8.8	8.8	8.8	8.8	8.8	14.6	14.6		14.6	14.6	
Effective Green, g (s)	8.8	8.8	8.8	8.8	8.8	8.8	14.6	14.6		14.6	14.6	
Actuated g/C Ratio	0.28	0.28	0.28	0.28	0.28	0.28	0.46	0.46		0.46	0.46	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	412	574	488	430	574	488	527	1775		260	1794	
v/s Ratio Prot		0.01			0.03			c0.26			0.08	
v/s Ratio Perm	0.01		0.02	c0.10		0.01	0.08			0.12		
v/c Ratio	0.03	0.02	0.07	0.37	0.10	0.04	0.17	0.57		0.27	0.18	
Uniform Delay, d1	8.2	8.2	8.3	9.1	8.4	8.2	4.9	6.1		5.1	4.9	
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	0.0	0.0	0.1	0.6	0.1	0.0	0.1	0.4		0.6	0.0	
Delay (s)	8.2	8.2	8.4	9.6	8.5	8.2	5.0	6.5		5.7	4.9	
Level of Service	A	A	A	A	A	A	A	A		A	A	
Approach Delay (s)		8.3			9.1			6.4			5.1	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	31.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	92	36	110	106	40	6
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.81	0.96	0.96	0.50	0.92
Hourly flow rate (vph)	114	44	115	110	80	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1009			513		
pX, platoon unblocked					0.97	
vC, conflicting volume			158		475	136
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			158		442	136
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		84	99
cM capacity (veh/h)			1422		510	913

Direction, Lane #	SE 1	NW 1	NE 1
Volume Total	158	225	87
Volume Left	0	115	80
Volume Right	44	0	7
cSH	1700	1422	528
Volume to Capacity	0.09	0.08	0.16
Queue Length 95th (ft)	0	7	15
Control Delay (s)	0.0	4.3	13.2
Lane LOS		A	B
Approach Delay (s)	0.0	4.3	13.2
Approach LOS			B

Intersection Summary			
Average Delay	4.5		
Intersection Capacity Utilization	32.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	29	94	0	0	213	20	0	0	0	2	0	24
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.83	0.83	0.83	0.87	0.87	0.87	0.65	0.65	0.65	0.75	0.75	0.75
Hourly flow rate (vph)	35	113	0	0	245	23	0	0	0	3	0	32
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		496										
pX, platoon unblocked												
vC, conflicting volume	268			113			471	451	113	439	439	256
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	268			113			471	451	113	439	439	256
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			100	100	100	99	100	96
cM capacity (veh/h)	1296			1476			472	490	940	517	498	782

Direction, Lane #	SE 1	NW 1	NE 1	SW 1
Volume Total	148	268	0	35
Volume Left	35	0	0	3
Volume Right	0	23	0	32
cSH	1296	1476	1700	753
Volume to Capacity	0.03	0.00	0.00	0.05
Queue Length 95th (ft)	2	0	0	4
Control Delay (s)	2.0	0.0	0.0	10.0
Lane LOS	A		A	B
Approach Delay (s)	2.0	0.0	0.0	10.0
Approach LOS			A	B

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	32.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	61	16	32	19	66	2	85	582	10	3	385	128
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.89	0.89	0.89	0.78	0.78	0.78	0.83	0.83	0.83	0.92	0.92	0.92
Hourly flow rate (vph)	69	18	36	24	85	3	102	701	12	3	418	139
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								713			458	
pX, platoon unblocked	0.95	0.95	0.99	0.95	0.95	0.94	0.99			0.94		
vC, conflicting volume	1095	1413	279	1173	1476	357	558			713		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	927	1261	239	1009	1328	198	522			576		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	28	88	95	83	36	100	90			100		
cM capacity (veh/h)	95	144	751	147	131	764	1026			937		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	NE 3	SW 1	SW 2	SW 3
Volume Total	122	112	102	467	246	3	279	279
Volume Left	69	24	102	0	0	3	0	0
Volume Right	36	3	0	0	12	0	0	139
cSH	137	137	1026	1700	1700	937	1700	1700
Volume to Capacity	0.89	0.81	0.10	0.27	0.14	0.00	0.16	0.16
Queue Length 95th (ft)	148	127	8	0	0	0	0	0
Control Delay (s)	112.8	96.1	8.9	0.0	0.0	8.9	0.0	0.0
Lane LOS	F	F	A			A		
Approach Delay (s)	112.8	96.1	1.1			0.1		
Approach LOS	F	F						

Intersection Summary			
Average Delay	15.8		
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	22	12	0	107	0	0	0	0	214	100	608
Peak Hour Factor	0.92	0.92	0.92	0.89	0.89	0.89	0.92	0.92	0.92	0.85	0.85	0.85
Hourly flow rate (vph)	0	24	13	0	120	0	0	0	0	252	118	715

Direction, Lane #	SE 1	NW 1	NE 1	SW 1	SW 2
Volume Total (vph)	37	120	0	369	715
Volume Left (vph)	0	0	0	252	0
Volume Right (vph)	13	0	0	0	715
Hadj (s)	-0.18	0.03	0.00	0.17	-0.57
Departure Headway (s)	4.8	4.9	4.7	4.5	3.2
Degree Utilization, x	0.05	0.16	0.00	0.46	0.64
Capacity (veh/h)	683	687	721	780	1119
Control Delay (s)	8.0	8.8	7.7	11.2	11.6
Approach Delay (s)	8.0	8.8	0.0	11.5	
Approach LOS	A	A	A	B	

Intersection Summary			
Delay	11.1		
Level of Service	B		
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection Sign configuration not allowed in HCM analysis.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	71	94	0	0	0	171	0	108	11	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.83	0.83	0.83	0.86	0.86	0.86	0.85	0.85	0.85	0.92	0.92	0.92
Hourly flow rate (vph)	86	113	0	0	0	199	0	127	13	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	0			113			384	284	57	304	284	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			113			384	284	57	304	284	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			100			100	78	99	100	100	100
cM capacity (veh/h)	1622			1474			527	591	998	495	591	1084

Direction, Lane #	SE 1	SE 2	SE 3	NW 1	NE 1	NE 2
Volume Total	86	57	57	199	85	55
Volume Left	86	0	0	0	0	0
Volume Right	0	0	0	199	0	13
cSH	1622	1700	1700	1700	591	653
Volume to Capacity	0.05	0.03	0.03	0.12	0.14	0.08
Queue Length 95th (ft)	4	0	0	0	12	7
Control Delay (s)	7.3	0.0	0.0	0.0	12.1	11.0
Lane LOS	A				B	B
Approach Delay (s)	3.2			0.0	11.7	
Approach LOS					B	

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	27.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	115	242	16	4	62	35	12	2	15	60	5	17
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.78	0.78	0.78	0.66	0.66	0.66	0.71	0.71	0.71	0.66	0.66	0.66
Hourly flow rate (vph)	147	310	21	6	94	53	17	3	21	91	8	26
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		488										
pX, platoon unblocked												
vC, conflicting volume	147			331			778	774	165	605	758	120
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	147			331			778	774	165	605	758	120
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	90			100			93	99	98	73	97	97
cM capacity (veh/h)	1432			1225			251	292	850	339	299	908

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total	303	176	153	41	124
Volume Left	147	0	6	17	91
Volume Right	0	21	53	21	26
cSH	1432	1700	1225	401	386
Volume to Capacity	0.10	0.10	0.00	0.10	0.32
Queue Length 95th (ft)	9	0	0	8	34
Control Delay (s)	4.3	0.0	0.4	15.0	18.7
Lane LOS	A		A	B	C
Approach Delay (s)	2.7		0.4	15.0	18.7
Approach LOS				B	C

Intersection Summary			
Average Delay	5.4		
Intersection Capacity Utilization	28.4%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection Sign configuration not allowed in HCM analysis.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	394	525	337	531	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.7	4.1	4.1	4.1		
Lane Util. Factor	1.00	0.95	0.95	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1947	3893	3893	1742		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	1947	3893	3893	1742		
Peak-hour factor, PHF	0.84	0.84	0.79	0.79	0.92	0.92
Adj. Flow (vph)	469	625	427	672	0	0
RTOR Reduction (vph)	0	0	0	437	0	0
Lane Group Flow (vph)	469	625	427	235	0	0
Turn Type	Prot	NA	NA	Perm		
Protected Phases	3	8	4			
Permitted Phases				4		
Actuated Green, G (s)	6.4	30.9	20.8	20.8		
Effective Green, g (s)	6.4	30.9	20.8	20.8		
Actuated g/C Ratio	0.11	0.52	0.35	0.35		
Clearance Time (s)	3.7	4.1	4.1	4.1		
Vehicle Extension (s)	8.0	0.2	4.1	4.1		
Lane Grp Cap (vph)	209	2025	1363	609		
v/s Ratio Prot	c0.24	0.16	0.11			
v/s Ratio Perm				c0.14		
v/c Ratio	2.24	0.31	0.31	0.39		
Uniform Delay, d1	26.5	8.1	14.1	14.5		
Progression Factor	1.00	1.00	1.19	3.23		
Incremental Delay, d2	574.9	0.0	0.2	0.6		
Delay (s)	601.4	8.2	17.0	47.5		
Level of Service	F	A	B	D		
Approach Delay (s)		262.5	35.6		0.0	
Approach LOS		F	D		A	

Intersection Summary			
HCM 2000 Control Delay	148.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	59.4	Sum of lost time (s)	11.9
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	0	300	407	857	520	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.1	4.1	4.0	4.1	
Lane Util. Factor		0.95	0.91	0.91	0.97	
Frt		1.00	0.92	0.85	1.00	
Flt Protected		1.00	1.00	1.00	0.95	
Satd. Flow (prot)		3893	3442	1585	3776	
Flt Permitted		1.00	1.00	1.00	0.95	
Satd. Flow (perm)		3893	3442	1585	3776	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	326	442	932	565	0
RTOR Reduction (vph)	0	0	255	0	0	0
Lane Group Flow (vph)	0	326	653	466	565	0
Turn Type		NA	NA	Free	NA	
Protected Phases		6	6		8	
Permitted Phases				Free		
Actuated Green, G (s)		20.3	20.3	59.4	30.9	
Effective Green, g (s)		20.3	20.3	59.4	30.9	
Actuated g/C Ratio		0.34	0.34	1.00	0.52	
Clearance Time (s)		4.1	4.1		4.1	
Vehicle Extension (s)		3.0	3.0		0.2	
Lane Grp Cap (vph)		1330	1176	1585	1964	
v/s Ratio Prot		0.08	c0.19		0.15	
v/s Ratio Perm				c0.29		
v/c Ratio		0.25	0.55	0.29	0.29	
Uniform Delay, d1		14.0	15.9	0.0	8.0	
Progression Factor		0.70	1.00	1.00	0.36	
Incremental Delay, d2		0.1	0.6	0.5	0.0	
Delay (s)		10.0	16.5	0.5	2.9	
Level of Service		A	B	A	A	
Approach Delay (s)		10.0	11.0		2.9	
Approach LOS		A	B		A	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	59.4	Sum of lost time (s)	11.9
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1: Broadway St & Monterey St.

9/10/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	0	42	0	0	201	0	0	0	0	0	0	76
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.72	0.72	0.72	0.81	0.81	0.81	0.92	0.92	0.92	0.92	0.92	0.66
Hourly flow rate (vph)	0	58	0	0	248	0	0	0	0	0	0	115
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	248			58			306	306	58	306	306	248
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	248			58			306	306	58	306	306	248
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	85
cM capacity (veh/h)	1318			1546			552	607	1008	646	607	791

Direction, Lane #	SE 1	NW 1	NE 1	SW 1	SW 2
Volume Total	58	248	0	0	115
Volume Left	0	0	0	0	0
Volume Right	0	0	0	0	115
cSH	1318	1546	1700	1700	791
Volume to Capacity	0.00	0.00	0.00	0.00	0.15
Queue Length 95th (ft)	0	0	0	0	13
Control Delay (s)	0.0	0.0	0.0	0.0	10.3
Lane LOS			A	A	B
Approach Delay (s)	0.0	0.0	0.0	10.3	
Approach LOS			A	B	

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	22.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	78	177	0	0	215	52	175	30	41	0	0	0
Peak Hour Factor	0.83	0.83	0.83	0.82	0.82	0.82	0.80	0.80	0.80	0.92	0.92	0.92
Hourly flow rate (vph)	94	213	0	0	262	63	219	38	51	0	0	0

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1	NE 2
Volume Total (vph)	165	142	175	151	238	70
Volume Left (vph)	94	0	0	0	219	0
Volume Right (vph)	0	0	0	63	0	51
Hadj (s)	0.32	0.03	0.03	-0.26	0.49	-0.48
Departure Headway (s)	6.3	6.0	6.0	5.7	6.6	5.6
Degree Utilization, x	0.29	0.24	0.29	0.24	0.44	0.11
Capacity (veh/h)	550	576	579	606	520	600
Control Delay (s)	10.6	9.6	10.2	9.2	13.4	8.1
Approach Delay (s)	10.1		9.7		12.2	
Approach LOS	B		A		B	

Intersection Summary			
Delay	10.7		
Level of Service	B		
Intersection Capacity Utilization	34.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	0	256	98	0	16	8
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.74	0.74	0.82	0.82	0.75	0.75
Hourly flow rate (vph)	0	346	120	0	21	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1131				
pX, platoon unblocked						
vC, conflicting volume	120				465	120
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	120				465	120
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				96	99
cM capacity (veh/h)	1468				555	932

Direction, Lane #	SE 1	NW 1	SW 1	SW 2
Volume Total	346	120	21	11
Volume Left	0	0	21	0
Volume Right	0	0	0	11
cSH	1700	1700	555	932
Volume to Capacity	0.20	0.07	0.04	0.01
Queue Length 95th (ft)	0	0	3	1
Control Delay (s)	0.0	0.0	11.7	8.9
Lane LOS			B	A
Approach Delay (s)	0.0	0.0	10.8	
Approach LOS			B	

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	23.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	0	200	17	11	379	0	0	0	0	58	10	182
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.79	0.79	0.79	0.86	0.86	0.86	0.92	0.92	0.92	0.81	0.81	0.81
Hourly flow rate (vph)	0	253	22	13	441	0	0	0	0	72	12	225
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		735										
pX, platoon unblocked												
vC, conflicting volume	441			275			516	730	264	730	741	220
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	441			275			516	730	264	730	741	220
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	100	100	77	96	71
cM capacity (veh/h)	1116			1285			304	344	734	308	339	784

Direction, Lane #	SE 1	NW 1	NW 2	SW 1	SW 2
Volume Total	275	160	294	159	150
Volume Left	0	13	0	72	0
Volume Right	22	0	0	75	150
cSH	1700	1285	1700	436	784
Volume to Capacity	0.16	0.01	0.17	0.36	0.19
Queue Length 95th (ft)	0	1	0	41	18
Control Delay (s)	0.0	0.7	0.0	17.9	10.7
Lane LOS		A		C	B
Approach Delay (s)	0.0	0.2		14.4	
Approach LOS				B	

Intersection Summary			
Average Delay	4.4		
Intersection Capacity Utilization	32.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	149	2	198	0	0	0	0	567	33	114	393	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2						5.2		5.2	5.2	
Lane Util. Factor	1.00	1.00						0.95		1.00	0.95	
Frt	1.00	0.85						0.99		1.00	1.00	
Flt Protected	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (prot)	1770	1586						3510		1770	3539	
Flt Permitted	0.95	1.00						1.00		0.40	1.00	
Satd. Flow (perm)	1770	1586						3510		753	3539	
Peak-hour factor, PHF	0.94	0.94	0.94	0.92	0.92	0.92	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	159	2	211	0	0	0	0	616	36	121	418	0
RTOR Reduction (vph)	0	168	0	0	0	0	0	8	0	0	0	0
Lane Group Flow (vph)	159	45	0	0	0	0	0	644	0	121	418	0
Turn Type	Split	NA						NA		Perm	NA	
Protected Phases	4	4						2			2	
Permitted Phases										2		
Actuated Green, G (s)	8.6	8.6						23.8		23.8	23.8	
Effective Green, g (s)	8.6	8.6						23.8		23.8	23.8	
Actuated g/C Ratio	0.21	0.21						0.57		0.57	0.57	
Clearance Time (s)	4.2	4.2						5.2		5.2	5.2	
Vehicle Extension (s)	5.2	5.2						0.2		0.2	0.2	
Lane Grp Cap (vph)	364	326						1998		428	2015	
v/s Ratio Prot	c0.09	0.03						c0.18			0.12	
v/s Ratio Perm										0.16		
v/c Ratio	0.44	0.14						0.32		0.28	0.21	
Uniform Delay, d1	14.5	13.6						4.7		4.6	4.4	
Progression Factor	1.00	1.00						1.00		1.00	1.00	
Incremental Delay, d2	1.9	0.4						0.0		0.1	0.0	
Delay (s)	16.4	14.0						4.8		4.8	4.4	
Level of Service	B	B						A		A	A	
Approach Delay (s)		15.0			0.0			4.8			4.5	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	41.8	Sum of lost time (s)	9.4
Intersection Capacity Utilization	62.9%	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												
Volume (veh/h)	0	0	0	23	2	69	275	437	0	0	485	408
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.59	0.59	0.59	0.94	0.94	0.94	0.89	0.89	0.89
Hourly flow rate (vph)	0	0	0	39	3	117	293	465	0	0	545	458
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								284			1117	
pX, platoon unblocked	0.97	0.97	0.97	0.97	0.97		0.97					
vC, conflicting volume	1710	1824	502	1322	2053	232	1003			465		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1669	1786	422	1269	2023	232	939			465		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	100	52	90	85	58			100		
cM capacity (veh/h)	32	46	563	82	32	770	703			1093		

Direction, Lane #	NW 1	NW 2	NE 1	NE 2	NE 3	SW 1	SW 2
Volume Total	41	119	293	232	232	363	640
Volume Left	39	0	293	0	0	0	0
Volume Right	0	117	0	0	0	0	458
cSH	77	581	703	1700	1700	1700	1700
Volume to Capacity	0.53	0.20	0.42	0.14	0.14	0.21	0.38
Queue Length 95th (ft)	56	19	51	0	0	0	0
Control Delay (s)	95.2	12.8	13.7	0.0	0.0	0.0	0.0
Lane LOS	F	B	B				
Approach Delay (s)	33.8		5.3			0.0	
Approach LOS	D						

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	33	2	80	9	9	18	56	441	5	2	807	30
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.68	0.68	0.68	0.75	0.75	0.75	0.89	0.89	0.89	0.88	0.88	0.88
Hourly flow rate (vph)	49	3	118	12	12	24	63	496	6	2	917	34
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								595			806	
pX, platoon unblocked	0.87	0.87	0.87	0.87	0.87		0.87					
vC, conflicting volume	1342	1566	476	1206	1580	251	951			501		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1101	1357	108	945	1373	251	653			501		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	60	98	85	92	90	97	92			100		
cM capacity (veh/h)	122	119	807	149	116	749	812			1059		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2
Volume Total	169	48	311	253	461	493
Volume Left	49	12	63	0	2	0
Volume Right	118	24	0	6	0	34
cSH	297	222	812	1700	1059	1700
Volume to Capacity	0.57	0.22	0.08	0.15	0.00	0.29
Queue Length 95th (ft)	82	20	6	0	0	0
Control Delay (s)	32.0	25.6	2.7	0.0	0.1	0.0
Lane LOS	D	D	A		A	
Approach Delay (s)	32.0	25.6	1.5		0.0	
Approach LOS	D	D				

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	56.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	86	0	0	274	0	0	654	0	0	747	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5			4.2			4.2	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		1.00			1.00			1.00			1.00	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		1863			1863			3539			3539	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		1863			1863			3539			3539	
Peak-hour factor, PHF	0.91	0.91	0.91	0.93	0.93	0.93	0.94	0.94	0.94	0.85	0.85	0.85
Adj. Flow (vph)	0	95	0	0	295	0	0	696	0	0	879	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	95	0	0	295	0	0	696	0	0	879	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Actuated Green, G (s)		19.7			19.7			27.1			27.1	
Effective Green, g (s)		19.7			19.7			27.1			27.1	
Actuated g/C Ratio		0.35			0.35			0.49			0.49	
Clearance Time (s)		4.5			4.5			4.2			4.2	
Vehicle Extension (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		661			661			1728			1728	
v/s Ratio Prot		0.05			c0.16			0.20			c0.25	
v/s Ratio Perm												
v/c Ratio		0.14			0.45			0.40			0.51	
Uniform Delay, d1		12.2			13.7			9.0			9.7	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.2			1.0			0.3			0.5	
Delay (s)		12.4			14.7			9.4			10.2	
Level of Service		B			B			A			B	
Approach Delay (s)		12.4			14.7			9.4			10.2	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	55.5	Sum of lost time (s)	8.7
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	96	89	95	83	18	21	65	343	221	52	688	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	5.6	5.6		5.6	5.6		4.0	4.2		4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.92		1.00	0.92		1.00	0.94		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3266		1770	1711		1770	3331		1770	3497	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3266		1770	1711		1770	3331		1770	3497	
Peak-hour factor, PHF	0.62	0.62	0.62	0.84	0.84	0.84	0.91	0.91	0.91	0.94	0.94	0.94
Adj. Flow (vph)	155	144	153	99	21	25	71	377	243	55	732	64
RTOR Reduction (vph)	0	123	0	0	22	0	0	77	0	0	5	0
Lane Group Flow (vph)	155	174	0	99	24	0	71	543	0	55	791	0
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.5	14.5		8.9	8.9		6.5	24.7		6.2	24.4	
Effective Green, g (s)	14.5	14.5		8.9	8.9		6.5	24.7		6.2	24.4	
Actuated g/C Ratio	0.20	0.20		0.12	0.12		0.09	0.34		0.08	0.33	
Clearance Time (s)	5.6	5.6		5.6	5.6		4.0	4.2		4.0	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	348	642		213	206		156	1116		148	1157	
v/s Ratio Prot	c0.09	0.05		c0.06	0.01		c0.04	0.16		0.03	c0.23	
v/s Ratio Perm												
v/c Ratio	0.45	0.27		0.46	0.12		0.46	0.49		0.37	0.68	
Uniform Delay, d1	26.1	25.1		30.2	28.9		31.9	19.5		31.9	21.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.1		0.6	0.1		0.8	0.1		0.6	1.3	
Delay (s)	26.4	25.2		30.8	29.0		32.7	19.6		32.5	22.7	
Level of Service	C	C		C	C		C	B		C	C	
Approach Delay (s)		25.6			30.2			20.9			23.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	73.7	Sum of lost time (s)	19.4
Intersection Capacity Utilization	63.8%	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												
Volume (vph)	86	176	59	208	308	62	38	380	42	34	537	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.0	4.2		4.0	4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1793		1770	1863	1583	1770	3487		1770	3463	
Flt Permitted	0.43	1.00		0.53	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	804	1793		988	1863	1583	1770	3487		1770	3463	
Peak-hour factor, PHF	0.88	0.88	0.88	0.87	0.87	0.87	0.93	0.93	0.93	0.81	0.81	0.81
Adj. Flow (vph)	98	200	67	239	354	71	41	409	45	42	663	111
RTOR Reduction (vph)	0	13	0	0	0	43	0	7	0	0	11	0
Lane Group Flow (vph)	98	254	0	239	354	28	41	447	0	42	763	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	27.1	27.1		27.1	27.1	27.1	3.6	24.9		3.6	24.9	
Effective Green, g (s)	27.1	27.1		27.1	27.1	27.1	3.6	24.9		3.6	24.9	
Actuated g/C Ratio	0.40	0.40		0.40	0.40	0.40	0.05	0.37		0.05	0.37	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.0	4.2		4.0	4.2	
Vehicle Extension (s)	4.8	4.8		4.8	4.8	4.8	2.0	4.8		2.0	4.8	
Lane Grp Cap (vph)	320	714		393	742	630	93	1276		93	1268	
v/s Ratio Prot		0.14			0.19		0.02	c0.13		0.02	c0.22	
v/s Ratio Perm	0.12			c0.24		0.02						
v/c Ratio	0.31	0.36		0.61	0.48	0.04	0.44	0.35		0.45	0.60	
Uniform Delay, d1	14.0	14.3		16.2	15.2	12.5	31.2	15.7		31.2	17.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.1	0.6		3.7	0.9	0.1	1.2	0.3		1.3	1.1	
Delay (s)	15.1	14.9		20.0	16.1	12.6	32.4	16.0		32.5	18.7	
Level of Service	B	B		B	B	B	C	B		C	B	
Approach Delay (s)		15.0			17.1			17.4			19.4	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	68.0	Sum of lost time (s)	12.4
Intersection Capacity Utilization	60.9%	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												
Volume (vph)	62	486	11	0	0	0	0	567	17	67	725	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2					4.2		4.2	4.2	
Lane Util. Factor		0.91	1.00					0.95		1.00	0.95	
Frt		1.00	0.85					1.00		1.00	1.00	
Flt Protected		0.99	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		5057	1583					3524		1770	3539	
Flt Permitted		0.99	1.00					1.00		0.38	1.00	
Satd. Flow (perm)		5057	1583					3524		711	3539	
Peak-hour factor, PHF	0.81	0.81	0.81	0.92	0.92	0.92	0.94	0.94	0.94	0.81	0.81	0.81
Adj. Flow (vph)	77	600	14	0	0	0	0	603	18	83	895	0
RTOR Reduction (vph)	0	0	9	0	0	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	677	5	0	0	0	0	618	0	83	895	0
Turn Type	Split	NA	Perm					NA		Perm	NA	
Protected Phases	4	4						2			6	
Permitted Phases			4							6		
Actuated Green, G (s)		20.0	20.0					25.0		25.0	25.0	
Effective Green, g (s)		20.0	20.0					25.0		25.0	25.0	
Actuated g/C Ratio		0.37	0.37					0.47		0.47	0.47	
Clearance Time (s)		4.2	4.2					4.2		4.2	4.2	
Vehicle Extension (s)		2.0	2.0					2.0		2.0	2.0	
Lane Grp Cap (vph)		1894	592					1649		332	1656	
v/s Ratio Prot		c0.13						0.18			c0.25	
v/s Ratio Perm			0.00							0.12		
v/c Ratio		0.36	0.01					0.37		0.25	0.54	
Uniform Delay, d1		12.1	10.5					9.2		8.6	10.1	
Progression Factor		1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2		0.0	0.0					0.1		0.1	0.2	
Delay (s)		12.1	10.5					9.2		8.7	10.3	
Level of Service		B	B					A		A	B	
Approach Delay (s)		12.1			0.0			9.2			10.2	
Approach LOS		B			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	53.4	Sum of lost time (s)	8.4
Intersection Capacity Utilization	68.8%	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												
Volume (vph)	85	34	162	57	93	11	43	574	13	5	574	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2	4.2	4.2	4.2	4.2	4.0	4.2	4.2	4.0	4.2	4.2
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1681	1764	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	1681	1764	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.70	0.70	0.70	0.86	0.86	0.86	0.92	0.92	0.92	0.89	0.89	0.89
Adj. Flow (vph)	121	49	231	66	108	13	47	624	14	6	645	25
RTOR Reduction (vph)	0	0	187	0	0	11	0	0	8	0	0	16
Lane Group Flow (vph)	121	49	44	59	115	2	47	624	6	6	645	9
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	5		6	6		3	8		7	4	
Permitted Phases			5			6			8			4
Actuated Green, G (s)	14.8	14.8	14.8	13.7	13.7	13.7	4.2	31.0	31.0	0.8	27.6	27.6
Effective Green, g (s)	14.8	14.8	14.8	13.7	13.7	13.7	4.2	31.0	31.0	0.8	27.6	27.6
Actuated g/C Ratio	0.19	0.19	0.19	0.18	0.18	0.18	0.05	0.40	0.40	0.01	0.36	0.36
Clearance Time (s)	4.2	4.2	4.2	4.2	4.2	4.2	4.0	4.2	4.2	4.0	4.2	4.2
Vehicle Extension (s)	4.9	4.9	4.9	4.9	4.9	4.9	2.0	4.9	4.9	2.0	4.9	4.9
Lane Grp Cap (vph)	340	358	304	299	314	282	96	1426	638	18	1270	568
v/s Ratio Prot	c0.07	0.03		0.04	c0.07		c0.03	c0.18		0.00	c0.18	
v/s Ratio Perm			0.03			0.00			0.00			0.01
v/c Ratio	0.36	0.14	0.15	0.20	0.37	0.01	0.49	0.44	0.01	0.33	0.51	0.02
Uniform Delay, d1	26.9	25.8	25.8	26.9	27.8	26.0	35.3	16.6	13.7	37.8	19.3	15.9
Progression Factor	1.00	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	1.3	0.4	0.4	0.7	1.5	0.0	1.4	0.4	0.0	3.9	0.6	0.0
Delay (s)	28.2	26.1	26.3	27.6	29.2	26.0	36.7	17.1	13.8	41.7	20.0	15.9
Level of Service	C	C	C	C	C	C	D	B	B	D	B	B
Approach Delay (s)		26.8			28.5			18.3			20.0	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	76.9	Sum of lost time (s)	16.6
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	31	50	119	74	596	0	0	570	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)					4.2	4.2	4.2	4.2			4.2	
Lane Util. Factor					0.95	1.00	1.00	0.95			0.95	
Frt					1.00	0.85	1.00	1.00			0.98	
Flt Protected					0.98	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					3473	1583	1770	3539			3474	
Flt Permitted					0.98	1.00	0.37	1.00			1.00	
Satd. Flow (perm)					3473	1583	686	3539			3474	
Peak-hour factor, PHF	0.92	0.92	0.92	0.82	0.82	0.82	0.91	0.91	0.91	0.87	0.87	0.87
Adj. Flow (vph)	0	0	0	38	61	145	81	655	0	0	655	92
RTOR Reduction (vph)	0	0	0	0	0	120	0	0	0	0	12	0
Lane Group Flow (vph)	0	0	0	0	99	25	81	655	0	0	735	0
Turn Type				Split	NA	Perm	Perm	NA			NA	
Protected Phases				8	8			2			6	
Permitted Phases						8	2					
Actuated Green, G (s)					6.0	6.0	20.5	20.5			20.5	
Effective Green, g (s)					6.0	6.0	20.5	20.5			20.5	
Actuated g/C Ratio					0.17	0.17	0.59	0.59			0.59	
Clearance Time (s)					4.2	4.2	4.2	4.2			4.2	
Vehicle Extension (s)					2.0	2.0	2.0	2.0			2.0	
Lane Grp Cap (vph)					597	272	402	2078			2040	
v/s Ratio Prot					c0.03			0.19			c0.21	
v/s Ratio Perm						0.02	0.12					
v/c Ratio					0.17	0.09	0.20	0.32			0.36	
Uniform Delay, d1					12.3	12.2	3.4	3.6			3.8	
Progression Factor					1.00	1.00	1.00	1.00			1.00	
Incremental Delay, d2					0.0	0.1	0.1	0.0			0.0	
Delay (s)					12.4	12.2	3.5	3.7			3.8	
Level of Service					B	B	A	A			A	
Approach Delay (s)		0.0			12.3			3.7			3.8	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	4.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	34.9	Sum of lost time (s)	8.4
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	119	530	7	21	402	255	10	217	16	188	165	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.6		4.0	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3533		1770	3539	1583	1770	3502		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.61	1.00		0.59	1.00	1.00
Satd. Flow (perm)	1770	3533		1770	3539	1583	1127	3502		1105	1863	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.77	0.77	0.77	0.91	0.91	0.91	0.89	0.89	0.89
Adj. Flow (vph)	127	564	7	27	522	331	11	238	18	211	185	115
RTOR Reduction (vph)	0	1	0	0	0	164	0	6	0	0	0	84
Lane Group Flow (vph)	127	571	0	27	522	167	11	250	0	211	185	31
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	7.8	33.4		2.3	27.9	27.9	17.9	17.9		17.9	17.9	17.9
Effective Green, g (s)	7.8	33.4		2.3	27.9	27.9	17.9	17.9		17.9	17.9	17.9
Actuated g/C Ratio	0.12	0.50		0.03	0.42	0.42	0.27	0.27		0.27	0.27	0.27
Clearance Time (s)	4.0	4.6		4.0	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	206	1766		60	1478	661	301	938		296	499	424
v/s Ratio Prot	c0.07	0.16		0.02	c0.15			0.07			0.10	
v/s Ratio Perm						0.11	0.01			c0.19		0.02
v/c Ratio	0.62	0.32		0.45	0.35	0.25	0.04	0.27		0.71	0.37	0.07
Uniform Delay, d1	28.1	10.0		31.6	13.3	12.7	18.1	19.3		22.1	19.9	18.3
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	3.8	0.0		1.9	0.1	0.1	0.0	0.1		6.6	0.2	0.0
Delay (s)	31.9	10.0		33.6	13.3	12.7	18.1	19.3		28.7	20.0	18.3
Level of Service	C	A		C	B	B	B	B		C	C	B
Approach Delay (s)		14.0			13.7			19.3			23.2	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	66.8	Sum of lost time (s)	13.2
Intersection Capacity Utilization	59.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	148	0	4	148	4	4
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.89	0.89	0.40	0.40
Hourly flow rate (vph)	164	0	4	166	10	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	484			1038		
pX, platoon unblocked						
vC, conflicting volume			164		340	164
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			164		340	164
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	99
cM capacity (veh/h)			1414		654	880

Direction, Lane #	SE 1	NW 1	NE 1
Volume Total	164	171	20
Volume Left	0	4	10
Volume Right	0	0	10
cSH	1700	1414	750
Volume to Capacity	0.10	0.00	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.2	9.9
Lane LOS		A	A
Approach Delay (s)	0.0	0.2	9.9
Approach LOS			A

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	21.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	71	228	0	0	137	5	0	0	0	10	0	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	15	15	12	12	15	15	15	12	15	12
Total Lost time (s)	4.0	4.2			4.2	4.2					4.0	4.2
Lane Util. Factor	1.00	1.00			1.00	1.00					1.00	1.00
Frt	1.00	1.00			1.00	0.85					1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00					0.95	1.00
Satd. Flow (prot)	1770	1863			1863	1583					1947	1583
Flt Permitted	0.95	1.00			1.00	1.00					1.00	1.00
Satd. Flow (perm)	1770	1863			1863	1583					2049	1583
Peak-hour factor, PHF	0.88	0.88	0.92	0.92	0.83	0.83	0.92	0.92	0.92	0.57	0.92	0.57
Adj. Flow (vph)	81	259	0	0	165	6	0	0	0	18	0	226
RTOR Reduction (vph)	0	0	0	0	0	4	0	0	0	0	0	175
Lane Group Flow (vph)	81	259	0	0	165	2	0	0	0	0	18	51
Turn Type	Prot	NA			NA	Perm	Perm			Prot	NA	custom
Protected Phases	5	2			6			4!		4!	8	
Permitted Phases						6	4					4
Actuated Green, G (s)	3.9	16.0			8.1	8.1					7.3	7.1
Effective Green, g (s)	3.9	16.0			8.1	8.1					7.3	7.1
Actuated g/C Ratio	0.12	0.51			0.26	0.26					0.23	0.23
Clearance Time (s)	4.0	4.2			4.2	4.2					4.0	4.2
Vehicle Extension (s)	3.0	4.8			4.8	4.8					3.0	2.0
Lane Grp Cap (vph)	219	946			479	407					474	356
v/s Ratio Prot	0.05	c0.14			c0.09						0.01	
v/s Ratio Perm						0.00					0.00	c0.03
v/c Ratio	0.37	0.27			0.34	0.00					0.04	0.14
Uniform Delay, d1	12.7	4.4			9.5	8.7					9.4	9.8
Progression Factor	1.00	1.00			1.00	1.00					1.00	1.00
Incremental Delay, d2	1.1	0.3			0.8	0.0					0.0	0.1
Delay (s)	13.7	4.7			10.4	8.7					9.4	9.8
Level of Service	B	A			B	A					A	A
Approach Delay (s)		6.9			10.3			0.0			9.8	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	31.5	Sum of lost time (s)	12.4
Intersection Capacity Utilization	24.6%	ICU Level of Service	A
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												
Volume (vph)	9	197	51	84	313	22	77	39	102	20	60	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2	4.2	4.2	4.2		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.89		1.00	0.94	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1844		1770	1660		1770	1756	
Flt Permitted	0.46	1.00	1.00	0.62	1.00		0.67	1.00		0.65	1.00	
Satd. Flow (perm)	865	1863	1583	1161	1844		1252	1660		1214	1756	
Peak-hour factor, PHF	0.91	0.91	0.91	0.86	0.86	0.86	0.84	0.84	0.84	0.73	0.73	0.73
Adj. Flow (vph)	10	216	56	98	364	26	92	46	121	27	82	51
RTOR Reduction (vph)	0	0	31	0	5	0	0	77	0	0	32	0
Lane Group Flow (vph)	10	216	25	98	385	0	92	90	0	27	101	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	17.4	17.4	17.4	17.4	17.4		14.7	14.7		14.7	14.7	
Effective Green, g (s)	17.4	17.4	17.4	17.4	17.4		14.7	14.7		14.7	14.7	
Actuated g/C Ratio	0.43	0.43	0.43	0.43	0.43		0.36	0.36		0.36	0.36	
Clearance Time (s)	4.2	4.2	4.2	4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	0.2	0.2	0.2	0.2	0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	371	800	680	498	792		454	602		440	637	
v/s Ratio Prot		0.12			c0.21			0.05			0.06	
v/s Ratio Perm	0.01		0.02	0.08			c0.07			0.02		
v/c Ratio	0.03	0.27	0.04	0.20	0.49		0.20	0.15		0.06	0.16	
Uniform Delay, d1	6.7	7.5	6.7	7.2	8.3		8.9	8.7		8.4	8.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.0	0.1	0.0	0.1	0.2		0.1	0.0		0.0	0.0	
Delay (s)	6.7	7.5	6.7	7.3	8.5		9.0	8.7		8.4	8.8	
Level of Service	A	A	A	A	A		A	A		A	A	
Approach Delay (s)		7.3			8.3			8.8			8.7	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	40.5	Sum of lost time (s)	8.4
Intersection Capacity Utilization	72.2%	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												
Volume (vph)	18	390	23	0	0	0	0	53	92	38	59	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5						4.5		4.5	4.5	
Lane Util. Factor		0.91						1.00		1.00	1.00	
Frt		0.99						0.91		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		5035						1704		1770	1863	
Flt Permitted		1.00						1.00		0.63	1.00	
Satd. Flow (perm)		5035						1704		1182	1863	
Peak-hour factor, PHF	0.84	0.84	0.84	0.92	0.92	0.92	0.74	0.74	0.74	0.71	0.71	0.71
Adj. Flow (vph)	21	464	27	0	0	0	0	72	124	54	83	0
RTOR Reduction (vph)	0	12	0	0	0	0	0	76	0	0	0	0
Lane Group Flow (vph)	0	500	0	0	0	0	0	120	0	54	83	0
Turn Type	Split	NA						NA		Perm	NA	
Protected Phases	2	2						8			4	
Permitted Phases										4		
Actuated Green, G (s)		15.4						15.4		15.4	15.4	
Effective Green, g (s)		15.4						15.4		15.4	15.4	
Actuated g/C Ratio		0.39						0.39		0.39	0.39	
Clearance Time (s)		4.5						4.5		4.5	4.5	
Vehicle Extension (s)		0.2						0.2		0.2	0.2	
Lane Grp Cap (vph)		1948						659		457	720	
v/s Ratio Prot		c0.10						c0.07			0.04	
v/s Ratio Perm										0.05		
v/c Ratio		0.26						0.18		0.12	0.12	
Uniform Delay, d1		8.3						8.0		7.8	7.8	
Progression Factor		1.00						1.00		1.00	1.00	
Incremental Delay, d2		0.0						0.0		0.0	0.0	
Delay (s)		8.3						8.1		7.9	7.9	
Level of Service		A						A		A	A	
Approach Delay (s)		8.3			0.0			8.1			7.9	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	39.8	Sum of lost time (s)	9.0
Intersection Capacity Utilization	68.8%	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												
Volume (veh/h)	0	0	0	27	203	17	63	19	0	0	5	4
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.78	0.78	0.78	0.76	0.76	0.76	0.45	0.45	0.45
Hourly flow rate (vph)	0	0	0	35	260	22	83	25	0	0	11	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1000			1010							
pX, platoon unblocked												
vC, conflicting volume	282			0			214	351	0	353	340	141
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	282			0			214	351	0	353	340	141
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			88	96	100	100	98	99
cM capacity (veh/h)	1277			1622			695	560	1084	549	568	881

Direction, Lane #	NW 1	NW 2	NE 1	NE 2	SW 1
Volume Total	165	152	83	25	20
Volume Left	35	0	83	0	0
Volume Right	0	22	0	0	9
cSH	1622	1700	695	560	674
Volume to Capacity	0.02	0.09	0.12	0.04	0.03
Queue Length 95th (ft)	2	0	10	3	2
Control Delay (s)	1.7	0.0	10.9	11.7	10.5
Lane LOS	A		B	B	B
Approach Delay (s)	0.9		11.1		10.5
Approach LOS			B		B

Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	64	19	20	135	23	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.8			4.8	4.8	
Lane Util. Factor	0.95			0.95	1.00	
Frt	0.97			1.00	0.90	
Flt Protected	1.00			0.99	0.99	
Satd. Flow (prot)	3418			3516	1651	
Flt Permitted	1.00			0.91	0.99	
Satd. Flow (perm)	3418			3207	1651	
Peak-hour factor, PHF	0.87	0.87	0.85	0.85	0.72	0.72
Adj. Flow (vph)	74	22	24	159	32	104
RTOR Reduction (vph)	17	0	0	0	93	0
Lane Group Flow (vph)	80	0	0	183	43	0
Turn Type	NA		Perm	NA	NA	
Protected Phases	2			2		
Permitted Phases			2		4	
Actuated Green, G (s)	3.7			3.7	1.5	
Effective Green, g (s)	3.7			3.7	1.5	
Actuated g/C Ratio	0.25			0.25	0.10	
Clearance Time (s)	4.8			4.8	4.8	
Vehicle Extension (s)	0.2			0.2	0.2	
Lane Grp Cap (vph)	854			801	167	
v/s Ratio Prot	0.02					
v/s Ratio Perm				c0.06	c0.03	
v/c Ratio	0.09			0.23	0.25	
Uniform Delay, d1	4.3			4.4	6.1	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	0.0			0.1	0.3	
Delay (s)	4.3			4.5	6.4	
Level of Service	A			A	A	
Approach Delay (s)	4.3			4.5	6.4	
Approach LOS	A			A	A	

Intersection Summary			
HCM 2000 Control Delay	5.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	14.8	Sum of lost time (s)	9.6
Intersection Capacity Utilization	21.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	260	16	22	266	38	54
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.88	0.88	0.75	0.75	0.74	0.74
Hourly flow rate (vph)	295	18	29	355	51	73
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	537			471		
pX, platoon unblocked			0.96		0.96	0.96
vC, conflicting volume			314		718	305
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			270		689	260
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		87	90
cM capacity (veh/h)			1248		388	751

Direction, Lane #	SE 1	NW 1	NE 1
Volume Total	314	384	124
Volume Left	0	29	51
Volume Right	18	0	73
cSH	1700	1248	541
Volume to Capacity	0.18	0.02	0.23
Queue Length 95th (ft)	0	2	22
Control Delay (s)	0.0	0.8	13.6
Lane LOS		A	B
Approach Delay (s)	0.0	0.8	13.6
Approach LOS			B

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	21	74	19	8	63	10	14	72	14	25	143	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2		4.2	4.2		4.2	4.2	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.98		1.00	0.98		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1805			1822		1770	1818		1770	1818	
Flt Permitted		0.94			0.97		0.63	1.00		0.69	1.00	
Satd. Flow (perm)		1713			1775		1172	1818		1284	1818	
Peak-hour factor, PHF	0.93	0.93	0.93	0.84	0.84	0.84	0.82	0.82	0.82	0.83	0.83	0.83
Adj. Flow (vph)	23	80	20	10	75	12	17	88	17	30	172	33
RTOR Reduction (vph)	0	11	0	0	8	0	0	6	0	0	6	0
Lane Group Flow (vph)	0	112	0	0	89	0	17	99	0	30	199	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)		11.7			11.7		21.3	21.3		21.3	21.3	
Effective Green, g (s)		11.7			11.7		21.3	21.3		21.3	21.3	
Actuated g/C Ratio		0.28			0.28		0.51	0.51		0.51	0.51	
Clearance Time (s)		4.2			4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)		0.2			0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		484			501		602	935		660	935	
v/s Ratio Prot								0.05			c0.11	
v/s Ratio Perm		c0.07			0.05		0.01			0.02		
v/c Ratio		0.23			0.18		0.03	0.11		0.05	0.21	
Uniform Delay, d1		11.4			11.2		5.0	5.2		5.0	5.5	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			0.1		0.0	0.0		0.0	0.0	
Delay (s)		11.5			11.3		5.0	5.2		5.0	5.5	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		11.5			11.3			5.1			5.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	41.4	Sum of lost time (s)	8.4
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	44	71	24	22	47	35	13	43	33	49	127	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2		4.2	4.2		4.2	4.2	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.95		1.00	0.94		1.00	0.95	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1791			1760		1770	1742		1770	1762	
Flt Permitted		0.88			0.92		0.61	1.00		0.70	1.00	
Satd. Flow (perm)		1594			1635		1144	1742		1301	1762	
Peak-hour factor, PHF	0.79	0.79	0.79	0.91	0.91	0.91	0.85	0.85	0.85	0.86	0.86	0.86
Adj. Flow (vph)	56	90	30	24	52	38	15	51	39	57	148	84
RTOR Reduction (vph)	0	13	0	0	27	0	0	19	0	0	36	0
Lane Group Flow (vph)	0	163	0	0	87	0	15	71	0	57	196	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)		12.4			12.4		22.7	22.7		22.7	22.7	
Effective Green, g (s)		12.4			12.4		22.7	22.7		22.7	22.7	
Actuated g/C Ratio		0.29			0.29		0.52	0.52		0.52	0.52	
Clearance Time (s)		4.2			4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)		0.2			0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		454			466		596	909		678	919	
v/s Ratio Prot								0.04			c0.11	
v/s Ratio Perm		c0.10			0.05		0.01			0.04		
v/c Ratio		0.36			0.19		0.03	0.08		0.08	0.21	
Uniform Delay, d1		12.4			11.7		5.0	5.2		5.2	5.6	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.2			0.1		0.0	0.0		0.0	0.0	
Delay (s)		12.6			11.8		5.0	5.2		5.2	5.6	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		12.6			11.8			5.2			5.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	43.5	Sum of lost time (s)	8.4
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	65	0	0	149	0	0	155	0	0	263	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2			4.2			4.2	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			1.00			1.00			1.00	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		3539			3539			1863			1863	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		3539			3539			1863			1863	
Peak-hour factor, PHF	0.79	0.79	0.79	0.91	0.91	0.91	0.93	0.93	0.93	0.78	0.78	0.78
Adj. Flow (vph)	0	82	0	0	164	0	0	167	0	0	337	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	82	0	0	164	0	0	167	0	0	337	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)		20.0			20.0			12.7			12.7	
Effective Green, g (s)		20.0			20.0			12.7			12.7	
Actuated g/C Ratio		0.49			0.49			0.31			0.31	
Clearance Time (s)		4.2			4.2			4.2			4.2	
Vehicle Extension (s)		0.2			0.2			0.2			0.2	
Lane Grp Cap (vph)		1722			1722			575			575	
v/s Ratio Prot		0.02			c0.05			0.09			c0.18	
v/s Ratio Perm												
v/c Ratio		0.05			0.10			0.29			0.59	
Uniform Delay, d1		5.5			5.7			10.8			12.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.0			0.0			0.1			1.0	
Delay (s)		5.5			5.7			10.9			13.0	
Level of Service		A			A			B			B	
Approach Delay (s)		5.5			5.7			10.9			13.0	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	41.1	Sum of lost time (s)	8.4
Intersection Capacity Utilization	47.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	183	230	72	54	209	52	16	114	36	37	152	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.96		1.00	0.92	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1807		1770	3412		1770	3258	
Flt Permitted	0.47	1.00	1.00	0.56	1.00		0.54	1.00		0.64	1.00	
Satd. Flow (perm)	884	1863	1583	1044	1807		997	3412		1195	3258	
Peak-hour factor, PHF	0.86	0.86	0.86	0.76	0.76	0.76	0.86	0.86	0.86	0.89	0.89	0.89
Adj. Flow (vph)	213	267	84	71	275	68	19	133	42	42	171	192
RTOR Reduction (vph)	0	0	49	0	14	0	0	24	0	0	108	0
Lane Group Flow (vph)	213	267	35	71	329	0	19	151	0	42	255	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	23.7	23.7	23.7	23.7	23.7		25.0	25.0		25.0	25.0	
Effective Green, g (s)	23.7	23.7	23.7	23.7	23.7		25.0	25.0		25.0	25.0	
Actuated g/C Ratio	0.41	0.41	0.41	0.41	0.41		0.44	0.44		0.44	0.44	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	0.2	0.2	0.2	0.2	0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	364	769	653	431	746		434	1486		520	1418	
v/s Ratio Prot		0.14			0.18			0.04			c0.08	
v/s Ratio Perm	c0.24		0.02	0.07			0.02			0.04		
v/c Ratio	0.59	0.35	0.05	0.16	0.44		0.04	0.10		0.08	0.18	
Uniform Delay, d1	13.0	11.5	10.1	10.6	12.1		9.3	9.6		9.5	9.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.5	0.1	0.0	0.1	0.2		0.0	0.0		0.0	0.0	
Delay (s)	14.6	11.6	10.1	10.7	12.2		9.3	9.6		9.5	9.9	
Level of Service	B	B	B	B	B		A	A		A	A	
Approach Delay (s)		12.5			12.0			9.6			9.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	57.4	Sum of lost time (s)	8.7
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	82	178	97	58	378	55	116	295	21	51	232	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.2		4.0	4.2		4.0	4.2		4.0	4.2	
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.98		1.00	0.99		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1764		1770	3472		1770	3504		1770	3323	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1764		1770	3472		1770	3504		1770	3323	
Peak-hour factor, PHF	0.94	0.94	0.94	0.87	0.87	0.87	0.86	0.86	0.86	0.78	0.78	0.78
Adj. Flow (vph)	87	189	103	67	434	63	135	343	24	65	297	204
RTOR Reduction (vph)	0	22	0	0	13	0	0	6	0	0	138	0
Lane Group Flow (vph)	87	270	0	67	484	0	135	361	0	65	363	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	6.2	21.6		4.3	19.7		7.2	19.8		4.3	16.9	
Effective Green, g (s)	6.2	21.6		4.3	19.7		7.2	19.8		4.3	16.9	
Actuated g/C Ratio	0.09	0.33		0.06	0.30		0.11	0.30		0.06	0.25	
Clearance Time (s)	4.0	4.2		4.0	4.2		4.0	4.2		4.0	4.2	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	5.0		2.0	5.0	
Lane Grp Cap (vph)	165	573		114	1030		191	1044		114	845	
v/s Ratio Prot	c0.05	c0.15		0.04	0.14		c0.08	c0.10		0.04	c0.11	
v/s Ratio Perm												
v/c Ratio	0.53	0.47		0.59	0.47		0.71	0.35		0.57	0.43	
Uniform Delay, d1	28.7	17.8		30.2	19.1		28.6	18.2		30.2	20.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.4	1.3		4.9	0.7		9.3	0.4		4.2	0.7	
Delay (s)	30.1	19.1		35.1	19.8		37.9	18.7		34.4	21.5	
Level of Service	C	B		D	B		D	B		C	C	
Approach Delay (s)		21.6			21.6			23.8			22.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	66.4	Sum of lost time (s)	16.4
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	177	265	104	0	0	0	0	557	41	66	429	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5	4.5					4.5		4.5	4.5	
Lane Util. Factor		0.91	1.00					0.95		1.00	0.95	
Frt		1.00	0.85					0.99		1.00	1.00	
Flt Protected		0.98	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		4985	1583					3503		1770	3539	
Flt Permitted		0.98	1.00					1.00		0.35	1.00	
Satd. Flow (perm)		4985	1583					3503		647	3539	
Peak-hour factor, PHF	0.59	0.59	0.59	0.92	0.92	0.92	0.86	0.86	0.86	0.95	0.95	0.95
Adj. Flow (vph)	300	449	176	0	0	0	0	648	48	69	452	0
RTOR Reduction (vph)	0	0	114	0	0	0	0	10	0	0	0	0
Lane Group Flow (vph)	0	749	62	0	0	0	0	686	0	69	452	0
Turn Type	Split	NA	Perm					NA		Perm	NA	
Protected Phases	2	2						4			4	
Permitted Phases			2							4		
Actuated Green, G (s)		19.0	19.0					26.0		26.0	26.0	
Effective Green, g (s)		19.0	19.0					26.0		26.0	26.0	
Actuated g/C Ratio		0.35	0.35					0.48		0.48	0.48	
Clearance Time (s)		4.5	4.5					4.5		4.5	4.5	
Vehicle Extension (s)		0.2	0.2					0.2		0.2	0.2	
Lane Grp Cap (vph)		1753	556					1686		311	1703	
v/s Ratio Prot		c0.15						c0.20			0.13	
v/s Ratio Perm			0.04							0.11		
v/c Ratio		0.43	0.11					0.41		0.22	0.27	
Uniform Delay, d1		13.3	11.8					9.0		8.1	8.3	
Progression Factor		1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2		0.1	0.0					0.1		0.1	0.0	
Delay (s)		13.4	11.8					9.1		8.3	8.4	
Level of Service		B	B					A		A	A	
Approach Delay (s)		13.1			0.0			9.1			8.3	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	70.4%	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												
Volume (vph)	0	0	0	40	125	95	14	1051	0	0	441	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)				4.2	4.2	4.2	4.2	4.2			4.2	4.2
Lane Util. Factor				1.00	1.00	1.00	1.00	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1770	1863	1583	1770	3539			3539	1583
Flt Permitted				0.95	1.00	1.00	0.45	1.00			1.00	1.00
Satd. Flow (perm)				1770	1863	1583	831	3539			3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.83	0.83	0.83	0.77	0.77	0.77	0.80	0.80	0.80
Adj. Flow (vph)	0	0	0	48	151	114	18	1365	0	0	551	38
RTOR Reduction (vph)	0	0	0	0	0	25	0	0	0	0	0	16
Lane Group Flow (vph)	0	0	0	48	151	89	18	1365	0	0	551	22
Turn Type				Split	NA	Perm	Perm	NA			NA	Perm
Protected Phases				6	6			8			4	
Permitted Phases						6	8					4
Actuated Green, G (s)				6.8	6.8	6.8	21.1	21.1			21.1	21.1
Effective Green, g (s)				6.8	6.8	6.8	21.1	21.1			21.1	21.1
Actuated g/C Ratio				0.19	0.19	0.19	0.58	0.58			0.58	0.58
Clearance Time (s)				4.2	4.2	4.2	4.2	4.2			4.2	4.2
Vehicle Extension (s)				3.0	3.0	3.0	5.0	5.0			5.0	5.0
Lane Grp Cap (vph)				331	348	296	483	2057			2057	920
v/s Ratio Prot				0.03	c0.08			c0.39			0.16	
v/s Ratio Perm						0.06	0.02					0.01
v/c Ratio				0.15	0.43	0.30	0.04	0.66			0.27	0.02
Uniform Delay, d1				12.3	13.0	12.7	3.3	5.2			3.8	3.2
Progression Factor				1.00	1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2				0.2	0.9	0.6	0.1	1.1			0.1	0.0
Delay (s)				12.5	13.9	13.3	3.3	6.3			3.9	3.2
Level of Service				B	B	B	A	A			A	A
Approach Delay (s)		0.0			13.5			6.2			3.9	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	36.3	Sum of lost time (s)	8.4
Intersection Capacity Utilization	70.4%	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												
Volume (vph)	113	225	33	47	193	103	32	1005	63	60	366	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3508		1770	3480	
Flt Permitted	0.50	1.00	1.00	0.51	1.00	1.00	0.47	1.00		0.13	1.00	
Satd. Flow (perm)	925	1863	1583	951	1863	1583	867	3508		247	3480	
Peak-hour factor, PHF	0.81	0.81	0.81	0.67	0.67	0.67	0.78	0.78	0.78	0.84	0.84	0.84
Adj. Flow (vph)	140	278	41	70	288	154	41	1288	81	71	436	55
RTOR Reduction (vph)	0	0	28	0	0	25	0	8	0	0	16	0
Lane Group Flow (vph)	140	278	13	70	288	129	41	1361	0	71	475	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	19.0	19.0	19.0	19.0	19.0	19.0	30.2	30.2		30.2	30.2	
Effective Green, g (s)	19.0	19.0	19.0	19.0	19.0	19.0	30.2	30.2		30.2	30.2	
Actuated g/C Ratio	0.33	0.33	0.33	0.33	0.33	0.33	0.52	0.52		0.52	0.52	
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	303	610	518	311	610	518	451	1826		128	1812	
v/s Ratio Prot		0.15			c0.15			c0.39			0.14	
v/s Ratio Perm	0.15		0.01	0.07		0.08	0.05			0.29		
v/c Ratio	0.46	0.46	0.03	0.23	0.47	0.25	0.09	0.75		0.55	0.26	
Uniform Delay, d1	15.5	15.4	13.2	14.2	15.5	14.3	7.0	10.9		9.4	7.7	
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	0.4	0.2	0.0	0.1	0.2	0.1	0.0	1.5		2.9	0.0	
Delay (s)	15.9	15.6	13.2	14.3	15.7	14.4	7.0	12.4		12.3	7.7	
Level of Service	B	B	B	B	B	B	A	B		B	A	
Approach Delay (s)		15.5			15.1			12.2			8.3	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	8.8
Intersection Capacity Utilization	92.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	75	136	20	0	0	0	23	1028	83	140	569	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.6	4.6				4.6	4.6		4.6	4.6	
Lane Util. Factor		1.00	1.00				1.00	0.95		1.00	0.95	
Frt		1.00	0.85				1.00	0.99		1.00	0.98	
Flt Protected		0.98	1.00				0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1830	1583				1770	3500		1770	3484	
Flt Permitted		0.98	1.00				0.39	1.00		0.13	1.00	
Satd. Flow (perm)		1830	1583				731	3500		244	3484	
Peak-hour factor, PHF	0.70	0.70	0.70	0.92	0.92	0.92	0.72	0.72	0.72	0.95	0.95	0.95
Adj. Flow (vph)	107	194	29	0	0	0	32	1428	115	147	599	69
RTOR Reduction (vph)	0	0	21	0	0	0	0	7	0	0	10	0
Lane Group Flow (vph)	0	301	8	0	0	0	32	1536	0	147	658	0
Turn Type	Split	NA	Perm				Perm	NA		Perm	NA	
Protected Phases	4	4						2			6	
Permitted Phases			4				2			6		
Actuated Green, G (s)		11.5	11.5				30.5	30.5		30.5	30.5	
Effective Green, g (s)		11.5	11.5				30.5	30.5		30.5	30.5	
Actuated g/C Ratio		0.22	0.22				0.60	0.60		0.60	0.60	
Clearance Time (s)		4.6	4.6				4.6	4.6		4.6	4.6	
Vehicle Extension (s)		0.2	0.2				4.1	4.1		4.1	4.1	
Lane Grp Cap (vph)		411	355				435	2084		145	2075	
v/s Ratio Prot		c0.16						0.44			0.19	
v/s Ratio Perm			0.01				0.04			c0.60		
v/c Ratio		0.73	0.02				0.07	0.74		1.01	0.32	
Uniform Delay, d1		18.4	15.5				4.4	7.5		10.4	5.2	
Progression Factor		1.00	1.00				1.00	1.00		1.00	1.00	
Incremental Delay, d2		5.7	0.0				0.1	1.5		78.4	0.1	
Delay (s)		24.1	15.5				4.5	9.0		88.8	5.3	
Level of Service		C	B				A	A		F	A	
Approach Delay (s)		23.4			0.0			8.9			20.3	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	51.2	Sum of lost time (s)	9.2
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	0	313	0	1104	472	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)		4.1		4.1	4.6	
Lane Util. Factor		0.88		0.95	0.95	
Frt		0.85		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		2787		3539	3539	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		2787		3539	3539	
Peak-hour factor, PHF	0.91	0.91	0.72	0.72	0.92	0.92
Adj. Flow (vph)	0	344	0	1533	513	0
RTOR Reduction (vph)	0	233	0	0	0	0
Lane Group Flow (vph)	0	111	0	1533	513	0
Turn Type		custom		NA	NA	
Protected Phases				6	4	
Permitted Phases		7				
Actuated Green, G (s)		13.9		21.0	13.4	
Effective Green, g (s)		13.9		21.0	13.4	
Actuated g/C Ratio		0.32		0.49	0.31	
Clearance Time (s)		4.1		4.1	4.6	
Vehicle Extension (s)		1.2		3.0	4.0	
Lane Grp Cap (vph)		898		1724	1100	
v/s Ratio Prot				c0.43	c0.14	
v/s Ratio Perm		0.04				
v/c Ratio		0.12		0.89	0.47	
Uniform Delay, d1		10.3		10.0	12.0	
Progression Factor		1.00		1.00	1.00	
Incremental Delay, d2		0.0		6.0	0.4	
Delay (s)		10.3		16.0	12.4	
Level of Service		B		B	B	
Approach Delay (s)	10.3			16.0	12.4	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	43.1	Sum of lost time (s)	8.7
Intersection Capacity Utilization	33.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1009	32	0	254	0	0	0	0	543	308	349
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0					4.0	4.0	4.0
Lane Util. Factor		0.95			0.95					0.91	0.91	1.00
Frt		1.00			1.00					1.00	1.00	0.85
Flt Protected		1.00			1.00					0.95	0.98	1.00
Satd. Flow (prot)		3523			3539					1610	3314	1583
Flt Permitted		1.00			1.00					0.95	0.98	1.00
Satd. Flow (perm)		3523			3539					1610	3314	1583
Peak-hour factor, PHF	0.89	0.89	0.89	0.97	0.97	0.97	0.92	0.92	0.92	0.97	0.97	0.97
Adj. Flow (vph)	0	1134	36	0	262	0	0	0	0	560	318	360
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0	0	0	226
Lane Group Flow (vph)	0	1165	0	0	262	0	0	0	0	286	592	134
Turn Type		NA			NA					Perm	NA	Perm
Protected Phases		4			8						2	
Permitted Phases										2		2
Actuated Green, G (s)		15.5			15.5					14.0	14.0	14.0
Effective Green, g (s)		15.5			15.5					14.0	14.0	14.0
Actuated g/C Ratio		0.41			0.41					0.37	0.37	0.37
Clearance Time (s)		4.0			4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1456			1462					601	1237	590
v/s Ratio Prot		c0.33			0.07							
v/s Ratio Perm										0.18	0.18	0.08
v/c Ratio		0.80			0.18					0.48	0.48	0.23
Uniform Delay, d1		9.6			7.0					9.0	9.0	8.0
Progression Factor		1.00			1.00					1.00	1.00	1.00
Incremental Delay, d2		3.2			0.1					0.6	0.3	0.2
Delay (s)		12.8			7.0					9.6	9.3	8.2
Level of Service		B			A					A	A	A
Approach Delay (s)		12.8			7.0			0.0			9.0	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	37.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	383	808	0	346	125	279
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.1	4.1		4.1	4.1	4.1
Lane Util. Factor	0.95	1.00		0.95	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3539	1583		3539	1770	1583
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3539	1583		3539	1770	1583
Peak-hour factor, PHF	0.73	0.73	0.92	0.92	0.95	0.95
Adj. Flow (vph)	525	1107	0	376	132	294
RTOR Reduction (vph)	0	679	0	0	0	56
Lane Group Flow (vph)	525	428	0	376	132	238
Turn Type	NA	Perm		NA	NA	Perm
Protected Phases	6			6	8	
Permitted Phases		6				8
Actuated Green, G (s)	21.2	21.2		21.2	26.7	26.7
Effective Green, g (s)	21.2	21.2		21.2	26.7	26.7
Actuated g/C Ratio	0.38	0.38		0.38	0.48	0.48
Clearance Time (s)	4.1	4.1		4.1	4.1	4.1
Vehicle Extension (s)	3.0	3.0		3.0	0.2	0.2
Lane Grp Cap (vph)	1337	598		1337	842	753
v/s Ratio Prot	0.15			0.11	0.07	
v/s Ratio Perm		c0.27				c0.15
v/c Ratio	0.39	0.72		0.28	0.16	0.32
Uniform Delay, d1	12.7	14.9		12.1	8.3	9.1
Progression Factor	1.00	1.00		0.60	1.00	1.00
Incremental Delay, d2	0.2	4.1		0.1	0.0	0.1
Delay (s)	12.9	19.0		7.4	8.4	9.2
Level of Service	B	B		A	A	A
Approach Delay (s)	17.0			7.4	8.9	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	56.1	Sum of lost time (s)	11.9
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	363	867	174	101	585	84	347	413	48	237	325	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.6	4.6	4.0	4.9		4.0	4.6	4.6	4.0	4.9	4.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	3433	3473		3433	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	3433	3473		3433	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.86	0.86	0.86	0.91	0.91	0.91	0.84	0.84	0.84	0.86	0.86	0.86
Adj. Flow (vph)	422	1008	202	111	643	92	413	492	57	276	378	94
RTOR Reduction (vph)	0	0	124	0	17	0	0	0	46	0	0	84
Lane Group Flow (vph)	422	1008	78	111	718	0	413	492	11	276	378	10
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8						6			2
Actuated Green, G (s)	8.0	25.8	25.8	5.4	22.9		10.9	12.4	12.4	6.0	7.2	7.2
Effective Green, g (s)	8.0	25.8	25.8	5.4	22.9		10.9	12.4	12.4	6.0	7.2	7.2
Actuated g/C Ratio	0.12	0.39	0.39	0.08	0.34		0.16	0.19	0.19	0.09	0.11	0.11
Clearance Time (s)	4.0	4.6	4.6	4.0	4.9		4.0	4.6	4.6	4.0	4.9	4.9
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.2		2.0	5.0	5.0	2.0	5.2	5.2
Lane Grp Cap (vph)	411	1366	611	277	1190		560	656	293	308	381	170
v/s Ratio Prot	c0.12	c0.28		0.03	0.21		c0.12	c0.14		0.08	0.11	
v/s Ratio Perm			0.05						0.01			0.01
v/c Ratio	1.03	0.74	0.13	0.40	0.60		0.74	0.75	0.04	0.90	0.99	0.06
Uniform Delay, d1	29.4	17.6	13.2	29.2	18.2		26.6	25.7	22.3	30.1	29.8	26.8
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	51.4	2.6	0.2	0.3	1.3		4.4	5.7	0.1	26.0	44.0	0.3
Delay (s)	80.8	20.2	13.4	29.5	19.5		30.9	31.5	22.4	56.1	73.7	27.1
Level of Service	F	C	B	C	B		C	C	C	E	E	C
Approach Delay (s)		35.0			20.8			30.7			61.4	
Approach LOS		D			C			C			E	

Intersection Summary			
HCM 2000 Control Delay	35.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	66.8	Sum of lost time (s)	17.8
Intersection Capacity Utilization	62.9%	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												
Volume (vph)	32	297	10	21	261	129	50	75	22	28	5	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5			4.5			4.5			4.5	
Lane Util. Factor	1.00	0.95			1.00			1.00			1.00	
Frt	1.00	1.00			0.96			0.98			0.92	
Flt Protected	0.95	1.00			1.00			0.98			0.98	
Satd. Flow (prot)	1770	3522			1779			1794			1682	
Flt Permitted	0.47	1.00			0.97			0.87			0.87	
Satd. Flow (perm)	872	3522			1734			1593			1490	
Peak-hour factor, PHF	0.85	0.85	0.85	0.86	0.86	0.86	0.85	0.85	0.85	0.78	0.78	0.78
Adj. Flow (vph)	38	349	12	24	303	150	59	88	26	36	6	65
RTOR Reduction (vph)	0	4	0	0	26	0	0	9	0	0	43	0
Lane Group Flow (vph)	38	357	0	0	451	0	0	164	0	0	64	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	19.3	19.3			19.3			14.0			14.0	
Effective Green, g (s)	19.3	19.3			19.3			14.0			14.0	
Actuated g/C Ratio	0.46	0.46			0.46			0.33			0.33	
Clearance Time (s)	4.5	4.5			4.5			4.5			4.5	
Vehicle Extension (s)	0.2	0.2			0.2			0.2			0.2	
Lane Grp Cap (vph)	397	1606			791			527			493	
v/s Ratio Prot		0.10										
v/s Ratio Perm	0.04				c0.26			c0.10			0.04	
v/c Ratio	0.10	0.22			0.57			0.31			0.13	
Uniform Delay, d1	6.5	7.0			8.5			10.6			9.9	
Progression Factor	1.00	1.00			1.00			1.00			1.00	
Incremental Delay, d2	0.0	0.0			0.6			0.1			0.0	
Delay (s)	6.6	7.0			9.1			10.7			9.9	
Level of Service	A	A			A			B			A	
Approach Delay (s)		6.9			9.1			10.7			9.9	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	42.3	Sum of lost time (s)	9.0
Intersection Capacity Utilization	64.5%	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												
Volume (vph)	141	99	25	98	90	77	14	445	50	104	429	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.2	4.2	4.0	4.2		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.93		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1733		1770	3486		1770	3432	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.41	1.00		0.39	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1733		760	3486		722	3432	
Peak-hour factor, PHF	0.72	0.72	0.72	0.87	0.87	0.87	0.82	0.82	0.82	0.94	0.94	0.94
Adj. Flow (vph)	196	138	35	113	103	89	17	543	61	111	456	116
RTOR Reduction (vph)	0	0	28	0	57	0	0	15	0	0	39	0
Lane Group Flow (vph)	196	138	7	113	135	0	17	589	0	111	533	0
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8			4		
Actuated Green, G (s)	8.3	9.7	9.7	5.4	6.8		20.1	20.1		20.1	20.1	
Effective Green, g (s)	8.3	9.7	9.7	5.4	6.8		20.1	20.1		20.1	20.1	
Actuated g/C Ratio	0.17	0.20	0.20	0.11	0.14		0.42	0.42		0.42	0.42	
Clearance Time (s)	4.0	4.2	4.2	4.0	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		6.0	6.0		6.0	6.0	
Lane Grp Cap (vph)	308	379	322	200	247		320	1472		304	1449	
v/s Ratio Prot	c0.11	c0.07		0.06	c0.08			c0.17			0.16	
v/s Ratio Perm			0.00				0.02			0.15		
v/c Ratio	0.64	0.36	0.02	0.56	0.54		0.05	0.40		0.37	0.37	
Uniform Delay, d1	18.2	16.3	15.2	20.0	19.0		8.1	9.6		9.4	9.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.2	0.2	0.0	2.2	1.3		0.2	0.5		2.1	0.4	
Delay (s)	21.4	16.5	15.2	22.2	20.3		8.3	10.1		11.5	9.9	
Level of Service	C	B	B	C	C		A	B		B	A	
Approach Delay (s)		19.0			21.0			10.0			10.1	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	47.6	Sum of lost time (s)	12.4
Intersection Capacity Utilization	52.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	176	180	200	0	0	0	0	560	101	311	439	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.7	4.7	4.7					5.2		5.2	5.2	
Lane Util. Factor	1.00	1.00	1.00					0.95		1.00	0.95	
Frt	1.00	1.00	0.85					0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583					3458		1770	3539	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583					3458		1770	3539	
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.92	0.92	0.91	0.91	0.91	0.94	0.94	0.94
Adj. Flow (vph)	198	202	225	0	0	0	0	615	111	331	467	0
RTOR Reduction (vph)	0	0	152	0	0	0	0	20	0	0	0	0
Lane Group Flow (vph)	198	202	73	0	0	0	0	706	0	331	467	0
Turn Type	Split	NA	Perm					NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	18.8	18.8	18.8					17.7		6.3	29.2	
Effective Green, g (s)	18.8	18.8	18.8					17.7		6.3	29.2	
Actuated g/C Ratio	0.32	0.32	0.32					0.31		0.11	0.50	
Clearance Time (s)	4.7	4.7	4.7					5.2		5.2	5.2	
Vehicle Extension (s)	6.2	6.2	6.2					0.2		2.0	0.2	
Lane Grp Cap (vph)	574	604	513					1057		192	1784	
v/s Ratio Prot	c0.11	0.11						c0.20		c0.19	0.13	
v/s Ratio Perm			0.05									
v/c Ratio	0.34	0.33	0.14					0.67		1.72	0.26	
Uniform Delay, d1	14.9	14.8	13.8					17.5		25.8	8.2	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	1.1	1.0	0.4					1.2		346.8	0.0	
Delay (s)	15.9	15.8	14.2					18.8		372.6	8.2	
Level of Service	B	B	B					B		F	A	
Approach Delay (s)		15.3			0.0			18.8			159.3	
Approach LOS		B			A			B			F	

Intersection Summary			
HCM 2000 Control Delay	70.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	57.9	Sum of lost time (s)	15.1
Intersection Capacity Utilization	71.9%	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												
Volume (vph)	0	0	0	95	108	225	306	401	0	0	666	584
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)					5.4	5.4	3.7	5.2			5.2	5.2
Lane Util. Factor					0.95	1.00	1.00	0.95			0.95	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.98	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					3459	1583	1770	3539			3539	1583
Flt Permitted					0.98	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					3459	1583	1770	3539			3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.86	0.86	0.86	0.82	0.82	0.82	0.86	0.86	0.86
Adj. Flow (vph)	0	0	0	110	126	262	373	489	0	0	774	679
RTOR Reduction (vph)	0	0	0	0	0	201	0	0	0	0	0	387
Lane Group Flow (vph)	0	0	0	0	236	61	373	489	0	0	774	292
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)					13.1	13.1	11.4	33.0			17.9	17.9
Effective Green, g (s)					13.1	13.1	11.4	33.0			17.9	17.9
Actuated g/C Ratio					0.23	0.23	0.20	0.58			0.32	0.32
Clearance Time (s)					5.4	5.4	3.7	5.2			5.2	5.2
Vehicle Extension (s)					5.0	5.0	2.0	0.2			0.2	0.2
Lane Grp Cap (vph)					799	365	355	2059			1117	499
v/s Ratio Prot					c0.07		c0.21	0.14			c0.22	
v/s Ratio Perm						0.04						0.18
v/c Ratio					0.30	0.17	1.05	0.24			0.69	0.58
Uniform Delay, d1					18.0	17.4	22.7	5.7			17.0	16.3
Progression Factor					1.00	1.00	1.00	1.00			1.00	1.00
Incremental Delay, d2					0.4	0.5	61.7	0.0			1.5	1.1
Delay (s)					18.4	17.9	84.3	5.8			18.5	17.4
Level of Service					B	B	F	A			B	B
Approach Delay (s)		0.0			18.1			39.8			18.0	
Approach LOS		A			B			D			B	

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	56.7	Sum of lost time (s)	14.3
Intersection Capacity Utilization	71.9%	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												
Volume (vph)	0	120	0	0	244	0	0	374	0	0	740	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5			4.2			4.2	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		1.00			1.00			1.00			1.00	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		3539			3539			3539			3539	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		3539			3539			3539			3539	
Peak-hour factor, PHF	0.88	0.88	0.88	0.85	0.85	0.85	0.90	0.90	0.90	0.79	0.79	0.79
Adj. Flow (vph)	0	136	0	0	287	0	0	416	0	0	937	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	136	0	0	287	0	0	416	0	0	937	0
Turn Type	Perm	NA	Perm	Perm	NA			NA			NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4								2
Actuated Green, G (s)		8.6			8.6			30.3			30.3	
Effective Green, g (s)		8.6			8.6			30.3			30.3	
Actuated g/C Ratio		0.18			0.18			0.64			0.64	
Clearance Time (s)		4.5			4.5			4.2			4.2	
Vehicle Extension (s)		2.0			2.0			5.0			5.0	
Lane Grp Cap (vph)		639			639			2252			2252	
v/s Ratio Prot		0.04			c0.08			0.12			c0.26	
v/s Ratio Perm												
v/c Ratio		0.21			0.45			0.18			0.42	
Uniform Delay, d1		16.6			17.4			3.6			4.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.1			0.2			0.1			0.3	
Delay (s)		16.7			17.6			3.6			4.5	
Level of Service		B			B			A			A	
Approach Delay (s)		16.7			17.6			3.6			4.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	47.6	Sum of lost time (s)	8.7
Intersection Capacity Utilization	37.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	9	118	298	35	370	157	78	369	32	95	670	9
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	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	2049	1742	1947	3719		1947	3846		1947	3885	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1947	2049	1742	1947	3719		1947	3846		1947	3885	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	128	324	38	402	171	85	401	35	103	728	10
RTOR Reduction (vph)	0	0	220	0	85	0	0	11	0	0	1	0
Lane Group Flow (vph)	10	128	104	38	488	0	85	425	0	103	737	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6									
Actuated Green, G (s)	0.6	11.9	11.9	1.2	12.5		2.0	13.6		3.0	14.6	
Effective Green, g (s)	0.6	11.9	11.9	1.2	12.5		2.0	13.6		3.0	14.6	
Actuated g/C Ratio	0.01	0.26	0.26	0.03	0.27		0.04	0.30		0.07	0.32	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	25	533	453	51	1017		85	1144		127	1241	
v/s Ratio Prot	0.01	0.06		c0.02	c0.13		0.04	0.11		c0.05	c0.19	
v/s Ratio Perm			0.06									
v/c Ratio	0.40	0.24	0.23	0.75	0.48		1.00	0.37		0.81	0.59	
Uniform Delay, d1	22.4	13.3	13.3	22.1	13.9		21.9	12.7		21.1	13.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.2	0.2	0.3	44.3	0.4		97.6	0.2		31.0	0.8	
Delay (s)	32.5	13.6	13.6	66.4	14.2		119.5	12.9		52.1	13.8	
Level of Service	C	B	B	E	B		F	B		D	B	
Approach Delay (s)		14.0			17.5			30.3			18.5	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	45.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	139	8	63	89	14	115	11	334	20	72	518	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.8	4.8		4.8	4.8			4.8		4.8	4.8	4.8
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95		1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.87			0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1615		1770	1614			3505		1770	1863	1583
Flt Permitted	0.65	1.00		0.68	1.00			0.93		0.52	1.00	1.00
Satd. Flow (perm)	1216	1615		1261	1614			3282		961	1863	1583
Peak-hour factor, PHF	0.57	0.57	0.57	0.78	0.78	0.78	0.91	0.91	0.91	0.92	0.92	0.92
Adj. Flow (vph)	244	14	111	114	18	147	12	367	22	78	563	84
RTOR Reduction (vph)	0	78	0	0	104	0	0	7	0	0	0	49
Lane Group Flow (vph)	244	47	0	114	61	0	0	394	0	78	563	35
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		2
Actuated Green, G (s)	10.0	10.0		10.0	10.0			14.3		14.3	14.3	14.3
Effective Green, g (s)	10.0	10.0		10.0	10.0			14.3		14.3	14.3	14.3
Actuated g/C Ratio	0.29	0.29		0.29	0.29			0.42		0.42	0.42	0.42
Clearance Time (s)	4.8	4.8		4.8	4.8			4.8		4.8	4.8	4.8
Vehicle Extension (s)	0.2	0.2		0.2	0.2			0.2		0.2	0.2	0.2
Lane Grp Cap (vph)	358	476		371	476			1384		405	785	667
v/s Ratio Prot		0.03			0.04						c0.30	
v/s Ratio Perm	c0.20			0.09				0.12		0.08		0.02
v/c Ratio	0.68	0.10		0.31	0.13			0.28		0.19	0.72	0.05
Uniform Delay, d1	10.5	8.7		9.3	8.8			6.4		6.2	8.1	5.8
Progression Factor	1.00	1.00		1.00	1.00			1.00		1.00	1.00	1.00
Incremental Delay, d2	4.2	0.0		0.2	0.0			0.0		0.1	2.6	0.0
Delay (s)	14.8	8.7		9.4	8.8			6.5		6.3	10.7	5.8
Level of Service	B	A		A	A			A		A	B	A
Approach Delay (s)		12.7			9.1			6.5			9.7	
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	0.70		
Actuated Cycle Length (s)	33.9	Sum of lost time (s)	9.6
Intersection Capacity Utilization	69.0%	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												
Volume (vph)	62	222	179	139	392	146	256	369	64	64	375	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.1	4.2		4.1	4.2		4.1	4.2		4.1	4.2	
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.93		1.00	0.96		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1738		1770	3395		1770	3460		1770	3479	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1738		1770	3395		1770	3460		1770	3479	
Peak-hour factor, PHF	0.87	0.87	0.87	0.92	0.92	0.92	0.99	0.99	0.99	0.83	0.83	0.83
Adj. Flow (vph)	71	255	206	151	426	159	259	373	65	77	452	58
RTOR Reduction (vph)	0	29	0	0	38	0	0	13	0	0	11	0
Lane Group Flow (vph)	71	432	0	151	547	0	259	425	0	77	499	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	7.4	22.9		12.3	27.8		15.3	28.9		7.8	21.4	
Effective Green, g (s)	7.4	22.9		12.3	27.8		15.3	28.9		7.8	21.4	
Actuated g/C Ratio	0.08	0.26		0.14	0.31		0.17	0.33		0.09	0.24	
Clearance Time (s)	4.1	4.2		4.1	4.2		4.1	4.2		4.1	4.2	
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	148	449		246	1066		306	1129		156	841	
v/s Ratio Prot	0.04	c0.25		c0.09	0.16		c0.15	0.12		0.04	c0.14	
v/s Ratio Perm												
v/c Ratio	0.48	0.96		0.61	0.51		0.85	0.38		0.49	0.59	
Uniform Delay, d1	38.7	32.4		35.9	24.8		35.5	22.9		38.5	29.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.4	33.2		4.5	0.8		18.9	0.4		2.4	1.7	
Delay (s)	41.2	65.6		40.4	25.7		54.4	23.3		40.9	31.4	
Level of Service	D	E		D	C		D	C		D	C	
Approach Delay (s)		62.3			28.7			34.9			32.7	
Approach LOS		E			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	38.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	88.5	Sum of lost time (s)	16.6
Intersection Capacity Utilization	70.2%	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												
Volume (vph)	47	195	38	0	0	0	0	549	125	49	467	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2					4.2		4.2	4.2	
Lane Util. Factor		0.91	1.00					0.95		1.00	0.95	
Frt		1.00	0.85					0.97		1.00	1.00	
Flt Protected		0.99	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		5037	1583					3441		1770	3539	
Flt Permitted		0.99	1.00					1.00		0.28	1.00	
Satd. Flow (perm)		5037	1583					3441		530	3539	
Peak-hour factor, PHF	0.82	0.82	0.82	0.92	0.92	0.92	0.81	0.81	0.81	0.91	0.91	0.91
Adj. Flow (vph)	57	238	46	0	0	0	0	678	154	54	513	0
RTOR Reduction (vph)	0	0	31	0	0	0	0	33	0	0	0	0
Lane Group Flow (vph)	0	295	15	0	0	0	0	799	0	54	513	0
Turn Type	Split	NA	Perm					NA		Perm	NA	
Protected Phases	4	4						2			2	
Permitted Phases			4							2		
Actuated Green, G (s)		20.0	20.0					31.0		31.0	31.0	
Effective Green, g (s)		20.0	20.0					31.0		31.0	31.0	
Actuated g/C Ratio		0.34	0.34					0.52		0.52	0.52	
Clearance Time (s)		4.2	4.2					4.2		4.2	4.2	
Vehicle Extension (s)		0.2	0.2					0.2		0.2	0.2	
Lane Grp Cap (vph)		1695	532					1795		276	1846	
v/s Ratio Prot		c0.06						c0.23			0.14	
v/s Ratio Perm			0.01							0.10		
v/c Ratio		0.17	0.03					0.45		0.20	0.28	
Uniform Delay, d1		13.9	13.2					8.8		7.6	7.9	
Progression Factor		1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2		0.0	0.0					0.1		0.1	0.0	
Delay (s)		13.9	13.2					8.9		7.7	8.0	
Level of Service		B	B					A		A	A	
Approach Delay (s)		13.8			0.0			8.9			7.9	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	59.4	Sum of lost time (s)	8.4
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	44	305	94	106	606	0	0	415	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	15	12	15	15	15	12	12	15	15	12	12
Total Lost time (s)					4.2		4.2	4.2			4.2	
Lane Util. Factor					0.95		1.00	0.95			0.95	
Frt					0.97		1.00	1.00			0.98	
Flt Protected					1.00		0.95	1.00			1.00	
Satd. Flow (prot)					3750		1770	3539			3459	
Flt Permitted					1.00		0.45	1.00			1.00	
Satd. Flow (perm)					3750		831	3539			3459	
Peak-hour factor, PHF	0.92	0.92	0.92	0.80	0.80	0.80	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	55	381	118	115	659	0	0	437	78
RTOR Reduction (vph)	0	0	0	0	47	0	0	0	0	0	28	0
Lane Group Flow (vph)	0	0	0	0	507	0	115	659	0	0	487	0
Turn Type				Split	NA		Perm	NA			NA	
Protected Phases				2	2			4			4	
Permitted Phases							4					
Actuated Green, G (s)					19.8		23.8	23.8			23.8	
Effective Green, g (s)					19.8		23.8	23.8			23.8	
Actuated g/C Ratio					0.38		0.46	0.46			0.46	
Clearance Time (s)					4.2		4.2	4.2			4.2	
Vehicle Extension (s)					0.2		0.2	0.2			0.2	
Lane Grp Cap (vph)					1427		380	1619			1583	
v/s Ratio Prot					c0.14			c0.19			0.14	
v/s Ratio Perm							0.14					
v/c Ratio					0.36		0.30	0.41			0.31	
Uniform Delay, d1					11.5		8.9	9.4			8.9	
Progression Factor					1.00		1.00	1.00			1.00	
Incremental Delay, d2					0.1		0.2	0.1			0.0	
Delay (s)					11.6		9.0	9.5			8.9	
Level of Service					B		A	A			A	
Approach Delay (s)		0.0			11.6			9.4			8.9	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	52.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	150	229	39	78	215	94	43	608	81	56	356	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1778		1770	3539	1583	1770	3539	1583
Flt Permitted	0.40	1.00	1.00	0.58	1.00		0.52	1.00	1.00	0.33	1.00	1.00
Satd. Flow (perm)	744	1863	1583	1083	1778		960	3539	1583	616	3539	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.75	0.75	0.75	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	161	246	42	104	287	125	48	683	91	63	400	116
RTOR Reduction (vph)	0	0	24	0	21	0	0	0	52	0	0	66
Lane Group Flow (vph)	161	246	18	104	391	0	48	683	39	63	400	50
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			2			4			4	
Permitted Phases	2	2	2	2			4		4	4		4
Actuated Green, G (s)	25.3	25.3	25.3	25.3	25.3		26.0	26.0	26.0	26.0	26.0	26.0
Effective Green, g (s)	25.3	25.3	25.3	25.3	25.3		26.0	26.0	26.0	26.0	26.0	26.0
Actuated g/C Ratio	0.42	0.42	0.42	0.42	0.42		0.43	0.43	0.43	0.43	0.43	0.43
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	0.2	0.2	0.2	0.2	0.2		0.2	0.2	0.2	0.2	0.2	0.2
Lane Grp Cap (vph)	312	781	664	454	745		413	1525	682	265	1525	682
v/s Ratio Prot		0.13			c0.22			c0.19			0.11	
v/s Ratio Perm	0.22		0.01	0.10			0.05		0.02	0.10		0.03
v/c Ratio	0.52	0.31	0.03	0.23	0.52		0.12	0.45	0.06	0.24	0.26	0.07
Uniform Delay, d1	13.0	11.7	10.3	11.2	13.0		10.3	12.1	10.0	10.9	11.0	10.1
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	0.6	0.1	0.0	0.1	0.3		0.0	0.1	0.0	0.2	0.0	0.0
Delay (s)	13.6	11.8	10.3	11.3	13.3		10.3	12.2	10.0	11.0	11.0	10.1
Level of Service	B	B	B	B	B		B	B	B	B	B	B
Approach Delay (s)		12.3			12.9			11.8			10.8	
Approach LOS		B			B			B			B	

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)	60.3	Sum of lost time (s)	9.0
Intersection Capacity Utilization	99.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL2	NEL	NER
Lane Configurations												
Volume (vph)	21	146	10	266	66	196	323	238	17	8	318	503
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6		4.6	4.6	4.6	4.0	4.6	4.6	4.0	4.6	4.6
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.88	1.00	1.00	0.97	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00	1.00	0.95	0.95	1.00
Satd. Flow (prot)	1770	1845		1681	1717	1583	1770	2787	1583	1770	3433	1583
Flt Permitted	0.54	1.00		0.59	0.65	1.00	0.95	1.00	1.00	0.95	0.95	1.00
Satd. Flow (perm)	1000	1845		1045	1154	1583	1770	2787	1583	1770	3433	1583
Peak-hour factor, PHF	0.84	0.84	0.84	0.85	0.85	0.85	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	25	174	12	313	78	231	351	259	18	10	383	606
RTOR Reduction (vph)	0	4	0	0	0	176	0	0	8	0	0	240
Lane Group Flow (vph)	25	182	0	188	203	55	351	259	10	10	383	366
Turn Type	Perm	NA		Perm	NA	Perm	NA	custom	custom	Prot	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4		4			2			6
Actuated Green, G (s)	15.7	15.7		15.7	15.7	15.7	16.5	36.9	36.9	0.4	20.8	20.8
Effective Green, g (s)	15.7	15.7		15.7	15.7	15.7	16.5	36.9	36.9	0.4	20.8	20.8
Actuated g/C Ratio	0.24	0.24		0.24	0.24	0.24	0.25	0.56	0.56	0.01	0.31	0.31
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6	4.0	4.6	4.6	4.0	4.6	4.6
Vehicle Extension (s)	3.0	3.0		3.5	3.5	3.5	3.0	4.8	4.8	2.0	4.8	4.8
Lane Grp Cap (vph)	237	437		247	273	375	441	1553	882	10	1078	497
v/s Ratio Prot		0.10					c0.20	0.09		0.01	0.11	
v/s Ratio Perm	0.03			c0.18	0.18	0.03			0.01			c0.23
v/c Ratio	0.11	0.42		0.76	0.74	0.15	0.80	0.17	0.01	1.00	0.36	0.74
Uniform Delay, d1	19.8	21.4		23.5	23.4	20.0	23.3	7.1	6.5	32.9	17.5	20.3
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	0.2	0.6		13.3	10.8	0.2	9.6	0.1	0.0	284.6	0.4	6.6
Delay (s)	20.0	22.0		36.8	34.2	20.2	32.9	7.2	6.5	317.5	17.9	26.9
Level of Service	B	C		D	C	C	C	A	A	F	B	C
Approach Delay (s)		21.8			29.8		21.5				26.3	
Approach LOS		C			C		C				C	

Intersection Summary			
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	66.2	Sum of lost time (s)	13.2
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (vph)	9	105	103	387	277	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.67	1.00	0.51	1.00	1.00	1.00
Satd. Flow (perm)	1248	1583	941	1863	1863	1583
Peak-hour factor, PHF	0.61	0.61	0.76	0.76	0.78	0.78
Adj. Flow (vph)	15	172	136	509	355	28
RTOR Reduction (vph)	0	116	0	0	0	13
Lane Group Flow (vph)	15	56	136	509	355	15
Turn Type	NA	custom	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	19.0	19.0	30.1	30.1	30.1	30.1
Effective Green, g (s)	19.0	19.0	30.1	30.1	30.1	30.1
Actuated g/C Ratio	0.33	0.33	0.52	0.52	0.52	0.52
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	0.2	0.2	0.2	0.2	0.2	0.2
Lane Grp Cap (vph)	408	517	487	965	965	820
v/s Ratio Prot				c0.27	0.19	
v/s Ratio Perm	0.01	c0.04	0.14			0.01
v/c Ratio	0.04	0.11	0.28	0.53	0.37	0.02
Uniform Delay, d1	13.3	13.6	7.9	9.3	8.3	6.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.0	0.1	0.2	0.1	0.0
Delay (s)	13.3	13.7	8.0	9.5	8.4	6.8
Level of Service	B	B	A	A	A	A
Approach Delay (s)	13.6			9.2	8.3	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	58.1	Sum of lost time (s)	9.0
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	32	156	0	0	114	22	99	307	20	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.91				
Frt		1.00			0.98			0.99				
Flt Protected		0.99			1.00			0.99				
Satd. Flow (prot)		3509			3452			4992				
Flt Permitted		0.89			1.00			0.99				
Satd. Flow (perm)		3138			3452			4992				
Peak-hour factor, PHF	0.85	0.85	0.85	0.77	0.77	0.77	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	38	184	0	0	148	29	111	345	22	0	0	0
RTOR Reduction (vph)	0	0	0	0	19	0	0	10	0	0	0	0
Lane Group Flow (vph)	0	222	0	0	158	0	0	468	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		8			4		2	2				
Permitted Phases	8											
Actuated Green, G (s)		19.0			19.0			25.0				
Effective Green, g (s)		19.0			19.0			25.0				
Actuated g/C Ratio		0.35			0.35			0.46				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		0.2			0.2			0.2				
Lane Grp Cap (vph)		1104			1214			2311				
v/s Ratio Prot					0.05			c0.09				
v/s Ratio Perm		c0.07										
v/c Ratio		0.20			0.13			0.20				
Uniform Delay, d1		12.2			11.9			8.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		0.0			0.0			0.0				
Delay (s)		12.2			11.9			8.6				
Level of Service		B			B			A				
Approach Delay (s)		12.2			11.9			8.6			0.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	55.9%	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												
Volume (vph)	63	29	0	0	62	37	29	238	29	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6			4.2	4.2		4.2	4.2			
Lane Util. Factor	0.95	0.95			1.00	1.00		0.91	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	0.98			1.00	1.00		0.99	1.00			
Satd. Flow (prot)	1681	1736			1863	1583		5057	1583			
Flt Permitted	0.95	0.98			1.00	1.00		0.99	1.00			
Satd. Flow (perm)	1681	1736			1863	1583		5057	1583			
Peak-hour factor, PHF	0.85	0.85	0.85	0.52	0.52	0.52	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	74	34	0	0	119	71	31	251	31	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	60	0	0	19	0	0	0
Lane Group Flow (vph)	53	55	0	0	119	11	0	282	12	0	0	0
Turn Type	Split	NA			NA	Perm	Split	NA	Perm			
Protected Phases	2	2			1		8	8				
Permitted Phases						1			8			
Actuated Green, G (s)	4.2	4.2			5.9	5.9		13.7	13.7			
Effective Green, g (s)	4.2	4.2			5.9	5.9		13.7	13.7			
Actuated g/C Ratio	0.11	0.11			0.16	0.16		0.37	0.37			
Clearance Time (s)	4.6	4.6			4.2	4.2		4.2	4.2			
Vehicle Extension (s)	3.8	3.8			2.0	2.0		2.0	2.0			
Lane Grp Cap (vph)	191	198			298	253		1882	589			
v/s Ratio Prot	0.03	c0.03			c0.06			c0.06				
v/s Ratio Perm						0.01			0.01			
v/c Ratio	0.28	0.28			0.40	0.04		0.15	0.02			
Uniform Delay, d1	14.9	14.9			13.9	13.1		7.7	7.3			
Progression Factor	1.00	1.00			1.00	1.00		1.00	1.00			
Incremental Delay, d2	1.0	1.0			0.3	0.0		0.0	0.0			
Delay (s)	15.9	15.9			14.2	13.1		7.7	7.3			
Level of Service	B	B			B	B		A	A			
Approach Delay (s)		15.9			13.8			7.7			0.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	36.8	Sum of lost time (s)	13.0
Intersection Capacity Utilization	58.7%	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												
Volume (vph)	9	226	0	0	655	81	44	263	79	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2			4.2			4.2				
Lane Util. Factor	1.00	1.00			1.00			0.91				
Frt	1.00	1.00			0.99			0.97				
Flt Protected	0.95	1.00			1.00			0.99				
Satd. Flow (prot)	1770	1863			1835			4901				
Flt Permitted	0.12	1.00			1.00			0.99				
Satd. Flow (perm)	229	1863			1835			4901				
Peak-hour factor, PHF	0.87	0.87	0.87	0.86	0.86	0.86	0.76	0.76	0.76	0.92	0.92	0.92
Adj. Flow (vph)	10	260	0	0	762	94	58	346	104	0	0	0
RTOR Reduction (vph)	0	0	0	0	6	0	0	67	0	0	0	0
Lane Group Flow (vph)	10	260	0	0	850	0	0	441	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		2			6		8	8				
Permitted Phases	2											
Actuated Green, G (s)	32.6	32.6			32.6			22.1				
Effective Green, g (s)	32.6	32.6			32.6			22.1				
Actuated g/C Ratio	0.52	0.52			0.52			0.35				
Clearance Time (s)	4.2	4.2			4.2			4.2				
Vehicle Extension (s)	0.2	0.2			0.2			0.2				
Lane Grp Cap (vph)	118	962			948			1716				
v/s Ratio Prot		0.14			c0.46			c0.09				
v/s Ratio Perm	0.04											
v/c Ratio	0.08	0.27			0.90			0.26				
Uniform Delay, d1	7.7	8.6			13.7			14.6				
Progression Factor	1.00	1.00			1.00			1.00				
Incremental Delay, d2	0.1	0.1			10.7			0.0				
Delay (s)	7.8	8.6			24.4			14.7				
Level of Service	A	A			C			B				
Approach Delay (s)		8.6			24.4			14.7			0.0	
Approach LOS		A			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	63.1	Sum of lost time (s)	8.4
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	112	426	49	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2			
Lane Util. Factor		1.00	0.91			
Frt		0.86	0.98			
Flt Protected		1.00	1.00			
Satd. Flow (prot)		1611	5007			
Flt Permitted		1.00	1.00			
Satd. Flow (perm)		1611	5007			
Peak-hour factor, PHF	0.85	0.85	0.69	0.69	0.92	0.92
Adj. Flow (vph)	0	132	617	71	0	0
RTOR Reduction (vph)	0	116	20	0	0	0
Lane Group Flow (vph)	0	16	668	0	0	0
Turn Type		custom	NA			
Protected Phases			8			
Permitted Phases		2				
Actuated Green, G (s)		3.4	16.1			
Effective Green, g (s)		3.4	16.1			
Actuated g/C Ratio		0.12	0.58			
Clearance Time (s)		4.2	4.2			
Vehicle Extension (s)		0.2	6.0			
Lane Grp Cap (vph)		196	2889			
v/s Ratio Prot			c0.13			
v/s Ratio Perm		c0.01				
v/c Ratio		0.08	0.23			
Uniform Delay, d1		10.9	2.9			
Progression Factor		1.00	1.00			
Incremental Delay, d2		0.1	0.1			
Delay (s)		10.9	3.0			
Level of Service		B	A			
Approach Delay (s)	10.9		3.0		0.0	
Approach LOS	B		A		A	

Intersection Summary			
HCM 2000 Control Delay	4.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	27.9	Sum of lost time (s)	8.4
Intersection Capacity Utilization	23.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	141	337	42	159	0	0	0	0	39	730	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.4			5.4						5.4	5.4
Lane Util. Factor		0.95			0.95						0.91	1.00
Frt		0.89			1.00						1.00	0.85
Flt Protected		1.00			0.99						1.00	1.00
Satd. Flow (prot)		3165			3503						5072	1583
Flt Permitted		1.00			0.75						1.00	1.00
Satd. Flow (perm)		3165			2640						5072	1583
Peak-hour factor, PHF	0.78	0.78	0.78	0.85	0.85	0.85	0.92	0.92	0.92	0.74	0.74	0.74
Adj. Flow (vph)	0	181	432	49	187	0	0	0	0	53	986	114
RTOR Reduction (vph)	0	68	0	0	0	0	0	0	0	0	0	76
Lane Group Flow (vph)	0	545	0	0	236	0	0	0	0	0	1039	38
Turn Type		NA		Perm	NA					Split	NA	Perm
Protected Phases		2			2					8	8	
Permitted Phases				2								8
Actuated Green, G (s)		7.9			7.9						9.5	9.5
Effective Green, g (s)		7.9			7.9						9.5	9.5
Actuated g/C Ratio		0.28			0.28						0.34	0.34
Clearance Time (s)		5.4			5.4						5.4	5.4
Vehicle Extension (s)		0.2			0.2						0.2	0.2
Lane Grp Cap (vph)		886			739						1708	533
v/s Ratio Prot		c0.17									c0.20	
v/s Ratio Perm					0.09							0.02
v/c Ratio		0.61			0.32						0.61	0.07
Uniform Delay, d1		8.8			8.0						7.8	6.4
Progression Factor		1.00			1.00						1.00	1.00
Incremental Delay, d2		0.9			0.1						0.4	0.0
Delay (s)		9.7			8.1						8.2	6.4
Level of Service		A			A						A	A
Approach Delay (s)		9.7			8.1			0.0			8.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	28.2	Sum of lost time (s)	10.8
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	44	76	75	46	0	0	0	0	30	534	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		4.2	4.2					4.2	4.2	4.2
Lane Util. Factor		0.95		1.00	1.00					1.00	0.95	1.00
Frt		0.90		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3201		1770	1863					1770	3539	1583
Flt Permitted		1.00		0.67	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3201		1245	1863					1770	3539	1583
Peak-hour factor, PHF	0.91	0.91	0.91	0.69	0.69	0.69	0.92	0.92	0.92	0.78	0.78	0.78
Adj. Flow (vph)	0	48	84	109	67	0	0	0	0	38	685	46
RTOR Reduction (vph)	0	63	0	0	0	0	0	0	0	0	0	19
Lane Group Flow (vph)	0	69	0	109	67	0	0	0	0	38	685	27
Turn Type		NA		Perm	NA					Split	NA	Perm
Protected Phases		2			2					4	4	
Permitted Phases				2								4
Actuated Green, G (s)		14.0		14.0	14.0					32.3	32.3	32.3
Effective Green, g (s)		14.0		14.0	14.0					32.3	32.3	32.3
Actuated g/C Ratio		0.26		0.26	0.26					0.59	0.59	0.59
Clearance Time (s)		4.2		4.2	4.2					4.2	4.2	4.2
Vehicle Extension (s)		0.2		0.2	0.2					0.2	0.2	0.2
Lane Grp Cap (vph)		819		318	476					1045	2089	934
v/s Ratio Prot		0.02			0.04					0.02	c0.19	
v/s Ratio Perm				c0.09								0.02
v/c Ratio		0.08		0.34	0.14					0.04	0.33	0.03
Uniform Delay, d1		15.5		16.6	15.7					4.7	5.7	4.7
Progression Factor		1.00		1.00	1.00					1.00	1.00	1.00
Incremental Delay, d2		0.0		0.2	0.0					0.0	0.0	0.0
Delay (s)		15.5		16.8	15.8					4.7	5.7	4.7
Level of Service		B		B	B					A	A	A
Approach Delay (s)		15.5			16.4			0.0			5.6	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	54.7	Sum of lost time (s)	8.4
Intersection Capacity Utilization	58.7%	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												
Volume (vph)	0	98	5	122	578	0	0	0	0	137	409	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		4.2	4.2						4.2	
Lane Util. Factor		1.00		1.00	1.00						0.91	
Frt		0.99		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		1852		1770	1863						4977	
Flt Permitted		1.00		0.68	1.00						0.99	
Satd. Flow (perm)		1852		1276	1863						4977	
Peak-hour factor, PHF	0.92	0.92	0.92	0.81	0.81	0.81	0.92	0.92	0.92	0.80	0.80	0.80
Adj. Flow (vph)	0	107	5	151	714	0	0	0	0	171	511	48
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	109	0	151	714	0	0	0	0	0	717	0
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		2			6					4	4	
Permitted Phases				6								
Actuated Green, G (s)		29.6		29.6	29.6						22.0	
Effective Green, g (s)		29.6		29.6	29.6						22.0	
Actuated g/C Ratio		0.49		0.49	0.49						0.37	
Clearance Time (s)		4.2		4.2	4.2						4.2	
Vehicle Extension (s)		0.2		0.2	0.2						0.2	
Lane Grp Cap (vph)		913		629	919						1824	
v/s Ratio Prot		0.06			c0.38						c0.14	
v/s Ratio Perm				0.12								
v/c Ratio		0.12		0.24	0.78						0.39	
Uniform Delay, d1		8.2		8.7	12.5						14.1	
Progression Factor		1.00		1.00	1.00						1.00	
Incremental Delay, d2		0.3		0.1	3.8						0.1	
Delay (s)		8.5		8.8	16.3						14.1	
Level of Service		A		A	B						B	
Approach Delay (s)		8.5			15.0			0.0			14.1	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBR	SBR2	SER	NWL	NWT	SWL	SWT
Lane Configurations								
Volume (vph)	89	345	1	9	15	26	70	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12
Total Lost time (s)	4.9	4.9		4.2		4.0	4.6	4.6
Lane Util. Factor	1.00	0.88		1.00		1.00	1.00	0.95
Frt	1.00	0.85		0.86		1.00	1.00	1.00
Flt Protected	0.95	1.00		1.00		0.98	0.95	1.00
Satd. Flow (prot)	1770	2787		1611		1830	1770	3539
Flt Permitted	0.95	1.00		1.00		0.98	0.95	1.00
Satd. Flow (perm)	1770	2787		1611		1830	1770	3539
Peak-hour factor, PHF	0.86	0.86	0.86	0.63	0.51	0.51	0.64	0.64
Adj. Flow (vph)	103	401	1	14	29	51	109	184
RTOR Reduction (vph)	0	119	0	14	0	0	0	0
Lane Group Flow (vph)	103	283	0	0	0	80	109	184
Turn Type	NA	Prot		custom	Split	NA	Split	NA
Protected Phases	2	2		8	1	1	4	4
Permitted Phases								
Actuated Green, G (s)	12.3	12.3		0.8		6.5	7.3	7.3
Effective Green, g (s)	12.3	12.3		0.8		6.5	7.3	7.3
Actuated g/C Ratio	0.28	0.28		0.02		0.15	0.16	0.16
Clearance Time (s)	4.9	4.9		4.2		4.0	4.6	4.6
Vehicle Extension (s)	4.0	4.0		2.0		2.0	4.0	4.0
Lane Grp Cap (vph)	488	768		28		266	289	579
v/s Ratio Prot	0.06	c0.10		c0.00		c0.04	c0.06	0.05
v/s Ratio Perm								
v/c Ratio	0.21	0.37		0.01		0.30	0.38	0.32
Uniform Delay, d1	12.4	13.0		21.5		17.0	16.6	16.5
Progression Factor	1.00	1.00		1.00		1.00	1.00	1.00
Incremental Delay, d2	0.3	0.4		0.0		0.2	1.1	0.4
Delay (s)	12.7	13.4		21.6		17.3	17.8	16.9
Level of Service	B	B		C		B	B	B
Approach Delay (s)	13.3					17.3		17.2
Approach LOS	B					B		B

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	44.6	Sum of lost time (s)	17.7
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NWL2	NWL	NWR	NWR2
Lane Configurations										
Volume (vph)	220	249	7	68	177	162	104	117	729	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	5.2	5.2		5.2	5.2			5.2	5.2	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	0.76	
Frt	1.00	1.00		1.00	0.93			1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	
Satd. Flow (prot)	1770	3524		1770	3286			1770	3610	
Flt Permitted	0.49	1.00		0.58	1.00			0.95	1.00	
Satd. Flow (perm)	915	3524		1081	3286			1770	3610	
Peak-hour factor, PHF	0.92	0.92	0.92	0.75	0.75	0.75	0.67	0.67	0.67	0.67
Adj. Flow (vph)	239	271	8	91	236	216	155	175	1088	19
RTOR Reduction (vph)	0	24	0	0	18	0	0	54	24	0
Lane Group Flow (vph)	239	255	0	91	434	0	0	276	1083	0
Turn Type	Perm	NA		Perm	NA		Split	NA	Perm	
Protected Phases		4			4		2	2		
Permitted Phases	4			4					2	
Actuated Green, G (s)	23.4	23.4		23.4	23.4			23.4	23.4	
Effective Green, g (s)	23.4	23.4		23.4	23.4			23.4	23.4	
Actuated g/C Ratio	0.41	0.41		0.41	0.41			0.41	0.41	
Clearance Time (s)	5.2	5.2		5.2	5.2			5.2	5.2	
Vehicle Extension (s)	0.2	0.2		0.2	0.2			0.2	0.2	
Lane Grp Cap (vph)	374	1441		442	1344			724	1476	
v/s Ratio Prot		0.07			0.13			0.16		
v/s Ratio Perm	c0.26			0.08					c0.30	
v/c Ratio	0.64	0.18		0.21	0.32			0.38	0.73	
Uniform Delay, d1	13.5	10.8		10.9	11.5			11.8	14.3	
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00	
Incremental Delay, d2	2.6	0.0		0.1	0.1			0.1	1.7	
Delay (s)	16.2	10.8		11.0	11.6			12.0	15.9	
Level of Service	B	B		B	B			B	B	
Approach Delay (s)		13.3			11.5			15.0		
Approach LOS		B			B			B		

Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	57.2	Sum of lost time (s)	10.4
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	379	16	0	294	0	0	0	0	92	411	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5					4.9	4.9	4.9
Lane Util. Factor		0.95			0.95					1.00	0.95	1.00
Frt		0.99			1.00					1.00	1.00	0.85
Flt Protected		1.00			1.00					0.95	1.00	1.00
Satd. Flow (prot)		3518			3539					1770	3539	1583
Flt Permitted		1.00			1.00					0.95	1.00	1.00
Satd. Flow (perm)		3518			3539					1770	3539	1583
Peak-hour factor, PHF	0.87	0.87	0.87	0.85	0.85	0.85	0.92	0.92	0.92	0.86	0.86	0.86
Adj. Flow (vph)	0	436	18	0	346	0	0	0	0	107	478	91
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0	0	0	58
Lane Group Flow (vph)	0	449	0	0	346	0	0	0	0	107	478	33
Turn Type		NA			NA					Split	NA	Perm
Protected Phases		4			4					2	2	
Permitted Phases												2
Actuated Green, G (s)		25.5			25.5					20.1	20.1	20.1
Effective Green, g (s)		25.5			25.5					20.1	20.1	20.1
Actuated g/C Ratio		0.46			0.46					0.37	0.37	0.37
Clearance Time (s)		4.5			4.5					4.9	4.9	4.9
Vehicle Extension (s)		5.0			5.0					5.0	5.0	5.0
Lane Grp Cap (vph)		1631			1640					646	1293	578
v/s Ratio Prot		c0.13			0.10					0.06	c0.14	
v/s Ratio Perm												0.02
v/c Ratio		0.28			0.21					0.17	0.37	0.06
Uniform Delay, d1		9.1			8.8					11.8	12.8	11.3
Progression Factor		1.00			1.00					1.00	1.00	1.00
Incremental Delay, d2		0.2			0.1					0.3	0.4	0.1
Delay (s)		9.3			8.9					12.0	13.2	11.4
Level of Service		A			A					B	B	B
Approach Delay (s)		9.3			8.9			0.0			12.8	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	9.4
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	3	369	383	383	2	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.90	0.90	0.71	0.71	0.33	0.33
Hourly flow rate (vph)	3	410	539	539	6	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1079				1226	809
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1079				1226	809
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				97	98
cM capacity (veh/h)	646				196	380

Direction, Lane #	SE 1	NW 1	SW 1
Volume Total	413	1079	12
Volume Left	3	0	6
Volume Right	0	539	6
cSH	646	1700	259
Volume to Capacity	0.01	0.63	0.05
Queue Length 95th (ft)	0	0	4
Control Delay (s)	0.2	0.0	19.6
Lane LOS	A		C
Approach Delay (s)	0.2	0.0	19.6
Approach LOS			C

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	53.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	15	231	33	5	357	30	18	20	22	15	20	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.4	5.4		5.4		5.4	5.4		5.4	5.4	
Lane Util. Factor		0.95	1.00		0.95		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.99		1.00	0.92		1.00	0.94	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3529	1583		3496		1770	1717		1770	1742	
Flt Permitted		0.92	1.00		0.95		0.72	1.00		0.73	1.00	
Satd. Flow (perm)		3264	1583		3330		1348	1717		1357	1742	
Peak-hour factor, PHF	0.87	0.87	0.87	0.79	0.79	0.79	0.94	0.94	0.94	0.69	0.69	0.69
Adj. Flow (vph)	17	266	38	6	452	38	19	21	23	22	29	22
RTOR Reduction (vph)	0	0	15	0	8	0	0	19	0	0	18	0
Lane Group Flow (vph)	0	283	23	0	488	0	19	25	0	22	33	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2			4			4		
Actuated Green, G (s)		32.6	32.6		32.6		9.4	9.4		9.4	9.4	
Effective Green, g (s)		32.6	32.6		32.6		9.4	9.4		9.4	9.4	
Actuated g/C Ratio		0.62	0.62		0.62		0.18	0.18		0.18	0.18	
Clearance Time (s)		5.4	5.4		5.4		5.4	5.4		5.4	5.4	
Vehicle Extension (s)		0.2	0.2		0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		2015	977		2056		239	305		241	310	
v/s Ratio Prot								0.01			c0.02	
v/s Ratio Perm		0.09	0.01		c0.15		0.01			0.02		
v/c Ratio		0.14	0.02		0.24		0.08	0.08		0.09	0.11	
Uniform Delay, d1		4.2	3.9		4.5		18.1	18.1		18.1	18.2	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0	0.0		0.0		0.1	0.0		0.1	0.1	
Delay (s)		4.2	3.9		4.5		18.1	18.1		18.2	18.2	
Level of Service		A	A		A		B	B		B	B	
Approach Delay (s)		4.2			4.5			18.1			18.2	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	6.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	52.8	Sum of lost time (s)	10.8
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	5	360	366	25	11	16
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.91	0.91	0.71	0.71	0.72	0.72
Hourly flow rate (vph)	5	396	515	35	15	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	551				940	533
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	551				940	533
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				95	96
cM capacity (veh/h)	1019				291	547

Direction, Lane #	SE 1	NW 1	SW 1
Volume Total	401	551	38
Volume Left	5	0	15
Volume Right	0	35	22
cSH	1019	1700	403
Volume to Capacity	0.01	0.32	0.09
Queue Length 95th (ft)	0	0	8
Control Delay (s)	0.2	0.0	14.9
Lane LOS	A		B
Approach Delay (s)	0.2	0.0	14.9
Approach LOS			B

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	62	15	124	9	16	142
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.5		4.9		4.9	4.9
Lane Util. Factor	1.00		0.95		1.00	1.00
Frt	0.97		0.99		1.00	1.00
Flt Protected	0.96		1.00		0.95	1.00
Satd. Flow (prot)	1744		3504		1770	1863
Flt Permitted	0.95		1.00		0.68	1.00
Satd. Flow (perm)	1729		3504		1263	1863
Peak-hour factor, PHF	0.77	0.77	0.88	0.88	0.90	0.90
Adj. Flow (vph)	81	19	141	10	18	158
RTOR Reduction (vph)	15	0	6	0	0	0
Lane Group Flow (vph)	85	0	145	0	18	158
Turn Type	NA		NA		Perm	NA
Protected Phases			2			2
Permitted Phases	4				2	
Actuated Green, G (s)	3.8		5.9		5.9	5.9
Effective Green, g (s)	3.8		5.9		5.9	5.9
Actuated g/C Ratio	0.20		0.31		0.31	0.31
Clearance Time (s)	4.5		4.9		4.9	4.9
Vehicle Extension (s)	5.0		4.0		4.0	4.0
Lane Grp Cap (vph)	343		1082		390	575
v/s Ratio Prot			0.04			c0.08
v/s Ratio Perm	c0.05				0.01	
v/c Ratio	0.25		0.13		0.05	0.27
Uniform Delay, d1	6.4		4.8		4.6	5.0
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	0.8		0.1		0.1	0.4
Delay (s)	7.2		4.8		4.7	5.3
Level of Service	A		A		A	A
Approach Delay (s)	7.2		4.8			5.3
Approach LOS	A		A			A

Intersection Summary			
HCM 2000 Control Delay	5.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	19.1	Sum of lost time (s)	9.4
Intersection Capacity Utilization	33.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBR2	SEL2	SEL
Lane Configurations												
Volume (vph)	31	9	7	511	2	4	302	11	19	6	1	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6		4.6	4.6				4.6	4.6	4.2		4.6
Lane Util. Factor	1.00		0.95	0.95				0.95	1.00	1.00		0.97
Frt	0.97		0.85	0.85				1.00	0.85	0.86		0.90
Flt Protected	1.00		1.00	1.00				0.95	1.00	1.00		0.98
Satd. Flow (prot)	1804		1511	1504				3376	1583	1611		3203
Flt Permitted	1.00		1.00	1.00				0.95	1.00	1.00		0.95
Satd. Flow (perm)	1804		1511	1504				3376	1583	1611		3112
Peak-hour factor, PHF	0.85	0.85	0.78	0.78	0.78	0.71	0.71	0.71	0.71	0.50	0.95	0.95
Adj. Flow (vph)	36	11	9	655	3	6	425	15	27	12	1	171
RTOR Reduction (vph)	8	0	0	48	0	0	0	0	23	10	0	52
Lane Group Flow (vph)	39	0	337	282	0	0	0	446	4	2	0	447
Turn Type	NA		NA	custom		Perm	Perm	NA	Perm	custom	Perm	NA
Protected Phases	6		6	2				4		8		5
Permitted Phases				6		4	4		4		5	2
Actuated Green, G (s)	21.6		21.6	33.1				12.0	12.0	12.4		29.5
Effective Green, g (s)	21.6		21.6	33.1				12.0	12.0	12.4		29.5
Actuated g/C Ratio	0.27		0.27	0.41				0.15	0.15	0.15		0.36
Clearance Time (s)	4.6		4.6	4.6				4.6	4.6	4.2		4.6
Vehicle Extension (s)	5.0		5.0	5.0				4.0	4.0	2.0		5.0
Lane Grp Cap (vph)	478		400	610				497	233	245		1146
v/s Ratio Prot	0.02		c0.22	c0.07						0.00		c0.09
v/s Ratio Perm				0.12				0.13	0.00			0.06
v/c Ratio	0.08		0.84	0.46				1.66dl	0.02	0.01		0.39
Uniform Delay, d1	22.5		28.3	17.7				34.1	29.7	29.3		19.3
Progression Factor	1.00		1.00	1.00				1.00	1.00	1.00		1.00
Incremental Delay, d2	0.2		16.2	1.2				19.0	0.0	0.0		0.5
Delay (s)	22.7		44.6	18.9				53.1	29.7	29.3		19.8
Level of Service	C		D	B				D	C	C		B
Approach Delay (s)	22.7		31.8					51.8				19.8
Approach LOS	C		C					D				B

Intersection Summary			
HCM 2000 Control Delay	33.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	81.5	Sum of lost time (s)	18.4
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	SER	SER2
Lane Configurations		
Volume (vph)	310	1
Ideal Flow (vphpl)	1900	1900
Lane Width	12	12
Total Lost time (s)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Peak-hour factor, PHF	0.95	0.95
Adj. Flow (vph)	326	1
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	0
Turn Type		
Protected Phases		
Permitted Phases		
Actuated Green, G (s)		
Effective Green, g (s)		
Actuated g/C Ratio		
Clearance Time (s)		
Vehicle Extension (s)		
Lane Grp Cap (vph)		
v/s Ratio Prot		
v/s Ratio Perm		
v/c Ratio		
Uniform Delay, d1		
Progression Factor		
Incremental Delay, d2		
Delay (s)		
Level of Service		
Approach Delay (s)		
Approach LOS		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	22	225	29	7	401	54	26	28	19	81	102	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.6	4.6		4.6		4.6	4.6		4.6	4.6	
Lane Util. Factor		0.95	1.00		0.95		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.98		1.00	0.94		1.00	0.99	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3524	1583		3475		1770	1750		1770	1841	
Flt Permitted		0.90	1.00		0.95		0.67	1.00		0.72	1.00	
Satd. Flow (perm)		3192	1583		3305		1245	1750		1341	1841	
Peak-hour factor, PHF	0.87	0.87	0.87	0.91	0.91	0.91	0.83	0.83	0.83	0.80	0.80	0.80
Adj. Flow (vph)	25	259	33	8	441	59	31	34	23	101	128	11
RTOR Reduction (vph)	0	0	16	0	18	0	0	17	0	0	6	0
Lane Group Flow (vph)	0	284	17	0	490	0	31	40	0	101	133	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4			2			2		
Actuated Green, G (s)		23.3	23.3		23.3		12.7	12.7		12.7	12.7	
Effective Green, g (s)		23.3	23.3		23.3		12.7	12.7		12.7	12.7	
Actuated g/C Ratio		0.52	0.52		0.52		0.28	0.28		0.28	0.28	
Clearance Time (s)		4.6	4.6		4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)		0.2	0.2		0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		1645	816		1703		349	491		376	517	
v/s Ratio Prot								0.02			0.07	
v/s Ratio Perm		0.09	0.01		c0.15		0.02			c0.08		
v/c Ratio		0.17	0.02		0.29		0.09	0.08		0.27	0.26	
Uniform Delay, d1		5.8	5.4		6.2		12.0	12.0		12.6	12.6	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0	0.0		0.0		0.0	0.0		0.1	0.1	
Delay (s)		5.8	5.4		6.3		12.0	12.0		12.8	12.7	
Level of Service		A	A		A		B	B		B	B	
Approach Delay (s)		5.8			6.3			12.0			12.7	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	7.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	45.2	Sum of lost time (s)	9.2
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	239	22	7	360	0	12	0	30	143	221	79
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5		4.5		4.5	4.5	4.5	
Lane Util. Factor		0.95			0.95		1.00		1.00	1.00	0.95	
Frt		0.99			1.00		1.00		0.85	1.00	0.96	
Flt Protected		1.00			1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		3495			3536		1770		1583	1770	3400	
Flt Permitted		1.00			0.95		0.56		1.00	0.95	1.00	
Satd. Flow (perm)		3495			3359		1036		1583	1770	3400	
Peak-hour factor, PHF	0.95	0.95	0.95	0.91	0.91	0.91	0.88	0.88	0.88	0.93	0.93	0.93
Adj. Flow (vph)	0	252	23	8	396	0	14	0	34	154	238	85
RTOR Reduction (vph)	0	11	0	0	0	0	0	0	20	0	50	0
Lane Group Flow (vph)	0	264	0	0	404	0	14	0	14	154	273	0
Turn Type		NA		Perm	NA		D.Pm		custom	Perm	NA	
Protected Phases		4			4				2		2	
Permitted Phases				4			2		2	2		
Actuated Green, G (s)		25.0			25.0		24.0		24.0	24.0	24.0	
Effective Green, g (s)		25.0			25.0		24.0		24.0	24.0	24.0	
Actuated g/C Ratio		0.43			0.43		0.41		0.41	0.41	0.41	
Clearance Time (s)		4.5			4.5		4.5		4.5	4.5	4.5	
Vehicle Extension (s)		2.0			2.0		2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)		1506			1447		428		655	732	1406	
v/s Ratio Prot		0.08							0.01		0.08	
v/s Ratio Perm					c0.12		0.01			c0.09		
v/c Ratio		0.18			0.28		0.03		0.02	0.21	0.19	
Uniform Delay, d1		10.2			10.7		10.1		10.1	10.9	10.8	
Progression Factor		1.00			1.00		1.00		1.00	1.00	1.00	
Incremental Delay, d2		0.0			0.0		0.0		0.0	0.1	0.0	
Delay (s)		10.2			10.7		10.1		10.1	11.0	10.9	
Level of Service		B			B		B		B	B	B	
Approach Delay (s)		10.2			10.7			10.1			10.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	155	221	83	10	306	122	123	615	17	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5			4.2				
Lane Util. Factor		0.95			0.95			0.95				
Frt		0.97			0.96			1.00				
Flt Protected		0.98			1.00			0.99				
Satd. Flow (prot)		3386			3388			3499				
Flt Permitted		0.62			0.94			0.99				
Satd. Flow (perm)		2134			3181			3499				
Peak-hour factor, PHF	0.70	0.70	0.70	0.70	0.70	0.70	0.62	0.62	0.62	0.92	0.92	0.92
Adj. Flow (vph)	221	316	119	14	437	174	198	992	27	0	0	0
RTOR Reduction (vph)	0	31	0	0	27	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	625	0	0	598	0	0	1214	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		8			4		6	6				
Permitted Phases	8			4								
Actuated Green, G (s)		25.5			25.5			23.8				
Effective Green, g (s)		25.5			25.5			23.8				
Actuated g/C Ratio		0.44			0.44			0.41				
Clearance Time (s)		4.5			4.5			4.2				
Vehicle Extension (s)		0.2			0.2			0.2				
Lane Grp Cap (vph)		938			1398			1435				
v/s Ratio Prot								c0.35				
v/s Ratio Perm		c0.29			0.19							
v/c Ratio		0.67			0.43			0.85				
Uniform Delay, d1		12.9			11.2			15.4				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		1.4			0.1			4.6				
Delay (s)		14.3			11.3			20.0				
Level of Service		B			B			C				
Approach Delay (s)		14.3			11.3			20.0			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	58.0	Sum of lost time (s)	8.7
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	24	0	2	6	1	0	1	468	17	16	802	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6			4.6			4.2	4.2		4.2	
Lane Util. Factor	1.00	1.00			1.00			0.95	1.00		0.95	
Frt	1.00	0.85			1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00			0.96			1.00	1.00		1.00	
Satd. Flow (prot)	1770	1583			1786			3539	1583		3528	
Flt Permitted	0.74	1.00			0.77			0.95	1.00		0.94	
Satd. Flow (perm)	1377	1583			1427			3376	1583		3335	
Peak-hour factor, PHF	0.90	0.90	0.90	0.25	0.25	0.25	0.97	0.97	0.97	0.79	0.79	0.79
Adj. Flow (vph)	27	0	2	24	4	0	1	482	18	20	1015	15
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	6	0	1	0
Lane Group Flow (vph)	27	0	0	0	28	0	0	483	12	0	1049	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4		4	4		
Actuated Green, G (s)	7.5	7.5			7.5			31.5	31.5		31.5	
Effective Green, g (s)	7.5	7.5			7.5			31.5	31.5		31.5	
Actuated g/C Ratio	0.16	0.16			0.16			0.66	0.66		0.66	
Clearance Time (s)	4.6	4.6			4.6			4.2	4.2		4.2	
Vehicle Extension (s)	5.0	5.0			5.0			4.0	4.0		4.0	
Lane Grp Cap (vph)	216	248			223			2224	1043		2197	
v/s Ratio Prot		0.00										
v/s Ratio Perm	0.02				c0.02			0.14	0.01		c0.31	
v/c Ratio	0.12	0.00			0.13			0.22	0.01		0.48	
Uniform Delay, d1	17.3	17.0			17.3			3.2	2.8		4.1	
Progression Factor	1.00	1.00			1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.5	0.0			0.5			0.1	0.0		0.2	
Delay (s)	17.9	17.0			17.9			3.3	2.8		4.3	
Level of Service	B	B			B			A	A		A	
Approach Delay (s)		17.8			17.9			3.3			4.3	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	4.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	47.8	Sum of lost time (s)	8.8
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	64	38	39	59	0	0	0	0	48	638	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2						4.9	
Lane Util. Factor		1.00			1.00						0.91	
Frt		0.95			1.00						0.99	
Flt Protected		1.00			0.98						1.00	
Satd. Flow (prot)		1769			1827						5016	
Flt Permitted		1.00			0.81						1.00	
Satd. Flow (perm)		1769			1517						5016	
Peak-hour factor, PHF	0.77	0.77	0.77	0.79	0.79	0.79	0.92	0.92	0.92	0.89	0.89	0.89
Adj. Flow (vph)	0	83	49	49	75	0	0	0	0	54	717	57
RTOR Reduction (vph)	0	39	0	0	0	0	0	0	0	0	14	0
Lane Group Flow (vph)	0	93	0	0	124	0	0	0	0	0	814	0
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		8			8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		7.5			7.5						21.1	
Effective Green, g (s)		7.5			7.5						21.1	
Actuated g/C Ratio		0.20			0.20						0.56	
Clearance Time (s)		4.2			4.2						4.9	
Vehicle Extension (s)		4.0			4.0						5.0	
Lane Grp Cap (vph)		351			301						2807	
v/s Ratio Prot		0.05									c0.16	
v/s Ratio Perm					c0.08							
v/c Ratio		0.26			0.41						0.29	
Uniform Delay, d1		12.8			13.2						4.4	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		0.6			1.3						0.1	
Delay (s)		13.3			14.4						4.5	
Level of Service		B			B						A	
Approach Delay (s)		13.3			14.4			0.0			4.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	37.7	Sum of lost time (s)	9.1
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	51	64	0	0	78	109	20	1089	24	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2			4.9				
Lane Util. Factor		1.00			1.00			0.91				
Frt		1.00			0.92			1.00				
Flt Protected		0.98			1.00			1.00				
Satd. Flow (prot)		1822			1716			5065				
Flt Permitted		0.75			1.00			1.00				
Satd. Flow (perm)		1406			1716			5065				
Peak-hour factor, PHF	0.72	0.72	0.72	0.85	0.85	0.85	0.85	0.85	0.85	0.92	0.92	0.92
Adj. Flow (vph)	71	89	0	0	92	128	24	1281	28	0	0	0
RTOR Reduction (vph)	0	0	0	0	13	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	160	0	0	207	0	0	1329	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)		8.6			8.6			19.9				
Effective Green, g (s)		8.6			8.6			19.9				
Actuated g/C Ratio		0.23			0.23			0.53				
Clearance Time (s)		4.2			4.2			4.9				
Vehicle Extension (s)		4.0			4.0			0.2				
Lane Grp Cap (vph)		321			392			2680				
v/s Ratio Prot					c0.12			c0.26				
v/s Ratio Perm		0.11										
v/c Ratio		0.50			0.53			0.50				
Uniform Delay, d1		12.6			12.7			5.6				
Progression Factor		1.00			1.00			1.00				
Incremental Delay, d2		1.7			1.7			0.1				
Delay (s)		14.3			14.4			5.7				
Level of Service		B			B			A				
Approach Delay (s)		14.3			14.4			5.7			0.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	37.6	Sum of lost time (s)	9.1
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	219	142	0	0	0	0	0	0	355	319	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2									4.6	
Lane Util. Factor		0.95									0.95	
Frt		0.94									1.00	
Flt Protected		1.00									0.97	
Satd. Flow (prot)		3331									3448	
Flt Permitted		1.00									0.97	
Satd. Flow (perm)		3331									3448	
Peak-hour factor, PHF	0.84	0.84	0.84	0.92	0.92	0.92	0.92	0.92	0.92	0.86	0.86	0.86
Adj. Flow (vph)	0	261	169	0	0	0	0	0	0	413	371	0
RTOR Reduction (vph)	0	112	0	0	0	0	0	0	0	0	225	0
Lane Group Flow (vph)	0	318	0	0	0	0	0	0	0	0	559	0
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Actuated Green, G (s)		14.2									19.3	
Effective Green, g (s)		14.2									19.3	
Actuated g/C Ratio		0.34									0.46	
Clearance Time (s)		4.2									4.6	
Vehicle Extension (s)		6.4									5.6	
Lane Grp Cap (vph)		1118									1573	
v/s Ratio Prot		c0.10										
v/s Ratio Perm											0.16	
v/c Ratio		0.28									0.36	
Uniform Delay, d1		10.3									7.5	
Progression Factor		1.00									1.00	
Incremental Delay, d2		0.4									0.4	
Delay (s)		10.8									7.8	
Level of Service		B									A	
Approach Delay (s)		10.8			0.0			0.0			7.8	
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	0.33		
Actuated Cycle Length (s)	42.3	Sum of lost time (s)	8.8
Intersection Capacity Utilization	37.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations											
Volume (vph)	188	360	0	0	436	419	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6			4.6	4.6					
Lane Util. Factor	1.00	1.00			0.95	1.00					
Frt	1.00	1.00			1.00	0.85					
Flt Protected	0.95	0.95			1.00	1.00					
Satd. Flow (prot)	1770	1770			3539	1583					
Flt Permitted	0.95	0.95			1.00	1.00					
Satd. Flow (perm)	1770	1770			3539	1583					
Peak-hour factor, PHF	0.85	0.85	0.85	0.70	0.70	0.70	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	221	424	0	0	623	599	0	0	0	0	0
RTOR Reduction (vph)	118	0	0	0	0	121	0	0	0	0	0
Lane Group Flow (vph)	103	424	0	0	623	478	0	0	0	0	0
Turn Type	Split	NA			NA	Perm					
Protected Phases	4	4			2						
Permitted Phases						2					
Actuated Green, G (s)	14.5	14.5			18.7	18.7					
Effective Green, g (s)	14.5	14.5			18.7	18.7					
Actuated g/C Ratio	0.34	0.34			0.44	0.44					
Clearance Time (s)	4.6	4.6			4.6	4.6					
Vehicle Extension (s)	5.0	5.0			4.5	4.5					
Lane Grp Cap (vph)	605	605			1560	698					
v/s Ratio Prot	0.06	c0.24			0.18						
v/s Ratio Perm						c0.30					
v/c Ratio	0.17	0.70			0.40	0.69					
Uniform Delay, d1	9.7	12.1			8.0	9.5					
Progression Factor	1.00	1.00			1.00	1.00					
Incremental Delay, d2	0.3	4.6			0.3	3.3					
Delay (s)	10.0	16.7			8.3	12.8					
Level of Service	B	B			A	B					
Approach Delay (s)		14.4			10.5			0.0		0.0	
Approach LOS		B			B			A		A	

Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	42.4	Sum of lost time (s)	9.2
Intersection Capacity Utilization	39.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	327	175	7	98	0	0	0	0	0	506	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		3.7	3.7		3.7						4.1	
Lane Util. Factor		1.00	1.00		1.00						0.95	
Frt		1.00	0.85		1.00						0.97	
Flt Protected		1.00	1.00		1.00						1.00	
Satd. Flow (prot)		1863	1583		1857						3438	
Flt Permitted		1.00	1.00		0.97						1.00	
Satd. Flow (perm)		1863	1583		1815						3438	
Peak-hour factor, PHF	0.96	0.96	0.96	0.70	0.70	0.70	0.92	0.92	0.92	0.82	0.82	0.82
Adj. Flow (vph)	0	341	182	10	140	0	0	0	0	0	617	146
RTOR Reduction (vph)	0	0	113	0	0	0	0	0	0	0	33	0
Lane Group Flow (vph)	0	341	69	0	150	0	0	0	0	0	730	0
Turn Type		NA	Perm	Perm	NA						NA	
Protected Phases		4			8						6	
Permitted Phases			4	8								
Actuated Green, G (s)		17.2	17.2		17.2						20.1	
Effective Green, g (s)		17.2	17.2		17.2						20.1	
Actuated g/C Ratio		0.38	0.38		0.38						0.45	
Clearance Time (s)		3.7	3.7		3.7						4.1	
Vehicle Extension (s)		5.0	5.0		4.8						4.6	
Lane Grp Cap (vph)		710	603		692						1532	
v/s Ratio Prot		c0.18									c0.21	
v/s Ratio Perm			0.04		0.08							
v/c Ratio		0.48	0.12		0.22						0.48	
Uniform Delay, d1		10.6	9.0		9.4						8.8	
Progression Factor		1.00	1.00		1.00						1.00	
Incremental Delay, d2		1.1	0.2		0.3						0.4	
Delay (s)		11.6	9.2		9.7						9.2	
Level of Service		B	A		A						A	
Approach Delay (s)		10.8			9.7			0.0			9.2	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	45.1	Sum of lost time (s)	7.8
Intersection Capacity Utilization	45.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	325	0	105	567	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.6			4.6		
Lane Util. Factor	1.00			0.95		
Frt	1.00			1.00		
Flt Protected	0.95			0.99		
Satd. Flow (prot)	1770			3512		
Flt Permitted	0.95			0.99		
Satd. Flow (perm)	1770			3512		
Peak-hour factor, PHF	0.96	0.96	0.72	0.72	0.92	0.92
Adj. Flow (vph)	339	0	146	788	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	339	0	0	934	0	0
Turn Type	NA		Split	NA		
Protected Phases	4		2	2		
Permitted Phases						
Actuated Green, G (s)	15.2			24.3		
Effective Green, g (s)	15.2			24.3		
Actuated g/C Ratio	0.31			0.50		
Clearance Time (s)	4.6			4.6		
Vehicle Extension (s)	3.3			4.9		
Lane Grp Cap (vph)	552			1752		
v/s Ratio Prot	c0.19			c0.27		
v/s Ratio Perm						
v/c Ratio	0.61			0.53		
Uniform Delay, d1	14.3			8.3		
Progression Factor	1.00			1.00		
Incremental Delay, d2	2.1			0.6		
Delay (s)	16.3			8.9		
Level of Service	B			A		
Approach Delay (s)	16.3			8.9	0.0	
Approach LOS	B			A	A	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	48.7	Sum of lost time (s)	9.2
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	450	33	83	296	0	0	0	0	171	635	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		3.7	4.2						4.9	
Lane Util. Factor		0.95		1.00	0.95						0.91	
Frt		0.99		1.00	1.00						0.98	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3503		1770	3539						4942	
Flt Permitted		1.00		0.95	1.00						0.99	
Satd. Flow (perm)		3503		1770	3539						4942	
Peak-hour factor, PHF	0.97	0.97	0.97	0.83	0.83	0.83	0.92	0.92	0.92	0.89	0.89	0.89
Adj. Flow (vph)	0	464	34	100	357	0	0	0	0	192	713	133
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0	0	21	0
Lane Group Flow (vph)	0	493	0	100	357	0	0	0	0	0	1017	0
Turn Type		NA		Prot	NA					Split	NA	
Protected Phases		4		3	8					6	6	
Permitted Phases												
Actuated Green, G (s)		19.6		6.6	29.9						20.2	
Effective Green, g (s)		19.6		6.6	29.9						20.2	
Actuated g/C Ratio		0.33		0.11	0.51						0.34	
Clearance Time (s)		4.2		3.7	4.2						4.9	
Vehicle Extension (s)		6.8		2.0	6.8						0.2	
Lane Grp Cap (vph)		1159		197	1787						1686	
v/s Ratio Prot		c0.14		c0.06	0.10						c0.21	
v/s Ratio Perm												
v/c Ratio		0.43		0.51	0.20						0.60	
Uniform Delay, d1		15.4		24.8	8.1						16.2	
Progression Factor		1.00		1.00	1.00						1.00	
Incremental Delay, d2		0.9		0.8	0.2						0.4	
Delay (s)		16.3		25.5	8.3						16.6	
Level of Service		B		C	A						B	
Approach Delay (s)		16.3			12.0			0.0			16.6	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	59.2	Sum of lost time (s)	12.8
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	131	490	0	0	341	92	33	1233	21	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.7	4.2			4.2	4.2		4.9	4.9			
Lane Util. Factor	1.00	0.95			0.95	1.00		0.91	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		1.00	1.00			
Satd. Flow (prot)	1770	3539			3539	1583		5079	1583			
Flt Permitted	0.95	1.00			1.00	1.00		1.00	1.00			
Satd. Flow (perm)	1770	3539			3539	1583		5079	1583			
Peak-hour factor, PHF	0.95	0.95	0.95	0.84	0.84	0.84	0.86	0.86	0.86	0.92	0.92	0.92
Adj. Flow (vph)	138	516	0	0	406	110	38	1434	24	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	80	0	0	15	0	0	0
Lane Group Flow (vph)	138	516	0	0	406	30	0	1472	9	0	0	0
Turn Type	Prot	NA			NA	Perm	Split	NA	Perm			
Protected Phases	7	4			8		2	2				
Permitted Phases						8			2			
Actuated Green, G (s)	8.1	29.0			17.2	17.2		24.2	24.2			
Effective Green, g (s)	8.1	29.0			17.2	17.2		24.2	24.2			
Actuated g/C Ratio	0.13	0.47			0.28	0.28		0.39	0.39			
Clearance Time (s)	3.7	4.2			4.2	4.2		4.9	4.9			
Vehicle Extension (s)	2.0	5.1			5.1	5.1		0.2	0.2			
Lane Grp Cap (vph)	230	1647			977	437		1972	614			
v/s Ratio Prot	c0.08	0.15			c0.11			c0.29				
v/s Ratio Perm						0.02			0.01			
v/c Ratio	0.60	0.31			0.42	0.07		0.75	0.02			
Uniform Delay, d1	25.6	10.4			18.4	16.6		16.4	11.7			
Progression Factor	1.00	1.00			1.00	1.00		1.00	1.00			
Incremental Delay, d2	2.8	0.2			0.6	0.1		1.4	0.0			
Delay (s)	28.4	10.7			19.1	16.8		17.8	11.7			
Level of Service	C	B			B	B		B	B			
Approach Delay (s)		14.4			18.6			17.7			0.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	62.3	Sum of lost time (s)	12.8
Intersection Capacity Utilization	52.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	443	53	98	368	82	53	396	102	102	232	78
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.6		4.0	4.6		4.0	14.6		4.0	4.6	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.97		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3483		1770	3443		1770	3431		1770	3405	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3483		1770	3443		1770	3431		1770	3405	
Peak-hour factor, PHF	0.94	0.94	0.94	0.85	0.85	0.85	0.77	0.77	0.77	0.88	0.88	0.88
Adj. Flow (vph)	76	471	56	115	433	96	69	514	132	116	264	89
RTOR Reduction (vph)	0	10	0	0	20	0	0	23	0	0	32	0
Lane Group Flow (vph)	76	517	0	115	509	0	69	623	0	116	321	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases												
Actuated Green, G (s)	6.6	21.0		7.7	22.1		6.4	19.4		7.7	30.7	
Effective Green, g (s)	6.6	21.0		7.7	22.1		6.4	19.4		7.7	30.7	
Actuated g/C Ratio	0.08	0.25		0.09	0.27		0.08	0.23		0.09	0.37	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.0	14.6		4.0	4.6	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	5.0		2.0	5.0	
Lane Grp Cap (vph)	140	881		164	916		136	801		164	1259	
v/s Ratio Prot	0.04	c0.15		c0.06	0.15		0.04	c0.18		c0.07	0.09	
v/s Ratio Perm												
v/c Ratio	0.54	0.59		0.70	0.56		0.51	0.78		0.71	0.26	
Uniform Delay, d1	36.7	27.2		36.5	26.2		36.8	29.8		36.6	18.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.3	1.6		10.5	1.2		1.1	5.6		10.8	0.2	
Delay (s)	39.0	28.8		47.0	27.5		37.9	35.4		47.3	18.4	
Level of Service	D	C		D	C		D	D		D	B	
Approach Delay (s)		30.1			31.0			35.6			25.6	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	31.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	83.0	Sum of lost time (s)	27.2
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	134	467	127	112	376	153	109	570	52	131	430	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9		4.0	4.9	4.9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3386		1770	3495		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3386		1770	3495		1770	3539	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.87	0.87	0.87	0.91	0.91	0.91	0.85	0.85	0.85
Adj. Flow (vph)	140	486	132	129	432	176	120	626	57	154	506	99
RTOR Reduction (vph)	0	0	97	0	54	0	0	8	0	0	0	70
Lane Group Flow (vph)	140	486	35	129	554	0	120	675	0	154	506	29
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4									2
Actuated Green, G (s)	8.0	19.6	19.6	7.8	19.4		7.6	19.7		9.9	22.0	22.0
Effective Green, g (s)	8.0	19.6	19.6	7.8	19.4		7.6	19.7		9.9	22.0	22.0
Actuated g/C Ratio	0.11	0.26	0.26	0.10	0.26		0.10	0.26		0.13	0.29	0.29
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.5		2.0	5.0		2.0	5.0	5.0
Lane Grp Cap (vph)	189	927	414	184	878		179	920		234	1040	465
v/s Ratio Prot	c0.08	0.14		0.07	c0.16		0.07	c0.19		c0.09	0.14	
v/s Ratio Perm			0.02									0.02
v/c Ratio	0.74	0.52	0.08	0.70	0.63		0.67	0.73		0.66	0.49	0.06
Uniform Delay, d1	32.4	23.6	20.8	32.4	24.5		32.4	25.2		30.8	21.7	19.0
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	12.8	0.9	0.2	9.4	1.9		7.5	3.7		5.0	0.8	0.1
Delay (s)	45.1	24.5	21.0	41.8	26.4		39.9	28.9		35.9	22.5	19.1
Level of Service	D	C	C	D	C		D	C		D	C	B
Approach Delay (s)		27.7			29.1			30.5			24.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	74.8	Sum of lost time (s)	17.8
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	99	0	0	0	246	833
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.2					4.9
Lane Util. Factor	1.00					0.91
Frt	1.00					1.00
Flt Protected	0.95					0.99
Satd. Flow (prot)	1770					5028
Flt Permitted	0.95					0.99
Satd. Flow (perm)	1770					5028
Peak-hour factor, PHF	0.75	0.75	0.92	0.92	0.89	0.89
Adj. Flow (vph)	132	0	0	0	276	936
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	132	0	0	0	0	1212
Turn Type	NA				Split	NA
Protected Phases	8				6	6
Permitted Phases						
Actuated Green, G (s)	8.2					28.2
Effective Green, g (s)	8.2					28.2
Actuated g/C Ratio	0.18					0.62
Clearance Time (s)	4.2					4.9
Vehicle Extension (s)	4.8					5.4
Lane Grp Cap (vph)	318					3116
v/s Ratio Prot	c0.07					c0.24
v/s Ratio Perm						
v/c Ratio	0.42					0.39
Uniform Delay, d1	16.5					4.3
Progression Factor	1.00					1.00
Incremental Delay, d2	1.7					0.2
Delay (s)	18.2					4.5
Level of Service	B					A
Approach Delay (s)	18.2		0.0			4.5
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	5.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	45.5	Sum of lost time (s)	9.1
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	233	0	0	98	192	0	849	614	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2			4.2	4.2		4.9	4.9			
Lane Util. Factor	1.00	1.00			1.00	1.00		0.91	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		1.00	1.00			
Satd. Flow (prot)	1770	1863			1863	1583		5085	1583			
Flt Permitted	0.68	1.00			1.00	1.00		1.00	1.00			
Satd. Flow (perm)	1266	1863			1863	1583		5085	1583			
Peak-hour factor, PHF	0.87	0.87	0.87	0.82	0.82	0.82	0.88	0.88	0.88	0.92	0.92	0.92
Adj. Flow (vph)	20	268	0	0	120	234	0	965	698	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	45	0	0	222	0	0	0
Lane Group Flow (vph)	20	268	0	0	120	189	0	965	476	0	0	0
Turn Type	Perm	NA			NA	Perm	Split	NA	Perm			
Protected Phases		4			4		2	2				
Permitted Phases	4					4			2			
Actuated Green, G (s)	18.8	18.8			18.8	18.8		29.6	29.6			
Effective Green, g (s)	18.8	18.8			18.8	18.8		29.6	29.6			
Actuated g/C Ratio	0.33	0.33			0.33	0.33		0.51	0.51			
Clearance Time (s)	4.2	4.2			4.2	4.2		4.9	4.9			
Vehicle Extension (s)	5.7	5.7			5.7	5.7		5.2	5.2			
Lane Grp Cap (vph)	413	609			609	517		2617	814			
v/s Ratio Prot		c0.14			0.06			0.19				
v/s Ratio Perm	0.02					0.12			c0.30			
v/c Ratio	0.05	0.44			0.20	0.37		0.37	0.59			
Uniform Delay, d1	13.2	15.2			13.9	14.8		8.4	9.7			
Progression Factor	1.00	1.00			1.00	1.00		1.00	1.00			
Incremental Delay, d2	0.1	1.3			0.4	1.1		0.2	1.7			
Delay (s)	13.4	16.5			14.3	15.9		8.6	11.4			
Level of Service	B	B			B	B		A	B			
Approach Delay (s)		16.3			15.4			9.8			0.0	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	57.5	Sum of lost time (s)	9.1
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	194	313	59	121	0	0	0	0	3	700	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		3.7	4.2						4.9	4.9
Lane Util. Factor		1.00		1.00	1.00						0.95	1.00
Frt		0.92		1.00	1.00						1.00	0.85
Flt Protected		1.00		0.95	1.00						1.00	1.00
Satd. Flow (prot)		1708		1770	1863						3539	1583
Flt Permitted		1.00		0.95	1.00						1.00	1.00
Satd. Flow (perm)		1708		1770	1863						3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.74	0.74	0.74	0.92	0.92	0.92	0.86	0.86	0.86
Adj. Flow (vph)	0	216	348	80	164	0	0	0	0	3	814	186
RTOR Reduction (vph)	0	58	0	0	0	0	0	0	0	0	0	116
Lane Group Flow (vph)	0	506	0	80	164	0	0	0	0	0	817	70
Turn Type		NA		Prot	NA					Split	NA	Perm
Protected Phases		4		3	8					6	6	
Permitted Phases												6
Actuated Green, G (s)		26.3		6.5	36.5						27.3	27.3
Effective Green, g (s)		26.3		6.5	36.5						27.3	27.3
Actuated g/C Ratio		0.36		0.09	0.50						0.37	0.37
Clearance Time (s)		4.2		3.7	4.2						4.9	4.9
Vehicle Extension (s)		4.9		2.0	4.6						5.2	5.2
Lane Grp Cap (vph)		616		157	932						1325	592
v/s Ratio Prot		c0.30		c0.05	0.09						c0.23	
v/s Ratio Perm												0.04
v/c Ratio		0.82		0.51	0.18						0.62	0.12
Uniform Delay, d1		21.2		31.7	10.0						18.5	14.9
Progression Factor		1.00		1.00	1.00						1.00	1.00
Incremental Delay, d2		9.6		0.9	0.2						1.3	0.2
Delay (s)		30.8		32.6	10.1						19.8	15.1
Level of Service		C		C	B						B	B
Approach Delay (s)		30.8			17.5			0.0			19.0	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	72.9	Sum of lost time (s)	12.8
Intersection Capacity Utilization	64.8%	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												
Volume (veh/h)	3	68	16	5	108	0	15	18	1	10	6	5
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.75	0.75	0.63	0.63	0.63	0.67	0.67	0.67	0.58	0.58	0.58
Hourly flow rate (vph)	4	91	21	8	171	0	22	27	1	17	10	9
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1300										
pX, platoon unblocked												
vC, conflicting volume	171			112			310	297	56	256	307	171
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	171			112			310	297	56	256	307	171
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			96	96	100	97	98	99
cM capacity (veh/h)	1403			1475			601	609	999	649	600	842

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total	49	67	179	51	36
Volume Left	4	0	8	22	17
Volume Right	0	21	0	1	9
cSH	1403	1700	1475	612	670
Volume to Capacity	0.00	0.04	0.01	0.08	0.05
Queue Length 95th (ft)	0	0	0	7	4
Control Delay (s)	0.6	0.0	0.4	11.4	10.7
Lane LOS	A		A	B	B
Approach Delay (s)	0.3		0.4	11.4	10.7
Approach LOS				B	B

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	19.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	9	71	4	5	104	4	1	20	2	14	9	7
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.70	0.70	0.70	0.59	0.59	0.59	0.72	0.72	0.72	0.68	0.68	0.68
Hourly flow rate (vph)	13	101	6	8	176	7	1	28	3	21	13	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					1008							
pX, platoon unblocked												
vC, conflicting volume	183			107			344	330	54	290	329	180
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	183			107			344	330	54	290	329	180
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			100	95	100	97	98	99
cM capacity (veh/h)	1389			1482			563	579	1002	608	579	832

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total	64	56	192	32	44
Volume Left	13	0	8	1	21
Volume Right	0	6	7	3	10
cSH	1389	1700	1482	600	639
Volume to Capacity	0.01	0.03	0.01	0.05	0.07
Queue Length 95th (ft)	1	0	0	4	6
Control Delay (s)	1.6	0.0	0.4	11.3	11.1
Lane LOS	A		A	B	B
Approach Delay (s)	0.8		0.4	11.3	11.1
Approach LOS				B	B

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	24.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	28	74	181	52	61	71	393	84	51	777	39
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	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	2049	1742	1947	2049	1742	1947	3790		1947	3865	
Flt Permitted	0.72	1.00	1.00	0.73	1.00	1.00	0.28	1.00		0.42	1.00	
Satd. Flow (perm)	1470	2049	1742	1505	2049	1742	581	3790		854	3865	
Peak-hour factor, PHF	0.81	0.81	0.81	0.85	0.85	0.85	0.77	0.77	0.77	0.86	0.86	0.86
Adj. Flow (vph)	19	35	91	213	61	72	92	510	109	59	903	45
RTOR Reduction (vph)	0	0	36	0	0	49	0	42	0	0	8	0
Lane Group Flow (vph)	19	35	55	213	61	23	92	577	0	59	940	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6		6	2		2	4			8		
Actuated Green, G (s)	10.2	10.2	10.2	10.2	10.2	10.2	14.1	14.1		14.1	14.1	
Effective Green, g (s)	10.2	10.2	10.2	10.2	10.2	10.2	14.1	14.1		14.1	14.1	
Actuated g/C Ratio	0.32	0.32	0.32	0.32	0.32	0.32	0.44	0.44		0.44	0.44	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	464	647	550	475	647	550	253	1654		372	1687	
v/s Ratio Prot		0.02			0.03			0.15			c0.24	
v/s Ratio Perm	0.01		0.03	c0.14		0.01	0.16			0.07		
v/c Ratio	0.04	0.05	0.10	0.45	0.09	0.04	0.36	0.35		0.16	0.56	
Uniform Delay, d1	7.7	7.7	7.8	8.8	7.8	7.7	6.1	6.0		5.5	6.8	
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	0.0	0.0	0.1	0.7	0.1	0.0	0.9	0.1		0.2	0.4	
Delay (s)	7.7	7.7	7.9	9.5	7.9	7.7	7.0	6.2		5.7	7.2	
Level of Service	A	A	A	A	A	A	A	A		A	A	
Approach Delay (s)		7.8			8.8			6.3			7.1	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	32.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	109	129	158	144	47	13
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.86	0.86	0.82	0.82	0.88	0.88
Hourly flow rate (vph)	127	150	193	176	53	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	1009			513		
pX, platoon unblocked					0.90	
vC, conflicting volume			277		763	202
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			277		684	202
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			85		83	98
cM capacity (veh/h)			1286		318	839

Direction, Lane #	SE 1	NW 1	NE 1
Volume Total	277	368	68
Volume Left	0	193	53
Volume Right	150	0	15
cSH	1700	1286	368
Volume to Capacity	0.16	0.15	0.19
Queue Length 95th (ft)	0	13	17
Control Delay (s)	0.0	5.0	17.0
Lane LOS		A	C
Approach Delay (s)	0.0	5.0	17.0
Approach LOS			C

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	43.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	71	168	0	0	123	26	0	0	0	5	0	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.80	0.80	0.80	0.86	0.86	0.86	0.54	0.54	0.54	0.82	0.82	0.82
Hourly flow rate (vph)	89	210	0	0	143	30	0	0	0	6	0	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		487										
pX, platoon unblocked												
vC, conflicting volume	173			210			555	561	210	546	546	158
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	173			210			555	561	210	546	546	158
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	94			100			100	100	100	99	100	99
cM capacity (veh/h)	1403			1361			416	409	830	427	417	887

Direction, Lane #	SE 1	NW 1	NE 1	SW 1
Volume Total	299	173	0	16
Volume Left	89	0	0	6
Volume Right	0	30	0	10
cSH	1403	1361	1700	627
Volume to Capacity	0.06	0.00	0.00	0.03
Queue Length 95th (ft)	5	0	0	2
Control Delay (s)	2.7	0.0	0.0	10.9
Lane LOS	A		A	B
Approach Delay (s)	2.7	0.0	0.0	10.9
Approach LOS			A	B

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	34.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	128	8	79	15	59	10	70	527	14	2	579	55
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.82	0.82	0.82	0.73	0.73	0.73	0.91	0.91	0.91	0.77	0.77	0.77
Hourly flow rate (vph)	156	10	96	21	81	14	77	579	15	3	752	71
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								698			474	
pX, platoon unblocked	0.87	0.87	0.86	0.87	0.87	0.98	0.86			0.98		
vC, conflicting volume	1290	1541	412	1223	1569	297	823			595		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	926	1215	0	848	1247	242	463			545		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	93	90	88	41	98	92			100		
cM capacity (veh/h)	95	143	930	176	137	744	939			1000		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	NE 3	SW 1	SW 2	SW 3
Volume Total	262	115	77	386	208	3	501	322
Volume Left	156	21	77	0	0	3	0	0
Volume Right	96	14	0	0	15	0	0	71
cSH	145	159	939	1700	1700	1000	1700	1700
Volume to Capacity	1.81	0.73	0.08	0.23	0.12	0.00	0.29	0.19
Queue Length 95th (ft)	492	110	7	0	0	0	0	0
Control Delay (s)	443.8	72.0	9.2	0.0	0.0	8.6	0.0	0.0
Lane LOS	F	F	A			A		
Approach Delay (s)	443.8	72.0	1.1			0.0		
Approach LOS	F	F						

Intersection Summary			
Average Delay	66.9		
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	111	24	0	223	0	0	0	6	211	17	135
Peak Hour Factor	0.76	0.76	0.76	0.78	0.78	0.78	0.50	0.50	0.50	0.88	0.88	0.88
Hourly flow rate (vph)	0	146	32	0	286	0	0	0	12	240	19	153

Direction, Lane #	SE 1	NW 1	NE 1	SW 1	SW 2
Volume Total (vph)	178	286	12	259	153
Volume Left (vph)	0	0	0	240	0
Volume Right (vph)	32	0	12	0	153
Hadj (s)	-0.07	0.03	-0.57	0.22	-0.57
Departure Headway (s)	5.0	4.9	5.0	5.3	3.2
Degree Utilization, x	0.25	0.39	0.02	0.38	0.14
Capacity (veh/h)	674	695	622	634	1121
Control Delay (s)	9.6	11.1	8.0	11.6	6.7
Approach Delay (s)	9.6	11.1	8.0	9.8	
Approach LOS	A	B	A	A	

Intersection Summary			
Delay	10.1		
Level of Service	B		
Intersection Capacity Utilization	33.2%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection Sign configuration not allowed in HCM analysis.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	553	100	0	0	0	251	0	146	31	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.83	0.83	0.83	0.83	0.83	0.83	0.92	0.92	0.92
Hourly flow rate (vph)	643	116	0	0	0	302	0	176	37	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	0			116			1554	1402	58	1469	1402	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			116			1554	1402	58	1469	1402	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	60			100			100	0	96	0	100	100
cM capacity (veh/h)	1622			1470			53	84	996	0	84	1084

Direction, Lane #	SE 1	SE 2	SE 3	NW 1	NE 1	NE 2
Volume Total	643	58	58	302	117	96
Volume Left	643	0	0	0	0	0
Volume Right	0	0	0	302	0	37
cSH	1622	1700	1700	1700	84	130
Volume to Capacity	0.40	0.03	0.03	0.18	1.40	0.74
Queue Length 95th (ft)	49	0	0	0	226	106
Control Delay (s)	8.7	0.0	0.0	0.0	325.8	86.2
Lane LOS	A				F	F
Approach Delay (s)	7.3			0.0	218.0	
Approach LOS					F	

Intersection Summary			
Average Delay	40.8		
Intersection Capacity Utilization	53.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	89	131	16	2	37	21	25	2	5	71	27	30
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.70	0.70	0.70	0.83	0.83	0.83	0.67	0.67	0.67	0.83	0.83	0.83
Hourly flow rate (vph)	127	187	23	2	45	25	37	3	7	86	33	36
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		490										
pX, platoon unblocked												
vC, conflicting volume	70			210			567	528	105	419	526	57
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	70			210			567	528	105	419	526	57
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	92			100			89	99	99	82	92	96
cM capacity (veh/h)	1529			1358			344	416	929	478	417	997

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total	221	116	72	48	154
Volume Left	127	0	2	37	86
Volume Right	0	23	25	7	36
cSH	1529	1700	1358	387	526
Volume to Capacity	0.08	0.07	0.00	0.12	0.29
Queue Length 95th (ft)	7	0	0	10	30
Control Delay (s)	4.6	0.0	0.3	15.6	14.7
Lane LOS	A		A	C	B
Approach Delay (s)	3.0		0.3	15.6	14.7
Approach LOS				C	B

Intersection Summary			
Average Delay	6.6		
Intersection Capacity Utilization	25.5%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection Sign configuration not allowed in HCM analysis.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	690	762	263	520	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.7	4.1	4.1	4.1		
Lane Util. Factor	1.00	0.95	0.95	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	1947	3893	3893	1742		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	1947	3893	3893	1742		
Peak-hour factor, PHF	0.86	0.86	0.89	0.89	0.92	0.92
Adj. Flow (vph)	802	886	296	584	0	0
RTOR Reduction (vph)	0	0	0	411	0	0
Lane Group Flow (vph)	802	886	296	173	0	0
Turn Type	Prot	NA	NA	Perm		
Protected Phases	3	8	4			
Permitted Phases				4		
Actuated Green, G (s)	6.4	26.7	16.6	16.6		
Effective Green, g (s)	6.4	26.7	16.6	16.6		
Actuated g/C Ratio	0.11	0.48	0.30	0.30		
Clearance Time (s)	3.7	4.1	4.1	4.1		
Vehicle Extension (s)	8.0	0.2	4.1	4.1		
Lane Grp Cap (vph)	222	1852	1151	515		
v/s Ratio Prot	c0.41	c0.23	0.08			
v/s Ratio Perm				0.10		
v/c Ratio	3.61	0.48	0.26	0.34		
Uniform Delay, d1	24.9	10.0	15.1	15.4		
Progression Factor	1.00	1.00	1.17	2.81		
Incremental Delay, d2	1186.8	0.1	0.2	0.5		
Delay (s)	1211.6	10.0	17.8	44.0		
Level of Service	F	B	B	D		
Approach Delay (s)		580.9	35.2		0.0	
Approach LOS		F	D		A	

Intersection Summary			
HCM 2000 Control Delay	393.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	56.1	Sum of lost time (s)	11.9
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	0	647	339	781	751	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.1	4.1	4.0	4.1	
Lane Util. Factor		0.95	0.91	0.91	0.97	
Frt		1.00	0.92	0.85	1.00	
Flt Protected		1.00	1.00	1.00	0.95	
Satd. Flow (prot)		3893	3429	1585	3776	
Flt Permitted		1.00	1.00	1.00	0.95	
Satd. Flow (perm)		3893	3429	1585	3776	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	703	368	849	816	0
RTOR Reduction (vph)	0	0	264	0	0	0
Lane Group Flow (vph)	0	703	529	424	816	0
Turn Type		NA	NA	Free	NA	
Protected Phases		6	6		8	
Permitted Phases				Free		
Actuated Green, G (s)		21.2	21.2	56.1	26.7	
Effective Green, g (s)		21.2	21.2	56.1	26.7	
Actuated g/C Ratio		0.38	0.38	1.00	0.48	
Clearance Time (s)		4.1	4.1		4.1	
Vehicle Extension (s)		3.0	3.0		0.2	
Lane Grp Cap (vph)		1471	1295	1585	1797	
v/s Ratio Prot		c0.18	0.15		c0.22	
v/s Ratio Perm				0.27		
v/c Ratio		0.48	0.41	0.27	0.45	
Uniform Delay, d1		13.2	12.8	0.0	9.8	
Progression Factor		0.59	1.00	1.00	0.33	
Incremental Delay, d2		0.2	0.2	0.4	0.1	
Delay (s)		8.0	13.0	0.4	3.3	
Level of Service		A	B	A	A	
Approach Delay (s)		8.0	8.6		3.3	
Approach LOS		A	A		A	

Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	56.1	Sum of lost time (s)	11.9
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1: Broadway St & Monterey St.

8/27/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	220	58	0	0	60	229	0	0	0	0	0	30
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	239	63	0	0	65	249	0	0	0	0	0	33
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	314			63			731	855	63	731	731	190
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	314			63			731	855	63	731	731	190
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	81			100			100	100	100	100	100	96
cM capacity (veh/h)	1246			1540			277	239	1002	288	282	852

Direction, Lane #	SE 1	NW 1	NE 1	SW 1	SW 2
Volume Total	302	314	0	0	33
Volume Left	239	0	0	0	0
Volume Right	0	249	0	0	33
cSH	1246	1540	1700	1700	852
Volume to Capacity	0.19	0.00	0.00	0.00	0.04
Queue Length 95th (ft)	18	0	0	0	3
Control Delay (s)	7.1	0.0	0.0	0.0	9.4
Lane LOS	A		A	A	A
Approach Delay (s)	7.1	0.0	0.0	9.4	
Approach LOS			A	A	

Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	336	0	0	243	62	78	83	65	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	365	0	0	264	67	85	90	71	0	0	0

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1	NE 2
Volume Total (vph)	143	243	176	155	130	116
Volume Left (vph)	22	0	0	0	85	0
Volume Right (vph)	0	0	0	67	0	71
Hadj (s)	0.11	0.03	0.03	-0.27	0.36	-0.39
Departure Headway (s)	5.8	5.7	5.8	5.5	6.6	5.8
Degree Utilization, x	0.23	0.39	0.28	0.24	0.24	0.19
Capacity (veh/h)	597	610	599	630	511	574
Control Delay (s)	9.3	11.1	9.9	9.0	10.4	9.0
Approach Delay (s)	10.4		9.4		9.7	
Approach LOS	B		A		A	

Intersection Summary			
Delay	9.9		
Level of Service	A		
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	0	260	90	0	28	431
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	283	98	0	30	468
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1132				
pX, platoon unblocked						
vC, conflicting volume	98				380	98
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	98				380	98
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				95	51
cM capacity (veh/h)	1495				622	958

Direction, Lane #	SE 1	NW 1	SW 1	SW 2
Volume Total	283	98	30	468
Volume Left	0	0	30	0
Volume Right	0	0	0	468
cSH	1700	1700	622	958
Volume to Capacity	0.17	0.06	0.05	0.49
Queue Length 95th (ft)	0	0	4	69
Control Delay (s)	0.0	0.0	11.1	12.3
Lane LOS			B	B
Approach Delay (s)	0.0	0.0	12.2	
Approach LOS			B	

Intersection Summary			
Average Delay	6.9		
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	0	293	10	92	565	0	0	0	0	350	66	600
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	318	11	100	614	0	0	0	0	380	72	652
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		735										
pX, platoon unblocked												
vC, conflicting volume	614			329			867	1138	324	1138	1143	307
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	614			329			867	1138	324	1138	1143	307
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			92			100	100	100	0	61	5
cM capacity (veh/h)	961			1227			9	184	672	147	182	689

Direction, Lane #	SE 1	NW 1	NW 2	SW 1	SW 2
Volume Total	329	305	409	670	435
Volume Left	0	100	0	380	0
Volume Right	11	0	0	217	435
cSH	1700	1227	1700	203	689
Volume to Capacity	0.19	0.08	0.24	3.30	0.63
Queue Length 95th (ft)	0	7	0	Err	112
Control Delay (s)	0.0	3.2	0.0	Err	18.7
Lane LOS		A		F	C
Approach Delay (s)	0.0	1.4		6069.8	
Approach LOS				F	

Intersection Summary			
Average Delay	3121.3		
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	413	0	325	0	0	0	0	833	94	98	559	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2						5.2		5.2	5.2	
Lane Util. Factor	1.00	1.00						0.95		1.00	0.95	
Frt	1.00	0.85						0.98		1.00	1.00	
Flt Protected	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (prot)	1770	1583						3485		1770	3539	
Flt Permitted	0.95	1.00						1.00		0.22	1.00	
Satd. Flow (perm)	1770	1583						3485		413	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	449	0	353	0	0	0	0	905	102	107	608	0
RTOR Reduction (vph)	0	165	0	0	0	0	0	7	0	0	0	0
Lane Group Flow (vph)	449	188	0	0	0	0	0	1000	0	107	608	0
Turn Type	Split	NA						NA		Perm	NA	
Protected Phases	4	4						2			2	
Permitted Phases										2		
Actuated Green, G (s)	36.8	36.8						63.8		63.8	63.8	
Effective Green, g (s)	36.8	36.8						63.8		63.8	63.8	
Actuated g/C Ratio	0.33	0.33						0.58		0.58	0.58	
Clearance Time (s)	4.2	4.2						5.2		5.2	5.2	
Vehicle Extension (s)	5.2	5.2						0.2		0.2	0.2	
Lane Grp Cap (vph)	592	529						2021		239	2052	
v/s Ratio Prot	c0.25	0.12						c0.29			0.17	
v/s Ratio Perm										0.26		
v/c Ratio	0.76	0.36						0.49		0.45	0.30	
Uniform Delay, d1	32.6	27.6						13.6		13.1	11.7	
Progression Factor	1.00	1.00						1.00		1.03	1.00	
Incremental Delay, d2	6.7	0.9						0.9		5.9	0.4	
Delay (s)	39.3	28.6						14.5		19.4	12.1	
Level of Service	D	C						B		B	B	
Approach Delay (s)		34.6			0.0			14.5			13.2	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.4
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	0	0	0	108	25	204	490	756	0	0	548	208
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	117	27	222	533	822	0	0	596	226
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								284			1117	
pX, platoon unblocked												
vC, conflicting volume	2420	2596	411	2185	2709	411	822			822		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2420	2596	411	2185	2709	411	822			822		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	100	0	0	62	34			100		
cM capacity (veh/h)	0	8	590	12	7	590	803			803		

Direction, Lane #	NW 1	NW 2	NE 1	NE 2	NE 3	SW 1	SW 2
Volume Total	131	235	533	411	411	397	425
Volume Left	117	0	533	0	0	0	0
Volume Right	0	222	0	0	0	0	226
cSH	11	102	803	1700	1700	1700	1700
Volume to Capacity	11.81	2.32	0.66	0.24	0.24	0.23	0.25
Queue Length 95th (ft)	Err	523	128	0	0	0	0
Control Delay (s)	Err	690.0	17.8	0.0	0.0	0.0	0.0
Lane LOS	F	F	C				
Approach Delay (s)	4018.6		7.0			0.0	
Approach LOS	F						

Intersection Summary			
Average Delay	582.7		
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	21	4	47	15	40	23	91	854	15	30	694	73
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	23	4	51	16	43	25	99	928	16	33	754	79
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								595			806	
pX, platoon unblocked	0.94	0.94	0.94	0.94	0.94		0.94					
vC, conflicting volume	1568	2002	417	1630	2033	472	834			945		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1481	1941	260	1546	1974	472	702			945		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	92	93	71	11	95	88			95		
cM capacity (veh/h)	17	51	697	56	49	538	840			722		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2
Volume Total	78	85	563	480	410	457
Volume Left	23	16	99	0	33	0
Volume Right	51	25	0	16	0	79
cSH	51	69	840	1700	722	1700
Volume to Capacity	1.54	1.23	0.12	0.28	0.05	0.27
Queue Length 95th (ft)	185	168	10	0	4	0
Control Delay (s)	447.7	286.2	3.0	0.0	1.4	0.0
Lane LOS	F	F	A		A	
Approach Delay (s)	447.7	286.2	1.6		0.6	
Approach LOS	F	F				

Intersection Summary			
Average Delay	29.7		
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	104	0	0	196	0	0	979	0	0	752	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5			4.2			4.2	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		1.00			1.00			1.00			1.00	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		1863			1863			3539			3539	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		1863			1863			3539			3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	113	0	0	213	0	0	1064	0	0	817	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	113	0	0	213	0	0	1064	0	0	817	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Actuated Green, G (s)		21.2			21.2			80.1			80.1	
Effective Green, g (s)		21.2			21.2			80.1			80.1	
Actuated g/C Ratio		0.19			0.19			0.73			0.73	
Clearance Time (s)		4.5			4.5			4.2			4.2	
Vehicle Extension (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		359			359			2577			2577	
v/s Ratio Prot		0.06			c0.11			c0.30			0.23	
v/s Ratio Perm												
v/c Ratio		0.31			0.59			0.41			0.32	
Uniform Delay, d1		38.2			40.5			5.8			5.3	
Progression Factor		0.73			1.00			0.99			0.41	
Incremental Delay, d2		1.1			3.9			0.5			0.1	
Delay (s)		28.9			44.4			6.2			2.3	
Level of Service		C			D			A			A	
Approach Delay (s)		28.9			44.4			6.2			2.3	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.7
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	183	159	89	180	270	80	23	573	281	45	721	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	5.6	5.6		5.6	5.6		4.0	4.2		4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.97		1.00	0.95		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3348		1770	1799		1770	3365		1770	3500	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3348		1770	1799		1770	3365		1770	3500	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	199	173	97	196	293	87	25	623	305	49	784	63
RTOR Reduction (vph)	0	74	0	0	10	0	0	49	0	0	5	0
Lane Group Flow (vph)	199	196	0	196	370	0	25	879	0	49	842	0
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.9	16.9		25.8	25.8		4.8	41.5		6.4	43.1	
Effective Green, g (s)	16.9	16.9		25.8	25.8		4.8	41.5		6.4	43.1	
Actuated g/C Ratio	0.15	0.15		0.23	0.23		0.04	0.38		0.06	0.39	
Clearance Time (s)	5.6	5.6		5.6	5.6		4.0	4.2		4.0	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	271	514		415	421		77	1269		102	1371	
v/s Ratio Prot	c0.11	0.06		0.11	c0.21		0.01	c0.26		c0.03	0.24	
v/s Ratio Perm												
v/c Ratio	0.73	0.38		0.47	0.88		0.32	0.69		0.48	0.61	
Uniform Delay, d1	44.4	41.8		36.2	40.6		51.0	28.9		50.2	26.8	
Progression Factor	1.00	1.00		1.00	1.00		1.24	0.75		1.02	0.73	
Incremental Delay, d2	8.6	0.2		0.3	17.9		0.9	3.0		1.1	1.7	
Delay (s)	53.0	42.0		36.6	58.5		64.1	24.6		52.4	21.4	
Level of Service	D	D		D	E		E	C		D	C	
Approach Delay (s)		46.7			51.0			25.6			23.1	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	19.4
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	33	111	50	318	647	202	115	600	106	80	430	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.0	4.2		4.0	4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1777		1770	1863	1583	1770	3460		1770	3424	
Flt Permitted	0.13	1.00		0.62	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	251	1777		1153	1863	1583	1770	3460		1770	3424	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	121	54	346	703	220	125	652	115	87	467	130
RTOR Reduction (vph)	0	15	0	0	0	50	0	12	0	0	22	0
Lane Group Flow (vph)	36	160	0	346	703	170	125	755	0	87	575	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	50.9	50.9		50.9	50.9	50.9	15.9	38.7		8.0	30.8	
Effective Green, g (s)	50.9	50.9		50.9	50.9	50.9	15.9	38.7		8.0	30.8	
Actuated g/C Ratio	0.46	0.46		0.46	0.46	0.46	0.14	0.35		0.07	0.28	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.0	4.2		4.0	4.2	
Vehicle Extension (s)	4.8	4.8		4.8	4.8	4.8	2.0	4.8		2.0	4.8	
Lane Grp Cap (vph)	116	822		533	862	732	255	1217		128	958	
v/s Ratio Prot		0.09			c0.38		0.07	c0.22		0.05	c0.17	
v/s Ratio Perm	0.14			0.30		0.11						
v/c Ratio	0.31	0.19		0.65	0.82	0.23	0.49	0.62		0.68	0.60	
Uniform Delay, d1	18.5	17.4		22.7	25.5	17.8	43.3	29.6		49.8	34.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.78	0.72		0.59	0.47	
Incremental Delay, d2	3.0	0.2		3.6	6.7	0.3	0.4	1.7		10.5	2.7	
Delay (s)	21.5	17.7		26.3	32.2	18.1	34.3	23.0		39.8	18.7	
Level of Service	C	B		C	C	B	C	C		D	B	
Approach Delay (s)		18.3			28.1			24.6			21.4	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.4
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	56	308	34	0	0	0	0	685	150	24	614	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2					4.2		4.2	4.2	
Lane Util. Factor		0.91	1.00					0.95		1.00	0.95	
Frt		1.00	0.85					0.97		1.00	1.00	
Flt Protected		0.99	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		5046	1583					3444		1770	3539	
Flt Permitted		0.99	1.00					1.00		0.29	1.00	
Satd. Flow (perm)		5046	1583					3444		541	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	61	335	37	0	0	0	0	745	163	26	667	0
RTOR Reduction (vph)	0	0	30	0	0	0	0	12	0	0	0	0
Lane Group Flow (vph)	0	396	7	0	0	0	0	896	0	26	667	0
Turn Type	Split	NA	Perm					NA		Perm	NA	
Protected Phases	4	4						2			6	
Permitted Phases			4							6		
Actuated Green, G (s)		20.0	20.0					81.6		81.6	81.6	
Effective Green, g (s)		20.0	20.0					81.6		81.6	81.6	
Actuated g/C Ratio		0.18	0.18					0.74		0.74	0.74	
Clearance Time (s)		4.2	4.2					4.2		4.2	4.2	
Vehicle Extension (s)		2.0	2.0					2.0		2.0	2.0	
Lane Grp Cap (vph)		917	287					2554		401	2625	
v/s Ratio Prot		c0.08						c0.26			0.19	
v/s Ratio Perm			0.00							0.05		
v/c Ratio		0.43	0.02					0.35		0.06	0.25	
Uniform Delay, d1		40.0	37.0					5.0		3.9	4.5	
Progression Factor		0.98	1.24					0.47		0.25	0.25	
Incremental Delay, d2		0.1	0.0					0.3		0.0	0.0	
Delay (s)		39.4	46.0					2.7		1.0	1.1	
Level of Service		D	D					A		A	A	
Approach Delay (s)		40.0			0.0			2.7			1.1	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	47.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	59	33	34	108	517	10	118	586	5	16	499	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2	4.2	4.2	4.2	4.2	4.0	4.2	4.2	4.0	4.2	4.2
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	3433	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	3433	1863	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	64	36	37	117	562	11	128	637	5	17	542	53
RTOR Reduction (vph)	0	0	34	0	0	6	0	0	4	0	0	42
Lane Group Flow (vph)	64	36	3	117	562	5	128	637	1	17	542	11
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	5		6	6		3	8		7	4	
Permitted Phases			5			6			8			4
Actuated Green, G (s)	9.6	9.6	9.6	50.5	50.5	50.5	10.3	30.6	30.6	2.7	23.0	23.0
Effective Green, g (s)	9.6	9.6	9.6	50.5	50.5	50.5	10.3	30.6	30.6	2.7	23.0	23.0
Actuated g/C Ratio	0.09	0.09	0.09	0.46	0.46	0.46	0.09	0.28	0.28	0.02	0.21	0.21
Clearance Time (s)	4.2	4.2	4.2	4.2	4.2	4.2	4.0	4.2	4.2	4.0	4.2	4.2
Vehicle Extension (s)	4.9	4.9	4.9	4.9	4.9	4.9	2.0	4.9	4.9	2.0	4.9	4.9
Lane Grp Cap (vph)	154	162	138	1576	855	726	165	984	440	43	739	330
v/s Ratio Prot	c0.04	0.02		0.03	c0.30		c0.07	0.18		0.01	c0.15	
v/s Ratio Perm			0.00			0.00			0.00			0.01
v/c Ratio	0.42	0.22	0.02	0.07	0.66	0.01	0.78	0.65	0.00	0.40	0.73	0.03
Uniform Delay, d1	47.5	46.7	45.9	16.7	23.0	16.1	48.7	35.0	28.7	52.8	40.6	34.6
Progression Factor	1.00	1.00	1.00	0.91	0.95	1.00	1.02	0.58	1.00	1.13	0.91	0.31
Incremental Delay, d2	3.6	1.4	0.1	0.1	3.4	0.0	17.8	1.9	0.0	2.1	4.4	0.1
Delay (s)	51.2	48.1	46.1	15.2	25.3	16.2	67.4	22.3	28.7	61.9	41.6	10.8
Level of Service	D	D	D	B	C	B	E	C	C	E	D	B
Approach Delay (s)		49.0			23.5			29.8			39.5	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.6
Intersection Capacity Utilization	68.9%	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												
Volume (vph)	0	0	0	38	185	112	103	557	0	0	524	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)					4.2	4.2	4.2	4.2			4.2	
Lane Util. Factor					0.95	1.00	1.00	0.95			0.95	
Frt					1.00	0.85	1.00	1.00			0.96	
Flt Protected					0.99	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					3509	1583	1770	3539			3412	
Flt Permitted					0.99	1.00	0.36	1.00			1.00	
Satd. Flow (perm)					3509	1583	673	3539			3412	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	41	201	122	112	605	0	0	570	179
RTOR Reduction (vph)	0	0	0	0	0	109	0	0	0	0	14	0
Lane Group Flow (vph)	0	0	0	0	242	13	112	605	0	0	735	0
Turn Type				Split	NA	Perm	Perm	NA			NA	
Protected Phases				8	8			2			6	
Permitted Phases						8	2					
Actuated Green, G (s)					12.0	12.0	89.6	89.6			89.6	
Effective Green, g (s)					12.0	12.0	89.6	89.6			89.6	
Actuated g/C Ratio					0.11	0.11	0.81	0.81			0.81	
Clearance Time (s)					4.2	4.2	4.2	4.2			4.2	
Vehicle Extension (s)					2.0	2.0	2.0	2.0			2.0	
Lane Grp Cap (vph)					382	172	548	2882			2779	
v/s Ratio Prot					c0.07			0.17			c0.22	
v/s Ratio Perm						0.01	0.17					
v/c Ratio					0.63	0.08	0.20	0.21			0.26	
Uniform Delay, d1					46.9	44.0	2.3	2.3			2.4	
Progression Factor					0.97	1.30	0.20	0.02			1.00	
Incremental Delay, d2					1.4	0.0	0.7	0.1			0.0	
Delay (s)					46.8	57.1	1.1	0.2			2.4	
Level of Service					D	E	A	A			A	
Approach Delay (s)		0.0			50.3			0.3			2.4	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	53.6%	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												
Volume (vph)	110	451	20	12	601	234	11	306	5	265	205	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.6		4.0	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3516		1770	3539	1583	1770	3531		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.56	1.00		0.53	1.00	1.00
Satd. Flow (perm)	1770	3516		1770	3539	1583	1045	3531		994	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	490	22	13	653	254	12	333	5	288	223	116
RTOR Reduction (vph)	0	4	0	0	0	136	0	1	0	0	0	79
Lane Group Flow (vph)	120	508	0	13	653	118	12	337	0	288	223	37
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	5.9	33.1		1.1	28.3	28.3	22.4	22.4		22.4	22.4	22.4
Effective Green, g (s)	5.9	33.1		1.1	28.3	28.3	22.4	22.4		22.4	22.4	22.4
Actuated g/C Ratio	0.08	0.47		0.02	0.41	0.41	0.32	0.32		0.32	0.32	0.32
Clearance Time (s)	4.0	4.6		4.0	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	149	1667		27	1434	641	335	1133		318	597	508
v/s Ratio Prot	c0.07	0.14		0.01	c0.18			0.10			0.12	
v/s Ratio Perm						0.07	0.01			c0.29		0.02
v/c Ratio	0.81	0.30		0.48	0.46	0.18	0.04	0.30		0.91	0.37	0.07
Uniform Delay, d1	31.4	11.3		34.1	15.1	13.3	16.3	17.8		22.7	18.3	16.5
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	24.9	0.0		4.9	0.1	0.1	0.0	0.1		27.2	0.1	0.0
Delay (s)	56.3	11.3		38.9	15.2	13.4	16.3	17.8		49.9	18.4	16.5
Level of Service	E	B		D	B	B	B	B		D	B	B
Approach Delay (s)		19.9			15.0			17.8			32.5	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	69.8	Sum of lost time (s)	13.2
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	158	0	15	15	10	10
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	172	0	16	16	11	11
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	484			1038		
pX, platoon unblocked						
vC, conflicting volume			172		221	172
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			172		221	172
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		99	99
cM capacity (veh/h)			1405		759	872

Direction, Lane #	SE 1	NW 1	NE 1
Volume Total	172	33	22
Volume Left	0	16	11
Volume Right	0	0	11
cSH	1700	1405	811
Volume to Capacity	0.10	0.01	0.03
Queue Length 95th (ft)	0	1	2
Control Delay (s)	0.0	3.8	9.6
Lane LOS		A	A
Approach Delay (s)	0.0	3.8	9.6
Approach LOS			A

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	24.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	443	137	424	36	25	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.0	4.2	4.2	4.2	4.2	4.2
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	482	149	461	39	27	279
RTOR Reduction (vph)	0	0	0	24	0	256
Lane Group Flow (vph)	482	149	461	15	27	23
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Actuated Green, G (s)	46.0	92.7	42.7	42.7	8.9	8.9
Effective Green, g (s)	46.0	92.7	42.7	42.7	8.9	8.9
Actuated g/C Ratio	0.42	0.84	0.39	0.39	0.08	0.08
Clearance Time (s)	4.0	4.2	4.2	4.2	4.2	4.2
Vehicle Extension (s)	3.0	4.8	4.8	4.8	2.0	2.0
Lane Grp Cap (vph)	740	2982	1373	614	143	128
v/s Ratio Prot	c0.27	0.04	c0.13		c0.02	
v/s Ratio Perm				0.01		0.01
v/c Ratio	0.65	0.05	0.34	0.02	0.19	0.18
Uniform Delay, d1	25.6	1.4	23.7	20.8	47.2	47.1
Progression Factor	1.18	1.44	0.90	0.68	1.00	1.00
Incremental Delay, d2	2.0	0.0	0.6	0.1	0.2	0.2
Delay (s)	32.2	2.1	22.0	14.1	47.4	47.4
Level of Service	C	A	C	B	D	D
Approach Delay (s)		25.1	21.4		47.4	
Approach LOS		C	C		D	

Intersection Summary			
HCM 2000 Control Delay	28.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.4
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	25	170	31	98	496	94	46	115	27	15	183	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2	4.2	4.2	4.2		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.97		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1818		1770	1810		1770	1814	
Flt Permitted	0.22	1.00	1.00	0.64	1.00		0.58	1.00		0.66	1.00	
Satd. Flow (perm)	414	1863	1583	1194	1818		1071	1810		1228	1814	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	185	34	107	539	102	50	125	29	16	199	42
RTOR Reduction (vph)	0	0	18	0	12	0	0	14	0	0	12	0
Lane Group Flow (vph)	27	185	16	107	629	0	50	140	0	16	229	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	26.7	26.7	26.7	26.7	26.7		22.0	22.0		22.0	22.0	
Effective Green, g (s)	26.7	26.7	26.7	26.7	26.7		22.0	22.0		22.0	22.0	
Actuated g/C Ratio	0.47	0.47	0.47	0.47	0.47		0.39	0.39		0.39	0.39	
Clearance Time (s)	4.2	4.2	4.2	4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	0.2	0.2	0.2	0.2	0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	193	871	740	558	850		412	697		473	698	
v/s Ratio Prot		0.10			c0.35			0.08			c0.13	
v/s Ratio Perm	0.07		0.01	0.09			0.05			0.01		
v/c Ratio	0.14	0.21	0.02	0.19	0.74		0.12	0.20		0.03	0.33	
Uniform Delay, d1	8.7	9.0	8.2	8.9	12.4		11.3	11.7		10.9	12.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.0	0.0	0.1	3.1		0.0	0.1		0.0	0.1	
Delay (s)	8.8	9.0	8.2	9.0	15.4		11.4	11.7		10.9	12.4	
Level of Service	A	A	A	A	B		B	B		B	B	
Approach Delay (s)		8.9			14.5			11.7			12.4	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	57.1	Sum of lost time (s)	8.4
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	48	280	96	0	0	0	0	200	78	23	108	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5						4.5		4.5	4.5	
Lane Util. Factor		0.91						1.00		1.00	1.00	
Frt		0.97						0.96		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		4885						1792		1770	1863	
Flt Permitted		0.99						1.00		0.27	1.00	
Satd. Flow (perm)		4885						1792		506	1863	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	52	304	104	0	0	0	0	217	85	25	117	0
RTOR Reduction (vph)	0	23	0	0	0	0	0	22	0	0	0	0
Lane Group Flow (vph)	0	437	0	0	0	0	0	280	0	25	117	0
Turn Type	Split	NA						NA		Perm	NA	
Protected Phases	2	2						8			4	
Permitted Phases										4		
Actuated Green, G (s)		76.8						24.2		24.2	24.2	
Effective Green, g (s)		76.8						24.2		24.2	24.2	
Actuated g/C Ratio		0.70						0.22		0.22	0.22	
Clearance Time (s)		4.5						4.5		4.5	4.5	
Vehicle Extension (s)		0.2						0.2		0.2	0.2	
Lane Grp Cap (vph)		3410						394		111	409	
v/s Ratio Prot		c0.09						c0.16			0.06	
v/s Ratio Perm										0.05		
v/c Ratio		0.13						0.71		0.23	0.29	
Uniform Delay, d1		5.5						39.7		35.2	35.7	
Progression Factor		1.30						1.00		1.10	1.09	
Incremental Delay, d2		0.1						5.0		0.4	0.1	
Delay (s)		7.2						44.6		39.1	38.9	
Level of Service		A						D		D	D	
Approach Delay (s)		7.2			0.0			44.6			39.0	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	68.8%	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												
Volume (veh/h)	0	0	0	121	255	8	100	8	0	0	10	7
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	132	277	9	109	9	0	0	11	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1000			1010							
pX, platoon unblocked												
vC, conflicting volume	286			0			415	549	0	549	545	143
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	286			0			415	549	0	549	545	143
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			92			77	98	100	100	97	99
cM capacity (veh/h)	1273			1622			476	406	1084	386	408	879

Direction, Lane #	NW 1	NW 2	NE 1	NE 2	SW 1
Volume Total	270	147	109	9	18
Volume Left	132	0	109	0	0
Volume Right	0	9	0	0	8
cSH	1622	1700	476	406	524
Volume to Capacity	0.08	0.09	0.23	0.02	0.04
Queue Length 95th (ft)	7	0	22	2	3
Control Delay (s)	3.9	0.0	14.8	14.1	12.1
Lane LOS	A		B	B	B
Approach Delay (s)	2.6		14.7		12.1
Approach LOS			B		B

Intersection Summary			
Average Delay	5.5		
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	92	32	34	102	0	2	0	74	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.8			4.8			4.8				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.96			1.00			0.87				
Flt Protected		1.00			0.99			1.00				
Satd. Flow (prot)		3402			3496			1615				
Flt Permitted		1.00			0.87			0.99				
Satd. Flow (perm)		3402			3081			1603				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	100	35	37	111	0	2	0	80	0	0	0
RTOR Reduction (vph)	0	4	0	0	0	0	0	77	0	0	0	0
Lane Group Flow (vph)	0	131	0	0	148	0	0	5	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm		
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)		96.3			96.3			4.1				
Effective Green, g (s)		96.3			96.3			4.1				
Actuated g/C Ratio		0.88			0.88			0.04				
Clearance Time (s)		4.8			4.8			4.8				
Vehicle Extension (s)		0.2			0.2			0.2				
Lane Grp Cap (vph)		2978			2697			59				
v/s Ratio Prot		0.04										
v/s Ratio Perm					c0.05			c0.00				
v/c Ratio		0.04			0.05			0.08				
Uniform Delay, d1		0.9			0.9			51.1				
Progression Factor		5.00			0.98			1.00				
Incremental Delay, d2		0.0			0.0			0.2				
Delay (s)		4.5			0.9			51.4				
Level of Service		A			A			D				
Approach Delay (s)		4.5			0.9			51.4			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.06		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.6
Intersection Capacity Utilization	24.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	566	45	136	533	11	47
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	615	49	148	579	12	51
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	537			471		
pX, platoon unblocked			0.99		0.92	0.99
vC, conflicting volume			664		1225	332
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			636		1023	300
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			84		93	93
cM capacity (veh/h)			932		180	688

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1
Volume Total	410	254	341	386	63
Volume Left	0	0	148	0	12
Volume Right	0	49	0	0	51
cSH	1700	1700	932	1700	448
Volume to Capacity	0.24	0.15	0.16	0.23	0.14
Queue Length 95th (ft)	0	0	14	0	12
Control Delay (s)	0.0	0.0	5.1	0.0	14.3
Lane LOS			A		B
Approach Delay (s)	0.0		2.4		14.3
Approach LOS					B

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	26	78	10	13	54	106	15	256	25	19	320	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2		4.2	4.2		4.2	4.2	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.92		1.00	0.99		1.00	0.99	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1820			1703		1770	1838		1770	1845	
Flt Permitted		0.92			0.98		0.27	1.00		0.36	1.00	
Satd. Flow (perm)		1694			1677		495	1838		673	1845	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	28	85	11	14	59	115	16	278	27	21	348	23
RTOR Reduction (vph)	0	2	0	0	30	0	0	5	0	0	4	0
Lane Group Flow (vph)	0	122	0	0	158	0	16	300	0	21	367	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)		69.9			69.9		31.7	31.7		31.7	31.7	
Effective Green, g (s)		69.9			69.9		31.7	31.7		31.7	31.7	
Actuated g/C Ratio		0.64			0.64		0.29	0.29		0.29	0.29	
Clearance Time (s)		4.2			4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)		0.2			0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		1076			1065		142	529		193	531	
v/s Ratio Prot								0.16			c0.20	
v/s Ratio Perm		0.07			c0.09		0.03			0.03		
v/c Ratio		0.11			0.15		0.11	0.57		0.11	0.69	
Uniform Delay, d1		7.9			8.1		28.8	33.3		28.8	34.8	
Progression Factor		1.00			1.00		1.00	1.00		0.76	0.69	
Incremental Delay, d2		0.2			0.3		0.1	0.8		0.1	3.0	
Delay (s)		8.1			8.4		28.9	34.1		21.8	27.0	
Level of Service		A			A		C	C		C	C	
Approach Delay (s)		8.1			8.4			33.9			26.7	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	33	62	13	2	25	12	27	345	15	11	345	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2		4.2	4.2		4.2	4.2	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.96		1.00	0.99		1.00	0.98	
Flt Protected		0.98			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1805			1781		1770	1851		1770	1826	
Flt Permitted		0.92			0.99		0.22	1.00		0.27	1.00	
Satd. Flow (perm)		1689			1776		408	1851		507	1826	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	67	14	2	27	13	29	375	16	12	375	57
RTOR Reduction (vph)	0	2	0	0	5	0	0	3	0	0	10	0
Lane Group Flow (vph)	0	115	0	0	37	0	29	388	0	12	422	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)		67.2			67.2		34.4	34.4		34.4	34.4	
Effective Green, g (s)		67.2			67.2		34.4	34.4		34.4	34.4	
Actuated g/C Ratio		0.61			0.61		0.31	0.31		0.31	0.31	
Clearance Time (s)		4.2			4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)		0.2			0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		1031			1084		127	578		158	571	
v/s Ratio Prot								0.21			c0.23	
v/s Ratio Perm		c0.07			0.02		0.07			0.02		
v/c Ratio		0.11			0.03		0.23	0.67		0.08	0.74	
Uniform Delay, d1		8.9			8.5		28.0	32.9		26.6	33.8	
Progression Factor		0.60			1.00		0.59	0.51		1.11	0.83	
Incremental Delay, d2		0.2			0.1		0.3	2.4		0.1	3.4	
Delay (s)		5.5			8.6		16.7	19.3		29.6	31.5	
Level of Service		A			A		B	B		C	C	
Approach Delay (s)		5.5			8.6			19.1			31.4	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	22.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	118	0	0	165	0	0	453	0	0	576	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2			4.2			4.2	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			1.00			1.00			1.00	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		3539			3539			1863			1863	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		3539			3539			1863			1863	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	128	0	0	179	0	0	492	0	0	626	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	128	0	0	179	0	0	492	0	0	626	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)		57.0			57.0			44.6			44.6	
Effective Green, g (s)		57.0			57.0			44.6			44.6	
Actuated g/C Ratio		0.52			0.52			0.41			0.41	
Clearance Time (s)		4.2			4.2			4.2			4.2	
Vehicle Extension (s)		0.2			0.2			0.2			0.2	
Lane Grp Cap (vph)		1833			1833			755			755	
v/s Ratio Prot		0.04			c0.05			0.26			c0.34	
v/s Ratio Perm												
v/c Ratio		0.07			0.10			0.65			0.83	
Uniform Delay, d1		13.2			13.4			26.4			29.3	
Progression Factor		0.93			0.97			0.25			1.13	
Incremental Delay, d2		0.1			0.1			1.5			6.7	
Delay (s)		12.3			13.2			8.2			39.9	
Level of Service		B			B			A			D	
Approach Delay (s)		12.3			13.2			8.2			39.9	
Approach LOS		B			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.4
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												
Volume (vph)	418	460	119	210	438	101	142	351	143	71	308	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.97		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3430		1770	3440		1770	3386		1770	3386	
Flt Permitted	0.41	1.00		0.39	1.00		0.34	1.00		0.29	1.00	
Satd. Flow (perm)	765	3430		726	3440		633	3386		532	3386	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	454	500	129	228	476	110	154	382	155	77	335	136
RTOR Reduction (vph)	0	16	0	0	14	0	0	45	0	0	45	0
Lane Group Flow (vph)	454	613	0	228	572	0	154	492	0	77	426	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	71.9	71.9		71.9	71.9		29.4	29.4		29.4	29.4	
Effective Green, g (s)	71.9	71.9		71.9	71.9		29.4	29.4		29.4	29.4	
Actuated g/C Ratio	0.65	0.65		0.65	0.65		0.27	0.27		0.27	0.27	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	500	2241		474	2248		169	904		142	904	
v/s Ratio Prot		0.18			0.17			0.15			0.13	
v/s Ratio Perm	c0.59			0.31			c0.24			0.14		
v/c Ratio	0.91	0.27		0.48	0.25		0.91	0.54		0.54	0.47	
Uniform Delay, d1	16.2	8.0		9.6	7.9		39.0	34.6		34.5	33.8	
Progression Factor	1.18	1.16		0.54	0.54		1.17	1.18		0.80	0.77	
Incremental Delay, d2	22.8	0.3		3.4	0.3		42.4	0.3		1.8	0.1	
Delay (s)	42.1	9.6		8.6	4.5		88.0	41.0		29.6	26.2	
Level of Service	D	A		A	A		F	D		C	C	
Approach Delay (s)		23.2			5.7			51.5			26.7	
Approach LOS		C			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.7
Intersection Capacity Utilization	98.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	123	223	124	75	454	80	152	348	66	88	304	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.2		4.0	4.2		4.0	4.2		4.0	4.2	
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.98		1.00	0.98		1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1763		1770	3460		1770	3454		1770	3282	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1763		1770	3460		1770	3454		1770	3282	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	134	242	135	82	493	87	165	378	72	96	330	310
RTOR Reduction (vph)	0	16	0	0	12	0	0	15	0	0	158	0
Lane Group Flow (vph)	134	361	0	82	568	0	165	435	0	96	482	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	12.3	47.4		7.9	43.0		14.1	28.6		9.7	24.2	
Effective Green, g (s)	12.3	47.4		7.9	43.0		14.1	28.6		9.7	24.2	
Actuated g/C Ratio	0.11	0.43		0.07	0.39		0.13	0.26		0.09	0.22	
Clearance Time (s)	4.0	4.2		4.0	4.2		4.0	4.2		4.0	4.2	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	5.0		2.0	5.0	
Lane Grp Cap (vph)	197	759		127	1352		226	898		156	722	
v/s Ratio Prot	c0.08	c0.20		0.05	0.16		c0.09	0.13		0.05	c0.15	
v/s Ratio Perm												
v/c Ratio	0.68	0.48		0.65	0.42		0.73	0.48		0.62	0.67	
Uniform Delay, d1	47.0	22.4		49.7	24.4		46.1	34.5		48.4	39.2	
Progression Factor	0.99	0.68		1.00	1.00		0.75	1.03		0.58	1.04	
Incremental Delay, d2	4.8	1.3		8.2	1.0		7.8	0.7		4.6	2.9	
Delay (s)	51.2	16.5		57.8	25.4		42.6	36.2		32.5	43.7	
Level of Service	D	B		E	C		D	D		C	D	
Approach Delay (s)		25.6			29.4			37.9			42.2	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	63.1%	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												
Volume (vph)	210	257	237	0	0	0	0	438	92	131	781	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5	4.5					4.5		4.5	4.5	
Lane Util. Factor		0.91	1.00					0.95		1.00	0.95	
Frt		1.00	0.85					0.97		1.00	1.00	
Flt Protected		0.98	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		4973	1583					3447		1770	3539	
Flt Permitted		0.98	1.00					1.00		0.29	1.00	
Satd. Flow (perm)		4973	1583					3447		537	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	228	279	258	0	0	0	0	476	100	142	849	0
RTOR Reduction (vph)	0	0	49	0	0	0	0	24	0	0	0	0
Lane Group Flow (vph)	0	507	209	0	0	0	0	552	0	142	849	0
Turn Type	Split	NA	Perm					NA		Perm	NA	
Protected Phases	2	2						4			4	
Permitted Phases			2							4		
Actuated Green, G (s)		68.1	68.1					32.9		32.9	32.9	
Effective Green, g (s)		68.1	68.1					32.9		32.9	32.9	
Actuated g/C Ratio		0.62	0.62					0.30		0.30	0.30	
Clearance Time (s)		4.5	4.5					4.5		4.5	4.5	
Vehicle Extension (s)		0.2	0.2					0.2		0.2	0.2	
Lane Grp Cap (vph)		3078	980					1030		160	1058	
v/s Ratio Prot		0.10						0.16			0.24	
v/s Ratio Perm			c0.13							c0.26		
v/c Ratio		0.16	0.21					0.54		0.89	0.80	
Uniform Delay, d1		8.9	9.2					32.2		36.8	35.6	
Progression Factor		0.64	0.50					0.80		0.56	0.52	
Incremental Delay, d2		0.1	0.4					0.2		34.2	3.5	
Delay (s)		5.8	5.1					25.9		54.7	21.9	
Level of Service		A	A					C		D	C	
Approach Delay (s)		5.5			0.0			25.9			26.6	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	70.4%	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												
Volume (vph)	0	0	0	47	188	67	61	331	0	0	1279	159
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)				4.2	4.2	4.2	4.2	4.2			4.2	4.2
Lane Util. Factor				1.00	1.00	1.00	1.00	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1770	1863	1583	1770	3539			3539	1583
Flt Permitted				0.95	1.00	1.00	0.12	1.00			1.00	1.00
Satd. Flow (perm)				1770	1863	1583	230	3539			3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	51	204	73	66	360	0	0	1390	173
RTOR Reduction (vph)	0	0	0	0	0	28	0	0	0	0	0	40
Lane Group Flow (vph)	0	0	0	51	204	45	66	360	0	0	1390	133
Turn Type				Split	NA	Perm	Perm	NA			NA	Perm
Protected Phases				6	6			8			4	
Permitted Phases						6	8					4
Actuated Green, G (s)				33.7	33.7	33.7	67.9	67.9			67.9	67.9
Effective Green, g (s)				33.7	33.7	33.7	67.9	67.9			67.9	67.9
Actuated g/C Ratio				0.31	0.31	0.31	0.62	0.62			0.62	0.62
Clearance Time (s)				4.2	4.2	4.2	4.2	4.2			4.2	4.2
Vehicle Extension (s)				3.0	3.0	3.0	5.0	5.0			5.0	5.0
Lane Grp Cap (vph)				542	570	484	141	2184			2184	977
v/s Ratio Prot				0.03	c0.11			0.10			c0.39	
v/s Ratio Perm						0.03	0.29					0.08
v/c Ratio				0.09	0.36	0.09	0.47	0.16			0.64	0.14
Uniform Delay, d1				27.2	29.7	27.2	11.3	9.0			13.3	8.8
Progression Factor				0.82	0.83	0.71	1.44	1.02			0.48	0.59
Incremental Delay, d2				0.3	1.7	0.4	4.9	0.1			0.7	0.1
Delay (s)				22.6	26.4	19.8	21.2	9.2			7.0	5.3
Level of Service				C	C	B	C	A			A	A
Approach Delay (s)		0.0			24.3			11.1			6.8	
Approach LOS		A			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	70.4%	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												
Volume (vph)	47	206	53	94	286	123	50	314	38	100	1291	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3482		1770	3494	
Flt Permitted	0.42	1.00	1.00	0.53	1.00	1.00	0.07	1.00		0.51	1.00	
Satd. Flow (perm)	791	1863	1583	994	1863	1583	135	3482		949	3494	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	224	58	102	311	134	54	341	41	109	1403	130
RTOR Reduction (vph)	0	0	33	0	0	55	0	11	0	0	8	0
Lane Group Flow (vph)	51	224	25	102	311	79	54	371	0	109	1525	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	39.5	39.5	39.5	39.5	39.5	39.5	61.7	61.7		61.7	61.7	
Effective Green, g (s)	39.5	39.5	39.5	39.5	39.5	39.5	61.7	61.7		61.7	61.7	
Actuated g/C Ratio	0.36	0.36	0.36	0.36	0.36	0.36	0.56	0.56		0.56	0.56	
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	284	668	568	356	668	568	75	1953		532	1959	
v/s Ratio Prot		0.12			c0.17			0.11			c0.44	
v/s Ratio Perm	0.06		0.02	0.10		0.05	0.40			0.11		
v/c Ratio	0.18	0.34	0.04	0.29	0.47	0.14	0.72	0.19		0.20	0.78	
Uniform Delay, d1	24.1	25.7	23.0	25.2	27.1	23.8	17.8	11.9		12.0	18.8	
Progression Factor	0.73	0.72	0.47	1.00	1.00	1.00	0.79	0.38		0.24	0.19	
Incremental Delay, d2	1.4	1.3	0.1	2.0	2.3	0.5	23.8	0.0		0.1	1.4	
Delay (s)	18.9	19.9	10.9	27.2	29.5	24.3	37.7	4.5		2.9	5.1	
Level of Service	B	B	B	C	C	C	D	A		A	A	
Approach Delay (s)		18.2			27.8			8.6			5.0	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.8
Intersection Capacity Utilization	110.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	51	106	61	0	0	0	35	299	62	232	1450	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.6	4.6				4.6	4.6		4.6	4.6	
Lane Util. Factor		1.00	1.00				1.00	0.95		1.00	0.95	
Frt		1.00	0.85				1.00	0.97		1.00	0.98	
Flt Protected		0.98	1.00				0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1833	1583				1770	3448		1770	3479	
Flt Permitted		0.98	1.00				0.10	1.00		0.52	1.00	
Satd. Flow (perm)		1833	1583				189	3448		969	3479	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	55	115	66	0	0	0	38	325	67	252	1576	201
RTOR Reduction (vph)	0	0	36	0	0	0	0	9	0	0	5	0
Lane Group Flow (vph)	0	170	30	0	0	0	38	383	0	252	1772	0
Turn Type	Split	NA	Perm				Perm	NA		Perm	NA	
Protected Phases	4	4						2			6	
Permitted Phases			4				2			6		
Actuated Green, G (s)		13.2	13.2				87.6	87.6		87.6	87.6	
Effective Green, g (s)		13.2	13.2				87.6	87.6		87.6	87.6	
Actuated g/C Ratio		0.12	0.12				0.80	0.80		0.80	0.80	
Clearance Time (s)		4.6	4.6				4.6	4.6		4.6	4.6	
Vehicle Extension (s)		0.2	0.2				4.1	4.1		4.1	4.1	
Lane Grp Cap (vph)		219	189				150	2745		771	2770	
v/s Ratio Prot		c0.09						0.11			c0.51	
v/s Ratio Perm			0.02				0.20			0.26		
v/c Ratio		0.78	0.16				0.25	0.14		0.33	0.64	
Uniform Delay, d1		47.0	43.4				2.9	2.6		3.1	4.6	
Progression Factor		1.00	1.00				1.03	0.74		0.88	1.53	
Incremental Delay, d2		14.5	0.1				1.3	0.0		1.0	1.1	
Delay (s)		61.4	43.6				4.2	1.9		3.7	8.2	
Level of Service		E	D				A	A		A	A	
Approach Delay (s)		56.4			0.0			2.1			7.6	
Approach LOS		E			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.2
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	0	1042	0	350	825	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)		4.1		4.1	4.6	
Lane Util. Factor		0.88		0.95	0.95	
Frt		0.85		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		2787		3539	3539	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		2787		3539	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1133	0	380	897	0
RTOR Reduction (vph)	0	703	0	0	0	0
Lane Group Flow (vph)	0	430	0	380	897	0
Turn Type		custom		NA	NA	
Protected Phases				6	4	
Permitted Phases		7				
Actuated Green, G (s)		41.7		60.1	41.2	
Effective Green, g (s)		41.7		60.1	41.2	
Actuated g/C Ratio		0.38		0.55	0.37	
Clearance Time (s)		4.1		4.1	4.6	
Vehicle Extension (s)		1.2		3.0	4.0	
Lane Grp Cap (vph)		1056		1933	1325	
v/s Ratio Prot				c0.11	c0.25	
v/s Ratio Perm		0.15				
v/c Ratio		0.41		0.20	0.68	
Uniform Delay, d1		25.1		12.7	28.8	
Progression Factor		1.00		0.89	0.81	
Incremental Delay, d2		0.1		0.2	1.5	
Delay (s)		25.2		11.5	24.8	
Level of Service		C		B	C	
Approach Delay (s)	25.2			11.5	24.8	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	22.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.7
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	628	22	0	337	0	0	0	0	504	1032	1067
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0					4.0	4.0	4.0
Lane Util. Factor		0.95			0.95					0.91	0.91	1.00
Frt		0.99			1.00					1.00	1.00	0.85
Flt Protected		1.00			1.00					0.95	1.00	1.00
Satd. Flow (prot)		3521			3539					1610	3382	1583
Flt Permitted		1.00			1.00					0.95	1.00	1.00
Satd. Flow (perm)		3521			3539					1610	3382	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	683	24	0	366	0	0	0	0	548	1122	1160
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	0	0	0	30
Lane Group Flow (vph)	0	705	0	0	366	0	0	0	0	493	1177	1130
Turn Type		NA			NA					Perm	NA	Perm
Protected Phases		4			8						2	
Permitted Phases										2		2
Actuated Green, G (s)		23.0			23.0					79.0	79.0	79.0
Effective Green, g (s)		23.0			23.0					79.0	79.0	79.0
Actuated g/C Ratio		0.21			0.21					0.72	0.72	0.72
Clearance Time (s)		4.0			4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		736			739					1156	2428	1136
v/s Ratio Prot		c0.20			0.10							
v/s Ratio Perm										0.31	0.35	c0.71
v/c Ratio		0.96			0.50					0.43	0.48	0.99
Uniform Delay, d1		43.0			38.4					6.3	6.7	15.3
Progression Factor		0.85			2.12					1.00	1.00	1.00
Incremental Delay, d2		20.4			0.5					1.2	0.7	25.4
Delay (s)		56.9			81.8					7.4	7.4	40.7
Level of Service		E			F					A	A	D
Approach Delay (s)		56.9			81.8			0.0			21.1	
Approach LOS		E			F			A			C	

Intersection Summary			
HCM 2000 Control Delay	33.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	170	230	0	570	235	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.1	4.0		4.1	4.1	4.1
Lane Util. Factor	0.95	1.00		0.95	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3539	1583		3539	1770	1583
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3539	1583		3539	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	250	0	620	255	296
RTOR Reduction (vph)	0	0	0	0	0	157
Lane Group Flow (vph)	185	250	0	620	255	139
Turn Type	NA	Free		NA	NA	Perm
Protected Phases	6			6	8	
Permitted Phases		Free				8
Actuated Green, G (s)	50.3	110.0		50.3	51.5	51.5
Effective Green, g (s)	50.3	110.0		50.3	51.5	51.5
Actuated g/C Ratio	0.46	1.00		0.46	0.47	0.47
Clearance Time (s)	4.1			4.1	4.1	4.1
Vehicle Extension (s)	3.0			3.0	0.2	0.2
Lane Grp Cap (vph)	1618	1583		1618	828	741
v/s Ratio Prot	0.05			c0.18	c0.14	
v/s Ratio Perm		0.16				0.09
v/c Ratio	0.11	0.16		0.38	0.31	0.19
Uniform Delay, d1	17.1	0.0		19.6	18.2	17.0
Progression Factor	0.56	1.00		0.54	1.00	1.00
Incremental Delay, d2	0.1	0.2		0.6	0.1	0.0
Delay (s)	9.7	0.2		11.2	18.3	17.1
Level of Service	A	A		B	B	B
Approach Delay (s)	4.3			11.2	17.6	
Approach LOS	A			B	B	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	39.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	191	598	136	115	715	97	388	470	27	270	423	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.6	4.6	4.0	4.9		4.0	4.6	4.6	4.0	4.9	4.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	3433	3476		3433	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	3433	3476		3433	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	208	650	148	125	777	105	422	511	29	293	460	261
RTOR Reduction (vph)	0	0	76	0	11	0	0	0	21	0	0	151
Lane Group Flow (vph)	208	650	72	125	871	0	422	511	8	293	460	110
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8						6			2
Actuated Green, G (s)	7.8	29.1	29.1	7.1	28.1		12.1	23.3	23.3	11.2	22.1	22.1
Effective Green, g (s)	7.8	29.1	29.1	7.1	28.1		12.1	23.3	23.3	11.2	22.1	22.1
Actuated g/C Ratio	0.09	0.33	0.33	0.08	0.32		0.14	0.27	0.27	0.13	0.25	0.25
Clearance Time (s)	4.0	4.6	4.6	4.0	4.9		4.0	4.6	4.6	4.0	4.9	4.9
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.2		2.0	5.0	5.0	2.0	5.2	5.2
Lane Grp Cap (vph)	304	1171	524	277	1111		472	938	419	437	889	398
v/s Ratio Prot	c0.06	0.18		0.04	c0.25		c0.12	c0.14		0.09	0.13	
v/s Ratio Perm			0.05						0.00			0.07
v/c Ratio	0.68	0.56	0.14	0.45	0.78		0.89	0.54	0.02	0.67	0.52	0.28
Uniform Delay, d1	38.9	24.1	20.6	38.5	27.1		37.3	27.7	23.9	36.6	28.3	26.5
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	5.0	1.0	0.3	0.4	4.3		18.6	1.1	0.0	3.2	1.1	0.8
Delay (s)	43.9	25.1	20.9	39.0	31.5		55.8	28.9	23.9	39.8	29.4	27.3
Level of Service	D	C	C	D	C		E	C	C	D	C	C
Approach Delay (s)		28.3			32.4			40.6			31.9	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	33.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	87.9	Sum of lost time (s)	17.8
Intersection Capacity Utilization	65.9%	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												
Volume (vph)	0	483	4	37	378	39	25	50	35	85	11	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5			4.5			4.5	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			0.99			0.96			0.95	
Flt Protected		1.00			1.00			0.99			0.97	
Satd. Flow (prot)		3535			3480			1762			1722	
Flt Permitted		1.00			0.88			0.91			0.70	
Satd. Flow (perm)		3535			3059			1628			1246	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	525	4	40	411	42	27	54	38	92	12	60
RTOR Reduction (vph)	0	0	0	0	4	0	0	21	0	0	26	0
Lane Group Flow (vph)	0	529	0	0	489	0	0	98	0	0	138	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		80.0			80.0			21.0			21.0	
Effective Green, g (s)		80.0			80.0			21.0			21.0	
Actuated g/C Ratio		0.73			0.73			0.19			0.19	
Clearance Time (s)		4.5			4.5			4.5			4.5	
Vehicle Extension (s)		0.2			0.2			0.2			0.2	
Lane Grp Cap (vph)		2570			2224			310			237	
v/s Ratio Prot		0.15										
v/s Ratio Perm					c0.16			0.06			c0.11	
v/c Ratio		0.21			0.22			0.32			0.58	
Uniform Delay, d1		4.8			4.9			38.3			40.5	
Progression Factor		0.70			0.66			1.00			1.07	
Incremental Delay, d2		0.1			0.0			0.2			2.3	
Delay (s)		3.5			3.2			38.5			45.8	
Level of Service		A			A			D			D	
Approach Delay (s)		3.5			3.2			38.5			45.8	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	65.5%	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												
Volume (vph)	62	35	25	65	45	46	16	995	51	183	643	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.2	4.2	4.0	4.2		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.92		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1722		1770	3514		1770	3456	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.29	1.00		0.18	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1722		539	3514		342	3456	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	38	27	71	49	50	17	1082	55	199	699	130
RTOR Reduction (vph)	0	0	21	0	32	0	0	4	0	0	15	0
Lane Group Flow (vph)	67	38	6	71	67	0	17	1133	0	199	814	0
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8			4		
Actuated Green, G (s)	6.2	25.1	25.1	6.3	25.2		66.2	66.2		66.2	66.2	
Effective Green, g (s)	6.2	25.1	25.1	6.3	25.2		66.2	66.2		66.2	66.2	
Actuated g/C Ratio	0.06	0.23	0.23	0.06	0.23		0.60	0.60		0.60	0.60	
Clearance Time (s)	4.0	4.2	4.2	4.0	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		6.0	6.0		6.0	6.0	
Lane Grp Cap (vph)	99	425	361	101	394		324	2114		205	2079	
v/s Ratio Prot	0.04	0.02		c0.04	c0.04			0.32			0.24	
v/s Ratio Perm			0.00				0.03			c0.58		
v/c Ratio	0.68	0.09	0.02	0.70	0.17		0.05	0.54		0.97	0.39	
Uniform Delay, d1	50.9	33.4	32.9	50.9	34.0		9.0	12.9		21.0	11.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.98	0.76	
Incremental Delay, d2	13.5	0.4	0.1	16.5	0.9		0.2	0.6		51.7	0.3	
Delay (s)	64.4	33.9	33.0	67.4	35.0		9.2	13.5		72.3	8.9	
Level of Service	E	C	C	E	C		A	B		E	A	
Approach Delay (s)		49.2			48.5			13.4			21.2	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.4
Intersection Capacity Utilization	60.0%	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												
Volume (vph)	847	215	497	0	0	0	0	812	291	121	476	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.7	4.7	4.7					5.2		5.2	5.2	
Lane Util. Factor	1.00	1.00	1.00					0.95		1.00	0.95	
Frt	1.00	1.00	0.85					0.96		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583					3399		1770	3539	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583					3399		1770	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	921	234	540	0	0	0	0	883	316	132	517	0
RTOR Reduction (vph)	0	0	134	0	0	0	0	33	0	0	0	0
Lane Group Flow (vph)	921	234	406	0	0	0	0	1166	0	132	517	0
Turn Type	Split	NA	Perm					NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	50.3	50.3	50.3					36.6		8.0	49.8	
Effective Green, g (s)	50.3	50.3	50.3					36.6		8.0	49.8	
Actuated g/C Ratio	0.46	0.46	0.46					0.33		0.07	0.45	
Clearance Time (s)	4.7	4.7	4.7					5.2		5.2	5.2	
Vehicle Extension (s)	6.2	6.2	6.2					0.2		2.0	0.2	
Lane Grp Cap (vph)	809	851	723					1130		128	1602	
v/s Ratio Prot	c0.52	0.13						c0.34		c0.07	0.15	
v/s Ratio Perm			0.26									
v/c Ratio	1.14	0.27	0.56					1.03		1.03	0.32	
Uniform Delay, d1	29.9	18.5	21.8					36.7		51.0	19.3	
Progression Factor	1.00	1.00	1.00					0.72		1.17	1.13	
Incremental Delay, d2	77.1	0.5	2.2					33.8		82.8	0.5	
Delay (s)	106.9	19.1	24.0					60.3		142.3	22.3	
Level of Service	F	B	C					E		F	C	
Approach Delay (s)		68.4			0.0			60.3			46.7	
Approach LOS		E			A			E			D	

Intersection Summary			
HCM 2000 Control Delay	61.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	15.1
Intersection Capacity Utilization	131.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	187	265	548	450	1201	0	0	400	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)					5.4	5.4	3.7	5.2			5.2	5.2
Lane Util. Factor					0.95	1.00	1.00	0.95			0.95	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.98	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					3468	1583	1770	3539			3539	1583
Flt Permitted					0.98	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					3468	1583	1770	3539			3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	203	288	596	489	1305	0	0	435	247
RTOR Reduction (vph)	0	0	0	0	0	48	0	0	0	0	0	194
Lane Group Flow (vph)	0	0	0	0	491	548	489	1305	0	0	435	53
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)					37.6	37.6	34.3	61.8			23.8	23.8
Effective Green, g (s)					37.6	37.6	34.3	61.8			23.8	23.8
Actuated g/C Ratio					0.34	0.34	0.31	0.56			0.22	0.22
Clearance Time (s)					5.4	5.4	3.7	5.2			5.2	5.2
Vehicle Extension (s)					5.0	5.0	2.0	0.2			0.2	0.2
Lane Grp Cap (vph)					1185	541	551	1988			765	342
v/s Ratio Prot					0.14		c0.28	c0.37			0.12	
v/s Ratio Perm						c0.35						0.03
v/c Ratio					0.41	1.01	0.89	0.66			0.57	0.16
Uniform Delay, d1					27.8	36.2	36.0	16.7			38.5	35.0
Progression Factor					1.00	1.00	0.79	0.56			0.63	0.46
Incremental Delay, d2					0.5	41.9	1.8	0.2			3.0	1.0
Delay (s)					28.3	78.1	30.2	9.5			27.3	17.0
Level of Service					C	E	C	A			C	B
Approach Delay (s)		0.0			55.6			15.2			23.5	
Approach LOS		A			E			B			C	

Intersection Summary			
HCM 2000 Control Delay	29.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.3
Intersection Capacity Utilization	131.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	237	0	0	185	0	0	0	1067	0	405	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5			4.2			4.2	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		1.00			1.00			0.85			1.00	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		3539			3539			3008			3539	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		3539			3539			3008			3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	258	0	0	201	0	0	0	1160	0	440	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	66	0	0	0	0
Lane Group Flow (vph)	0	258	0	0	201	0	0	1094	0	0	440	0
Turn Type	Perm	NA	Perm	Perm	NA			NA			NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4								2
Actuated Green, G (s)		12.6			12.6			88.7			88.7	
Effective Green, g (s)		12.6			12.6			88.7			88.7	
Actuated g/C Ratio		0.11			0.11			0.81			0.81	
Clearance Time (s)		4.5			4.5			4.2			4.2	
Vehicle Extension (s)		2.0			2.0			5.0			5.0	
Lane Grp Cap (vph)		405			405			2425			2853	
v/s Ratio Prot		c0.07			0.06			c0.36			0.12	
v/s Ratio Perm												
v/c Ratio		0.64			0.50			0.85dr			0.15	
Uniform Delay, d1		46.5			45.7			3.2			2.4	
Progression Factor		1.00			1.52			3.09			0.80	
Incremental Delay, d2		2.4			0.3			0.5			0.1	
Delay (s)		48.9			70.1			10.6			2.0	
Level of Service		D			E			B			A	
Approach Delay (s)		48.9			70.1			10.6			2.0	
Approach LOS		D			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.7
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	93	744	64	62	244	170	69	791	325	209	472	46
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	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	3893	1742	1947	3653		1947	3723		1947	3841	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1947	3893	1742	1947	3653		1947	3723		1947	3841	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	101	809	70	67	265	185	75	860	353	227	513	50
RTOR Reduction (vph)	0	0	50	0	119	0	0	42	0	0	6	0
Lane Group Flow (vph)	101	809	20	67	331	0	75	1171	0	227	557	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6									
Actuated Green, G (s)	8.4	31.6	31.6	6.6	29.8		7.1	42.8		13.0	48.7	
Effective Green, g (s)	8.4	31.6	31.6	6.6	29.8		7.1	42.8		13.0	48.7	
Actuated g/C Ratio	0.08	0.29	0.29	0.06	0.27		0.06	0.39		0.12	0.44	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	148	1118	500	116	989		125	1448		230	1700	
v/s Ratio Prot	c0.05	c0.21		0.03	0.09		0.04	c0.31		c0.12	0.14	
v/s Ratio Perm			0.01									
v/c Ratio	0.68	0.72	0.04	0.58	0.33		0.60	0.81		0.99	0.33	
Uniform Delay, d1	49.5	35.3	28.3	50.3	32.2		50.1	29.9		48.4	20.0	
Progression Factor	0.90	0.89	0.97	1.24	0.88		1.00	1.00		1.25	0.73	
Incremental Delay, d2	12.1	4.0	0.1	6.7	0.9		7.5	3.4		55.0	0.1	
Delay (s)	56.8	35.4	27.5	69.2	29.1		57.6	33.4		115.5	14.6	
Level of Service	E	D	C	E	C		E	C		F	B	
Approach Delay (s)		37.0			34.3			34.8			43.6	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	37.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	58	15	26	15	3	28	80	605	83	52	399	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.8	4.8		4.8	4.8			4.8		4.8	4.8	4.8
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95		1.00	1.00	1.00
Frt	1.00	0.90		1.00	0.86			0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99		0.95	1.00	1.00
Satd. Flow (prot)	1770	1685		1770	1609			3464		1770	1863	1583
Flt Permitted	0.74	1.00		0.73	1.00			0.85		0.34	1.00	1.00
Satd. Flow (perm)	1370	1685		1357	1609			2944		624	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	63	16	28	16	3	30	87	658	90	57	434	63
RTOR Reduction (vph)	0	26	0	0	28	0	0	3	0	0	0	10
Lane Group Flow (vph)	63	18	0	16	5	0	0	832	0	57	434	53
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		2
Actuated Green, G (s)	7.2	7.2		7.2	7.2			93.2		93.2	93.2	93.2
Effective Green, g (s)	7.2	7.2		7.2	7.2			93.2		93.2	93.2	93.2
Actuated g/C Ratio	0.07	0.07		0.07	0.07			0.85		0.85	0.85	0.85
Clearance Time (s)	4.8	4.8		4.8	4.8			4.8		4.8	4.8	4.8
Vehicle Extension (s)	0.2	0.2		0.2	0.2			0.2		0.2	0.2	0.2
Lane Grp Cap (vph)	89	110		88	105			2494		528	1578	1341
v/s Ratio Prot		0.01			0.00						0.23	
v/s Ratio Perm	c0.05			0.01				c0.28		0.09		0.03
v/c Ratio	0.71	0.16		0.18	0.05			0.33		0.11	0.28	0.04
Uniform Delay, d1	50.4	48.6		48.6	48.2			1.8		1.4	1.7	1.3
Progression Factor	0.83	0.72		0.90	1.00			0.16		0.03	0.04	0.01
Incremental Delay, d2	18.8	0.3		0.4	0.1			0.3		0.3	0.3	0.0
Delay (s)	60.5	35.2		44.2	48.4			0.5		0.3	0.3	0.1
Level of Service	E	D		D	D			A		A	A	A
Approach Delay (s)		50.1			47.0			0.5			0.3	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.6
Intersection Capacity Utilization	64.6%	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												
Volume (vph)	122	269	200	156	358	249	217	620	110	99	459	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.1	4.2		4.1	4.2		4.1	4.2		4.1	4.2	
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.94		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1744		1770	3321		1770	3459		1770	3454	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1744		1770	3321		1770	3459		1770	3454	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	133	292	217	170	389	271	236	674	120	108	499	95
RTOR Reduction (vph)	0	23	0	0	107	0	0	14	0	0	14	0
Lane Group Flow (vph)	133	486	0	170	553	0	236	780	0	108	580	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	13.0	37.5		14.3	38.8		17.6	31.0		10.6	24.0	
Effective Green, g (s)	13.0	37.5		14.3	38.8		17.6	31.0		10.6	24.0	
Actuated g/C Ratio	0.12	0.34		0.13	0.35		0.16	0.28		0.10	0.22	
Clearance Time (s)	4.1	4.2		4.1	4.2		4.1	4.2		4.1	4.2	
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	209	594		230	1171		283	974		170	753	
v/s Ratio Prot	0.08	c0.28		c0.10	0.17		c0.13	c0.23		0.06	0.17	
v/s Ratio Perm												
v/c Ratio	0.64	0.82		0.74	0.47		0.83	0.80		0.64	0.77	
Uniform Delay, d1	46.2	33.1		46.1	27.6		44.8	36.6		47.8	40.4	
Progression Factor	0.82	0.86		0.95	0.86		0.87	0.97		1.11	1.01	
Incremental Delay, d2	5.2	10.1		10.2	1.2		18.4	5.4		7.3	5.5	
Delay (s)	43.3	38.7		53.9	25.0		57.3	40.9		60.3	46.4	
Level of Service	D	D		D	C		E	D		E	D	
Approach Delay (s)		39.7			30.9			44.7			48.5	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	41.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.6
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	185	385	192	0	0	0	0	639	256	155	715	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2					4.2		4.2	4.2	
Lane Util. Factor		0.91	1.00					0.95		1.00	0.95	
Frt		1.00	0.85					0.96		1.00	1.00	
Flt Protected		0.98	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		5004	1583					3388		1770	3539	
Flt Permitted		0.98	1.00					1.00		0.27	1.00	
Satd. Flow (perm)		5004	1583					3388		500	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	201	418	209	0	0	0	0	695	278	168	777	0
RTOR Reduction (vph)	0	0	144	0	0	0	0	22	0	0	0	0
Lane Group Flow (vph)	0	619	65	0	0	0	0	951	0	168	777	0
Turn Type	Split	NA	Perm					NA		Perm	NA	
Protected Phases	4	4						2			2	
Permitted Phases			4							2		
Actuated Green, G (s)		20.2	20.2					81.4		81.4	81.4	
Effective Green, g (s)		20.2	20.2					81.4		81.4	81.4	
Actuated g/C Ratio		0.18	0.18					0.74		0.74	0.74	
Clearance Time (s)		4.2	4.2					4.2		4.2	4.2	
Vehicle Extension (s)		0.2	0.2					0.2		0.2	0.2	
Lane Grp Cap (vph)		918	290					2507		370	2618	
v/s Ratio Prot		c0.12						0.28			0.22	
v/s Ratio Perm			0.04							c0.34		
v/c Ratio		0.67	0.22					0.38		0.45	0.30	
Uniform Delay, d1		41.8	38.2					5.2		5.6	4.8	
Progression Factor		1.00	1.00					1.04		2.32	2.31	
Incremental Delay, d2		1.6	0.1					0.3		3.4	0.2	
Delay (s)		43.4	38.4					5.7		16.4	11.2	
Level of Service		D	D					A		B	B	
Approach Delay (s)		42.1			0.0			5.7			12.2	
Approach LOS		D			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	75	266	67	83	503	0	0	930	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	15	12	15	15	15	12	12	15	15	12	12
Total Lost time (s)					4.2		4.2	4.2			4.2	
Lane Util. Factor					0.95		1.00	0.95			0.95	
Frt					0.98		1.00	1.00			0.98	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					3762		1770	3539			3458	
Flt Permitted					0.99		0.10	1.00			1.00	
Satd. Flow (perm)					3762		187	3539			3458	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	82	289	73	90	547	0	0	1011	183
RTOR Reduction (vph)	0	0	0	0	11	0	0	0	0	0	19	0
Lane Group Flow (vph)	0	0	0	0	433	0	90	547	0	0	1175	0
Turn Type				Split	NA		Perm	NA			NA	
Protected Phases				2	2			4			4	
Permitted Phases							4					
Actuated Green, G (s)					52.3		49.3	49.3			49.3	
Effective Green, g (s)					52.3		49.3	49.3			49.3	
Actuated g/C Ratio					0.48		0.45	0.45			0.45	
Clearance Time (s)					4.2		4.2	4.2			4.2	
Vehicle Extension (s)					0.2		0.2	0.2			0.2	
Lane Grp Cap (vph)					1788		83	1586			1549	
v/s Ratio Prot					c0.12			0.15			0.34	
v/s Ratio Perm							c0.48					
v/c Ratio					0.24		1.08	0.34			0.76	
Uniform Delay, d1					17.1		30.4	19.8			25.4	
Progression Factor					0.57		0.80	0.57			0.54	
Incremental Delay, d2					0.3		119.5	0.0			1.7	
Delay (s)					10.1		143.8	11.3			15.5	
Level of Service					B		F	B			B	
Approach Delay (s)		0.0			10.1			30.0			15.5	
Approach LOS		A			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	164	230	45	148	230	81	86	403	3	90	845	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1790		1770	3539	1583	1770	3539	1583
Flt Permitted	0.50	1.00	1.00	0.58	1.00		0.12	1.00	1.00	0.41	1.00	1.00
Satd. Flow (perm)	938	1863	1583	1073	1790		232	3539	1583	772	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	178	250	49	161	250	88	93	438	3	98	918	161
RTOR Reduction (vph)	0	0	21	0	9	0	0	0	2	0	0	95
Lane Group Flow (vph)	178	250	28	161	329	0	93	438	1	98	918	66
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			2			4			4	
Permitted Phases	2	2	2	2			4		4	4		4
Actuated Green, G (s)	63.9	63.9	63.9	63.9	63.9		37.1	37.1	37.1	37.1	37.1	37.1
Effective Green, g (s)	63.9	63.9	63.9	63.9	63.9		37.1	37.1	37.1	37.1	37.1	37.1
Actuated g/C Ratio	0.58	0.58	0.58	0.58	0.58		0.34	0.34	0.34	0.34	0.34	0.34
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	0.2	0.2	0.2	0.2	0.2		0.2	0.2	0.2	0.2	0.2	0.2
Lane Grp Cap (vph)	544	1082	919	623	1039		78	1193	533	260	1193	533
v/s Ratio Prot		0.13			0.18			0.12			0.26	
v/s Ratio Perm	c0.19		0.02	0.15			c0.40		0.00	0.13		0.04
v/c Ratio	0.33	0.23	0.03	0.26	0.32		1.19	0.37	0.00	0.38	0.77	0.12
Uniform Delay, d1	11.9	11.2	9.8	11.4	11.8		36.5	27.6	24.2	27.7	32.6	25.2
Progression Factor	1.00	1.00	1.00	0.67	0.64		1.00	0.71	0.00	0.84	0.84	1.20
Incremental Delay, d2	1.6	0.5	0.1	0.9	0.7		161.7	0.1	0.0	0.3	2.2	0.0
Delay (s)	13.5	11.7	9.9	8.5	8.2		198.1	19.7	0.0	23.5	29.4	30.4
Level of Service	B	B	A	A	A		F	B	A	C	C	C
Approach Delay (s)		12.2			8.3			50.6			29.1	
Approach LOS		B			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL2	NEL	NER
Lane Configurations												
Volume (vph)	17	84	7	571	389	419	285	424	24	61	244	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6		4.6	4.6	4.6	4.0	4.6	4.6	4.0	4.6	4.6
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.88	1.00	1.00	0.97	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	0.99	1.00	0.95	1.00	1.00	0.95	0.95	1.00
Satd. Flow (prot)	1770	1840		1681	1749	1583	1770	2787	1583	1770	3433	1583
Flt Permitted	0.23	1.00		0.69	0.89	1.00	0.95	1.00	1.00	0.95	0.95	1.00
Satd. Flow (perm)	423	1840		1226	1581	1583	1770	2787	1583	1770	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	91	8	621	423	455	310	461	26	66	265	305
RTOR Reduction (vph)	0	3	0	0	0	250	0	0	17	0	0	238
Lane Group Flow (vph)	18	96	0	491	553	205	310	461	9	66	265	67
Turn Type	Perm	NA		Perm	NA	Perm	NA	custom	custom	Prot	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4		4			2			6
Actuated Green, G (s)	49.6	49.6		49.6	49.6	49.6	23.0	39.7	39.7	7.5	24.2	24.2
Effective Green, g (s)	49.6	49.6		49.6	49.6	49.6	23.0	39.7	39.7	7.5	24.2	24.2
Actuated g/C Ratio	0.45	0.45		0.45	0.45	0.45	0.21	0.36	0.36	0.07	0.22	0.22
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6	4.0	4.6	4.6	4.0	4.6	4.6
Vehicle Extension (s)	3.0	3.0		3.5	3.5	3.5	3.0	4.8	4.8	2.0	4.8	4.8
Lane Grp Cap (vph)	190	829		552	712	713	370	1005	571	120	755	348
v/s Ratio Prot		0.05					c0.18	c0.17		0.04	0.08	
v/s Ratio Perm	0.04			c0.40	0.35	0.13			0.01			0.04
v/c Ratio	0.09	0.12		0.89	0.78	0.29	0.84	0.46	0.02	0.55	0.35	0.19
Uniform Delay, d1	17.3	17.5		27.7	25.5	19.1	41.7	26.9	22.6	49.6	36.3	34.9
Progression Factor	1.00	1.00		0.86	0.87	0.83	1.00	1.00	1.00	0.84	0.91	2.16
Incremental Delay, d2	0.2	0.1		8.5	2.6	0.1	15.2	1.5	0.1	3.0	1.2	1.2
Delay (s)	17.5	17.6		32.3	24.7	16.0	56.9	28.4	22.7	44.9	34.2	76.5
Level of Service	B	B		C	C	B	E	C	C	D	C	E
Approach Delay (s)		17.6			24.5		39.3				55.6	
Approach LOS		B			C		D				E	

Intersection Summary			
HCM 2000 Control Delay	34.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.2
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (vph)	19	75	83	667	276	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.70	1.00	0.57	1.00	1.00	1.00
Satd. Flow (perm)	1301	1583	1059	3539	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	82	90	725	300	38
RTOR Reduction (vph)	0	67	0	0	0	10
Lane Group Flow (vph)	21	15	90	725	300	28
Turn Type	NA	custom	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	20.0	20.0	81.0	81.0	81.0	81.0
Effective Green, g (s)	20.0	20.0	81.0	81.0	81.0	81.0
Actuated g/C Ratio	0.18	0.18	0.74	0.74	0.74	0.74
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	0.2	0.2	0.2	0.2	0.2	0.2
Lane Grp Cap (vph)	236	287	779	2605	2605	1165
v/s Ratio Prot				c0.20	0.08	
v/s Ratio Perm	c0.02	0.01	0.08			0.02
v/c Ratio	0.09	0.05	0.12	0.28	0.12	0.02
Uniform Delay, d1	37.4	37.2	4.2	4.8	4.2	3.9
Progression Factor	1.23	1.79	1.00	1.00	1.05	1.81
Incremental Delay, d2	0.1	0.0	0.3	0.3	0.0	0.0
Delay (s)	46.2	66.6	4.5	5.1	4.4	7.0
Level of Service	D	E	A	A	A	A
Approach Delay (s)	62.5			5.0	4.7	
Approach LOS	E			A	A	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	45	100	0	0	115	68	327	1291	49	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.91				
Frt		1.00			0.94			1.00				
Flt Protected		0.98			1.00			0.99				
Satd. Flow (prot)		3485			3342			5014				
Flt Permitted		0.80			1.00			0.99				
Satd. Flow (perm)		2824			3342			5014				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	109	0	0	125	74	355	1403	53	0	0	0
RTOR Reduction (vph)	0	0	0	0	58	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	158	0	0	141	0	0	1809	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		8			4		2	2				
Permitted Phases	8											
Actuated Green, G (s)		19.0			19.0			81.0				
Effective Green, g (s)		19.0			19.0			81.0				
Actuated g/C Ratio		0.17			0.17			0.74				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		0.2			0.2			0.2				
Lane Grp Cap (vph)		487			577			3692				
v/s Ratio Prot					0.04			c0.36				
v/s Ratio Perm		c0.06										
v/c Ratio		0.32			0.24			0.49				
Uniform Delay, d1		39.9			39.3			6.0				
Progression Factor		1.18			1.00			1.00				
Incremental Delay, d2		0.1			0.1			0.5				
Delay (s)		47.2			39.4			6.4				
Level of Service		D			D			A				
Approach Delay (s)		47.2			39.4			6.4			0.0	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	212	97	0	0	15	8	141	1055	56	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6			4.2	4.2		4.2	4.2			
Lane Util. Factor	0.95	0.95			1.00	1.00		0.91	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	0.98			1.00	1.00		0.99	1.00			
Satd. Flow (prot)	1681	1737			1863	1583		5056	1583			
Flt Permitted	0.95	0.98			1.00	1.00		0.99	1.00			
Satd. Flow (perm)	1681	1737			1863	1583		5056	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	230	105	0	0	16	9	153	1147	61	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	9	0	0	38	0	0	0
Lane Group Flow (vph)	166	169	0	0	16	0	0	1300	23	0	0	0
Turn Type	Split	NA			NA	Perm	Split	NA	Perm			
Protected Phases	2	2			1		8	8				
Permitted Phases						1			8			
Actuated Green, G (s)	54.9	54.9			4.2	4.2		37.9	37.9			
Effective Green, g (s)	54.9	54.9			4.2	4.2		37.9	37.9			
Actuated g/C Ratio	0.50	0.50			0.04	0.04		0.34	0.34			
Clearance Time (s)	4.6	4.6			4.2	4.2		4.2	4.2			
Vehicle Extension (s)	3.8	3.8			2.0	2.0		2.0	2.0			
Lane Grp Cap (vph)	838	866			71	60		1742	545			
v/s Ratio Prot	c0.10	0.10			c0.01			c0.26				
v/s Ratio Perm						0.00			0.01			
v/c Ratio	0.20	0.20			0.23	0.01		0.75	0.04			
Uniform Delay, d1	15.3	15.3			51.3	50.9		31.8	24.0			
Progression Factor	0.99	0.99			1.00	1.00		0.83	0.56			
Incremental Delay, d2	0.5	0.5			0.6	0.0		1.4	0.0			
Delay (s)	15.6	15.6			51.9	50.9		27.7	13.4			
Level of Service	B	B			D	D		C	B			
Approach Delay (s)		15.6			51.5			27.1			0.0	
Approach LOS		B			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	25.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	72.1%	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												
Volume (vph)	54	550	0	0	482	147	58	1100	116	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2			4.2			4.2				
Lane Util. Factor	1.00	1.00			1.00			0.91				
Frt	1.00	1.00			0.97			0.99				
Flt Protected	0.95	1.00			1.00			1.00				
Satd. Flow (prot)	1770	1863			1804			5005				
Flt Permitted	0.27	1.00			1.00			1.00				
Satd. Flow (perm)	503	1863			1804			5005				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	59	598	0	0	524	160	63	1196	126	0	0	0
RTOR Reduction (vph)	0	0	0	0	6	0	0	12	0	0	0	0
Lane Group Flow (vph)	59	598	0	0	678	0	0	1373	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		2			6		8	8				
Permitted Phases	2											
Actuated Green, G (s)	66.8	66.8			66.8			34.8				
Effective Green, g (s)	66.8	66.8			66.8			34.8				
Actuated g/C Ratio	0.61	0.61			0.61			0.32				
Clearance Time (s)	4.2	4.2			4.2			4.2				
Vehicle Extension (s)	0.2	0.2			0.2			0.2				
Lane Grp Cap (vph)	305	1131			1095			1583				
v/s Ratio Prot		0.32			c0.38			c0.27				
v/s Ratio Perm	0.12											
v/c Ratio	0.19	0.53			0.62			0.87				
Uniform Delay, d1	9.6	12.5			13.6			35.4				
Progression Factor	1.26	1.29			1.37			0.39				
Incremental Delay, d2	1.3	1.6			2.0			4.6				
Delay (s)	13.4	17.7			20.7			18.4				
Level of Service	B	B			C			B				
Approach Delay (s)		17.3			20.7			18.4			0.0	
Approach LOS		B			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	92.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	68	853	435	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2			
Lane Util. Factor		1.00	0.91			
Frt		0.86	0.95			
Flt Protected		1.00	1.00			
Satd. Flow (prot)		1611	4828			
Flt Permitted		1.00	1.00			
Satd. Flow (perm)		1611	4828			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	74	927	473	0	0
RTOR Reduction (vph)	0	49	98	0	0	0
Lane Group Flow (vph)	0	25	1302	0	0	0
Turn Type		custom	NA			
Protected Phases			8			
Permitted Phases		2				
Actuated Green, G (s)		37.7	63.9			
Effective Green, g (s)		37.7	63.9			
Actuated g/C Ratio		0.34	0.58			
Clearance Time (s)		4.2	4.2			
Vehicle Extension (s)		0.2	6.0			
Lane Grp Cap (vph)		552	2804			
v/s Ratio Prot			c0.27			
v/s Ratio Perm		c0.02				
v/c Ratio		0.05	0.46			
Uniform Delay, d1		24.1	13.2			
Progression Factor		1.00	0.05			
Incremental Delay, d2		0.2	0.2			
Delay (s)		24.3	1.0			
Level of Service		C	A			
Approach Delay (s)	24.3		1.0		0.0	
Approach LOS	C		A		A	

Intersection Summary			
HCM 2000 Control Delay	2.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	37.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	117	197	53	357	0	0	0	0	51	1133	270
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.4			5.4						5.4	5.4
Lane Util. Factor		0.95			0.95						0.91	1.00
Frt		0.91			1.00						1.00	0.85
Flt Protected		1.00			0.99						1.00	1.00
Satd. Flow (prot)		3206			3516						5074	1583
Flt Permitted		1.00			0.85						1.00	1.00
Satd. Flow (perm)		3206			3023						5074	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	127	214	58	388	0	0	0	0	55	1232	293
RTOR Reduction (vph)	0	20	0	0	0	0	0	0	0	0	0	190
Lane Group Flow (vph)	0	321	0	0	446	0	0	0	0	0	1287	103
Turn Type		NA		Perm	NA					Split	NA	Perm
Protected Phases		2			2					8	8	
Permitted Phases				2								8
Actuated Green, G (s)		64.3			64.3						34.9	34.9
Effective Green, g (s)		64.3			64.3						34.9	34.9
Actuated g/C Ratio		0.58			0.58						0.32	0.32
Clearance Time (s)		5.4			5.4						5.4	5.4
Vehicle Extension (s)		0.2			0.2						0.2	0.2
Lane Grp Cap (vph)		1874			1767						1609	502
v/s Ratio Prot		0.10									c0.25	
v/s Ratio Perm					c0.15							0.07
v/c Ratio		0.17			0.25						0.80	0.21
Uniform Delay, d1		10.5			11.1						34.4	27.4
Progression Factor		1.00			1.01						0.77	0.78
Incremental Delay, d2		0.2			0.3						2.3	0.1
Delay (s)		10.7			11.6						28.8	21.4
Level of Service		B			B						C	C
Approach Delay (s)		10.7			11.6			0.0			27.5	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.8
Intersection Capacity Utilization	57.4%	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												
Volume (vph)	0	242	293	17	122	0	0	0	0	115	1141	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		4.2	4.2					4.2	4.2	4.2
Lane Util. Factor		0.95		1.00	1.00					1.00	0.95	1.00
Frt		0.92		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3249		1770	1863					1770	3539	1583
Flt Permitted		1.00		0.38	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3249		701	1863					1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	263	318	18	133	0	0	0	0	125	1240	22
RTOR Reduction (vph)	0	33	0	0	0	0	0	0	0	0	0	7
Lane Group Flow (vph)	0	548	0	18	133	0	0	0	0	125	1240	15
Turn Type		NA		Perm	NA					Split	NA	Perm
Protected Phases		2			2					4	4	
Permitted Phases				2								4
Actuated Green, G (s)		54.5		54.5	54.5					47.1	47.1	47.1
Effective Green, g (s)		54.5		54.5	54.5					47.1	47.1	47.1
Actuated g/C Ratio		0.50		0.50	0.50					0.43	0.43	0.43
Clearance Time (s)		4.2		4.2	4.2					4.2	4.2	4.2
Vehicle Extension (s)		0.2		0.2	0.2					0.2	0.2	0.2
Lane Grp Cap (vph)		1609		347	923					757	1515	677
v/s Ratio Prot		c0.17			0.07					0.07	c0.35	
v/s Ratio Perm				0.03								0.01
v/c Ratio		0.34		0.05	0.14					0.17	0.82	0.02
Uniform Delay, d1		16.8		14.4	15.1					19.4	27.7	18.2
Progression Factor		1.05		2.13	2.16					0.29	0.24	0.13
Incremental Delay, d2		0.6		0.2	0.3					0.0	2.5	0.0
Delay (s)		18.3		30.8	32.9					5.7	9.3	2.3
Level of Service		B		C	C					A	A	A
Approach Delay (s)		18.3			32.7			0.0			8.8	
Approach LOS		B			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	72.1%	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												
Volume (vph)	0	297	15	199	323	0	0	0	0	268	1060	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		4.2	4.2						4.2	
Lane Util. Factor		1.00		1.00	1.00						0.91	
Frt		0.99		1.00	1.00						0.98	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		1851		1770	1863						4962	
Flt Permitted		1.00		0.49	1.00						0.99	
Satd. Flow (perm)		1851		912	1863						4962	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	323	16	216	351	0	0	0	0	291	1152	165
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	14	0
Lane Group Flow (vph)	0	338	0	216	351	0	0	0	0	0	1594	0
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		2			6					4	4	
Permitted Phases				6								
Actuated Green, G (s)		60.5		60.5	60.5						41.1	
Effective Green, g (s)		60.5		60.5	60.5						41.1	
Actuated g/C Ratio		0.55		0.55	0.55						0.37	
Clearance Time (s)		4.2		4.2	4.2						4.2	
Vehicle Extension (s)		0.2		0.2	0.2						0.2	
Lane Grp Cap (vph)		1018		501	1024						1853	
v/s Ratio Prot		0.18			0.19						c0.32	
v/s Ratio Perm				c0.24								
v/c Ratio		0.33		0.43	0.34						0.86	
Uniform Delay, d1		13.6		14.6	13.7						31.8	
Progression Factor		0.46		0.80	0.82						0.69	
Incremental Delay, d2		0.7		0.2	0.1						2.9	
Delay (s)		7.0		11.9	11.3						24.7	
Level of Service		A		B	B						C	
Approach Delay (s)		7.0			11.5			0.0			24.7	
Approach LOS		A			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	92.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBR	SBR2	SER	NWL	NWT	SWL	SWT
Lane Configurations								
Volume (vph)	350	1206	3	40	23	47	97	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12
Total Lost time (s)	4.9	4.9		4.2		4.0	4.6	4.6
Lane Util. Factor	1.00	0.88		1.00		1.00	1.00	0.95
Frt	1.00	0.85		0.86		1.00	1.00	1.00
Flt Protected	0.95	1.00		1.00		0.98	0.95	1.00
Satd. Flow (prot)	1770	2787		1611		1833	1770	3539
Flt Permitted	0.95	1.00		1.00		0.98	0.95	1.00
Satd. Flow (perm)	1770	2787		1611		1833	1770	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	380	1311	3	43	25	51	105	239
RTOR Reduction (vph)	0	41	0	42	0	0	0	0
Lane Group Flow (vph)	380	1273	0	1	0	76	105	239
Turn Type	NA	Prot		custom	Split	NA	Split	NA
Protected Phases	2	2		8	1	1	4	4
Permitted Phases								
Actuated Green, G (s)	63.0	63.0		3.6		12.0	13.7	13.7
Effective Green, g (s)	63.0	63.0		3.6		12.0	13.7	13.7
Actuated g/C Ratio	0.57	0.57		0.03		0.11	0.12	0.12
Clearance Time (s)	4.9	4.9		4.2		4.0	4.6	4.6
Vehicle Extension (s)	4.0	4.0		2.0		2.0	4.0	4.0
Lane Grp Cap (vph)	1013	1596		52		199	220	440
v/s Ratio Prot	0.21	c0.46		c0.00		c0.04	0.06	c0.07
v/s Ratio Perm								
v/c Ratio	0.38	0.80		0.03		0.38	0.48	0.54
Uniform Delay, d1	12.8	18.5		51.5		45.6	44.8	45.2
Progression Factor	0.62	0.59		1.00		1.00	1.15	1.14
Incremental Delay, d2	0.7	2.9		0.1		0.4	2.1	1.7
Delay (s)	8.7	13.9		51.6		46.0	53.8	53.1
Level of Service	A	B		D		D	D	D
Approach Delay (s)	12.8					46.0		53.3
Approach LOS	B					D		D

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.7
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NWL2	NWL	NWR	NWR2
Lane Configurations										
Volume (vph)	135	500	21	72	103	77	225	74	553	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	5.2	5.2		5.2	5.2			5.2	5.2	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	0.76	
Frt	1.00	0.99		1.00	0.94			1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	
Satd. Flow (prot)	1770	3518		1770	3312			1770	3610	
Flt Permitted	0.63	1.00		0.22	1.00			0.95	1.00	
Satd. Flow (perm)	1169	3518		414	3312			1770	3610	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	147	543	23	78	112	84	245	80	601	24
RTOR Reduction (vph)	0	17	0	0	66	0	0	0	7	0
Lane Group Flow (vph)	147	549	0	78	130	0	0	325	618	0
Turn Type	Perm	NA		Perm	NA		Split	NA	Perm	
Protected Phases		4			4		2	2		
Permitted Phases	4			4					2	
Actuated Green, G (s)	24.0	24.0		24.0	24.0			75.6	75.6	
Effective Green, g (s)	24.0	24.0		24.0	24.0			75.6	75.6	
Actuated g/C Ratio	0.22	0.22		0.22	0.22			0.69	0.69	
Clearance Time (s)	5.2	5.2		5.2	5.2			5.2	5.2	
Vehicle Extension (s)	0.2	0.2		0.2	0.2			0.2	0.2	
Lane Grp Cap (vph)	255	767		90	722			1216	2481	
v/s Ratio Prot		0.16			0.04			c0.18		
v/s Ratio Perm	0.13			c0.19					0.17	
v/c Ratio	0.58	0.72		0.87	0.18			0.27	0.25	
Uniform Delay, d1	38.5	39.8		41.5	35.0			6.6	6.5	
Progression Factor	0.37	0.36		1.00	1.00			0.81	0.82	
Incremental Delay, d2	1.7	2.2		52.1	0.0			0.5	0.2	
Delay (s)	15.9	16.5		93.5	35.0			5.9	5.5	
Level of Service	B	B		F	D			A	A	
Approach Delay (s)		16.4			51.7			5.7		
Approach LOS		B			D			A		

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.4
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	534	54	0	167	0	0	0	0	110	1516	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5					4.9	4.9	4.9
Lane Util. Factor		0.95			0.95					1.00	0.95	1.00
Frt		0.99			1.00					1.00	1.00	0.85
Flt Protected		1.00			1.00					0.95	1.00	1.00
Satd. Flow (prot)		3490			3539					1770	3539	1583
Flt Permitted		1.00			1.00					0.95	1.00	1.00
Satd. Flow (perm)		3490			3539					1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	580	59	0	182	0	0	0	0	120	1648	229
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	0	0	0	32
Lane Group Flow (vph)	0	632	0	0	182	0	0	0	0	120	1648	197
Turn Type		NA			NA					Split	NA	Perm
Protected Phases		4			4					2	2	
Permitted Phases												2
Actuated Green, G (s)		29.2			29.2					71.4	71.4	71.4
Effective Green, g (s)		29.2			29.2					71.4	71.4	71.4
Actuated g/C Ratio		0.27			0.27					0.65	0.65	0.65
Clearance Time (s)		4.5			4.5					4.9	4.9	4.9
Vehicle Extension (s)		5.0			5.0					5.0	5.0	5.0
Lane Grp Cap (vph)		926			939					1148	2297	1027
v/s Ratio Prot		c0.18			0.05					0.07	c0.47	
v/s Ratio Perm												0.12
v/c Ratio		0.68			0.19					0.10	0.72	0.19
Uniform Delay, d1		36.2			31.3					7.3	12.7	7.7
Progression Factor		1.00			0.84					1.86	1.80	2.45
Incremental Delay, d2		2.7			0.2					0.2	1.7	0.4
Delay (s)		38.9			26.5					13.6	24.4	19.3
Level of Service		D			C					B	C	B
Approach Delay (s)		38.9			26.5			0.0			23.2	
Approach LOS		D			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	27.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.4
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	5	729	262	260	5	4
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	792	285	283	5	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	567				833	284
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	567				833	284
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				98	99
cM capacity (veh/h)	1001				305	713

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	SW 1
Volume Total	270	528	190	378	10
Volume Left	5	0	0	0	5
Volume Right	0	0	0	283	4
cSH	1001	1700	1700	1700	409
Volume to Capacity	0.01	0.31	0.11	0.22	0.02
Queue Length 95th (ft)	0	0	0	0	2
Control Delay (s)	0.2	0.0	0.0	0.0	14.0
Lane LOS	A				B
Approach Delay (s)	0.1		0.0		14.0
Approach LOS					B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	33.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	460	288	13	310	28	3	18	17	40	221	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.4	5.4		5.4		5.4	5.4		5.4	5.4	
Lane Util. Factor		0.95	1.00		0.95		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.99		1.00	0.93		1.00	0.97	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3529	1583		3491		1770	1730		1770	1811	
Flt Permitted		0.92	1.00		0.93		0.50	1.00		0.73	1.00	
Satd. Flow (perm)		3245	1583		3261		925	1730		1364	1811	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	32	500	313	14	337	30	3	20	18	43	240	54
RTOR Reduction (vph)	0	0	153	0	10	0	0	12	0	0	14	0
Lane Group Flow (vph)	0	532	160	0	371	0	3	26	0	43	280	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2			4			4		
Actuated Green, G (s)		30.6	30.6		30.6		18.6	18.6		18.6	18.6	
Effective Green, g (s)		30.6	30.6		30.6		18.6	18.6		18.6	18.6	
Actuated g/C Ratio		0.51	0.51		0.51		0.31	0.31		0.31	0.31	
Clearance Time (s)		5.4	5.4		5.4		5.4	5.4		5.4	5.4	
Vehicle Extension (s)		0.2	0.2		0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		1654	807		1663		286	536		422	561	
v/s Ratio Prot								0.01			c0.15	
v/s Ratio Perm		c0.16	0.10		0.11		0.00			0.03		
v/c Ratio		0.32	0.20		0.22		0.01	0.05		0.10	0.50	
Uniform Delay, d1		8.6	8.0		8.1		14.3	14.5		14.7	16.9	
Progression Factor		1.00	1.00		1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0	0.0		0.0		0.0	0.0		0.0	0.3	
Delay (s)		8.7	8.1		8.2		14.3	14.5		14.8	17.2	
Level of Service		A	A		A		B	B		B	B	
Approach Delay (s)		8.4			8.2			14.5			16.9	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	10.8
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	13	691	257	12	48	21
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	751	279	13	52	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	292				690	146
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	292				690	146
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	99				86	97
cM capacity (veh/h)	1266				375	874

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	SW 1
Volume Total	264	501	186	106	75
Volume Left	14	0	0	0	52
Volume Right	0	0	0	13	23
cSH	1266	1700	1700	1700	454
Volume to Capacity	0.01	0.29	0.11	0.06	0.17
Queue Length 95th (ft)	1	0	0	0	15
Control Delay (s)	0.5	0.0	0.0	0.0	14.5
Lane LOS	A				B
Approach Delay (s)	0.2		0.0		14.5
Approach LOS					B

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	45	29	427	25	10	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.5		4.9		4.9	4.9
Lane Util. Factor	1.00		0.95		1.00	1.00
Frt	0.95		0.99		1.00	1.00
Flt Protected	0.97		1.00		0.95	1.00
Satd. Flow (prot)	1712		3510		1770	1863
Flt Permitted	0.84		1.00		0.47	1.00
Satd. Flow (perm)	1490		3510		881	1863
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	32	464	27	11	114
RTOR Reduction (vph)	28	0	3	0	0	0
Lane Group Flow (vph)	53	0	488	0	11	114
Turn Type	NA		NA		Perm	NA
Protected Phases			2			2
Permitted Phases	4				2	
Actuated Green, G (s)	3.8		14.4		14.4	14.4
Effective Green, g (s)	3.8		14.4		14.4	14.4
Actuated g/C Ratio	0.14		0.52		0.52	0.52
Clearance Time (s)	4.5		4.9		4.9	4.9
Vehicle Extension (s)	5.0		4.0		4.0	4.0
Lane Grp Cap (vph)	205		1831		459	972
v/s Ratio Prot			c0.14			0.06
v/s Ratio Perm	c0.04				0.01	
v/c Ratio	0.26		0.27		0.02	0.12
Uniform Delay, d1	10.6		3.7		3.2	3.4
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	1.4		0.1		0.0	0.1
Delay (s)	12.1		3.8		3.2	3.4
Level of Service	B		A		A	A
Approach Delay (s)	12.1		3.8			3.4
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	4.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	27.6	Sum of lost time (s)	9.4
Intersection Capacity Utilization	32.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	274	25	482	116	35	425
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	298	27	524	126	38	462
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						273
pX, platoon unblocked						
vC, conflicting volume	1062	524			650	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1062	524			650	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	95			96	
cM capacity (veh/h)	237	553			936	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1
Volume Total	325	524	126	500
Volume Left	298	0	0	38
Volume Right	27	0	126	0
cSH	249	1700	1700	936
Volume to Capacity	1.30	0.31	0.07	0.04
Queue Length 95th (ft)	418	0	0	3
Control Delay (s)	202.3	0.0	0.0	1.1
Lane LOS	F			A
Approach Delay (s)	202.3	0.0		1.1
Approach LOS	F			

Intersection Summary			
Average Delay	45.0		
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBR2	SEL
Lane Configurations												
Volume (vph)	125	56	10	175	292	1	42	206	0	42	3	719
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6			4.6	4.6				4.6	4.6	4.2	4.6
Lane Util. Factor	1.00			0.95	0.95				0.95	1.00	1.00	0.97
Frt	0.96			0.96	0.85				1.00	0.85	0.86	0.93
Flt Protected	1.00			1.00	1.00				0.95	1.00	1.00	0.97
Satd. Flow (prot)	1785			1695	1504				3362	1583	1611	3274
Flt Permitted	1.00			0.99	1.00				0.95	1.00	1.00	0.95
Satd. Flow (perm)	1785			1674	1504				3362	1583	1611	3210
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	136	61	11	190	317	1	46	224	0	46	3	782
RTOR Reduction (vph)	15	0	0	0	82	0	0	0	0	40	3	33
Lane Group Flow (vph)	182	0	0	274	163	0	0	0	270	6	0	1432
Turn Type	NA		Perm	NA	Perm		Perm	Perm	NA	Perm	custom	NA
Protected Phases	6			6					4		8	5
Permitted Phases			6		6		4	4		4		2
Actuated Green, G (s)	25.6			25.6	25.6				14.8	14.8	15.2	51.2
Effective Green, g (s)	25.6			25.6	25.6				14.8	14.8	15.2	51.2
Actuated g/C Ratio	0.23			0.23	0.23				0.13	0.13	0.14	0.47
Clearance Time (s)	4.6			4.6	4.6				4.6	4.6	4.2	4.6
Vehicle Extension (s)	5.0			5.0	5.0				4.0	4.0	2.0	5.0
Lane Grp Cap (vph)	415			389	350				452	212	222	1510
v/s Ratio Prot	0.10										0.00	c0.24
v/s Ratio Perm				c0.16	0.11				0.08	0.00		c0.20
v/c Ratio	0.44			0.70	0.47				1.13dl	0.03	0.00	0.95
Uniform Delay, d1	36.1			38.7	36.3				44.8	41.4	40.9	28.1
Progression Factor	1.03			0.73	0.81				1.00	1.00	1.00	0.16
Incremental Delay, d2	1.5			6.9	2.0				2.5	0.1	0.0	6.5
Delay (s)	38.5			35.3	31.5				47.3	41.4	40.9	11.0
Level of Service	D			D	C				D	D	D	B
Approach Delay (s)	38.5			33.5					46.4			11.0
Approach LOS	D			C					D			B

Intersection Summary			
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	SER	SER2
Lane Configurations		
Volume (vph)	627	1
Ideal Flow (vphpl)	1900	1900
Lane Width	12	12
Total Lost time (s)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	682	1
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	0
Turn Type		
Protected Phases		
Permitted Phases		
Actuated Green, G (s)		
Effective Green, g (s)		
Actuated g/C Ratio		
Clearance Time (s)		
Vehicle Extension (s)		
Lane Grp Cap (vph)		
v/s Ratio Prot		
v/s Ratio Perm		
v/c Ratio		
Uniform Delay, d1		
Progression Factor		
Incremental Delay, d2		
Delay (s)		
Level of Service		
Approach Delay (s)		
Approach LOS		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	55	875	222	25	399	37	149	269	63	16	51	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.6	4.6		4.6		4.6	4.6		4.6	4.6	
Lane Util. Factor		0.95	1.00		0.95		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.99		1.00	0.97		1.00	0.97	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3529	1583		3487		1770	1810		1770	1816	
Flt Permitted		0.88	1.00		0.80		0.71	1.00		0.46	1.00	
Satd. Flow (perm)		3115	1583		2803		1330	1810		860	1816	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	60	951	241	27	434	40	162	292	68	17	55	11
RTOR Reduction (vph)	0	0	83	0	8	0	0	6	0	0	5	0
Lane Group Flow (vph)	0	1011	158	0	493	0	162	354	0	17	61	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4			2			2		
Actuated Green, G (s)		44.2	44.2		44.2		56.6	56.6		56.6	56.6	
Effective Green, g (s)		44.2	44.2		44.2		56.6	56.6		56.6	56.6	
Actuated g/C Ratio		0.40	0.40		0.40		0.51	0.51		0.51	0.51	
Clearance Time (s)		4.6	4.6		4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)		0.2	0.2		0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		1251	636		1126		684	931		442	934	
v/s Ratio Prot								c0.20			0.03	
v/s Ratio Perm		c0.32	0.10		0.18		0.12			0.02		
v/c Ratio		0.81	0.25		0.44		0.24	0.38		0.04	0.07	
Uniform Delay, d1		29.1	21.9		23.9		14.8	16.1		13.2	13.4	
Progression Factor		0.81	0.78		0.72		1.00	1.00		1.09	1.14	
Incremental Delay, d2		2.9	0.1		0.1		0.8	1.2		0.2	0.1	
Delay (s)		26.6	17.2		17.3		15.6	17.3		14.5	15.4	
Level of Service		C	B		B		B	B		B	B	
Approach Delay (s)		24.8			17.3			16.8			15.2	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	21.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.2
Intersection Capacity Utilization	74.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	888	32	13	266	0	9	0	16	320	605	186
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5		4.5		4.5	4.5	4.5	
Lane Util. Factor		0.95			0.95		1.00		1.00	1.00	0.95	
Frt		0.99			1.00		1.00		0.85	1.00	0.96	
Flt Protected		1.00			1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		3521			3531		1770		1583	1770	3415	
Flt Permitted		1.00			0.86		0.26		1.00	0.95	1.00	
Satd. Flow (perm)		3521			3050		490		1583	1770	3415	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	965	35	14	289	0	10	0	17	348	658	202
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	8	0	21	0
Lane Group Flow (vph)	0	997	0	0	303	0	10	0	9	348	839	0
Turn Type		NA		Perm	NA		D.Pm		custom	Perm	NA	
Protected Phases		4			4				2		2	
Permitted Phases				4			2		2	2		
Actuated Green, G (s)		40.6			40.6		60.4		60.4	60.4	60.4	
Effective Green, g (s)		40.6			40.6		60.4		60.4	60.4	60.4	
Actuated g/C Ratio		0.37			0.37		0.55		0.55	0.55	0.55	
Clearance Time (s)		4.5			4.5		4.5		4.5	4.5	4.5	
Vehicle Extension (s)		2.0			2.0		2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)		1299			1125		269		869	971	1875	
v/s Ratio Prot		c0.28							0.01		c0.25	
v/s Ratio Perm					0.10		0.02			0.20		
v/c Ratio		0.77			0.27		0.04		0.01	0.36	0.45	
Uniform Delay, d1		30.5			24.3		11.4		11.2	13.9	14.8	
Progression Factor		0.42			0.87		1.00		1.00	1.14	1.13	
Incremental Delay, d2		2.1			0.0		0.3		0.0	0.7	0.5	
Delay (s)		15.1			21.1		11.7		11.3	16.5	17.3	
Level of Service		B			C		B		B	B	B	
Approach Delay (s)		15.1			21.1			11.4			17.0	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	194	760	268	6	222	83	51	226	15	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5			4.2				
Lane Util. Factor		0.95			0.95			0.95				
Frt		0.97			0.96			0.99				
Flt Protected		0.99			1.00			0.99				
Satd. Flow (prot)		3396			3394			3482				
Flt Permitted		0.80			0.93			0.99				
Satd. Flow (perm)		2748			3152			3482				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	211	826	291	7	241	90	55	246	16	0	0	0
RTOR Reduction (vph)	0	29	0	0	34	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	1299	0	0	304	0	0	314	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		8			4		6	6				
Permitted Phases	8			4								
Actuated Green, G (s)		68.6			68.6			32.7				
Effective Green, g (s)		68.6			68.6			32.7				
Actuated g/C Ratio		0.62			0.62			0.30				
Clearance Time (s)		4.5			4.5			4.2				
Vehicle Extension (s)		0.2			0.2			0.2				
Lane Grp Cap (vph)		1713			1965			1035				
v/s Ratio Prot								c0.09				
v/s Ratio Perm		c0.47			0.10							
v/c Ratio		0.76			0.15			0.30				
Uniform Delay, d1		14.8			8.6			29.9				
Progression Factor		0.41			1.00			1.02				
Incremental Delay, d2		1.5			0.0			0.7				
Delay (s)		7.5			8.6			31.3				
Level of Service		A			A			C				
Approach Delay (s)		7.5			8.6			31.3			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.7
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	311	0	11	21	0	0	10	1317	369	91	402	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6			4.6			4.2	4.2		4.2	
Lane Util. Factor	1.00	1.00			1.00			0.95	1.00		0.95	
Frt	1.00	0.85			1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00			0.95			1.00	1.00		0.99	
Satd. Flow (prot)	1770	1583			1770			3538	1583		3499	
Flt Permitted	0.74	1.00			0.75			0.95	1.00		0.50	
Satd. Flow (perm)	1383	1583			1397			3362	1583		1770	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	338	0	12	23	0	0	11	1432	401	99	437	9
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	142	0	1	0
Lane Group Flow (vph)	338	5	0	0	23	0	0	1443	259	0	544	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4		4	4		
Actuated Green, G (s)	50.4	50.4			50.4			50.8	50.8		50.8	
Effective Green, g (s)	50.4	50.4			50.4			50.8	50.8		50.8	
Actuated g/C Ratio	0.46	0.46			0.46			0.46	0.46		0.46	
Clearance Time (s)	4.6	4.6			4.6			4.2	4.2		4.2	
Vehicle Extension (s)	5.0	5.0			5.0			4.0	4.0		4.0	
Lane Grp Cap (vph)	633	725			640			1552	731		817	
v/s Ratio Prot		0.00										
v/s Ratio Perm	c0.24				0.02			c0.43	0.16		0.31	
v/c Ratio	0.53	0.01			0.04			0.93	0.35		1.46dl	
Uniform Delay, d1	21.4	16.2			16.4			27.9	19.1		23.0	
Progression Factor	1.00	1.00			1.00			1.00	1.00		1.13	
Incremental Delay, d2	3.2	0.0			0.1			10.3	0.4		2.0	
Delay (s)	24.6	16.2			16.5			38.2	19.5		27.9	
Level of Service	C	B			B			D	B		C	
Approach Delay (s)		24.3			16.5			34.1			27.9	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.8
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	52	37	42	35	0	0	0	0	96	1869	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2						4.9	
Lane Util. Factor		1.00			1.00						0.91	
Frt		0.94			1.00						1.00	
Flt Protected		1.00			0.97						1.00	
Satd. Flow (prot)		1759			1813						5053	
Flt Permitted		1.00			0.70						1.00	
Satd. Flow (perm)		1759			1306						5053	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	57	40	46	38	0	0	0	0	104	2032	58
RTOR Reduction (vph)	0	20	0	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	78	0	0	84	0	0	0	0	0	2192	0
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		8			8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		12.5			12.5						88.4	
Effective Green, g (s)		12.5			12.5						88.4	
Actuated g/C Ratio		0.11			0.11						0.80	
Clearance Time (s)		4.2			4.2						4.9	
Vehicle Extension (s)		4.0			4.0						5.0	
Lane Grp Cap (vph)		199			148						4060	
v/s Ratio Prot		0.04									c0.43	
v/s Ratio Perm					c0.06							
v/c Ratio		0.39			0.57						0.54	
Uniform Delay, d1		45.2			46.2						3.7	
Progression Factor		1.00			0.83						0.15	
Incremental Delay, d2		1.7			5.9						0.0	
Delay (s)		46.9			44.4						0.6	
Level of Service		D			D						A	
Approach Delay (s)		46.9			44.4			0.0			0.6	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	4.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.1
Intersection Capacity Utilization	57.7%	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												
Volume (vph)	52	90	0	0	50	59	25	785	33	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2			4.9				
Lane Util. Factor		1.00			1.00			0.91				
Frt		1.00			0.93			0.99				
Flt Protected		0.98			1.00			1.00				
Satd. Flow (prot)		1829			1726			5048				
Flt Permitted		0.76			1.00			1.00				
Satd. Flow (perm)		1424			1726			5048				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	98	0	0	54	64	27	853	36	0	0	0
RTOR Reduction (vph)	0	0	0	0	53	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	155	0	0	65	0	0	914	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)		17.0			17.0			83.9				
Effective Green, g (s)		17.0			17.0			83.9				
Actuated g/C Ratio		0.15			0.15			0.76				
Clearance Time (s)		4.2			4.2			4.9				
Vehicle Extension (s)		4.0			4.0			0.2				
Lane Grp Cap (vph)		220			266			3850				
v/s Ratio Prot					0.04			c0.18				
v/s Ratio Perm		c0.11										
v/c Ratio		0.70			0.24			0.24				
Uniform Delay, d1		44.1			40.9			3.8				
Progression Factor		1.02			1.00			0.75				
Incremental Delay, d2		9.7			0.7			0.1				
Delay (s)		54.7			41.5			3.0				
Level of Service		D			D			A				
Approach Delay (s)		54.7			41.5			3.0			0.0	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.1
Intersection Capacity Utilization	38.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	573	236	0	0	0	0	0	0	472	968	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2									4.6	
Lane Util. Factor		0.95									0.95	
Frt		0.96									1.00	
Flt Protected		1.00									0.98	
Satd. Flow (prot)		3384									3482	
Flt Permitted		1.00									0.98	
Satd. Flow (perm)		3384									3482	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	623	257	0	0	0	0	0	0	513	1052	0
RTOR Reduction (vph)	0	41	0	0	0	0	0	0	0	0	41	0
Lane Group Flow (vph)	0	839	0	0	0	0	0	0	0	0	1524	0
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Actuated Green, G (s)		36.8									64.4	
Effective Green, g (s)		36.8									64.4	
Actuated g/C Ratio		0.33									0.59	
Clearance Time (s)		4.2									4.6	
Vehicle Extension (s)		6.4									5.6	
Lane Grp Cap (vph)		1132									2038	
v/s Ratio Prot		c0.25										
v/s Ratio Perm											0.44	
v/c Ratio		0.74									0.75	
Uniform Delay, d1		32.4									16.8	
Progression Factor		1.00									0.64	
Incremental Delay, d2		3.7									1.4	
Delay (s)		36.1									12.2	
Level of Service		D									B	
Approach Delay (s)		36.1			0.0			0.0			12.2	
Approach LOS		D			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.8
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations											
Volume (vph)	379	785	0	0	281	225	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6			4.6	4.6					
Lane Util. Factor	1.00	1.00			0.95	1.00					
Frt	1.00	1.00			1.00	0.85					
Flt Protected	0.95	0.95			1.00	1.00					
Satd. Flow (prot)	1770	1770			3539	1583					
Flt Permitted	0.95	0.95			1.00	1.00					
Satd. Flow (perm)	1770	1770			3539	1583					
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	412	853	0	0	305	245	0	0	0	0	0
RTOR Reduction (vph)	53	0	0	0	0	169	0	0	0	0	0
Lane Group Flow (vph)	359	853	0	0	305	76	0	0	0	0	0
Turn Type	Split	NA			NA	Perm					
Protected Phases	4	4			2						
Permitted Phases						2					
Actuated Green, G (s)	72.0	72.0			28.8	28.8					
Effective Green, g (s)	72.0	72.0			28.8	28.8					
Actuated g/C Ratio	0.65	0.65			0.26	0.26					
Clearance Time (s)	4.6	4.6			4.6	4.6					
Vehicle Extension (s)	5.0	5.0			4.5	4.5					
Lane Grp Cap (vph)	1158	1158			926	414					
v/s Ratio Prot	0.20	c0.48			c0.09						
v/s Ratio Perm						0.05					
v/c Ratio	0.31	0.74			0.33	0.18					
Uniform Delay, d1	8.2	12.7			32.8	31.5					
Progression Factor	0.59	0.66			1.06	1.59					
Incremental Delay, d2	0.2	2.2			0.9	0.9					
Delay (s)	5.1	10.6			35.5	51.1					
Level of Service	A	B			D	D					
Approach Delay (s)		8.8			42.4			0.0		0.0	
Approach LOS		A			D			A		A	

Intersection Summary			
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.2
Intersection Capacity Utilization	59.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1013	563	6	57	0	0	0	0	0	871	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		3.7	3.7		3.7						4.1	
Lane Util. Factor		1.00	1.00		1.00						0.95	
Frt		1.00	0.85		1.00						0.98	
Flt Protected		1.00	1.00		0.99						1.00	
Satd. Flow (prot)		1863	1583		1853						3454	
Flt Permitted		1.00	1.00		0.67						1.00	
Satd. Flow (perm)		1863	1583		1239						3454	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1101	612	7	62	0	0	0	0	0	947	182
RTOR Reduction (vph)	0	0	10	0	0	0	0	0	0	0	15	0
Lane Group Flow (vph)	0	1101	602	0	69	0	0	0	0	0	1114	0
Turn Type		NA	Perm	Perm	NA						NA	
Protected Phases		4			8						6	
Permitted Phases			4	8								
Actuated Green, G (s)		65.3	65.3		65.3						36.9	
Effective Green, g (s)		65.3	65.3		65.3						36.9	
Actuated g/C Ratio		0.59	0.59		0.59						0.34	
Clearance Time (s)		3.7	3.7		3.7						4.1	
Vehicle Extension (s)		5.0	5.0		4.8						4.6	
Lane Grp Cap (vph)		1105	939		735						1158	
v/s Ratio Prot		c0.59									c0.32	
v/s Ratio Perm			0.38		0.06							
v/c Ratio		1.00	0.64		0.09						0.96	
Uniform Delay, d1		22.2	14.7		9.6						35.9	
Progression Factor		1.00	1.00		1.68						1.00	
Incremental Delay, d2		26.1	2.1		0.1						18.8	
Delay (s)		48.3	16.7		16.2						54.7	
Level of Service		D	B		B						D	
Approach Delay (s)		37.0			16.2			0.0			54.7	
Approach LOS		D			B			A			D	

Intersection Summary			
HCM 2000 Control Delay	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	7.8
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	1013	0	62	640	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.6			4.6		
Lane Util. Factor	1.00			0.95		
Frt	1.00			1.00		
Flt Protected	0.95			1.00		
Satd. Flow (prot)	1770			3524		
Flt Permitted	0.95			1.00		
Satd. Flow (perm)	1770			3524		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1101	0	67	696	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1101	0	0	763	0	0
Turn Type	NA		Split	NA		
Protected Phases	4		2	2		
Permitted Phases						
Actuated Green, G (s)	74.1			26.7		
Effective Green, g (s)	74.1			26.7		
Actuated g/C Ratio	0.67			0.24		
Clearance Time (s)	4.6			4.6		
Vehicle Extension (s)	3.3			4.9		
Lane Grp Cap (vph)	1192			855		
v/s Ratio Prot	c0.62			c0.22		
v/s Ratio Perm						
v/c Ratio	0.92			0.89		
Uniform Delay, d1	15.5			40.3		
Progression Factor	0.47			0.75		
Incremental Delay, d2	3.4			13.3		
Delay (s)	10.7			43.5		
Level of Service	B			D		
Approach Delay (s)	10.7			43.5	0.0	
Approach LOS	B			D	A	

Intersection Summary			
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.2
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1148	149	146	386	0	0	0	0	385	1735	268
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		3.7	4.2						4.9	
Lane Util. Factor		0.95		1.00	0.95						0.91	
Frt		0.98		1.00	1.00						0.98	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3478		1770	3539						4960	
Flt Permitted		1.00		0.95	1.00						0.99	
Satd. Flow (perm)		3478		1770	3539						4960	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1248	162	159	420	0	0	0	0	418	1886	291
RTOR Reduction (vph)	0	9	0	0	0	0	0	0	0	0	14	0
Lane Group Flow (vph)	0	1401	0	159	420	0	0	0	0	0	2581	0
Turn Type		NA		Prot	NA					Split	NA	
Protected Phases		4		3	8					6	6	
Permitted Phases												
Actuated Green, G (s)		37.8		9.3	50.8						50.1	
Effective Green, g (s)		37.8		9.3	50.8						50.1	
Actuated g/C Ratio		0.34		0.08	0.46						0.46	
Clearance Time (s)		4.2		3.7	4.2						4.9	
Vehicle Extension (s)		6.8		2.0	6.8						0.2	
Lane Grp Cap (vph)		1195		149	1634						2259	
v/s Ratio Prot		c0.40		c0.09	0.12						c0.52	
v/s Ratio Perm												
v/c Ratio		1.17		1.07	0.26						1.14	
Uniform Delay, d1		36.1		50.4	18.1						29.9	
Progression Factor		1.00		1.56	0.04						0.63	
Incremental Delay, d2		86.7		81.8	0.2						68.3	
Delay (s)		122.8		160.5	1.0						87.2	
Level of Service		F		F	A						F	
Approach Delay (s)		122.8			44.8			0.0			87.2	
Approach LOS		F			D			A			F	

Intersection Summary			
HCM 2000 Control Delay	92.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.8
Intersection Capacity Utilization	102.8%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	700	799	0	0	504	125	59	790	25	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.7	4.2			4.2	4.2		4.9	4.9			
Lane Util. Factor	1.00	0.95			0.95	1.00		0.91	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		1.00	1.00			
Satd. Flow (prot)	1770	3539			3539	1583		5068	1583			
Flt Permitted	0.95	1.00			1.00	1.00		1.00	1.00			
Satd. Flow (perm)	1770	3539			3539	1583		5068	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	761	868	0	0	548	136	64	859	27	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	47	0	0	19	0	0	0
Lane Group Flow (vph)	761	868	0	0	548	89	0	923	8	0	0	0
Turn Type	Prot	NA			NA	Perm	Split	NA	Perm			
Protected Phases	7	4			8		2	2				
Permitted Phases						8			2			
Actuated Green, G (s)	41.5	69.0			23.8	23.8		31.9	31.9			
Effective Green, g (s)	41.5	69.0			23.8	23.8		31.9	31.9			
Actuated g/C Ratio	0.38	0.63			0.22	0.22		0.29	0.29			
Clearance Time (s)	3.7	4.2			4.2	4.2		4.9	4.9			
Vehicle Extension (s)	2.0	5.1			5.1	5.1		0.2	0.2			
Lane Grp Cap (vph)	667	2219			765	342		1469	459			
v/s Ratio Prot	c0.43	0.25			c0.15			c0.18				
v/s Ratio Perm						0.06			0.00			
v/c Ratio	1.14	0.39			0.72	0.26		0.63	0.02			
Uniform Delay, d1	34.2	10.1			40.0	35.8		33.9	27.9			
Progression Factor	0.76	0.43			1.00	1.00		1.00	1.65			
Incremental Delay, d2	65.3	0.0			4.0	0.9		2.0	0.1			
Delay (s)	91.4	4.4			44.0	36.7		35.8	46.1			
Level of Service	F	A			D	D		D	D			
Approach Delay (s)		45.0			42.5			36.1			0.0	
Approach LOS		D			D			D			A	

Intersection Summary			
HCM 2000 Control Delay	41.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.8
Intersection Capacity Utilization	102.8%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	406	95	182	465	43	54	395	109	110	580	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.6		4.0	4.6		4.0	14.6		4.0	4.6	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.99		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3439		1770	3494		1770	3425		1770	3490	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3439		1770	3494		1770	3425		1770	3490	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	74	441	103	198	505	47	59	429	118	120	630	64
RTOR Reduction (vph)	0	18	0	0	6	0	0	23	0	0	7	0
Lane Group Flow (vph)	74	526	0	198	546	0	59	524	0	120	687	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases												
Actuated Green, G (s)	9.2	23.7		15.3	29.8		9.2	25.4		12.5	38.7	
Effective Green, g (s)	9.2	23.7		15.3	29.8		9.2	25.4		12.5	38.7	
Actuated g/C Ratio	0.09	0.23		0.15	0.29		0.09	0.24		0.12	0.37	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.0	14.6		4.0	4.6	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	5.0		2.0	5.0	
Lane Grp Cap (vph)	156	782		260	1000		156	835		212	1297	
v/s Ratio Prot	0.04	c0.15		c0.11	0.16		0.03	0.15		c0.07	c0.20	
v/s Ratio Perm												
v/c Ratio	0.47	0.67		0.76	0.55		0.38	0.63		0.57	0.53	
Uniform Delay, d1	45.1	36.7		42.6	31.4		44.8	35.1		43.2	25.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.8	3.0		11.2	1.1		0.6	2.1		2.1	0.7	
Delay (s)	46.0	39.7		53.9	32.5		45.3	37.2		45.3	26.3	
Level of Service	D	D		D	C		D	D		D	C	
Approach Delay (s)		40.4			38.1			38.0			29.1	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	36.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	104.1	Sum of lost time (s)	27.2
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	132	482	180	152	517	129	238	551	68	117	633	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9		4.0	4.9	4.9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3433		1770	3481		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3433		1770	3481		1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	143	524	196	165	562	140	259	599	74	127	688	149
RTOR Reduction (vph)	0	0	114	0	23	0	0	10	0	0	0	84
Lane Group Flow (vph)	143	524	82	165	679	0	259	663	0	127	688	65
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4									2
Actuated Green, G (s)	12.0	23.9	23.9	12.0	23.9		14.8	26.5		12.4	24.1	24.1
Effective Green, g (s)	12.0	23.9	23.9	12.0	23.9		14.8	26.5		12.4	24.1	24.1
Actuated g/C Ratio	0.13	0.26	0.26	0.13	0.26		0.16	0.29		0.13	0.26	0.26
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.5		2.0	5.0		2.0	5.0	5.0
Lane Grp Cap (vph)	229	913	408	229	886		282	996		237	921	411
v/s Ratio Prot	0.08	0.15		c0.09	c0.20		c0.15	0.19		0.07	c0.19	
v/s Ratio Perm			0.05									0.04
v/c Ratio	0.62	0.57	0.20	0.72	0.77		0.92	0.67		0.54	0.75	0.16
Uniform Delay, d1	38.2	29.9	26.9	38.7	31.8		38.3	29.1		37.4	31.5	26.4
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	3.8	1.2	0.4	9.1	4.5		32.1	2.2		1.2	4.0	0.4
Delay (s)	42.0	31.1	27.3	47.8	36.3		70.4	31.4		38.6	35.5	26.8
Level of Service	D	C	C	D	D		E	C		D	D	C
Approach Delay (s)		32.1			38.5			42.2			34.5	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	36.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	92.6	Sum of lost time (s)	17.8
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	193	0	0	0	255	2194
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.2					4.9
Lane Util. Factor	1.00					0.91
Frt	1.00					1.00
Flt Protected	0.95					0.99
Satd. Flow (prot)	1770					5059
Flt Permitted	0.95					0.99
Satd. Flow (perm)	1770					5059
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	210	0	0	0	277	2385
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	210	0	0	0	0	2662
Turn Type	NA				Split	NA
Protected Phases	8				6	6
Permitted Phases						
Actuated Green, G (s)	19.5					81.4
Effective Green, g (s)	19.5					81.4
Actuated g/C Ratio	0.18					0.74
Clearance Time (s)	4.2					4.9
Vehicle Extension (s)	4.8					5.4
Lane Grp Cap (vph)	313					3743
v/s Ratio Prot	c0.12					c0.53
v/s Ratio Perm						
v/c Ratio	0.67					0.71
Uniform Delay, d1	42.3					7.8
Progression Factor	0.35					0.83
Incremental Delay, d2	6.6					0.1
Delay (s)	21.5					6.6
Level of Service	C					A
Approach Delay (s)	21.5		0.0			6.6
Approach LOS	C		A			A

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.1
Intersection Capacity Utilization	145.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	7	255	0	0	195	494	2	714	902	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2			4.2	4.2		4.9	4.9			
Lane Util. Factor	1.00	1.00			1.00	1.00		0.91	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		1.00	1.00			
Satd. Flow (prot)	1770	1863			1863	1583		5085	1583			
Flt Permitted	0.51	1.00			1.00	1.00		1.00	1.00			
Satd. Flow (perm)	959	1863			1863	1583		5085	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	8	277	0	0	212	537	2	776	980	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	136	0	0	141	0	0	0
Lane Group Flow (vph)	8	277	0	0	212	401	0	778	839	0	0	0
Turn Type	Perm	NA			NA	Perm	Split	NA	Perm			
Protected Phases		4			4		2	2				
Permitted Phases	4					4			2			
Actuated Green, G (s)	33.8	33.8			33.8	33.8		67.1	67.1			
Effective Green, g (s)	33.8	33.8			33.8	33.8		67.1	67.1			
Actuated g/C Ratio	0.31	0.31			0.31	0.31		0.61	0.61			
Clearance Time (s)	4.2	4.2			4.2	4.2		4.9	4.9			
Vehicle Extension (s)	5.7	5.7			5.7	5.7		5.2	5.2			
Lane Grp Cap (vph)	294	572			572	486		3101	965			
v/s Ratio Prot		0.15			0.11			0.15				
v/s Ratio Perm	0.01					c0.25			c0.53			
v/c Ratio	0.03	0.48			0.37	0.83		0.25	0.87			
Uniform Delay, d1	26.6	31.0			29.8	35.4		9.9	17.8			
Progression Factor	1.58	1.56			1.00	1.00		0.24	0.56			
Incremental Delay, d2	0.1	1.2			1.1	12.6		0.1	6.0			
Delay (s)	42.1	49.6			30.8	47.9		2.4	16.0			
Level of Service	D	D			C	D		A	B			
Approach Delay (s)		49.4			43.1			10.0			0.0	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	22.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.1
Intersection Capacity Utilization	131.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	533	1321	97	72	0	0	0	0	4	1035	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		3.7	4.2						4.9	4.9
Lane Util. Factor		1.00		1.00	1.00						0.95	1.00
Frt		0.90		1.00	1.00						1.00	0.85
Flt Protected		1.00		0.95	1.00						1.00	1.00
Satd. Flow (prot)		1684		1770	1863						3539	1583
Flt Permitted		1.00		0.95	1.00						1.00	1.00
Satd. Flow (perm)		1684		1770	1863						3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	579	1436	105	78	0	0	0	0	4	1125	125
RTOR Reduction (vph)	0	46	0	0	0	0	0	0	0	0	0	76
Lane Group Flow (vph)	0	1969	0	105	78	0	0	0	0	0	1129	49
Turn Type		NA		Prot	NA					Split	NA	Perm
Protected Phases		4		3	8					6	6	
Permitted Phases												6
Actuated Green, G (s)		56.8		12.0	72.5						28.4	28.4
Effective Green, g (s)		56.8		12.0	72.5						28.4	28.4
Actuated g/C Ratio		0.52		0.11	0.66						0.26	0.26
Clearance Time (s)		4.2		3.7	4.2						4.9	4.9
Vehicle Extension (s)		4.9		2.0	4.6						5.2	5.2
Lane Grp Cap (vph)		869		193	1227						913	408
v/s Ratio Prot		c1.17		c0.06	0.04						c0.32	
v/s Ratio Perm												0.03
v/c Ratio		2.27		0.54	0.06						1.24	0.12
Uniform Delay, d1		26.6		46.4	6.7						40.8	31.2
Progression Factor		1.00		1.00	1.00						1.00	1.00
Incremental Delay, d2		573.3		1.7	0.0						115.9	0.6
Delay (s)		599.9		48.1	6.7						156.7	31.8
Level of Service		F		D	A						F	C
Approach Delay (s)		599.9			30.5			0.0			144.3	
Approach LOS		F			C			A			F	

Intersection Summary			
HCM 2000 Control Delay	404.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.75		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.8
Intersection Capacity Utilization	145.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	10	488	27	17	57	36	7	19	5	23	31	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	530	29	18	62	39	8	21	5	25	34	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1300										
pX, platoon unblocked												
vC, conflicting volume	101			560			705	705	280	421	700	82
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	101			560			705	705	280	421	700	82
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			98			97	94	99	95	90	100
cM capacity (veh/h)	1489			1007			293	350	717	480	353	962

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total	276	295	120	34	62
Volume Left	11	0	18	8	25
Volume Right	0	29	39	5	3
cSH	1489	1700	1007	364	410
Volume to Capacity	0.01	0.17	0.02	0.09	0.15
Queue Length 95th (ft)	1	0	1	8	13
Control Delay (s)	0.4	0.0	1.5	15.9	15.3
Lane LOS	A		A	C	C
Approach Delay (s)	0.2		1.5	15.9	15.3
Approach LOS				C	C

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	32.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	5	510	10	5	112	18	0	6	9	12	7	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	5	554	11	5	122	20	0	7	10	13	8	3
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					1008							
pX, platoon unblocked												
vC, conflicting volume	141			565			720	723	283	443	718	132
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	141			565			720	723	283	443	718	132
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			100	98	99	97	98	100
cM capacity (veh/h)	1439			1003			307	348	714	481	350	894

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total	283	288	147	16	24
Volume Left	5	0	5	0	13
Volume Right	0	11	20	10	3
cSH	1439	1700	1003	503	455
Volume to Capacity	0.00	0.17	0.01	0.03	0.05
Queue Length 95th (ft)	0	0	0	3	4
Control Delay (s)	0.2	0.0	0.4	12.4	13.3
Lane LOS	A		A	B	B
Approach Delay (s)	0.1		0.4	12.4	13.3
Approach LOS				B	B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	30.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	38	39	123	113	102	39	77	1029	201	59	471	26
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	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	2049	1742	1947	2049	1742	1947	3798		1947	3863	
Flt Permitted	0.68	1.00	1.00	0.73	1.00	1.00	0.40	1.00		0.10	1.00	
Satd. Flow (perm)	1397	2049	1742	1495	2049	1742	826	3798		196	3863	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	42	134	123	111	42	84	1118	218	64	512	28
RTOR Reduction (vph)	0	0	79	0	0	25	0	25	0	0	6	0
Lane Group Flow (vph)	41	42	55	123	111	17	84	1311	0	64	534	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6		6	2		2	4			8		
Actuated Green, G (s)	45.3	45.3	45.3	45.3	45.3	45.3	56.7	56.7		56.7	56.7	
Effective Green, g (s)	45.3	45.3	45.3	45.3	45.3	45.3	56.7	56.7		56.7	56.7	
Actuated g/C Ratio	0.41	0.41	0.41	0.41	0.41	0.41	0.52	0.52		0.52	0.52	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	575	843	717	615	843	717	425	1957		101	1991	
v/s Ratio Prot		0.02			0.05			c0.35			0.14	
v/s Ratio Perm	0.03		0.03	c0.08		0.01	0.10			0.33		
v/c Ratio	0.07	0.05	0.08	0.20	0.13	0.02	0.20	0.67		0.63	0.27	
Uniform Delay, d1	19.6	19.4	19.7	20.7	20.1	19.2	14.4	19.7		19.2	15.0	
Progression Factor	1.00	1.00	1.00	1.35	1.36	1.93	0.83	0.81		1.05	0.77	
Incremental Delay, d2	0.2	0.1	0.2	0.7	0.3	0.1	0.1	0.6		12.3	0.1	
Delay (s)	19.8	19.5	19.9	28.7	27.6	37.1	12.1	16.4		32.3	11.7	
Level of Service	B	B	B	C	C	D	B	B		C	B	
Approach Delay (s)		19.8			29.6			16.2			13.9	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.1%	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												
Volume (veh/h)	0	140	58	161	115	0	61	0	10	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	152	63	175	125	0	66	0	11	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1009			513							
pX, platoon unblocked	0.90						0.90	0.90		0.90	0.90	0.90
vC, conflicting volume	125			215			659	659	184	670	690	125
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			215			566	566	184	579	601	0
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			87			81	100	99	100	100	100
cM capacity (veh/h)	1463			1355			353	340	859	342	325	978

Direction, Lane #	SE 1	NW 1	NE 1	SW 1
Volume Total	215	300	77	0
Volume Left	0	175	66	0
Volume Right	63	0	11	0
cSH	1463	1355	385	1700
Volume to Capacity	0.00	0.13	0.20	0.00
Queue Length 95th (ft)	0	11	18	0
Control Delay (s)	0.0	5.2	16.7	0.0
Lane LOS		A	C	A
Approach Delay (s)	0.0	5.2	16.7	0.0
Approach LOS			C	A

Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	29	128	0	0	357	36	0	0	0	25	0	24
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	32	139	0	0	388	39	0	0	0	27	0	26
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		492										
pX, platoon unblocked												
vC, conflicting volume	427			139			422	629	70	540	610	214
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	427			139			422	629	70	540	610	214
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			100			100	100	100	93	100	97
cM capacity (veh/h)	1129			1442			488	386	979	416	396	791

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1	SW 1
Volume Total	101	70	194	233	0	53
Volume Left	32	0	0	0	0	27
Volume Right	0	0	0	39	0	26
cSH	1129	1700	1442	1700	1700	542
Volume to Capacity	0.03	0.04	0.00	0.14	0.00	0.10
Queue Length 95th (ft)	2	0	0	0	0	8
Control Delay (s)	2.7	0.0	0.0	0.0	0.0	12.4
Lane LOS	A				A	B
Approach Delay (s)	1.6		0.0		0.0	12.4
Approach LOS					A	B

Intersection Summary			
Average Delay	1.4		
Intersection Capacity Utilization	28.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	88	31	50	41	90	27	129	791	64	25	744	218
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	96	34	54	45	98	29	140	860	70	27	809	237
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								692			479	
pX, platoon unblocked	0.86	0.86	0.82	0.86	0.86	0.91	0.82			0.91		
vC, conflicting volume	1770	2191	523	1705	2275	465	1046			929		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1109	1597	0	1034	1694	215	615			725		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	53	94	46	0	96	82			97		
cM capacity (veh/h)	0	72	888	82	63	719	787			795		

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1	NE 2	NE 3	SW 1	SW 2	SW 3
Volume Total	112	71	93	78	140	573	356	27	539	507
Volume Left	96	0	45	0	140	0	0	27	0	0
Volume Right	0	54	0	29	0	0	70	0	0	237
cSH	0	242	71	96	787	1700	1700	795	1700	1700
Volume to Capacity	Err	0.29	1.32	0.82	0.18	0.34	0.21	0.03	0.32	0.30
Queue Length 95th (ft)	Err	30	187	111	16	0	0	3	0	0
Control Delay (s)	Err	25.9	315.1	125.6	10.6	0.0	0.0	9.7	0.0	0.0
Lane LOS	F	D	F	F	B			A		
Approach Delay (s)	Err		228.7		1.4			0.2		
Approach LOS	F		F							

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	65	12	0	736	0	0	0	0	718	100	608
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
Lane Util. Factor		1.00			1.00						1.00	1.00
Frt		0.98			1.00						1.00	0.85
Flt Protected		1.00			1.00						0.96	1.00
Satd. Flow (prot)		2006			2049						1963	1742
Flt Permitted		1.00			1.00						0.96	1.00
Satd. Flow (perm)		2006			2049						1963	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	71	13	0	800	0	0	0	0	780	109	661
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0	0	0	49
Lane Group Flow (vph)	0	78	0	0	800	0	0	0	0	0	889	612
Turn Type		NA			NA				custom	Perm	NA	Perm
Protected Phases		6									8	
Permitted Phases					2				4	8		8
Actuated Green, G (s)		48.4			48.4						53.6	53.6
Effective Green, g (s)		48.4			48.4						53.6	53.6
Actuated g/C Ratio		0.44			0.44						0.49	0.49
Clearance Time (s)		4.0			4.0						4.0	4.0
Vehicle Extension (s)		3.0			3.0						3.0	3.0
Lane Grp Cap (vph)		882			901						956	848
v/s Ratio Prot		0.04										
v/s Ratio Perm					c0.39						0.45	0.35
v/c Ratio		0.09			0.89						0.93	0.72
Uniform Delay, d1		17.9			28.3						26.4	22.3
Progression Factor		0.33			1.00						1.00	1.00
Incremental Delay, d2		0.2			12.7						14.8	3.0
Delay (s)		6.1			41.0						41.3	25.3
Level of Service		A			D						D	C
Approach Delay (s)		6.1			41.0			0.0			34.5	
Approach LOS		A			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	35.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Intersection Sign configuration not allowed in HCM analysis.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	160	208	0	0	0	225	0	145	20	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	174	226	0	0	0	245	0	158	22	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	0			226			696	574	113	561	574	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			226			696	574	113	561	574	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	89			100			100	59	98	100	100	100
cM capacity (veh/h)	1622			1340			301	382	918	251	382	1084

Direction, Lane #	SE 1	SE 2	SE 3	NW 1	NE 1	NE 2
Volume Total	174	113	113	245	105	74
Volume Left	174	0	0	0	0	0
Volume Right	0	0	0	245	0	22
cSH	1622	1700	1700	1700	382	460
Volume to Capacity	0.11	0.07	0.07	0.14	0.28	0.16
Queue Length 95th (ft)	9	0	0	0	28	14
Control Delay (s)	7.5	0.0	0.0	0.0	18.0	14.3
Lane LOS	A				C	B
Approach Delay (s)	3.3			0.0	16.5	
Approach LOS					C	

Intersection Summary			
Average Delay	5.2		
Intersection Capacity Utilization	37.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	228	206	15	10	476	35	6	4	18	36	18	30
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	248	224	16	11	517	38	7	4	20	39	20	33
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		488										
pX, platoon unblocked												
vC, conflicting volume	555			240			1328	1305	120	1188	1294	536
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	555			240			1328	1305	120	1188	1294	536
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	75			99			91	96	98	65	84	93
cM capacity (veh/h)	1011			1324			75	119	909	110	121	489

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total	360	128	566	30	91
Volume Left	248	0	11	7	39
Volume Right	0	16	38	20	33
cSH	1011	1700	1324	210	157
Volume to Capacity	0.25	0.08	0.01	0.15	0.58
Queue Length 95th (ft)	24	0	1	12	76
Control Delay (s)	7.5	0.0	0.2	25.1	56.0
Lane LOS	A		A	D	F
Approach Delay (s)	5.5		0.2	25.1	56.0
Approach LOS				D	F

Intersection Summary			
Average Delay	7.4		
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

Intersection Sign configuration not allowed in HCM analysis.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	482	675	381	591	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.7	4.1	4.1	4.1		
Lane Util. Factor	0.97	0.95	0.95	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3776	3893	3893	1742		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3776	3893	3893	1742		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	524	734	414	642	0	0
RTOR Reduction (vph)	0	0	0	491	0	0
Lane Group Flow (vph)	524	734	414	151	0	0
Turn Type	Prot	NA	NA	Perm		
Protected Phases	3	8	4			
Permitted Phases				4		
Actuated Green, G (s)	22.0	51.5	25.8	25.8		
Effective Green, g (s)	22.0	51.5	25.8	25.8		
Actuated g/C Ratio	0.20	0.47	0.23	0.23		
Clearance Time (s)	3.7	4.1	4.1	4.1		
Vehicle Extension (s)	8.0	0.2	4.1	4.1		
Lane Grp Cap (vph)	755	1822	913	408		
v/s Ratio Prot	c0.14	0.19	c0.11			
v/s Ratio Perm				0.09		
v/c Ratio	0.69	0.40	0.45	0.37		
Uniform Delay, d1	40.9	19.2	36.1	35.3		
Progression Factor	1.46	0.65	1.26	4.69		
Incremental Delay, d2	3.6	0.0	0.5	0.7		
Delay (s)	63.3	12.5	45.8	166.3		
Level of Service	E	B	D	F		
Approach Delay (s)		33.6	119.1		0.0	
Approach LOS		C	F		A	

Intersection Summary			
HCM 2000 Control Delay	72.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	0	604	407	1026	740	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.1	4.1	4.0	4.1	
Lane Util. Factor		0.95	0.91	0.91	0.97	
Frt		1.00	0.92	0.85	1.00	
Flt Protected		1.00	1.00	1.00	0.95	
Satd. Flow (prot)		3893	3417	1585	3776	
Flt Permitted		1.00	1.00	1.00	0.95	
Satd. Flow (perm)		3893	3417	1585	3776	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	657	442	1115	804	0
RTOR Reduction (vph)	0	0	176	0	0	0
Lane Group Flow (vph)	0	657	824	557	804	0
Turn Type		NA	NA	Free	NA	
Protected Phases		6	6		8	
Permitted Phases				Free		
Actuated Green, G (s)		50.3	50.3	110.0	51.5	
Effective Green, g (s)		50.3	50.3	110.0	51.5	
Actuated g/C Ratio		0.46	0.46	1.00	0.47	
Clearance Time (s)		4.1	4.1		4.1	
Vehicle Extension (s)		3.0	3.0		0.2	
Lane Grp Cap (vph)		1780	1562	1585	1767	
v/s Ratio Prot		0.17	c0.24		c0.21	
v/s Ratio Perm				0.35		
v/c Ratio		0.37	0.53	0.35	0.46	
Uniform Delay, d1		19.5	21.3	0.0	19.8	
Progression Factor		0.78	1.00	1.00	0.21	
Incremental Delay, d2		0.6	1.3	0.6	0.1	
Delay (s)		15.7	22.6	0.6	4.3	
Level of Service		B	C	A	A	
Approach Delay (s)		15.7	14.8		4.3	
Approach LOS		B	B		A	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	50.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Unsignalized Intersection Capacity Analysis
1: Broadway St & Monterey St.

8/27/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	399	93	0	0	148	103	0	0	0	0	0	80
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	434	101	0	0	161	112	0	0	0	0	0	87
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	273			101			1185	1241	101	1185	1185	217
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	273			101			1185	1241	101	1185	1185	217
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	66			100			100	100	100	100	100	89
cM capacity (veh/h)	1290			1491			110	116	954	123	125	823

Direction, Lane #	SE 1	NW 1	NE 1	SW 1	SW 2
Volume Total	535	273	0	0	87
Volume Left	434	0	0	0	0
Volume Right	0	112	0	0	87
cSH	1290	1491	1700	1700	823
Volume to Capacity	0.34	0.00	0.00	0.00	0.11
Queue Length 95th (ft)	37	0	0	0	9
Control Delay (s)	8.1	0.0	0.0	0.0	9.9
Lane LOS	A		A	A	A
Approach Delay (s)	8.1	0.0	0.0	9.9	
Approach LOS			A	A	

Intersection Summary			
Average Delay	5.8		
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	0	381	124	221	316	0	239	65	69	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	414	135	240	343	0	260	71	75	0	0	0

Direction, Lane #	NB 1	NB 2	SB 1	SB 2	NE 1	NE 2
Volume Total (vph)	276	273	355	229	295	110
Volume Left (vph)	0	0	240	0	260	0
Volume Right (vph)	0	135	0	0	0	75
Hadj (s)	0.03	-0.31	0.37	0.03	0.47	-0.44
Departure Headway (s)	7.0	6.7	7.3	6.9	7.8	6.9
Degree Utilization, x	0.54	0.51	0.72	0.44	0.64	0.21
Capacity (veh/h)	490	522	476	503	437	494
Control Delay (s)	16.7	15.1	25.4	14.1	22.6	10.5
Approach Delay (s)	15.9		20.9		19.3	
Approach LOS	C		C		C	

Intersection Summary			
Delay	18.7		
Level of Service	C		
Intersection Capacity Utilization	52.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	0	427	227	0	24	52
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	464	247	0	26	57
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)		1132				
pX, platoon unblocked						
vC, conflicting volume	247				711	247
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	247				711	247
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				93	93
cM capacity (veh/h)	1319				400	792

Direction, Lane #	SE 1	NW 1	SW 1	SW 2
Volume Total	464	247	26	57
Volume Left	0	0	26	0
Volume Right	0	0	0	57
cSH	1700	1700	400	792
Volume to Capacity	0.27	0.15	0.07	0.07
Queue Length 95th (ft)	0	0	5	6
Control Delay (s)	0.0	0.0	14.6	9.9
Lane LOS			B	A
Approach Delay (s)	0.0	0.0	11.4	
Approach LOS			B	

Intersection Summary			
Average Delay	1.2		
Intersection Capacity Utilization	32.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	0	252	165	23	598	0	0	0	0	285	313	459
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	274	179	25	650	0	0	0	0	310	340	499
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		735										
pX, platoon unblocked				0.91			0.91	0.91	0.91	0.91	0.91	
vC, conflicting volume	650			453			909	1064	364	1064	1153	325
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	650			348			849	1020	249	1020	1118	325
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			0	100	100	0	0	26
cM capacity (veh/h)	932			1097			0	209	682	170	183	671

Direction, Lane #	SE 1	NW 1	NW 2	SW 1	SW 2
Volume Total	453	242	433	816	333
Volume Left	0	25	0	310	0
Volume Right	179	0	0	166	333
cSH	1700	1097	1700	208	671
Volume to Capacity	0.27	0.02	0.25	3.93	0.50
Queue Length 95th (ft)	0	2	0	Err	69
Control Delay (s)	0.0	1.1	0.0	Err	15.5
Lane LOS		A		F	C
Approach Delay (s)	0.0	0.4		7108.8	
Approach LOS				F	

Intersection Summary			
Average Delay	3586.7		
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	255	10	396	0	0	0	0	829	143	280	565	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2						5.2		5.2	5.2	
Lane Util. Factor	1.00	1.00						0.95		1.00	0.95	
Frt	1.00	0.85						0.98		1.00	1.00	
Flt Protected	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (prot)	1770	1590						3461		1770	3539	
Flt Permitted	0.95	1.00						1.00		0.24	1.00	
Satd. Flow (perm)	1770	1590						3461		455	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	277	11	430	0	0	0	0	901	155	304	614	0
RTOR Reduction (vph)	0	289	0	0	0	0	0	20	0	0	0	0
Lane Group Flow (vph)	277	152	0	0	0	0	0	1036	0	304	614	0
Turn Type	Split	NA						NA		Perm	NA	
Protected Phases	4	4						2			2	
Permitted Phases										2		
Actuated Green, G (s)	13.0	13.0						49.0		49.0	49.0	
Effective Green, g (s)	13.0	13.0						49.0		49.0	49.0	
Actuated g/C Ratio	0.18	0.18						0.69		0.69	0.69	
Clearance Time (s)	4.2	4.2						5.2		5.2	5.2	
Vehicle Extension (s)	5.2	5.2						0.2		0.2	0.2	
Lane Grp Cap (vph)	322	289						2375		312	2428	
v/s Ratio Prot	c0.16	0.10						0.30			0.17	
v/s Ratio Perm										c0.67		
v/c Ratio	0.86	0.53						0.44		0.97	0.25	
Uniform Delay, d1	28.3	26.4						5.0		10.6	4.3	
Progression Factor	1.00	1.00						1.00		1.00	1.00	
Incremental Delay, d2	21.9	3.5						0.0		43.5	0.0	
Delay (s)	50.3	29.9						5.1		54.1	4.3	
Level of Service	D	C						A		D	A	
Approach Delay (s)		37.8			0.0			5.1			20.8	
Approach LOS		D			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	71.4	Sum of lost time (s)	9.4
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	0	0	0	129	10	299	364	712	0	0	716	615
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	140	11	325	396	774	0	0	778	668
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								284			1117	
pX, platoon unblocked	0.84	0.84	0.84	0.84	0.84		0.84					
vC, conflicting volume	2621	2678	723	1954	3012	387	1447			774		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2550	2617	296	1758	3014	387	1155			774		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	100	0	0	47	22			100		
cM capacity (veh/h)	0	4	590	16	2	611	506			837		

Direction, Lane #	NW 1	NW 2	NE 1	NE 2	NE 3	SW 1	SW 2
Volume Total	146	330	396	387	387	519	928
Volume Left	140	0	396	0	0	0	0
Volume Right	0	325	0	0	0	0	668
cSH	13	118	506	1700	1700	1700	1700
Volume to Capacity	11.00	2.80	0.78	0.23	0.23	0.31	0.55
Queue Length 95th (ft)	Err	765	178	0	0	0	0
Control Delay (s)	Err	891.2	33.2	0.0	0.0	0.0	0.0
Lane LOS	F	F	D				
Approach Delay (s)	3677.6		11.2			0.0	
Approach LOS	F						

Intersection Summary			
Average Delay	570.4		
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	33	13	111	25	25	50	141	825	35	15	1196	85
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	36	14	121	27	27	54	153	897	38	16	1300	92
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								595			806	
pX, platoon unblocked	0.76	0.76	0.76	0.76	0.76		0.76					
vC, conflicting volume	2202	2620	696	2033	2647	467	1392			935		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1949	2500	0	1727	2536	467	884			935		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	9	85	0	0	90	73			98		
cM capacity (veh/h)	0	15	824	6	15	542	578			728		

Direction, Lane #	SE 1	NW 1	NE 1	NE 2	SW 1	SW 2
Volume Total	171	109	602	486	666	742
Volume Left	36	27	153	0	16	0
Volume Right	121	54	0	38	0	92
cSH	0	17	578	1700	728	1700
Volume to Capacity	Err	6.25	0.27	0.29	0.02	0.44
Queue Length 95th (ft)	Err	Err	27	0	2	0
Control Delay (s)	Err	Err	7.0	0.0	0.6	0.0
Lane LOS	F	F	A		A	
Approach Delay (s)	Err	Err	3.9		0.3	
Approach LOS	F	F				

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	169	0	0	427	0	0	1018	0	0	1064	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5			4.2			4.2	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		1.00			1.00			1.00			1.00	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		1863			1863			3539			3539	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		1863			1863			3539			3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	184	0	0	464	0	0	1107	0	0	1157	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	184	0	0	464	0	0	1107	0	0	1157	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			6	
Permitted Phases	4			4			2			6		
Actuated Green, G (s)		18.4			18.4			27.2			27.2	
Effective Green, g (s)		18.4			18.4			27.2			27.2	
Actuated g/C Ratio		0.34			0.34			0.50			0.50	
Clearance Time (s)		4.5			4.5			4.2			4.2	
Vehicle Extension (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		631			631			1772			1772	
v/s Ratio Prot		0.10			c0.25			0.31			c0.33	
v/s Ratio Perm												
v/c Ratio		0.29			0.74			0.62			0.65	
Uniform Delay, d1		13.2			15.8			9.8			10.0	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.5			5.4			1.0			1.2	
Delay (s)		13.7			21.2			10.8			11.2	
Level of Service		B			C			B			B	
Approach Delay (s)		13.7			21.2			10.8			11.2	
Approach LOS		B			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	12.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	54.3	Sum of lost time (s)	8.7
Intersection Capacity Utilization	59.1%	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												
Volume (vph)	162	211	148	115	142	35	113	807	245	111	916	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	5.6	5.6		5.6	5.6		4.0	4.2		4.0	4.2	
Lane Util. Factor	1.00	0.95		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3320		1770	1807		1770	3416		1770	3473	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3320		1770	1807		1770	3416		1770	3473	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	176	229	161	125	154	38	123	877	266	121	996	143
RTOR Reduction (vph)	0	132	0	0	9	0	0	24	0	0	10	0
Lane Group Flow (vph)	176	258	0	125	183	0	123	1119	0	121	1129	0
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.8	15.8		15.5	15.5		11.7	42.7		11.6	42.6	
Effective Green, g (s)	15.8	15.8		15.5	15.5		11.7	42.7		11.6	42.6	
Actuated g/C Ratio	0.15	0.15		0.15	0.15		0.11	0.41		0.11	0.41	
Clearance Time (s)	5.6	5.6		5.6	5.6		4.0	4.2		4.0	4.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	266	499		261	266		197	1389		195	1409	
v/s Ratio Prot	c0.10	0.08		0.07	c0.10		c0.07	c0.33		0.07	0.33	
v/s Ratio Perm												
v/c Ratio	0.66	0.52		0.48	0.69		0.62	0.81		0.62	0.80	
Uniform Delay, d1	42.1	41.1		41.0	42.4		44.6	27.5		44.6	27.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.02		1.16	0.60	
Incremental Delay, d2	4.7	0.4		0.5	5.8		4.4	5.1		2.5	2.9	
Delay (s)	46.8	41.5		41.6	48.2		48.9	33.1		54.4	19.4	
Level of Service	D	D		D	D		D	C		D	B	
Approach Delay (s)		43.1			45.6			34.7			22.8	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	19.4
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	91	262	60	307	619	127	79	839	86	69	789	118
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.0	4.2		4.0	4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1811		1770	1863	1583	1770	3490		1770	3470	
Flt Permitted	0.13	1.00		0.43	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	246	1811		802	1863	1583	1770	3490		1770	3470	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	99	285	65	334	673	138	86	912	93	75	858	128
RTOR Reduction (vph)	0	8	0	0	0	55	0	7	0	0	11	0
Lane Group Flow (vph)	99	342	0	334	673	83	86	998	0	75	975	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	45.9	45.9		45.9	45.9	45.9	9.6	37.1		9.6	37.1	
Effective Green, g (s)	45.9	45.9		45.9	45.9	45.9	9.6	37.1		9.6	37.1	
Actuated g/C Ratio	0.44	0.44		0.44	0.44	0.44	0.09	0.35		0.09	0.35	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.0	4.2		4.0	4.2	
Vehicle Extension (s)	4.8	4.8		4.8	4.8	4.8	2.0	4.8		2.0	4.8	
Lane Grp Cap (vph)	107	791		350	814	691	161	1233		161	1226	
v/s Ratio Prot		0.19			0.36		0.05	c0.29		0.04	c0.28	
v/s Ratio Perm	0.40			c0.42		0.05						
v/c Ratio	0.93	0.43		0.95	0.83	0.12	0.53	0.81		0.47	0.80	
Uniform Delay, d1	27.9	20.5		28.5	26.0	17.6	45.6	30.7		45.3	30.5	
Progression Factor	0.77	0.74		1.00	1.00	1.00	0.81	0.72		0.68	0.91	
Incremental Delay, d2	63.8	0.7		36.6	7.7	0.2	1.1	3.8		0.7	5.0	
Delay (s)	85.4	15.8		65.1	33.7	17.7	37.8	25.9		31.4	32.9	
Level of Service	F	B		E	C	B	D	C		C	C	
Approach Delay (s)		31.2			40.9			26.9			32.8	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	33.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.4
Intersection Capacity Utilization	92.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	120	947	32	0	0	0	0	903	187	213	943	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2					4.2		4.2	4.2	
Lane Util. Factor		0.91	1.00					0.95		1.00	0.95	
Frt		1.00	0.85					0.97		1.00	1.00	
Flt Protected		0.99	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		5057	1583					3448		1770	3539	
Flt Permitted		0.99	1.00					1.00		0.19	1.00	
Satd. Flow (perm)		5057	1583					3448		360	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	130	1029	35	0	0	0	0	982	203	232	1025	0
RTOR Reduction (vph)	0	0	16	0	0	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	1159	19	0	0	0	0	1184	0	232	1025	0
Turn Type	Split	NA	Perm					NA		Perm	NA	
Protected Phases	4	4						2			6	
Permitted Phases			4							6		
Actuated Green, G (s)		25.0	25.0					71.6		71.6	71.6	
Effective Green, g (s)		25.0	25.0					71.6		71.6	71.6	
Actuated g/C Ratio		0.24	0.24					0.68		0.68	0.68	
Clearance Time (s)		4.2	4.2					4.2		4.2	4.2	
Vehicle Extension (s)		2.0	2.0					2.0		2.0	2.0	
Lane Grp Cap (vph)		1204	376					2351		245	2413	
v/s Ratio Prot		c0.23						0.34			0.29	
v/s Ratio Perm			0.01							c0.64		
v/c Ratio		0.96	0.05					0.50		0.95	0.42	
Uniform Delay, d1		39.5	30.8					8.1		15.0	7.5	
Progression Factor		1.04	1.28					0.36		1.52	0.56	
Incremental Delay, d2		16.6	0.0					0.5		36.6	0.0	
Delay (s)		57.8	39.4					3.5		59.3	4.2	
Level of Service		E	D					A		E	A	
Approach Delay (s)		57.3			0.0			3.5			14.4	
Approach LOS		E			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	157	70	325	92	198	24	75	909	18	15	739	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2	4.2	4.2	4.2	4.2	4.0	4.2	4.2	4.0	4.2	4.2
Lane Util. Factor	1.00	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	3433	1863	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1863	1583	3433	1863	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	171	76	353	100	215	26	82	988	20	16	803	49
RTOR Reduction (vph)	0	0	292	0	0	20	0	0	12	0	0	32
Lane Group Flow (vph)	171	76	61	100	215	6	82	988	8	16	803	17
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	5		6	6		3	8		7	4	
Permitted Phases			5			6			8			4
Actuated Green, G (s)	18.1	18.1	18.1	25.2	25.2	25.2	9.6	40.3	40.3	4.8	35.5	35.5
Effective Green, g (s)	18.1	18.1	18.1	25.2	25.2	25.2	9.6	40.3	40.3	4.8	35.5	35.5
Actuated g/C Ratio	0.17	0.17	0.17	0.24	0.24	0.24	0.09	0.38	0.38	0.05	0.34	0.34
Clearance Time (s)	4.2	4.2	4.2	4.2	4.2	4.2	4.0	4.2	4.2	4.0	4.2	4.2
Vehicle Extension (s)	4.9	4.9	4.9	4.9	4.9	4.9	2.0	4.9	4.9	2.0	4.9	4.9
Lane Grp Cap (vph)	305	321	272	823	447	379	161	1358	607	80	1196	535
v/s Ratio Prot	c0.10	0.04		0.03	c0.12		c0.05	c0.28		0.01	0.23	
v/s Ratio Perm			0.04			0.00			0.00			0.01
v/c Ratio	0.56	0.24	0.22	0.12	0.48	0.02	0.51	0.73	0.01	0.20	0.67	0.03
Uniform Delay, d1	39.8	37.5	37.4	31.2	34.3	30.4	45.5	27.7	20.0	48.3	29.8	23.2
Progression Factor	1.00	1.00	1.00	0.86	0.86	1.00	1.46	0.42	1.00	1.50	0.39	0.11
Incremental Delay, d2	3.7	0.8	0.8	0.3	3.6	0.1	0.8	2.0	0.0	0.4	1.8	0.0
Delay (s)	43.6	38.3	38.2	27.0	33.2	30.5	67.2	13.6	20.0	72.7	13.6	2.5
Level of Service	D	D	D	C	C	C	E	B	C	E	B	A
Approach Delay (s)		39.8			31.2			17.8			14.0	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.6
Intersection Capacity Utilization	69.4%	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												
Volume (vph)	0	0	0	43	167	184	193	897	0	0	756	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)					4.2	4.2	4.2	4.2			4.2	
Lane Util. Factor					0.95	1.00	1.00	0.95			0.95	
Frt					1.00	0.85	1.00	1.00			0.98	
Flt Protected					0.99	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					3503	1583	1770	3539			3463	
Flt Permitted					0.99	1.00	0.29	1.00			1.00	
Satd. Flow (perm)					3503	1583	533	3539			3463	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	47	182	200	210	975	0	0	822	137
RTOR Reduction (vph)	0	0	0	0	0	165	0	0	0	0	9	0
Lane Group Flow (vph)	0	0	0	0	229	35	210	975	0	0	950	0
Turn Type				Split	NA	Perm	Perm	NA			NA	
Protected Phases				8	8			2			6	
Permitted Phases						8	2					
Actuated Green, G (s)					11.4	11.4	85.2	85.2			85.2	
Effective Green, g (s)					11.4	11.4	85.2	85.2			85.2	
Actuated g/C Ratio					0.11	0.11	0.81	0.81			0.81	
Clearance Time (s)					4.2	4.2	4.2	4.2			4.2	
Vehicle Extension (s)					2.0	2.0	2.0	2.0			2.0	
Lane Grp Cap (vph)					380	171	432	2871			2809	
v/s Ratio Prot					c0.07			0.28			0.27	
v/s Ratio Perm						0.02	c0.39					
v/c Ratio					0.60	0.21	0.49	0.34			0.34	
Uniform Delay, d1					44.6	42.7	3.1	2.6			2.6	
Progression Factor					0.91	0.81	0.94	0.02			0.17	
Incremental Delay, d2					1.8	0.2	2.8	0.2			0.0	
Delay (s)					42.3	34.7	5.7	0.3			0.5	
Level of Service					D	C	A	A			A	
Approach Delay (s)		0.0			38.8			1.3			0.5	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	58.7%	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												
Volume (vph)	237	991	53	52	696	453	45	563	54	330	351	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.6		4.0	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3512		1770	3539	1583	1770	3493		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.44	1.00		0.33	1.00	1.00
Satd. Flow (perm)	1770	3512		1770	3539	1583	815	3493		623	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	258	1077	58	57	757	492	49	612	59	359	382	264
RTOR Reduction (vph)	0	3	0	0	0	146	0	7	0	0	0	132
Lane Group Flow (vph)	258	1132	0	57	757	346	49	664	0	359	382	132
Turn Type	Prot	NA		Prot	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases	5	2		1	6			8			4	
Permitted Phases						6	8			4		4
Actuated Green, G (s)	12.0	33.4		6.0	27.4	27.4	52.4	52.4		52.4	52.4	52.4
Effective Green, g (s)	12.0	33.4		6.0	27.4	27.4	52.4	52.4		52.4	52.4	52.4
Actuated g/C Ratio	0.11	0.32		0.06	0.26	0.26	0.50	0.50		0.50	0.50	0.50
Clearance Time (s)	4.0	4.6		4.0	4.6	4.6	4.6	4.6		4.6	4.6	4.6
Vehicle Extension (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	202	1117		101	923	413	406	1743		310	929	789
v/s Ratio Prot	c0.15	c0.32		0.03	0.21			0.19			0.21	
v/s Ratio Perm						0.22	0.06			c0.58		0.08
v/c Ratio	1.28	1.01		0.56	0.82	0.84	0.12	0.38		1.16	0.41	0.17
Uniform Delay, d1	46.5	35.8		48.2	36.5	36.7	14.0	16.3		26.3	16.6	14.4
Progression Factor	1.24	1.04		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	156.5	29.8		4.2	8.1	18.0	0.0	0.1		101.1	0.1	0.0
Delay (s)	214.2	67.2		52.5	44.6	54.7	14.1	16.3		127.4	16.7	14.4
Level of Service	F	E		D	D	D	B	B		F	B	B
Approach Delay (s)		94.4			48.7			16.2			55.6	
Approach LOS		F			D			B			E	

Intersection Summary			
HCM 2000 Control Delay	59.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	13.2
Intersection Capacity Utilization	84.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	350	20	10	339	14	26
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	380	22	11	368	15	28
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	484			1038		
pX, platoon unblocked						
vC, conflicting volume			402		782	391
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			402		782	391
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		96	96
cM capacity (veh/h)			1156		360	657

Direction, Lane #	SE 1	NW 1	NE 1
Volume Total	402	379	43
Volume Left	0	11	15
Volume Right	22	0	28
cSH	1700	1156	510
Volume to Capacity	0.24	0.01	0.09
Queue Length 95th (ft)	0	1	7
Control Delay (s)	0.0	0.3	12.7
Lane LOS		A	B
Approach Delay (s)	0.0	0.3	12.7
Approach LOS			B

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	35.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	180	447	323	15	49	403
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.0	4.2	4.2	4.2	4.2	4.2
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	1770	1583
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1770	3539	3539	1583	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	196	486	351	16	53	438
RTOR Reduction (vph)	0	0	0	7	0	395
Lane Group Flow (vph)	196	486	351	9	53	43
Turn Type	Prot	NA	NA	Perm	NA	Perm
Protected Phases	5	2	6		4	
Permitted Phases				6		4
Actuated Green, G (s)	26.0	86.4	56.4	56.4	10.2	10.2
Effective Green, g (s)	26.0	86.4	56.4	56.4	10.2	10.2
Actuated g/C Ratio	0.25	0.82	0.54	0.54	0.10	0.10
Clearance Time (s)	4.0	4.2	4.2	4.2	4.2	4.2
Vehicle Extension (s)	3.0	4.8	4.8	4.8	2.0	2.0
Lane Grp Cap (vph)	438	2912	1900	850	171	153
v/s Ratio Prot	c0.11	0.14	c0.10		c0.03	
v/s Ratio Perm				0.01		0.03
v/c Ratio	0.45	0.17	0.18	0.01	0.31	0.28
Uniform Delay, d1	33.4	1.9	12.5	11.3	44.1	44.0
Progression Factor	0.78	0.73	1.00	1.00	1.08	2.72
Incremental Delay, d2	0.7	0.1	0.2	0.0	0.4	0.3
Delay (s)	26.8	1.5	12.7	11.3	48.0	119.8
Level of Service	C	A	B	B	D	F
Approach Delay (s)		8.8	12.6		112.1	
Approach LOS		A	B		F	

Intersection Summary			
HCM 2000 Control Delay	42.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.4
Intersection Capacity Utilization	40.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	30	366	112	170	492	87	120	100	38	66	184	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2	4.2	4.2	4.2		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.96		1.00	0.93	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1821		1770	1786		1770	1740	
Flt Permitted	0.34	1.00	1.00	0.49	1.00		0.22	1.00		0.59	1.00	
Satd. Flow (perm)	633	1863	1583	906	1821		415	1786		1090	1740	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	398	122	185	535	95	130	109	41	72	200	157
RTOR Reduction (vph)	0	0	15	0	4	0	0	16	0	0	32	0
Lane Group Flow (vph)	33	398	107	185	626	0	130	134	0	72	325	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		
Actuated Green, G (s)	70.7	70.7	70.7	70.7	70.7		25.9	25.9		25.9	25.9	
Effective Green, g (s)	70.7	70.7	70.7	70.7	70.7		25.9	25.9		25.9	25.9	
Actuated g/C Ratio	0.67	0.67	0.67	0.67	0.67		0.25	0.25		0.25	0.25	
Clearance Time (s)	4.2	4.2	4.2	4.2	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	0.2	0.2	0.2	0.2	0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	426	1254	1065	610	1226		102	440		268	429	
v/s Ratio Prot		0.21			c0.34			0.08			0.19	
v/s Ratio Perm	0.05		0.07	0.20			c0.31			0.07		
v/c Ratio	0.08	0.32	0.10	0.30	0.51		1.27	0.30		0.27	0.76	
Uniform Delay, d1	5.9	7.1	6.0	7.0	8.5		39.5	32.2		31.9	36.6	
Progression Factor	1.15	1.11	1.27	1.43	1.60		0.55	0.33		0.76	0.69	
Incremental Delay, d2	0.1	0.3	0.1	0.8	0.9		178.3	0.1		0.2	6.3	
Delay (s)	7.0	8.2	7.7	10.8	14.6		200.1	10.9		24.6	31.7	
Level of Service	A	A	A	B	B		F	B		C	C	
Approach Delay (s)		8.0			13.8			98.8			30.5	
Approach LOS		A			B			F			C	

Intersection Summary			
HCM 2000 Control Delay	27.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	103.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	76	816	154	0	0	0	0	241	204	79	304	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5						4.5		4.5	4.5	
Lane Util. Factor		0.91						1.00		1.00	1.00	
Frt		0.98						0.94		1.00	1.00	
Flt Protected		1.00						1.00		0.95	1.00	
Satd. Flow (prot)		4955						1747		1770	1863	
Flt Permitted		1.00						1.00		0.15	1.00	
Satd. Flow (perm)		4955						1747		274	1863	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	83	887	167	0	0	0	0	262	222	86	330	0
RTOR Reduction (vph)	0	15	0	0	0	0	0	40	0	0	0	0
Lane Group Flow (vph)	0	1122	0	0	0	0	0	444	0	86	330	0
Turn Type	Split	NA						NA		Perm	NA	
Protected Phases	2	2						8			4	
Permitted Phases										4		
Actuated Green, G (s)		64.0						32.0		32.0	32.0	
Effective Green, g (s)		64.0						32.0		32.0	32.0	
Actuated g/C Ratio		0.61						0.30		0.30	0.30	
Clearance Time (s)		4.5						4.5		4.5	4.5	
Vehicle Extension (s)		0.2						0.2		0.2	0.2	
Lane Grp Cap (vph)		3020						532		83	567	
v/s Ratio Prot		c0.23						0.25			0.18	
v/s Ratio Perm										c0.31		
v/c Ratio		0.37						0.83		1.04	0.58	
Uniform Delay, d1		10.3						34.0		36.5	30.8	
Progression Factor		0.43						0.95		0.97	0.97	
Incremental Delay, d2		0.3						10.3		108.2	1.0	
Delay (s)		4.8						42.5		143.6	30.8	
Level of Service		A						D		F	C	
Approach Delay (s)		4.8			0.0			42.5			54.1	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	23.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	0	0	0	227	239	20	187	39	0	0	25	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	247	260	22	203	42	0	0	27	22
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1000			1010							
pX, platoon unblocked												
vC, conflicting volume	282			0			659	775	0	785	764	141
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	282			0			659	775	0	785	764	141
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			85			27	85	100	100	90	98
cM capacity (veh/h)	1278			1622			279	278	1084	221	282	881

Direction, Lane #	NW 1	NW 2	NE 1	NE 2	SW 1
Volume Total	377	152	203	42	49
Volume Left	247	0	203	0	0
Volume Right	0	22	0	0	22
cSH	1622	1700	279	278	404
Volume to Capacity	0.15	0.09	0.73	0.15	0.12
Queue Length 95th (ft)	13	0	130	13	10
Control Delay (s)	5.4	0.0	46.0	20.3	15.1
Lane LOS	A		E	C	C
Approach Delay (s)	3.9		41.6		15.1
Approach LOS			E		C

Intersection Summary			
Average Delay	15.8		
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	230	48	50	302	0	30	0	137	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.8			4.8			4.8				
Lane Util. Factor		0.95			0.95			1.00				
Frt		0.97			1.00			0.89				
Flt Protected		1.00			0.99			0.99				
Satd. Flow (prot)		3448			3514			1642				
Flt Permitted		1.00			0.86			0.94				
Satd. Flow (perm)		3448			3055			1551				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	250	52	54	328	0	33	0	149	0	0	0
RTOR Reduction (vph)	0	6	0	0	0	0	0	139	0	0	0	0
Lane Group Flow (vph)	0	296	0	0	382	0	0	43	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm		
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)		88.6			88.6			6.8				
Effective Green, g (s)		88.6			88.6			6.8				
Actuated g/C Ratio		0.84			0.84			0.06				
Clearance Time (s)		4.8			4.8			4.8				
Vehicle Extension (s)		0.2			0.2			0.2				
Lane Grp Cap (vph)		2909			2577			100				
v/s Ratio Prot		0.09										
v/s Ratio Perm					c0.13			c0.03				
v/c Ratio		0.10			0.15			0.43				
Uniform Delay, d1		1.4			1.5			47.2				
Progression Factor		0.30			1.00			1.00				
Incremental Delay, d2		0.1			0.1			1.1				
Delay (s)		0.5			1.6			48.3				
Level of Service		A			A			D				
Approach Delay (s)		0.5			1.6			48.3			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.17		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.6
Intersection Capacity Utilization	39.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (veh/h)	624	0	67	723	38	55
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	678	0	73	786	41	60
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)	537			471		
pX, platoon unblocked					0.97	
vC, conflicting volume			678		1217	339
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			678		1160	339
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			92		75	91
cM capacity (veh/h)			910		168	657

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1
Volume Total	452	226	335	524	101
Volume Left	0	0	73	0	41
Volume Right	0	0	0	0	60
cSH	1700	1700	910	1700	300
Volume to Capacity	0.27	0.13	0.08	0.31	0.34
Queue Length 95th (ft)	0	0	7	0	36
Control Delay (s)	0.0	0.0	2.7	0.0	22.9
Lane LOS			A		C
Approach Delay (s)	0.0		1.1		22.9
Approach LOS					C

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	45	135	36	60	135	85	33	301	48	161	1037	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2		4.2	4.2		4.2	4.2	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.96		1.00	0.98		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1802			1768		1770	1824		1770	1848	
Flt Permitted		0.80			0.82		0.06	1.00		0.50	1.00	
Satd. Flow (perm)		1458			1464		105	1824		930	1848	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	49	147	39	65	147	92	36	327	52	175	1127	62
RTOR Reduction (vph)	0	7	0	0	15	0	0	6	0	0	2	0
Lane Group Flow (vph)	0	228	0	0	289	0	36	373	0	175	1187	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)		25.8			25.8		70.8	70.8		70.8	70.8	
Effective Green, g (s)		25.8			25.8		70.8	70.8		70.8	70.8	
Actuated g/C Ratio		0.25			0.25		0.67	0.67		0.67	0.67	
Clearance Time (s)		4.2			4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)		0.2			0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		358			359		70	1229		627	1246	
v/s Ratio Prot								0.20			c0.64	
v/s Ratio Perm		0.16			c0.20		0.34			0.19		
v/c Ratio		0.64			0.80		0.51	0.30		0.28	0.95	
Uniform Delay, d1		35.4			37.2		8.5	7.0		6.9	15.6	
Progression Factor		1.00			1.00		1.00	1.00		0.22	0.27	
Incremental Delay, d2		8.4			17.3		2.6	0.1		0.0	5.3	
Delay (s)		43.8			54.5		11.2	7.1		1.5	9.4	
Level of Service		D			D		B	A		A	A	
Approach Delay (s)		43.8			54.5			7.4			8.4	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	115.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	50	150	50	10	124	27	50	362	19	41	1194	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2		4.2	4.2		4.2	4.2	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.97			0.98		1.00	0.99		1.00	0.99	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1795			1815		1770	1849		1770	1848	
Flt Permitted		0.79			0.95		0.05	1.00		0.49	1.00	
Satd. Flow (perm)		1437			1731		95	1849		921	1848	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	163	54	11	135	29	54	393	21	45	1298	73
RTOR Reduction (vph)	0	8	0	0	7	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	263	0	0	168	0	54	412	0	45	1369	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)		18.4			18.4		78.2	78.2		78.2	78.2	
Effective Green, g (s)		18.4			18.4		78.2	78.2		78.2	78.2	
Actuated g/C Ratio		0.18			0.18		0.74	0.74		0.74	0.74	
Clearance Time (s)		4.2			4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)		0.2			0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		251			303		70	1377		685	1376	
v/s Ratio Prot								0.22			c0.74	
v/s Ratio Perm		c0.18			0.10		0.57			0.05		
v/c Ratio		1.05			0.56		0.77	0.30		0.07	0.99	
Uniform Delay, d1		43.3			39.6		8.0	4.4		3.6	13.2	
Progression Factor		0.91			1.00		0.99	0.68		0.00	0.55	
Incremental Delay, d2		68.8			7.2		34.4	0.0		0.0	6.1	
Delay (s)		108.4			46.7		42.4	3.0		0.0	13.4	
Level of Service		F			D		D	A		A	B	
Approach Delay (s)		108.4			46.7			7.6			13.0	
Approach LOS		F			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	190	0	0	315	0	0	467	0	0	1415	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2			4.2			4.2	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			1.00			1.00			1.00	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		3539			3539			1863			1863	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		3539			3539			1863			1863	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	207	0	0	342	0	0	508	0	0	1538	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	207	0	0	342	0	0	508	0	0	1538	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4			4		
Actuated Green, G (s)		31.8			31.8			64.8			64.8	
Effective Green, g (s)		31.8			31.8			64.8			64.8	
Actuated g/C Ratio		0.30			0.30			0.62			0.62	
Clearance Time (s)		4.2			4.2			4.2			4.2	
Vehicle Extension (s)		0.2			0.2			0.2			0.2	
Lane Grp Cap (vph)		1071			1071			1149			1149	
v/s Ratio Prot		0.06			c0.10			0.27			c0.83	
v/s Ratio Perm												
v/c Ratio		0.19			0.32			0.44			1.34	
Uniform Delay, d1		27.1			28.2			10.6			20.1	
Progression Factor		1.99			0.96			0.58			0.76	
Incremental Delay, d2		0.4			0.8			0.1			154.8	
Delay (s)		54.3			27.8			6.2			170.2	
Level of Service		D			C			A			F	
Approach Delay (s)		54.3			27.8			6.2			170.2	
Approach LOS		D			C			A			F	

Intersection Summary			
HCM 2000 Control Delay	110.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	106.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	481	418	266	262	402	124	74	452	143	134	922	507
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.96		1.00	0.96		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3333		1770	3414		1770	3412		1770	3351	
Flt Permitted	0.34	1.00		0.24	1.00		0.07	1.00		0.36	1.00	
Satd. Flow (perm)	629	3333		442	3414		130	3412		667	3351	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	523	454	289	285	437	135	80	491	155	146	1002	551
RTOR Reduction (vph)	0	73	0	0	26	0	0	32	0	0	78	0
Lane Group Flow (vph)	523	670	0	285	546	0	80	614	0	146	1475	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	38.8	38.8		38.8	38.8		57.5	57.5		57.5	57.5	
Effective Green, g (s)	38.8	38.8		38.8	38.8		57.5	57.5		57.5	57.5	
Actuated g/C Ratio	0.37	0.37		0.37	0.37		0.55	0.55		0.55	0.55	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	232	1231		163	1261		71	1868		365	1835	
v/s Ratio Prot		0.20			0.16			0.18			0.44	
v/s Ratio Perm	c0.83			0.64			c0.62			0.22		
v/c Ratio	2.25	0.54		1.75	0.43		1.13	0.33		0.40	0.80	
Uniform Delay, d1	33.1	26.1		33.1	24.8		23.8	13.1		13.8	19.2	
Progression Factor	0.80	0.74		0.87	0.83		0.64	0.32		1.45	1.42	
Incremental Delay, d2	577.9	1.7		360.1	1.0		143.6	0.0		0.1	0.9	
Delay (s)	604.3	21.1		388.8	21.6		158.9	4.3		20.1	28.0	
Level of Service	F	C		F	C		F	A		C	C	
Approach Delay (s)		262.0			143.7			21.3			27.4	
Approach LOS		F			F			C			C	

Intersection Summary			
HCM 2000 Control Delay	113.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.58		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.7
Intersection Capacity Utilization	122.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	164	376	187	163	489	105	114	615	74	119	991	304
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.2		4.0	4.2		4.0	4.2		4.0	4.2	
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.95		1.00	0.97		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1770		1770	3446		1770	3482		1770	3415	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1770		1770	3446		1770	3482		1770	3415	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	178	409	203	177	532	114	124	668	80	129	1077	330
RTOR Reduction (vph)	0	17	0	0	17	0	0	8	0	0	27	0
Lane Group Flow (vph)	178	595	0	177	629	0	124	740	0	129	1380	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	12.9	32.2		10.0	29.3		8.0	34.8		11.6	38.4	
Effective Green, g (s)	12.9	32.2		10.0	29.3		8.0	34.8		11.6	38.4	
Actuated g/C Ratio	0.12	0.31		0.10	0.28		0.08	0.33		0.11	0.37	
Clearance Time (s)	4.0	4.2		4.0	4.2		4.0	4.2		4.0	4.2	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	5.0		2.0	5.0	
Lane Grp Cap (vph)	217	542		168	961		134	1154		195	1248	
v/s Ratio Prot	0.10	c0.34		c0.10	0.18		c0.07	0.21		0.07	c0.40	
v/s Ratio Perm												
v/c Ratio	0.82	1.10		1.05	0.65		0.93	0.64		0.66	1.11	
Uniform Delay, d1	44.9	36.4		47.5	33.4		48.2	29.8		44.8	33.3	
Progression Factor	1.17	0.69		1.09	0.71		1.00	0.75		1.29	0.76	
Incremental Delay, d2	9.4	55.8		78.2	2.9		9.9	0.2		5.4	58.0	
Delay (s)	62.2	80.9		130.0	26.4		57.9	22.5		63.4	83.2	
Level of Service	E	F		F	C		E	C		E	F	
Approach Delay (s)		76.7			48.7			27.6			81.5	
Approach LOS		E			D			C			F	

Intersection Summary			
HCM 2000 Control Delay	62.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	97.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	327	687	225	0	0	0	0	743	173	200	1189	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5	4.5					4.5		4.5	4.5	
Lane Util. Factor		0.91	1.00					0.95		1.00	0.95	
Frt		1.00	0.85					0.97		1.00	1.00	
Flt Protected		0.98	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		5005	1583					3439		1770	3539	
Flt Permitted		0.98	1.00					1.00		0.22	1.00	
Satd. Flow (perm)		5005	1583					3439		406	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	355	747	245	0	0	0	0	808	188	217	1292	0
RTOR Reduction (vph)	0	0	49	0	0	0	0	11	0	0	0	0
Lane Group Flow (vph)	0	1102	196	0	0	0	0	985	0	217	1292	0
Turn Type	Split	NA	Perm					NA		Perm	NA	
Protected Phases	2	2						4			4	
Permitted Phases			2							4		
Actuated Green, G (s)		36.9	36.9					59.1		59.1	59.1	
Effective Green, g (s)		36.9	36.9					59.1		59.1	59.1	
Actuated g/C Ratio		0.35	0.35					0.56		0.56	0.56	
Clearance Time (s)		4.5	4.5					4.5		4.5	4.5	
Vehicle Extension (s)		0.2	0.2					0.2		0.2	0.2	
Lane Grp Cap (vph)		1758	556					1935		228	1991	
v/s Ratio Prot		c0.22						0.29			0.37	
v/s Ratio Perm			0.12							c0.53		
v/c Ratio		0.63	0.35					0.51		0.95	0.65	
Uniform Delay, d1		28.3	25.2					14.1		21.6	15.8	
Progression Factor		0.65	0.51					1.11		0.53	0.57	
Incremental Delay, d2		1.4	1.5					0.1		40.3	0.4	
Delay (s)		19.8	14.4					15.7		51.8	9.5	
Level of Service		B	B					B		D	A	
Approach Delay (s)		18.8			0.0			15.7			15.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	64	197	185	50	1084	0	0	1305	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)				4.2	4.2	4.2	4.2	4.2			4.2	4.2
Lane Util. Factor				1.00	1.00	1.00	1.00	0.95			0.95	1.00
Frt				1.00	1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				1770	1863	1583	1770	3539			3539	1583
Flt Permitted				0.95	1.00	1.00	0.12	1.00			1.00	1.00
Satd. Flow (perm)				1770	1863	1583	216	3539			3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	70	214	201	54	1178	0	0	1418	136
RTOR Reduction (vph)	0	0	0	0	0	67	0	0	0	0	0	31
Lane Group Flow (vph)	0	0	0	70	214	134	54	1178	0	0	1418	105
Turn Type				Split	NA	Perm	Perm	NA			NA	Perm
Protected Phases				6	6			8			4	
Permitted Phases						6	8					4
Actuated Green, G (s)				32.4	32.4	32.4	64.2	64.2			64.2	64.2
Effective Green, g (s)				32.4	32.4	32.4	64.2	64.2			64.2	64.2
Actuated g/C Ratio				0.31	0.31	0.31	0.61	0.61			0.61	0.61
Clearance Time (s)				4.2	4.2	4.2	4.2	4.2			4.2	4.2
Vehicle Extension (s)				3.0	3.0	3.0	5.0	5.0			5.0	5.0
Lane Grp Cap (vph)				546	574	488	132	2163			2163	967
v/s Ratio Prot				0.04	c0.11			0.33			c0.40	
v/s Ratio Perm						0.08	0.25					0.07
v/c Ratio				0.13	0.37	0.27	0.41	0.54			0.66	0.11
Uniform Delay, d1				26.1	28.4	27.4	10.6	11.9			13.2	8.5
Progression Factor				0.91	0.89	0.83	0.53	0.77			0.35	0.13
Incremental Delay, d2				0.5	1.8	1.4	3.8	0.4			0.8	0.1
Delay (s)				24.3	27.0	24.2	9.5	9.6			5.3	1.1
Level of Service				C	C	C	A	A			A	A
Approach Delay (s)		0.0			25.4			9.6			5.0	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	133	483	97	125	425	203	72	1061	160	106	1103	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	3470		1770	3507	
Flt Permitted	0.28	1.00	1.00	0.21	1.00	1.00	0.12	1.00		0.11	1.00	
Satd. Flow (perm)	520	1863	1583	398	1863	1583	223	3470		199	3507	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	145	525	105	136	462	221	78	1153	174	115	1199	77
RTOR Reduction (vph)	0	0	30	0	0	37	0	11	0	0	4	0
Lane Group Flow (vph)	145	525	75	136	462	184	78	1316	0	115	1272	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	40.4	40.4	40.4	40.4	40.4	40.4	55.8	55.8		55.8	55.8	
Effective Green, g (s)	40.4	40.4	40.4	40.4	40.4	40.4	55.8	55.8		55.8	55.8	
Actuated g/C Ratio	0.38	0.38	0.38	0.38	0.38	0.38	0.53	0.53		0.53	0.53	
Clearance Time (s)	4.6	4.6	4.6	4.6	4.6	4.6	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	200	716	609	153	716	609	118	1844		105	1863	
v/s Ratio Prot		0.28			0.25			0.38			0.36	
v/s Ratio Perm	0.28		0.05	c0.34		0.12	0.35			c0.58		
v/c Ratio	0.72	0.73	0.12	0.89	0.65	0.30	0.66	0.71		1.10	0.68	
Uniform Delay, d1	27.6	27.7	20.9	30.2	26.4	22.5	17.8	18.6		24.6	18.1	
Progression Factor	1.09	1.09	1.09	1.00	1.00	1.00	0.82	0.79		0.48	0.30	
Incremental Delay, d2	17.1	5.4	0.3	48.0	4.4	1.3	9.2	1.0		112.4	0.8	
Delay (s)	47.3	35.7	23.0	78.2	30.9	23.8	23.7	15.6		124.3	6.1	
Level of Service	D	D	C	E	C	C	C	B		F	A	
Approach Delay (s)		36.2			36.8			16.1			15.9	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.8
Intersection Capacity Utilization	115.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	227	362	62	0	0	0	32	1288	100	215	961	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.6	4.6				4.6	4.6		4.6	4.6	
Lane Util. Factor		1.00	1.00				1.00	0.95		1.00	0.95	
Frt		1.00	0.85				1.00	0.99		1.00	0.98	
Flt Protected		0.98	1.00				0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1827	1583				1770	3501		1770	3482	
Flt Permitted		0.98	1.00				0.18	1.00		0.10	1.00	
Satd. Flow (perm)		1827	1583				334	3501		184	3482	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	247	393	67	0	0	0	35	1400	109	234	1045	126
RTOR Reduction (vph)	0	0	12	0	0	0	0	5	0	0	9	0
Lane Group Flow (vph)	0	640	55	0	0	0	35	1504	0	234	1162	0
Turn Type	Split	NA	Perm				Perm	NA		Perm	NA	
Protected Phases	4	4						2			6	
Permitted Phases			4				2			6		
Actuated Green, G (s)		31.4	31.4				64.4	64.4		64.4	64.4	
Effective Green, g (s)		31.4	31.4				64.4	64.4		64.4	64.4	
Actuated g/C Ratio		0.30	0.30				0.61	0.61		0.61	0.61	
Clearance Time (s)		4.6	4.6				4.6	4.6		4.6	4.6	
Vehicle Extension (s)		0.2	0.2				4.1	4.1		4.1	4.1	
Lane Grp Cap (vph)		546	473				204	2147		112	2135	
v/s Ratio Prot		c0.35						0.43			0.33	
v/s Ratio Perm			0.03				0.10			c1.27		
v/c Ratio		1.17	0.12				0.17	0.70		2.09	0.54	
Uniform Delay, d1		36.8	26.7				8.8	13.8		20.3	11.8	
Progression Factor		1.00	1.00				1.23	1.20		1.03	0.58	
Incremental Delay, d2		95.7	0.0				0.4	0.9		516.6	0.9	
Delay (s)		132.5	26.8				11.2	17.4		537.4	7.8	
Level of Service		F	C				B	B		F	A	
Approach Delay (s)		122.4			0.0			17.2			96.0	
Approach LOS		F			A			B			F	

Intersection Summary			
HCM 2000 Control Delay	67.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.78		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.2
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBR	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	0	748	0	1520	548	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)		4.1		4.1	4.6	
Lane Util. Factor		0.88		0.95	0.95	
Frt		0.85		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		2787		3539	3539	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		2787		3539	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	813	0	1652	596	0
RTOR Reduction (vph)	0	615	0	0	0	0
Lane Group Flow (vph)	0	198	0	1652	596	0
Turn Type		custom		NA	NA	
Protected Phases				6	4	
Permitted Phases		7				
Actuated Green, G (s)		25.6		71.2	25.1	
Effective Green, g (s)		25.6		71.2	25.1	
Actuated g/C Ratio		0.24		0.68	0.24	
Clearance Time (s)		4.1		4.1	4.6	
Vehicle Extension (s)		1.2		3.0	4.0	
Lane Grp Cap (vph)		679		2399	845	
v/s Ratio Prot				c0.47	c0.17	
v/s Ratio Perm		0.07				
v/c Ratio		0.29		0.69	0.71	
Uniform Delay, d1		32.3		10.2	36.6	
Progression Factor		1.00		0.98	0.64	
Incremental Delay, d2		0.1		1.0	2.8	
Delay (s)		32.4		11.0	26.2	
Level of Service		C		B	C	
Approach Delay (s)	32.4			11.0	26.2	
Approach LOS	C			B	C	

Intersection Summary			
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.7
Intersection Capacity Utilization	48.6%	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												
Volume (vph)	0	1265	65	0	608	0	0	0	0	638	706	581
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0					4.0	4.0	4.0
Lane Util. Factor		0.95			0.95					0.91	0.91	1.00
Frt		0.99			1.00					1.00	1.00	0.85
Flt Protected		1.00			1.00					0.95	0.99	1.00
Satd. Flow (prot)		3513			3539					1610	3353	1583
Flt Permitted		1.00			1.00					0.95	0.99	1.00
Satd. Flow (perm)		3513			3539					1610	3353	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1375	71	0	661	0	0	0	0	693	767	632
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	0	0	0	86
Lane Group Flow (vph)	0	1443	0	0	661	0	0	0	0	471	989	546
Turn Type		NA			NA					Perm	NA	Perm
Protected Phases		4			8						2	
Permitted Phases										2		2
Actuated Green, G (s)		47.4			47.4					49.6	49.6	49.6
Effective Green, g (s)		47.4			47.4					49.6	49.6	49.6
Actuated g/C Ratio		0.45			0.45					0.47	0.47	0.47
Clearance Time (s)		4.0			4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1585			1597					760	1583	747
v/s Ratio Prot		c0.41			0.19							
v/s Ratio Perm										0.29	0.29	c0.34
v/c Ratio		0.91			0.41					0.62	0.62	0.73
Uniform Delay, d1		26.8			19.4					20.7	20.7	22.3
Progression Factor		0.85			0.46					1.00	1.00	1.00
Incremental Delay, d2		0.9			0.1					3.8	1.9	6.2
Delay (s)		23.5			9.1					24.4	22.6	28.5
Level of Service		C			A					C	C	C
Approach Delay (s)		23.5			9.1			0.0			24.8	
Approach LOS		C			A			A			C	

Intersection Summary			
HCM 2000 Control Delay	21.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	638	935	0	384	141	388
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.1	4.0		4.1	4.1	4.1
Lane Util. Factor	0.95	1.00		0.95	1.00	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	1.00	1.00		1.00	0.95	1.00
Satd. Flow (prot)	3539	1583		3539	1770	1583
Flt Permitted	1.00	1.00		1.00	0.95	1.00
Satd. Flow (perm)	3539	1583		3539	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	693	1016	0	417	153	422
RTOR Reduction (vph)	0	0	0	0	0	41
Lane Group Flow (vph)	693	1016	0	417	153	381
Turn Type	NA	Free		NA	NA	Perm
Protected Phases	6			6	8	
Permitted Phases		Free				8
Actuated Green, G (s)	38.9	105.0		38.9	57.9	57.9
Effective Green, g (s)	38.9	105.0		38.9	57.9	57.9
Actuated g/C Ratio	0.37	1.00		0.37	0.55	0.55
Clearance Time (s)	4.1			4.1	4.1	4.1
Vehicle Extension (s)	3.0			3.0	0.2	0.2
Lane Grp Cap (vph)	1311	1583		1311	976	872
v/s Ratio Prot	0.20			0.12	0.09	
v/s Ratio Perm		c0.64				0.24
v/c Ratio	0.53	0.64		0.32	0.16	0.44
Uniform Delay, d1	25.9	0.0		23.6	11.6	13.9
Progression Factor	1.19	1.00		0.57	1.00	1.00
Incremental Delay, d2	1.1	1.5		0.5	0.0	0.1
Delay (s)	31.9	1.5		14.1	11.6	14.0
Level of Service	C	A		B	B	B
Approach Delay (s)	13.8			14.1	13.4	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	48.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	363	856	174	151	580	112	566	616	101	500	625	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.6	4.6	4.0	4.9		4.0	4.6	4.6	4.0	4.9	4.9
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	3433	3453		3433	3539	1583	3433	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	3433	3453		3433	3539	1583	3433	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	395	930	189	164	630	122	615	670	110	543	679	240
RTOR Reduction (vph)	0	0	78	0	17	0	0	0	80	0	0	157
Lane Group Flow (vph)	395	930	111	164	735	0	615	670	30	543	679	83
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases			8						6			2
Actuated Green, G (s)	8.0	29.0	29.0	7.5	28.2		11.0	24.9	24.9	14.0	27.6	27.6
Effective Green, g (s)	8.0	29.0	29.0	7.5	28.2		11.0	24.9	24.9	14.0	27.6	27.6
Actuated g/C Ratio	0.09	0.31	0.31	0.08	0.30		0.12	0.27	0.27	0.15	0.30	0.30
Clearance Time (s)	4.0	4.6	4.6	4.0	4.9		4.0	4.6	4.6	4.0	4.9	4.9
Vehicle Extension (s)	2.0	5.0	5.0	2.0	5.2		2.0	5.0	5.0	2.0	5.2	5.2
Lane Grp Cap (vph)	296	1108	495	278	1051		407	951	425	519	1054	471
v/s Ratio Prot	c0.12	c0.26		0.05	0.21		c0.18	c0.19		0.16	c0.19	
v/s Ratio Perm			0.07						0.02			0.05
v/c Ratio	1.33	0.84	0.22	0.59	0.70		1.51	0.70	0.07	1.05	0.64	0.18
Uniform Delay, d1	42.3	29.6	23.5	41.1	28.5		40.8	30.5	25.2	39.3	28.2	24.1
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	171.8	6.4	0.5	2.1	2.7		242.4	3.0	0.1	52.1	1.9	0.4
Delay (s)	214.1	36.0	24.0	43.1	31.2		283.2	33.5	25.4	91.4	30.2	24.5
Level of Service	F	D	C	D	C		F	C	C	F	C	C
Approach Delay (s)		81.0			33.3			142.9			52.0	
Approach LOS		F			C			F			D	

Intersection Summary			
HCM 2000 Control Delay	81.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	92.6	Sum of lost time (s)	17.8
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	50	614	25	31	350	190	50	75	76	61	15	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5			4.5			4.5			4.5	
Lane Util. Factor	1.00	0.95			0.95			1.00			1.00	
Frt	1.00	0.99			0.95			0.95			0.92	
Flt Protected	0.95	1.00			1.00			0.99			0.98	
Satd. Flow (prot)	1770	3519			3353			1746			1690	
Flt Permitted	0.40	1.00			0.89			0.84			0.71	
Satd. Flow (perm)	752	3519			2984			1479			1220	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	667	27	34	380	207	54	82	83	66	16	109
RTOR Reduction (vph)	0	2	0	0	36	0	0	27	0	0	59	0
Lane Group Flow (vph)	54	692	0	0	585	0	0	192	0	0	132	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	74.5	74.5			74.5			21.5			21.5	
Effective Green, g (s)	74.5	74.5			74.5			21.5			21.5	
Actuated g/C Ratio	0.71	0.71			0.71			0.20			0.20	
Clearance Time (s)	4.5	4.5			4.5			4.5			4.5	
Vehicle Extension (s)	0.2	0.2			0.2			0.2			0.2	
Lane Grp Cap (vph)	533	2496			2117			302			249	
v/s Ratio Prot		c0.20										
v/s Ratio Perm	0.07				0.20			c0.13			0.11	
v/c Ratio	0.10	0.28			0.28			0.64			0.53	
Uniform Delay, d1	4.8	5.5			5.5			38.2			37.2	
Progression Factor	0.36	0.31			1.26			1.00			0.89	
Incremental Delay, d2	0.2	0.1			0.0			3.2			1.1	
Delay (s)	1.9	1.8			7.0			41.4			34.1	
Level of Service	A	A			A			D			C	
Approach Delay (s)		1.8			7.0			41.4			34.1	
Approach LOS		A			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	12.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	66.6%	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												
Volume (vph)	308	200	75	295	200	65	75	1031	120	198	740	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.2	4.2	4.0	4.2		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	1794		1770	3484		1770	3424	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.20	1.00		0.13	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	1794		375	3484		250	3424	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	335	217	82	321	217	71	82	1121	130	215	804	223
RTOR Reduction (vph)	0	0	66	0	11	0	0	9	0	0	24	0
Lane Group Flow (vph)	335	217	16	321	277	0	82	1242	0	215	1003	0
Turn Type	Prot	NA	Perm	Prot	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			8			4	
Permitted Phases			2				8			4		
Actuated Green, G (s)	15.0	20.8	20.8	14.0	19.8		57.8	57.8		57.8	57.8	
Effective Green, g (s)	15.0	20.8	20.8	14.0	19.8		57.8	57.8		57.8	57.8	
Actuated g/C Ratio	0.14	0.20	0.20	0.13	0.19		0.55	0.55		0.55	0.55	
Clearance Time (s)	4.0	4.2	4.2	4.0	4.2		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0		6.0	6.0		6.0	6.0	
Lane Grp Cap (vph)	252	369	313	236	338		206	1917		137	1884	
v/s Ratio Prot	c0.19	0.12		0.18	c0.15			0.36			0.29	
v/s Ratio Perm			0.01				0.22			c0.86		
v/c Ratio	1.33	0.59	0.05	1.36	0.82		0.40	0.65		1.57	0.53	
Uniform Delay, d1	45.0	38.2	34.1	45.5	40.9		13.6	16.5		23.6	15.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		0.55	0.29	
Incremental Delay, d2	172.9	6.7	0.3	187.0	19.4		3.5	1.2		284.9	0.6	
Delay (s)	217.9	44.9	34.4	232.5	60.3		17.1	17.7		297.9	5.0	
Level of Service	F	D	C	F	E		B	B		F	A	
Approach Delay (s)		135.0			151.1			17.7			55.7	
Approach LOS		F			F			B			E	

Intersection Summary			
HCM 2000 Control Delay	70.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.36		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.4
Intersection Capacity Utilization	88.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	229	377	392	0	0	0	0	985	429	298	751	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.7	4.7	4.7					5.2		5.2	5.2	
Lane Util. Factor	1.00	1.00	1.00					0.95		1.00	0.95	
Frt	1.00	1.00	0.85					0.95		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583					3378		1770	3539	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583					3378		1770	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	249	410	426	0	0	0	0	1071	466	324	816	0
RTOR Reduction (vph)	0	0	171	0	0	0	0	47	0	0	0	0
Lane Group Flow (vph)	249	410	255	0	0	0	0	1490	0	324	816	0
Turn Type	Split	NA	Perm					NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	24.7	24.7	24.7					48.8		16.4	70.4	
Effective Green, g (s)	24.7	24.7	24.7					48.8		16.4	70.4	
Actuated g/C Ratio	0.24	0.24	0.24					0.46		0.16	0.67	
Clearance Time (s)	4.7	4.7	4.7					5.2		5.2	5.2	
Vehicle Extension (s)	6.2	6.2	6.2					0.2		2.0	0.2	
Lane Grp Cap (vph)	416	438	372					1569		276	2372	
v/s Ratio Prot	0.14	c0.22						c0.44		c0.18	0.23	
v/s Ratio Perm			0.16									
v/c Ratio	0.60	0.94	0.69					0.95		1.17	0.34	
Uniform Delay, d1	35.7	39.4	36.6					26.9		44.3	7.4	
Progression Factor	1.00	1.00	1.00					0.84		1.25	1.06	
Incremental Delay, d2	4.4	28.9	8.0					8.9		102.3	0.3	
Delay (s)	40.1	68.3	44.6					31.5		157.7	8.1	
Level of Service	D	E	D					C		F	A	
Approach Delay (s)		52.5			0.0			31.5			50.7	
Approach LOS		D			A			C			D	

Intersection Summary			
HCM 2000 Control Delay	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	15.1
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	187	216	382	560	651	0	0	862	749
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)					5.4	5.4	3.7	5.2			5.2	5.2
Lane Util. Factor					0.95	1.00	1.00	0.95			0.95	1.00
Frt					1.00	0.85	1.00	1.00			1.00	0.85
Flt Protected					0.98	1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)					3459	1583	1770	3539			3539	1583
Flt Permitted					0.98	1.00	0.95	1.00			1.00	1.00
Satd. Flow (perm)					3459	1583	1770	3539			3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	203	235	415	609	708	0	0	937	814
RTOR Reduction (vph)	0	0	0	0	0	173	0	0	0	0	0	158
Lane Group Flow (vph)	0	0	0	0	438	242	609	708	0	0	937	656
Turn Type				Split	NA	Perm	Prot	NA			NA	Perm
Protected Phases				8	8		5	2			6	
Permitted Phases						8						6
Actuated Green, G (s)					26.3	26.3	27.3	68.1			37.1	37.1
Effective Green, g (s)					26.3	26.3	27.3	68.1			37.1	37.1
Actuated g/C Ratio					0.25	0.25	0.26	0.65			0.35	0.35
Clearance Time (s)					5.4	5.4	3.7	5.2			5.2	5.2
Vehicle Extension (s)					5.0	5.0	2.0	0.2			0.2	0.2
Lane Grp Cap (vph)					866	396	460	2295			1250	559
v/s Ratio Prot					0.13		c0.34	0.20			0.26	
v/s Ratio Perm						c0.15						c0.41
v/c Ratio					0.51	0.61	1.32	0.31			0.75	1.17
Uniform Delay, d1					33.8	34.8	38.9	8.1			29.9	33.9
Progression Factor					1.00	1.00	0.57	0.21			0.81	0.88
Incremental Delay, d2					1.0	4.0	152.5	0.2			3.6	93.8
Delay (s)					34.7	38.8	174.6	1.9			27.7	123.5
Level of Service					C	D	F	A			C	F
Approach Delay (s)		0.0			36.7			81.7			72.2	
Approach LOS		A			D			F			E	

Intersection Summary			
HCM 2000 Control Delay	67.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.3
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	484	0	0	409	0	0	774	0	0	1275	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5			4.2			4.2	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		1.00			1.00			1.00			1.00	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		3539			3539			3539			3539	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		3539			3539			3539			3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	526	0	0	445	0	0	841	0	0	1386	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	526	0	0	445	0	0	841	0	0	1386	0
Turn Type	Perm	NA	Perm	Perm	NA			NA			NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4								2
Actuated Green, G (s)		22.6			22.6			73.7			73.7	
Effective Green, g (s)		22.6			22.6			73.7			73.7	
Actuated g/C Ratio		0.22			0.22			0.70			0.70	
Clearance Time (s)		4.5			4.5			4.2			4.2	
Vehicle Extension (s)		2.0			2.0			5.0			5.0	
Lane Grp Cap (vph)		761			761			2484			2484	
v/s Ratio Prot		c0.15			0.13			0.24			c0.39	
v/s Ratio Perm												
v/c Ratio		0.69			0.58			0.34			0.56	
Uniform Delay, d1		38.0			37.0			6.1			7.7	
Progression Factor		1.00			0.39			0.63			0.05	
Incremental Delay, d2		2.2			0.7			0.4			0.2	
Delay (s)		40.2			15.2			4.2			0.6	
Level of Service		D			B			A			A	
Approach Delay (s)		40.2			15.2			4.2			0.6	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.7
Intersection Capacity Utilization	55.9%	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												
Volume (vph)	100	786	69	195	443	428	53	557	315	170	1405	234
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	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.93		1.00	0.95		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	3893	1742	1947	3606		1947	3682		1947	3810	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1947	3893	1742	1947	3606		1947	3682		1947	3810	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	854	75	212	482	465	58	605	342	185	1527	254
RTOR Reduction (vph)	0	0	59	0	167	0	0	77	0	0	12	0
Lane Group Flow (vph)	109	854	16	212	780	0	58	870	0	185	1769	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6									
Actuated Green, G (s)	7.0	22.2	22.2	7.3	22.5		7.3	50.5		9.0	52.2	
Effective Green, g (s)	7.0	22.2	22.2	7.3	22.5		7.3	50.5		9.0	52.2	
Actuated g/C Ratio	0.07	0.21	0.21	0.07	0.21		0.07	0.48		0.09	0.50	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	129	823	368	135	772		135	1770		166	1894	
v/s Ratio Prot	0.06	c0.22		c0.11	0.22		0.03	0.24		c0.10	c0.46	
v/s Ratio Perm			0.01									
v/c Ratio	0.84	1.04	0.04	1.57	1.01		0.43	0.49		1.11	0.93	
Uniform Delay, d1	48.5	41.4	32.9	48.9	41.2		46.9	18.5		48.0	24.8	
Progression Factor	1.11	0.84	0.75	1.04	0.91		0.88	1.51		0.99	1.00	
Incremental Delay, d2	36.1	41.1	0.2	289.1	34.8		2.1	0.2		102.6	8.9	
Delay (s)	90.0	75.7	25.1	339.8	72.4		43.2	28.2		150.0	33.6	
Level of Service	F	E	C	F	E		D	C		F	C	
Approach Delay (s)		73.6			121.3			29.0			44.6	
Approach LOS		E			F			C			D	

Intersection Summary			
HCM 2000 Control Delay	64.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	95.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	83	8	63	86	54	105	64	577	20	74	861	360
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.8	4.8		4.8	4.8			4.8		4.8	4.8	4.8
Lane Util. Factor	1.00	1.00		1.00	1.00			0.95		1.00	1.00	1.00
Frt	1.00	0.87		1.00	0.90			1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1616		1770	1679			3506		1770	1863	1583
Flt Permitted	0.36	1.00		0.71	1.00			0.76		0.37	1.00	1.00
Satd. Flow (perm)	673	1616		1317	1679			2676		698	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	90	9	68	93	59	114	70	627	22	80	936	391
RTOR Reduction (vph)	0	60	0	0	81	0	0	1	0	0	0	79
Lane Group Flow (vph)	90	17	0	93	92	0	0	718	0	80	936	312
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			4			2			2	
Permitted Phases	4			4			2			2		2
Actuated Green, G (s)	11.6	11.6		11.6	11.6			83.8		83.8	83.8	83.8
Effective Green, g (s)	11.6	11.6		11.6	11.6			83.8		83.8	83.8	83.8
Actuated g/C Ratio	0.11	0.11		0.11	0.11			0.80		0.80	0.80	0.80
Clearance Time (s)	4.8	4.8		4.8	4.8			4.8		4.8	4.8	4.8
Vehicle Extension (s)	0.2	0.2		0.2	0.2			0.2		0.2	0.2	0.2
Lane Grp Cap (vph)	74	178		145	185			2135		557	1486	1263
v/s Ratio Prot		0.01			0.05						c0.50	
v/s Ratio Perm	c0.13			0.07				0.27		0.11		0.20
v/c Ratio	1.22	0.09		0.64	0.50			0.34		0.14	0.63	0.25
Uniform Delay, d1	46.7	42.0		44.7	44.0			2.9		2.4	4.3	2.7
Progression Factor	0.84	0.59		0.90	0.85			0.45		0.18	0.87	0.68
Incremental Delay, d2	173.8	0.1		6.9	0.7			0.3		0.0	0.2	0.0
Delay (s)	213.1	24.8		47.3	38.3			1.6		0.5	3.9	1.9
Level of Service	F	C		D	D			A		A	A	A
Approach Delay (s)		126.3			41.4			1.6			3.2	
Approach LOS		F			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.6
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	130	344	248	269	522	175	288	583	155	153	752	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.1	4.2		4.1	4.2		4.1	4.2		4.1	4.2	
Lane Util. Factor	1.00	1.00		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.96		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1746		1770	3406		1770	3428		1770	3493	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1746		1770	3406		1770	3428		1770	3493	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	141	374	270	292	567	190	313	634	168	166	817	77
RTOR Reduction (vph)	0	24	0	0	30	0	0	22	0	0	7	0
Lane Group Flow (vph)	141	620	0	292	727	0	313	780	0	166	887	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	13.0	33.6		17.0	37.6		13.0	26.9		10.9	24.8	
Effective Green, g (s)	13.0	33.6		17.0	37.6		13.0	26.9		10.9	24.8	
Actuated g/C Ratio	0.12	0.32		0.16	0.36		0.12	0.26		0.10	0.24	
Clearance Time (s)	4.1	4.2		4.1	4.2		4.1	4.2		4.1	4.2	
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	219	558		286	1219		219	878		183	825	
v/s Ratio Prot	0.08	c0.35		c0.17	c0.21		c0.18	0.23		0.09	c0.25	
v/s Ratio Perm												
v/c Ratio	0.64	1.11		1.02	0.60		1.43	0.89		0.91	1.08	
Uniform Delay, d1	43.8	35.7		44.0	27.5		46.0	37.6		46.5	40.1	
Progression Factor	0.99	1.15		0.84	0.94		1.06	1.02		1.14	0.66	
Incremental Delay, d2	6.2	71.5		46.2	1.3		217.0	11.4		38.9	52.6	
Delay (s)	49.7	112.4		83.1	27.1		265.6	49.6		91.9	79.0	
Level of Service	D	F		F	C		F	D		F	E	
Approach Delay (s)		101.1			42.7			110.3			81.0	
Approach LOS		F			D			F			F	

Intersection Summary			
HCM 2000 Control Delay	83.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.6
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	96	567	75	0	0	0	0	939	272	167	995	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2					4.2		4.2	4.2	
Lane Util. Factor		0.91	1.00					0.95		1.00	0.95	
Frt		1.00	0.85					0.97		1.00	1.00	
Flt Protected		0.99	1.00					1.00		0.95	1.00	
Satd. Flow (prot)		5049	1583					3420		1770	3539	
Flt Permitted		0.99	1.00					1.00		0.17	1.00	
Satd. Flow (perm)		5049	1583					3420		320	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	104	616	82	0	0	0	0	1021	296	182	1082	0
RTOR Reduction (vph)	0	0	49	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	720	33	0	0	0	0	1313	0	182	1082	0
Turn Type	Split	NA	Perm					NA		Perm	NA	
Protected Phases	4	4						2			2	
Permitted Phases			4							2		
Actuated Green, G (s)		20.0	20.0					76.6		76.6	76.6	
Effective Green, g (s)		20.0	20.0					76.6		76.6	76.6	
Actuated g/C Ratio		0.19	0.19					0.73		0.73	0.73	
Clearance Time (s)		4.2	4.2					4.2		4.2	4.2	
Vehicle Extension (s)		0.2	0.2					0.2		0.2	0.2	
Lane Grp Cap (vph)		961	301					2494		233	2581	
v/s Ratio Prot		c0.14						0.38			0.31	
v/s Ratio Perm			0.02							c0.57		
v/c Ratio		0.75	0.11					0.53		0.78	0.42	
Uniform Delay, d1		40.1	35.1					6.2		8.9	5.5	
Progression Factor		1.00	1.00					0.61		1.42	0.91	
Incremental Delay, d2		2.8	0.1					0.7		16.2	0.3	
Delay (s)		43.0	35.2					4.5		28.9	5.4	
Level of Service		D	D					A		C	A	
Approach Delay (s)		42.2			0.0			4.5			8.8	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	63	607	221	134	1283	0	0	1112	308
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	15	12	15	15	15	12	12	15	15	12	12
Total Lost time (s)					4.2		4.2	4.2			4.2	
Lane Util. Factor					0.95		1.00	0.95			0.95	
Frt					0.96		1.00	1.00			0.97	
Flt Protected					1.00		0.95	1.00			1.00	
Satd. Flow (prot)					3735		1770	3539			3424	
Flt Permitted					1.00		0.10	1.00			1.00	
Satd. Flow (perm)					3735		183	3539			3424	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	68	660	240	146	1395	0	0	1209	335
RTOR Reduction (vph)	0	0	0	0	31	0	0	0	0	0	17	0
Lane Group Flow (vph)	0	0	0	0	937	0	146	1395	0	0	1527	0
Turn Type				Split	NA		Perm	NA			NA	
Protected Phases				2	2			4			4	
Permitted Phases							4					
Actuated Green, G (s)					29.8		66.8	66.8			66.8	
Effective Green, g (s)					29.8		66.8	66.8			66.8	
Actuated g/C Ratio					0.28		0.64	0.64			0.64	
Clearance Time (s)					4.2		4.2	4.2			4.2	
Vehicle Extension (s)					0.2		0.2	0.2			0.2	
Lane Grp Cap (vph)					1060		116	2251			2178	
v/s Ratio Prot					c0.25			0.39			0.45	
v/s Ratio Perm							c0.80					
v/c Ratio					0.88		1.26	0.62			0.70	
Uniform Delay, d1					35.9		19.1	11.5			12.5	
Progression Factor					0.86		0.63	0.65			0.94	
Incremental Delay, d2					10.7		165.8	0.3			0.8	
Delay (s)					41.7		178.0	7.8			12.6	
Level of Service					D		F	A			B	
Approach Delay (s)		0.0			41.7			23.9			12.6	
Approach LOS		A			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	23.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	270	400	80	189	215	202	80	1191	166	115	879	205
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1727		1770	3539	1583	1770	3539	1583
Flt Permitted	0.31	1.00	1.00	0.33	1.00		0.21	1.00	1.00	0.10	1.00	1.00
Satd. Flow (perm)	585	1863	1583	620	1727		390	3539	1583	189	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	293	435	87	205	234	220	87	1295	180	125	955	223
RTOR Reduction (vph)	0	0	35	0	19	0	0	0	56	0	0	107
Lane Group Flow (vph)	293	435	52	205	435	0	87	1295	124	125	955	117
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		2			2			4			4	
Permitted Phases	2	2	2	2			4		4	4		4
Actuated Green, G (s)	43.5	43.5	43.5	43.5	43.5		52.5	52.5	52.5	52.5	52.5	52.5
Effective Green, g (s)	43.5	43.5	43.5	43.5	43.5		52.5	52.5	52.5	52.5	52.5	52.5
Actuated g/C Ratio	0.41	0.41	0.41	0.41	0.41		0.50	0.50	0.50	0.50	0.50	0.50
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	0.2	0.2	0.2	0.2	0.2		0.2	0.2	0.2	0.2	0.2	0.2
Lane Grp Cap (vph)	242	771	655	256	715		195	1769	791	94	1769	791
v/s Ratio Prot		0.23			0.25			0.37			0.27	
v/s Ratio Perm	c0.50		0.03	0.33			0.22		0.08	c0.66		0.07
v/c Ratio	1.21	0.56	0.08	0.80	0.61		0.45	0.73	0.16	1.33	0.54	0.15
Uniform Delay, d1	30.8	23.5	18.6	27.0	24.1		16.9	20.7	14.2	26.2	18.0	14.2
Progression Factor	1.00	1.00	1.00	1.09	1.09		0.61	0.64	0.25	0.90	0.86	1.66
Incremental Delay, d2	126.8	3.0	0.2	18.6	3.0		0.4	1.0	0.0	188.3	0.1	0.0
Delay (s)	157.5	26.5	18.9	48.0	29.2		10.8	14.3	3.6	212.0	15.5	23.6
Level of Service	F	C	B	D	C		B	B	A	F	B	C
Approach Delay (s)		72.8			35.1			12.9			35.7	
Approach LOS		E			D			B			D	

Intersection Summary			
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	114.1%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL2	NEL	NER
Lane Configurations												
Volume (vph)	32	253	25	536	66	371	502	506	29	20	703	854
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6		4.6	4.6	4.6	4.0	4.6	4.6	4.0	4.6	4.6
Lane Util. Factor	1.00	1.00		0.95	0.95	1.00	1.00	0.88	1.00	1.00	0.97	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00	1.00	0.95	0.95	1.00
Satd. Flow (prot)	1770	1838		1681	1703	1583	1770	2787	1583	1770	3433	1583
Flt Permitted	0.35	1.00		0.42	0.43	1.00	0.95	1.00	1.00	0.95	0.95	1.00
Satd. Flow (perm)	654	1838		748	765	1583	1770	2787	1583	1770	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	35	275	27	583	72	403	546	550	32	22	764	928
RTOR Reduction (vph)	0	3	0	0	0	267	0	0	16	0	0	180
Lane Group Flow (vph)	35	299	0	315	340	136	546	550	16	22	764	748
Turn Type	Perm	NA		Perm	NA	Perm	NA	custom	custom	Prot	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4		4			2			6
Actuated Green, G (s)	35.4	35.4		35.4	35.4	35.4	25.0	53.5	53.5	2.9	31.4	31.4
Effective Green, g (s)	35.4	35.4		35.4	35.4	35.4	25.0	53.5	53.5	2.9	31.4	31.4
Actuated g/C Ratio	0.34	0.34		0.34	0.34	0.34	0.24	0.51	0.51	0.03	0.30	0.30
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6	4.0	4.6	4.6	4.0	4.6	4.6
Vehicle Extension (s)	3.0	3.0		3.5	3.5	3.5	3.0	4.8	4.8	2.0	4.8	4.8
Lane Grp Cap (vph)	220	619		252	257	533	421	1420	806	48	1026	473
v/s Ratio Prot		0.16					c0.31	0.20		0.01	0.22	
v/s Ratio Perm	0.05			0.42	c0.44	0.09			0.01			c0.47
v/c Ratio	0.16	0.48		1.25	1.32	0.25	1.30	0.39	0.02	0.46	0.74	1.58
Uniform Delay, d1	24.4	27.5		34.8	34.8	25.2	40.0	15.7	12.8	50.3	33.2	36.8
Progression Factor	1.00	1.00		0.48	0.48	0.48	1.00	1.00	1.00	1.08	0.94	0.91
Incremental Delay, d2	0.3	0.6		136.6	165.9	0.2	150.2	0.8	0.0	1.5	2.9	267.4
Delay (s)	24.7	28.1		153.2	182.5	12.3	190.2	16.5	12.8	55.5	34.1	300.8
Level of Service	C	C		F	F	B	F	B	B	E	C	F
Approach Delay (s)		27.8			109.0		100.5				178.8	
Approach LOS		C			F		F				F	

Intersection Summary			
HCM 2000 Control Delay	128.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	13.2
Intersection Capacity Utilization	94.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	SEL	SET	NWT	NWR
Lane Configurations						
Volume (vph)	268	218	70	591	465	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.71	1.00	0.45	1.00	1.00	1.00
Satd. Flow (perm)	1318	1583	840	3539	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	291	237	76	642	505	46
RTOR Reduction (vph)	0	153	0	0	0	17
Lane Group Flow (vph)	291	84	76	642	505	29
Turn Type	NA	custom	Perm	NA	NA	Perm
Protected Phases				2	6	
Permitted Phases	4	4	2			6
Actuated Green, G (s)	29.5	29.5	66.5	66.5	66.5	66.5
Effective Green, g (s)	29.5	29.5	66.5	66.5	66.5	66.5
Actuated g/C Ratio	0.28	0.28	0.63	0.63	0.63	0.63
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	0.2	0.2	0.2	0.2	0.2	0.2
Lane Grp Cap (vph)	370	444	532	2241	2241	1002
v/s Ratio Prot				c0.18	0.14	
v/s Ratio Perm	c0.22	0.05	0.09			0.02
v/c Ratio	0.79	0.19	0.14	0.29	0.23	0.03
Uniform Delay, d1	34.8	28.7	7.8	8.6	8.2	7.2
Progression Factor	0.85	0.63	1.00	1.00	0.75	0.54
Incremental Delay, d2	9.5	0.1	0.6	0.3	0.0	0.0
Delay (s)	39.0	18.2	8.3	8.9	6.2	3.9
Level of Service	D	B	A	A	A	A
Approach Delay (s)	29.7			8.9	6.0	
Approach LOS	C			A	A	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	32	156	0	0	184	321	99	649	531	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.91				
Frt		1.00			0.90			0.94				
Flt Protected		0.99			1.00			1.00				
Satd. Flow (prot)		3509			3202			4750				
Flt Permitted		0.65			1.00			1.00				
Satd. Flow (perm)		2302			3202			4750				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	35	170	0	0	200	349	108	705	577	0	0	0
RTOR Reduction (vph)	0	0	0	0	168	0	0	76	0	0	0	0
Lane Group Flow (vph)	0	205	0	0	381	0	0	1314	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		8			4		2	2				
Permitted Phases	8											
Actuated Green, G (s)		19.4			19.4			75.6				
Effective Green, g (s)		19.4			19.4			75.6				
Actuated g/C Ratio		0.18			0.18			0.72				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		0.2			0.2			0.2				
Lane Grp Cap (vph)		425			591			3420				
v/s Ratio Prot					c0.12			c0.28				
v/s Ratio Perm		0.09										
v/c Ratio		0.48			0.64			0.38				
Uniform Delay, d1		38.3			39.6			5.7				
Progression Factor		0.64			1.00			1.00				
Incremental Delay, d2		0.2			1.8			0.3				
Delay (s)		24.8			41.4			6.0				
Level of Service		C			D			A				
Approach Delay (s)		24.8			41.4			6.0			0.0	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	61.6%	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												
Volume (vph)	65	94	0	0	436	100	242	768	296	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6			4.2	4.2		4.2	4.2			
Lane Util. Factor	0.95	0.95			1.00	1.00		0.91	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		0.99	1.00			
Satd. Flow (prot)	1681	1764			1863	1583		5025	1583			
Flt Permitted	0.95	1.00			1.00	1.00		0.99	1.00			
Satd. Flow (perm)	1681	1764			1863	1583		5025	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	71	102	0	0	474	109	263	835	322	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	76	0	0	170	0	0	0
Lane Group Flow (vph)	64	109	0	0	474	33	0	1098	152	0	0	0
Turn Type	Split	NA			NA	Perm	Split	NA	Perm			
Protected Phases	2	2			1		8	8				
Permitted Phases						1			8			
Actuated Green, G (s)	29.3	29.3			32.0	32.0		30.7	30.7			
Effective Green, g (s)	29.3	29.3			32.0	32.0		30.7	30.7			
Actuated g/C Ratio	0.28	0.28			0.30	0.30		0.29	0.29			
Clearance Time (s)	4.6	4.6			4.2	4.2		4.2	4.2			
Vehicle Extension (s)	3.8	3.8			2.0	2.0		2.0	2.0			
Lane Grp Cap (vph)	469	492			567	482		1469	462			
v/s Ratio Prot	0.04	c0.06			c0.25			c0.22				
v/s Ratio Perm						0.02			0.10			
v/c Ratio	0.14	0.22			0.84	0.07		0.75	0.33			
Uniform Delay, d1	28.4	29.1			34.1	25.9		33.6	29.1			
Progression Factor	1.09	1.09			1.00	1.00		0.88	0.63			
Incremental Delay, d2	0.6	1.0			9.9	0.0		1.8	0.1			
Delay (s)	31.5	32.8			44.0	25.9		31.4	18.3			
Level of Service	C	C			D	C		C	B			
Approach Delay (s)		32.3			40.6			28.4			0.0	
Approach LOS		C			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	32.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	38	400	0	0	691	154	46	612	133	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2			4.2			4.2				
Lane Util. Factor	1.00	1.00			1.00			0.91				
Frt	1.00	1.00			0.98			0.97				
Flt Protected	0.95	1.00			1.00			1.00				
Satd. Flow (prot)	1770	1863			1817			4942				
Flt Permitted	0.20	1.00			1.00			1.00				
Satd. Flow (perm)	374	1863			1817			4942				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	41	435	0	0	751	167	50	665	145	0	0	0
RTOR Reduction (vph)	0	0	0	0	7	0	0	31	0	0	0	0
Lane Group Flow (vph)	41	435	0	0	911	0	0	829	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		2			6		8	8				
Permitted Phases	2											
Actuated Green, G (s)	73.8	73.8			73.8			22.8				
Effective Green, g (s)	73.8	73.8			73.8			22.8				
Actuated g/C Ratio	0.70	0.70			0.70			0.22				
Clearance Time (s)	4.2	4.2			4.2			4.2				
Vehicle Extension (s)	0.2	0.2			0.2			0.2				
Lane Grp Cap (vph)	262	1309			1277			1073				
v/s Ratio Prot		0.23			c0.50			c0.17				
v/s Ratio Perm	0.11											
v/c Ratio	0.16	0.33			0.71			0.77				
Uniform Delay, d1	5.2	6.0			9.3			38.7				
Progression Factor	0.98	1.00			0.47			0.48				
Incremental Delay, d2	1.1	0.6			1.4			2.6				
Delay (s)	6.2	6.7			5.7			21.1				
Level of Service	A	A			A			C				
Approach Delay (s)		6.6			5.7			21.1			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	11.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	266	625	267	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2			
Lane Util. Factor		1.00	0.91			
Frt		0.86	0.96			
Flt Protected		1.00	1.00			
Satd. Flow (prot)		1611	4857			
Flt Permitted		1.00	1.00			
Satd. Flow (perm)		1611	4857			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	289	679	290	0	0
RTOR Reduction (vph)	0	61	84	0	0	0
Lane Group Flow (vph)	0	228	885	0	0	0
Turn Type		custom	NA			
Protected Phases			8			
Permitted Phases		2				
Actuated Green, G (s)		58.9	37.7			
Effective Green, g (s)		58.9	37.7			
Actuated g/C Ratio		0.56	0.36			
Clearance Time (s)		4.2	4.2			
Vehicle Extension (s)		0.2	6.0			
Lane Grp Cap (vph)		903	1743			
v/s Ratio Prot			c0.18			
v/s Ratio Perm		c0.14				
v/c Ratio		0.25	0.51			
Uniform Delay, d1		11.8	26.4			
Progression Factor		1.00	0.33			
Incremental Delay, d2		0.7	0.5			
Delay (s)		12.5	9.3			
Level of Service		B	A			
Approach Delay (s)	12.5		9.3		0.0	
Approach LOS	B		A		A	

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	41.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	141	337	108	159	0	0	0	0	60	2258	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.4			5.4						5.4	5.4
Lane Util. Factor		0.95			0.95						0.91	1.00
Frt		0.89			1.00						1.00	0.85
Flt Protected		1.00			0.98						1.00	1.00
Satd. Flow (prot)		3165			3469						5079	1583
Flt Permitted		1.00			0.58						1.00	1.00
Satd. Flow (perm)		3165			2066						5079	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	153	366	117	173	0	0	0	0	65	2454	107
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	0	41
Lane Group Flow (vph)	0	515	0	0	290	0	0	0	0	0	2519	66
Turn Type		NA		Perm	NA					Split	NA	Perm
Protected Phases		2			2					8	8	
Permitted Phases				2								8
Actuated Green, G (s)		29.9			29.9						64.3	64.3
Effective Green, g (s)		29.9			29.9						64.3	64.3
Actuated g/C Ratio		0.28			0.28						0.61	0.61
Clearance Time (s)		5.4			5.4						5.4	5.4
Vehicle Extension (s)		0.2			0.2						0.2	0.2
Lane Grp Cap (vph)		901			588						3110	969
v/s Ratio Prot		c0.16									c0.50	
v/s Ratio Perm					0.14							0.04
v/c Ratio		0.57			0.49						0.81	0.07
Uniform Delay, d1		32.1			31.2						15.7	8.2
Progression Factor		1.00			0.95						0.60	0.53
Incremental Delay, d2		2.6			2.7						1.2	0.0
Delay (s)		34.7			32.4						10.6	4.4
Level of Service		C			C						B	A
Approach Delay (s)		34.7			32.4			0.0			10.4	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.8
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	112	380	188	418	0	0	0	0	40	1397	342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		4.2	4.2					4.2	4.2	4.2
Lane Util. Factor		0.95		1.00	1.00					1.00	0.95	1.00
Frt		0.88		1.00	1.00					1.00	1.00	0.85
Flt Protected		1.00		0.95	1.00					0.95	1.00	1.00
Satd. Flow (prot)		3129		1770	1863					1770	3539	1583
Flt Permitted		1.00		0.39	1.00					0.95	1.00	1.00
Satd. Flow (perm)		3129		724	1863					1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	122	413	204	454	0	0	0	0	43	1518	372
RTOR Reduction (vph)	0	10	0	0	0	0	0	0	0	0	0	64
Lane Group Flow (vph)	0	525	0	204	454	0	0	0	0	43	1518	308
Turn Type		NA		Perm	NA					Split	NA	Perm
Protected Phases		2			2					4	4	
Permitted Phases				2								4
Actuated Green, G (s)		46.7		46.7	46.7					49.9	49.9	49.9
Effective Green, g (s)		46.7		46.7	46.7					49.9	49.9	49.9
Actuated g/C Ratio		0.44		0.44	0.44					0.48	0.48	0.48
Clearance Time (s)		4.2		4.2	4.2					4.2	4.2	4.2
Vehicle Extension (s)		0.2		0.2	0.2					0.2	0.2	0.2
Lane Grp Cap (vph)		1391		322	828					841	1681	752
v/s Ratio Prot		0.17			0.24					0.02	c0.43	
v/s Ratio Perm				c0.28								0.19
v/c Ratio		0.38		0.63	0.55					0.05	0.90	0.41
Uniform Delay, d1		19.5		22.5	21.4					14.8	25.3	18.0
Progression Factor		1.06		0.60	0.54					0.31	0.26	0.07
Incremental Delay, d2		0.8		6.8	1.9					0.0	4.6	0.1
Delay (s)		21.4		20.4	13.5					4.6	11.1	1.3
Level of Service		C		C	B					A	B	A
Approach Delay (s)		21.4			15.6			0.0			9.1	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	92.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	243	27	210	506	0	0	0	0	176	1539	83
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		4.2	4.2						4.2	
Lane Util. Factor		1.00		1.00	1.00						0.91	
Frt		0.99		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						1.00	
Satd. Flow (prot)		1838		1770	1863						5026	
Flt Permitted		1.00		0.50	1.00						1.00	
Satd. Flow (perm)		1838		941	1863						5026	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	264	29	228	550	0	0	0	0	191	1673	90
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	289	0	228	550	0	0	0	0	0	1948	0
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		2			6					4	4	
Permitted Phases				6								
Actuated Green, G (s)		49.9		49.9	49.9						46.7	
Effective Green, g (s)		49.9		49.9	49.9						46.7	
Actuated g/C Ratio		0.48		0.48	0.48						0.44	
Clearance Time (s)		4.2		4.2	4.2						4.2	
Vehicle Extension (s)		0.2		0.2	0.2						0.2	
Lane Grp Cap (vph)		873		447	885						2235	
v/s Ratio Prot		0.16			c0.30						c0.39	
v/s Ratio Perm				0.24								
v/c Ratio		0.33		0.51	0.62						0.87	
Uniform Delay, d1		17.2		19.1	20.5						26.4	
Progression Factor		1.28		0.95	0.94						0.48	
Incremental Delay, d2		1.0		0.3	0.7						2.5	
Delay (s)		23.0		18.5	19.9						15.2	
Level of Service		C		B	B						B	
Approach Delay (s)		23.0			19.5			0.0			15.2	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	97.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL	SBR	SBR2	SER	NWL	NWT	SWL	SWT
Lane Configurations								
Volume (vph)	452	1361	5	67	15	26	114	191
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12
Total Lost time (s)	4.9	4.9		4.2		4.0	4.6	4.6
Lane Util. Factor	1.00	0.88		1.00		1.00	1.00	0.95
Frt	1.00	0.85		0.86		1.00	1.00	1.00
Flt Protected	0.95	1.00		1.00		0.98	0.95	1.00
Satd. Flow (prot)	1770	2787		1611		1829	1770	3539
Flt Permitted	0.95	1.00		1.00		0.98	0.95	1.00
Satd. Flow (perm)	1770	2787		1611		1829	1770	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	491	1479	5	73	16	28	124	208
RTOR Reduction (vph)	0	47	0	70	0	0	0	0
Lane Group Flow (vph)	491	1437	0	3	0	44	124	208
Turn Type	NA	Prot		custom	Split	NA	Split	NA
Protected Phases	2	2		8	1	1	4	4
Permitted Phases								
Actuated Green, G (s)	56.9	56.9		4.8		12.0	13.6	13.6
Effective Green, g (s)	56.9	56.9		4.8		12.0	13.6	13.6
Actuated g/C Ratio	0.54	0.54		0.05		0.11	0.13	0.13
Clearance Time (s)	4.9	4.9		4.2		4.0	4.6	4.6
Vehicle Extension (s)	4.0	4.0		2.0		2.0	4.0	4.0
Lane Grp Cap (vph)	959	1510		73		209	229	458
v/s Ratio Prot	0.28	c0.52		c0.00		c0.02	c0.07	0.06
v/s Ratio Perm								
v/c Ratio	0.51	0.95		0.05		0.21	0.54	0.45
Uniform Delay, d1	15.2	22.8		47.9		42.2	42.8	42.3
Progression Factor	0.25	0.33		1.00		1.00	0.80	0.80
Incremental Delay, d2	1.6	12.2		0.1		0.2	2.9	0.9
Delay (s)	5.4	19.7		48.0		42.4	37.3	34.6
Level of Service	A	B		D		D	D	C
Approach Delay (s)	16.1					42.4		35.6
Approach LOS	B					D		D

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	17.7
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NWL2	NWL	NWR	NWR2
Lane Configurations										
Volume (vph)	262	296	8	113	281	234	237	266	1577	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	5.2	5.2		5.2	5.2			5.2	5.2	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	0.76	
Frt	1.00	1.00		1.00	0.93			1.00	0.85	
Flt Protected	0.95	1.00		0.95	1.00			0.95	1.00	
Satd. Flow (prot)	1770	3525		1770	3298			1770	3610	
Flt Permitted	0.37	1.00		0.53	1.00			0.95	1.00	
Satd. Flow (perm)	683	3525		990	3298			1770	3610	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	285	322	9	123	305	254	258	289	1714	32
RTOR Reduction (vph)	0	14	0	0	6	0	0	31	11	0
Lane Group Flow (vph)	285	317	0	123	553	0	0	516	1735	0
Turn Type	Perm	NA		Perm	NA		Split	NA	Perm	
Protected Phases		4			4		2	2		
Permitted Phases	4			4					2	
Actuated Green, G (s)	41.8	41.8		41.8	41.8			52.8	52.8	
Effective Green, g (s)	41.8	41.8		41.8	41.8			52.8	52.8	
Actuated g/C Ratio	0.40	0.40		0.40	0.40			0.50	0.50	
Clearance Time (s)	5.2	5.2		5.2	5.2			5.2	5.2	
Vehicle Extension (s)	0.2	0.2		0.2	0.2			0.2	0.2	
Lane Grp Cap (vph)	271	1403		394	1312			890	1815	
v/s Ratio Prot		0.09			0.17			0.29		
v/s Ratio Perm	c0.42			0.12					c0.48	
v/c Ratio	1.05	0.23		0.31	0.42			0.58	0.96	
Uniform Delay, d1	31.6	20.9		21.7	22.9			18.3	25.0	
Progression Factor	0.54	0.34		1.00	1.00			0.77	0.75	
Incremental Delay, d2	66.1	0.0		0.2	0.1			2.5	12.2	
Delay (s)	83.0	7.1		21.9	22.9			16.5	30.8	
Level of Service	F	A		C	C			B	C	
Approach Delay (s)		42.2			22.7			27.4		
Approach LOS		D			C			C		

Intersection Summary			
HCM 2000 Control Delay	29.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.4
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	532	61	0	731	0	0	0	0	175	1410	243
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5					4.9	4.9	4.9
Lane Util. Factor		0.95			0.95					1.00	0.95	1.00
Frt		0.98			1.00					1.00	1.00	0.85
Flt Protected		1.00			1.00					0.95	1.00	1.00
Satd. Flow (prot)		3485			3539					1770	3539	1583
Flt Permitted		1.00			1.00					0.95	1.00	1.00
Satd. Flow (perm)		3485			3539					1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	578	66	0	795	0	0	0	0	190	1533	264
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	0	0	0	17
Lane Group Flow (vph)	0	636	0	0	795	0	0	0	0	190	1533	247
Turn Type		NA			NA					Split	NA	Perm
Protected Phases		4			4					2	2	
Permitted Phases												2
Actuated Green, G (s)		34.2			34.2					61.4	61.4	61.4
Effective Green, g (s)		34.2			34.2					61.4	61.4	61.4
Actuated g/C Ratio		0.33			0.33					0.58	0.58	0.58
Clearance Time (s)		4.5			4.5					4.9	4.9	4.9
Vehicle Extension (s)		5.0			5.0					5.0	5.0	5.0
Lane Grp Cap (vph)		1135			1152					1035	2069	925
v/s Ratio Prot		0.18			c0.22					0.11	c0.43	
v/s Ratio Perm												0.16
v/c Ratio		0.56			0.69					0.18	0.74	0.27
Uniform Delay, d1		29.2			30.8					10.1	16.0	10.7
Progression Factor		0.84			0.76					1.69	1.66	1.85
Incremental Delay, d2		1.0			2.2					0.3	2.1	0.6
Delay (s)		25.6			25.5					17.5	28.6	20.4
Level of Service		C			C					B	C	C
Approach Delay (s)		25.6			25.5			0.0			26.5	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	26.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.4
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	25	275	737	35	10	16
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	299	801	38	11	17
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	839				1024	420
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	839				1024	420
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	97				95	97
cM capacity (veh/h)	791				223	582

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	SW 1
Volume Total	127	199	534	305	28
Volume Left	27	0	0	0	11
Volume Right	0	0	0	38	17
cSH	791	1700	1700	1700	360
Volume to Capacity	0.03	0.12	0.31	0.18	0.08
Queue Length 95th (ft)	3	0	0	0	6
Control Delay (s)	2.4	0.0	0.0	0.0	15.9
Lane LOS	A				C
Approach Delay (s)	0.9		0.0		15.9
Approach LOS					C

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	36.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	61	399	75	55	800	154	40	57	45	67	199	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.4	5.4		5.4		5.4	5.4		5.4	5.4	
Lane Util. Factor		0.95	1.00		0.95		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.98		1.00	0.93		1.00	0.95	
Flt Protected		0.99	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3516	1583		3449		1770	1739		1770	1773	
Flt Permitted		0.71	1.00		0.89		0.25	1.00		0.68	1.00	
Satd. Flow (perm)		2502	1583		3070		468	1739		1274	1773	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	66	434	82	60	870	167	43	62	49	73	216	102
RTOR Reduction (vph)	0	0	26	0	10	0	0	32	0	0	19	0
Lane Group Flow (vph)	0	500	56	0	1087	0	43	79	0	73	299	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2		2	2			4			4		
Actuated Green, G (s)		72.0	72.0		72.0		22.2	22.2		22.2	22.2	
Effective Green, g (s)		72.0	72.0		72.0		22.2	22.2		22.2	22.2	
Actuated g/C Ratio		0.69	0.69		0.69		0.21	0.21		0.21	0.21	
Clearance Time (s)		5.4	5.4		5.4		5.4	5.4		5.4	5.4	
Vehicle Extension (s)		0.2	0.2		0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		1715	1085		2105		98	367		269	374	
v/s Ratio Prot								0.05			c0.17	
v/s Ratio Perm		0.20	0.04		c0.35		0.09			0.06		
v/c Ratio		0.29	0.05		0.52		0.44	0.22		0.27	0.80	
Uniform Delay, d1		6.5	5.4		8.0		36.0	34.2		34.6	39.3	
Progression Factor		1.05	1.86		0.25		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.3	0.1		0.8		1.1	0.1		0.2	10.7	
Delay (s)		7.1	10.0		2.7		37.1	34.3		34.8	49.9	
Level of Service		A	B		A		D	C		C	D	
Approach Delay (s)		7.5			2.7			35.1			47.1	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.8
Intersection Capacity Utilization	100.9%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (veh/h)	42	262	715	39	28	40
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	46	285	777	42	30	43
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	820				1032	410
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	820				1032	410
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	94				86	93
cM capacity (veh/h)	805				216	591

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	SW 1
Volume Total	141	190	518	301	74
Volume Left	46	0	0	0	30
Volume Right	0	0	0	42	43
cSH	805	1700	1700	1700	344
Volume to Capacity	0.06	0.11	0.30	0.18	0.21
Queue Length 95th (ft)	5	0	0	0	20
Control Delay (s)	3.6	0.0	0.0	0.0	18.3
Lane LOS	A				C
Approach Delay (s)	1.5		0.0		18.3
Approach LOS					C

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	SET	SER	NWL	NWT
Lane Configurations						
Volume (vph)	177	85	165	33	50	290
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.5		4.9		4.9	4.9
Lane Util. Factor	1.00		0.95		1.00	1.00
Frt	0.96		0.97		1.00	1.00
Flt Protected	0.97		1.00		0.95	1.00
Satd. Flow (prot)	1723		3450		1770	1863
Flt Permitted	0.76		1.00		0.62	1.00
Satd. Flow (perm)	1361		3450		1150	1863
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	192	92	179	36	54	315
RTOR Reduction (vph)	35	0	8	0	0	0
Lane Group Flow (vph)	249	0	207	0	54	315
Turn Type	NA		NA		Perm	NA
Protected Phases			2			2
Permitted Phases	4				2	
Actuated Green, G (s)	27.6		68.0		68.0	68.0
Effective Green, g (s)	27.6		68.0		68.0	68.0
Actuated g/C Ratio	0.26		0.65		0.65	0.65
Clearance Time (s)	4.5		4.9		4.9	4.9
Vehicle Extension (s)	5.0		4.0		4.0	4.0
Lane Grp Cap (vph)	357		2234		744	1206
v/s Ratio Prot			0.06			c0.17
v/s Ratio Perm	c0.18				0.05	
v/c Ratio	0.70		0.09		0.07	0.26
Uniform Delay, d1	34.9		6.9		6.8	7.8
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	7.4		0.1		0.2	0.5
Delay (s)	42.3		7.0		7.0	8.4
Level of Service	D		A		A	A
Approach Delay (s)	42.3		7.0			8.2
Approach LOS	D		A			A

Intersection Summary			
HCM 2000 Control Delay	19.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.4
Intersection Capacity Utilization	40.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	297	102	616	366	0	755
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	323	111	670	398	0	821
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						274
pX, platoon unblocked						
vC, conflicting volume	1490	670			1067	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1490	670			1067	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	76			100	
cM capacity (veh/h)	136	457			653	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1
Volume Total	434	670	398	821
Volume Left	323	0	0	0
Volume Right	111	0	398	0
cSH	166	1700	1700	653
Volume to Capacity	2.61	0.39	0.23	0.00
Queue Length 95th (ft)	944	0	0	0
Control Delay (s)	785.5	0.0	0.0	0.0
Lane LOS	F			
Approach Delay (s)	785.5	0.0		0.0
Approach LOS	F			

Intersection Summary			
Average Delay	146.7		
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBT	EBR	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBR2	SEL2	SEL
Lane Configurations												
Volume (vph)	661	40	223	1344	2	9	682	11	44	6	1	987
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6		4.6	4.6				4.6	4.6	4.2		4.6
Lane Util. Factor	1.00		0.95	0.95				0.95	1.00	1.00		0.97
Frt	0.99		0.89	0.85				1.00	0.85	0.86		0.95
Flt Protected	1.00		1.00	1.00				0.95	1.00	1.00		0.97
Satd. Flow (prot)	1849		1578	1504				3373	1583	1611		3328
Flt Permitted	1.00		1.00	1.00				0.95	1.00	1.00		0.95
Satd. Flow (perm)	1849		1578	1504				3373	1583	1611		3287
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	718	43	242	1461	2	10	741	12	48	7	1	1073
RTOR Reduction (vph)	1	0	0	22	0	0	0	0	40	6	0	29
Lane Group Flow (vph)	760	0	870	813	0	0	0	763	8	1	0	1545
Turn Type	NA		NA	custom		Perm	Perm	NA	Perm	custom	Perm	NA
Protected Phases	6		6	2				4		8		5
Permitted Phases				6		4	4		4		5	2
Actuated Green, G (s)	54.4		54.4	77.8				24.4	24.4	24.8		52.8
Effective Green, g (s)	54.4		54.4	77.8				24.4	24.4	24.8		52.8
Actuated g/C Ratio	0.36		0.36	0.52				0.16	0.16	0.17		0.35
Clearance Time (s)	4.6		4.6	4.6				4.6	4.6	4.2		4.6
Vehicle Extension (s)	5.0		5.0	5.0				4.0	4.0	2.0		5.0
Lane Grp Cap (vph)	670		572	780				548	257	266		1165
v/s Ratio Prot	0.41		c0.55	0.16						0.00		c0.26
v/s Ratio Perm				0.38				0.23	0.00			c0.21
v/c Ratio	1.13		1.52	1.04				2.62dl	0.03	0.00		1.33
Uniform Delay, d1	47.8		47.8	36.1				62.8	52.8	52.3		48.6
Progression Factor	1.00		1.00	1.00				1.00	1.00	1.00		1.00
Incremental Delay, d2	77.9		243.3	43.9				187.5	0.1	0.0		152.8
Delay (s)	125.7		291.1	80.0				250.3	52.9	52.3		201.4
Level of Service	F		F	F				F	D	D		F
Approach Delay (s)	125.7		187.7					238.6				201.4
Approach LOS	F		F					F				F

Intersection Summary			
HCM 2000 Control Delay	190.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	131.2%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	SER	SER2
Lane Configurations		
Volume (vph)	454	6
Ideal Flow (vphpl)	1900	1900
Lane Width	12	12
Total Lost time (s)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	493	7
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	0
Turn Type		
Protected Phases		
Permitted Phases		
Actuated Green, G (s)		
Effective Green, g (s)		
Actuated g/C Ratio		
Clearance Time (s)		
Vehicle Extension (s)		
Lane Grp Cap (vph)		
v/s Ratio Prot		
v/s Ratio Perm		
v/c Ratio		
Uniform Delay, d1		
Progression Factor		
Incremental Delay, d2		
Delay (s)		
Level of Service		
Approach Delay (s)		
Approach LOS		

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	61	535	207	30	770	106	101	162	74	264	278	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.6	4.6		4.6		4.6	4.6		4.6	4.6	
Lane Util. Factor		0.95	1.00		0.95		1.00	1.00		1.00	1.00	
Frt		1.00	0.85		0.98		1.00	0.95		1.00	0.99	
Flt Protected		0.99	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3521	1583		3471		1770	1775		1770	1841	
Flt Permitted		0.61	1.00		0.91		0.50	1.00		0.57	1.00	
Satd. Flow (perm)		2173	1583		3166		939	1775		1055	1841	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	66	582	225	33	837	115	110	176	80	287	302	26
RTOR Reduction (vph)	0	0	109	0	11	0	0	13	0	0	3	0
Lane Group Flow (vph)	0	648	116	0	974	0	110	243	0	287	325	0
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			2	
Permitted Phases	4		4	4			2			2		
Actuated Green, G (s)		38.3	38.3		38.3		57.5	57.5		57.5	57.5	
Effective Green, g (s)		38.3	38.3		38.3		57.5	57.5		57.5	57.5	
Actuated g/C Ratio		0.36	0.36		0.36		0.55	0.55		0.55	0.55	
Clearance Time (s)		4.6	4.6		4.6		4.6	4.6		4.6	4.6	
Vehicle Extension (s)		0.2	0.2		0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)		792	577		1154		514	972		577	1008	
v/s Ratio Prot								0.14			0.18	
v/s Ratio Perm		0.30	0.07		c0.31		0.12			c0.27		
v/c Ratio		0.82	0.20		0.84		0.21	0.25		0.50	0.32	
Uniform Delay, d1		30.2	22.9		30.6		12.2	12.4		14.8	13.1	
Progression Factor		1.00	1.00		0.53		1.00	1.00		1.06	1.04	
Incremental Delay, d2		6.3	0.1		5.2		1.0	0.6		2.8	0.8	
Delay (s)		36.4	22.9		21.4		13.1	13.1		18.6	14.4	
Level of Service		D	C		C		B	B		B	B	
Approach Delay (s)		33.0			21.4			13.1			16.4	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.2
Intersection Capacity Utilization	95.9%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	600	46	20	709	0	30	0	75	244	401	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5		4.5		4.5	4.5	4.5	
Lane Util. Factor		0.95			0.95		1.00		1.00	1.00	0.95	
Frt		0.99			1.00		1.00		0.85	1.00	0.96	
Flt Protected		1.00			1.00		0.95		1.00	0.95	1.00	
Satd. Flow (prot)		3501			3534		1770		1583	1770	3390	
Flt Permitted		1.00			0.92		0.38		1.00	0.95	1.00	
Satd. Flow (perm)		3501			3262		717		1583	1770	3390	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	652	50	22	771	0	33	0	82	265	436	171
RTOR Reduction (vph)	0	7	0	0	0	0	0	0	35	0	28	0
Lane Group Flow (vph)	0	695	0	0	793	0	33	0	47	265	579	0
Turn Type		NA		Perm	NA		D.Pm		custom	Perm	NA	
Protected Phases		4			4				2		2	
Permitted Phases				4			2		2	2		
Actuated Green, G (s)		36.4			36.4		59.6		59.6	59.6	59.6	
Effective Green, g (s)		36.4			36.4		59.6		59.6	59.6	59.6	
Actuated g/C Ratio		0.35			0.35		0.57		0.57	0.57	0.57	
Clearance Time (s)		4.5			4.5		4.5		4.5	4.5	4.5	
Vehicle Extension (s)		2.0			2.0		2.0		2.0	2.0	2.0	
Lane Grp Cap (vph)		1213			1130		406		898	1004	1924	
v/s Ratio Prot		0.20							0.03		c0.17	
v/s Ratio Perm					c0.24		0.05			0.15		
v/c Ratio		0.57			0.70		0.08		0.05	0.26	0.30	
Uniform Delay, d1		28.0			29.6		10.3		10.1	11.5	11.8	
Progression Factor		0.93			1.02		1.00		1.00	1.39	1.42	
Incremental Delay, d2		0.3			1.3		0.4		0.1	0.6	0.4	
Delay (s)		26.5			31.5		10.7		10.2	16.6	17.2	
Level of Service		C			C		B		B	B	B	
Approach Delay (s)		26.5			31.5			10.4			17.0	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	306	438	107	11	627	222	265	678	45	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.5			4.5			4.2				
Lane Util. Factor		0.95			0.95			0.95				
Frt		0.98			0.96			0.99				
Flt Protected		0.98			1.00			0.99				
Satd. Flow (prot)		3411			3400			3468				
Flt Permitted		0.53			0.94			0.99				
Satd. Flow (perm)		1825			3198			3468				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	333	476	116	12	682	241	288	737	49	0	0	0
RTOR Reduction (vph)	0	12	0	0	30	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	914	0	0	905	0	0	1071	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		8			4		6	6				
Permitted Phases	8			4								
Actuated Green, G (s)		56.7			56.7			39.6				
Effective Green, g (s)		56.7			56.7			39.6				
Actuated g/C Ratio		0.54			0.54			0.38				
Clearance Time (s)		4.5			4.5			4.2				
Vehicle Extension (s)		0.2			0.2			0.2				
Lane Grp Cap (vph)		985			1726			1307				
v/s Ratio Prot								c0.31				
v/s Ratio Perm		c0.50			0.28							
v/c Ratio		1.36dl			0.52			0.82				
Uniform Delay, d1		22.3			15.5			29.5				
Progression Factor		1.23			0.82			0.66				
Incremental Delay, d2		13.6			0.1			5.5				
Delay (s)		40.9			12.8			25.0				
Level of Service		D			B			C				
Approach Delay (s)		40.9			12.8			25.0			0.0	
Approach LOS		D			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	26.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.7
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	556	0	9	6	1	0	1	1022	511	34	883	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6			4.6			4.2	4.2		4.2	
Lane Util. Factor	1.00	1.00			1.00			0.95	1.00		0.95	
Frt	1.00	0.85			1.00			1.00	0.85		1.00	
Flt Protected	0.95	1.00			0.96			1.00	1.00		1.00	
Satd. Flow (prot)	1770	1583			1785			3539	1583		3526	
Flt Permitted	0.75	1.00			0.91			0.95	1.00		0.76	
Satd. Flow (perm)	1402	1583			1693			3378	1583		2676	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	604	0	10	7	1	0	1	1111	555	37	960	13
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	267	0	1	0
Lane Group Flow (vph)	604	5	0	0	8	0	0	1112	288	0	1009	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		2			2			4			4	
Permitted Phases	2			2			4		4	4		
Actuated Green, G (s)	52.4	52.4			52.4			43.8	43.8		43.8	
Effective Green, g (s)	52.4	52.4			52.4			43.8	43.8		43.8	
Actuated g/C Ratio	0.50	0.50			0.50			0.42	0.42		0.42	
Clearance Time (s)	4.6	4.6			4.6			4.2	4.2		4.2	
Vehicle Extension (s)	5.0	5.0			5.0			4.0	4.0		4.0	
Lane Grp Cap (vph)	699	789			844			1409	660		1116	
v/s Ratio Prot		0.00										
v/s Ratio Perm	c0.43				0.00			0.33	0.18		c0.38	
v/c Ratio	0.86	0.01			0.01			0.79	0.44		0.90	
Uniform Delay, d1	23.2	13.2			13.2			26.6	21.8		28.6	
Progression Factor	1.00	1.00			1.00			1.00	1.00		1.00	
Incremental Delay, d2	13.4	0.0			0.0			3.2	0.6		10.5	
Delay (s)	36.6	13.2			13.3			29.8	22.4		39.2	
Level of Service	D	B			B			C	C		D	
Approach Delay (s)		36.2			13.3			27.3			39.2	
Approach LOS		D			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	32.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.8
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	135	64	85	120	0	0	0	0	105	1553	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2						4.9	
Lane Util. Factor		1.00			1.00						0.91	
Frt		0.96			1.00						0.99	
Flt Protected		1.00			0.98						1.00	
Satd. Flow (prot)		1782			1825						5020	
Flt Permitted		1.00			0.58						1.00	
Satd. Flow (perm)		1782			1085						5020	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	147	70	92	130	0	0	0	0	114	1688	127
RTOR Reduction (vph)	0	18	0	0	0	0	0	0	0	0	6	0
Lane Group Flow (vph)	0	199	0	0	222	0	0	0	0	0	1923	0
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		8			8					6	6	
Permitted Phases				8								
Actuated Green, G (s)		24.4			24.4						71.5	
Effective Green, g (s)		24.4			24.4						71.5	
Actuated g/C Ratio		0.23			0.23						0.68	
Clearance Time (s)		4.2			4.2						4.9	
Vehicle Extension (s)		4.0			4.0						5.0	
Lane Grp Cap (vph)		414			252						3418	
v/s Ratio Prot		0.11									c0.38	
v/s Ratio Perm					c0.20							
v/c Ratio		0.48			0.88						0.56	
Uniform Delay, d1		34.8			38.9						8.7	
Progression Factor		1.00			0.83						0.58	
Incremental Delay, d2		1.2			27.2						0.1	
Delay (s)		36.0			59.5						5.1	
Level of Service		D			E						A	
Approach Delay (s)		36.0			59.5			0.0			5.1	
Approach LOS		D			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.1
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	118	122	0	0	155	120	55	1328	29	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2			4.2			4.9				
Lane Util. Factor		1.00			1.00			0.91				
Frt		1.00			0.94			1.00				
Flt Protected		0.98			1.00			1.00				
Satd. Flow (prot)		1818			1753			5060				
Flt Permitted		0.45			1.00			1.00				
Satd. Flow (perm)		836			1753			5060				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	128	133	0	0	168	130	60	1443	32	0	0	0
RTOR Reduction (vph)	0	0	0	0	11	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	261	0	0	287	0	0	1534	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		4			8		2	2				
Permitted Phases	4											
Actuated Green, G (s)		29.9			29.9			66.0				
Effective Green, g (s)		29.9			29.9			66.0				
Actuated g/C Ratio		0.28			0.28			0.63				
Clearance Time (s)		4.2			4.2			4.9				
Vehicle Extension (s)		4.0			4.0			0.2				
Lane Grp Cap (vph)		238			499			3180				
v/s Ratio Prot					0.16			c0.30				
v/s Ratio Perm		c0.31										
v/c Ratio		1.10			0.57			0.48				
Uniform Delay, d1		37.5			32.1			10.4				
Progression Factor		1.28			1.00			1.00				
Incremental Delay, d2		83.8			1.9			0.2				
Delay (s)		132.1			34.0			10.6				
Level of Service		F			C			B				
Approach Delay (s)		132.1			34.0			10.6			0.0	
Approach LOS		F			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	29.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.1
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												
Volume (vph)	0	321	202	0	0	0	0	0	0	487	500	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2									4.6	
Lane Util. Factor		0.95									0.95	
Frt		0.94									1.00	
Flt Protected		1.00									0.98	
Satd. Flow (prot)		3334									3454	
Flt Permitted		1.00									0.98	
Satd. Flow (perm)		3334									3454	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	349	220	0	0	0	0	0	0	529	543	0
RTOR Reduction (vph)	0	118	0	0	0	0	0	0	0	0	112	0
Lane Group Flow (vph)	0	451	0	0	0	0	0	0	0	0	960	0
Turn Type		NA								Perm	NA	
Protected Phases		4									6	
Permitted Phases										6		
Actuated Green, G (s)		25.7									70.5	
Effective Green, g (s)		25.7									70.5	
Actuated g/C Ratio		0.24									0.67	
Clearance Time (s)		4.2									4.6	
Vehicle Extension (s)		6.4									5.6	
Lane Grp Cap (vph)		816									2319	
v/s Ratio Prot		c0.14										
v/s Ratio Perm											0.28	
v/c Ratio		0.55									0.41	
Uniform Delay, d1		34.6									7.9	
Progression Factor		1.00									0.13	
Incremental Delay, d2		1.9									0.5	
Delay (s)		36.5									1.5	
Level of Service		D									A	
Approach Delay (s)		36.5			0.0			0.0			1.5	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.8
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations											
Volume (vph)	229	553	0	0	553	636	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6			4.6	4.6					
Lane Util. Factor	1.00	1.00			0.95	1.00					
Frt	1.00	1.00			1.00	0.85					
Flt Protected	0.95	0.95			1.00	1.00					
Satd. Flow (prot)	1770	1770			3539	1583					
Flt Permitted	0.95	0.95			1.00	1.00					
Satd. Flow (perm)	1770	1770			3539	1583					
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	249	601	0	0	601	691	0	0	0	0	0
RTOR Reduction (vph)	128	0	0	0	0	85	0	0	0	0	0
Lane Group Flow (vph)	121	601	0	0	601	606	0	0	0	0	0
Turn Type	Split	NA			NA	Perm					
Protected Phases	4	4			2						
Permitted Phases						2					
Actuated Green, G (s)	41.7	41.7			54.1	54.1					
Effective Green, g (s)	41.7	41.7			54.1	54.1					
Actuated g/C Ratio	0.40	0.40			0.52	0.52					
Clearance Time (s)	4.6	4.6			4.6	4.6					
Vehicle Extension (s)	5.0	5.0			4.5	4.5					
Lane Grp Cap (vph)	702	702			1823	815					
v/s Ratio Prot	0.07	c0.34			0.17						
v/s Ratio Perm						c0.38					
v/c Ratio	0.17	0.86			0.33	0.74					
Uniform Delay, d1	20.5	28.9			14.9	20.0					
Progression Factor	0.81	0.86			0.68	0.69					
Incremental Delay, d2	0.2	10.2			0.3	3.7					
Delay (s)	16.7	35.0			10.3	17.5					
Level of Service	B	D			B	B					
Approach Delay (s)		29.7			14.2			0.0		0.0	
Approach LOS		C			B			A		A	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.2
Intersection Capacity Utilization	53.6%	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												
Volume (vph)	0	714	275	7	85	0	0	0	0	0	706	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		3.7	3.7		3.7						4.1	
Lane Util. Factor		1.00	1.00		1.00						0.95	
Frt		1.00	0.85		1.00						0.97	
Flt Protected		1.00	1.00		1.00						1.00	
Satd. Flow (prot)		1863	1583		1855						3446	
Flt Permitted		1.00	1.00		0.95						1.00	
Satd. Flow (perm)		1863	1583		1770						3446	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	776	299	8	92	0	0	0	0	0	767	163
RTOR Reduction (vph)	0	0	31	0	0	0	0	0	0	0	16	0
Lane Group Flow (vph)	0	776	268	0	100	0	0	0	0	0	914	0
Turn Type		NA	Perm	Perm	NA						NA	
Protected Phases		4			8						6	
Permitted Phases			4	8								
Actuated Green, G (s)		54.9	54.9		54.9						42.3	
Effective Green, g (s)		54.9	54.9		54.9						42.3	
Actuated g/C Ratio		0.52	0.52		0.52						0.40	
Clearance Time (s)		3.7	3.7		3.7						4.1	
Vehicle Extension (s)		5.0	5.0		4.8						4.6	
Lane Grp Cap (vph)		974	827		925						1388	
v/s Ratio Prot		c0.42									c0.27	
v/s Ratio Perm			0.17		0.06							
v/c Ratio		0.80	0.32		0.11						0.66	
Uniform Delay, d1		20.5	14.4		12.7						25.5	
Progression Factor		1.00	1.00		1.26						1.00	
Incremental Delay, d2		5.3	0.5		0.1						2.5	
Delay (s)		25.8	14.9		16.1						27.9	
Level of Service		C	B		B						C	
Approach Delay (s)		22.7			16.1			0.0			27.9	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	7.8
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	714	0	98	724	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.6			4.6		
Lane Util. Factor	1.00			0.95		
Frpb, ped/bikes	1.00			1.00		
Flpb, ped/bikes	1.00			1.00		
Frt	1.00			1.00		
Flt Protected	0.95			0.99		
Satd. Flow (prot)	1770			3518		
Flt Permitted	0.95			0.99		
Satd. Flow (perm)	1770			3518		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	776	0	107	787	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	776	0	0	894	0	0
Confl. Peds. (#/hr)			721			
Turn Type	NA		Split	NA		
Protected Phases	4		2	2		
Permitted Phases						
Actuated Green, G (s)	54.4			41.4		
Effective Green, g (s)	54.4			41.4		
Actuated g/C Ratio	0.52			0.39		
Clearance Time (s)	4.6			4.6		
Vehicle Extension (s)	3.3			4.9		
Lane Grp Cap (vph)	917			1387		
v/s Ratio Prot	c0.44			c0.25		
v/s Ratio Perm						
v/c Ratio	0.85			0.64		
Uniform Delay, d1	21.7			25.8		
Progression Factor	0.11			0.69		
Incremental Delay, d2	5.0			2.2		
Delay (s)	7.5			20.0		
Level of Service	A			C		
Approach Delay (s)	7.5			20.0	0.0	
Approach LOS	A			C	A	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.2
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1408	128	234	1047	0	0	0	0	391	1516	426
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		3.7	4.2						4.9	
Lane Util. Factor		0.95		1.00	0.95						0.91	
Frt		0.99		1.00	1.00						0.97	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		3495		1770	3539						4905	
Flt Permitted		1.00		0.95	1.00						0.99	
Satd. Flow (perm)		3495		1770	3539						4905	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1530	139	254	1138	0	0	0	0	425	1648	463
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0	0	28	0
Lane Group Flow (vph)	0	1663	0	254	1138	0	0	0	0	0	2508	0
Turn Type		NA		Prot	NA					Split	NA	
Protected Phases		4		3	8					6	6	
Permitted Phases												
Actuated Green, G (s)		36.8		11.3	51.8						44.1	
Effective Green, g (s)		36.8		11.3	51.8						44.1	
Actuated g/C Ratio		0.35		0.11	0.49						0.42	
Clearance Time (s)		4.2		3.7	4.2						4.9	
Vehicle Extension (s)		6.8		2.0	6.8						0.2	
Lane Grp Cap (vph)		1224		190	1745						2060	
v/s Ratio Prot		c0.48		c0.14	0.32						c0.51	
v/s Ratio Perm												
v/c Ratio		1.36		1.34	0.65						1.22	
Uniform Delay, d1		34.1		46.9	19.9						30.4	
Progression Factor		1.00		1.56	0.09						1.13	
Incremental Delay, d2		166.6		159.8	0.4						100.8	
Delay (s)		200.7		232.9	2.1						135.1	
Level of Service		F		F	A						F	
Approach Delay (s)		200.7			44.2			0.0			135.1	
Approach LOS		F			D			A			F	

Intersection Summary			
HCM 2000 Control Delay	132.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.29		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.8
Intersection Capacity Utilization	113.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	314	1397	0	0	1152	217	77	1651	38	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	3.7	4.2			4.2	4.2		4.9	4.9			
Lane Util. Factor	1.00	0.95			0.95	1.00		0.91	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		1.00	1.00			
Satd. Flow (prot)	1770	3539			3539	1583		5074	1583			
Flt Permitted	0.95	1.00			1.00	1.00		1.00	1.00			
Satd. Flow (perm)	1770	3539			3539	1583		5074	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	341	1518	0	0	1252	236	84	1795	41	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	42	0	0	27	0	0	0
Lane Group Flow (vph)	341	1518	0	0	1252	194	0	1879	14	0	0	0
Turn Type	Prot	NA			NA	Perm	Split	NA	Perm			
Protected Phases	7	4			8		2	2				
Permitted Phases						8			2			
Actuated Green, G (s)	19.3	58.8			35.8	35.8		37.1	37.1			
Effective Green, g (s)	19.3	58.8			35.8	35.8		37.1	37.1			
Actuated g/C Ratio	0.18	0.56			0.34	0.34		0.35	0.35			
Clearance Time (s)	3.7	4.2			4.2	4.2		4.9	4.9			
Vehicle Extension (s)	2.0	5.1			5.1	5.1		0.2	0.2			
Lane Grp Cap (vph)	325	1981			1206	539		1792	559			
v/s Ratio Prot	c0.19	0.43			c0.35			c0.37				
v/s Ratio Perm						0.12			0.01			
v/c Ratio	1.05	0.77			1.04	0.36		1.05	0.03			
Uniform Delay, d1	42.9	17.8			34.6	26.0		33.9	22.2			
Progression Factor	0.52	0.42			1.00	1.00		0.69	0.06			
Incremental Delay, d2	30.0	0.2			36.3	0.9		34.5	0.1			
Delay (s)	52.2	7.7			70.9	26.9		57.7	1.3			
Level of Service	D	A			E	C		E	A			
Approach Delay (s)		15.8			64.0			56.5			0.0	
Approach LOS		B			E			E			A	

Intersection Summary			
HCM 2000 Control Delay	44.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.8
Intersection Capacity Utilization	113.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	162	1142	106	156	933	165	128	752	172	369	662	311
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.6		4.0	4.6		4.0	14.6		4.0	4.6	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3494		1770	3460		1770	3440		1770	3370	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3494		1770	3460		1770	3440		1770	3370	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	176	1241	115	170	1014	179	139	817	187	401	720	338
RTOR Reduction (vph)	0	5	0	0	10	0	0	14	0	0	38	0
Lane Group Flow (vph)	176	1351	0	170	1183	0	139	990	0	401	1020	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases												
Actuated Green, G (s)	12.0	43.4		12.0	43.4		14.2	38.4		24.0	58.2	
Effective Green, g (s)	12.0	43.4		12.0	43.4		14.2	38.4		24.0	58.2	
Actuated g/C Ratio	0.08	0.30		0.08	0.30		0.10	0.26		0.17	0.40	
Clearance Time (s)	4.0	4.6		4.0	4.6		4.0	14.6		4.0	4.6	
Vehicle Extension (s)	2.0	5.0		2.0	5.0		2.0	5.0		2.0	5.0	
Lane Grp Cap (vph)	146	1045		146	1035		173	911		292	1352	
v/s Ratio Prot	c0.10	c0.39		0.10	0.34		0.08	c0.29		c0.23	0.30	
v/s Ratio Perm												
v/c Ratio	1.21	1.29		1.16	1.14		0.80	1.09		1.37	0.75	
Uniform Delay, d1	66.5	50.8		66.5	50.8		64.0	53.3		60.5	37.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	140.2	139.0		125.5	76.2		21.8	56.2		188.2	2.9	
Delay (s)	206.7	189.8		192.0	127.0		85.9	109.5		248.7	40.2	
Level of Service	F	F		F	F		F	F		F	D	
Approach Delay (s)		191.8			135.1			106.6			97.5	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	135.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	145.0	Sum of lost time (s)	27.2
Intersection Capacity Utilization	114.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	272	1139	351	184	809	196	285	882	94	224	811	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9		4.0	4.9	4.9
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3436		1770	3488		1770	3539	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3436		1770	3488		1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	296	1238	382	200	879	213	310	959	102	243	882	213
RTOR Reduction (vph)	0	0	72	0	15	0	0	6	0	0	0	102
Lane Group Flow (vph)	296	1238	310	200	1077	0	310	1055	0	243	882	111
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		1	6		5	2	
Permitted Phases			4									2
Actuated Green, G (s)	21.0	47.1	47.1	15.0	41.1		23.0	42.1		18.0	37.1	37.1
Effective Green, g (s)	21.0	47.1	47.1	15.0	41.1		23.0	42.1		18.0	37.1	37.1
Actuated g/C Ratio	0.15	0.34	0.34	0.11	0.29		0.16	0.30		0.13	0.27	0.27
Clearance Time (s)	4.0	4.9	4.9	4.0	4.9		4.0	4.9		4.0	4.9	4.9
Vehicle Extension (s)	2.0	4.5	4.5	2.0	4.5		2.0	5.0		2.0	5.0	5.0
Lane Grp Cap (vph)	265	1190	532	189	1008		290	1048		227	937	419
v/s Ratio Prot	c0.17	c0.35		0.11	0.31		c0.18	c0.30		0.14	0.25	
v/s Ratio Perm			0.20									0.07
v/c Ratio	1.12	1.04	0.58	1.06	1.07		1.07	1.01		1.07	0.94	0.26
Uniform Delay, d1	59.5	46.5	38.3	62.5	49.5		58.5	49.0		61.0	50.4	40.7
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	90.4	37.2	2.2	81.7	48.6		72.3	29.5		79.7	17.4	0.7
Delay (s)	149.9	83.6	40.6	144.2	98.0		130.8	78.5		140.7	67.8	41.4
Level of Service	F	F	D	F	F		F	E		F	E	D
Approach Delay (s)		85.3			105.2			90.3			76.8	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	88.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.8
Intersection Capacity Utilization	98.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (vph)	115	0	0	0	468	2315
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)	4.2					4.9
Lane Util. Factor	1.00					0.91
Frt	1.00					1.00
Flt Protected	0.95					0.99
Satd. Flow (prot)	1770					5043
Flt Permitted	0.95					0.99
Satd. Flow (perm)	1770					5043
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	125	0	0	0	509	2516
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	125	0	0	0	0	3025
Turn Type	NA				Split	NA
Protected Phases	8				6	6
Permitted Phases						
Actuated Green, G (s)	14.4					81.5
Effective Green, g (s)	14.4					81.5
Actuated g/C Ratio	0.14					0.78
Clearance Time (s)	4.2					4.9
Vehicle Extension (s)	4.8					5.4
Lane Grp Cap (vph)	242					3914
v/s Ratio Prot	c0.07					c0.60
v/s Ratio Perm						
v/c Ratio	0.52					0.77
Uniform Delay, d1	42.1					6.6
Progression Factor	0.29					0.99
Incremental Delay, d2	3.4					0.1
Delay (s)	15.8					6.6
Level of Service	B					A
Approach Delay (s)	15.8		0.0			6.6
Approach LOS	B		A			A

Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.1
Intersection Capacity Utilization	148.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	442	0	0	116	386	0	1302	948	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2			4.2	4.2		4.9	4.9			
Lane Util. Factor	1.00	1.00			1.00	1.00		0.91	1.00			
Frt	1.00	1.00			1.00	0.85		1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00		1.00	1.00			
Satd. Flow (prot)	1770	1863			1863	1583		5085	1583			
Flt Permitted	0.64	1.00			1.00	1.00		1.00	1.00			
Satd. Flow (perm)	1198	1863			1863	1583		5085	1583			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	33	480	0	0	126	420	0	1415	1030	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	39	0	0	43	0	0	0
Lane Group Flow (vph)	33	480	0	0	126	381	0	1415	987	0	0	0
Turn Type	Perm	NA			NA	Perm	Split	NA	Perm			
Protected Phases		4			4		2	2				
Permitted Phases	4					4			2			
Actuated Green, G (s)	29.8	29.8			29.8	29.8		66.1	66.1			
Effective Green, g (s)	29.8	29.8			29.8	29.8		66.1	66.1			
Actuated g/C Ratio	0.28	0.28			0.28	0.28		0.63	0.63			
Clearance Time (s)	4.2	4.2			4.2	4.2		4.9	4.9			
Vehicle Extension (s)	5.7	5.7			5.7	5.7		5.2	5.2			
Lane Grp Cap (vph)	340	528			528	449		3201	996			
v/s Ratio Prot		c0.26			0.07			0.28				
v/s Ratio Perm	0.03					0.24			c0.62			
v/c Ratio	0.10	0.91			0.24	0.85		0.44	0.99			
Uniform Delay, d1	27.7	36.3			28.9	35.5		10.0	19.2			
Progression Factor	1.07	1.14			1.00	1.00		0.17	0.48			
Incremental Delay, d2	0.2	14.5			0.6	15.7		0.1	14.0			
Delay (s)	29.8	55.8			29.5	51.2		1.8	23.2			
Level of Service	C	E			C	D		A	C			
Approach Delay (s)		54.2			46.2			10.8			0.0	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	22.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.1
Intersection Capacity Utilization	134.7%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	365	1016	76	260	0	0	0	0	4	1687	369
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		3.7	4.2						4.9	4.9
Lane Util. Factor		1.00		1.00	1.00						0.95	1.00
Frt		0.90		1.00	1.00						1.00	0.85
Flt Protected		1.00		0.95	1.00						1.00	1.00
Satd. Flow (prot)		1678		1770	1863						3539	1583
Flt Permitted		1.00		0.95	1.00						1.00	1.00
Satd. Flow (perm)		1678		1770	1863						3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	397	1104	83	283	0	0	0	0	4	1834	401
RTOR Reduction (vph)	0	60	0	0	0	0	0	0	0	0	0	151
Lane Group Flow (vph)	0	1441	0	83	283	0	0	0	0	0	1838	250
Turn Type		NA		Prot	NA					Split	NA	Perm
Protected Phases		4		3	8					6	6	
Permitted Phases												6
Actuated Green, G (s)		42.8		9.6	56.1						39.8	39.8
Effective Green, g (s)		42.8		9.6	56.1						39.8	39.8
Actuated g/C Ratio		0.41		0.09	0.53						0.38	0.38
Clearance Time (s)		4.2		3.7	4.2						4.9	4.9
Vehicle Extension (s)		4.9		2.0	4.6						5.2	5.2
Lane Grp Cap (vph)		683		161	995						1341	600
v/s Ratio Prot		c0.86		c0.05	0.15						c0.52	
v/s Ratio Perm												0.16
v/c Ratio		2.11		0.52	0.28						1.37	0.42
Uniform Delay, d1		31.1		45.5	13.4						32.6	24.0
Progression Factor		1.00		1.00	1.00						1.00	1.00
Incremental Delay, d2		504.5		1.2	0.3						171.6	2.1
Delay (s)		535.6		46.6	13.7						204.2	26.2
Level of Service		F		D	B						F	C
Approach Delay (s)		535.6			21.2			0.0			172.3	
Approach LOS		F			C			A			F	

Intersection Summary			
HCM 2000 Control Delay	291.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.62		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.8
Intersection Capacity Utilization	136.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	10	361	28	45	485	10	16	35	5	25	15	15
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	11	392	30	49	527	11	17	38	5	27	16	16
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1300										
pX, platoon unblocked												
vC, conflicting volume	538			423			1084	1065	211	873	1075	533
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	538			423			1084	1065	211	873	1075	533
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			96			88	82	99	86	92	97
cM capacity (veh/h)	1026			1133			149	209	794	201	207	492

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total	207	227	587	61	60
Volume Left	11	0	49	17	27
Volume Right	0	30	11	5	16
cSH	1026	1700	1133	200	241
Volume to Capacity	0.01	0.13	0.04	0.31	0.25
Queue Length 95th (ft)	1	0	3	31	24
Control Delay (s)	0.5	0.0	1.2	30.8	24.7
Lane LOS	A		A	D	C
Approach Delay (s)	0.3		1.2	30.8	24.7
Approach LOS				D	C

Intersection Summary			
Average Delay	3.6		
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	25	319	15	15	508	15	10	42	10	35	25	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	347	16	16	552	16	11	46	11	38	27	27
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)					1008							
pX, platoon unblocked	0.91						0.91	0.91		0.91	0.91	0.91
vC, conflicting volume	568			363			1043	1010	182	854	1010	560
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	479			363			999	963	182	792	963	470
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	97			99			93	79	99	81	88	94
cM capacity (veh/h)	985			1192			150	222	830	206	222	493

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total	201	190	585	67	92
Volume Left	27	0	16	11	38
Volume Right	0	16	16	11	27
cSH	985	1700	1192	232	255
Volume to Capacity	0.03	0.11	0.01	0.29	0.36
Queue Length 95th (ft)	2	0	1	29	40
Control Delay (s)	1.4	0.0	0.4	26.8	26.9
Lane LOS	A		A	D	D
Approach Delay (s)	0.7		0.4	26.8	26.9
Approach LOS				D	D

Intersection Summary			
Average Delay	4.2		
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	35	60	141	276	221	81	150	776	152	107	1280	73
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	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	2049	1742	1947	2049	1742	1947	3798		1947	3862	
Flt Permitted	0.41	1.00	1.00	0.71	1.00	1.00	0.13	1.00		0.25	1.00	
Satd. Flow (perm)	839	2049	1742	1464	2049	1742	259	3798		502	3862	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	65	153	300	240	88	163	843	165	116	1391	79
RTOR Reduction (vph)	0	0	76	0	0	47	0	22	0	0	5	0
Lane Group Flow (vph)	38	65	77	300	240	41	163	986	0	116	1465	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6		6	2		2	4			8		
Actuated Green, G (s)	25.2	25.2	25.2	25.2	25.2	25.2	71.8	71.8		71.8	71.8	
Effective Green, g (s)	25.2	25.2	25.2	25.2	25.2	25.2	71.8	71.8		71.8	71.8	
Actuated g/C Ratio	0.24	0.24	0.24	0.24	0.24	0.24	0.68	0.68		0.68	0.68	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	201	491	418	351	491	418	177	2597		343	2640	
v/s Ratio Prot		0.03			0.12			0.26			0.38	
v/s Ratio Perm	0.05		0.04	c0.20		0.02	c0.63			0.23		
v/c Ratio	0.19	0.13	0.18	0.85	0.49	0.10	0.92	0.38		0.34	0.55	
Uniform Delay, d1	31.8	31.3	31.7	38.1	34.4	31.1	14.2	7.1		6.8	8.5	
Progression Factor	1.00	1.00	1.00	0.84	0.85	0.67	1.31	1.11		0.18	0.29	
Incremental Delay, d2	2.1	0.6	1.0	21.9	3.3	0.5	43.2	0.1		0.5	0.2	
Delay (s)	33.8	31.9	32.7	54.1	32.4	21.3	61.8	7.9		1.8	2.7	
Level of Service	C	C	C	D	C	C	E	A		A	A	
Approach Delay (s)		32.7			41.2			15.4			2.6	
Approach LOS		C			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	0	339	238	271	312	0	138	0	20	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	368	259	295	339	0	150	0	22	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		1009			513							
pX, platoon unblocked	0.77						0.77	0.77		0.77	0.77	0.77
vC, conflicting volume	339			627			1426	1426	498	1448	1555	339
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			627			1404	1404	498	1433	1572	0
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			69			0	100	96	100	100	100
cM capacity (veh/h)	1256			955			69	75	572	63	59	839

Direction, Lane #	SE 1	NW 1	NE 1	SW 1
Volume Total	627	634	172	0
Volume Left	0	295	150	0
Volume Right	259	0	22	0
cSH	1256	955	78	1700
Volume to Capacity	0.00	0.31	2.22	0.00
Queue Length 95th (ft)	0	33	396	0
Control Delay (s)	0.0	7.0	673.0	0.0
Lane LOS		A	F	A
Approach Delay (s)	0.0	7.0	673.0	0.0
Approach LOS			F	A

Intersection Summary			
Average Delay	83.8		
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	71	317	0	0	328	48	0	0	0	45	0	25
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	77	345	0	0	357	52	0	0	0	49	0	27
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		491										
pX, platoon unblocked												
vC, conflicting volume	409			345			704	908	172	709	882	204
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	409			345			704	908	172	709	882	204
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	93			100			100	100	100	84	100	97
cM capacity (veh/h)	1147			1211			297	255	841	305	265	802

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1	SW 1
Volume Total	249	172	178	230	0	76
Volume Left	77	0	0	0	0	49
Volume Right	0	0	0	52	0	27
cSH	1147	1700	1211	1700	1700	391
Volume to Capacity	0.07	0.10	0.00	0.14	0.00	0.19
Queue Length 95th (ft)	5	0	0	0	0	18
Control Delay (s)	3.0	0.0	0.0	0.0	0.0	16.4
Lane LOS	A				A	C
Approach Delay (s)	1.8		0.0		0.0	16.4
Approach LOS					A	C

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	35.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	242	28	105	29	202	31	90	875	28	12	1082	85
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	263	30	114	32	220	34	98	951	30	13	1176	92
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		998										
pX, platoon unblocked												
vC, conflicting volume	253			145			1467	930	72	1347	970	127
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	253			145			1467	930	72	1347	970	127
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	80			98			0	0	97	0	0	90
cM capacity (veh/h)	1309			1435			0	208	975	0	197	900

Direction, Lane #	SE 1	SE 2	NW 1	NW 2	NE 1	NE 2	NE 3	SW 1	SW 2	SW 3
Volume Total	278	129	141	143	98	634	347	13	784	484
Volume Left	263	0	32	0	98	0	0	13	0	0
Volume Right	0	114	0	34	0	0	30	0	0	92
cSH	1309	1700	1435	1700	0	208	223	0	197	231
Volume to Capacity	0.20	0.08	0.02	0.08	Err	3.05	1.56	Err	3.99	2.10
Queue Length 95th (ft)	19	0	2	0	Err	Err	540	Err	Err	915
Control Delay (s)	8.1	0.0	1.8	0.0	Err	Err	311.0	Err	Err	541.8
Lane LOS	A		A		F	F	F	F	F	F
Approach Delay (s)	5.5		0.9		Err			Err		
Approach LOS					F			F		

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	509	0	0	365	24	0	0	6	316	17	135
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	4.0
Lane Util. Factor		1.00			1.00				1.00		1.00	1.00
Frt		1.00			0.99				0.86		1.00	0.85
Flt Protected		1.00			1.00				1.00		0.95	1.00
Satd. Flow (prot)		2049			2032				1772		1956	1742
Flt Permitted		1.00			1.00				1.00		0.95	1.00
Satd. Flow (perm)		2049			2032				1772		1956	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	553	0	0	397	26	0	0	7	343	18	147
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	5	0	0	111
Lane Group Flow (vph)	0	553	0	0	421	0	0	0	2	0	361	36
Turn Type		NA			NA				custom	Perm	NA	Perm
Protected Phases					6						8	
Permitted Phases		2							4	8		8
Actuated Green, G (s)		71.4			71.4				25.6		25.6	25.6
Effective Green, g (s)		71.4			71.4				25.6		25.6	25.6
Actuated g/C Ratio		0.68			0.68				0.24		0.24	0.24
Clearance Time (s)		4.0			4.0				4.0		4.0	4.0
Vehicle Extension (s)		3.0			3.0				3.0		3.0	3.0
Lane Grp Cap (vph)		1393			1381				432		476	424
v/s Ratio Prot					0.21							
v/s Ratio Perm		c0.27							0.00		0.18	0.02
v/c Ratio		0.40			0.31				0.00		0.76	0.08
Uniform Delay, d1		7.4			6.8				30.0		36.8	30.7
Progression Factor		1.00			0.90				1.00		1.00	1.00
Incremental Delay, d2		0.8			0.6				0.0		6.8	0.1
Delay (s)		8.2			6.7				30.1		43.6	30.7
Level of Service		A			A				C		D	C
Approach Delay (s)		8.2			6.7			30.1			39.9	
Approach LOS		A			A			C			D	

Intersection Summary			
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection Sign configuration not allowed in HCM analysis.

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	603	489	0	0	0	351	0	201	210	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	655	532	0	0	0	382	0	218	228	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	0			532			2033	1842	266	1914	1842	0
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	0			532			2033	1842	266	1914	1842	0
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	60			100			100	0	69	0	100	100
cM capacity (veh/h)	1622			1032			23	44	732	0	44	1084

Direction, Lane #	SE 1	SE 2	SE 3	NW 1	NE 1	NE 2
Volume Total	655	266	266	382	146	301
Volume Left	655	0	0	0	0	0
Volume Right	0	0	0	382	0	228
cSH	1622	1700	1700	1700	44	154
Volume to Capacity	0.40	0.16	0.16	0.22	3.29	1.96
Queue Length 95th (ft)	50	0	0	0	Err	581
Control Delay (s)	8.7	0.0	0.0	0.0	Err	502.0
Lane LOS	A				F	F
Approach Delay (s)	4.8			0.0	3598.4	
Approach LOS					F	

Intersection Summary			
Average Delay	800.5		
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	198	361	15	15	209	45	10	8	20	46	31	73
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	215	392	16	16	227	49	11	9	22	50	34	79
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		477										
pX, platoon unblocked												
vC, conflicting volume	276			409			1211	1140	204	937	1123	252
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	276			409			1211	1140	204	937	1123	252
tC, single (s)	4.1			4.1			7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	83			99			88	95	97	72	80	89
cM capacity (veh/h)	1284			1147			90	164	802	177	168	748

Direction, Lane #	SE 1	SE 2	NW 1	NE 1	SW 1
Volume Total	411	212	292	41	163
Volume Left	215	0	16	11	50
Volume Right	0	16	49	22	79
cSH	1284	1700	1147	206	276
Volume to Capacity	0.17	0.13	0.01	0.20	0.59
Queue Length 95th (ft)	15	0	1	18	87
Control Delay (s)	5.1	0.0	0.6	26.8	35.2
Lane LOS	A		A	D	E
Approach Delay (s)	3.4		0.6	26.8	35.2
Approach LOS				D	E

Intersection Summary			
Average Delay	8.1		
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection Sign configuration not allowed in HCM analysis.

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	1043	856	595	520	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.7	4.1	4.1	4.1		
Lane Util. Factor	0.97	0.95	0.95	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3776	3893	3893	1742		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3776	3893	3893	1742		
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1134	930	647	565	0	0
RTOR Reduction (vph)	0	0	0	458	0	0
Lane Group Flow (vph)	1134	930	647	107	0	0
Turn Type	Prot	NA	NA	Perm		
Protected Phases	3	8	4			
Permitted Phases				4		
Actuated Green, G (s)	34.3	57.9	19.9	19.9		
Effective Green, g (s)	34.3	57.9	19.9	19.9		
Actuated g/C Ratio	0.33	0.55	0.19	0.19		
Clearance Time (s)	3.7	4.1	4.1	4.1		
Vehicle Extension (s)	8.0	0.2	4.1	4.1		
Lane Grp Cap (vph)	1233	2146	737	330		
v/s Ratio Prot	c0.30	0.24	c0.17			
v/s Ratio Perm				0.06		
v/c Ratio	0.92	0.43	0.88	0.32		
Uniform Delay, d1	34.0	13.9	41.4	36.7		
Progression Factor	0.88	1.03	0.94	1.62		
Incremental Delay, d2	7.8	0.0	10.3	0.7		
Delay (s)	37.7	14.3	49.4	60.3		
Level of Service	D	B	D	E		
Approach Delay (s)		27.2	54.5		0.0	
Approach LOS		C	D		A	

Intersection Summary			
HCM 2000 Control Delay	37.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations						
Volume (vph)	0	1151	339	1222	751	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.1	4.1	4.0	4.1	
Lane Util. Factor		0.95	0.91	0.91	0.97	
Frt		1.00	0.90	0.85	1.00	
Flt Protected		1.00	1.00	1.00	0.95	
Satd. Flow (prot)		3893	3369	1585	3776	
Flt Permitted		1.00	1.00	1.00	0.95	
Satd. Flow (perm)		3893	3369	1585	3776	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1251	368	1328	816	0
RTOR Reduction (vph)	0	0	312	0	0	0
Lane Group Flow (vph)	0	1251	720	664	816	0
Turn Type		NA	NA	Free	NA	
Protected Phases		6	6		8	
Permitted Phases				Free		
Actuated Green, G (s)		38.9	38.9	105.0	57.9	
Effective Green, g (s)		38.9	38.9	105.0	57.9	
Actuated g/C Ratio		0.37	0.37	1.00	0.55	
Clearance Time (s)		4.1	4.1		4.1	
Vehicle Extension (s)		3.0	3.0		0.2	
Lane Grp Cap (vph)		1442	1248	1585	2082	
v/s Ratio Prot		c0.32	0.21		0.22	
v/s Ratio Perm				c0.42		
v/c Ratio		0.87	0.58	0.42	0.39	
Uniform Delay, d1		30.7	26.5	0.0	13.5	
Progression Factor		0.66	1.00	1.00	0.34	
Incremental Delay, d2		6.7	1.9	0.8	0.0	
Delay (s)		26.8	28.4	0.8	4.7	
Level of Service		C	C	A	A	
Approach Delay (s)		26.8	17.6		4.7	
Approach LOS		C	B		A	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	11.9
Intersection Capacity Utilization	60.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
1: Tuolumne St

8/28/2013

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	142	620	121	389	236	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00
Frt		1.00	0.90		1.00	0.85
Flt Protected		0.99	1.00		0.95	1.00
Satd. Flow (prot)		2030	1838		1947	1742
Flt Permitted		0.77	1.00		0.95	1.00
Satd. Flow (perm)		1574	1838		1947	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	154	674	132	423	257	50
RTOR Reduction (vph)	0	0	91	0	0	33
Lane Group Flow (vph)	0	828	464	0	257	17
Turn Type	Perm	NA	NA		NA	custom
Protected Phases		6	2			
Permitted Phases	6				8	8
Actuated Green, G (s)		83.0	83.0		19.0	19.0
Effective Green, g (s)		83.0	83.0		19.0	19.0
Actuated g/C Ratio		0.75	0.75		0.17	0.17
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1187	1386		336	300
v/s Ratio Prot			0.25			
v/s Ratio Perm		c0.53			c0.13	0.01
v/c Ratio		0.70	0.33		0.76	0.06
Uniform Delay, d1		7.0	4.4		43.4	38.0
Progression Factor		1.00	1.00		0.98	0.89
Incremental Delay, d2		3.4	0.7		9.6	0.1
Delay (s)		10.4	5.1		52.3	33.9
Level of Service		B	A		D	C
Approach Delay (s)		10.4	5.1		49.3	
Approach LOS		B	A		D	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	14	57	14	14	78	21	21	400	21	14	861	14
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		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.98			0.97		1.00	0.99		1.00	1.00	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1988			1985		1947	2034		1947	2044	
Flt Permitted		0.95			0.97		0.16	1.00		0.44	1.00	
Satd. Flow (perm)		1910			1932		336	2034		911	2044	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	62	15	15	85	23	23	435	23	15	936	15
RTOR Reduction (vph)	0	6	0	0	7	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	86	0	0	116	0	23	456	0	15	950	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)		27.5			27.5		74.5	74.5		74.5	74.5	
Effective Green, g (s)		27.5			27.5		74.5	74.5		74.5	74.5	
Actuated g/C Ratio		0.25			0.25		0.68	0.68		0.68	0.68	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		477			483		227	1377		616	1384	
v/s Ratio Prot								0.22			c0.46	
v/s Ratio Perm		0.05			c0.06		0.07			0.02		
v/c Ratio		0.18			0.24		0.10	0.33		0.02	0.69	
Uniform Delay, d1		32.4			32.9		6.2	7.4		5.8	10.7	
Progression Factor		1.00			1.00		0.37	0.20		0.95	1.01	
Incremental Delay, d2		0.8			1.2		0.2	0.1		0.0	0.1	
Delay (s)		33.2			34.1		2.5	1.6		5.5	11.0	
Level of Service		C			C		A	A		A	B	
Approach Delay (s)		33.2			34.1			1.6			10.9	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.5%	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												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
Turn Type	Perm											
Protected Phases		6			2			4				
Permitted Phases	6											
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations										
Volume (vph)	93	14	370	209	14	0	0	0	536	68
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0					4.0	4.0
Lane Util. Factor	1.00			0.91					1.00	1.00
Frt	0.98			1.00					1.00	0.85
Flt Protected	0.96			0.97					0.95	1.00
Satd. Flow (prot)	1929			5406					1947	1742
Flt Permitted	0.96			0.97					0.95	1.00
Satd. Flow (perm)	1929			5406					1947	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	101	15	402	227	15	0	0	0	583	74
RTOR Reduction (vph)	8	0	0	1	0	0	0	0	0	0
Lane Group Flow (vph)	108	0	0	643	0	0	0	0	583	74
Turn Type	NA		Perm	NA					NA	Prot
Protected Phases	4!			6					8!	8
Permitted Phases			6							
Actuated Green, G (s)	44.1			57.9					44.1	44.1
Effective Green, g (s)	44.1			57.9					44.1	44.1
Actuated g/C Ratio	0.40			0.53					0.40	0.40
Clearance Time (s)	4.0			4.0					4.0	4.0
Vehicle Extension (s)	3.0			3.0					3.0	3.0
Lane Grp Cap (vph)	773			2845					780	698
v/s Ratio Prot	0.06								c0.30	0.04
v/s Ratio Perm				0.12						
v/c Ratio	0.14			0.23					0.75	0.11
Uniform Delay, d1	20.9			14.0					28.2	20.6
Progression Factor	1.00			1.00					0.71	0.79
Incremental Delay, d2	0.1			0.2					3.4	0.1
Delay (s)	21.0			14.2					23.3	16.3
Level of Service	C			B					C	B
Approach Delay (s)	21.0			14.2			0.0		22.5	
Approach LOS	C			B			A		C	

Intersection Summary			
HCM 2000 Control Delay	18.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.2%	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												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
Turn Type	Perm					custom						
Protected Phases		6						4				
Permitted Phases	6					2						
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	28	80	21	21	421	21	131	576	182
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	
Lane Util. Factor					1.00			1.00		1.00	1.00	
Frt					0.98			0.99		1.00	0.96	
Flt Protected					0.99			1.00		0.95	1.00	
Satd. Flow (prot)					1982			2032		1947	1975	
Flt Permitted					0.99			0.87		0.43	1.00	
Satd. Flow (perm)					1982			1778		878	1975	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	30	87	23	23	458	23	142	626	198
RTOR Reduction (vph)	0	0	0	0	5	0	0	2	0	0	16	0
Lane Group Flow (vph)	0	0	0	0	135	0	0	502	0	142	808	0
Turn Type				Perm	NA		Perm	NA		Perm	NA	
Protected Phases					2			4			8	
Permitted Phases				2			4			8		
Actuated Green, G (s)					37.1			64.9		64.9	64.9	
Effective Green, g (s)					37.1			64.9		64.9	64.9	
Actuated g/C Ratio					0.34			0.59		0.59	0.59	
Clearance Time (s)					4.0			4.0		4.0	4.0	
Vehicle Extension (s)					3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)					668			1049		518	1165	
v/s Ratio Prot											c0.41	
v/s Ratio Perm					0.07			0.28		0.16		
v/c Ratio					0.20			0.48		0.27	0.69	
Uniform Delay, d1					25.9			12.9		11.0	15.6	
Progression Factor					1.00			2.24		0.67	0.49	
Incremental Delay, d2					0.7			0.3		0.2	1.5	
Delay (s)					26.6			29.2		7.6	9.1	
Level of Service					C			C		A	A	
Approach Delay (s)		0.0			26.6			29.2			8.9	
Approach LOS		A			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
Turn Type	Perm											
Protected Phases		6			2			4				
Permitted Phases	6											
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	46	150	0	0	115	68	267	415	69	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.91				
Frt		1.00			0.94			0.99				
Flt Protected		0.99			1.00			0.98				
Satd. Flow (prot)		3498			3342			4928				
Flt Permitted		0.82			1.00			0.98				
Satd. Flow (perm)		2919			3342			4928				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	50	163	0	0	125	74	290	451	75	0	0	0
RTOR Reduction (vph)	0	0	0	0	61	0	0	7	0	0	0	0
Lane Group Flow (vph)	0	213	0	0	138	0	0	809	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		8			4		2	2				
Permitted Phases	8											
Actuated Green, G (s)		19.0			19.0			81.0				
Effective Green, g (s)		19.0			19.0			81.0				
Actuated g/C Ratio		0.17			0.17			0.74				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		0.2			0.2			0.2				
Lane Grp Cap (vph)		504			577			3628				
v/s Ratio Prot					0.04			c0.16				
v/s Ratio Perm		c0.07										
v/c Ratio		0.42			0.24			0.22				
Uniform Delay, d1		40.6			39.3			4.6				
Progression Factor		0.97			1.00			0.17				
Incremental Delay, d2		0.2			0.1			0.1				
Delay (s)		39.4			39.3			0.9				
Level of Service		D			D			A				
Approach Delay (s)		39.4			39.3			0.9			0.0	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.0%	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												
Volume (vph)	176	145	112	35	65	25	101	374	56	15	155	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6			4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.93			1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00			0.98	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1741			1831	1583	1770	1863	1583	1770	1811	
Flt Permitted	0.95	1.00			0.98	1.00	0.50	1.00	1.00	0.19	1.00	
Satd. Flow (perm)	1770	1741			1831	1583	935	1863	1583	361	1811	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	191	158	122	38	71	27	110	407	61	16	168	38
RTOR Reduction (vph)	0	18	0	0	0	24	0	0	42	0	9	0
Lane Group Flow (vph)	191	262	0	0	109	3	110	407	19	16	197	0
Turn Type	Split	NA		Split	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	2	2		1	1			8			8	
Permitted Phases						1	8		8	8		
Actuated Green, G (s)	55.7	55.7			11.0	11.0	30.3	30.3	30.3	30.3	30.3	
Effective Green, g (s)	55.7	55.7			11.0	11.0	30.3	30.3	30.3	30.3	30.3	
Actuated g/C Ratio	0.51	0.51			0.10	0.10	0.28	0.28	0.28	0.28	0.28	
Clearance Time (s)	4.6	4.6			4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Vehicle Extension (s)	3.8	3.8			2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	896	881			183	158	257	513	436	99	498	
v/s Ratio Prot	0.11	c0.15			c0.06			c0.22			0.11	
v/s Ratio Perm						0.00	0.12		0.01	0.04		
v/c Ratio	0.21	0.30			0.60	0.02	0.43	0.79	0.04	0.16	0.40	
Uniform Delay, d1	15.0	15.8			47.4	44.6	32.7	36.9	29.2	30.2	32.4	
Progression Factor	0.99	0.97			1.00	1.00	1.11	1.09	1.46	0.88	0.83	
Incremental Delay, d2	0.3	0.5			3.4	0.0	0.4	7.0	0.0	0.3	0.2	
Delay (s)	15.1	15.8			50.8	44.6	36.6	47.3	42.8	26.9	27.2	
Level of Service	B	B			D	D	D	D	D	C	C	
Approach Delay (s)		15.5			49.6			44.8			27.2	
Approach LOS		B			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	32.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	70.2%	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												
Volume (vph)	104	183	130	150	455	107	58	533	116	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2		4.2	4.2		4.2	4.2				
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00				
Frt	1.00	0.94		1.00	0.97		1.00	0.97				
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00				
Satd. Flow (prot)	1770	1747		1770	1810		1770	1813				
Flt Permitted	0.25	1.00		0.47	1.00		0.95	1.00				
Satd. Flow (perm)	460	1747		877	1810		1770	1813				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	113	199	141	163	495	116	63	579	126	0	0	0
RTOR Reduction (vph)	0	21	0	0	7	0	0	8	0	0	0	0
Lane Group Flow (vph)	113	319	0	163	604	0	63	697	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		2			6		8	8				
Permitted Phases	2			6								
Actuated Green, G (s)	55.4	55.4		55.4	55.4		46.2	46.2				
Effective Green, g (s)	55.4	55.4		55.4	55.4		46.2	46.2				
Actuated g/C Ratio	0.50	0.50		0.50	0.50		0.42	0.42				
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2				
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2				
Lane Grp Cap (vph)	231	879		441	911		743	761				
v/s Ratio Prot		0.18			c0.33		0.04	c0.38				
v/s Ratio Perm	0.25			0.19								
v/c Ratio	0.49	0.36		0.37	0.66		0.08	0.92				
Uniform Delay, d1	18.0	16.6		16.7	20.3		19.2	30.1				
Progression Factor	0.74	0.73		1.00	1.00		0.68	0.96				
Incremental Delay, d2	2.6	0.4		2.4	3.8		0.0	14.7				
Delay (s)	15.9	12.5		19.0	24.1		13.1	43.5				
Level of Service	B	B		B	C		B	D				
Approach Delay (s)		13.3			23.1			41.0			0.0	
Approach LOS		B			C			D			A	

Intersection Summary			
HCM 2000 Control Delay	27.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	98.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	68	435	185	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2			
Lane Util. Factor		1.00	0.95			
Frt		0.86	0.96			
Flt Protected		1.00	1.00			
Satd. Flow (prot)		1611	3381			
Flt Permitted		1.00	1.00			
Satd. Flow (perm)		1611	3381			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	74	473	201	0	0
RTOR Reduction (vph)	0	28	82	0	0	0
Lane Group Flow (vph)	0	46	592	0	0	0
Turn Type		custom	NA			
Protected Phases			8			
Permitted Phases		2				
Actuated Green, G (s)		69.0	32.6			
Effective Green, g (s)		69.0	32.6			
Actuated g/C Ratio		0.63	0.30			
Clearance Time (s)		4.2	4.2			
Vehicle Extension (s)		0.2	6.0			
Lane Grp Cap (vph)		1010	1002			
v/s Ratio Prot			c0.18			
v/s Ratio Perm		c0.03				
v/c Ratio		0.05	0.59			
Uniform Delay, d1		7.9	33.0			
Progression Factor		1.00	0.85			
Incremental Delay, d2		0.1	1.7			
Delay (s)		8.0	29.9			
Level of Service		A	C			
Approach Delay (s)	8.0		29.9		0.0	
Approach LOS	A		C		A	

Intersection Summary			
HCM 2000 Control Delay	27.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	29.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	100	117	197	53	297	32	30	614	28	51	1027	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.4			5.4		4.0	4.0		4.0	5.4	
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	0.95	
Frt		0.93			0.99		1.00	0.99		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3247			3470		1770	1851		1770	3453	
Flt Permitted		0.70			0.82		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2294			2849		1770	1851		1770	3453	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	127	214	58	323	35	33	667	30	55	1116	217
RTOR Reduction (vph)	0	107	0	0	6	0	0	2	0	0	16	0
Lane Group Flow (vph)	0	343	0	0	410	0	33	695	0	55	1317	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			2		7	4		3	8	
Permitted Phases	2			2								
Actuated Green, G (s)		39.0			39.0		3.6	50.8		6.8	52.6	
Effective Green, g (s)		39.0			39.0		3.6	50.8		6.8	52.6	
Actuated g/C Ratio		0.35			0.35		0.03	0.46		0.06	0.48	
Clearance Time (s)		5.4			5.4		4.0	4.0		4.0	5.4	
Vehicle Extension (s)		0.2			0.2		3.0	3.0		3.0	0.2	
Lane Grp Cap (vph)		813			1010		57	854		109	1651	
v/s Ratio Prot							0.02	0.38		c0.03	c0.38	
v/s Ratio Perm		c0.15			0.14							
v/c Ratio		0.42			0.41		0.58	0.81		0.50	0.80	
Uniform Delay, d1		26.9			26.8		52.5	25.5		50.0	24.2	
Progression Factor		1.00			1.62		0.98	0.92		0.79	0.80	
Incremental Delay, d2		1.6			1.2		12.9	5.8		3.4	2.4	
Delay (s)		28.5			44.6		64.6	29.3		43.0	21.8	
Level of Service		C			D		E	C		D	C	
Approach Delay (s)		28.5			44.6			30.9			22.6	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	78.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	35	242	96	127	72	51	100	685	75	115	1014	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.2		4.0	4.2		4.0	4.2	4.2	4.0	4.2	4.2
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.96		1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1784		1770	1747		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1784		1770	1747		1770	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	263	104	138	78	55	109	745	82	125	1102	130
RTOR Reduction (vph)	0	13	0	0	23	0	0	0	41	0	0	42
Lane Group Flow (vph)	38	354	0	138	110	0	109	745	41	125	1102	88
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			8
Actuated Green, G (s)	3.6	21.1		7.0	24.5		6.0	55.0	55.0	10.5	59.5	59.5
Effective Green, g (s)	3.6	21.1		7.0	24.5		6.0	55.0	55.0	10.5	59.5	59.5
Actuated g/C Ratio	0.03	0.19		0.06	0.22		0.05	0.50	0.50	0.10	0.54	0.54
Clearance Time (s)	4.0	4.2		4.0	4.2		4.0	4.2	4.2	4.0	4.2	4.2
Vehicle Extension (s)	3.0	0.2		3.0	0.2		3.0	0.2	0.2	3.0	0.2	0.2
Lane Grp Cap (vph)	57	342		112	389		96	931	791	168	1007	856
v/s Ratio Prot	0.02	c0.20		c0.08	c0.06		c0.06	0.40		c0.07	c0.59	
v/s Ratio Perm									0.03			0.06
v/c Ratio	0.67	1.04		1.23	0.28		1.14	0.80	0.05	0.74	1.09	0.10
Uniform Delay, d1	52.6	44.4		51.5	35.5		52.0	22.9	14.1	48.4	25.2	12.3
Progression Factor	1.00	1.00		0.73	1.18		1.19	0.62	2.15	1.32	0.58	0.47
Incremental Delay, d2	25.7	58.1		159.3	1.8		123.6	3.8	0.0	5.5	48.1	0.0
Delay (s)	78.3	102.5		197.1	43.5		185.4	18.1	30.4	69.6	62.8	5.7
Level of Service	E	F		F	D		F	B	C	E	E	A
Approach Delay (s)		100.3			121.7			38.7			58.0	
Approach LOS		F			F			D			E	

Intersection Summary			
HCM 2000 Control Delay	63.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	98.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	75	207	15	197	241	75	35	613	133	76	1078	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		4.2	4.2		4.0	4.2		4.2	4.2	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.99		1.00	0.96		1.00	0.97		1.00	0.98	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1827		1770	1796		1770	1813		1770	1824	
Flt Permitted		0.51		0.42	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		950		788	1796		1770	1813		1770	1824	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	225	16	214	262	82	38	666	145	83	1172	188
RTOR Reduction (vph)	0	1	0	0	11	0	0	6	0	0	5	0
Lane Group Flow (vph)	0	322	0	214	333	0	38	805	0	83	1355	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2			6								
Actuated Green, G (s)		31.2		31.2	31.2		3.6	48.6		17.6	62.8	
Effective Green, g (s)		31.2		31.2	31.2		3.6	48.6		17.6	62.8	
Actuated g/C Ratio		0.28		0.28	0.28		0.03	0.44		0.16	0.57	
Clearance Time (s)		4.2		4.2	4.2		4.0	4.2		4.2	4.2	
Vehicle Extension (s)		0.2		0.2	0.2		3.0	0.2		0.2	0.2	
Lane Grp Cap (vph)		269		223	509		57	801		283	1041	
v/s Ratio Prot					0.19		c0.02	0.44		0.05	c0.74	
v/s Ratio Perm		c0.34		0.27								
v/c Ratio		1.20		0.96	0.65		0.67	1.00		0.29	1.30	
Uniform Delay, d1		39.4		38.8	34.7		52.6	30.7		40.7	23.6	
Progression Factor		1.00		0.87	0.90		1.29	0.47		1.43	0.43	
Incremental Delay, d2		118.4		42.2	1.9		22.0	30.3		0.0	136.5	
Delay (s)		157.8		76.1	33.2		89.9	44.6		58.2	146.7	
Level of Service		F		E	C		F	D		E	F	
Approach Delay (s)		157.8			49.6			46.6			141.6	
Approach LOS		F			D			D			F	

Intersection Summary			
HCM 2000 Control Delay	101.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.6
Intersection Capacity Utilization	124.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL2	SBL	SBR	SBR2	SEL	SET	SER	NWL	NWT	NWR	NET	NER
Lane Configurations												
Volume (vph)	25	294	1535	3	40	25	40	23	30	17	523	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.9	4.9			4.2			4.0		4.6	
Lane Util. Factor		1.00	0.88			1.00			1.00		1.00	
Frt		1.00	0.85			0.95			0.97		0.99	
Flt Protected		0.95	1.00			0.98			0.98		1.00	
Satd. Flow (prot)		1770	2787			1734			1774		1841	
Flt Permitted		0.95	1.00			0.84			0.98		1.00	
Satd. Flow (perm)		1770	2787			1489			1774		1841	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	320	1668	3	43	27	43	25	33	18	568	54
RTOR Reduction (vph)	0	0	57	0	0	20	0	0	0	0	3	0
Lane Group Flow (vph)	0	347	1614	0	0	93	0	0	76	0	619	0
Turn Type	Perm	NA	Prot		Perm	NA		Split	NA		NA	
Protected Phases		2	2			3		1	1		4	
Permitted Phases	2				3							
Actuated Green, G (s)		44.9	44.9			6.0			6.0		35.4	
Effective Green, g (s)		44.9	44.9			6.0			6.0		35.4	
Actuated g/C Ratio		0.41	0.41			0.05			0.05		0.32	
Clearance Time (s)		4.9	4.9			4.2			4.0		4.6	
Vehicle Extension (s)		4.0	4.0			2.0			2.0		4.0	
Lane Grp Cap (vph)		722	1137			81			96		592	
v/s Ratio Prot			c0.58						c0.04		0.34	
v/s Ratio Perm		0.20				c0.06						
v/c Ratio		0.48	1.42			1.15			0.79		1.04	
Uniform Delay, d1		24.0	32.5			52.0			51.4		37.3	
Progression Factor		1.00	1.00			1.00			1.00		0.69	
Incremental Delay, d2		2.3	193.8			146.2			32.7		46.9	
Delay (s)		26.2	226.4			198.2			84.1		72.5	
Level of Service		C	F			F			F		E	
Approach Delay (s)		192.0				198.2			84.1		72.5	
Approach LOS		F				F			F		E	

Intersection Summary			
HCM 2000 Control Delay	159.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.7
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SWL	SWT
Lane Configurations		
Volume (vph)	97	221
Ideal Flow (vphpl)	1900	1900
Lane Width	12	12
Total Lost time (s)	4.6	4.6
Lane Util. Factor	1.00	1.00
Frt	1.00	1.00
Flt Protected	0.95	1.00
Satd. Flow (prot)	1770	1863
Flt Permitted	0.11	1.00
Satd. Flow (perm)	210	1863
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	105	240
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	105	240
Turn Type	Perm	NA
Protected Phases		4
Permitted Phases	4	
Actuated Green, G (s)	35.4	35.4
Effective Green, g (s)	35.4	35.4
Actuated g/C Ratio	0.32	0.32
Clearance Time (s)	4.6	4.6
Vehicle Extension (s)	4.0	4.0
Lane Grp Cap (vph)	67	599
v/s Ratio Prot		0.13
v/s Ratio Perm	c0.50	
v/c Ratio	1.57	0.40
Uniform Delay, d1	37.3	29.0
Progression Factor	1.13	1.10
Incremental Delay, d2	310.8	0.5
Delay (s)	352.8	32.5
Level of Service	F	C
Approach Delay (s)		130.0
Approach LOS		F

Intersection Summary

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	NEL2	NEL
Lane Configurations												
Volume (vph)	135	375	21	72	94	59	225	74	488	22	203	225
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
Lane Util. Factor		1.00			1.00				0.95			1.00
Frt		0.99			0.96				1.00			0.96
Flt Protected		0.99			0.98				0.98			0.96
Satd. Flow (prot)		2012			1945				3807			1904
Flt Permitted		0.81			0.67				0.98			0.96
Satd. Flow (perm)		1660			1331				3807			1904
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	147	408	23	78	102	64	245	80	530	24	221	245
RTOR Reduction (vph)	0	6	0	0	13	0	0	0	1	0	0	0
Lane Group Flow (vph)	0	572	0	0	231	0	0	0	878	0	0	640
Turn Type	Perm	NA		Perm	NA		Perm	Perm	NA		Perm	NA
Protected Phases		4			8				2!			2!
Permitted Phases	4			8			2!	2!			2!	
Actuated Green, G (s)		43.3			43.3				58.7			58.7
Effective Green, g (s)		43.3			43.3				58.7			58.7
Actuated g/C Ratio		0.39			0.39				0.53			0.53
Clearance Time (s)		4.0			4.0				4.0			4.0
Vehicle Extension (s)		3.0			3.0				3.0			3.0
Lane Grp Cap (vph)		653			523				2031			1016
v/s Ratio Prot												
v/s Ratio Perm		c0.34			0.17				0.23			0.34
v/c Ratio		0.88			0.44				0.43			0.63
Uniform Delay, d1		30.9			24.5				15.5			18.0
Progression Factor		1.00			1.00				1.00			1.47
Incremental Delay, d2		12.6			0.6				0.7			0.3
Delay (s)		43.4			25.1				16.2			26.8
Level of Service		D			C				B			C
Approach Delay (s)		43.4			25.1				16.2			26.8
Approach LOS		D			C				B			C

Intersection Summary			
HCM 2000 Control Delay	26.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.3%	ICU Level of Service	G
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	NER
Lane Configurations	
Volume (vph)	160
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	174
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	212	33	67	150	293	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	0.98			1.00	1.00	0.85
Flt Protected	1.00			0.98	0.95	1.00
Satd. Flow (prot)	3814			3834	1947	1742
Flt Permitted	1.00			0.79	0.95	1.00
Satd. Flow (perm)	3814			3071	1947	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	230	36	73	163	318	153
RTOR Reduction (vph)	5	0	0	0	0	119
Lane Group Flow (vph)	261	0	0	236	318	34
Turn Type	NA		Perm	NA	NA	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	77.4			77.4	24.6	24.6
Effective Green, g (s)	77.4			77.4	24.6	24.6
Actuated g/C Ratio	0.70			0.70	0.22	0.22
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2683			2160	435	389
v/s Ratio Prot	0.07				c0.16	
v/s Ratio Perm				c0.08		0.02
v/c Ratio	0.10			0.11	0.73	0.09
Uniform Delay, d1	5.2			5.2	39.6	33.8
Progression Factor	1.00			1.00	1.49	4.74
Incremental Delay, d2	0.1			0.1	6.1	0.1
Delay (s)	5.3			5.3	65.2	160.5
Level of Service	A			A	E	F
Approach Delay (s)	5.3			5.3	96.2	
Approach LOS	A			A	F	

Intersection Summary			
HCM 2000 Control Delay	49.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	307	254	286	0	0	0	0	385	50	302	603	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			4.0	
Lane Util. Factor	0.97	1.00						1.00			1.00	
Frt	1.00	0.92						0.98			1.00	
Flt Protected	0.95	1.00						1.00			0.98	
Satd. Flow (prot)	3776	1886						2017			2015	
Flt Permitted	0.95	1.00						1.00			0.62	
Satd. Flow (perm)	3776	1886						2017			1278	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	334	276	311	0	0	0	0	418	54	328	655	0
RTOR Reduction (vph)	0	37	0	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	334	550	0	0	0	0	0	468	0	0	983	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		6						4			8	
Permitted Phases	6									8		
Actuated Green, G (s)	28.0	28.0						74.0			74.0	
Effective Green, g (s)	28.0	28.0						74.0			74.0	
Actuated g/C Ratio	0.25	0.25						0.67			0.67	
Clearance Time (s)	4.0	4.0						4.0			4.0	
Vehicle Extension (s)	3.0	3.0						3.0			3.0	
Lane Grp Cap (vph)	961	480						1356			859	
v/s Ratio Prot		c0.29						0.23				
v/s Ratio Perm	0.09										c0.77	
v/c Ratio	0.35	1.15						0.34			1.14	
Uniform Delay, d1	33.5	41.0						7.7			18.0	
Progression Factor	1.00	1.00						0.58			0.72	
Incremental Delay, d2	1.0	88.0						0.1			75.6	
Delay (s)	34.5	129.0						4.6			88.5	
Level of Service	C	F						A			F	
Approach Delay (s)		94.8			0.0			4.6			88.5	
Approach LOS		F			A			A			F	

Intersection Summary			
HCM 2000 Control Delay	74.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	112.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	23	222	35	50	642	0	0	882	396
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
Lane Util. Factor					0.95			0.95			0.95	0.95
Frt					0.98			1.00			0.99	0.85
Flt Protected					1.00			1.00			1.00	1.00
Satd. Flow (prot)					3804			3879			1934	1655
Flt Permitted					1.00			0.73			1.00	1.00
Satd. Flow (perm)					3804			2835			1934	1655
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	25	241	38	54	698	0	0	959	430
RTOR Reduction (vph)	0	0	0	0	10	0	0	0	0	0	2	47
Lane Group Flow (vph)	0	0	0	0	294	0	0	752	0	0	1000	340
Turn Type				Perm	NA		Perm	NA			NA	Perm
Protected Phases					2			4			8	
Permitted Phases				2			4					8
Actuated Green, G (s)					21.3			80.7			80.7	80.7
Effective Green, g (s)					21.3			80.7			80.7	80.7
Actuated g/C Ratio					0.19			0.73			0.73	0.73
Clearance Time (s)					4.0			4.0			4.0	4.0
Vehicle Extension (s)					3.0			3.0			3.0	3.0
Lane Grp Cap (vph)					736			2079			1418	1214
v/s Ratio Prot											c0.52	
v/s Ratio Perm					0.08			0.27				0.21
v/c Ratio					0.40			0.36			0.71	0.28
Uniform Delay, d1					38.8			5.3			8.1	4.9
Progression Factor					1.41			1.17			0.82	0.53
Incremental Delay, d2					1.6			0.1			1.2	0.1
Delay (s)					56.3			6.3			7.8	2.7
Level of Service					E			A			A	A
Approach Delay (s)		0.0			56.3			6.3			6.4	
Approach LOS		A			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.4%	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												
Volume (vph)	210	396	0	0	0	0	0	696	34	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				
Lane Util. Factor		0.95						0.91				
Frt		1.00						0.99				
Flt Protected		0.98						1.00				
Satd. Flow (prot)		3827						5555				
Flt Permitted		0.98						1.00				
Satd. Flow (perm)		3827						5555				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	228	430	0	0	0	0	0	757	37	0	0	0
RTOR Reduction (vph)	0	30	0	0	0	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	628	0	0	0	0	0	788	0	0	0	0
Turn Type	Split	NA						NA				
Protected Phases	6	6						4				
Permitted Phases												
Actuated Green, G (s)		78.4						23.6				
Effective Green, g (s)		78.4						23.6				
Actuated g/C Ratio		0.71						0.21				
Clearance Time (s)		4.0						4.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		2727						1191				
v/s Ratio Prot		c0.16						c0.14				
v/s Ratio Perm												
v/c Ratio		0.23						0.66				
Uniform Delay, d1		5.4						39.5				
Progression Factor		1.58						1.00				
Incremental Delay, d2		0.0						1.4				
Delay (s)		8.6						40.9				
Level of Service		A						D				
Approach Delay (s)		8.6			0.0			40.9			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	0	35	55	210	696	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			4.0				
Lane Util. Factor					0.95			0.91				
Frt					0.91			1.00				
Flt Protected					1.00			0.99				
Satd. Flow (prot)					3536			5530				
Flt Permitted					1.00			0.99				
Satd. Flow (perm)					3536			5530				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	38	60	228	757	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	19	0	0	111	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	79	0	0	874	0	0	0	0
Turn Type					NA		Split	NA				
Protected Phases					2		4	4				
Permitted Phases												
Actuated Green, G (s)					74.7			27.3				
Effective Green, g (s)					74.7			27.3				
Actuated g/C Ratio					0.68			0.25				
Clearance Time (s)					4.0			4.0				
Vehicle Extension (s)					3.0			3.0				
Lane Grp Cap (vph)					2401			1372				
v/s Ratio Prot					c0.02			c0.16				
v/s Ratio Perm												
v/c Ratio					0.03			0.64				
Uniform Delay, d1					5.8			36.9				
Progression Factor					1.00			0.36				
Incremental Delay, d2					0.0			0.9				
Delay (s)					5.8			14.2				
Level of Service					A			B				
Approach Delay (s)		0.0			5.8			14.2			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.19		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	27.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	80	169	716	26	80	1197
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	0.95
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1947	1742	2039		1947	3893
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1947	1742	2039		1947	3893
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	184	778	28	87	1301
RTOR Reduction (vph)	0	127	2	0	0	0
Lane Group Flow (vph)	87	57	804	0	87	1301
Turn Type	NA	Prot	NA		Prot	NA
Protected Phases	2	2	4		3	8
Permitted Phases						
Actuated Green, G (s)	34.3	34.3	54.8		8.9	67.7
Effective Green, g (s)	34.3	34.3	54.8		8.9	67.7
Actuated g/C Ratio	0.31	0.31	0.50		0.08	0.62
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	607	543	1015		157	2395
v/s Ratio Prot	c0.04	0.03	c0.39		0.04	c0.33
v/s Ratio Perm						
v/c Ratio	0.14	0.11	0.79		0.55	0.54
Uniform Delay, d1	27.3	26.9	22.9		48.6	12.2
Progression Factor	1.34	3.40	1.65		1.16	1.51
Incremental Delay, d2	0.5	0.4	3.2		0.4	0.0
Delay (s)	37.1	92.0	40.9		56.7	18.5
Level of Service	D	F	D		E	B
Approach Delay (s)	74.4		40.9			20.9
Approach LOS	E		D			C

Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.1%	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												
Volume (vph)	81	25	0	0	80	50	120	294	115	50	0	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	4.0	4.0	4.0		4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00	1.00	1.00		1.00
Frt	1.00	1.00			0.95		1.00	1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (prot)	1947	2049			1943		1947	2049	1742	1947		1742
Flt Permitted	0.67	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (perm)	1367	2049			1943		1947	2049	1742	1947		1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	88	27	0	0	87	54	130	320	125	54	0	54
RTOR Reduction (vph)	0	0	0	0	11	0	0	0	98	0	0	46
Lane Group Flow (vph)	88	27	0	0	130	0	130	320	27	54	0	8
Turn Type	Perm	NA			NA		Prot	NA	Perm	Prot		custom
Protected Phases		6			2		7	4		3		8
Permitted Phases	6								4			
Actuated Green, G (s)	67.1	67.1			67.1		14.1	23.6	23.6	7.3		16.8
Effective Green, g (s)	67.1	67.1			67.1		14.1	23.6	23.6	7.3		16.8
Actuated g/C Ratio	0.61	0.61			0.61		0.13	0.21	0.21	0.07		0.15
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	833	1249			1185		249	439	373	129		266
v/s Ratio Prot		0.01			c0.07		c0.07	c0.16		0.03		0.00
v/s Ratio Perm	0.06								0.02			
v/c Ratio	0.11	0.02			0.11		0.52	0.73	0.07	0.42		0.03
Uniform Delay, d1	8.9	8.5			9.0		44.8	40.2	34.5	49.3		39.7
Progression Factor	0.25	0.25			1.00		1.42	1.06	1.18	1.00		4.20
Incremental Delay, d2	0.2	0.0			0.0		1.9	5.9	0.1	2.2		0.0
Delay (s)	2.5	2.1			9.0		65.7	48.7	40.6	51.3		166.6
Level of Service	A	A			A		E	D	D	D		F
Approach Delay (s)		2.4			9.0			50.8			108.9	
Approach LOS		A			A			D			F	

Intersection Summary			
HCM 2000 Control Delay	45.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	25	75	39	50	15	75	50	669	50	75	1160	55
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		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.95		1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	1945		1947	1792		1947	2028		1947	2035	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1947	1945		1947	1792		1947	2028		1947	2035	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	82	42	54	16	82	54	727	54	82	1261	60
RTOR Reduction (vph)	0	18	0	0	72	0	0	2	0	0	1	0
Lane Group Flow (vph)	27	106	0	54	26	0	54	779	0	82	1320	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	2.4	13.0		3.2	13.8		5.6	69.8		8.0	72.2	
Effective Green, g (s)	2.4	13.0		3.2	13.8		5.6	69.8		8.0	72.2	
Actuated g/C Ratio	0.02	0.12		0.03	0.13		0.05	0.63		0.07	0.66	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	42	229		56	224		99	1286		141	1335	
v/s Ratio Prot	0.01	c0.05		c0.03	0.01		0.03	0.38		c0.04	c0.65	
v/s Ratio Perm												
v/c Ratio	0.64	0.46		0.96	0.12		0.55	0.61		0.58	0.99	
Uniform Delay, d1	53.4	45.3		53.3	42.7		51.0	11.9		49.4	18.5	
Progression Factor	1.00	1.00		1.26	3.46		1.04	0.38		0.93	0.78	
Incremental Delay, d2	29.0	6.6		106.0	1.1		3.9	0.5		0.6	5.1	
Delay (s)	82.4	51.9		173.5	148.9		56.8	5.1		46.3	19.5	
Level of Service	F	D		F	F		E	A		D	B	
Approach Delay (s)		57.3			157.6			8.4			21.1	
Approach LOS		E			F			A			C	

Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	170	30	60	537	220	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.97	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1947	1742	1947	2049	1978	
Flt Permitted	0.95	1.00	0.42	1.00	1.00	
Satd. Flow (perm)	1947	1742	869	2049	1978	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	33	65	584	239	82
RTOR Reduction (vph)	0	15	0	0	20	0
Lane Group Flow (vph)	185	18	65	584	301	0
Turn Type	NA	Perm	Perm	NA	NA	
Protected Phases	6			4	8	
Permitted Phases		6	4			
Actuated Green, G (s)	59.5	59.5	42.5	42.5	42.5	
Effective Green, g (s)	59.5	59.5	42.5	42.5	42.5	
Actuated g/C Ratio	0.54	0.54	0.39	0.39	0.39	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	1053	942	335	791	764	
v/s Ratio Prot	c0.10			c0.29	0.15	
v/s Ratio Perm		0.01	0.07			
v/c Ratio	0.18	0.02	0.19	0.74	0.39	
Uniform Delay, d1	12.8	11.7	22.4	29.0	24.4	
Progression Factor	2.11	3.76	1.71	1.58	0.30	
Incremental Delay, d2	0.3	0.0	0.3	3.4	0.3	
Delay (s)	27.4	44.1	38.5	49.2	7.8	
Level of Service	C	D	D	D	A	
Approach Delay (s)	29.9			48.2	7.8	
Approach LOS	C			D	A	

Intersection Summary			
HCM 2000 Control Delay	33.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	44	6	35	46	25	25	638	100	172	1286	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		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.99			0.97		1.00	0.98		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1999			1952		1947	2007		1947	2041	
Flt Permitted		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1999			1952		1947	2007		1947	2041	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	48	7	38	50	27	27	693	109	187	1398	38
RTOR Reduction (vph)	0	4	0	0	11	0	0	4	0	0	1	0
Lane Group Flow (vph)	0	67	0	0	104	0	27	798	0	187	1435	0
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	6	6		2	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)		9.1			9.5		4.6	59.4		16.0	70.8	
Effective Green, g (s)		9.1			9.5		4.6	59.4		16.0	70.8	
Actuated g/C Ratio		0.08			0.09		0.04	0.54		0.15	0.64	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		165			168		81	1083		283	1313	
v/s Ratio Prot		c0.03			c0.05		0.01	0.40		c0.10	c0.70	
v/s Ratio Perm												
v/c Ratio		0.41			0.62		0.33	0.74		0.66	1.09	
Uniform Delay, d1		47.9			48.5		51.2	19.3		44.4	19.6	
Progression Factor		1.00			1.34		0.93	0.64		1.20	0.51	
Incremental Delay, d2		1.6			15.4		0.6	0.6		0.5	43.3	
Delay (s)		49.5			80.6		48.1	13.0		54.0	53.2	
Level of Service		D			F		D	B		D	D	
Approach Delay (s)		49.5			80.6			14.1			53.3	
Approach LOS		D			F			B			D	

Intersection Summary			
HCM 2000 Control Delay	42.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	92.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	41	275	0	0	35	15	71	594	59	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			0.95				
Frt		1.00			0.96			0.99				
Flt Protected		0.99			1.00			1.00				
Satd. Flow (prot)		2036			1967			3827				
Flt Permitted		0.96			1.00			1.00				
Satd. Flow (perm)		1967			1967			3827				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	299	0	0	38	16	77	646	64	0	0	0
RTOR Reduction (vph)	0	0	0	0	6	0	0	8	0	0	0	0
Lane Group Flow (vph)	0	344	0	0	48	0	0	779	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		6			2		4	4				
Permitted Phases	6											
Actuated Green, G (s)		71.4			71.4			30.6				
Effective Green, g (s)		71.4			71.4			30.6				
Actuated g/C Ratio		0.65			0.65			0.28				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			3.0				
Lane Grp Cap (vph)		1276			1276			1064				
v/s Ratio Prot					0.02			c0.20				
v/s Ratio Perm		c0.17										
v/c Ratio		0.27			0.04			0.73				
Uniform Delay, d1		8.2			6.9			36.0				
Progression Factor		1.33			1.00			1.27				
Incremental Delay, d2		0.4			0.1			1.7				
Delay (s)		11.3			7.0			47.2				
Level of Service		B			A			D				
Approach Delay (s)		11.3			7.0			47.2			0.0	
Approach LOS		B			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	35.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	29	32	0	0	0	25	568	85	135	1567	15
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	4.0	
Lane Util. Factor		1.00					1.00	1.00		1.00	1.00	
Frt		0.94					1.00	0.98		1.00	1.00	
Flt Protected		0.99					0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1914					1947	2009		1947	2046	
Flt Permitted		0.99					0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1914					1947	2009		1947	2046	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	32	35	0	0	0	27	617	92	147	1703	16
RTOR Reduction (vph)	0	26	0	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	57	0	0	0	0	27	705	0	147	1719	0
Turn Type	Perm	NA					Prot	NA		Prot	NA	
Protected Phases		6					7	4		3	8	
Permitted Phases	6											
Actuated Green, G (s)		7.8					4.5	76.7		13.5	85.7	
Effective Green, g (s)		7.8					4.5	76.7		13.5	85.7	
Actuated g/C Ratio		0.07					0.04	0.70		0.12	0.78	
Clearance Time (s)		4.0					4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0					3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		135					79	1400		238	1594	
v/s Ratio Prot							0.01	0.35		c0.08	c0.84	
v/s Ratio Perm		0.03										
v/c Ratio		0.42					0.34	0.50		0.62	1.08	
Uniform Delay, d1		48.9					51.3	7.8		45.8	12.1	
Progression Factor		1.00					0.77	0.69		1.25	0.33	
Incremental Delay, d2		9.4					1.7	0.2		0.4	36.6	
Delay (s)		58.3					41.2	5.5		57.5	40.5	
Level of Service		E					D	A		E	D	
Approach Delay (s)		58.3			0.0			6.8			41.9	
Approach LOS		E			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	32.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	43	206	0	0	0	0	0	605	65	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				
Lane Util. Factor		0.95						0.95				
Frt		1.00						0.99				
Flt Protected		0.99						1.00				
Satd. Flow (prot)		3860						3836				
Flt Permitted		0.99						1.00				
Satd. Flow (perm)		3860						3836				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	224	0	0	0	0	0	658	71	0	0	0
RTOR Reduction (vph)	0	8	0	0	0	0	0	14	0	0	0	0
Lane Group Flow (vph)	0	263	0	0	0	0	0	715	0	0	0	0
Turn Type	Perm	NA						NA				
Protected Phases		6						4				
Permitted Phases	6											
Actuated Green, G (s)		72.6						29.4				
Effective Green, g (s)		72.6						29.4				
Actuated g/C Ratio		0.66						0.27				
Clearance Time (s)		4.0						4.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		2547						1025				
v/s Ratio Prot								c0.19				
v/s Ratio Perm		0.07										
v/c Ratio		0.10						0.70				
Uniform Delay, d1		6.8						36.3				
Progression Factor		1.97						0.89				
Incremental Delay, d2		0.1						1.9				
Delay (s)		13.5						34.3				
Level of Service		B						C				
Approach Delay (s)		13.5			0.0			34.3			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	28.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	32.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	71	21	53	39	25	25	533	25	207	1537	75
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		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.94		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	1978		1947	1929		1947	2035		1947	2035	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1947	1978		1947	1929		1947	2035		1947	2035	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	77	23	58	42	27	27	579	27	225	1671	82
RTOR Reduction (vph)	0	10	0	0	22	0	0	1	0	0	1	0
Lane Group Flow (vph)	16	90	0	58	47	0	27	605	0	225	1752	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	1.6	8.7		4.0	11.1		4.1	63.7		17.6	77.2	
Effective Green, g (s)	1.6	8.7		4.0	11.1		4.1	63.7		17.6	77.2	
Actuated g/C Ratio	0.01	0.08		0.04	0.10		0.04	0.58		0.16	0.70	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	28	156		70	194		72	1178		311	1428	
v/s Ratio Prot	0.01	c0.05		c0.03	0.02		0.01	0.30		c0.12	c0.86	
v/s Ratio Perm												
v/c Ratio	0.57	0.58		0.83	0.24		0.38	0.51		0.72	1.23	
Uniform Delay, d1	53.9	48.9		52.7	45.6		51.7	13.9		43.9	16.4	
Progression Factor	1.00	1.00		1.05	1.30		0.90	0.92		1.02	1.22	
Incremental Delay, d2	25.2	14.6		52.3	2.9		2.9	0.3		0.8	102.7	
Delay (s)	79.0	63.4		107.5	61.9		49.2	13.0		45.5	122.7	
Level of Service	E	E		F	E		D	B		D	F	
Approach Delay (s)		65.6			82.7			14.6			113.9	
Approach LOS		E			F			B			F	

Intersection Summary			
HCM 2000 Control Delay	88.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	108.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	70	233	0	0	63	24	54	526	48	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	4.0		4.0				
Lane Util. Factor	1.00	1.00			1.00	1.00		0.95				
Frt	1.00	1.00			1.00	0.85		0.99				
Flt Protected	0.95	1.00			1.00	1.00		1.00				
Satd. Flow (prot)	1947	2049			2049	1742		3832				
Flt Permitted	0.71	1.00			1.00	1.00		1.00				
Satd. Flow (perm)	1460	2049			2049	1742		3832				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	253	0	0	68	26	59	572	52	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	8	0	8	0	0	0	0
Lane Group Flow (vph)	76	253	0	0	68	18	0	675	0	0	0	0
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		6			2			4				
Permitted Phases	6					2	4					
Actuated Green, G (s)	75.0	75.0			75.0	75.0		27.0				
Effective Green, g (s)	75.0	75.0			75.0	75.0		27.0				
Actuated g/C Ratio	0.68	0.68			0.68	0.68		0.25				
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				
Lane Grp Cap (vph)	995	1397			1397	1187		940				
v/s Ratio Prot		c0.12			0.03							
v/s Ratio Perm	0.05					0.01		0.18				
v/c Ratio	0.08	0.18			0.05	0.01		0.72				
Uniform Delay, d1	5.9	6.4			5.8	5.6		38.0				
Progression Factor	2.71	2.98			1.00	1.00		0.84				
Incremental Delay, d2	0.1	0.2			0.1	0.0		2.6				
Delay (s)	16.1	19.2			5.8	5.6		34.6				
Level of Service	B	B			A	A		C				
Approach Delay (s)		18.4			5.8			34.6			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	27.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Volume (vph)	65	678	145	578	175	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		1.00	1.00		1.00	1.00
Frt		1.00	0.89		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2040	1828		1947	1742
Flt Permitted		0.88	1.00		0.95	1.00
Satd. Flow (perm)		1802	1828		1947	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	71	737	158	628	190	71
RTOR Reduction (vph)	0	0	118	0	0	61
Lane Group Flow (vph)	0	808	668	0	190	10
Turn Type	Perm	NA	NA		NA	Perm
Protected Phases		6	2		8	
Permitted Phases	6					8
Actuated Green, G (s)		81.6	81.6		15.4	15.4
Effective Green, g (s)		81.6	81.6		15.4	15.4
Actuated g/C Ratio		0.78	0.78		0.15	0.15
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1400	1420		285	255
v/s Ratio Prot			0.37		c0.10	
v/s Ratio Perm		c0.45				0.01
v/c Ratio		0.58	0.47		0.67	0.04
Uniform Delay, d1		4.7	4.1		42.4	38.5
Progression Factor		1.00	1.00		1.14	1.35
Incremental Delay, d2		1.7	1.1		5.6	0.1
Delay (s)		6.5	5.2		53.9	51.9
Level of Service		A	A		D	D
Approach Delay (s)		6.5	5.2		53.3	
Approach LOS		A	A		D	

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
Turn Type	Perm											
Protected Phases		6			2			4				
Permitted Phases	6											
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	47	101	70	54	101	39	23	297	47	39	706	39
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		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.97		1.00	0.98		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1939			1966		1947	2007		1947	2033	
Flt Permitted		0.90			0.86		0.12	1.00		0.45	1.00	
Satd. Flow (perm)		1760			1716		246	2007		923	2033	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	110	76	59	110	42	25	323	51	42	767	42
RTOR Reduction (vph)	0	14	0	0	7	0	0	7	0	0	2	0
Lane Group Flow (vph)	0	223	0	0	204	0	25	367	0	42	807	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)		41.9			41.9		55.1	55.1		55.1	55.1	
Effective Green, g (s)		41.9			41.9		55.1	55.1		55.1	55.1	
Actuated g/C Ratio		0.40			0.40		0.52	0.52		0.52	0.52	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		702			684		129	1053		484	1066	
v/s Ratio Prot								0.18			c0.40	
v/s Ratio Perm		c0.13			0.12		0.10			0.05		
v/c Ratio		0.32			0.30		0.19	0.35		0.09	0.76	
Uniform Delay, d1		21.7			21.5		13.2	14.5		12.4	19.7	
Progression Factor		1.00			1.00		0.23	0.17		0.98	0.97	
Incremental Delay, d2		1.2			1.1		0.7	0.2		0.0	1.4	
Delay (s)		22.9			22.6		3.7	2.6		12.3	20.4	
Level of Service		C			C		A	A		B	C	
Approach Delay (s)		22.9			22.6			2.7			20.0	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.9%	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												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
Turn Type	Perm											
Protected Phases		6			2			4				
Permitted Phases	6											
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	31	124	16	6	351	12	180	413	267
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	
Lane Util. Factor					1.00			1.00		1.00	1.00	
Frt					0.99			1.00		1.00	0.94	
Flt Protected					0.99			1.00		0.95	1.00	
Satd. Flow (prot)					2005			2038		1947	1928	
Flt Permitted					0.99			0.99		0.45	1.00	
Satd. Flow (perm)					2005			2017		928	1928	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	34	135	17	7	382	13	196	449	290
RTOR Reduction (vph)	0	0	0	0	3	0	0	2	0	0	35	0
Lane Group Flow (vph)	0	0	0	0	183	0	0	400	0	196	704	0
Turn Type				Perm	NA		Perm	NA		Perm	NA	
Protected Phases					2			4			8	
Permitted Phases				2			4			8		
Actuated Green, G (s)					44.0			53.0		53.0	53.0	
Effective Green, g (s)					44.0			53.0		53.0	53.0	
Actuated g/C Ratio					0.42			0.50		0.50	0.50	
Clearance Time (s)					4.0			4.0		4.0	4.0	
Vehicle Extension (s)					3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)					840			1018		468	973	
v/s Ratio Prot											c0.37	
v/s Ratio Perm					0.09			0.20		0.21		
v/c Ratio					0.22			0.39		0.42	0.72	
Uniform Delay, d1					19.5			16.1		16.3	20.3	
Progression Factor					1.00			0.92		0.58	0.46	
Incremental Delay, d2					0.6			0.3		0.5	2.3	
Delay (s)					20.1			15.0		10.0	11.6	
Level of Service					C			B		B	B	
Approach Delay (s)		0.0			20.1			15.0			11.2	
Approach LOS		A			C			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)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)												
Lane Util. Factor												
Frt												
Flt Protected												
Satd. Flow (prot)												
Flt Permitted												
Satd. Flow (perm)												
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	0	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	0	0	0	0	0	0	0	0
Turn Type	Perm					custom						
Protected Phases		6						4				
Permitted Phases	6					2						
Actuated Green, G (s)												
Effective Green, g (s)												
Actuated g/C Ratio												
Clearance Time (s)												
Vehicle Extension (s)												
Lane Grp Cap (vph)												
v/s Ratio Prot												
v/s Ratio Perm												
v/c Ratio												
Uniform Delay, d1												
Progression Factor												
Incremental Delay, d2												
Delay (s)												
Level of Service												
Approach Delay (s)		0.0			0.0			0.0			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	0.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.00		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	0.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	SEL	SET	SER	NWL	NWT	NWR	SWL	SWR
Lane Configurations										
Volume (vph)	62	23	308	208	23	0	0	0	334	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0					4.0	4.0
Lane Util. Factor	1.00			0.91					1.00	1.00
Frt	0.96			0.99					1.00	0.85
Flt Protected	0.96			0.97					0.95	1.00
Satd. Flow (prot)	1905			5404					1947	1742
Flt Permitted	0.96			0.97					0.95	1.00
Satd. Flow (perm)	1905			5404					1947	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	25	335	226	25	0	0	0	363	120
RTOR Reduction (vph)	19	0	0	2	0	0	0	0	0	0
Lane Group Flow (vph)	73	0	0	584	0	0	0	0	363	120
Turn Type	NA		Perm	NA					NA	Prot
Protected Phases	4!			6					8!	8
Permitted Phases			6							
Actuated Green, G (s)	26.6			70.4					26.6	26.6
Effective Green, g (s)	26.6			70.4					26.6	26.6
Actuated g/C Ratio	0.25			0.67					0.25	0.25
Clearance Time (s)	4.0			4.0					4.0	4.0
Vehicle Extension (s)	3.0			3.0					3.0	3.0
Lane Grp Cap (vph)	482			3623					493	441
v/s Ratio Prot	0.04								c0.19	0.07
v/s Ratio Perm				0.11						
v/c Ratio	0.15			0.16					0.74	0.27
Uniform Delay, d1	30.4			6.4					36.0	31.4
Progression Factor	1.00			1.00					1.16	1.21
Incremental Delay, d2	0.1			0.1					4.9	0.3
Delay (s)	30.6			6.5					46.6	38.2
Level of Service	C			A					D	D
Approach Delay (s)	30.6			6.5			0.0		44.5	
Approach LOS	C			A			A		D	

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
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												
Volume (vph)	86	156	0	0	114	28	223	366	29	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.0			5.0			5.0				
Lane Util. Factor		0.95			0.95			0.91				
Frt		1.00			0.97			0.99				
Flt Protected		0.98			1.00			0.98				
Satd. Flow (prot)		3478			3436			4960				
Flt Permitted		0.79			1.00			0.98				
Satd. Flow (perm)		2797			3436			4960				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	170	0	0	124	30	242	398	32	0	0	0
RTOR Reduction (vph)	0	0	0	0	25	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	263	0	0	129	0	0	669	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		8			4		2	2				
Permitted Phases	8											
Actuated Green, G (s)		19.0			19.0			76.0				
Effective Green, g (s)		19.0			19.0			76.0				
Actuated g/C Ratio		0.18			0.18			0.72				
Clearance Time (s)		5.0			5.0			5.0				
Vehicle Extension (s)		0.2			0.2			0.2				
Lane Grp Cap (vph)		506			621			3590				
v/s Ratio Prot					0.04			c0.13				
v/s Ratio Perm		c0.09										
v/c Ratio		0.52			0.21			0.19				
Uniform Delay, d1		38.9			36.6			4.6				
Progression Factor		0.74			1.00			0.27				
Incremental Delay, d2		0.2			0.1			0.1				
Delay (s)		29.1			36.7			1.3				
Level of Service		C			D			A				
Approach Delay (s)		29.1			36.7			1.3			0.0	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	65.0%	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												
Volume (vph)	161	29	50	50	163	37	370	240	33	50	140	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6			4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Lane Util. Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.91			1.00	0.85	1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1687			1841	1583	1770	1863	1583	1770	1790	
Flt Permitted	0.95	1.00			0.99	1.00	0.58	1.00	1.00	0.51	1.00	
Satd. Flow (perm)	1770	1687			1841	1583	1073	1863	1583	958	1790	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	175	32	54	54	177	40	402	261	36	54	152	54
RTOR Reduction (vph)	0	38	0	0	0	34	0	0	21	0	15	0
Lane Group Flow (vph)	175	48	0	0	231	6	402	261	15	54	191	0
Turn Type	Split	NA		Split	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases	2	2		1	1			8			8	
Permitted Phases						1	8		8	8		
Actuated Green, G (s)	31.5	31.5			16.6	16.6	43.9	43.9	43.9	43.9	43.9	
Effective Green, g (s)	31.5	31.5			16.6	16.6	43.9	43.9	43.9	43.9	43.9	
Actuated g/C Ratio	0.30	0.30			0.16	0.16	0.42	0.42	0.42	0.42	0.42	
Clearance Time (s)	4.6	4.6			4.2	4.2	4.2	4.2	4.2	4.2	4.2	
Vehicle Extension (s)	3.8	3.8			2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lane Grp Cap (vph)	531	506			291	250	448	778	661	400	748	
v/s Ratio Prot	c0.10	0.03			c0.13			0.14			0.11	
v/s Ratio Perm						0.00	c0.37		0.01	0.06		
v/c Ratio	0.33	0.10			0.79	0.03	0.90	0.34	0.02	0.14	0.26	
Uniform Delay, d1	28.5	26.5			42.6	37.4	28.5	20.7	17.9	18.8	19.9	
Progression Factor	1.20	1.44			1.00	1.00	1.01	1.06	2.03	0.83	0.79	
Incremental Delay, d2	1.2	0.3			13.0	0.0	17.7	0.1	0.0	0.1	0.1	
Delay (s)	35.4	38.4			55.5	37.4	46.3	21.9	36.4	15.7	15.8	
Level of Service	D	D			E	D	D	C	D	B	B	
Approach Delay (s)		36.4			52.8			36.7			15.8	
Approach LOS		D			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	35.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	70.9%	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												
Volume (vph)	63	171	50	100	698	29	70	233	105	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.2	4.2		4.2	4.2		4.2	4.2				
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00				
Frt	1.00	0.97		1.00	0.99		1.00	0.95				
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00				
Satd. Flow (prot)	1770	1800		1770	1851		1770	1776				
Flt Permitted	0.25	1.00		0.60	1.00		0.95	1.00				
Satd. Flow (perm)	469	1800		1119	1851		1770	1776				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	186	54	109	759	32	76	253	114	0	0	0
RTOR Reduction (vph)	0	8	0	0	1	0	0	17	0	0	0	0
Lane Group Flow (vph)	68	232	0	109	790	0	76	350	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Split	NA				
Protected Phases		2			6		8	8				
Permitted Phases	2			6								
Actuated Green, G (s)	71.2	71.2		71.2	71.2		25.4	25.4				
Effective Green, g (s)	71.2	71.2		71.2	71.2		25.4	25.4				
Actuated g/C Ratio	0.68	0.68		0.68	0.68		0.24	0.24				
Clearance Time (s)	4.2	4.2		4.2	4.2		4.2	4.2				
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2				
Lane Grp Cap (vph)	318	1220		758	1255		428	429				
v/s Ratio Prot		0.13			c0.43		0.04	c0.20				
v/s Ratio Perm	0.15			0.10								
v/c Ratio	0.21	0.19		0.14	0.63		0.18	0.82				
Uniform Delay, d1	6.4	6.2		6.0	9.5		31.5	37.6				
Progression Factor	0.52	0.49		1.00	1.00		1.00	1.07				
Incremental Delay, d2	0.5	0.1		0.4	2.4		0.1	10.7				
Delay (s)	3.8	3.2		6.4	11.9		31.5	50.8				
Level of Service	A	A		A	B		C	D				
Approach Delay (s)		3.3			11.2			47.5			0.0	
Approach LOS		A			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	0	112	204	200	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2			
Lane Util. Factor		1.00	0.95			
Frt		0.86	0.93			
Flt Protected		1.00	1.00			
Satd. Flow (prot)		1611	3277			
Flt Permitted		1.00	1.00			
Satd. Flow (perm)		1611	3277			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	122	222	217	0	0
RTOR Reduction (vph)	0	30	180	0	0	0
Lane Group Flow (vph)	0	92	259	0	0	0
Turn Type		custom	NA			
Protected Phases			8			
Permitted Phases		2				
Actuated Green, G (s)		78.9	17.7			
Effective Green, g (s)		78.9	17.7			
Actuated g/C Ratio		0.75	0.17			
Clearance Time (s)		4.2	4.2			
Vehicle Extension (s)		0.2	6.0			
Lane Grp Cap (vph)		1210	552			
v/s Ratio Prot			c0.08			
v/s Ratio Perm		c0.06				
v/c Ratio		0.08	0.47			
Uniform Delay, d1		3.4	39.4			
Progression Factor		1.00	2.43			
Incremental Delay, d2		0.1	1.7			
Delay (s)		3.6	97.4			
Level of Service		A	F			
Approach Delay (s)	3.6		97.4		0.0	
Approach LOS	A		F		A	

Intersection Summary			
HCM 2000 Control Delay	77.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.15		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	26.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	150	145	475	98	232	22	30	442	32	91	1814	259
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.4			5.4		4.0	4.0		5.4	5.4	
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	0.95	
Frt		0.91			0.99		1.00	0.99		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3181			3458		1770	1844		1770	3473	
Flt Permitted		0.72			0.55		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		2302			1918		1770	1844		1770	3473	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	158	516	107	252	24	33	480	35	99	1972	282
RTOR Reduction (vph)	0	63	0	0	4	0	0	1	0	0	10	0
Lane Group Flow (vph)	0	774	0	0	379	0	33	514	0	99	2244	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			2		7	4		3	8	
Permitted Phases	2			2								
Actuated Green, G (s)		26.8			26.8		2.4	55.6		7.8	61.0	
Effective Green, g (s)		26.8			26.8		2.4	55.6		7.8	61.0	
Actuated g/C Ratio		0.26			0.26		0.02	0.53		0.07	0.58	
Clearance Time (s)		5.4			5.4		4.0	4.0		5.4	5.4	
Vehicle Extension (s)		0.2			0.2		3.0	3.0		0.2	0.2	
Lane Grp Cap (vph)		587			489		40	976		131	2017	
v/s Ratio Prot							0.02	0.28		c0.06	c0.65	
v/s Ratio Perm		c0.34			0.20							
v/c Ratio		1.32			1.35dl		0.82	0.53		0.76	1.11	
Uniform Delay, d1		39.1			36.3		51.1	16.1		47.7	22.0	
Progression Factor		1.00			1.50		0.96	1.16		1.10	0.84	
Incremental Delay, d2		154.9			11.3		74.4	0.5		13.3	55.8	
Delay (s)		194.0			65.6		123.3	19.2		65.9	74.4	
Level of Service		F			E		F	B		E	E	
Approach Delay (s)		194.0			65.6			25.5			74.0	
Approach LOS		F			E			C			E	

Intersection Summary			
HCM 2000 Control Delay	91.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	112.2%	ICU Level of Service	H
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	50	117	382	299	234	50	105	497	83	40	1397	342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.2		4.0	4.2		4.0	4.2	4.2	4.2	4.2	4.2
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.89		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	1649		1770	1814		1770	1863	1583	1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1770	1649		1770	1814		1770	1863	1583	1770	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	127	415	325	254	54	114	540	90	43	1518	372
RTOR Reduction (vph)	0	76	0	0	7	0	0	0	51	0	0	41
Lane Group Flow (vph)	54	466	0	325	301	0	114	540	39	43	1518	331
Turn Type	Prot	NA		Prot	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases									4			8
Actuated Green, G (s)	3.2	19.7		5.0	21.5		4.0	45.1	45.1	18.6	59.9	59.9
Effective Green, g (s)	3.2	19.7		5.0	21.5		4.0	45.1	45.1	18.6	59.9	59.9
Actuated g/C Ratio	0.03	0.19		0.05	0.20		0.04	0.43	0.43	0.18	0.57	0.57
Clearance Time (s)	4.0	4.2		4.0	4.2		4.0	4.2	4.2	4.2	4.2	4.2
Vehicle Extension (s)	3.0	0.2		3.0	0.2		3.0	0.2	0.2	0.2	0.2	0.2
Lane Grp Cap (vph)	53	309		84	371		67	800	679	313	1062	903
v/s Ratio Prot	0.03	c0.28		c0.18	0.17		c0.06	0.29		0.02	c0.81	
v/s Ratio Perm									0.02			0.21
v/c Ratio	1.02	1.51		3.87	0.81		1.70	0.68	0.06	0.14	1.43	0.37
Uniform Delay, d1	50.9	42.6		50.0	39.8		50.5	24.1	17.5	36.4	22.6	12.2
Progression Factor	1.00	1.00		0.76	1.18		1.06	0.86	1.32	1.25	0.56	0.49
Incremental Delay, d2	129.1	244.3		1311.7	13.1		366.4	1.6	0.0	0.0	193.7	0.0
Delay (s)	180.0	286.9		1349.8	60.3		419.9	22.2	23.1	45.7	206.3	6.0
Level of Service	F	F		F	E		F	C	C	D	F	A
Approach Delay (s)		277.2			722.3			83.3			164.2	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	256.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.58		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.6
Intersection Capacity Utilization	139.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	50	132	17	265	429	100	50	579	90	73	1377	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		4.2	4.2		4.0	4.2		4.2	4.2	
Lane Util. Factor		1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt		0.99		1.00	0.97		1.00	0.98		1.00	0.99	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1819		1770	1810		1770	1825		1770	1847	
Flt Permitted		0.27		0.54	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		491		1015	1810		1770	1825		1770	1847	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	143	18	288	466	109	54	629	98	79	1497	88
RTOR Reduction (vph)	0	3	0	0	8	0	0	5	0	0	2	0
Lane Group Flow (vph)	0	212	0	288	567	0	54	722	0	79	1583	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2			6								
Actuated Green, G (s)		33.0		33.0	33.0		5.6	41.8		17.6	54.0	
Effective Green, g (s)		33.0		33.0	33.0		5.6	41.8		17.6	54.0	
Actuated g/C Ratio		0.31		0.31	0.31		0.05	0.40		0.17	0.51	
Clearance Time (s)		4.2		4.2	4.2		4.0	4.2		4.2	4.2	
Vehicle Extension (s)		0.2		0.2	0.2		3.0	0.2		0.2	0.2	
Lane Grp Cap (vph)		154		319	568		94	726		296	949	
v/s Ratio Prot					0.31		c0.03	0.40		0.04	c0.86	
v/s Ratio Perm		c0.43		0.28								
v/c Ratio		1.37		0.90	1.00		0.57	0.99		0.27	1.67	
Uniform Delay, d1		36.0		34.5	36.0		48.5	31.5		38.1	25.5	
Progression Factor		1.00		0.90	0.89		1.16	1.19		1.48	0.48	
Incremental Delay, d2		203.7		23.3	33.6		5.3	25.1		0.0	301.1	
Delay (s)		239.7		54.2	65.6		61.4	62.8		56.3	313.3	
Level of Service		F		D	E		E	E		E	F	
Approach Delay (s)		239.7			61.8			62.7			301.1	
Approach LOS		F			E			E			F	

Intersection Summary			
HCM 2000 Control Delay	185.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.50		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.6
Intersection Capacity Utilization	136.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL2	SBL	SBR	SBR2	SEL	SET	SER	NWL	NWT	NWR	NET	NER
Lane Configurations												
Volume (vph)	25	452	1341	5	35	8	24	15	30	17	494	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.9	4.9			4.6			4.0		4.6	
Lane Util. Factor		1.00	0.88			1.00			1.00		1.00	
Frt		1.00	0.85			0.95			0.96		0.99	
Flt Protected		0.95	1.00			0.97			0.99		1.00	
Satd. Flow (prot)		1770	2787			1728			1774		1840	
Flt Permitted		0.95	1.00			0.80			0.99		1.00	
Satd. Flow (perm)		1770	2787			1420			1774		1840	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	491	1458	5	38	9	26	16	33	18	537	54
RTOR Reduction (vph)	0	0	66	0	0	20	0	0	0	0	3	0
Lane Group Flow (vph)	0	518	1397	0	0	53	0	0	67	0	588	0
Turn Type	Perm	NA	Prot		Perm	NA		Split	NA		NA	
Protected Phases		2	2			3		1	1		4	
Permitted Phases	2				3							
Actuated Green, G (s)		39.5	39.5			9.0			6.0		32.4	
Effective Green, g (s)		39.5	39.5			9.0			6.0		32.4	
Actuated g/C Ratio		0.38	0.38			0.09			0.06		0.31	
Clearance Time (s)		4.9	4.9			4.6			4.0		4.6	
Vehicle Extension (s)		4.0	4.0			4.0			2.0		4.0	
Lane Grp Cap (vph)		665	1048			121			101		567	
v/s Ratio Prot			c0.50						c0.04		0.32	
v/s Ratio Perm		0.29				c0.04						
v/c Ratio		0.78	1.33			0.44			0.66		1.04	
Uniform Delay, d1		28.9	32.8			45.6			48.5		36.3	
Progression Factor		1.00	1.00			1.00			1.00		0.86	
Incremental Delay, d2		8.8	156.4			3.4			12.0		45.9	
Delay (s)		37.7	189.1			49.0			60.5		77.3	
Level of Service		D	F			D			E		E	
Approach Delay (s)		149.5				49.0			60.5		77.3	
Approach LOS		F				D			E		E	

Intersection Summary			
HCM 2000 Control Delay	132.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.1
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SWL	SWT
Lane Configurations		
Volume (vph)	114	191
Ideal Flow (vphpl)	1900	1900
Lane Width	12	12
Total Lost time (s)	4.6	4.6
Lane Util. Factor	1.00	1.00
Frt	1.00	1.00
Flt Protected	0.95	1.00
Satd. Flow (prot)	1770	1863
Flt Permitted	0.12	1.00
Satd. Flow (perm)	230	1863
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	124	208
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	124	208
Turn Type	Perm	NA
Protected Phases		4
Permitted Phases	4	
Actuated Green, G (s)	32.4	32.4
Effective Green, g (s)	32.4	32.4
Actuated g/C Ratio	0.31	0.31
Clearance Time (s)	4.6	4.6
Vehicle Extension (s)	4.0	4.0
Lane Grp Cap (vph)	70	574
v/s Ratio Prot		0.11
v/s Ratio Perm	c0.54	
v/c Ratio	1.77	0.36
Uniform Delay, d1	36.3	28.3
Progression Factor	0.92	0.88
Incremental Delay, d2	352.4	0.0
Delay (s)	385.7	25.0
Level of Service	F	C
Approach Delay (s)		159.7
Approach LOS		F

Intersection Summary

Movement	EBL	EBT	EBR2	WBL	WBT	WBR	NBL2	NBL	NBT	NBR	NEL2	NEL
Lane Configurations												
Volume (vph)	262	296	8	113	263	200	237	266	1613	29	162	190
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
Lane Util. Factor		1.00			1.00				0.95			1.00
Frt		1.00			0.95				1.00			0.96
Flt Protected		0.98			0.99				0.99			0.97
Satd. Flow (prot)		1999			1934				3840			1902
Flt Permitted		0.50			0.80				0.99			0.97
Satd. Flow (perm)		1013			1555				3840			1902
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	285	322	9	123	286	217	258	289	1753	32	176	207
RTOR Reduction (vph)	0	5	0	0	2	0	0	0	1	0	0	0
Lane Group Flow (vph)	0	611	0	0	624	0	0	0	2331	0	0	537
Turn Type	Perm	NA		Perm	NA		Perm	Perm	NA		Perm	NA
Protected Phases		4			8				2!			2!
Permitted Phases	4			8			2!	2!			2!	
Actuated Green, G (s)		48.0			48.0				49.0			49.0
Effective Green, g (s)		48.0			48.0				49.0			49.0
Actuated g/C Ratio		0.46			0.46				0.47			0.47
Clearance Time (s)		4.0			4.0				4.0			4.0
Vehicle Extension (s)		3.0			3.0				3.0			3.0
Lane Grp Cap (vph)		463			710				1792			887
v/s Ratio Prot												
v/s Ratio Perm		c0.60			0.40				0.61			0.28
v/c Ratio		1.32			0.88				1.30			0.61
Uniform Delay, d1		28.5			25.9				28.0			20.8
Progression Factor		1.00			1.00				1.00			1.91
Incremental Delay, d2		158.0			12.0				139.5			0.8
Delay (s)		186.5			37.9				167.5			40.5
Level of Service		F			D				F			D
Approach Delay (s)		186.5			37.9				167.5			40.5
Approach LOS		F			D				F			D

Intersection Summary			
HCM 2000 Control Delay	134.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.31		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	161.3%	ICU Level of Service	H
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

Movement	NER
Lane Configurations	
Volume (vph)	142
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.92
Adj. Flow (vph)	154
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations						
Volume (vph)	532	75	136	386	330	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	0.98			1.00	1.00	0.85
Flt Protected	1.00			0.99	0.95	1.00
Satd. Flow (prot)	3821			3843	1947	1742
Flt Permitted	1.00			0.65	0.95	1.00
Satd. Flow (perm)	3821			2538	1947	1742
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	578	82	148	420	359	82
RTOR Reduction (vph)	7	0	0	0	0	50
Lane Group Flow (vph)	653	0	0	568	359	32
Turn Type	NA		Perm	NA	NA	Perm
Protected Phases	6			2	4	
Permitted Phases			2			4
Actuated Green, G (s)	71.8			71.8	25.2	25.2
Effective Green, g (s)	71.8			71.8	25.2	25.2
Actuated g/C Ratio	0.68			0.68	0.24	0.24
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2612			1735	467	418
v/s Ratio Prot	0.17				c0.18	
v/s Ratio Perm				c0.22		0.02
v/c Ratio	0.25			0.33	0.77	0.08
Uniform Delay, d1	6.3			6.8	37.2	30.9
Progression Factor	1.00			1.00	0.79	0.83
Incremental Delay, d2	0.2			0.5	7.3	0.1
Delay (s)	6.6			7.3	36.6	25.6
Level of Service	A			A	D	C
Approach Delay (s)	6.6			7.3	34.5	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	105.0	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	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	158	76	286	0	0	0	0	331	50	260	528	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			4.0	
Lane Util. Factor	0.97	1.00						1.00			1.00	
Frt	1.00	0.88						0.98			1.00	
Flt Protected	0.95	1.00						1.00			0.98	
Satd. Flow (prot)	3776	1806						2013			2016	
Flt Permitted	0.95	1.00						1.00			0.70	
Satd. Flow (perm)	3776	1806						2013			1427	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.81	0.81	0.81
Adj. Flow (vph)	172	83	311	0	0	0	0	360	54	321	652	0
RTOR Reduction (vph)	0	130	0	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	172	264	0	0	0	0	0	409	0	0	973	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		6						4			8	
Permitted Phases	6									8		
Actuated Green, G (s)	18.1	18.1						78.9			78.9	
Effective Green, g (s)	18.1	18.1						78.9			78.9	
Actuated g/C Ratio	0.17	0.17						0.75			0.75	
Clearance Time (s)	4.0	4.0						4.0			4.0	
Vehicle Extension (s)	3.0	3.0						3.0			3.0	
Lane Grp Cap (vph)	650	311						1512			1072	
v/s Ratio Prot		c0.15						0.20				
v/s Ratio Perm	0.05										c0.68	
v/c Ratio	0.26	0.85						0.27			0.91	
Uniform Delay, d1	37.7	42.1						4.1			10.2	
Progression Factor	1.00	1.00						0.43			0.43	
Incremental Delay, d2	1.0	24.0						0.1			1.2	
Delay (s)	38.7	66.2						1.9			5.6	
Level of Service	D	E						A			A	
Approach Delay (s)		57.8			0.0			1.9			5.6	
Approach LOS		E			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	33	215	45	65	424	0	0	755	1638
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
Lane Util. Factor					0.95			0.95			0.95	0.95
Frt					0.98			1.00			0.94	0.85
Flt Protected					0.99			0.99			1.00	1.00
Satd. Flow (prot)					3782			3867			1831	1655
Flt Permitted					0.99			0.54			1.00	1.00
Satd. Flow (perm)					3782			2117			1831	1655
Peak-hour factor, PHF	0.92	0.92	0.92	0.78	0.78	0.78	0.92	0.92	0.92	0.71	0.71	0.71
Adj. Flow (vph)	0	0	0	42	276	58	71	461	0	0	1063	2307
RTOR Reduction (vph)	0	0	0	0	15	0	0	0	0	0	21	21
Lane Group Flow (vph)	0	0	0	0	361	0	0	532	0	0	1734	1594
Turn Type				Perm	NA		Perm	NA			NA	Perm
Protected Phases					2			4			8	
Permitted Phases				2			4					8
Actuated Green, G (s)					14.4			82.6			82.6	82.6
Effective Green, g (s)					14.4			82.6			82.6	82.6
Actuated g/C Ratio					0.14			0.79			0.79	0.79
Clearance Time (s)					4.0			4.0			4.0	4.0
Vehicle Extension (s)					3.0			3.0			3.0	3.0
Lane Grp Cap (vph)					518			1665			1440	1301
v/s Ratio Prot											0.95	
v/s Ratio Perm					0.10			0.25				c0.96
v/c Ratio					0.70			0.92dl			1.20	1.23
Uniform Delay, d1					43.2			3.2			11.2	11.2
Progression Factor					1.38			1.60			0.52	0.53
Incremental Delay, d2					7.5			0.1			95.3	104.8
Delay (s)					67.3			5.2			101.2	110.7
Level of Service					E			A			F	F
Approach Delay (s)		0.0			67.3			5.2			105.8	
Approach LOS		A			E			A			F	

Intersection Summary			
HCM 2000 Control Delay	89.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	99.6%	ICU Level of Service	F
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
c Critical Lane Group

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	154	233	0	0	0	0	0	629	70	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				
Lane Util. Factor		0.95						0.91				
Frt		1.00						0.98				
Flt Protected		0.98						1.00				
Satd. Flow (prot)		3817						5509				
Flt Permitted		0.98						1.00				
Satd. Flow (perm)		3817						5509				
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.89	0.89	0.89	0.92	0.92	0.92
Adj. Flow (vph)	171	259	0	0	0	0	0	707	79	0	0	0
RTOR Reduction (vph)	0	47	0	0	0	0	0	20	0	0	0	0
Lane Group Flow (vph)	0	383	0	0	0	0	0	766	0	0	0	0
Turn Type	Split	NA						NA				
Protected Phases	6	6						4				
Permitted Phases												
Actuated Green, G (s)		74.4						22.6				
Effective Green, g (s)		74.4						22.6				
Actuated g/C Ratio		0.71						0.22				
Clearance Time (s)		4.0						4.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		2704						1185				
v/s Ratio Prot		c0.10						c0.14				
v/s Ratio Perm												
v/c Ratio		0.14						0.65				
Uniform Delay, d1		5.0						37.6				
Progression Factor		0.49						1.00				
Incremental Delay, d2		0.1						1.2				
Delay (s)		2.5						38.8				
Level of Service		A						D				
Approach Delay (s)		2.5			0.0			38.8			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	31.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	0	36	60	225	558	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			4.0				
Lane Util. Factor					0.95			0.91				
Frt					0.91			1.00				
Flt Protected					1.00			0.99				
Satd. Flow (prot)					3528			5515				
Flt Permitted					1.00			0.99				
Satd. Flow (perm)					3528			5515				
Peak-hour factor, PHF	0.92	0.92	0.92	0.73	0.73	0.73	0.90	0.90	0.90	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	49	82	250	620	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	24	0	0	142	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	107	0	0	728	0	0	0	0
Turn Type					NA		Split	NA				
Protected Phases					2		4	4				
Permitted Phases												
Actuated Green, G (s)					74.3			22.7				
Effective Green, g (s)					74.3			22.7				
Actuated g/C Ratio					0.71			0.22				
Clearance Time (s)					4.0			4.0				
Vehicle Extension (s)					3.0			3.0				
Lane Grp Cap (vph)					2496			1192				
v/s Ratio Prot					c0.03			c0.13				
v/s Ratio Perm												
v/c Ratio					0.04			0.61				
Uniform Delay, d1					4.6			37.2				
Progression Factor					1.00			0.23				
Incremental Delay, d2					0.0			0.9				
Delay (s)					4.7			9.6				
Level of Service					A			A				
Approach Delay (s)		0.0			4.7			9.6			0.0	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.18		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	25.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	NWL	NWR	NET	NER	SWL	SWT
Lane Configurations						
Volume (vph)	149	150	549	65	58	2015
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	1.00		1.00	0.95
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1947	1742	2020		1947	3893
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1947	1742	2020		1947	3893
Peak-hour factor, PHF	0.89	0.89	0.92	0.92	0.89	0.89
Adj. Flow (vph)	167	169	597	71	65	2264
RTOR Reduction (vph)	0	144	4	0	0	0
Lane Group Flow (vph)	167	25	664	0	65	2264
Turn Type	NA	Perm	NA		Prot	NA
Protected Phases	2		4		3	8
Permitted Phases		2				
Actuated Green, G (s)	15.5	15.5	63.2		14.3	81.5
Effective Green, g (s)	15.5	15.5	63.2		14.3	81.5
Actuated g/C Ratio	0.15	0.15	0.60		0.14	0.78
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	287	257	1215		265	3021
v/s Ratio Prot	c0.09		0.33		0.03	c0.58
v/s Ratio Perm		0.01				
v/c Ratio	0.58	0.10	0.55		0.25	0.75
Uniform Delay, d1	41.7	38.7	12.4		40.5	6.3
Progression Factor	1.28	2.88	1.26		1.08	1.42
Incremental Delay, d2	8.3	0.7	0.4		0.0	0.1
Delay (s)	61.7	112.2	16.0		43.8	9.0
Level of Service	E	F	B		D	A
Approach Delay (s)	87.1		16.0			10.0
Approach LOS	F		B			A

Intersection Summary			
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	70.6%	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												
Volume (vph)	58	65	0	0	62	50	87	298	95	50	0	150
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	4.0	4.0	4.0		4.0
Lane Util. Factor	1.00	1.00			1.00		1.00	1.00	1.00	1.00		1.00
Frt	1.00	1.00			0.94		1.00	1.00	0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (prot)	1947	2049			1926		1947	2049	1742	1947		1742
Flt Permitted	0.66	1.00			1.00		0.95	1.00	1.00	0.95		1.00
Satd. Flow (perm)	1352	2049			1926		1947	2049	1742	1947		1742
Peak-hour factor, PHF	0.75	0.75	0.75	0.73	0.73	0.73	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	77	87	0	0	85	68	94	320	102	54	0	163
RTOR Reduction (vph)	0	0	0	0	15	0	0	0	80	0	0	131
Lane Group Flow (vph)	77	87	0	0	138	0	94	320	22	54	0	32
Turn Type	Perm	NA			NA		Prot	NA	Perm	Prot		custom
Protected Phases		6			2		7	4		3		8
Permitted Phases	6								4			
Actuated Green, G (s)	63.2	63.2			63.2		9.1	22.6	22.6	7.2		20.7
Effective Green, g (s)	63.2	63.2			63.2		9.1	22.6	22.6	7.2		20.7
Actuated g/C Ratio	0.60	0.60			0.60		0.09	0.22	0.22	0.07		0.20
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0	4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0	3.0	3.0		3.0
Lane Grp Cap (vph)	813	1233			1159		168	441	374	133		343
v/s Ratio Prot		0.04			c0.07		c0.05	c0.16		0.03		0.02
v/s Ratio Perm	0.06								0.01			
v/c Ratio	0.09	0.07			0.12		0.56	0.73	0.06	0.41		0.09
Uniform Delay, d1	8.8	8.7			9.0		46.0	38.3	32.7	46.9		34.5
Progression Factor	0.52	0.51			1.00		1.40	0.81	0.63	0.81		4.52
Incremental Delay, d2	0.2	0.1			0.0		4.0	5.8	0.1	2.0		0.1
Delay (s)	4.8	4.6			9.0		68.4	36.9	20.8	40.1		155.9
Level of Service	A	A			A		E	D	C	D		F
Approach Delay (s)		4.7			9.0			39.5			127.1	
Approach LOS		A			A			D			F	

Intersection Summary			
HCM 2000 Control Delay	47.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	38.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	175	168	297	83	55	95	75	449	75	50	1399	147
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		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.91		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	1853		1947	1855		1947	2005		1947	2020	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1947	1853		1947	1855		1947	2005		1947	2020	
Peak-hour factor, PHF	0.82	0.82	0.82	0.48	0.48	0.48	0.92	0.92	0.92	0.75	0.75	0.75
Adj. Flow (vph)	213	205	362	173	115	198	82	488	82	67	1865	196
RTOR Reduction (vph)	0	61	0	0	59	0	0	5	0	0	4	0
Lane Group Flow (vph)	213	506	0	173	254	0	82	565	0	67	2057	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	10.0	21.2		6.0	17.2		4.0	54.0		7.8	57.8	
Effective Green, g (s)	10.0	21.2		6.0	17.2		4.0	54.0		7.8	57.8	
Actuated g/C Ratio	0.10	0.20		0.06	0.16		0.04	0.51		0.07	0.55	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	185	374		111	303		74	1031		144	1111	
v/s Ratio Prot	0.11	c0.27		c0.09	0.14		c0.04	0.28		0.03	c1.02	
v/s Ratio Perm												
v/c Ratio	1.15	1.35		1.56	0.84		1.11	0.55		0.47	1.85	
Uniform Delay, d1	47.5	41.9		49.5	42.5		50.5	17.2		46.6	23.6	
Progression Factor	1.00	1.00		1.12	1.62		0.93	1.13		0.95	0.99	
Incremental Delay, d2	112.8	175.0		290.2	23.0		120.7	0.4		0.2	383.6	
Delay (s)	160.3	216.9		345.9	92.0		167.4	19.9		44.5	407.1	
Level of Service	F	F		F	F		F	B		D	F	
Approach Delay (s)		201.4			182.4			38.5			395.6	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	275.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.68		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	124.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Volume (vph)	143	150	188	265	100	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.96	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1947	1742	1947	2049	1957	
Flt Permitted	0.95	1.00	0.55	1.00	1.00	
Satd. Flow (perm)	1947	1742	1134	2049	1957	
Peak-hour factor, PHF	0.81	0.81	0.83	0.83	0.92	0.92
Adj. Flow (vph)	177	185	227	319	109	54
RTOR Reduction (vph)	0	59	0	0	30	0
Lane Group Flow (vph)	177	126	227	319	133	0
Turn Type	NA	Perm	Perm	NA	NA	
Protected Phases	6			4	8	
Permitted Phases		6	4			
Actuated Green, G (s)	71.5	71.5	25.5	25.5	25.5	
Effective Green, g (s)	71.5	71.5	25.5	25.5	25.5	
Actuated g/C Ratio	0.68	0.68	0.24	0.24	0.24	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	1325	1186	275	497	475	
v/s Ratio Prot	c0.09			0.16	0.07	
v/s Ratio Perm		0.07	c0.20			
v/c Ratio	0.13	0.11	0.83	0.64	0.28	
Uniform Delay, d1	5.9	5.8	37.6	35.7	32.3	
Progression Factor	2.19	6.20	1.14	1.13	0.80	
Incremental Delay, d2	0.1	0.1	17.7	2.8	0.3	
Delay (s)	13.0	35.8	60.5	43.1	26.2	
Level of Service	B	D	E	D	C	
Approach Delay (s)	24.6			50.3	26.2	
Approach LOS	C			D	C	

Intersection Summary			
HCM 2000 Control Delay	38.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	20	17	55	74	45	25	624	100	31	1436	25
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		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Frt		0.96			0.97		1.00	0.98		1.00	1.00	
Flt Protected		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1931			1947		1947	2006		1947	2044	
Flt Permitted		0.99			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1931			1947		1947	2006		1947	2044	
Peak-hour factor, PHF	0.77	0.77	0.77	0.75	0.75	0.75	0.92	0.92	0.92	0.81	0.81	0.81
Adj. Flow (vph)	19	26	22	73	99	60	27	678	109	38	1773	31
RTOR Reduction (vph)	0	18	0	0	12	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	49	0	0	220	0	27	783	0	38	1804	0
Turn Type	Split	NA		Split	NA		Prot	NA		Prot	NA	
Protected Phases	6	6		2	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)		8.1			13.3		4.7	62.6		5.0	62.9	
Effective Green, g (s)		8.1			13.3		4.7	62.6		5.0	62.9	
Actuated g/C Ratio		0.08			0.13		0.04	0.60		0.05	0.60	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		148			246		87	1195		92	1224	
v/s Ratio Prot		c0.03			c0.11		0.01	0.39		c0.02	c0.88	
v/s Ratio Perm												
v/c Ratio		0.33			0.89		0.31	0.65		0.41	1.47	
Uniform Delay, d1		45.9			45.2		48.6	14.0		48.6	21.1	
Progression Factor		1.00			1.13		0.93	0.81		1.28	0.53	
Incremental Delay, d2		1.3			35.2		0.5	0.3		0.3	213.5	
Delay (s)		47.2			86.0		45.8	11.7		62.4	224.6	
Level of Service		D			F		D	B		E	F	
Approach Delay (s)		47.2			86.0			12.8			221.3	
Approach LOS		D			F			B			F	

Intersection Summary			
HCM 2000 Control Delay	149.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	97.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	45	106	0	0	128	51	42	265	18	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			0.95				
Frt		1.00			0.96			0.99				
Flt Protected		0.99			1.00			0.99				
Satd. Flow (prot)		2019			1970			3836				
Flt Permitted		0.86			1.00			0.99				
Satd. Flow (perm)		1764			1970			3836				
Peak-hour factor, PHF	0.79	0.79	0.79	0.74	0.74	0.74	0.96	0.96	0.96	0.92	0.92	0.92
Adj. Flow (vph)	57	134	0	0	173	69	44	276	19	0	0	0
RTOR Reduction (vph)	0	0	0	0	6	0	0	6	0	0	0	0
Lane Group Flow (vph)	0	191	0	0	236	0	0	333	0	0	0	0
Turn Type	Perm	NA			NA		Split	NA				
Protected Phases		6			2		4	4				
Permitted Phases	6											
Actuated Green, G (s)		82.3			82.3			14.7				
Effective Green, g (s)		82.3			82.3			14.7				
Actuated g/C Ratio		0.78			0.78			0.14				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			3.0				
Lane Grp Cap (vph)		1382			1544			537				
v/s Ratio Prot					c0.12			c0.09				
v/s Ratio Perm		0.11										
v/c Ratio		0.14			0.15			0.62				
Uniform Delay, d1		2.8			2.8			42.5				
Progression Factor		0.21			1.00			0.91				
Incremental Delay, d2		0.2			0.2			1.9				
Delay (s)		0.8			3.0			40.7				
Level of Service		A			A			D				
Approach Delay (s)		0.8			3.0			40.7			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	29	34	0	0	0	50	569	100	124	1512	11
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	4.0	
Lane Util. Factor		1.00					1.00	1.00		1.00	1.00	
Frt		0.93					1.00	0.98		1.00	1.00	
Flt Protected		1.00					0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1900					1947	2003		1947	2047	
Flt Permitted		1.00					0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1900					1947	2003		1947	2047	
Peak-hour factor, PHF	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.92	0.92	0.84	0.84	0.84
Adj. Flow (vph)	0	35	41	0	0	0	54	618	109	148	1800	13
RTOR Reduction (vph)	0	38	0	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	38	0	0	0	0	54	722	0	148	1813	0
Turn Type	Perm	NA					Prot	NA		Prot	NA	
Protected Phases		6					7	4		3	8	
Permitted Phases	6											
Actuated Green, G (s)		7.0					7.1	72.8		13.2	78.9	
Effective Green, g (s)		7.0					7.1	72.8		13.2	78.9	
Actuated g/C Ratio		0.07					0.07	0.69		0.13	0.75	
Clearance Time (s)		4.0					4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0					3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		126					131	1388		244	1538	
v/s Ratio Prot		c0.02					0.03	0.36		c0.08	c0.89	
v/s Ratio Perm												
v/c Ratio		0.30					0.41	0.52		0.61	1.18	
Uniform Delay, d1		46.7					46.9	7.7		43.4	13.0	
Progression Factor		1.00					0.80	0.77		1.16	0.52	
Incremental Delay, d2		6.0					1.6	0.3		0.4	81.1	
Delay (s)		52.7					39.4	6.2		50.8	87.9	
Level of Service		D					D	A		D	F	
Approach Delay (s)		52.7			0.0			8.5			85.1	
Approach LOS		D			A			A			F	

Intersection Summary			
HCM 2000 Control Delay	63.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	97.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	57	196	0	0	0	0	0	323	77	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				
Lane Util. Factor		0.95						0.95				
Frt		1.00						0.97				
Flt Protected		0.99						1.00				
Satd. Flow (prot)		3850						3780				
Flt Permitted		0.99						1.00				
Satd. Flow (perm)		3850						3780				
Peak-hour factor, PHF	0.90	0.90	0.90	0.92	0.92	0.92	0.93	0.93	0.93	0.92	0.92	0.92
Adj. Flow (vph)	63	218	0	0	0	0	0	347	83	0	0	0
RTOR Reduction (vph)	0	10	0	0	0	0	0	34	0	0	0	0
Lane Group Flow (vph)	0	271	0	0	0	0	0	396	0	0	0	0
Turn Type	Perm	NA						NA				
Protected Phases		6						4				
Permitted Phases	6											
Actuated Green, G (s)		80.0						17.0				
Effective Green, g (s)		80.0						17.0				
Actuated g/C Ratio		0.76						0.16				
Clearance Time (s)		4.0						4.0				
Vehicle Extension (s)		3.0						3.0				
Lane Grp Cap (vph)		2933						612				
v/s Ratio Prot								c0.10				
v/s Ratio Perm		0.07										
v/c Ratio		0.09						0.65				
Uniform Delay, d1		3.2						41.2				
Progression Factor		1.63						0.87				
Incremental Delay, d2		0.1						2.3				
Delay (s)		5.3						38.3				
Level of Service		A						D				
Approach Delay (s)		5.3			0.0			38.3			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	25.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.19		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	25.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	25	100	25	106	64	50	50	415	50	42	1515	57
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		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	0.93		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	1988		1947	1914		1947	2016		1947	2038	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1947	1988		1947	1914		1947	2016		1947	2038	
Peak-hour factor, PHF	0.55	0.55	0.55	0.57	0.57	0.57	0.92	0.92	0.92	0.85	0.85	0.85
Adj. Flow (vph)	45	182	45	186	112	88	54	451	54	49	1782	67
RTOR Reduction (vph)	0	9	0	0	28	0	0	4	0	0	1	0
Lane Group Flow (vph)	45	218	0	186	172	0	54	501	0	49	1848	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	4.0	14.4		7.0	17.4		3.8	62.6		5.0	63.8	
Effective Green, g (s)	4.0	14.4		7.0	17.4		3.8	62.6		5.0	63.8	
Actuated g/C Ratio	0.04	0.14		0.07	0.17		0.04	0.60		0.05	0.61	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	74	272		129	317		70	1201		92	1238	
v/s Ratio Prot	0.02	c0.11		c0.10	c0.09		c0.03	0.25		0.03	c0.91	
v/s Ratio Perm												
v/c Ratio	0.61	0.80		1.44	0.54		0.77	0.42		0.53	1.49	
Uniform Delay, d1	49.7	43.9		49.0	40.2		50.2	11.4		48.9	20.6	
Progression Factor	1.00	1.00		1.01	1.12		1.05	1.05		1.03	1.36	
Incremental Delay, d2	13.3	21.7		236.7	6.5		35.4	0.2		0.5	222.1	
Delay (s)	63.1	65.6		286.3	51.6		88.3	12.1		50.7	250.0	
Level of Service	E	E		F	D		F	B		D	F	
Approach Delay (s)		65.2			164.7			19.5			244.9	
Approach LOS		E			F			B			F	

Intersection Summary			
HCM 2000 Control Delay	178.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	105.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	100	75	0	0	160	44	60	246	35	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	4.0		4.0				
Lane Util. Factor	1.00	1.00			1.00	1.00		0.95				
Frt	1.00	1.00			1.00	0.85		0.98				
Flt Protected	0.95	1.00			1.00	1.00		0.99				
Satd. Flow (prot)	1947	2049			2049	1742		3799				
Flt Permitted	0.59	1.00			1.00	1.00		0.99				
Satd. Flow (perm)	1204	2049			2049	1742		3799				
Peak-hour factor, PHF	0.72	0.72	0.72	0.59	0.59	0.59	0.75	0.75	0.75	0.92	0.92	0.92
Adj. Flow (vph)	139	104	0	0	271	75	80	328	47	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	16	0	12	0	0	0	0
Lane Group Flow (vph)	139	104	0	0	271	59	0	443	0	0	0	0
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		6			2			4				
Permitted Phases	6					2	4					
Actuated Green, G (s)	78.9	78.9			78.9	78.9		18.1				
Effective Green, g (s)	78.9	78.9			78.9	78.9		18.1				
Actuated g/C Ratio	0.75	0.75			0.75	0.75		0.17				
Clearance Time (s)	4.0	4.0			4.0	4.0		4.0				
Vehicle Extension (s)	3.0	3.0			3.0	3.0		3.0				
Lane Grp Cap (vph)	904	1539			1539	1308		654				
v/s Ratio Prot		0.05			c0.13							
v/s Ratio Perm	0.12					0.03		0.12				
v/c Ratio	0.15	0.07			0.18	0.04		0.68				
Uniform Delay, d1	3.7	3.4			3.7	3.4		40.7				
Progression Factor	3.97	3.70			1.00	1.00		0.80				
Incremental Delay, d2	0.3	0.1			0.2	0.1		2.8				
Delay (s)	14.9	12.7			4.0	3.4		35.5				
Level of Service	B	B			A	A		D				
Approach Delay (s)		13.9			3.9			35.5			0.0	
Approach LOS		B			A			D			A	

Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	33.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	394	525	337	531	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.7	4.1	4.1	4.1		
Lane Util. Factor	0.97	0.95	0.95	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3776	3893	3893	1742		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3776	3893	3893	1742		
Peak-hour factor, PHF	0.84	0.84	0.79	0.79	0.92	0.92
Adj. Flow (vph)	469	625	427	672	0	0
RTOR Reduction (vph)	0	0	0	437	0	0
Lane Group Flow (vph)	469	625	427	235	0	0
Turn Type	Prot	NA	NA	Perm		
Protected Phases	3	8	4			
Permitted Phases				4		
Actuated Green, G (s)	6.4	30.9	20.8	20.8		
Effective Green, g (s)	6.4	30.9	20.8	20.8		
Actuated g/C Ratio	0.11	0.52	0.35	0.35		
Clearance Time (s)	3.7	4.1	4.1	4.1		
Vehicle Extension (s)	8.0	0.2	4.1	4.1		
Lane Grp Cap (vph)	406	2025	1363	609		
v/s Ratio Prot	c0.12	0.16	0.11			
v/s Ratio Perm				c0.14		
v/c Ratio	1.16	0.31	0.31	0.39		
Uniform Delay, d1	26.5	8.1	14.1	14.5		
Progression Factor	1.00	1.00	1.19	3.23		
Incremental Delay, d2	94.3	0.0	0.2	0.6		
Delay (s)	120.8	8.2	17.0	47.5		
Level of Service	F	A	B	D		
Approach Delay (s)		56.4	35.6		0.0	
Approach LOS		E	D		A	

Intersection Summary			
HCM 2000 Control Delay	46.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	59.4	Sum of lost time (s)	11.9
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
330: E Divisadero St

9/27/2013

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	690	762	263	520	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.7	4.1	4.1	4.1		
Lane Util. Factor	0.97	0.95	0.95	1.00		
Frt	1.00	1.00	1.00	0.85		
Flt Protected	0.95	1.00	1.00	1.00		
Satd. Flow (prot)	3776	3893	3893	1742		
Flt Permitted	0.95	1.00	1.00	1.00		
Satd. Flow (perm)	3776	3893	3893	1742		
Peak-hour factor, PHF	0.86	0.86	0.89	0.89	0.92	0.92
Adj. Flow (vph)	802	886	296	584	0	0
RTOR Reduction (vph)	0	0	0	411	0	0
Lane Group Flow (vph)	802	886	296	173	0	0
Turn Type	Prot	NA	NA	Perm		
Protected Phases	3	8	4			
Permitted Phases				4		
Actuated Green, G (s)	6.4	26.7	16.6	16.6		
Effective Green, g (s)	6.4	26.7	16.6	16.6		
Actuated g/C Ratio	0.11	0.48	0.30	0.30		
Clearance Time (s)	3.7	4.1	4.1	4.1		
Vehicle Extension (s)	8.0	0.2	4.1	4.1		
Lane Grp Cap (vph)	430	1852	1151	515		
v/s Ratio Prot	c0.21	c0.23	0.08			
v/s Ratio Perm				0.10		
v/c Ratio	1.87	0.48	0.26	0.34		
Uniform Delay, d1	24.9	10.0	15.1	15.4		
Progression Factor	1.00	1.00	1.17	2.81		
Incremental Delay, d2	398.1	0.1	0.2	0.5		
Delay (s)	423.0	10.0	17.8	44.0		
Level of Service	F	B	B	D		
Approach Delay (s)		206.2	35.2		0.0	
Approach LOS		F	D		A	

Intersection Summary			
HCM 2000 Control Delay	147.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	56.1	Sum of lost time (s)	11.9
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
37: Fresno/Fresno & 99 SB On- Ramp/99 SB Off-Ramp

9/27/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	176	180	200	0	0	0	0	560	101	311	439	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.7	4.7	4.7					5.2		5.2	5.2	
Lane Util. Factor	1.00	1.00	1.00					0.95		1.00	0.95	
Frt	1.00	1.00	0.85					0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583					3458		1770	3539	
Flt Permitted	0.95	1.00	1.00					1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583					3458		1770	3539	
Peak-hour factor, PHF	0.89	0.89	0.89	0.92	0.92	0.92	0.91	0.91	0.91	0.94	0.94	0.94
Adj. Flow (vph)	198	202	225	0	0	0	0	615	111	331	467	0
RTOR Reduction (vph)	0	0	189	0	0	0	0	28	0	0	0	0
Lane Group Flow (vph)	198	202	36	0	0	0	0	698	0	331	467	0
Turn Type	Split	NA	Perm					NA		Prot	NA	
Protected Phases	4	4						2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	8.3	8.3	8.3					16.5		12.3	34.0	
Effective Green, g (s)	8.3	8.3	8.3					16.5		12.3	34.0	
Actuated g/C Ratio	0.16	0.16	0.16					0.32		0.24	0.65	
Clearance Time (s)	4.7	4.7	4.7					5.2		5.2	5.2	
Vehicle Extension (s)	6.2	6.2	6.2					0.2		2.0	0.2	
Lane Grp Cap (vph)	281	296	251					1093		417	2305	
v/s Ratio Prot	c0.11	0.11						c0.20		c0.19	0.13	
v/s Ratio Perm			0.02									
v/c Ratio	0.70	0.68	0.14					0.64		0.79	0.20	
Uniform Delay, d1	20.8	20.7	18.9					15.3		18.8	3.7	
Progression Factor	1.00	1.00	1.00					1.00		1.00	1.00	
Incremental Delay, d2	11.6	9.8	0.8					0.9		9.4	0.0	
Delay (s)	32.4	30.5	19.7					16.2		28.1	3.7	
Level of Service	C	C	B					B		C	A	
Approach Delay (s)		27.2			0.0			16.2			13.8	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	52.2	Sum of lost time (s)	15.1
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
4: Van Ness Ave & 41 SB Off-Ramp

9/26/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	119	2	3	427	0	0	0	0	170	13	410
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0						4.0	4.0
Lane Util. Factor		1.00			0.95						0.95	0.95
Frt		1.00			1.00						0.94	0.85
Flt Protected		1.00			1.00						0.97	1.00
Satd. Flow (prot)		1858			3538						1618	1504
Flt Permitted		1.00			0.95						0.97	1.00
Satd. Flow (perm)		1858			3374						1618	1504
Peak-hour factor, PHF	0.76	0.76	0.76	0.84	0.84	0.84	0.92	0.92	0.92	0.71	0.71	0.71
Adj. Flow (vph)	0	157	3	4	508	0	0	0	0	239	18	577
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	0	0	66	113
Lane Group Flow (vph)	0	158	0	0	512	0	0	0	0	0	364	291
Turn Type		NA		Perm	NA					Perm	NA	custom
Protected Phases		6			8!						8!	
Permitted Phases				8!						8!		6
Actuated Green, G (s)		18.2			13.8						13.8	18.2
Effective Green, g (s)		18.2			13.8						13.8	18.2
Actuated g/C Ratio		0.45			0.35						0.35	0.45
Clearance Time (s)		4.0			4.0						4.0	4.0
Vehicle Extension (s)		3.0			3.0						3.0	3.0
Lane Grp Cap (vph)		845			1164						558	684
v/s Ratio Prot		0.09										
v/s Ratio Perm					0.15						0.22	c0.19
v/c Ratio		0.19			0.44						0.65	0.43
Uniform Delay, d1		6.5			10.1						11.1	7.4
Progression Factor		1.00			1.00						1.00	1.00
Incremental Delay, d2		0.5			0.3						2.7	1.9
Delay (s)		7.0			10.4						13.8	9.3
Level of Service		A			B						B	A
Approach Delay (s)		7.0			10.4			0.0			11.6	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
4: Van Ness Ave & 41 SB Off-Ramp

9/27/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	200	17	11	379	0	0	0	0	58	10	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0						4.0	4.0
Lane Util. Factor		1.00			0.95						0.95	0.95
Frt		0.99			1.00						0.93	0.85
Flt Protected		1.00			1.00						0.98	1.00
Satd. Flow (prot)		1843			3534						1609	1504
Flt Permitted		1.00			0.94						0.98	1.00
Satd. Flow (perm)		1843			3339						1609	1504
Peak-hour factor, PHF	0.79	0.79	0.79	0.86	0.86	0.86	0.92	0.92	0.92	0.81	0.81	0.81
Adj. Flow (vph)	0	253	22	13	441	0	0	0	0	72	12	225
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	0	0	47	96
Lane Group Flow (vph)	0	267	0	0	454	0	0	0	0	0	111	55
Turn Type		NA		Perm	NA					Perm	NA	custom
Protected Phases		6			8!						8!	
Permitted Phases				8!						8!		6
Actuated Green, G (s)		10.4			10.4						10.4	10.4
Effective Green, g (s)		10.4			10.4						10.4	10.4
Actuated g/C Ratio		0.36			0.36						0.36	0.36
Clearance Time (s)		4.0			4.0						4.0	4.0
Vehicle Extension (s)		3.0			3.0						3.0	3.0
Lane Grp Cap (vph)		665			1205						581	543
v/s Ratio Prot		c0.14										
v/s Ratio Perm					c0.14						0.07	0.04
v/c Ratio		0.40			0.38						0.19	0.10
Uniform Delay, d1		6.9			6.8						6.3	6.1
Progression Factor		1.00			1.00						1.00	1.00
Incremental Delay, d2		0.4			0.2						0.2	0.1
Delay (s)		7.3			7.0						6.5	6.2
Level of Service		A			A						A	A
Approach Delay (s)		7.3			7.0			0.0			6.3	
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	0.39		
Actuated Cycle Length (s)	28.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	32.5%	ICU Level of Service	A
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
54: Stanislaus St & Van Ness Ave

9/27/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	98	5	122	578	0	0	0	0	137	409	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		4.2	4.2						4.2	
Lane Util. Factor		1.00		1.00	1.00						0.91	
Frt		0.99		1.00	1.00						0.99	
Flt Protected		1.00		0.95	1.00						0.99	
Satd. Flow (prot)		1852		1770	1863						4977	
Flt Permitted		1.00		0.68	1.00						0.99	
Satd. Flow (perm)		1852		1276	1863						4977	
Peak-hour factor, PHF	0.92	0.92	0.92	0.81	0.81	0.81	0.92	0.92	0.92	0.80	0.80	0.80
Adj. Flow (vph)	0	107	5	151	714	0	0	0	0	171	511	48
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	109	0	151	714	0	0	0	0	0	717	0
Turn Type		NA		Perm	NA					Split	NA	
Protected Phases		2			6					4	4	
Permitted Phases				6								
Actuated Green, G (s)		29.6		29.6	29.6						22.0	
Effective Green, g (s)		29.6		29.6	29.6						22.0	
Actuated g/C Ratio		0.49		0.49	0.49						0.37	
Clearance Time (s)		4.2		4.2	4.2						4.2	
Vehicle Extension (s)		0.2		0.2	0.2						0.2	
Lane Grp Cap (vph)		913		629	919						1824	
v/s Ratio Prot		0.06			c0.38						c0.14	
v/s Ratio Perm				0.12								
v/c Ratio		0.12		0.24	0.78						0.39	
Uniform Delay, d1		8.2		8.7	12.5						14.1	
Progression Factor		1.00		1.00	1.00						1.00	
Incremental Delay, d2		0.3		0.1	3.8						0.1	
Delay (s)		8.5		8.8	16.3						14.1	
Level of Service		A		A	B						B	
Approach Delay (s)		8.5			15.0			0.0			14.1	
Approach LOS		A			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.4
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: Ventura Ave & SR99 N Off-Ramp/SR99 N On-Ramp

9/27/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	31	7	83	326	561	0	0	324	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.95		1.00	0.95			0.95	
Frt					0.90		1.00	1.00			0.96	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					3134		1770	3539			3409	
Flt Permitted					0.99		0.46	1.00			1.00	
Satd. Flow (perm)					3134		860	3539			3409	
Peak-hour factor, PHF	0.92	0.92	0.92	0.70	0.70	0.70	0.76	0.76	0.76	0.86	0.86	0.86
Adj. Flow (vph)	0	0	0	44	10	119	429	738	0	0	377	122
RTOR Reduction (vph)	0	0	0	0	82	0	0	0	0	0	54	0
Lane Group Flow (vph)	0	0	0	0	91	0	429	738	0	0	445	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			4			8	
Permitted Phases				2			4					
Actuated Green, G (s)					18.5		33.5	33.5			33.5	
Effective Green, g (s)					18.5		33.5	33.5			33.5	
Actuated g/C Ratio					0.31		0.56	0.56			0.56	
Clearance Time (s)					4.0		4.0	4.0			4.0	
Vehicle Extension (s)					3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)					966		480	1975			1903	
v/s Ratio Prot								0.21			0.13	
v/s Ratio Perm					0.03		c0.50					
v/c Ratio					0.09		0.89	0.37			0.23	
Uniform Delay, d1					14.8		11.7	7.4			6.7	
Progression Factor					1.00		1.00	1.00			1.00	
Incremental Delay, d2					0.2		18.7	0.1			0.1	
Delay (s)					15.0		30.4	7.5			6.8	
Level of Service					B		C	A			A	
Approach Delay (s)		0.0			15.0			15.9			6.8	
Approach LOS		A			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: Ventura Ave & SR99 N Off-Ramp/SR99 N On-Ramp

9/27/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	23	2	69	275	437	0	0	485	408
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.95		1.00	0.95			0.95	
Frt					0.89		1.00	1.00			0.93	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					3110		1770	3539			3297	
Flt Permitted					0.99		0.27	1.00			1.00	
Satd. Flow (perm)					3110		506	3539			3297	
Peak-hour factor, PHF	0.92	0.92	0.92	0.59	0.59	0.59	0.94	0.94	0.94	0.89	0.89	0.89
Adj. Flow (vph)	0	0	0	39	3	117	293	465	0	0	545	458
RTOR Reduction (vph)	0	0	0	0	103	0	0	0	0	0	115	0
Lane Group Flow (vph)	0	0	0	0	56	0	293	465	0	0	888	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			4			8	
Permitted Phases				2			4					
Actuated Green, G (s)					6.9		44.4	44.4			44.4	
Effective Green, g (s)					6.9		44.4	44.4			44.4	
Actuated g/C Ratio					0.12		0.75	0.75			0.75	
Clearance Time (s)					4.0		4.0	4.0			4.0	
Vehicle Extension (s)					3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)					361		378	2649			2468	
v/s Ratio Prot								0.13			0.27	
v/s Ratio Perm					0.02		c0.58					
v/c Ratio					0.15		0.78	0.18			0.36	
Uniform Delay, d1					23.6		4.5	2.2			2.6	
Progression Factor					1.00		1.00	1.00			1.00	
Incremental Delay, d2					0.2		9.6	0.0			0.1	
Delay (s)					23.8		14.0	2.2			2.7	
Level of Service					C		B	A			A	
Approach Delay (s)		0.0			23.8			6.8			2.7	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	59.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
63: H St/N Echo St & E Divisadero St & N H St

9/27/2013

Movement	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR	SBR2	SEL
Lane Configurations												
Volume (vph)	21	4	4	10	241	1	9	71	0	9	3	444
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6			4.6	4.6				4.6	4.6	4.2	4.6
Lane Util. Factor	1.00			0.95	0.95				0.95	1.00	1.00	0.97
Frt	0.98			0.87	0.85				1.00	0.85	0.86	0.91
Flt Protected	1.00			1.00	1.00				0.95	1.00	1.00	0.98
Satd. Flow (prot)	1821			1531	1504				3362	1583	1611	3221
Flt Permitted	1.00			0.99	1.00				0.95	1.00	1.00	0.46
Satd. Flow (perm)	1821			1525	1504				3362	1583	1611	1494
Peak-hour factor, PHF	0.84	0.84	0.83	0.83	0.83	0.83	0.86	0.86	0.86	0.86	0.75	0.71
Adj. Flow (vph)	25	5	5	12	290	1	10	83	0	10	4	625
RTOR Reduction (vph)	4	0	0	0	73	0	0	0	0	9	4	29
Lane Group Flow (vph)	26	0	0	156	79	0	0	0	93	1	0	1565
Turn Type	NA		Perm	NA	Perm		Perm	Perm	NA	Perm	custom	NA
Protected Phases	6			6					4		8	5
Permitted Phases			6		6		4	4		4		2
Actuated Green, G (s)	20.5			20.5	20.5				7.0	7.0	7.4	38.0
Effective Green, g (s)	20.5			20.5	20.5				7.0	7.0	7.4	38.0
Actuated g/C Ratio	0.26			0.26	0.26				0.09	0.09	0.09	0.48
Clearance Time (s)	4.6			4.6	4.6				4.6	4.6	4.2	4.6
Vehicle Extension (s)	5.0			5.0	5.0				4.0	4.0	2.0	5.0
Lane Grp Cap (vph)	470			394	388				296	139	150	1543
v/s Ratio Prot	0.01										0.00	c0.49
v/s Ratio Perm				c0.10	0.05				0.03	0.00		
v/c Ratio	0.06			0.40	0.20				0.31	0.01	0.00	1.20dr
Uniform Delay, d1	22.1			24.3	23.0				33.9	33.0	32.6	20.6
Progression Factor	1.00			1.00	1.00				1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1			1.4	0.5				0.8	0.0	0.0	26.5
Delay (s)	22.2			25.7	23.6				34.7	33.0	32.6	47.1
Level of Service	C			C	C				C	C	C	D
Approach Delay (s)	22.2			24.6					34.6			47.1
Approach LOS	C			C					C			D

Intersection Summary			
HCM 2000 Control Delay	42.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	79.3	Sum of lost time (s)	18.4
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

Movement	SER	SER2
Lane Configurations		
Volume (vph)	687	1
Ideal Flow (vphpl)	1900	1900
Lane Width	12	12
Total Lost time (s)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Peak-hour factor, PHF	0.71	0.71
Adj. Flow (vph)	968	1
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	0	0
Turn Type		
Protected Phases		
Permitted Phases		
Actuated Green, G (s)		
Effective Green, g (s)		
Actuated g/C Ratio		
Clearance Time (s)		
Vehicle Extension (s)		
Lane Grp Cap (vph)		
v/s Ratio Prot		
v/s Ratio Perm		
v/c Ratio		
Uniform Delay, d1		
Progression Factor		
Incremental Delay, d2		
Delay (s)		
Level of Service		
Approach Delay (s)		
Approach LOS		

Intersection Summary

HCM Signalized Intersection Capacity Analysis
80: N Blackstone Ave & CA 180 WB

9/27/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	322	710	94	72	0	0	0	0	3	645	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2	3.7	4.2						4.9	4.9
Lane Util. Factor		1.00	1.00	1.00	1.00						0.95	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						1.00	1.00
Satd. Flow (prot)		1863	1583	1770	1863						3538	1583
Flt Permitted		1.00	1.00	0.95	1.00						1.00	1.00
Satd. Flow (perm)		1863	1583	1770	1863						3538	1583
Peak-hour factor, PHF	0.82	0.82	0.82	0.84	0.84	0.84	0.92	0.92	0.92	0.83	0.83	0.83
Adj. Flow (vph)	0	393	866	112	86	0	0	0	0	4	777	134
RTOR Reduction (vph)	0	0	32	0	0	0	0	0	0	0	0	100
Lane Group Flow (vph)	0	393	834	112	86	0	0	0	0	0	781	34
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		4		3	8					6	6	
Permitted Phases			4									6
Actuated Green, G (s)		47.4	47.4	7.0	58.1						22.8	22.8
Effective Green, g (s)		47.4	47.4	7.0	58.1						22.8	22.8
Actuated g/C Ratio		0.53	0.53	0.08	0.65						0.25	0.25
Clearance Time (s)		4.2	4.2	3.7	4.2						4.9	4.9
Vehicle Extension (s)		4.9	4.9	2.0	4.6						5.2	5.2
Lane Grp Cap (vph)		981	833	137	1202						896	401
v/s Ratio Prot		0.21		c0.06	0.05						c0.22	
v/s Ratio Perm			c0.53									0.02
v/c Ratio		0.40	1.00	0.82	0.07						0.87	0.08
Uniform Delay, d1		12.8	21.3	40.9	5.9						32.2	25.6
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		0.5	31.4	28.7	0.0						10.1	0.2
Delay (s)		13.3	52.7	69.6	6.0						42.3	25.8
Level of Service		B	D	E	A						D	C
Approach Delay (s)		40.4			41.9			0.0			39.9	
Approach LOS		D			D			A			D	

Intersection Summary			
HCM 2000 Control Delay	40.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.8
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
80: N Blackstone Ave & CA 180 WB

9/27/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	194	313	59	121	0	0	0	0	3	700	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2	3.7	4.2						4.9	4.9
Lane Util. Factor		1.00	1.00	1.00	1.00						0.95	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						1.00	1.00
Satd. Flow (prot)		1863	1583	1770	1863						3539	1583
Flt Permitted		1.00	1.00	0.95	1.00						1.00	1.00
Satd. Flow (perm)		1863	1583	1770	1863						3539	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.74	0.74	0.74	0.92	0.92	0.92	0.86	0.86	0.86
Adj. Flow (vph)	0	216	348	80	164	0	0	0	0	3	814	186
RTOR Reduction (vph)	0	0	231	0	0	0	0	0	0	0	0	107
Lane Group Flow (vph)	0	216	117	80	164	0	0	0	0	0	817	79
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		4		3	8					6	6	
Permitted Phases			4									6
Actuated Green, G (s)		17.0	17.0	6.0	26.7						26.7	26.7
Effective Green, g (s)		17.0	17.0	6.0	26.7						26.7	26.7
Actuated g/C Ratio		0.27	0.27	0.10	0.43						0.43	0.43
Clearance Time (s)		4.2	4.2	3.7	4.2						4.9	4.9
Vehicle Extension (s)		4.9	4.9	2.0	4.6						5.2	5.2
Lane Grp Cap (vph)		506	430	169	795						1511	676
v/s Ratio Prot		c0.12		c0.05	0.09						c0.23	
v/s Ratio Perm			0.07									0.05
v/c Ratio		0.43	0.27	0.47	0.21						0.54	0.12
Uniform Delay, d1		18.7	17.9	26.8	11.2						13.3	10.8
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		1.2	0.7	0.8	0.2						0.7	0.2
Delay (s)		19.9	18.6	27.5	11.5						14.1	11.0
Level of Service		B	B	C	B						B	B
Approach Delay (s)		19.1			16.7			0.0			13.5	
Approach LOS		B			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	62.5	Sum of lost time (s)	12.8
Intersection Capacity Utilization	54.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
86: Ventura Ave & H St

9/27/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	61	16	32	19	66	2	85	582	10	3	385	128
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		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.96			1.00		1.00	1.00		1.00	0.96	
Flt Protected		0.97			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1914			2020		1947	3883		1947	3747	
Flt Permitted		0.83			0.94		0.41	1.00		0.30	1.00	
Satd. Flow (perm)		1628			1924		833	3883		610	3747	
Peak-hour factor, PHF	0.89	0.89	0.89	0.78	0.78	0.78	0.83	0.83	0.83	0.92	0.92	0.92
Adj. Flow (vph)	69	18	36	24	85	3	102	701	12	3	418	139
RTOR Reduction (vph)	0	19	0	0	2	0	0	3	0	0	89	0
Lane Group Flow (vph)	0	104	0	0	110	0	102	710	0	3	468	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)		18.4			18.4		13.6	13.6		13.6	13.6	
Effective Green, g (s)		18.4			18.4		13.6	13.6		13.6	13.6	
Actuated g/C Ratio		0.46			0.46		0.34	0.34		0.34	0.34	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		748			885		283	1320		207	1273	
v/s Ratio Prot								c0.18			0.12	
v/s Ratio Perm		c0.06			0.06		0.12			0.00		
v/c Ratio		0.14			0.12		0.36	0.54		0.01	0.37	
Uniform Delay, d1		6.2			6.2		9.9	10.7		8.8	10.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4			0.3		0.8	0.4		0.0	0.2	
Delay (s)		6.6			6.5		10.7	11.1		8.8	10.1	
Level of Service		A			A		B	B		A	B	
Approach Delay (s)		6.6			6.5			11.0			10.1	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
86: Ventura Ave & H St

9/27/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	128	8	79	15	59	10	70	527	14	2	579	55
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		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.95			0.98		1.00	1.00		1.00	0.99	
Flt Protected		0.97			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1891			1998		1947	3878		1947	3843	
Flt Permitted		0.75			0.91		0.31	1.00		0.43	1.00	
Satd. Flow (perm)		1463			1841		630	3878		876	3843	
Peak-hour factor, PHF	0.82	0.82	0.82	0.73	0.73	0.73	0.91	0.91	0.91	0.77	0.77	0.77
Adj. Flow (vph)	156	10	96	21	81	14	77	579	15	3	752	71
RTOR Reduction (vph)	0	60	0	0	10	0	0	5	0	0	17	0
Lane Group Flow (vph)	0	202	0	0	106	0	77	589	0	3	806	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)		9.4			9.4		13.0	13.0		13.0	13.0	
Effective Green, g (s)		9.4			9.4		13.0	13.0		13.0	13.0	
Actuated g/C Ratio		0.31			0.31		0.43	0.43		0.43	0.43	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		452			569		269	1658		374	1643	
v/s Ratio Prot								0.15			c0.21	
v/s Ratio Perm		c0.14			0.06		0.12			0.00		
v/c Ratio		0.45			0.19		0.29	0.36		0.01	0.49	
Uniform Delay, d1		8.4			7.7		5.7	5.9		5.0	6.3	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.7			0.2		0.6	0.1		0.0	0.2	
Delay (s)		9.1			7.9		6.3	6.0		5.0	6.5	
Level of Service		A			A		A	A		A	A	
Approach Delay (s)		9.1			7.9			6.0			6.5	
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	0.47		
Actuated Cycle Length (s)	30.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
117: Stanislaus St & N St

9/27/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	71	14	53	39	15	15	279	15	162	632	13
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		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.96		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	2000		1947	1963		1947	2034		1947	2043	
Flt Permitted	0.71	1.00		0.69	1.00		0.23	1.00		0.57	1.00	
Satd. Flow (perm)	1460	2000		1419	1963		475	2034		1162	2043	
Peak-hour factor, PHF	0.85	0.85	0.85	0.79	0.79	0.79	0.92	0.92	0.92	0.84	0.84	0.84
Adj. Flow (vph)	18	84	16	67	49	19	16	303	16	193	752	15
RTOR Reduction (vph)	0	13	0	0	15	0	0	4	0	0	1	0
Lane Group Flow (vph)	18	87	0	67	53	0	16	315	0	193	766	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)	7.4	7.4		7.4	7.4		19.5	19.5		19.5	19.5	
Effective Green, g (s)	7.4	7.4		7.4	7.4		19.5	19.5		19.5	19.5	
Actuated g/C Ratio	0.21	0.21		0.21	0.21		0.56	0.56		0.56	0.56	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	309	424		300	416		265	1136		649	1141	
v/s Ratio Prot		0.04			0.03			0.16			c0.37	
v/s Ratio Perm	0.01			c0.05			0.03			0.17		
v/c Ratio	0.06	0.21		0.22	0.13		0.06	0.28		0.30	0.67	
Uniform Delay, d1	11.0	11.3		11.4	11.1		3.5	4.0		4.1	5.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	0.2		0.4	0.1		0.1	0.1		0.3	1.6	
Delay (s)	11.0	11.6		11.8	11.3		3.6	4.2		4.3	7.0	
Level of Service	B	B		B	B		A	A		A	A	
Approach Delay (s)		11.5			11.5			4.1			6.5	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	34.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
117: Stanislaus St & N St

9/27/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	25	22	9	106	64	25	25	256	25	42	456	25
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		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	1961		1947	1962		1947	2022		1947	2033	
Flt Permitted	0.66	1.00		0.72	1.00		0.28	1.00		0.53	1.00	
Satd. Flow (perm)	1348	1961		1476	1962		565	2022		1079	2033	
Peak-hour factor, PHF	0.55	0.55	0.55	0.57	0.57	0.57	0.92	0.92	0.92	0.85	0.85	0.85
Adj. Flow (vph)	45	40	16	186	112	44	27	278	27	49	536	29
RTOR Reduction (vph)	0	9	0	0	25	0	0	10	0	0	5	0
Lane Group Flow (vph)	45	47	0	186	131	0	27	295	0	49	560	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)	17.5	17.5		17.5	17.5		14.5	14.5		14.5	14.5	
Effective Green, g (s)	17.5	17.5		17.5	17.5		14.5	14.5		14.5	14.5	
Actuated g/C Ratio	0.44	0.44		0.44	0.44		0.36	0.36		0.36	0.36	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	589	857		645	858		204	732		391	736	
v/s Ratio Prot		0.02			0.07			0.15			c0.28	
v/s Ratio Perm	0.03			c0.13			0.05			0.05		
v/c Ratio	0.08	0.05		0.29	0.15		0.13	0.40		0.13	0.76	
Uniform Delay, d1	6.5	6.5		7.2	6.8		8.5	9.5		8.5	11.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.3	0.1		1.1	0.4		0.3	0.4		0.1	4.7	
Delay (s)	6.8	6.6		8.4	7.2		8.8	9.9		8.7	15.9	
Level of Service	A	A		A	A		A	A		A	B	
Approach Delay (s)		6.7			7.8			9.8			15.3	
Approach LOS		A			A			A			B	

Intersection Summary			
HCM 2000 Control Delay	11.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
25: Tulare St & H St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	418	460	119	210	438	101	142	351	143	71	308	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.97		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3430		1770	3440		1770	3386		1770	3386	
Flt Permitted	0.41	1.00		0.39	1.00		0.34	1.00		0.29	1.00	
Satd. Flow (perm)	765	3430		726	3440		633	3386		532	3386	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	454	500	129	228	476	110	154	382	155	77	335	136
RTOR Reduction (vph)	0	16	0	0	14	0	0	45	0	0	45	0
Lane Group Flow (vph)	454	613	0	228	572	0	154	492	0	77	426	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	71.9	71.9		71.9	71.9		29.4	29.4		29.4	29.4	
Effective Green, g (s)	71.9	71.9		71.9	71.9		29.4	29.4		29.4	29.4	
Actuated g/C Ratio	0.65	0.65		0.65	0.65		0.27	0.27		0.27	0.27	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	500	2241		474	2248		169	904		142	904	
v/s Ratio Prot		0.18			0.17			0.15			0.13	
v/s Ratio Perm	c0.59			0.31			c0.24			0.14		
v/c Ratio	0.91	0.27		0.48	0.25		0.91	0.54		0.54	0.47	
Uniform Delay, d1	16.2	8.0		9.6	7.9		39.0	34.6		34.5	33.8	
Progression Factor	1.18	1.16		0.56	0.56		1.17	1.18		0.80	0.77	
Incremental Delay, d2	22.8	0.3		3.4	0.3		42.4	0.3		1.8	0.1	
Delay (s)	42.1	9.6		8.8	4.7		88.0	41.0		29.6	26.2	
Level of Service	D	A		A	A		F	D		C	C	
Approach Delay (s)		23.2			5.9			51.5			26.7	
Approach LOS		C			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	25.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.7
Intersection Capacity Utilization	98.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
25: Tulare St & H St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	481	418	266	262	402	124	74	452	143	134	922	507
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.94		1.00	0.96		1.00	0.96		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3333		1770	3414		1770	3412		1770	3351	
Flt Permitted	0.40	1.00		0.30	1.00		0.16	1.00		0.34	1.00	
Satd. Flow (perm)	744	3333		561	3414		298	3412		637	3351	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	523	454	289	285	437	135	80	491	155	146	1002	551
RTOR Reduction (vph)	0	24	0	0	49	0	0	50	0	0	124	0
Lane Group Flow (vph)	523	719	0	285	523	0	80	596	0	146	1429	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	26.3	26.3		26.3	26.3		25.0	25.0		25.0	25.0	
Effective Green, g (s)	26.3	26.3		26.3	26.3		25.0	25.0		25.0	25.0	
Actuated g/C Ratio	0.44	0.44		0.44	0.44		0.42	0.42		0.42	0.42	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.2	4.2		4.2	4.2	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2		0.2	0.2	
Lane Grp Cap (vph)	326	1460		245	1496		124	1421		265	1396	
v/s Ratio Prot		0.22			0.15			0.17			c0.43	
v/s Ratio Perm	c0.70			0.51			0.27			0.23		
v/c Ratio	1.60	0.49		1.16	0.35		0.65	0.42		0.55	1.02	
Uniform Delay, d1	16.9	12.1		16.9	11.2		14.0	12.4		13.2	17.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	285.9	1.2		108.8	0.6		8.3	0.1		1.4	30.2	
Delay (s)	302.7	13.3		125.7	11.8		22.3	12.4		14.7	47.7	
Level of Service	F	B		F	B		C	B		B	D	
Approach Delay (s)		132.8			49.7			13.5			44.9	
Approach LOS		F			D			B			D	

Intersection Summary			
HCM 2000 Control Delay	65.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.32		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.7
Intersection Capacity Utilization	122.9%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
30: Tulare St & 41 SB On-Ramp /U Street

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	51	106	61	0	0	0	35	299	62	232	1450	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6	4.6				4.6	4.6		4.6	4.6	
Lane Util. Factor	1.00	1.00	1.00				1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85				1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00	1.00				0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583				1770	3448		1770	3479	
Flt Permitted	0.95	1.00	1.00				0.11	1.00		0.52	1.00	
Satd. Flow (perm)	1770	1863	1583				199	3448		969	3479	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	55	115	66	0	0	0	38	325	67	252	1576	201
RTOR Reduction (vph)	0	0	36	0	0	0	0	8	0	0	4	0
Lane Group Flow (vph)	55	115	30	0	0	0	38	384	0	252	1773	0
Turn Type	Split	NA	Perm				Perm	NA		Perm	NA	
Protected Phases	4	4						2			6	
Permitted Phases			4				2			6		
Actuated Green, G (s)	10.3	10.3	10.3				90.5	90.5		90.5	90.5	
Effective Green, g (s)	10.3	10.3	10.3				90.5	90.5		90.5	90.5	
Actuated g/C Ratio	0.09	0.09	0.09				0.82	0.82		0.82	0.82	
Clearance Time (s)	4.6	4.6	4.6				4.6	4.6		4.6	4.6	
Vehicle Extension (s)	0.2	0.2	0.2				4.1	4.1		4.1	4.1	
Lane Grp Cap (vph)	165	174	148				163	2836		797	2862	
v/s Ratio Prot	0.03	c0.06						0.11			c0.51	
v/s Ratio Perm			0.02				0.19			0.26		
v/c Ratio	0.33	0.66	0.20				0.23	0.14		0.32	0.62	
Uniform Delay, d1	46.6	48.2	46.0				2.1	1.9		2.3	3.5	
Progression Factor	1.00	1.00	1.00				1.10	0.74		0.83	1.45	
Incremental Delay, d2	0.4	7.1	0.2				1.0	0.0		1.0	0.9	
Delay (s)	47.1	55.3	46.3				3.4	1.5		2.9	6.0	
Level of Service	D	E	D				A	A		A	A	
Approach Delay (s)		50.8			0.0			1.6			5.6	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	9.2
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
30: Tulare St & 41 SB On-Ramp /U Street

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	227	362	62	0	0	0	32	1288	100	215	961	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6	4.6				4.6	4.6		4.6	4.6	
Lane Util. Factor	1.00	1.00	1.00				1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85				1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00				0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583				1770	3501		1770	3482	
Flt Permitted	0.95	1.00	1.00				0.20	1.00		0.12	1.00	
Satd. Flow (perm)	1770	1863	1583				369	3501		222	3482	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	247	393	67	0	0	0	35	1400	109	234	1045	126
RTOR Reduction (vph)	0	0	18	0	0	0	0	5	0	0	8	0
Lane Group Flow (vph)	247	393	49	0	0	0	35	1504	0	234	1163	0
Turn Type	Split	NA	Perm				Perm	NA		Perm	NA	
Protected Phases	4	4						2			6	
Permitted Phases			4				2			6		
Actuated Green, G (s)	24.4	24.4	24.4				71.4	71.4		71.4	71.4	
Effective Green, g (s)	24.4	24.4	24.4				71.4	71.4		71.4	71.4	
Actuated g/C Ratio	0.23	0.23	0.23				0.68	0.68		0.68	0.68	
Clearance Time (s)	4.6	4.6	4.6				4.6	4.6		4.6	4.6	
Vehicle Extension (s)	0.2	0.2	0.2				4.1	4.1		4.1	4.1	
Lane Grp Cap (vph)	411	432	367				250	2380		150	2367	
v/s Ratio Prot	0.14	c0.21						0.43			0.33	
v/s Ratio Perm			0.03				0.09			c1.06		
v/c Ratio	0.60	0.91	0.13				0.14	0.63		1.56	0.49	
Uniform Delay, d1	36.0	39.2	31.9				5.9	9.4		16.8	8.1	
Progression Factor	1.00	1.00	1.00				1.27	1.31		1.23	0.59	
Incremental Delay, d2	1.7	22.2	0.1				0.3	0.5		279.2	0.7	
Delay (s)	37.7	61.5	32.0				7.8	12.8		299.8	5.5	
Level of Service	D	E	C				A	B		F	A	
Approach Delay (s)		50.4			0.0			12.7			54.5	
Approach LOS		D			A			B			D	

Intersection Summary			
HCM 2000 Control Delay	36.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.39		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.2
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
38: Fresno & 99 NB Off-Ramp/99 NB On-Ramp

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	187	265	548	450	1201	0	0	400	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)					5.4	5.4	3.7	5.2			5.2	
Lane Util. Factor					0.95	1.00	1.00	0.95			0.91	
Frt					1.00	0.85	1.00	1.00			0.95	
Flt Protected					0.98	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					3468	1583	1770	3539			4809	
Flt Permitted					0.98	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					3468	1583	1770	3539			4809	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	203	288	596	489	1305	0	0	435	247
RTOR Reduction (vph)	0	0	0	0	0	47	0	0	0	0	93	0
Lane Group Flow (vph)	0	0	0	0	491	549	489	1305	0	0	589	0
Turn Type				Split	NA	Perm	Prot	NA			NA	
Protected Phases				8	8		5	2			6	
Permitted Phases						8						
Actuated Green, G (s)					39.6	39.6	32.3	59.8			23.8	
Effective Green, g (s)					39.6	39.6	32.3	59.8			23.8	
Actuated g/C Ratio					0.36	0.36	0.29	0.54			0.22	
Clearance Time (s)					5.4	5.4	3.7	5.2			5.2	
Vehicle Extension (s)					5.0	5.0	2.0	0.2			0.2	
Lane Grp Cap (vph)					1248	569	519	1923			1040	
v/s Ratio Prot					0.14		c0.28	c0.37			0.12	
v/s Ratio Perm						c0.35						
v/c Ratio					0.39	0.97	0.94	0.68			0.57	
Uniform Delay, d1					26.2	34.5	37.9	18.2			38.5	
Progression Factor					1.00	1.00	0.75	0.52			0.56	
Incremental Delay, d2					0.4	29.4	3.9	0.2			2.2	
Delay (s)					26.7	63.9	32.4	9.6			23.6	
Level of Service					C	E	C	A			C	
Approach Delay (s)		0.0			47.1			15.8			23.6	
Approach LOS		A			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	26.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.3
Intersection Capacity Utilization	131.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
38: Fresno & 99 NB Off-Ramp/99 NB On-Ramp

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	187	216	382	560	651	0	0	862	749
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)					5.4	5.4	3.7	5.2			5.2	
Lane Util. Factor					0.95	1.00	1.00	0.95			0.91	
Frt					1.00	0.85	1.00	1.00			0.93	
Flt Protected					0.98	1.00	0.95	1.00			1.00	
Satd. Flow (prot)					3459	1583	1770	3539			4731	
Flt Permitted					0.98	1.00	0.95	1.00			1.00	
Satd. Flow (perm)					3459	1583	1770	3539			4731	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	203	235	415	609	708	0	0	937	814
RTOR Reduction (vph)	0	0	0	0	0	173	0	0	0	0	138	0
Lane Group Flow (vph)	0	0	0	0	438	242	609	708	0	0	1613	0
Turn Type				Split	NA	Perm	Prot	NA			NA	
Protected Phases				8	8		5	2			6	
Permitted Phases						8						
Actuated Green, G (s)					26.3	26.3	28.3	68.1			36.1	
Effective Green, g (s)					26.3	26.3	28.3	68.1			36.1	
Actuated g/C Ratio					0.25	0.25	0.27	0.65			0.34	
Clearance Time (s)					5.4	5.4	3.7	5.2			5.2	
Vehicle Extension (s)					5.0	5.0	2.0	0.2			0.2	
Lane Grp Cap (vph)					866	396	477	2295			1626	
v/s Ratio Prot					0.13		c0.34	0.20			c0.34	
v/s Ratio Perm						c0.15						
v/c Ratio					0.51	0.61	1.28	0.31			1.18dr	
Uniform Delay, d1					33.8	34.8	38.4	8.1			34.3	
Progression Factor					1.00	1.00	0.56	0.21			0.78	
Incremental Delay, d2					1.0	4.0	131.8	0.2			18.9	
Delay (s)					34.7	38.8	153.3	1.9			45.8	
Level of Service					C	D	F	A			D	
Approach Delay (s)		0.0			36.7			71.9			45.8	
Approach LOS		A			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	52.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.3
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
4: Van Ness Ave & 41 SB Off-Ramp

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	293	10	92	565	0	0	0	0	350	66	600
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0						4.0	4.0
Lane Util. Factor		1.00			0.95						0.95	0.95
Frt		1.00			1.00						0.97	0.85
Flt Protected		1.00			0.99						0.97	1.00
Satd. Flow (prot)		1854			3515						1658	1504
Flt Permitted		1.00			0.84						0.97	1.00
Satd. Flow (perm)		1854			2957						1658	1504
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	318	11	100	614	0	0	0	0	380	72	652
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	10	107
Lane Group Flow (vph)	0	328	0	0	714	0	0	0	0	0	566	421
Turn Type		NA		Perm	NA					Perm	NA	custom
Protected Phases		6			8!						8!	
Permitted Phases				8!						8!		6
Actuated Green, G (s)		54.9			47.1						47.1	54.9
Effective Green, g (s)		54.9			47.1						47.1	54.9
Actuated g/C Ratio		0.50			0.43						0.43	0.50
Clearance Time (s)		4.0			4.0						4.0	4.0
Vehicle Extension (s)		3.0			3.0						3.0	3.0
Lane Grp Cap (vph)		925			1266						709	750
v/s Ratio Prot		0.18										
v/s Ratio Perm					0.24						0.34	c0.28
v/c Ratio		0.35			0.56						0.80	0.56
Uniform Delay, d1		16.8			23.7						27.3	19.2
Progression Factor		0.88			1.00						1.00	1.00
Incremental Delay, d2		1.0			0.6						6.2	3.0
Delay (s)		15.7			24.3						33.6	22.2
Level of Service		B			C						C	C
Approach Delay (s)		15.7			24.3			0.0			28.1	
Approach LOS		B			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	25.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
4: Van Ness Ave & 41 SB Off-Ramp

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	252	165	23	598	0	0	0	0	285	313	459
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0						4.0	4.0
Lane Util. Factor		1.00			0.95						0.95	0.95
Frt		0.95			1.00						0.99	0.85
Flt Protected		1.00			1.00						0.98	1.00
Satd. Flow (prot)		1763			3533						1713	1504
Flt Permitted		1.00			0.93						0.98	1.00
Satd. Flow (perm)		1763			3285						1713	1504
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	274	179	25	650	0	0	0	0	310	340	499
RTOR Reduction (vph)	0	20	0	0	0	0	0	0	0	0	3	140
Lane Group Flow (vph)	0	433	0	0	675	0	0	0	0	0	697	309
Turn Type		NA		Perm	NA					Perm	NA	custom
Protected Phases		6			8!						8!	
Permitted Phases				8!						8!		6
Actuated Green, G (s)		43.9			53.1						53.1	43.9
Effective Green, g (s)		43.9			53.1						53.1	43.9
Actuated g/C Ratio		0.42			0.51						0.51	0.42
Clearance Time (s)		4.0			4.0						4.0	4.0
Vehicle Extension (s)		3.0			3.0						3.0	3.0
Lane Grp Cap (vph)		737			1661						866	628
v/s Ratio Prot		c0.25										
v/s Ratio Perm					0.21						0.41	0.21
v/c Ratio		0.59			0.41						0.80	0.49
Uniform Delay, d1		23.6			16.1						21.6	22.4
Progression Factor		1.10			1.00						1.00	1.00
Incremental Delay, d2		3.0			0.2						5.5	2.7
Delay (s)		28.9			16.3						27.1	25.1
Level of Service		C			B						C	C
Approach Delay (s)		28.9			16.3			0.0			26.3	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	23.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
42: Fresno & Van Ness Ave

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	122	269	200	156	358	249	217	620	110	99	459	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.1	4.2	4.2	4.1	4.2		4.1	4.2		4.1	4.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	3321		1770	3459		1770	3454	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	3321		1770	3459		1770	3454	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	133	292	217	170	389	271	236	674	120	108	499	95
RTOR Reduction (vph)	0	0	148	0	107	0	0	13	0	0	14	0
Lane Group Flow (vph)	133	292	69	170	553	0	236	781	0	108	580	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2									
Actuated Green, G (s)	12.2	34.8	34.8	14.6	37.2		19.0	32.8		11.2	25.0	
Effective Green, g (s)	12.2	34.8	34.8	14.6	37.2		19.0	32.8		11.2	25.0	
Actuated g/C Ratio	0.11	0.32	0.32	0.13	0.34		0.17	0.30		0.10	0.23	
Clearance Time (s)	4.1	4.2	4.2	4.1	4.2		4.1	4.2		4.1	4.2	
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	196	589	500	234	1123		305	1031		180	785	
v/s Ratio Prot	0.08	0.16		c0.10	c0.17		c0.13	c0.23		0.06	0.17	
v/s Ratio Perm			0.04									
v/c Ratio	0.68	0.50	0.14	0.73	0.49		0.77	0.76		0.60	0.74	
Uniform Delay, d1	47.0	30.5	26.9	45.8	28.9		43.4	35.0		47.3	39.5	
Progression Factor	0.86	0.83	1.31	0.93	0.92		0.86	0.96		1.19	0.98	
Incremental Delay, d2	7.6	2.5	0.5	9.3	1.3		11.4	3.8		5.1	4.3	
Delay (s)	48.1	27.8	35.6	52.1	28.0		48.9	37.4		61.4	42.8	
Level of Service	D	C	D	D	C		D	D		E	D	
Approach Delay (s)		34.6			32.9			40.0			45.6	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	38.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.6
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
42: Fresno & Van Ness Ave

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	130	344	248	269	522	175	288	583	155	153	752	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.1	4.2	4.2	4.1	4.2		4.1	4.2		4.1	4.2	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1863	1583	1770	3406		1770	3428		1770	3493	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1863	1583	1770	3406		1770	3428		1770	3493	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	141	374	270	292	567	190	313	634	168	166	817	77
RTOR Reduction (vph)	0	0	205	0	31	0	0	22	0	0	7	0
Lane Group Flow (vph)	141	374	65	292	726	0	313	780	0	166	887	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases			2									
Actuated Green, G (s)	11.4	25.4	25.4	17.9	31.9		18.9	32.2		12.9	26.2	
Effective Green, g (s)	11.4	25.4	25.4	17.9	31.9		18.9	32.2		12.9	26.2	
Actuated g/C Ratio	0.11	0.24	0.24	0.17	0.30		0.18	0.31		0.12	0.25	
Clearance Time (s)	4.1	4.2	4.2	4.1	4.2		4.1	4.2		4.1	4.2	
Vehicle Extension (s)	3.0	5.0	5.0	3.0	5.0		3.0	5.0		3.0	5.0	
Lane Grp Cap (vph)	192	450	382	301	1034		318	1051		217	871	
v/s Ratio Prot	0.08	c0.20		c0.17	0.21		c0.18	0.23		0.09	c0.25	
v/s Ratio Perm			0.04									
v/c Ratio	0.73	0.83	0.17	0.97	0.70		0.98	0.74		0.76	1.02	
Uniform Delay, d1	45.3	37.8	31.5	43.3	32.3		42.9	32.7		44.6	39.4	
Progression Factor	0.98	1.15	2.40	0.84	0.93		1.07	1.04		1.03	0.64	
Incremental Delay, d2	13.2	15.8	0.9	32.0	2.4		45.3	3.4		13.9	34.2	
Delay (s)	57.4	59.1	76.5	68.3	32.4		91.4	37.2		59.6	59.4	
Level of Service	E	E	E	E	C		F	D		E	E	
Approach Delay (s)		64.8			42.4			52.4			59.4	
Approach LOS		E			D			D			E	

Intersection Summary			
HCM 2000 Control Delay	54.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.6
Intersection Capacity Utilization	85.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
46: Fresno & E Divisadero St & Fresno St.

8/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL2	NEL	NER
Lane Configurations												
Volume (vph)	17	84	7	571	389	419	285	424	24	61	244	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6		4.6	4.6	4.6	4.0	4.6	4.6	4.0	4.6	4.6
Lane Util. Factor	1.00	1.00		0.97	1.00	1.00	1.00	0.88	1.00	1.00	0.97	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00
Satd. Flow (prot)	1770	1840		3433	1863	1583	1770	2787	1583	1770	3433	1583
Flt Permitted	0.28	1.00		0.69	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00
Satd. Flow (perm)	514	1840		2504	1863	1583	1770	2787	1583	1770	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	18	91	8	621	423	455	310	461	26	66	265	305
RTOR Reduction (vph)	0	3	0	0	0	299	0	0	14	0	0	209
Lane Group Flow (vph)	18	96	0	621	423	156	310	461	12	66	265	96
Turn Type	Perm	NA		Perm	NA	Perm	NA	custom	custom	Prot	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4		4			2			6
Actuated Green, G (s)	37.8	37.8		37.8	37.8	37.8	24.2	51.5	51.5	7.5	34.8	34.8
Effective Green, g (s)	37.8	37.8		37.8	37.8	37.8	24.2	51.5	51.5	7.5	34.8	34.8
Actuated g/C Ratio	0.34	0.34		0.34	0.34	0.34	0.22	0.47	0.47	0.07	0.32	0.32
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6	4.0	4.6	4.6	4.0	4.6	4.6
Vehicle Extension (s)	3.0	3.0		3.5	3.5	3.5	3.0	4.8	4.8	2.0	4.8	4.8
Lane Grp Cap (vph)	176	632		860	640	543	389	1304	741	120	1086	500
v/s Ratio Prot		0.05			0.23		c0.18	c0.17		0.04	0.08	
v/s Ratio Perm	0.04			c0.25		0.10			0.01			0.06
v/c Ratio	0.10	0.15		0.72	0.66	0.29	0.80	0.35	0.02	0.55	0.24	0.19
Uniform Delay, d1	24.6	25.0		31.5	30.7	26.3	40.6	18.6	15.7	49.6	27.9	27.4
Progression Factor	1.00	1.00		1.04	1.04	1.33	1.00	1.00	1.00	0.98	0.95	2.34
Incremental Delay, d2	0.3	0.1		1.4	1.2	0.2	10.8	0.8	0.0	3.0	0.5	0.8
Delay (s)	24.8	25.1		34.2	33.0	35.1	51.4	19.4	15.7	51.6	27.0	64.9
Level of Service	C	C		C	C	D	D	B	B	D	C	E
Approach Delay (s)		25.1			34.1		31.7				47.7	
Approach LOS		C			C		C				D	

Intersection Summary			
HCM 2000 Control Delay	36.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	13.2
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
46: Fresno & E Divisadero St & Fresno St.

8/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SBL	SBR	SBR2	NEL2	NEL	NER
Lane Configurations												
Volume (vph)	32	253	25	536	66	371	502	506	29	20	703	854
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.6	4.6		4.6	4.6	4.6	4.0	4.6	4.6	4.0	4.6	4.6
Lane Util. Factor	1.00	1.00		0.97	1.00	1.00	1.00	0.88	1.00	1.00	0.97	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.85	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00
Satd. Flow (prot)	1770	1838		3433	1863	1583	1770	2787	1583	1770	3433	1583
Flt Permitted	0.71	1.00		0.42	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00
Satd. Flow (perm)	1323	1838		1527	1863	1583	1770	2787	1583	1770	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	35	275	27	583	72	403	546	550	32	22	764	928
RTOR Reduction (vph)	0	3	0	0	0	267	0	0	16	0	0	182
Lane Group Flow (vph)	35	299	0	583	72	136	546	550	16	22	764	746
Turn Type	Perm	NA		Perm	NA	Perm	NA	custom	custom	Prot	NA	Perm
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4		4			2			6
Actuated Green, G (s)	35.4	35.4		35.4	35.4	35.4	26.0	53.5	53.5	2.9	30.4	30.4
Effective Green, g (s)	35.4	35.4		35.4	35.4	35.4	26.0	53.5	53.5	2.9	30.4	30.4
Actuated g/C Ratio	0.34	0.34		0.34	0.34	0.34	0.25	0.51	0.51	0.03	0.29	0.29
Clearance Time (s)	4.6	4.6		4.6	4.6	4.6	4.0	4.6	4.6	4.0	4.6	4.6
Vehicle Extension (s)	3.0	3.0		3.5	3.5	3.5	3.0	4.8	4.8	2.0	4.8	4.8
Lane Grp Cap (vph)	446	619		514	628	533	438	1420	806	48	993	458
v/s Ratio Prot		0.16			0.04		c0.31	0.20		0.01	0.22	
v/s Ratio Perm	0.03			c0.38		0.09			0.01			c0.47
v/c Ratio	0.08	0.48		1.13	0.11	0.25	1.25	0.39	0.02	0.46	0.77	1.63
Uniform Delay, d1	23.7	27.5		34.8	24.0	25.2	39.5	15.7	12.8	50.3	34.1	37.3
Progression Factor	1.00	1.00		0.48	0.53	0.49	1.00	1.00	1.00	1.10	0.96	0.93
Incremental Delay, d2	0.1	0.6		79.0	0.1	0.2	128.9	0.8	0.0	1.5	3.4	288.9
Delay (s)	23.8	28.1		95.7	12.8	12.5	168.4	16.5	12.8	56.8	36.0	323.6
Level of Service	C	C		F	B	B	F	B	B	E	D	F
Approach Delay (s)		27.7			58.4		89.9				192.0	
Approach LOS		C			E		F				F	

Intersection Summary			
HCM 2000 Control Delay	118.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.33		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	13.2
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: Ventura Ave & SR99 N Off-Ramp/SR99 N On-Ramp

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	108	25	204	490	756	0	0	548	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.95		1.00	0.95			0.95	
Frt					0.91		1.00	1.00			0.96	
Flt Protected					0.98		0.95	1.00			1.00	
Satd. Flow (prot)					3167		1770	3539			3393	
Flt Permitted					0.98		0.33	1.00			1.00	
Satd. Flow (perm)					3167		610	3539			3393	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	117	27	222	533	822	0	0	596	226
RTOR Reduction (vph)	0	0	0	0	190	0	0	0	0	0	36	0
Lane Group Flow (vph)	0	0	0	0	176	0	533	822	0	0	786	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			4			8	
Permitted Phases				2			4					
Actuated Green, G (s)					16.0		86.0	86.0			86.0	
Effective Green, g (s)					16.0		86.0	86.0			86.0	
Actuated g/C Ratio					0.15		0.78	0.78			0.78	
Clearance Time (s)					4.0		4.0	4.0			4.0	
Vehicle Extension (s)					3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)					460		476	2766			2652	
v/s Ratio Prot								0.23			0.23	
v/s Ratio Perm					0.06		c0.87					
v/c Ratio					0.38		1.12	0.30			0.30	
Uniform Delay, d1					42.5		12.0	3.4			3.4	
Progression Factor					1.00		1.05	0.57			0.09	
Incremental Delay, d2					2.4		75.2	0.1			0.1	
Delay (s)					44.9		87.8	2.0			0.4	
Level of Service					D		F	A			A	
Approach Delay (s)		0.0			44.9			35.7			0.4	
Approach LOS		A			D			D			A	

Intersection Summary			
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
6: Ventura Ave & SR99 N Off-Ramp/SR99 N On-Ramp

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	129	10	299	364	712	0	0	716	615
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.95		1.00	0.95			0.95	
Frt					0.90		1.00	1.00			0.93	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					3131		1770	3539			3294	
Flt Permitted					0.99		0.15	1.00			1.00	
Satd. Flow (perm)					3131		284	3539			3294	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	140	11	325	396	774	0	0	778	668
RTOR Reduction (vph)	0	0	0	0	252	0	0	0	0	0	148	0
Lane Group Flow (vph)	0	0	0	0	224	0	396	774	0	0	1298	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					2			4			8	
Permitted Phases				2			4					
Actuated Green, G (s)					16.0		81.0	81.0			81.0	
Effective Green, g (s)					16.0		81.0	81.0			81.0	
Actuated g/C Ratio					0.15		0.77	0.77			0.77	
Clearance Time (s)					4.0		4.0	4.0			4.0	
Vehicle Extension (s)					3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)					477		219	2730			2541	
v/s Ratio Prot								0.22			0.39	
v/s Ratio Perm					0.07		c1.39					
v/c Ratio					0.47		1.81	0.28			0.51	
Uniform Delay, d1					40.6		12.0	3.5			4.5	
Progression Factor					1.00		1.00	1.00			0.26	
Incremental Delay, d2					3.3		381.2	0.1			0.1	
Delay (s)					43.9		393.2	3.6			1.3	
Level of Service					D		F	A			A	
Approach Delay (s)		0.0			43.9			135.5			1.3	
Approach LOS		A			D			F			A	

Intersection Summary			
HCM 2000 Control Delay	58.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.59		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
7: Ventura Ave & E St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	21	4	47	15	40	23	91	854	15	30	694	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.91			0.96			1.00			0.99	
Flt Protected		0.99			0.99			1.00			1.00	
Satd. Flow (prot)		1674			1771			3514			3484	
Flt Permitted		0.92			0.95			0.71			0.88	
Satd. Flow (perm)		1566			1707			2524			3056	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	23	4	51	16	43	25	99	928	16	33	754	79
RTOR Reduction (vph)	0	33	0	0	11	0	0	2	0	0	11	0
Lane Group Flow (vph)	0	45	0	0	73	0	0	1041	0	0	855	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)		39.2			39.2			62.8			62.8	
Effective Green, g (s)		39.2			39.2			62.8			62.8	
Actuated g/C Ratio		0.36			0.36			0.57			0.57	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		558			608			1440			1744	
v/s Ratio Prot												
v/s Ratio Perm		0.03			c0.04			c0.41			0.28	
v/c Ratio		0.08			0.12			0.72			0.49	
Uniform Delay, d1		23.5			23.8			17.2			14.1	
Progression Factor		1.00			1.00			0.67			0.65	
Incremental Delay, d2		0.3			0.4			1.7			0.2	
Delay (s)		23.7			24.2			13.3			9.4	
Level of Service		C			C			B			A	
Approach Delay (s)		23.7			24.2			13.3			9.4	
Approach LOS		C			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
7: Ventura Ave & E St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	33	13	111	25	25	50	141	825	35	15	1196	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.90			0.93			0.99			0.99	
Flt Protected		0.99			0.99			0.99			1.00	
Satd. Flow (prot)		1667			1716			3496			3503	
Flt Permitted		0.93			0.90			0.55			0.94	
Satd. Flow (perm)		1567			1562			1928			3281	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	14	121	27	27	54	153	897	38	16	1300	92
RTOR Reduction (vph)	0	81	0	0	33	0	0	3	0	0	5	0
Lane Group Flow (vph)	0	90	0	0	75	0	0	1085	0	0	1403	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)		20.4			20.4			76.6			76.6	
Effective Green, g (s)		20.4			20.4			76.6			76.6	
Actuated g/C Ratio		0.19			0.19			0.73			0.73	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		304			303			1406			2393	
v/s Ratio Prot												
v/s Ratio Perm		c0.06			0.05			c0.56			0.43	
v/c Ratio		0.30			0.25			0.77			0.59	
Uniform Delay, d1		36.2			35.8			8.8			6.7	
Progression Factor		1.00			1.00			1.09			1.00	
Incremental Delay, d2		2.5			1.9			2.5			0.4	
Delay (s)		38.7			37.7			12.1			7.1	
Level of Service		D			D			B			A	
Approach Delay (s)		38.7			37.7			12.1			7.1	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
74: N Blackstone Ave & E Belmont Ave.

8/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1148	149	146	386	0	0	0	0	385	1735	268
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2	3.7	4.2					4.9	4.9	
Lane Util. Factor		0.95	1.00	1.00	0.95					1.00	0.91	
Frt		1.00	0.85	1.00	1.00					1.00	0.98	
Flt Protected		1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (prot)		3539	1583	1770	3539					1770	4983	
Flt Permitted		1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (perm)		3539	1583	1770	3539					1770	4983	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1248	162	159	420	0	0	0	0	418	1886	291
RTOR Reduction (vph)	0	0	36	0	0	0	0	0	0	0	19	0
Lane Group Flow (vph)	0	1248	126	159	420	0	0	0	0	418	2158	0
Turn Type		NA	Perm	Prot	NA					Split	NA	
Protected Phases		4		3	8					6	6	
Permitted Phases			4									
Actuated Green, G (s)		38.8	38.8	10.7	53.2					47.7	47.7	
Effective Green, g (s)		38.8	38.8	10.7	53.2					47.7	47.7	
Actuated g/C Ratio		0.35	0.35	0.10	0.48					0.43	0.43	
Clearance Time (s)		4.2	4.2	3.7	4.2					4.9	4.9	
Vehicle Extension (s)		6.8	6.8	2.0	6.8					0.2	0.2	
Lane Grp Cap (vph)		1248	558	172	1711					767	2160	
v/s Ratio Prot		c0.35		c0.09	0.12					0.24	c0.43	
v/s Ratio Perm			0.08									
v/c Ratio		1.00	0.23	0.92	0.25					0.54	1.00	
Uniform Delay, d1		35.6	25.0	49.2	16.6					23.1	31.1	
Progression Factor		1.00	1.00	1.55	0.03					0.66	0.68	
Incremental Delay, d2		25.5	0.7	37.8	0.2					2.0	16.1	
Delay (s)		61.1	25.7	114.3	0.8					17.2	37.3	
Level of Service		E	C	F	A					B	D	
Approach Delay (s)		57.0			31.9			0.0			34.1	
Approach LOS		E			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	40.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.8
Intersection Capacity Utilization	90.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
74: N Blackstone Ave & E Belmont Ave.

8/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	1408	128	234	1047	0	0	0	0	391	1516	426
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2	3.7	4.2					4.9	4.9	
Lane Util. Factor		0.95	1.00	1.00	0.95					1.00	0.91	
Frt		1.00	0.85	1.00	1.00					1.00	0.97	
Flt Protected		1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (prot)		3539	1583	1770	3539					1770	4918	
Flt Permitted		1.00	1.00	0.95	1.00					0.95	1.00	
Satd. Flow (perm)		3539	1583	1770	3539					1770	4918	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1530	139	254	1138	0	0	0	0	425	1648	463
RTOR Reduction (vph)	0	0	37	0	0	0	0	0	0	0	38	0
Lane Group Flow (vph)	0	1530	102	254	1138	0	0	0	0	425	2073	0
Turn Type		NA	Perm	Prot	NA					Split	NA	
Protected Phases		4		3	8					6	6	
Permitted Phases			4									
Actuated Green, G (s)		38.8	38.8	13.3	55.8					40.1	40.1	
Effective Green, g (s)		38.8	38.8	13.3	55.8					40.1	40.1	
Actuated g/C Ratio		0.37	0.37	0.13	0.53					0.38	0.38	
Clearance Time (s)		4.2	4.2	3.7	4.2					4.9	4.9	
Vehicle Extension (s)		6.8	6.8	2.0	6.8					0.2	0.2	
Lane Grp Cap (vph)		1307	584	224	1880					675	1878	
v/s Ratio Prot		c0.43		c0.14	0.32					0.24	c0.42	
v/s Ratio Perm			0.06									
v/c Ratio		1.17	0.18	1.13	0.61					0.63	1.10	
Uniform Delay, d1		33.1	22.3	45.9	17.0					26.4	32.5	
Progression Factor		1.00	1.00	1.65	0.08					1.02	1.05	
Incremental Delay, d2		85.3	0.5	73.2	0.3					2.8	52.4	
Delay (s)		118.4	22.8	148.9	1.7					29.9	86.7	
Level of Service		F	C	F	A					C	F	
Approach Delay (s)		110.4			28.6			0.0			77.1	
Approach LOS		F			C			A			E	

Intersection Summary			
HCM 2000 Control Delay	75.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.8
Intersection Capacity Utilization	101.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
80: N Blackstone Ave & CA 180 WB

8/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	533	1321	97	72	0	0	0	0	4	1035	115
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2	3.7	4.2						4.9	4.9
Lane Util. Factor		1.00	1.00	1.00	1.00						0.95	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						1.00	1.00
Satd. Flow (prot)		1863	1583	1770	1863						3539	1583
Flt Permitted		1.00	1.00	0.95	1.00						1.00	1.00
Satd. Flow (perm)		1863	1583	1770	1863						3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	579	1436	105	78	0	0	0	0	4	1125	125
RTOR Reduction (vph)	0	0	46	0	0	0	0	0	0	0	0	75
Lane Group Flow (vph)	0	579	1390	105	78	0	0	0	0	0	1129	50
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		4		3	8					6	6	
Permitted Phases			4									6
Actuated Green, G (s)		55.8	55.8	12.0	71.5						29.4	29.4
Effective Green, g (s)		55.8	55.8	12.0	71.5						29.4	29.4
Actuated g/C Ratio		0.51	0.51	0.11	0.65						0.27	0.27
Clearance Time (s)		4.2	4.2	3.7	4.2						4.9	4.9
Vehicle Extension (s)		4.9	4.9	2.0	4.6						5.2	5.2
Lane Grp Cap (vph)		945	803	193	1210						945	423
v/s Ratio Prot		0.31		c0.06	0.04						c0.32	
v/s Ratio Perm			c0.88									0.03
v/c Ratio		0.61	1.73	0.54	0.06						1.19	0.12
Uniform Delay, d1		19.4	27.1	46.4	7.0						40.3	30.5
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		1.7	334.3	1.7	0.0						98.1	0.6
Delay (s)		21.0	361.4	48.1	7.1						138.4	31.0
Level of Service		C	F	D	A						F	C
Approach Delay (s)		263.6			30.6			0.0			127.7	
Approach LOS		F			C			A			F	

Intersection Summary			
HCM 2000 Control Delay	201.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.42		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.8
Intersection Capacity Utilization	128.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
80: N Blackstone Ave & CA 180 WB

8/29/2013

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	365	1016	76	260	0	0	0	0	4	1687	369
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2	4.2	3.7	4.2						4.9	4.9
Lane Util. Factor		1.00	1.00	1.00	1.00						0.95	1.00
Frt		1.00	0.85	1.00	1.00						1.00	0.85
Flt Protected		1.00	1.00	0.95	1.00						1.00	1.00
Satd. Flow (prot)		1863	1583	1770	1863						3539	1583
Flt Permitted		1.00	1.00	0.95	1.00						1.00	1.00
Satd. Flow (perm)		1863	1583	1770	1863						3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	397	1104	83	283	0	0	0	0	4	1834	401
RTOR Reduction (vph)	0	0	60	0	0	0	0	0	0	0	0	150
Lane Group Flow (vph)	0	397	1044	83	283	0	0	0	0	0	1838	251
Turn Type		NA	Perm	Prot	NA					Split	NA	Perm
Protected Phases		4		3	8					6	6	
Permitted Phases			4									6
Actuated Green, G (s)		39.8	39.8	9.6	53.1						42.8	42.8
Effective Green, g (s)		39.8	39.8	9.6	53.1						42.8	42.8
Actuated g/C Ratio		0.38	0.38	0.09	0.51						0.41	0.41
Clearance Time (s)		4.2	4.2	3.7	4.2						4.9	4.9
Vehicle Extension (s)		4.9	4.9	2.0	4.6						5.2	5.2
Lane Grp Cap (vph)		706	600	161	942						1442	645
v/s Ratio Prot		0.21		c0.05	0.15						c0.52	
v/s Ratio Perm			c0.66									0.16
v/c Ratio		0.56	1.74	0.52	0.30						1.27	0.39
Uniform Delay, d1		25.7	32.6	45.5	15.1						31.1	21.9
Progression Factor		1.00	1.00	1.00	1.00						1.00	1.00
Incremental Delay, d2		1.6	340.2	1.2	0.3						129.1	1.8
Delay (s)		27.4	372.8	46.6	15.4						160.2	23.6
Level of Service		C	F	D	B						F	C
Approach Delay (s)		281.4			22.5			0.0			135.8	
Approach LOS		F			C			A			F	

Intersection Summary			
HCM 2000 Control Delay	178.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.8
Intersection Capacity Utilization	130.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
84: Mono Street & G St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	140	58	161	115	0	61	0	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		0.96			1.00			0.98				
Flt Protected		1.00			0.97			0.96				
Satd. Flow (prot)		1968			1991			1927				
Flt Permitted		1.00			0.72			0.76				
Satd. Flow (perm)		1968			1466			1519				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	152	63	175	125	0	66	0	11	0	0	0
RTOR Reduction (vph)	0	7	0	0	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	208	0	0	300	0	0	68	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm		
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)		93.0			93.0			9.0				
Effective Green, g (s)		93.0			93.0			9.0				
Actuated g/C Ratio		0.85			0.85			0.08				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			3.0				
Lane Grp Cap (vph)		1663			1239			124				
v/s Ratio Prot		0.11										
v/s Ratio Perm					c0.20			c0.04				
v/c Ratio		0.13			0.24			0.55				
Uniform Delay, d1		1.5			1.7			48.5				
Progression Factor		0.47			7.11			1.00				
Incremental Delay, d2		0.2			0.5			4.9				
Delay (s)		0.8			12.2			53.4				
Level of Service		A			B			D				
Approach Delay (s)		0.8			12.2			53.4			0.0	
Approach LOS		A			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
84: Mono Street & G St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	339	238	271	312	0	138	0	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		0.94			1.00			0.98				
Flt Protected		1.00			0.98			0.96				
Satd. Flow (prot)		1935			2002			1930				
Flt Permitted		1.00			0.52			0.75				
Satd. Flow (perm)		1935			1059			1516				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	368	259	295	339	0	150	0	22	0	0	0
RTOR Reduction (vph)	0	23	0	0	0	0	0	9	0	0	0	0
Lane Group Flow (vph)	0	604	0	0	634	0	0	163	0	0	0	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm		
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)		82.5			82.5			14.5				
Effective Green, g (s)		82.5			82.5			14.5				
Actuated g/C Ratio		0.79			0.79			0.14				
Clearance Time (s)		4.0			4.0			4.0				
Vehicle Extension (s)		3.0			3.0			3.0				
Lane Grp Cap (vph)		1520			832			209				
v/s Ratio Prot		0.31										
v/s Ratio Perm					c0.60			c0.11				
v/c Ratio		0.40			0.76			0.78				
Uniform Delay, d1		3.5			6.0			43.7				
Progression Factor		0.89			1.00			1.00				
Incremental Delay, d2		0.8			6.5			17.1				
Delay (s)		3.9			12.5			60.8				
Level of Service		A			B			E				
Approach Delay (s)		3.9			12.5			60.8			0.0	
Approach LOS		A			B			E			A	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
86: Ventura Ave & H St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	88	31	50	41	90	27	129	791	64	25	744	218
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		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.96			0.97		1.00	0.99		1.00	0.97	
Flt Protected		0.97			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3627			3746		1947	3849		1947	3761	
Flt Permitted		0.74			0.85		0.15	1.00		0.19	1.00	
Satd. Flow (perm)		2768			3211		304	3849		393	3761	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	96	34	54	45	98	29	140	860	70	27	809	237
RTOR Reduction (vph)	0	27	0	0	10	0	0	10	0	0	48	0
Lane Group Flow (vph)	0	157	0	0	162	0	140	920	0	27	998	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)		52.5			52.5		49.5	49.5		49.5	49.5	
Effective Green, g (s)		52.5			52.5		49.5	49.5		49.5	49.5	
Actuated g/C Ratio		0.48			0.48		0.45	0.45		0.45	0.45	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1321			1532		136	1732		176	1692	
v/s Ratio Prot								0.24			0.27	
v/s Ratio Perm		c0.06			0.05		c0.46			0.07		
v/c Ratio		0.12			0.11		1.03	0.53		0.15	0.59	
Uniform Delay, d1		15.9			15.8		30.2	21.9		17.9	22.6	
Progression Factor		0.90			1.00		1.29	1.33		0.72	0.98	
Incremental Delay, d2		0.2			0.1		82.4	0.3		0.3	0.5	
Delay (s)		14.6			16.0		121.4	29.3		13.2	22.7	
Level of Service		B			B		F	C		B	C	
Approach Delay (s)		14.6			16.0			41.3			22.5	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
86: Ventura Ave & H St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	242	28	105	29	202	31	90	875	28	12	1082	85
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		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.96			0.98		1.00	1.00		1.00	0.99	
Flt Protected		0.97			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3613			3802		1947	3875		1947	3851	
Flt Permitted		0.65			0.88		0.10	1.00		0.19	1.00	
Satd. Flow (perm)		2416			3362		212	3875		397	3851	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	263	30	114	32	220	34	98	951	30	13	1176	92
RTOR Reduction (vph)	0	31	0	0	8	0	0	3	0	0	8	0
Lane Group Flow (vph)	0	376	0	0	278	0	98	978	0	13	1260	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)		45.2			45.2		51.8	51.8		51.8	51.8	
Effective Green, g (s)		45.2			45.2		51.8	51.8		51.8	51.8	
Actuated g/C Ratio		0.43			0.43		0.49	0.49		0.49	0.49	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1040			1447		104	1911		195	1899	
v/s Ratio Prot								0.25			0.33	
v/s Ratio Perm		c0.16			0.08		c0.46			0.03		
v/c Ratio		0.36			0.19		0.94	0.51		0.07	0.66	
Uniform Delay, d1		20.2			18.6		25.2	18.0		13.9	20.0	
Progression Factor		0.91			1.00		1.00	1.00		0.86	1.05	
Incremental Delay, d2		1.0			0.3		69.5	0.2		0.1	0.6	
Delay (s)		19.3			18.9		94.7	18.3		12.1	21.6	
Level of Service		B			B		F	B		B	C	
Approach Delay (s)		19.3			18.9			25.2			21.5	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
90: Santa Clara Street & Broadway St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	228	206	15	10	476	35	6	4	18	36	18	30
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	
Lane Util. Factor		0.95			1.00			1.00			1.00	
Frt		1.00			0.99			0.91			0.95	
Flt Protected		0.98			1.00			0.99			0.98	
Satd. Flow (prot)		3778			2028			1850			1909	
Flt Permitted		0.63			0.99			0.96			0.57	
Satd. Flow (perm)		2439			2007			1788			1119	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	248	224	16	11	517	38	7	4	20	39	20	33
RTOR Reduction (vph)	0	2	0	0	3	0	0	15	0	0	15	0
Lane Group Flow (vph)	0	486	0	0	563	0	0	16	0	0	77	0
Turn Type	custom	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4!			8			4!			6!	
Permitted Phases	6!			8			4!			6!		
Actuated Green, G (s)		27.6			36.7			27.6			33.7	
Effective Green, g (s)		27.6			36.7			27.6			33.7	
Actuated g/C Ratio		0.25			0.33			0.25			0.31	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		611			669			448			342	
v/s Ratio Prot												
v/s Ratio Perm		c0.20			c0.28			0.01			c0.07	
v/c Ratio		3.26dl			0.84			0.04			0.22	
Uniform Delay, d1		38.6			34.0			31.1			28.4	
Progression Factor		0.63			1.00			1.00			1.00	
Incremental Delay, d2		6.0			9.4			0.0			1.5	
Delay (s)		30.5			43.4			31.2			29.9	
Level of Service		C			D			C			C	
Approach Delay (s)		30.5			43.4			31.2			29.9	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	36.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

! Phase conflict between lane groups.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
90: Santa Clara Street & Broadway St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	198	361	15	15	209	45	10	8	20	46	31	73
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	
Lane Util. Factor		0.95			1.00			1.00			1.00	
Frt		1.00			0.98			0.93			0.93	
Flt Protected		0.98			1.00			0.99			0.98	
Satd. Flow (prot)		3812			1997			1880			1886	
Flt Permitted		0.57			0.95			0.94			0.65	
Satd. Flow (perm)		2227			1900			1780			1236	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	215	392	16	16	227	49	11	9	22	50	34	79
RTOR Reduction (vph)	0	2	0	0	7	0	0	15	0	0	28	0
Lane Group Flow (vph)	0	621	0	0	285	0	0	27	0	0	135	0
Turn Type	custom	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4!			8			4!			6!	
Permitted Phases	6!			8			4!			6!		
Actuated Green, G (s)		35.5			20.3			35.5			37.2	
Effective Green, g (s)		35.5			20.3			35.5			37.2	
Actuated g/C Ratio		0.34			0.19			0.34			0.35	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		752			367			601			437	
v/s Ratio Prot												
v/s Ratio Perm		c0.28			c0.15			0.02			c0.11	
v/c Ratio		2.69dl			0.78			0.05			0.31	
Uniform Delay, d1		31.9			40.2			23.4			24.6	
Progression Factor		0.80			1.00			1.00			1.00	
Incremental Delay, d2		5.8			9.9			0.0			1.8	
Delay (s)		31.2			50.1			23.4			26.4	
Level of Service		C			D			C			C	
Approach Delay (s)		31.2			50.1			23.4			26.4	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	35.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

! Phase conflict between lane groups.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
105: SR 99 South Offramp & White Bridge Ave

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	169	87	286	0	0	0	0	332	50	260	534	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		4.0	4.0	
Lane Util. Factor	0.97	1.00						1.00		1.00	1.00	
Frt	1.00	0.89						0.98		1.00	1.00	
Flt Protected	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (prot)	3776	1814						2013		1947	2049	
Flt Permitted	0.95	1.00						1.00		0.38	1.00	
Satd. Flow (perm)	3776	1814						2013		779	2049	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.81	0.81	0.81
Adj. Flow (vph)	184	95	311	0	0	0	0	361	54	321	659	0
RTOR Reduction (vph)	0	90	0	0	0	0	0	7	0	0	0	0
Lane Group Flow (vph)	184	316	0	0	0	0	0	408	0	321	659	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		6						4			8	
Permitted Phases	6									8		
Actuated Green, G (s)	48.6	48.6						48.4		48.4	48.4	
Effective Green, g (s)	48.6	48.6						48.4		48.4	48.4	
Actuated g/C Ratio	0.46	0.46						0.46		0.46	0.46	
Clearance Time (s)	4.0	4.0						4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	1747	839						927		359	944	
v/s Ratio Prot		c0.17						0.20			0.32	
v/s Ratio Perm	0.05									c0.41		
v/c Ratio	0.11	0.38						0.44		0.89	0.70	
Uniform Delay, d1	15.9	18.3						19.1		26.0	22.5	
Progression Factor	1.00	1.00						0.94		0.93	0.97	
Incremental Delay, d2	0.1	1.3						0.3		3.0	0.2	
Delay (s)	16.0	19.6						18.3		27.2	21.9	
Level of Service	B	B						B		C	C	
Approach Delay (s)		18.5			0.0			18.3			23.7	
Approach LOS		B			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
105: SR 99 South Offramp & White Bridge Ave

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	329	276	286	0	0	0	0	387	50	302	606	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		4.0	4.0	
Lane Util. Factor	0.97	1.00						1.00		1.00	1.00	
Frt	1.00	0.92						0.98		1.00	1.00	
Flt Protected	0.95	1.00						1.00		0.95	1.00	
Satd. Flow (prot)	3776	1893						2018		1947	2049	
Flt Permitted	0.95	1.00						1.00		0.34	1.00	
Satd. Flow (perm)	3776	1893						2018		698	2049	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	358	300	311	0	0	0	0	421	54	328	659	0
RTOR Reduction (vph)	0	31	0	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	358	580	0	0	0	0	0	470	0	328	659	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		6						4			8	
Permitted Phases	6									8		
Actuated Green, G (s)	48.7	48.7						53.3		53.3	53.3	
Effective Green, g (s)	48.7	48.7						53.3		53.3	53.3	
Actuated g/C Ratio	0.44	0.44						0.48		0.48	0.48	
Clearance Time (s)	4.0	4.0						4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)	1671	838						977		338	992	
v/s Ratio Prot		c0.31						0.23			0.32	
v/s Ratio Perm	0.09									c0.47		
v/c Ratio	0.21	0.69						0.48		0.97	0.66	
Uniform Delay, d1	18.9	24.6						19.1		27.6	21.5	
Progression Factor	1.00	1.00						0.83		0.68	0.75	
Incremental Delay, d2	0.3	4.7						0.4		34.4	1.3	
Delay (s)	19.2	29.3						16.1		53.1	17.3	
Level of Service	B	C						B		D	B	
Approach Delay (s)		25.6			0.0			16.1			29.2	
Approach LOS		C			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	25.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
106: White Bridge Ave/Stanislaus St & SR 99 North Onramp

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	23	222	35	50	666	0	0	885	419
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
Lane Util. Factor					0.95			0.95			0.91	0.91
Frt					0.98			1.00			0.99	0.85
Flt Protected					1.00			1.00			1.00	1.00
Satd. Flow (prot)					3804			3880			3704	1585
Flt Permitted					1.00			0.69			1.00	1.00
Satd. Flow (perm)					3804			2685			3704	1585
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	25	241	38	54	724	0	0	962	455
RTOR Reduction (vph)	0	0	0	0	7	0	0	0	0	0	5	192
Lane Group Flow (vph)	0	0	0	0	297	0	0	778	0	0	1003	217
Turn Type				Perm	NA		Perm	NA			NA	Perm
Protected Phases					2			4			8	
Permitted Phases				2			4					8
Actuated Green, G (s)					55.5			46.5			46.5	46.5
Effective Green, g (s)					55.5			46.5			46.5	46.5
Actuated g/C Ratio					0.50			0.42			0.42	0.42
Clearance Time (s)					4.0			4.0			4.0	4.0
Vehicle Extension (s)					3.0			3.0			3.0	3.0
Lane Grp Cap (vph)					1919			1135			1565	670
v/s Ratio Prot											0.27	
v/s Ratio Perm					0.08			c0.29				0.14
v/c Ratio					0.15			0.69			0.64	0.32
Uniform Delay, d1					14.6			25.8			25.1	21.2
Progression Factor					1.56			0.86			1.66	4.53
Incremental Delay, d2					0.2			1.7			0.7	0.2
Delay (s)					23.1			23.8			42.4	96.4
Level of Service					C			C			D	F
Approach Delay (s)		0.0			23.1			23.8			58.0	
Approach LOS		A			C			C			E	

Intersection Summary			
HCM 2000 Control Delay	43.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
106: White Bridge Ave/Stanislaus St & SR 99 North Onramp

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	0	0	33	215	45	65	436	0	0	761	1683
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
Lane Util. Factor					0.95			0.95			0.91	0.91
Frt					0.98			1.00			0.92	0.85
Flt Protected					0.99			0.99			1.00	1.00
Satd. Flow (prot)					3782			3868			3436	1585
Flt Permitted					0.99			0.57			1.00	1.00
Satd. Flow (perm)					3782			2204			3436	1585
Peak-hour factor, PHF	0.92	0.92	0.92	0.78	0.78	0.78	0.92	0.92	0.92	0.71	0.71	0.71
Adj. Flow (vph)	0	0	0	42	276	58	71	474	0	0	1072	2370
RTOR Reduction (vph)	0	0	0	0	15	0	0	0	0	0	21	21
Lane Group Flow (vph)	0	0	0	0	361	0	0	545	0	0	2236	1164
Turn Type				Perm	NA		Perm	NA			NA	Perm
Protected Phases					2			4			8	
Permitted Phases				2			4					8
Actuated Green, G (s)					14.4			82.6			82.6	82.6
Effective Green, g (s)					14.4			82.6			82.6	82.6
Actuated g/C Ratio					0.14			0.79			0.79	0.79
Clearance Time (s)					4.0			4.0			4.0	4.0
Vehicle Extension (s)					3.0			3.0			3.0	3.0
Lane Grp Cap (vph)					518			1733			2702	1246
v/s Ratio Prot											0.65	
v/s Ratio Perm					0.10			0.25				c0.73
v/c Ratio					0.70			0.92dl			0.90dr	0.93
Uniform Delay, d1					43.2			3.2			6.8	9.0
Progression Factor					1.40			0.73			0.53	0.52
Incremental Delay, d2					7.5			0.1			1.3	8.4
Delay (s)					68.0			2.4			4.9	13.1
Level of Service					E			A			A	B
Approach Delay (s)		0.0			68.0			2.4			7.7	
Approach LOS		A			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.8%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.
c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
111: Stanislaus St & Fulton St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	25	75	39	50	15	75	50	671	50	75	1169	55
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		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.95	
Frt	1.00	0.95		1.00	0.87		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	1945		1947	1792		1947	2028		1947	3867	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1947	1945		1947	1792		1947	2028		1947	3867	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	82	42	54	16	82	54	729	54	82	1271	60
RTOR Reduction (vph)	0	15	0	0	59	0	0	3	0	0	4	0
Lane Group Flow (vph)	27	109	0	54	39	0	54	780	0	82	1327	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	3.9	28.0		6.6	30.7		7.1	51.0		8.4	52.3	
Effective Green, g (s)	3.9	28.0		6.6	30.7		7.1	51.0		8.4	52.3	
Actuated g/C Ratio	0.04	0.25		0.06	0.28		0.06	0.46		0.08	0.48	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	69	495		116	500		125	940		148	1838	
v/s Ratio Prot	0.01	c0.06		c0.03	c0.02		0.03	c0.38		c0.04	0.34	
v/s Ratio Perm												
v/c Ratio	0.39	0.22		0.47	0.08		0.43	0.83		0.55	0.72	
Uniform Delay, d1	51.9	32.4		50.0	29.2		49.5	25.7		49.0	23.0	
Progression Factor	1.00	1.00		1.13	3.55		1.05	1.43		0.87	1.51	
Incremental Delay, d2	3.6	1.0		2.9	0.3		1.8	4.8		2.4	0.8	
Delay (s)	55.5	33.4		59.6	104.2		53.7	41.6		45.1	35.5	
Level of Service	E	C		E	F		D	D		D	D	
Approach Delay (s)		37.4			88.3			42.4			36.1	
Approach LOS		D			F			D			D	

Intersection Summary			
HCM 2000 Control Delay	41.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
111: Stanislaus St & Fulton St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	175	168	297	83	55	95	75	452	75	50	1404	147
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		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.90		1.00	0.91		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	1853		1947	1855		1947	3810		1947	3838	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1947	1853		1947	1855		1947	3810		1947	3838	
Peak-hour factor, PHF	0.82	0.82	0.82	0.48	0.48	0.48	0.92	0.92	0.92	0.75	0.75	0.75
Adj. Flow (vph)	213	205	362	173	115	198	82	491	82	67	1872	196
RTOR Reduction (vph)	0	61	0	0	60	0	0	11	0	0	7	0
Lane Group Flow (vph)	213	506	0	173	253	0	82	562	0	67	2061	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	13.0	27.2		8.0	22.2		4.0	46.0		7.8	49.8	
Effective Green, g (s)	13.0	27.2		8.0	22.2		4.0	46.0		7.8	49.8	
Actuated g/C Ratio	0.12	0.26		0.08	0.21		0.04	0.44		0.07	0.47	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	241	480		148	392		74	1669		144	1820	
v/s Ratio Prot	c0.11	c0.27		c0.09	0.14		c0.04	0.15		0.03	c0.54	
v/s Ratio Perm												
v/c Ratio	0.88	1.05		1.17	0.65		1.11	0.34		0.47	1.13	
Uniform Delay, d1	45.3	38.9		48.5	37.8		50.5	19.4		46.6	27.6	
Progression Factor	1.00	1.00		1.11	1.71		1.08	0.83		1.00	1.08	
Incremental Delay, d2	29.4	55.8		126.3	7.9		131.1	0.1		1.4	64.1	
Delay (s)	74.6	94.7		180.3	72.6		185.8	16.3		47.9	94.0	
Level of Service	E	F		F	E		F	B		D	F	
Approach Delay (s)		89.2			110.9			37.5			92.5	
Approach LOS		F			F			D			F	

Intersection Summary			
HCM 2000 Control Delay	85.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	92.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
115: Stanislaus St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	29	32	0	0	0	25	571	85	135	1673	15
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	4.0	
Lane Util. Factor		1.00					1.00	0.95		1.00	0.95	
Frt		0.94					1.00	0.98		1.00	1.00	
Flt Protected		0.99					0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1914					1947	3818		1947	3888	
Flt Permitted		0.99					0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1914					1947	3818		1947	3888	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	32	35	0	0	0	27	621	92	147	1818	16
RTOR Reduction (vph)	0	23	0	0	0	0	0	11	0	0	1	0
Lane Group Flow (vph)	0	60	0	0	0	0	27	702	0	147	1833	0
Turn Type	Perm	NA					Prot	NA		Prot	NA	
Protected Phases		6					7	4		3	8	
Permitted Phases	6											
Actuated Green, G (s)		22.9					4.7	61.6		13.5	70.4	
Effective Green, g (s)		22.9					4.7	61.6		13.5	70.4	
Actuated g/C Ratio		0.21					0.04	0.56		0.12	0.64	
Clearance Time (s)		4.0					4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0					3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		398					83	2138		238	2488	
v/s Ratio Prot							0.01	0.18		c0.08	c0.47	
v/s Ratio Perm		0.03										
v/c Ratio		0.15					0.33	0.33		0.62	0.74	
Uniform Delay, d1		35.6					51.1	13.0		45.8	13.5	
Progression Factor		1.00					0.80	0.94		1.24	0.62	
Incremental Delay, d2		0.8					1.2	0.0		0.4	0.1	
Delay (s)		36.4					42.1	12.3		57.1	8.4	
Level of Service		D					D	B		E	A	
Approach Delay (s)		36.4			0.0			13.3			12.1	
Approach LOS		D			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
115: Stanislaus St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	0	29	34	0	0	0	50	575	100	124	1566	11
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	4.0	
Lane Util. Factor		1.00					1.00	0.95		1.00	0.95	
Frt		0.93					1.00	0.98		1.00	1.00	
Flt Protected		1.00					0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1900					1947	3806		1947	3889	
Flt Permitted		1.00					0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1900					1947	3806		1947	3889	
Peak-hour factor, PHF	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.92	0.92	0.84	0.84	0.84
Adj. Flow (vph)	0	35	41	0	0	0	54	625	109	148	1864	13
RTOR Reduction (vph)	0	33	0	0	0	0	0	13	0	0	0	0
Lane Group Flow (vph)	0	43	0	0	0	0	54	721	0	148	1877	0
Turn Type	Perm	NA					Prot	NA		Prot	NA	
Protected Phases		6					7	4		3	8	
Permitted Phases	6											
Actuated Green, G (s)		20.4					7.2	59.4		13.2	65.4	
Effective Green, g (s)		20.4					7.2	59.4		13.2	65.4	
Actuated g/C Ratio		0.19					0.07	0.57		0.13	0.62	
Clearance Time (s)		4.0					4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0					3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		369					133	2153		244	2422	
v/s Ratio Prot		c0.02					0.03	0.19		c0.08	c0.48	
v/s Ratio Perm												
v/c Ratio		0.12					0.41	0.33		0.61	0.77	
Uniform Delay, d1		34.9					46.9	12.2		43.4	14.4	
Progression Factor		1.00					0.86	0.93		1.16	0.61	
Incremental Delay, d2		0.6					1.4	0.1		0.4	0.1	
Delay (s)		35.5					41.6	11.5		50.9	9.0	
Level of Service		D					D	B		D	A	
Approach Delay (s)		35.5			0.0			13.5			12.1	
Approach LOS		D			A			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
117: Stanislaus St & N St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	15	71	21	53	39	25	25	536	25	207	1643	75
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		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.94		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	1978		1947	1929		1947	3867		1947	3868	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1947	1978		1947	1929		1947	3867		1947	3868	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	77	23	58	42	27	27	583	27	225	1786	82
RTOR Reduction (vph)	0	10	0	0	20	0	0	3	0	0	3	0
Lane Group Flow (vph)	16	90	0	58	49	0	27	607	0	225	1865	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	1.6	18.8		6.4	23.6		4.5	51.0		17.8	64.3	
Effective Green, g (s)	1.6	18.8		6.4	23.6		4.5	51.0		17.8	64.3	
Actuated g/C Ratio	0.01	0.17		0.06	0.21		0.04	0.46		0.16	0.58	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	28	338		113	413		79	1792		315	2261	
v/s Ratio Prot	0.01	c0.05		c0.03	0.03		0.01	0.16		c0.12	c0.48	
v/s Ratio Perm												
v/c Ratio	0.57	0.27		0.51	0.12		0.34	0.34		0.71	0.82	
Uniform Delay, d1	53.9	39.6		50.3	34.8		51.3	18.8		43.7	18.3	
Progression Factor	1.00	1.00		1.01	1.29		1.05	0.83		1.08	0.69	
Incremental Delay, d2	25.2	1.9		3.9	0.6		2.5	0.1		0.7	0.2	
Delay (s)	79.0	41.5		54.4	45.6		56.2	15.7		47.7	12.9	
Level of Service	E	D		D	D		E	B		D	B	
Approach Delay (s)		46.7			49.6			17.4			16.6	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
117: Stanislaus St & N St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	25	100	25	106	64	50	50	421	50	42	1569	57
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		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.93		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1947	1988		1947	1914		1947	3832		1947	3873	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1947	1988		1947	1914		1947	3832		1947	3873	
Peak-hour factor, PHF	0.55	0.55	0.55	0.57	0.57	0.57	0.92	0.92	0.92	0.85	0.85	0.85
Adj. Flow (vph)	45	182	45	186	112	88	54	458	54	49	1846	67
RTOR Reduction (vph)	0	8	0	0	26	0	0	9	0	0	2	0
Lane Group Flow (vph)	45	219	0	186	174	0	54	503	0	49	1911	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	3.6	16.9		12.5	25.8		4.3	54.6		5.0	55.3	
Effective Green, g (s)	3.6	16.9		12.5	25.8		4.3	54.6		5.0	55.3	
Actuated g/C Ratio	0.03	0.16		0.12	0.25		0.04	0.52		0.05	0.53	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	66	319		231	470		79	1992		92	2039	
v/s Ratio Prot	0.02	c0.11		c0.10	0.09		c0.03	0.13		0.03	c0.49	
v/s Ratio Perm												
v/c Ratio	0.68	0.69		0.81	0.37		0.68	0.25		0.53	0.94	
Uniform Delay, d1	50.1	41.5		45.1	32.9		49.7	13.9		48.9	23.2	
Progression Factor	1.00	1.00		0.98	1.11		1.21	0.52		1.11	0.91	
Incremental Delay, d2	25.2	11.4		18.0	2.2		20.9	0.1		2.1	3.7	
Delay (s)	75.4	52.9		62.4	38.6		81.1	7.3		56.4	24.8	
Level of Service	E	D		E	D		F	A		E	C	
Approach Delay (s)		56.6			50.1			14.4			25.6	
Approach LOS		E			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	29.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
52: Stanislaus St & E St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	100	117	197	53	297	32	30	627	39	51	1053	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.4			5.4		4.0	4.0		4.0	5.4	5.4
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	0.95	1.00
Frt		0.93			0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3247			3470		1770	1847		1770	3539	1583
Flt Permitted		0.70			0.81		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)		2289			2834		1770	1847		1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	127	214	58	323	35	33	682	42	55	1145	217
RTOR Reduction (vph)	0	107	0	0	6	0	0	2	0	0	0	66
Lane Group Flow (vph)	0	343	0	0	410	0	33	722	0	55	1145	151
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		2			2		7	4		3	8	
Permitted Phases	2			2								8
Actuated Green, G (s)		38.1			38.1		3.6	51.7		6.8	53.5	53.5
Effective Green, g (s)		38.1			38.1		3.6	51.7		6.8	53.5	53.5
Actuated g/C Ratio		0.35			0.35		0.03	0.47		0.06	0.49	0.49
Clearance Time (s)		5.4			5.4		4.0	4.0		4.0	5.4	5.4
Vehicle Extension (s)		0.2			0.2		3.0	3.0		3.0	0.2	0.2
Lane Grp Cap (vph)		792			981		57	868		109	1721	769
v/s Ratio Prot							0.02	c0.39		c0.03	c0.32	
v/s Ratio Perm		c0.15			0.14							0.10
v/c Ratio		0.43			0.42		0.58	0.83		0.50	0.67	0.20
Uniform Delay, d1		27.7			27.5		52.5	25.4		50.0	21.5	16.0
Progression Factor		1.00			1.56		0.96	0.84		0.77	0.83	1.13
Incremental Delay, d2		1.7			1.3		12.9	6.5		3.4	0.7	0.0
Delay (s)		29.4			44.2		63.0	27.9		41.8	18.5	18.2
Level of Service		C			D		E	C		D	B	B
Approach Delay (s)		29.4			44.2			29.4			19.3	
Approach LOS		C			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	26.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
52: Stanislaus St & E St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	150	145	475	98	232	22	30	456	44	91	1864	259
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		5.4			5.4		4.0	4.0		5.4	5.4	5.4
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	0.95	1.00
Frt		0.91			0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3181			3458		1770	1838		1770	3539	1583
Flt Permitted		0.71			0.55		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)		2291			1935		1770	1838		1770	3539	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	163	158	516	107	252	24	33	496	48	99	2026	282
RTOR Reduction (vph)	0	63	0	0	5	0	0	2	0	0	0	42
Lane Group Flow (vph)	0	774	0	0	378	0	33	542	0	99	2026	240
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	Perm
Protected Phases		2			2		7	4		3	8	
Permitted Phases	2			2								8
Actuated Green, G (s)		25.8			25.8		2.4	56.6		7.8	62.0	62.0
Effective Green, g (s)		25.8			25.8		2.4	56.6		7.8	62.0	62.0
Actuated g/C Ratio		0.25			0.25		0.02	0.54		0.07	0.59	0.59
Clearance Time (s)		5.4			5.4		4.0	4.0		5.4	5.4	5.4
Vehicle Extension (s)		0.2			0.2		3.0	3.0		0.2	0.2	0.2
Lane Grp Cap (vph)		562			475		40	990		131	2089	934
v/s Ratio Prot							0.02	0.29		c0.06	c0.57	
v/s Ratio Perm		c0.34			0.20							0.15
v/c Ratio		1.38			1.35dl		0.82	0.55		0.76	0.97	0.26
Uniform Delay, d1		39.6			37.1		51.1	15.8		47.7	20.6	10.4
Progression Factor		1.00			1.47		1.00	1.00		1.09	0.91	0.66
Incremental Delay, d2		181.0			12.9		76.6	0.6		13.1	9.6	0.0
Delay (s)		220.6			67.6		127.7	16.5		65.0	28.4	6.9
Level of Service		F			E		F	B		E	C	A
Approach Delay (s)		220.6			67.6			22.8			27.4	
Approach LOS		F			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	68.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	14.8
Intersection Capacity Utilization	105.3%	ICU Level of Service	G
Analysis Period (min)	15		

dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
53: Stanislaus St & Broadway St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	35	249	96	127	76	53	100	685	75	124	1014	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.2		4.0	4.2		4.0	4.2		4.0	4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.94		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1785		1770	1748		1770	3487		1770	3483	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1785		1770	1748		1770	3487		1770	3483	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	38	271	104	138	83	58	109	745	82	135	1102	130
RTOR Reduction (vph)	0	12	0	0	22	0	0	7	0	0	9	0
Lane Group Flow (vph)	38	363	0	138	119	0	109	820	0	135	1223	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	3.6	32.3		11.5	40.2		8.8	36.7		13.1	41.0	
Effective Green, g (s)	3.6	32.3		11.5	40.2		8.8	36.7		13.1	41.0	
Actuated g/C Ratio	0.03	0.29		0.10	0.37		0.08	0.33		0.12	0.37	
Clearance Time (s)	4.0	4.2		4.0	4.2		4.0	4.2		4.0	4.2	
Vehicle Extension (s)	3.0	0.2		3.0	0.2		3.0	0.2		3.0	0.2	
Lane Grp Cap (vph)	57	524		185	638		141	1163		210	1298	
v/s Ratio Prot	0.02	c0.20		c0.08	0.07		c0.06	0.24		c0.08	c0.35	
v/s Ratio Perm												
v/c Ratio	0.67	0.69		0.75	0.19		0.77	0.70		0.64	0.94	
Uniform Delay, d1	52.6	34.4		47.8	23.8		49.6	31.9		46.2	33.4	
Progression Factor	1.00	1.00		0.88	1.92		1.31	0.75		1.27	0.75	
Incremental Delay, d2	25.7	7.4		14.8	0.6		18.9	1.3		1.8	4.5	
Delay (s)	78.3	41.8		56.7	46.2		83.7	25.1		60.6	29.5	
Level of Service	E	D		E	D		F	C		E	C	
Approach Delay (s)		45.2			51.4			31.9			32.6	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	35.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
53: Stanislaus St & Broadway St

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	50	121	382	299	241	53	105	497	83	45	1397	342
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)	4.0	4.2		4.0	4.2		4.0	4.2		4.2	4.2	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.89		1.00	0.97		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1651		1770	1812		1770	3463		1770	3435	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1651		1770	1812		1770	3463		1770	3435	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	132	415	325	262	58	114	540	90	49	1518	372
RTOR Reduction (vph)	0	110	0	0	8	0	0	10	0	0	20	0
Lane Group Flow (vph)	54	437	0	325	312	0	114	620	0	49	1870	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases												
Actuated Green, G (s)	3.2	18.7		6.0	21.5		7.0	45.1		18.6	56.9	
Effective Green, g (s)	3.2	18.7		6.0	21.5		7.0	45.1		18.6	56.9	
Actuated g/C Ratio	0.03	0.18		0.06	0.20		0.07	0.43		0.18	0.54	
Clearance Time (s)	4.0	4.2		4.0	4.2		4.0	4.2		4.2	4.2	
Vehicle Extension (s)	3.0	0.2		3.0	0.2		3.0	0.2		0.2	0.2	
Lane Grp Cap (vph)	53	294		101	371		118	1487		313	1861	
v/s Ratio Prot	0.03	c0.26		c0.18	c0.17		c0.06	0.18		0.03	c0.54	
v/s Ratio Perm												
v/c Ratio	1.02	1.49		3.22	0.84		0.97	0.42		0.16	1.00	
Uniform Delay, d1	50.9	43.1		49.5	40.1		48.9	20.8		36.6	24.1	
Progression Factor	1.00	1.00		0.82	1.24		1.10	0.86		1.30	0.64	
Incremental Delay, d2	129.1	236.0		1016.7	15.6		67.6	0.1		0.0	7.5	
Delay (s)	180.0	279.2		1057.3	65.3		121.3	17.9		47.6	22.9	
Level of Service	F	F		F	E		F	B		D	C	
Approach Delay (s)		270.3			565.1			33.7			23.5	
Approach LOS		F			F			C			C	

Intersection Summary			
HCM 2000 Control Delay	152.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	16.6
Intersection Capacity Utilization	115.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
54: Stanislaus St & Van Ness Ave

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	75	247	18	197	280	78	37	613	133	176	1084	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		4.2	4.2		4.0	4.2		4.2	4.2	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt		0.99		1.00	0.97		1.00	0.97		1.00	0.98	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1829		1770	1802		1770	3444		1770	3466	
Flt Permitted		0.71		0.47	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1310		868	1802		1770	3444		1770	3466	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	268	20	214	304	85	40	666	145	191	1178	188
RTOR Reduction (vph)	0	2	0	0	9	0	0	17	0	0	12	0
Lane Group Flow (vph)	0	368	0	214	380	0	40	794	0	191	1354	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2			6								
Actuated Green, G (s)		46.9		46.9	46.9		3.2	28.5		22.0	47.5	
Effective Green, g (s)		46.9		46.9	46.9		3.2	28.5		22.0	47.5	
Actuated g/C Ratio		0.43		0.43	0.43		0.03	0.26		0.20	0.43	
Clearance Time (s)		4.2		4.2	4.2		4.0	4.2		4.2	4.2	
Vehicle Extension (s)		0.2		0.2	0.2		3.0	0.2		0.2	0.2	
Lane Grp Cap (vph)		558		370	768		51	892		354	1496	
v/s Ratio Prot					0.21		0.02	0.23		c0.11	c0.39	
v/s Ratio Perm		c0.28		0.25								
v/c Ratio		0.66		0.58	0.50		0.78	0.89		0.54	0.91	
Uniform Delay, d1		25.2		24.0	22.9		53.1	39.2		39.5	29.1	
Progression Factor		1.00		0.71	0.72		1.20	0.45		1.18	0.55	
Incremental Delay, d2		6.0		1.0	0.1		47.1	9.2		0.1	0.8	
Delay (s)		31.2		18.2	16.8		111.0	27.1		46.7	16.8	
Level of Service		C		B	B		F	C		D	B	
Approach Delay (s)		31.2			17.3			31.0			20.5	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.6
Intersection Capacity Utilization	100.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
54: Stanislaus St & Van Ness Ave

8/29/2013

Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	50	153	19	265	505	106	53	579	90	124	1380	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.2		4.2	4.2		4.0	4.2		4.2	4.2	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt		0.99		1.00	0.97		1.00	0.98		1.00	0.99	
Flt Protected		0.99		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1820		1770	1814		1770	3468		1770	3510	
Flt Permitted		0.35		0.55	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		641		1024	1814		1770	3468		1770	3510	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	166	21	288	549	115	58	629	98	135	1500	88
RTOR Reduction (vph)	0	3	0	0	7	0	0	11	0	0	4	0
Lane Group Flow (vph)	0	238	0	288	657	0	58	716	0	135	1584	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2			6								
Actuated Green, G (s)		40.8		40.8	40.8		4.0	29.6		22.0	47.8	
Effective Green, g (s)		40.8		40.8	40.8		4.0	29.6		22.0	47.8	
Actuated g/C Ratio		0.39		0.39	0.39		0.04	0.28		0.21	0.46	
Clearance Time (s)		4.2		4.2	4.2		4.0	4.2		4.2	4.2	
Vehicle Extension (s)		0.2		0.2	0.2		3.0	0.2		0.2	0.2	
Lane Grp Cap (vph)		249		397	704		67	977		370	1597	
v/s Ratio Prot					0.36		c0.03	0.21		0.08	c0.45	
v/s Ratio Perm		c0.37		0.28								
v/c Ratio		0.96		0.73	0.93		0.87	0.73		0.36	0.99	
Uniform Delay, d1		31.2		27.3	30.8		50.2	34.1		35.5	28.4	
Progression Factor		1.00		0.79	0.80		1.12	1.06		1.30	0.51	
Incremental Delay, d2		46.7		4.1	15.3		50.8	1.7		0.0	5.1	
Delay (s)		77.9		25.6	39.8		107.0	37.8		46.1	19.6	
Level of Service		E		C	D		F	D		D	B	
Approach Delay (s)		77.9			35.5			42.9			21.7	
Approach LOS		E			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	33.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	12.6
Intersection Capacity Utilization	107.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
55: Stanislaus St & Parking Lot/O St & N Blackstone Ave

8/29/2013

Movement	SBL2	SBL	SBR	SBR2	SEL	SET	SER	NWL	NWT	NWR	NET	NER
Lane Configurations												
Volume (vph)	25	294	1641	3	40	25	40	23	30	17	526	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.9	4.9			4.2			4.0		4.6	
Lane Util. Factor		1.00	0.88			1.00			1.00		0.95	
Frt		1.00	0.85			0.95			0.97		0.99	
Flt Protected		0.95	1.00			0.98			0.98		1.00	
Satd. Flow (prot)		1770	2787			1734			1774		3493	
Flt Permitted		0.95	1.00			0.84			0.98		1.00	
Satd. Flow (perm)		1770	2787			1489			1774		3493	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	320	1784	3	43	27	43	25	33	18	572	54
RTOR Reduction (vph)	0	0	50	0	0	20	0	0	0	0	6	0
Lane Group Flow (vph)	0	347	1737	0	0	93	0	0	76	0	620	0
Turn Type	Perm	NA	Prot		Perm	NA		Split	NA		NA	
Protected Phases		2	2			3		1	1		4	
Permitted Phases	2				3							
Actuated Green, G (s)		53.1	53.1			6.8			6.0		26.4	
Effective Green, g (s)		53.1	53.1			6.8			6.0		26.4	
Actuated g/C Ratio		0.48	0.48			0.06			0.05		0.24	
Clearance Time (s)		4.9	4.9			4.2			4.0		4.6	
Vehicle Extension (s)		4.0	4.0			2.0			2.0		4.0	
Lane Grp Cap (vph)		854	1345			92			96		838	
v/s Ratio Prot			c0.62						c0.04		0.18	
v/s Ratio Perm		0.20				c0.06						
v/c Ratio		0.41	1.29			1.01			0.79		0.74	
Uniform Delay, d1		18.3	28.4			51.6			51.4		38.6	
Progression Factor		1.00	1.00			1.00			1.00		0.68	
Incremental Delay, d2		1.4	136.8			97.7			32.7		3.2	
Delay (s)		19.7	165.2			149.3			84.1		29.6	
Level of Service		B	F			F			F		C	
Approach Delay (s)		141.6				149.3			84.1		29.6	
Approach LOS		F				F			F		C	

Intersection Summary			
HCM 2000 Control Delay	113.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	17.7
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	SWL	SWT
Lane Configurations		
Volume (vph)	97	221
Ideal Flow (vphpl)	1900	1900
Lane Width	12	12
Total Lost time (s)	4.6	4.6
Lane Util. Factor	1.00	1.00
Frt	1.00	1.00
Flt Protected	0.95	1.00
Satd. Flow (prot)	1770	1863
Flt Permitted	0.19	1.00
Satd. Flow (perm)	359	1863
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	105	240
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	105	240
Turn Type	Perm	NA
Protected Phases		4
Permitted Phases	4	
Actuated Green, G (s)	26.4	26.4
Effective Green, g (s)	26.4	26.4
Actuated g/C Ratio	0.24	0.24
Clearance Time (s)	4.6	4.6
Vehicle Extension (s)	4.0	4.0
Lane Grp Cap (vph)	86	447
v/s Ratio Prot		0.13
v/s Ratio Perm	c0.29	
v/c Ratio	1.22	0.54
Uniform Delay, d1	41.8	36.5
Progression Factor	1.00	1.00
Incremental Delay, d2	167.9	1.6
Delay (s)	209.7	38.1
Level of Service	F	D
Approach Delay (s)		90.3
Approach LOS		F

Intersection Summary

HCM Signalized Intersection Capacity Analysis
55: Stanislaus St & Parking Lot/O St & N Blackstone Ave

8/29/2013

Movement	SBL2	SBL	SBR	SBR2	SEL	SET	SER	NWL	NWT	NWR	NET	NER
Lane Configurations												
Volume (vph)	25	452	1395	5	35	8	24	15	30	17	500	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	12
Total Lost time (s)		4.9	4.9			4.6			4.0		4.6	
Lane Util. Factor		1.00	0.88			1.00			1.00		0.95	
Frt		1.00	0.85			0.95			0.96		0.99	
Flt Protected		0.95	1.00			0.97			0.99		1.00	
Satd. Flow (prot)		1770	2787			1728			1774		3491	
Flt Permitted		0.95	1.00			0.80			0.99		1.00	
Satd. Flow (perm)		1770	2787			1420			1774		3491	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	27	491	1516	5	38	9	26	16	33	18	543	54
RTOR Reduction (vph)	0	0	58	0	0	20	0	0	0	0	7	0
Lane Group Flow (vph)	0	518	1463	0	0	53	0	0	67	0	590	0
Turn Type	Perm	NA	Prot		Perm	NA		Split	NA		NA	
Protected Phases		2	2			3		1	1		4	
Permitted Phases	2				3							
Actuated Green, G (s)		47.5	47.5			9.0			6.0		24.4	
Effective Green, g (s)		47.5	47.5			9.0			6.0		24.4	
Actuated g/C Ratio		0.45	0.45			0.09			0.06		0.23	
Clearance Time (s)		4.9	4.9			4.6			4.0		4.6	
Vehicle Extension (s)		4.0	4.0			4.0			2.0		4.0	
Lane Grp Cap (vph)		800	1260			121			101		811	
v/s Ratio Prot			c0.52						c0.04		0.17	
v/s Ratio Perm		0.29				c0.04						
v/c Ratio		0.65	1.16			0.44			0.66		0.73	
Uniform Delay, d1		22.3	28.8			45.6			48.5		37.2	
Progression Factor		1.00	1.00			1.00			1.00		0.89	
Incremental Delay, d2		4.0	81.6			3.4			12.0		3.2	
Delay (s)		26.3	110.4			49.0			60.5		36.5	
Level of Service		C	F			D			E		D	
Approach Delay (s)		89.0				49.0			60.5		36.5	
Approach LOS		F				D			E		D	

Intersection Summary			
HCM 2000 Control Delay	80.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	18.1
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	SWL	SWT
Lane Configurations		
Volume (vph)	114	191
Ideal Flow (vphpl)	1900	1900
Lane Width	12	12
Total Lost time (s)	4.6	4.6
Lane Util. Factor	1.00	1.00
Frt	1.00	1.00
Flt Protected	0.95	1.00
Satd. Flow (prot)	1770	1863
Flt Permitted	0.21	1.00
Satd. Flow (perm)	389	1863
Peak-hour factor, PHF	0.92	0.92
Adj. Flow (vph)	124	208
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	124	208
Turn Type	Perm	NA
Protected Phases		4
Permitted Phases	4	
Actuated Green, G (s)	24.4	24.4
Effective Green, g (s)	24.4	24.4
Actuated g/C Ratio	0.23	0.23
Clearance Time (s)	4.6	4.6
Vehicle Extension (s)	4.0	4.0
Lane Grp Cap (vph)	90	432
v/s Ratio Prot		0.11
v/s Ratio Perm	c0.32	
v/c Ratio	1.38	0.48
Uniform Delay, d1	40.3	34.8
Progression Factor	1.00	1.00
Incremental Delay, d2	225.1	1.2
Delay (s)	265.4	36.0
Level of Service	F	D
Approach Delay (s)		121.7
Approach LOS		F

Intersection Summary