Los Angeles County
Metropolitan Transportation Authority

Link Union Station

Final Environmental Impact Report Project Supporting Documentation

June 2019

Metro

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Construction Trip Quantity Estimates

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	Phase 1	Phase 2	Phase 3	Phase 4	Total Project	
Labor Cost	$ 415,251,000	$ 192,640,000	$ 223,010,000	$ 71,222,000	$ 902,123,000	39%
Equipment Cost	$ 263,875,000	$ 99,598,000	$ 121,094,000	$ 37,759,000	$ 522,326,000	22%
Material Cost	$ 475,638,000	$ 192,614,000	$ 233,011,000	$ 48,473,000	$ 949,736,000	41%
Total Cost	$ 1,154,763,000	$ 484,852,000	$ 577,115,000	$ 157,455,000	$ 2,335,374,000	
Labor Cost/Hour	$ 126	$ 126	$ 126	$ 126	$ 126	
Total Manhours	3,298,600	1,530,300	1,771,500	565,800	7,166,200	
Total Mandays	329,860	153,030	177,150	56,580	716,620	
Scheduled Workdays	566	464	512	130	1466	
Average Men/day	**583**	**330**	**346**	**435**	**489**	

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2031 Plus Construction Level of Service Worksheets

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	32	118	154	0	205	0	709	154	190	1207	0
Future Volume (vph)	44	32	118	154	0	205	0	709	154	190	1207	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	0.97	1.00	1.00	1.00		1.00		0.95	1.00	1.00	0.91	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1863	1583	1770		1583		3539	1583	1770	5085	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	1863	1583	1770		1583		3539	1583	1770	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	35	128	167	0	223	0	771	167	207	1312	0
RTOR Reduction (vph)	0	0	113	0	0	0	0	0	102	0	0	0
Lane Group Flow (vph)	48	35	15	167	0	223	0	771	65	207	1312	0
Turn Type	Split	NA	Perm	Prot		Prot		NA	Perm	Prot	NA	
Protected Phases	3	3		4		4		6		5	2	
Permitted Phases			3						6			
Actuated Green, G (s)	10.3	10.3	10.3	21.3		21.3		26.8	26.8	13.6	44.9	
Effective Green, g (s)	10.3	10.3	10.3	21.3		21.3		26.8	26.8	13.6	44.9	
Actuated g/C Ratio	0.11	0.11	0.11	0.24		0.24		0.30	0.30	0.15	0.50	
Clearance Time (s)	4.5	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	
Lane Grp Cap (vph)	392	213	181	418		374		1053	471	267	2536	
v/s Ratio Prot	0.01	c0.02		0.09		c0.14		c0.22		c0.12	0.26	
v/s Ratio Perm			0.01						0.04			
v/c Ratio	0.12	0.16	0.08	0.40		0.60		0.73	0.14	0.78	0.52	
Uniform Delay, d1	35.8	36.0	35.6	29.0		30.5		28.4	23.1	36.7	15.2	
Progression Factor	0.83	0.83	0.69	0.86		0.87		1.55	3.39	1.38	0.64	
Incremental Delay, d2	0.6	1.6	0.9	2.8		6.7		4.2	0.6	16.6	0.6	
Delay (s)	30.3	31.3	25.5	27.7		33.4		48.1	78.9	67.2	10.4	
Level of Service	C	C	C	C		C		D	E	E	B	
Approach Delay (s)		27.6			31.0			53.6			18.1	
Approach LOS		C			C			D			B	

Intersection Summary			
HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	243	119	14	10	154	101	13	38	7	274	68	192
Future Volume (vph)	243	119	14	10	154	101	13	38	7	274	68	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Lane Util. Factor	0.97	1.00		1.00	0.95			0.95			1.00	1.00
Frt	1.00	0.98		1.00	0.94			0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.96	1.00
Satd. Flow (prot)	3433	1834		1770	3328			3434			1791	1583
Flt Permitted	0.95	1.00		0.67	1.00			0.99			0.96	1.00
Satd. Flow (perm)	3433	1834		1239	3328			3434			1791	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)	264	129	15	11	167	110	14	41	8	298	74	209
RTOR Reduction (vph)	0	4	0	0	74	0	0	7	0	0	0	127
Lane Group Flow (vph)	264	140	0	11	203	0	0	56	0	0	372	82
Turn Type	Prot	NA		Perm	NA		Split	NA		Split	NA	custom
Protected Phases	5	2			6		3	3		4	4	4
Permitted Phases				6								5
Actuated Green, G (s)	12.0	45.9		29.4	29.4			7.5			23.1	35.1
Effective Green, g (s)	12.0	45.9		29.4	29.4			7.5			23.1	35.1
Actuated g/C Ratio	0.13	0.51		0.33	0.33			0.08			0.26	0.39
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	457	935		404	1087			286			459	696
v/s Ratio Prot	c0.08	0.08			c0.06			c0.02			c0.21	0.03
v/s Ratio Perm				0.01								0.02
v/c Ratio	0.58	0.15		0.03	0.19			0.19			0.81	0.12
Uniform Delay, d1	36.6	11.7		20.6	21.7			38.4			31.4	17.5
Progression Factor	1.38	0.31		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	1.5	0.3		0.0	0.1			1.5			10.4	0.1
Delay (s)	52.1	3.9		20.6	21.8			40.0			41.8	17.6
Level of Service	D	A		C	C			D			D	B
Approach Delay (s)		35.1			21.8			40.0			33.1	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	231	23	93	205	58	57
Future Volume (vph)	231	23	93	205	58	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	251	25	101	223	63	62

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total (vph)	276	101	223	63	62
Volume Left (vph)	0	101	0	63	0
Volume Right (vph)	25	0	0	0	62
Hadj (s)	-0.02	0.53	0.03	0.53	-0.67
Departure Headway (s)	5.0	5.7	5.2	6.5	5.3
Degree Utilization, x	0.39	0.16	0.32	0.11	0.09
Capacity (veh/h)	689	613	676	514	623
Control Delay (s)	11.1	8.5	9.4	9.1	7.6
Approach Delay (s)	11.1	9.1		8.4	
Approach LOS	B	A		A	

Intersection Summary				
Delay	9.8			
Level of Service	A			
Intersection Capacity Utilization	32.0%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	199	4	85	3	4	7	72	363	7	9	368	222
Future Volume (vph)	199	4	85	3	4	7	72	363	7	9	368	222
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)	216	4	92	3	4	8	78	395	8	10	400	241

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total (vph)	312	15	78	395	8	10	400	241
Volume Left (vph)	216	3	78	0	0	10	0	0
Volume Right (vph)	92	8	0	0	8	0	0	241
Hadj (s)	0.00	-0.25	0.53	0.03	-0.67	0.53	0.03	-0.67
Departure Headway (s)	6.3	7.1	6.8	6.3	3.2	6.9	6.4	3.2
Degree Utilization, x	0.55	0.03	0.15	0.70	0.01	0.02	0.71	0.21
Capacity (veh/h)	534	407	506	548	1121	498	541	1122
Control Delay (s)	16.6	10.3	9.8	21.3	5.0	8.9	22.6	5.9
Approach Delay (s)	16.6	10.3	19.2			16.2		
Approach LOS	C	B	C			C		

Intersection Summary				
Delay	17.2			
Level of Service	C			
Intersection Capacity Utilization	56.5%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	166	152	25	355	41	260	715	0	30	860	442
Future Volume (vph)	106	166	152	25	355	41	260	715	0	30	860	442
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.93		1.00	0.98		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3285		1770	3484		1770	3539		1770	3539	1583
Flt Permitted	0.24	1.00		0.54	1.00		0.22	1.00		0.95	1.00	1.00
Satd. Flow (perm)	441	3285		1014	3484		410	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)	115	180	165	27	386	45	283	777	0	33	935	480
RTOR Reduction (vph)	0	118	0	0	0	0	0	0	0	0	0	191
Lane Group Flow (vph)	115	227	0	27	431	0	283	777	0	33	935	289
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Prot	NA	Perm
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4			6					2
Actuated Green, G (s)	25.5	25.5		15.8	15.8		47.2	47.2		3.8	33.7	33.7
Effective Green, g (s)	25.5	25.5		15.8	15.8		47.2	47.2		3.8	33.7	33.7
Actuated g/C Ratio	0.28	0.28		0.18	0.18		0.52	0.52		0.04	0.37	0.37
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
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)	201	930		178	611		476	1856		74	1325	592
v/s Ratio Prot	c0.03	0.07			c0.12		c0.11	0.22		0.02	c0.26	
v/s Ratio Perm	0.13			0.03			0.20					0.18
v/c Ratio	0.57	0.24		0.15	0.71		0.59	0.42		0.45	0.71	0.49
Uniform Delay, d1	25.4	24.8		31.4	34.9		21.7	13.0		42.1	23.9	21.6
Progression Factor	0.76	0.62		1.00	1.00		0.51	0.31		1.42	0.44	0.15
Incremental Delay, d2	3.8	0.1		0.4	3.7		1.7	0.6		3.7	2.8	2.5
Delay (s)	23.3	15.4		31.8	38.6		12.7	4.6		63.5	13.3	5.9
Level of Service	C	B		C	D		B	A		E	B	A
Approach Delay (s)		17.4			38.2			6.8			12.0	
Approach LOS		B			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	50	25	64	7	104	3	363	150	11	6	47	62
Future Volume (vph)	50	25	64	7	104	3	363	150	11	6	47	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	27	70	8	113	3	395	163	12	7	51	67

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1
Volume Total (vph)	81	70	124	570	125
Volume Left (vph)	54	0	8	395	7
Volume Right (vph)	0	70	3	12	67
Hadj (s)	0.37	-0.67	0.03	0.16	-0.28
Departure Headway (s)	7.0	5.9	6.2	5.1	5.3
Degree Utilization, x	0.16	0.12	0.21	0.81	0.19
Capacity (veh/h)	476	555	530	692	614
Control Delay (s)	10.1	8.5	10.9	25.9	9.6
Approach Delay (s)	9.3		10.9	25.9	9.6
Approach LOS	A		B	D	A

Intersection Summary				
Delay	19.3			
Level of Service	C			
Intersection Capacity Utilization	53.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	528	27	2	948	92	13	855	168
Future Volume (vph)	0	0	0	0	528	27	2	948	92	13	855	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor					0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt					1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected					1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)					3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted					1.00	1.00	0.24	1.00	1.00	0.21	1.00	1.00
Satd. Flow (perm)					3539	1583	451	3539	1583	384	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	0	574	29	2	1030	100	14	929	183
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	45	0	0	25
Lane Group Flow (vph)	0	0	0	0	574	29	2	1030	55	14	929	158
Turn Type	pm+pt				NA	Perm	Perm	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4			8			2			6	7
Permitted Phases	4					8	2		2	6		6
Actuated Green, G (s)					21.0	21.0	49.7	49.7	49.7	49.7	49.7	55.5
Effective Green, g (s)					21.0	21.0	49.7	49.7	49.7	49.7	49.7	55.5
Actuated g/C Ratio					0.23	0.23	0.55	0.55	0.55	0.55	0.55	0.62
Clearance Time (s)					4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)					3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)					825	369	249	1954	874	212	1954	1055
v/s Ratio Prot					c0.16			c0.29			0.26	c0.01
v/s Ratio Perm						0.02	0.00		0.03	0.04		0.09
v/c Ratio					0.70	0.08	0.01	0.53	0.06	0.07	0.48	0.15
Uniform Delay, d1					31.6	26.9	9.1	12.7	9.3	9.4	12.2	7.3
Progression Factor					1.63	1.70	1.00	1.00	1.00	0.43	0.32	0.10
Incremental Delay, d2					1.6	0.1	0.1	1.0	0.1	0.5	0.7	0.1
Delay (s)					53.0	45.8	9.1	13.7	9.5	4.5	4.6	0.8
Level of Service					D	D	A	B	A	A	A	A
Approach Delay (s)		0.0			52.6			13.4			4.0	
Approach LOS		A			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	117	10	184	531	406	4	19	27	27	33	20
Future Volume (vph)	89	117	10	184	531	406	4	19	27	27	33	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5			4.5			4.5	
Lane Util. Factor		0.95	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.95			0.93			0.97	
Flt Protected		0.98	1.00		0.99			1.00			0.98	
Satd. Flow (prot)		3464	1583		3320			1721			1770	
Flt Permitted		0.98	1.00		0.99			0.98			0.90	
Satd. Flow (perm)		3464	1583		3320			1701			1620	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	97	127	11	200	577	441	4	21	29	29	36	22
RTOR Reduction (vph)	0	0	8	0	95	0	0	23	0	0	14	0
Lane Group Flow (vph)	0	224	3	0	1123	0	0	31	0	0	73	0
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	
Protected Phases	2	2		1	1			8			4	
Permitted Phases			2				8			4		
Actuated Green, G (s)		22.4	22.4		36.0			18.1			18.1	
Effective Green, g (s)		22.4	22.4		36.0			18.1			18.1	
Actuated g/C Ratio		0.25	0.25		0.40			0.20			0.20	
Clearance Time (s)		4.5	4.5		4.5			4.5			4.5	
Vehicle Extension (s)		3.0	3.0		3.0			3.0			3.0	
Lane Grp Cap (vph)		862	393		1328			342			325	
v/s Ratio Prot		c0.06			c0.34							
v/s Ratio Perm			0.00					0.02			c0.05	
v/c Ratio		0.26	0.01		0.85			0.09			0.23	
Uniform Delay, d1		27.1	25.4		24.5			29.3			30.1	
Progression Factor		1.07	1.00		0.70			1.00			1.00	
Incremental Delay, d2		0.7	0.0		2.9			0.5			1.6	
Delay (s)		29.7	25.5		20.1			29.8			31.7	
Level of Service		C	C		C			C			C	
Approach Delay (s)		29.5			20.1			29.8			31.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	480	1755	229	115	844	0	0	917	55
Future Volume (vph)	0	0	0	480	1755	229	115	844	0	0	917	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.5	4.5		4.5	4.5			4.5	
Lane Util. Factor				0.86	0.86		1.00	0.91			0.91	
Frt				1.00	0.98		1.00	1.00			0.99	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1522	4719		1770	5085			5042	
Flt Permitted				0.95	1.00		0.19	1.00			1.00	
Satd. Flow (perm)				1522	4719		347	5085			5042	
Peak-hour factor, PHF	0.92	0.92	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	522	1908	249	125	917	0	0	997	60
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	0	470	2209	0	125	917	0	0	1054	0
Turn Type				Prot	NA		Perm	NA			NA	
Protected Phases				3	8			2			6	
Permitted Phases							2					
Actuated Green, G (s)				44.5	44.5		36.5	36.5			36.5	
Effective Green, g (s)				44.5	44.5		36.5	36.5			36.5	
Actuated g/C Ratio				0.49	0.49		0.41	0.41			0.41	
Clearance Time (s)				4.5	4.5		4.5	4.5			4.5	
Lane Grp Cap (vph)				752	2333		140	2062			2044	
v/s Ratio Prot				0.31	c0.47			0.18			0.21	
v/s Ratio Perm							c0.36					
v/c Ratio				0.62	0.95		0.89	0.44			0.52	
Uniform Delay, d1				16.6	21.6		24.9	19.4			20.1	
Progression Factor				1.00	1.00		0.81	0.66			0.19	
Incremental Delay, d2				3.9	9.8		41.9	0.5			0.9	
Delay (s)				20.5	31.4		61.9	13.3			4.6	
Level of Service				C	C		E	B			A	
Approach Delay (s)		0.0			29.5			19.1			4.6	
Approach LOS		A			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	119	53	18	0	0	0	0	537	106	61	1160	0
Future Volume (vph)	119	53	18	0	0	0	0	537	106	61	1160	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5						4.5		4.5	4.5	
Lane Util. Factor	0.91	0.91						0.91		1.00	0.91	
Frt	1.00	0.98						0.98		1.00	1.00	
Flt Protected	0.95	0.98						1.00		0.95	1.00	
Satd. Flow (prot)	1610	3246						4960		1770	5085	
Flt Permitted	0.95	0.98						1.00		0.34	1.00	
Satd. Flow (perm)	1610	3246						4960		628	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	129	58	20	0	0	0	0	584	115	66	1261	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	33	0	0	0	0
Lane Group Flow (vph)	68	125	0	0	0	0	0	666	0	66	1261	0
Turn Type	Prot	NA						NA		pm+pt	NA	
Protected Phases	7	4						2		1	6	
Permitted Phases										6		
Actuated Green, G (s)	25.5	25.5						37.5		55.5	55.5	
Effective Green, g (s)	25.5	25.5						37.5		55.5	55.5	
Actuated g/C Ratio	0.28	0.28						0.42		0.62	0.62	
Clearance Time (s)	4.5	4.5						4.5		4.5	4.5	
Lane Grp Cap (vph)	456	919						2066		558	3135	
v/s Ratio Prot	c0.04	0.04						0.13		0.02	c0.25	
v/s Ratio Perm										0.06		
v/c Ratio	0.15	0.14						0.32		0.12	0.40	
Uniform Delay, d1	24.1	24.0						17.7		9.2	8.8	
Progression Factor	1.00	1.00						1.56		0.25	0.26	
Incremental Delay, d2	0.7	0.3						0.3		0.4	0.4	
Delay (s)	24.8	24.3						27.9		2.8	2.7	
Level of Service	C	C						C		A	A	
Approach Delay (s)		24.5			0.0			27.9			2.7	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	499	99	123	1239	46	123	441	129	76	1243	157
Future Volume (vph)	49	499	99	123	1239	46	123	441	129	76	1243	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.97		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	3539	1583	1770	5058		1770	4913		1770	5000	
Flt Permitted	0.14	1.00	1.00	0.29	1.00		0.16	1.00		0.27	1.00	
Satd. Flow (perm)	266	3539	1583	544	5058		307	4913		496	5000	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	542	108	134	1347	50	134	479	140	83	1351	171
RTOR Reduction (vph)	0	0	65	0	5	0	0	59	0	0	18	0
Lane Group Flow (vph)	53	542	43	134	1392	0	134	560	0	83	1504	0
Turn Type	Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	28.5	28.5	36.0	38.5	38.5		31.8	31.8		30.5	30.5	
Effective Green, g (s)	28.5	28.5	36.0	38.5	38.5		31.8	31.8		30.5	30.5	
Actuated g/C Ratio	0.32	0.32	0.40	0.43	0.43		0.35	0.35		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	
Lane Grp Cap (vph)	84	1120	633	307	2163		230	1735		255	1694	
v/s Ratio Prot		0.15	0.01	0.03	c0.28		c0.05	0.11		0.02	c0.30	
v/s Ratio Perm	0.20		0.02	0.16			0.16			0.09		
v/c Ratio	0.63	0.48	0.07	0.44	0.64		0.58	0.32		0.33	0.89	
Uniform Delay, d1	26.3	24.8	16.7	16.8	20.3		32.3	21.2		21.1	28.1	
Progression Factor	0.87	0.84	0.72	1.00	1.00		0.61	0.24		0.56	0.70	
Incremental Delay, d2	30.4	1.5	0.2	4.5	1.5		10.3	0.5		3.2	6.9	
Delay (s)	53.2	22.3	12.3	21.3	21.8		30.0	5.6		14.9	26.6	
Level of Service	D	C	B	C	C		C	A		B	C	
Approach Delay (s)		23.1			21.8			9.9			26.0	
Approach LOS		C			C			A			C	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	116	63	62	753	147	58	263	70	157	985	244
Future Volume (vph)	56	116	63	62	753	147	58	263	70	157	985	244
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3353		1770	3539	1583	1770	3539	1583	1770	4934	
Flt Permitted	0.18	1.00		0.63	1.00	1.00	0.15	1.00	1.00	0.58	1.00	
Satd. Flow (perm)	331	3353		1173	3539	1583	283	3539	1583	1074	4934	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	61	126	68	67	818	160	63	286	76	171	1071	265
RTOR Reduction (vph)	0	51	0	0	0	68	0	0	34	0	32	0
Lane Group Flow (vph)	61	143	0	67	818	92	63	286	42	171	1304	0
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	22.5	22.5		31.2	31.2	31.2	49.8	49.8	49.8	49.8	49.8	
Effective Green, g (s)	22.5	22.5		31.2	31.2	31.2	49.8	49.8	49.8	49.8	49.8	
Actuated g/C Ratio	0.25	0.25		0.35	0.35	0.35	0.55	0.55	0.55	0.55	0.55	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
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)	82	838		434	1226	548	156	1958	875	594	2730	
v/s Ratio Prot		0.04		0.01	c0.23			0.08			c0.26	
v/s Ratio Perm	c0.18			0.05		0.06	0.22		0.03	0.16		
v/c Ratio	0.74	0.17		0.15	0.67	0.17	0.40	0.15	0.05	0.29	0.48	
Uniform Delay, d1	31.1	26.4		20.4	25.0	20.4	11.6	9.8	9.2	10.7	12.2	
Progression Factor	1.00	1.00		0.84	0.91	0.73	0.70	0.52	0.68	0.32	0.29	
Incremental Delay, d2	30.1	0.1		0.1	1.0	0.1	7.5	0.2	0.1	1.1	0.5	
Delay (s)	61.2	26.5		17.2	23.7	15.1	15.6	5.2	6.3	4.5	4.1	
Level of Service	E	C		B	C	B	B	A	A	A	A	
Approach Delay (s)		34.8			21.9			6.9			4.1	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	444	199	311	1263	352	159	381	59	150	491	30
Future Volume (vph)	52	444	199	311	1263	352	159	381	59	150	491	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	1770	3508	
Flt Permitted	0.12	1.00	1.00	0.36	1.00	1.00	0.44	1.00	1.00	0.43	1.00	
Satd. Flow (perm)	216	3539	1583	680	3539	1583	818	3539	1583	793	3508	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	483	216	338	1373	383	173	414	64	163	534	33
RTOR Reduction (vph)	0	0	133	0	0	183	0	0	52	0	5	0
Lane Group Flow (vph)	57	483	83	338	1373	200	173	414	12	163	562	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	38.7	34.5	34.5	51.3	42.6	42.6	16.7	16.7	16.7	17.9	17.9	
Effective Green, g (s)	38.7	34.5	34.5	51.3	42.6	42.6	16.7	16.7	16.7	17.9	17.9	
Actuated g/C Ratio	0.43	0.38	0.38	0.57	0.47	0.47	0.19	0.19	0.19	0.20	0.20	
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)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	165	1356	606	536	1675	749	229	656	293	249	697	
v/s Ratio Prot	0.02	0.14		c0.09	c0.39		c0.06	0.12		0.06	c0.16	
v/s Ratio Perm	0.13		0.05	0.27		0.13	0.08		0.01	0.07		
v/c Ratio	0.35	0.36	0.14	0.63	0.82	0.27	0.76	0.63	0.04	0.65	0.81	
Uniform Delay, d1	17.4	19.8	18.1	11.0	20.4	14.3	34.6	33.8	30.1	32.0	34.4	
Progression Factor	1.00	1.00	1.00	1.02	0.64	0.21	0.90	0.89	1.00	0.68	0.72	
Incremental Delay, d2	1.3	0.7	0.5	0.2	0.4	0.1	12.7	1.9	0.1	6.0	6.7	
Delay (s)	18.7	20.6	18.5	11.5	13.5	3.1	43.9	32.1	30.1	27.9	31.6	
Level of Service	B	C	B	B	B	A	D	C	C	C	C	
Approach Delay (s)		19.8			11.3			35.1			30.8	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	68	70	106	128	338	35	184	337	560	150	234
Future Volume (vph)	115	68	70	106	128	338	35	184	337	560	150	234
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	0.91	0.91		1.00	1.00	1.00	0.97	0.95	1.00	0.97	0.95	
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1610	3154		1770	1863	1583	3433	3539	1583	3433	3216	
Flt Permitted	0.67	0.86		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1133	2739		1770	1863	1583	3433	3539	1583	3433	3216	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	125	74	76	115	139	367	38	200	366	609	163	254
RTOR Reduction (vph)	0	66	0	0	0	260	0	0	245	0	121	0
Lane Group Flow (vph)	85	124	0	115	139	107	38	200	121	609	296	0
Turn Type	Perm	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4					8			2			
Actuated Green, G (s)	12.3	12.3		9.4	26.2	26.2	3.3	29.7	29.7	20.6	47.0	
Effective Green, g (s)	12.3	12.3		9.4	26.2	26.2	3.3	29.7	29.7	20.6	47.0	
Actuated g/C Ratio	0.14	0.14		0.10	0.29	0.29	0.04	0.33	0.33	0.23	0.52	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
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)	154	374		184	542	460	125	1167	522	785	1679	
v/s Ratio Prot				c0.06	0.07		0.01	0.06		c0.18	0.09	
v/s Ratio Perm	c0.08	0.05				0.07			c0.08			
v/c Ratio	0.55	0.33		0.62	0.26	0.23	0.30	0.17	0.23	0.78	0.18	
Uniform Delay, d1	36.3	35.1		38.6	24.4	24.3	42.2	21.4	21.9	32.5	11.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.66	0.80	
Incremental Delay, d2	4.2	0.5		6.5	0.3	0.3	1.4	0.3	1.0	3.8	0.2	
Delay (s)	40.5	35.7		45.1	24.7	24.5	43.6	21.7	22.9	25.4	9.2	
Level of Service	D	D		D	C	C	D	C	C	C	A	
Approach Delay (s)		37.2			28.4			23.8			18.8	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	53.1%	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												
Traffic Volume (vph)	61	200	5	0	424	185	1	171	100	228	536	548
Future Volume (vph)	61	200	5	0	424	185	1	171	100	228	536	548
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00			0.95		1.00	0.94		1.00	0.92	
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3527			3378		1770	3343		1770	3271	
Flt Permitted	0.95	1.00			1.00		0.15	1.00		0.57	1.00	
Satd. Flow (perm)	1770	3527			3378		288	3343		1065	3271	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	66	217	5	0	461	201	1	186	109	248	583	596
RTOR Reduction (vph)	0	3	0	0	57	0	0	50	0	0	157	0
Lane Group Flow (vph)	66	219	0	0	605	0	1	245	0	248	1022	0
Turn Type	Prot	NA			NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	7.6	32.4			20.3		48.6	48.6		48.6	48.6	
Effective Green, g (s)	7.6	32.4			20.3		48.6	48.6		48.6	48.6	
Actuated g/C Ratio	0.08	0.36			0.23		0.54	0.54		0.54	0.54	
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	149	1269			761		155	1805		575	1766	
v/s Ratio Prot	c0.04	0.06			c0.18			0.07			c0.31	
v/s Ratio Perm							0.00			0.23		
v/c Ratio	0.44	0.17			0.80		0.01	0.14		0.43	0.58	
Uniform Delay, d1	39.2	19.7			32.9		9.6	10.3		12.4	13.9	
Progression Factor	1.34	1.48			1.15		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.1	0.1			5.7		0.1	0.2		2.4	1.4	
Delay (s)	54.6	29.1			43.6		9.6	10.4		14.8	15.2	
Level of Service	D	C			D		A	B		B	B	
Approach Delay (s)		34.9			43.6			10.4			15.2	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	23.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	69	167	29	153	10	190	263	12	11	1188	154
Future Volume (vph)	81	69	167	29	153	10	190	263	12	11	1188	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		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	0.91	
Frt	1.00	1.00	0.85	1.00	0.99		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	1845		1770	3516		1770	4998	
Flt Permitted	0.47	1.00	1.00	0.71	1.00		0.12	1.00		0.57	1.00	
Satd. Flow (perm)	871	1863	1583	1319	1845		227	3516		1060	4998	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	88	75	182	32	166	11	207	286	13	12	1291	167
RTOR Reduction (vph)	0	0	154	0	3	0	0	3	0	0	13	0
Lane Group Flow (vph)	88	75	28	32	174	0	207	296	0	12	1445	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	13.8	13.8	13.8	13.8	13.8		67.2	67.2		52.1	52.1	
Effective Green, g (s)	13.8	13.8	13.8	13.8	13.8		67.2	67.2		52.1	52.1	
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15		0.75	0.75		0.58	0.58	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
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)	133	285	242	202	282		351	2625		613	2893	
v/s Ratio Prot		0.04			0.09		c0.07	0.08			0.29	
v/s Ratio Perm	c0.10		0.02	0.02			c0.37			0.01		
v/c Ratio	0.66	0.26	0.12	0.16	0.62		0.59	0.11		0.02	0.50	
Uniform Delay, d1	35.9	33.6	32.8	33.1	35.6		7.4	3.2		8.1	11.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.71	0.49		1.00	1.00	
Incremental Delay, d2	11.7	0.5	0.2	0.4	4.0		2.5	0.1		0.1	0.6	
Delay (s)	47.6	34.1	33.1	33.4	39.6		15.1	1.6		8.1	11.8	
Level of Service	D	C	C	C	D		B	A		A	B	
Approach Delay (s)		37.0			38.7			7.1			11.8	
Approach LOS		D			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	65.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	64	0	0	0	57	369	293	0	1414	229
Future Volume (Veh/h)	0	0	64	0	0	0	57	369	293	0	1414	229
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	70	0	0	0	62	401	318	0	1537	249
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								206			797	
pX, platoon unblocked	0.90	0.90	0.90	0.90	0.90	1.00	0.90			1.00		
vC, conflicting volume	1986	2186	637	1107	2311	200	1786			401		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1677	1900	195	701	2038	187	1475			388		
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	90	100	100	100	85			100		
cM capacity (veh/h)	49	52	730	234	43	820	406			1161		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	70	0	62	200	200	318	615	615	556
Volume Left	0	0	62	0	0	0	0	0	0
Volume Right	70	0	0	0	0	318	0	0	249
cSH	730	1700	406	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.10	0.00	0.15	0.12	0.12	0.19	0.36	0.36	0.33
Queue Length 95th (ft)	8	0	13	0	0	0	0	0	0
Control Delay (s)	10.5	0.0	15.5	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	A	C						
Approach Delay (s)	10.5	0.0	1.2				0.0		
Approach LOS	B	A							

Intersection Summary					
Average Delay	0.6				
Intersection Capacity Utilization	43.1%	ICU Level of Service		A	
Analysis Period (min)	15				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	220	37	15	20	0	11	0	487	49	37	1403	0
Future Volume (vph)	220	37	15	20	0	11	0	487	49	37	1403	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5		4.5		4.5		4.5	4.5	
Lane Util. Factor	0.97	1.00		1.00		1.00		0.91		1.00	0.91	
Frt	1.00	0.96		1.00		0.85		0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)	3433	1783		1770		1583		5016		1770	5085	
Flt Permitted	0.95	1.00		0.95		1.00		1.00		0.42	1.00	
Satd. Flow (perm)	3433	1783		1770		1583		5016		786	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	239	40	16	22	0	12	0	529	53	40	1525	0
RTOR Reduction (vph)	0	14	0	0	0	12	0	9	0	0	0	0
Lane Group Flow (vph)	239	42	0	22	0	0	0	573	0	40	1525	0
Turn Type	pm+pt	NA		Prot		Perm		NA		Perm	NA	
Protected Phases	7	4		3				2			6	
Permitted Phases	4					8				6		
Actuated Green, G (s)	18.4	9.9		4.0		1.1		62.6		62.6	62.6	
Effective Green, g (s)	18.4	9.9		4.0		1.1		62.6		62.6	62.6	
Actuated g/C Ratio	0.20	0.11		0.04		0.01		0.70		0.70	0.70	
Clearance Time (s)	4.5	4.5		4.5		4.5		4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0		3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	701	196		78		19		3488		546	3536	
v/s Ratio Prot	c0.05	0.02		0.01				0.11			c0.30	
v/s Ratio Perm	0.02					0.00				0.05		
v/c Ratio	0.34	0.21		0.28		0.01		0.16		0.07	0.43	
Uniform Delay, d1	30.6	36.5		41.6		43.9		4.7		4.4	6.0	
Progression Factor	0.81	0.64		1.00		1.00		0.25		0.63	0.52	
Incremental Delay, d2	0.3	0.5		2.0		0.2		0.1		0.3	0.4	
Delay (s)	25.1	23.8		43.6		44.1		1.3		3.0	3.5	
Level of Service	C	C		D		D		A		A	A	
Approach Delay (s)		24.9			43.8			1.3			3.5	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	551	0	0	1499	20	120	179	95	0	0	0
Future Volume (vph)	75	551	0	0	1499	20	120	179	95	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	4.5				
Lane Util. Factor	1.00	0.95			0.91		0.86	0.86				
Frt	1.00	1.00			1.00		1.00	0.95				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1770	3539			5075		1522	4558				
Flt Permitted	0.12	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	216	3539			5075		1522	4558				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	599	0	0	1629	22	130	195	103	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	81	0	0	0	0
Lane Group Flow (vph)	82	599	0	0	1649	0	108	239	0	0	0	0
Turn Type	Perm	NA			NA		pm+pt	NA				
Protected Phases		4			8		6	2				
Permitted Phases	4						2					
Actuated Green, G (s)	61.7	61.7			61.7		19.3	19.3				
Effective Green, g (s)	61.7	61.7			61.7		19.3	19.3				
Actuated g/C Ratio	0.69	0.69			0.69		0.21	0.21				
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5				
Lane Grp Cap (vph)	148	2426			3479		326	977				
v/s Ratio Prot		0.17			0.33		c0.07	0.05				
v/s Ratio Perm	c0.38											
v/c Ratio	0.55	0.25			0.47		0.33	0.24				
Uniform Delay, d1	7.2	5.4			6.6		29.9	29.3				
Progression Factor	1.00	1.00			0.33		1.00	1.00				
Incremental Delay, d2	14.1	0.2			0.3		2.7	0.6				
Delay (s)	21.3	5.6			2.5		32.6	29.9				
Level of Service	C	A			A		C	C				
Approach Delay (s)		7.5			2.5			30.6			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	50.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	382	644	985	192
Future Volume (Veh/h)	0	0	382	644	985	192
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)	0	0	415	700	1071	209
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				369	243	
pX, platoon unblocked	0.88	0.88	0.88			
vC, conflicting volume	2239	462	1280			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1847	0	824			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	41			
cM capacity (veh/h)	24	950	703			

Direction, Lane #	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	415	233	233	233	428	428	423
Volume Left	415	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	209
cSH	703	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.59	0.14	0.14	0.14	0.25	0.25	0.25
Queue Length 95th (ft)	98	0	0	0	0	0	0
Control Delay (s)	17.2	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	C						
Approach Delay (s)	6.4				0.0		
Approach LOS							

Intersection Summary			
Average Delay	3.0		
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	300	1564	60	87	275	0	0	356	41
Future Volume (vph)	0	0	0	300	1564	60	87	275	0	0	356	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5		4.5	4.5			4.5	
Lane Util. Factor					0.91		1.00	0.95			0.95	
Frt					1.00		1.00	1.00			0.98	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					5022		1770	3539			3484	
Flt Permitted					0.99		0.42	1.00			1.00	
Satd. Flow (perm)					5022		779	3539			3484	
Peak-hour factor, PHF	0.92	0.92	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	326	1700	65	95	299	0	0	387	45
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	10	0
Lane Group Flow (vph)	0	0	0	0	2087	0	95	299	0	0	422	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					53.5		27.5	27.5			27.5	
Effective Green, g (s)					53.5		27.5	27.5			27.5	
Actuated g/C Ratio					0.59		0.31	0.31			0.31	
Clearance Time (s)					4.5		4.5	4.5			4.5	
Lane Grp Cap (vph)					2985		238	1081			1064	
v/s Ratio Prot								0.08			0.12	
v/s Ratio Perm					0.42		c0.12					
v/c Ratio					0.70		0.40	0.28			0.40	
Uniform Delay, d1					12.7		24.7	23.7			24.7	
Progression Factor					0.11		0.60	0.61			1.00	
Incremental Delay, d2					0.5		4.9	0.6			1.1	
Delay (s)					1.9		19.7	15.0			25.8	
Level of Service					A		B	B			C	
Approach Delay (s)		0.0			1.9			16.2			25.8	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑			↑↑			↑↑	
Traffic Volume (vph)	31	133	152	0	0	0	0	331	61	18	638	0
Future Volume (vph)	31	133	152	0	0	0	0	331	61	18	638	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5			4.5	
Lane Util. Factor		0.95						0.95			0.95	
Frt		0.93						0.98			1.00	
Flt Protected		1.00						1.00			1.00	
Satd. Flow (prot)		3268						3457			3534	
Flt Permitted		0.93						1.00			0.94	
Satd. Flow (perm)		3056						3457			3318	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	34	145	165	0	0	0	0	360	66	20	693	0
RTOR Reduction (vph)	0	109	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	235	0	0	0	0	0	426	0	0	713	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		30.5						50.5			50.5	
Effective Green, g (s)		30.5						50.5			50.5	
Actuated g/C Ratio		0.34						0.56			0.56	
Clearance Time (s)		4.5						4.5			4.5	
Lane Grp Cap (vph)		1035						1939			1861	
v/s Ratio Prot								0.12				
v/s Ratio Perm		c0.08									c0.21	
v/c Ratio		0.23						0.22			0.38	
Uniform Delay, d1		21.3						9.9			11.0	
Progression Factor		1.00						0.61			0.46	
Incremental Delay, d2		0.5						0.2			0.5	
Delay (s)		21.8						6.3			5.6	
Level of Service		C						A			A	
Approach Delay (s)		21.8			0.0			6.3			5.6	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	385	172	100	743	122	70	339	52	169	917	94
Future Volume (vph)	33	385	172	100	743	122	70	339	52	169	917	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.95		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3375		1770	3464		1770	3468		1770	3539	1583
Flt Permitted	0.17	1.00		0.34	1.00		0.20	1.00		0.48	1.00	1.00
Satd. Flow (perm)	308	3375		628	3464		373	3468		901	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)	36	418	187	109	808	133	76	368	57	184	997	102
RTOR Reduction (vph)	0	48	0	0	15	0	0	14	0	0	0	31
Lane Group Flow (vph)	36	557	0	109	926	0	76	411	0	184	997	71
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	35.5	35.5		35.5	35.5		45.5	45.5		45.5	45.5	45.5
Effective Green, g (s)	35.5	35.5		35.5	35.5		45.5	45.5		45.5	45.5	45.5
Actuated g/C Ratio	0.39	0.39		0.39	0.39		0.51	0.51		0.51	0.51	0.51
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Grp Cap (vph)	121	1331		247	1366		188	1753		455	1789	800
v/s Ratio Prot		0.17			c0.27			0.12			c0.28	
v/s Ratio Perm	0.12			0.17			0.20			0.20		0.04
v/c Ratio	0.30	0.42		0.44	0.68		0.40	0.23		0.40	0.56	0.09
Uniform Delay, d1	18.7	19.8		20.0	22.5		13.8	12.5		13.8	15.3	11.5
Progression Factor	1.00	1.00		0.75	0.76		0.74	0.65		0.71	0.69	0.55
Incremental Delay, d2	6.2	1.0		5.4	2.6		6.3	0.3		2.6	1.2	0.2
Delay (s)	24.9	20.7		20.4	19.7		16.5	8.4		12.4	11.7	6.5
Level of Service	C	C		C	B		B	A		B	B	A
Approach Delay (s)		21.0			19.8			9.7			11.4	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	391	120	49	645	83	107	369	59	115	822	137
Future Volume (vph)	29	391	120	49	645	83	107	369	59	115	822	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.98		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	3415		1770	3539	1583	1770	3466		1770	3463	
Flt Permitted	0.21	1.00		0.31	1.00	1.00	0.22	1.00		0.48	1.00	
Satd. Flow (perm)	396	3415		584	3539	1583	408	3466		885	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)	32	425	130	53	701	90	116	401	64	125	893	149
RTOR Reduction (vph)	0	32	0	0	0	64	0	14	0	0	15	0
Lane Group Flow (vph)	32	523	0	53	701	27	116	451	0	125	1027	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	26.5	26.5		26.5	26.5	26.5	54.5	54.5		54.5	54.5	
Effective Green, g (s)	26.5	26.5		26.5	26.5	26.5	54.5	54.5		54.5	54.5	
Actuated g/C Ratio	0.29	0.29		0.29	0.29	0.29	0.61	0.61		0.61	0.61	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	116	1005		171	1042	466	247	2098		535	2097	
v/s Ratio Prot		0.15			c0.20			0.13			c0.30	
v/s Ratio Perm	0.08			0.09		0.02	0.28			0.14		
v/c Ratio	0.28	0.52		0.31	0.67	0.06	0.47	0.21		0.23	0.49	
Uniform Delay, d1	24.4	26.5		24.7	27.9	22.8	9.8	8.0		8.2	10.0	
Progression Factor	1.00	1.00		0.56	0.54	0.47	1.00	1.00		0.85	0.84	
Incremental Delay, d2	5.8	1.9		4.3	3.2	0.2	6.3	0.2		0.9	0.7	
Delay (s)	30.2	28.4		18.0	18.2	11.0	16.1	8.3		7.8	9.1	
Level of Service	C	C		B	B	B	B	A		A	A	
Approach Delay (s)		28.5			17.4			9.8			8.9	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	346	222	204	808	186	106
Future Volume (vph)	346	222	204	808	186	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3332		1770	3539	3433	1583
Flt Permitted	1.00		0.40	1.00	0.95	1.00
Satd. Flow (perm)	3332		743	3539	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	376	241	222	878	202	115
RTOR Reduction (vph)	87	0	0	0	0	85
Lane Group Flow (vph)	530	0	222	878	202	30
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	57.5		57.5	57.5	23.5	23.5
Effective Green, g (s)	57.5		57.5	57.5	23.5	23.5
Actuated g/C Ratio	0.64		0.64	0.64	0.26	0.26
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Lane Grp Cap (vph)	2128		474	2261	896	413
v/s Ratio Prot	0.16			0.25	c0.06	
v/s Ratio Perm			c0.30			0.02
v/c Ratio	0.25		0.47	0.39	0.23	0.07
Uniform Delay, d1	7.0		8.4	7.8	26.1	25.0
Progression Factor	0.43		0.73	0.75	0.86	0.87
Incremental Delay, d2	0.3		2.6	0.4	0.5	0.3
Delay (s)	3.3		8.7	6.2	23.0	22.2
Level of Service	A		A	A	C	C
Approach Delay (s)	3.3			6.7	22.7	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	319	167	105	585	65	157	225	49	25	310	34
Future Volume (vph)	78	319	167	105	585	65	157	225	49	25	310	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.95		1.00	0.98			0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.98			1.00	
Satd. Flow (prot)	1770	3357		1770	3486			3417			3479	
Flt Permitted	0.30	1.00		0.40	1.00			0.67			0.91	
Satd. Flow (perm)	565	3357		753	3486			2348			3160	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	347	182	114	636	71	171	245	53	27	337	37
RTOR Reduction (vph)	0	76	0	0	9	0	0	11	0	0	8	0
Lane Group Flow (vph)	85	453	0	114	698	0	0	458	0	0	393	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	40.5	40.5		40.5	40.5			40.5			40.5	
Effective Green, g (s)	40.5	40.5		40.5	40.5			40.5			40.5	
Actuated g/C Ratio	0.45	0.45		0.45	0.45			0.45			0.45	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Lane Grp Cap (vph)	254	1510		338	1568			1056			1422	
v/s Ratio Prot		0.13			c0.20							
v/s Ratio Perm	0.15			0.15				c0.20			0.12	
v/c Ratio	0.33	0.30		0.34	0.44			0.43			0.28	
Uniform Delay, d1	16.0	15.7		16.0	17.0			16.9			15.5	
Progression Factor	0.55	0.46		1.31	1.35			1.00			0.53	
Incremental Delay, d2	3.2	0.5		2.6	0.9			1.3			0.5	
Delay (s)	12.0	7.6		23.7	23.9			18.2			8.8	
Level of Service	B	A		C	C			B			A	
Approach Delay (s)		8.2			23.9			18.2			8.8	
Approach LOS		A			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	291	230	131	293	957	8	228	503	91	26	1025	740
Future Volume (vph)	291	230	131	293	957	8	228	503	91	26	1025	740
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.96		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3212		1770	3535		1770	3539	1583	1770	3539	1583
Flt Permitted	0.17	0.56		0.45	1.00		0.13	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	285	1829		833	3535		238	3539	1583	834	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)	316	250	142	318	1040	9	248	547	99	28	1114	804
RTOR Reduction (vph)	0	38	0	0	1	0	0	0	57	0	0	39
Lane Group Flow (vph)	183	487	0	318	1048	0	248	547	42	28	1114	765
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4		3	8		5	2			6	7
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	39.4	39.4		37.8	23.0		37.9	37.9	37.9	26.8	26.8	42.4
Effective Green, g (s)	39.4	39.4		37.8	23.0		37.9	37.9	37.9	26.8	26.8	42.4
Actuated g/C Ratio	0.44	0.44		0.42	0.26		0.42	0.42	0.42	0.30	0.30	0.47
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
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)	354	1040		503	903		212	1490	666	248	1053	824
v/s Ratio Prot	0.09	0.08		0.10	c0.30		c0.09	0.15			0.31	c0.16
v/s Ratio Perm	0.14	0.12		0.16			c0.41		0.03	0.03		0.32
v/c Ratio	0.52	0.47		0.63	1.16		1.17	0.37	0.06	0.11	1.06	0.93
Uniform Delay, d1	18.5	17.9		18.5	33.5		23.0	17.8	15.5	23.0	31.6	22.4
Progression Factor	0.59	0.43		1.00	1.00		1.23	1.20	1.88	1.00	1.00	1.00
Incremental Delay, d2	1.2	0.3		2.6	84.7		114.1	0.7	0.2	0.9	44.4	16.4
Delay (s)	12.1	8.0		21.0	118.2		142.5	22.1	29.3	23.9	76.0	38.8
Level of Service	B	A		C	F		F	C	C	C	E	D
Approach Delay (s)		9.0			95.6			56.3			59.9	
Approach LOS		A			F			E			E	

Intersection Summary			
HCM 2000 Control Delay	61.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	96.4%	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												
Traffic Volume (vph)	90	71	9	12	571	156	39	167	2	108	169	510
Future Volume (vph)	90	71	9	12	571	156	39	167	2	108	169	510
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.97		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1831		1770	1803		1770	1860		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.57	1.00		0.57	1.00	1.00
Satd. Flow (perm)	1770	1831		1770	1803		1056	1860		1056	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)	98	77	10	13	621	170	42	182	2	117	184	554
RTOR Reduction (vph)	0	4	0	0	11	0	0	1	0	0	0	235
Lane Group Flow (vph)	98	83	0	13	780	0	42	183	0	117	184	319
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	10.3	50.5		1.0	41.2		25.0	25.0		25.0	25.0	25.0
Effective Green, g (s)	10.3	50.5		1.0	41.2		25.0	25.0		25.0	25.0	25.0
Actuated g/C Ratio	0.11	0.56		0.01	0.46		0.28	0.28		0.28	0.28	0.28
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
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)	202	1027		19	825		293	516		293	517	439
v/s Ratio Prot	c0.06	0.05		0.01	c0.43			0.10			0.10	
v/s Ratio Perm							0.04			0.11		c0.20
v/c Ratio	0.49	0.08		0.68	0.94		0.14	0.36		0.40	0.36	0.73
Uniform Delay, d1	37.4	9.1		44.3	23.3		24.4	26.0		26.4	26.0	29.4
Progression Factor	0.70	0.83		1.00	1.00		1.00	1.00		0.47	0.45	0.62
Incremental Delay, d2	1.8	0.0		69.9	19.1		1.0	1.9		1.6	0.8	4.2
Delay (s)	27.9	7.6		114.2	42.4		25.5	28.0		14.0	12.4	22.4
Level of Service	C	A		F	D		C	C		B	B	C
Approach Delay (s)		18.3			43.6			27.5			19.1	
Approach LOS		B			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	86.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	18	375	144	553	202	0
Future Volume (vph)	18	375	144	553	202	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	0.86		1.00	1.00	1.00	
Flt Protected	1.00		0.95	1.00	0.95	
Satd. Flow (prot)	3033		1770	3539	1770	
Flt Permitted	1.00		0.49	1.00	0.95	
Satd. Flow (perm)	3033		905	3539	1770	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	20	408	157	601	220	0
RTOR Reduction (vph)	193	0	0	0	0	0
Lane Group Flow (vph)	235	0	157	601	220	0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Actuated Green, G (s)	47.5		47.5	47.5	33.5	
Effective Green, g (s)	47.5		47.5	47.5	33.5	
Actuated g/C Ratio	0.53		0.53	0.53	0.37	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Lane Grp Cap (vph)	1600		477	1867	658	
v/s Ratio Prot	0.08			0.17	c0.12	
v/s Ratio Perm			c0.17			
v/c Ratio	0.15		0.33	0.32	0.33	
Uniform Delay, d1	10.9		12.1	12.1	20.3	
Progression Factor	0.86		0.28	0.29	1.00	
Incremental Delay, d2	0.2		1.6	0.4	1.4	
Delay (s)	9.5		5.0	3.9	21.6	
Level of Service	A		A	A	C	
Approach Delay (s)	9.5			4.1	21.6	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	43.1%	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												
Traffic Volume (vph)	9	4	6	100	4	24	22	601	169	62	550	12
Future Volume (vph)	9	4	6	100	4	24	22	601	169	62	550	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt		0.95		1.00	0.87		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1738		1770	1621		1770	3539	1583	1770	3528	
Flt Permitted		0.88		0.74	1.00		0.42	1.00	1.00	0.40	1.00	
Satd. Flow (perm)		1569		1385	1621		783	3539	1583	749	3528	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	4	7	109	4	26	24	653	184	67	598	13
RTOR Reduction (vph)	0	6	0	0	23	0	0	0	41	0	1	0
Lane Group Flow (vph)	0	15	0	109	7	0	24	653	143	67	610	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		11.1		11.1	11.1		69.9	69.9	69.9	69.9	69.9	
Effective Green, g (s)		11.1		11.1	11.1		69.9	69.9	69.9	69.9	69.9	
Actuated g/C Ratio		0.12		0.12	0.12		0.78	0.78	0.78	0.78	0.78	
Clearance Time (s)		4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		193		170	199		608	2748	1229	581	2740	
v/s Ratio Prot					0.00			c0.18			0.17	
v/s Ratio Perm		0.01		c0.08			0.03		0.09	0.09		
v/c Ratio		0.08		0.64	0.04		0.04	0.24	0.12	0.12	0.22	
Uniform Delay, d1		34.9		37.6	34.7		2.3	2.8	2.5	2.5	2.7	
Progression Factor		1.00		1.00	1.00		2.42	2.75	8.71	1.59	1.50	
Incremental Delay, d2		0.2		8.0	0.1		0.1	0.2	0.2	0.4	0.2	
Delay (s)		35.1		45.6	34.8		5.7	7.7	21.7	4.3	4.3	
Level of Service		D		D	C		A	A	C	A	A	
Approach Delay (s)		35.1			43.2			10.7			4.3	
Approach LOS		D			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	42.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	54	42	436	60	45	651
Future Volume (Veh/h)	54	42	436	60	45	651
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)	59	46	474	65	49	708
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						543
pX, platoon unblocked						
vC, conflicting volume	958	270			539	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	958	270			539	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	76	94			95	
cM capacity (veh/h)	243	728			1025	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	59	46	316	223	49	354	354
Volume Left	59	0	0	0	49	0	0
Volume Right	0	46	0	65	0	0	0
cSH	243	728	1700	1700	1025	1700	1700
Volume to Capacity	0.24	0.06	0.19	0.13	0.05	0.21	0.21
Queue Length 95th (ft)	23	5	0	0	4	0	0
Control Delay (s)	24.5	10.3	0.0	0.0	8.7	0.0	0.0
Lane LOS	C	B			A		
Approach Delay (s)	18.3		0.0		0.6		
Approach LOS	C						

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	30.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	639	57	81	1306	79	55
Future Volume (vph)	639	57	81	1306	79	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3496		1770	3539	1770	1583
Flt Permitted	1.00		0.31	1.00	0.95	1.00
Satd. Flow (perm)	3496		586	3539	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	695	62	88	1420	86	60
RTOR Reduction (vph)	12	0	0	0	0	39
Lane Group Flow (vph)	745	0	88	1420	86	21
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	26.4		26.4	26.4	19.6	19.6
Effective Green, g (s)	26.4		26.4	26.4	19.6	19.6
Actuated g/C Ratio	0.48		0.48	0.48	0.36	0.36
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1678		281	1698	630	564
v/s Ratio Prot	0.21			c0.40	c0.05	
v/s Ratio Perm			0.15			0.01
v/c Ratio	0.44		0.31	0.84	0.14	0.04
Uniform Delay, d1	9.4		8.8	12.4	12.0	11.5
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2		0.6	3.8	0.5	0.1
Delay (s)	9.6		9.4	16.2	12.4	11.7
Level of Service	A		A	B	B	B
Approach Delay (s)	9.6			15.8	12.1	
Approach LOS	A			B	B	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection Sign configuration not allowed in HCM analysis.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	105	61	37	0	656	0	0	1115	348
Future Volume (vph)	0	0	0	105	61	37	0	656	0	0	1115	348
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.5	4.5	4.5		4.5			4.5	
Lane Util. Factor				1.00	1.00	1.00		0.91			0.86	
Frt				1.00	1.00	0.85		1.00			0.96	
Flt Protected				0.95	1.00	1.00		1.00			1.00	
Satd. Flow (prot)				1770	1863	1583		5085			6179	
Flt Permitted				0.95	1.00	1.00		1.00			1.00	
Satd. Flow (perm)				1770	1863	1583		5085			6179	
Peak-hour factor, PHF	0.92	0.92	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	114	66	40	0	713	0	0	1212	378
RTOR Reduction (vph)	0	0	0	0	0	36	0	0	0	0	31	0
Lane Group Flow (vph)	0	0	0	114	66	4	0	713	0	0	1559	0
Turn Type				Prot	NA	Perm		NA			NA	
Protected Phases				3	8			2			6	
Permitted Phases						8						
Actuated Green, G (s)				9.8	9.8	9.8		71.2			71.2	
Effective Green, g (s)				9.8	9.8	9.8		71.2			71.2	
Actuated g/C Ratio				0.11	0.11	0.11		0.79			0.79	
Clearance Time (s)				4.5	4.5	4.5		4.5			4.5	
Vehicle Extension (s)				3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)				192	202	172		4022			4888	
v/s Ratio Prot				c0.06	0.04			0.14			c0.25	
v/s Ratio Perm						0.00						
v/c Ratio				0.59	0.33	0.03		0.18			0.32	
Uniform Delay, d1				38.2	37.1	35.8		2.3			2.6	
Progression Factor				1.00	1.00	1.00		0.23			0.23	
Incremental Delay, d2				4.9	0.9	0.1		0.1			0.1	
Delay (s)				43.1	38.0	35.9		0.6			0.7	
Level of Service				D	D	D		A			A	
Approach Delay (s)		0.0			40.2			0.6			0.7	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	4.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	361	65	49	91	0	188	0	1236	169	137	750	0
Future Volume (vph)	361	65	49	91	0	188	0	1236	169	137	750	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	0.97	1.00	1.00	1.00		1.00		0.95	1.00	1.00	0.91	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1863	1583	1770		1583		3539	1583	1770	5085	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	1863	1583	1770		1583		3539	1583	1770	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	392	71	53	99	0	204	0	1343	184	149	815	0
RTOR Reduction (vph)	0	0	46	0	0	0	0	0	73	0	0	0
Lane Group Flow (vph)	392	71	7	99	0	204	0	1343	111	149	815	0
Turn Type	Split	NA	Perm	Prot		Prot		NA	Perm	Prot	NA	
Protected Phases	3	3		4		4		6		5	2	
Permitted Phases			3						6			
Actuated Green, G (s)	11.5	11.5	11.5	12.5		12.5		38.5	38.5	9.5	52.5	
Effective Green, g (s)	11.5	11.5	11.5	12.5		12.5		38.5	38.5	9.5	52.5	
Actuated g/C Ratio	0.13	0.13	0.13	0.14		0.14		0.43	0.43	0.11	0.58	
Clearance Time (s)	4.5	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	
Lane Grp Cap (vph)	438	238	202	245		219		1513	677	186	2966	
v/s Ratio Prot	c0.11	0.04		0.06		c0.13		c0.38		c0.08	0.16	
v/s Ratio Perm			0.00						0.07			
v/c Ratio	0.89	0.30	0.03	0.40		0.93		0.89	0.16	0.80	0.27	
Uniform Delay, d1	38.7	35.6	34.4	35.4		38.3		23.8	15.8	39.3	9.3	
Progression Factor	1.16	1.15	1.00	1.02		1.01		1.37	2.38	1.26	0.81	
Incremental Delay, d2	20.4	2.7	0.3	4.7		44.2		6.4	0.4	28.5	0.2	
Delay (s)	65.1	43.7	34.6	40.6		82.8		39.0	38.1	78.0	7.7	
Level of Service	E	D	C	D		F		D	D	E	A	
Approach Delay (s)		59.0			69.0			38.9			18.6	
Approach LOS		E			E			D			B	

Intersection Summary			
HCM 2000 Control Delay	38.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	351	45	17	1	57	375	20	454	19	114	20	169
Future Volume (vph)	351	45	17	1	57	375	20	454	19	114	20	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Lane Util. Factor	0.97	1.00		1.00	0.95			0.95			1.00	1.00
Frt	1.00	0.96		1.00	0.87			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.96	1.00
Satd. Flow (prot)	3433	1788		1770	3078			3511			1787	1583
Flt Permitted	0.95	1.00		0.71	1.00			1.00			0.96	1.00
Satd. Flow (perm)	3433	1788		1329	3078			3511			1787	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)	382	49	18	1	62	408	22	493	21	124	22	184
RTOR Reduction (vph)	0	11	0	0	244	0	0	3	0	0	0	138
Lane Group Flow (vph)	382	56	0	1	226	0	0	533	0	0	146	46
Turn Type	Prot	NA		Perm	NA		Split	NA		Split	NA	custom
Protected Phases	5	2			6		3	3		4	4	4
Permitted Phases				6								5
Actuated Green, G (s)	12.5	36.6		19.6	19.6			29.7			10.2	22.7
Effective Green, g (s)	12.5	36.6		19.6	19.6			29.7			10.2	22.7
Actuated g/C Ratio	0.14	0.41		0.22	0.22			0.33			0.11	0.25
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	476	727		289	670			1158			202	478
v/s Ratio Prot	c0.11	0.03			c0.07			c0.15			c0.08	0.01
v/s Ratio Perm				0.00								0.02
v/c Ratio	0.80	0.08		0.00	0.34			0.46			0.72	0.10
Uniform Delay, d1	37.6	16.4		27.6	29.7			23.8			38.5	25.8
Progression Factor	1.37	0.42		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	8.8	0.2		0.0	0.3			1.3			12.0	0.1
Delay (s)	60.4	7.1		27.6	30.0			25.1			50.6	25.9
Level of Service	E	A		C	C			C			D	C
Approach Delay (s)		52.4			30.0			25.1			36.8	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	35.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	159	19	52	241	98	160
Future Volume (vph)	159	19	52	241	98	160
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	173	21	57	262	107	174

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total (vph)	194	57	262	107	174
Volume Left (vph)	0	57	0	107	0
Volume Right (vph)	21	0	0	0	174
Hadj (s)	-0.03	0.53	0.03	0.53	-0.67
Departure Headway (s)	5.5	6.0	5.5	6.4	5.2
Degree Utilization, x	0.29	0.10	0.40	0.19	0.25
Capacity (veh/h)	625	567	624	533	651
Control Delay (s)	10.7	8.5	11.0	9.7	8.7
Approach Delay (s)	10.7	10.6		9.1	
Approach LOS	B	B		A	

Intersection Summary				
Delay	10.1			
Level of Service	B			
Intersection Capacity Utilization	28.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	252	5	62	6	6	13	51	612	7	7	254	235
Future Volume (vph)	252	5	62	6	6	13	51	612	7	7	254	235
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)	274	5	67	7	7	14	55	665	8	8	276	255

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total (vph)	346	28	55	665	8	8	276	255
Volume Left (vph)	274	7	55	0	0	8	0	0
Volume Right (vph)	67	14	0	0	8	0	0	255
Hadj (s)	0.08	-0.22	0.53	0.03	-0.67	0.53	0.03	-0.67
Departure Headway (s)	6.5	7.3	6.9	6.4	3.2	7.3	6.8	3.2
Degree Utilization, x	0.63	0.06	0.11	1.18	0.01	0.02	0.52	0.23
Capacity (veh/h)	533	437	510	567	1121	473	501	1122
Control Delay (s)	19.9	10.8	9.5	121.3	5.0	9.3	15.9	5.9
Approach Delay (s)	19.9	10.8	111.6			11.1		
Approach LOS	C	B	F			B		

Intersection Summary				
Delay	57.5			
Level of Service	F			
Intersection Capacity Utilization	70.2%	ICU Level of Service	C	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	252	450	196	30	159	94	90	986	0	75	743	311
Future Volume (vph)	252	450	196	30	159	94	90	986	0	75	743	311
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.95		1.00	0.94		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3378		1770	3342		1770	3539		1770	3539	1583
Flt Permitted	0.35	1.00		0.38	1.00		0.35	1.00		0.95	1.00	1.00
Satd. Flow (perm)	659	3378		717	3342		646	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)	274	489	213	33	173	102	98	1072	0	82	808	338
RTOR Reduction (vph)	0	60	0	0	0	0	0	0	0	0	0	177
Lane Group Flow (vph)	274	642	0	33	275	0	98	1072	0	82	808	161
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Prot	NA	Perm
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4			6					2
Actuated Green, G (s)	28.6	28.6		12.7	12.7		40.3	40.3		7.6	43.0	43.0
Effective Green, g (s)	28.6	28.6		12.7	12.7		40.3	40.3		7.6	43.0	43.0
Actuated g/C Ratio	0.32	0.32		0.14	0.14		0.45	0.45		0.08	0.48	0.48
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
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)	350	1073		101	471		350	1584		149	1690	756
v/s Ratio Prot	c0.10	0.19			0.08		0.02	c0.30		0.05	c0.23	
v/s Ratio Perm	c0.15			0.05			0.11					0.10
v/c Ratio	0.78	0.60		0.33	0.58		0.28	0.68		0.55	0.48	0.21
Uniform Delay, d1	25.1	25.9		34.8	36.2		16.2	19.7		39.6	15.9	13.7
Progression Factor	0.60	0.48		1.00	1.00		0.63	0.64		1.37	0.53	0.05
Incremental Delay, d2	9.8	0.8		1.9	1.8		0.4	2.0		4.3	1.0	0.6
Delay (s)	25.0	13.1		36.7	38.0		10.6	14.6		58.5	9.4	1.3
Level of Service	C	B		D	D		B	B		E	A	A
Approach Delay (s)		16.4			37.9			14.3			10.5	
Approach LOS		B			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	65	41	109	13	65	28	95	165	20	12	55	26
Future Volume (vph)	65	41	109	13	65	28	95	165	20	12	55	26
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)	71	45	118	14	71	30	103	179	22	13	60	28

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1
Volume Total (vph)	116	118	115	304	101
Volume Left (vph)	71	0	14	103	13
Volume Right (vph)	0	118	30	22	28
Hadj (s)	0.34	-0.67	-0.10	0.06	-0.11
Departure Headway (s)	6.1	5.1	5.3	5.0	5.2
Degree Utilization, x	0.20	0.17	0.17	0.42	0.14
Capacity (veh/h)	555	662	614	685	636
Control Delay (s)	9.3	7.9	9.4	11.7	9.0
Approach Delay (s)	8.6		9.4	11.7	9.0
Approach LOS	A		A	B	A

Intersection Summary				
Delay	10.0			
Level of Service	B			
Intersection Capacity Utilization	41.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	322	484	116	16	281	14	68	739	147	41	804	124
Future Volume (vph)	322	484	116	16	281	14	68	739	147	41	804	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.97			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3437			3530	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.39	1.00			0.90	1.00	0.21	1.00	1.00	0.24	1.00	1.00
Satd. Flow (perm)	719	3437			3196	1583	393	3539	1583	454	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)	350	526	126	17	305	15	74	803	160	45	874	135
RTOR Reduction (vph)	0	23	0	0	0	0	0	0	92	0	0	49
Lane Group Flow (vph)	350	629	0	0	322	15	74	803	68	45	874	86
Turn Type	pm+pt	NA			NA	Perm	Perm	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4			8			2			6	7
Permitted Phases	4					8	2		2	6		6
Actuated Green, G (s)	42.9	42.9			19.4	19.4	38.1	38.1	38.1	38.1	38.1	57.1
Effective Green, g (s)	42.9	42.9			19.4	19.4	38.1	38.1	38.1	38.1	38.1	57.1
Actuated g/C Ratio	0.48	0.48			0.22	0.22	0.42	0.42	0.42	0.42	0.42	0.63
Clearance Time (s)	4.5	4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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)	564	1638			688	341	166	1498	670	192	1498	1083
v/s Ratio Prot	c0.13	0.18						0.23			c0.25	0.02
v/s Ratio Perm	c0.16				0.10	0.01	0.19		0.04	0.10		0.04
v/c Ratio	0.62	0.38			0.47	0.04	0.45	0.54	0.10	0.23	0.58	0.08
Uniform Delay, d1	15.8	15.1			30.8	28.0	18.4	19.4	15.6	16.6	19.9	6.3
Progression Factor	0.55	0.51			1.50	1.60	1.00	1.00	1.00	0.86	0.84	0.16
Incremental Delay, d2	1.9	0.1			0.4	0.0	8.4	1.4	0.3	2.6	1.5	0.0
Delay (s)	10.6	7.9			46.6	44.8	26.9	20.7	15.9	16.8	18.1	1.1
Level of Service	B	A			D	D	C	C	B	B	B	A
Approach Delay (s)		8.8			46.5			20.4			15.9	
Approach LOS		A			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	67.5%	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												
Traffic Volume (vph)	71	589	23	80	312	77	6	78	231	98	28	37
Future Volume (vph)	71	589	23	80	312	77	6	78	231	98	28	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5			4.5			4.5	
Lane Util. Factor		0.95	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.98			0.90			0.97	
Flt Protected		0.99	1.00		0.99			1.00			0.97	
Satd. Flow (prot)		3520	1583		3423			1677			1753	
Flt Permitted		0.99	1.00		0.99			0.99			0.47	
Satd. Flow (perm)		3520	1583		3423			1669			851	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	640	25	87	339	84	7	85	251	107	30	40
RTOR Reduction (vph)	0	0	16	0	19	0	0	109	0	0	12	0
Lane Group Flow (vph)	0	717	9	0	491	0	0	234	0	0	165	0
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	
Protected Phases	2	2		1	1			8			4	
Permitted Phases			2				8			4		
Actuated Green, G (s)		32.7	32.7		17.3			26.5			26.5	
Effective Green, g (s)		32.7	32.7		17.3			26.5			26.5	
Actuated g/C Ratio		0.36	0.36		0.19			0.29			0.29	
Clearance Time (s)		4.5	4.5		4.5			4.5			4.5	
Vehicle Extension (s)		3.0	3.0		3.0			3.0			3.0	
Lane Grp Cap (vph)		1278	575		657			491			250	
v/s Ratio Prot		c0.20			c0.14							
v/s Ratio Perm			0.01					0.14			c0.19	
v/c Ratio		0.56	0.02		0.75			0.48			0.66	
Uniform Delay, d1		22.9	18.3		34.3			26.1			27.8	
Progression Factor		0.66	1.00		0.84			1.00			1.00	
Incremental Delay, d2		1.7	0.0		3.6			3.3			12.9	
Delay (s)		16.8	18.4		32.2			29.3			40.7	
Level of Service		B	B		C			C			D	
Approach Delay (s)		16.8			32.2			29.3			40.7	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	26.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	269	568	180	20	1766	0	0	618	25
Future Volume (vph)	0	0	0	269	568	180	20	1766	0	0	618	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.5	4.5		4.5	4.5			4.5	
Lane Util. Factor				0.86	0.86		1.00	0.91			0.91	
Frt				1.00	0.97		1.00	1.00			0.99	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1522	4630		1770	5085			5056	
Flt Permitted				0.95	1.00		0.36	1.00			1.00	
Satd. Flow (perm)				1522	4630		663	5085			5056	
Peak-hour factor, PHF	0.92	0.92	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	292	617	196	22	1920	0	0	672	27
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	0	0	263	842	0	22	1920	0	0	694	0
Turn Type				Prot	NA		Perm	NA			NA	
Protected Phases				3	8			2			6	
Permitted Phases							2					
Actuated Green, G (s)				32.5	32.5		48.5	48.5			48.5	
Effective Green, g (s)				32.5	32.5		48.5	48.5			48.5	
Actuated g/C Ratio				0.36	0.36		0.54	0.54			0.54	
Clearance Time (s)				4.5	4.5		4.5	4.5			4.5	
Lane Grp Cap (vph)				549	1671		357	2740			2724	
v/s Ratio Prot				0.17	c0.18			c0.38			0.14	
v/s Ratio Perm							0.03					
v/c Ratio				0.48	0.50		0.06	0.70			0.25	
Uniform Delay, d1				22.2	22.5		9.9	15.4			11.1	
Progression Factor				1.00	1.00		0.94	0.70			1.00	
Incremental Delay, d2				3.0	1.1		0.1	0.7			0.2	
Delay (s)				25.2	23.5		9.4	11.4			11.3	
Level of Service				C	C		A	B			B	
Approach Delay (s)		0.0			23.9			11.4			11.3	
Approach LOS		A			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	243	57	84	0	0	0	0	634	66	50	942	0
Future Volume (vph)	243	57	84	0	0	0	0	634	66	50	942	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5						4.5		4.5	4.5	
Lane Util. Factor	0.91	0.91						0.91		1.00	0.91	
Frt	1.00	0.95						0.99		1.00	1.00	
Flt Protected	0.95	0.98						1.00		0.95	1.00	
Satd. Flow (prot)	1610	3152						5013		1770	5085	
Flt Permitted	0.95	0.79						1.00		0.23	1.00	
Satd. Flow (perm)	1610	2539						5013		428	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	264	62	91	0	0	0	0	689	72	54	1024	0
RTOR Reduction (vph)	0	11	0	0	0	0	0	11	0	0	0	0
Lane Group Flow (vph)	143	263	0	0	0	0	0	750	0	54	1024	0
Turn Type	Prot	NA						NA		pm+pt	NA	
Protected Phases	7	4			8			2		1	6	
Permitted Phases										6		
Actuated Green, G (s)	39.5	62.0						27.5		41.5	41.5	
Effective Green, g (s)	39.5	62.0						27.5		41.5	41.5	
Actuated g/C Ratio	0.35	0.55						0.24		0.37	0.37	
Clearance Time (s)	4.5	4.5						4.5		4.5	4.5	
Lane Grp Cap (vph)	565	1614						1225		271	1875	
v/s Ratio Prot	c0.09	0.06						c0.15		0.02	c0.20	
v/s Ratio Perm		c0.03								0.06		
v/c Ratio	0.25	0.16						0.61		0.20	0.55	
Uniform Delay, d1	26.0	12.5						37.8		32.6	28.1	
Progression Factor	1.00	1.00						1.00		1.00	1.00	
Incremental Delay, d2	1.1	0.2						2.3		1.6	1.1	
Delay (s)	27.1	12.7						40.0		34.3	29.2	
Level of Service	C	B						D		C	C	
Approach Delay (s)		17.6			0.0			40.0			29.5	
Approach LOS		B			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	30.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	112.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	968	193	117	936	118	98	720	120	98	668	134
Future Volume (vph)	91	968	193	117	936	118	98	720	120	98	668	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.98		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	3539	1583	1770	5000		1770	4977		1770	4958	
Flt Permitted	0.24	1.00	1.00	0.11	1.00		0.18	1.00		0.17	1.00	
Satd. Flow (perm)	439	3539	1583	200	5000		341	4977		317	4958	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	99	1052	210	127	1017	128	107	783	130	107	726	146
RTOR Reduction (vph)	0	0	41	0	17	0	0	26	0	0	34	0
Lane Group Flow (vph)	99	1052	169	127	1128	0	107	887	0	107	838	0
Turn Type	Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	35.5	35.5	42.2	46.3	46.3		30.4	23.7		30.0	23.5	
Effective Green, g (s)	35.5	35.5	42.2	46.3	46.3		30.4	23.7		30.0	23.5	
Actuated g/C Ratio	0.39	0.39	0.47	0.51	0.51		0.34	0.26		0.33	0.26	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	173	1395	742	212	2572		221	1310		210	1294	
v/s Ratio Prot		c0.30	0.02	c0.04	0.23		0.04	c0.18		c0.04	0.17	
v/s Ratio Perm	0.23		0.09	0.27			0.13			0.13		
v/c Ratio	0.57	0.75	0.23	0.60	0.44		0.48	0.68		0.51	0.65	
Uniform Delay, d1	21.3	23.5	14.2	15.8	13.7		32.2	29.7		32.9	29.6	
Progression Factor	0.60	0.59	0.56	1.00	1.00		0.87	0.88		0.74	0.63	
Incremental Delay, d2	10.5	3.1	0.6	11.9	0.5		7.3	2.8		8.3	2.4	
Delay (s)	23.3	16.9	8.5	27.7	14.2		35.3	29.0		32.6	21.1	
Level of Service	C	B	A	C	B		D	C		C	C	
Approach Delay (s)		16.1			15.6			29.6			22.4	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	70.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	103	322	70	61	426	361	177	988	50	96	396	57
Future Volume (vph)	103	322	70	61	426	361	177	988	50	96	396	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3445		1770	3539	1583	1770	3539	1583	1770	4989	
Flt Permitted	0.35	1.00		0.38	1.00	1.00	0.46	1.00	1.00	0.20	1.00	
Satd. Flow (perm)	657	3445		716	3539	1583	861	3539	1583	380	4989	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	112	350	76	66	463	392	192	1074	54	104	430	62
RTOR Reduction (vph)	0	22	0	0	0	52	0	0	22	0	18	0
Lane Group Flow (vph)	112	404	0	66	463	340	192	1074	32	104	474	0
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	19.1	19.1		27.9	27.9	27.9	53.1	53.1	53.1	53.1	53.1	
Effective Green, g (s)	19.1	19.1		27.9	27.9	27.9	53.1	53.1	53.1	53.1	53.1	
Actuated g/C Ratio	0.21	0.21		0.31	0.31	0.31	0.59	0.59	0.59	0.59	0.59	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
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)	139	731		272	1097	490	507	2088	933	224	2943	
v/s Ratio Prot		0.12		0.01	0.13			c0.30			0.09	
v/s Ratio Perm	c0.17			0.06		c0.21	0.22		0.02	0.27		
v/c Ratio	0.81	0.55		0.24	0.42	0.69	0.38	0.51	0.03	0.46	0.16	
Uniform Delay, d1	33.7	31.6		27.4	24.6	27.3	9.7	10.9	7.7	10.4	8.4	
Progression Factor	1.00	1.00		0.37	0.50	0.36	0.79	0.80	1.41	0.56	0.40	
Incremental Delay, d2	27.7	0.9		0.0	0.0	0.4	1.8	0.7	0.1	6.5	0.1	
Delay (s)	61.4	32.5		10.2	12.5	10.1	9.4	9.5	11.0	12.4	3.5	
Level of Service	E	C		B	B	B	A	A	B	B	A	
Approach Delay (s)		38.6			11.3			9.5			5.0	
Approach LOS		D			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	952	265	118	872	306	288	730	185	246	313	49
Future Volume (vph)	47	952	265	118	872	306	288	730	185	246	313	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	1770	3468	
Flt Permitted	0.15	1.00	1.00	0.15	1.00	1.00	0.38	1.00	1.00	0.20	1.00	
Satd. Flow (perm)	279	3539	1583	279	3539	1583	708	3539	1583	365	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)	51	1035	288	128	948	333	313	793	201	267	340	53
RTOR Reduction (vph)	0	0	193	0	0	209	0	0	142	0	13	0
Lane Group Flow (vph)	51	1035	95	128	948	124	313	793	59	267	380	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	29.8	29.8	29.8	33.5	33.5	33.5	36.7	21.7	21.7	34.1	20.4	
Effective Green, g (s)	29.8	29.8	29.8	33.5	33.5	33.5	36.7	21.7	21.7	34.1	20.4	
Actuated g/C Ratio	0.33	0.33	0.33	0.37	0.37	0.37	0.41	0.24	0.24	0.38	0.23	
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)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	143	1171	524	216	1317	589	465	853	381	352	786	
v/s Ratio Prot	0.01	c0.29		0.04	c0.27		0.11	c0.22		c0.12	0.11	
v/s Ratio Perm	0.11		0.06	0.18		0.08	0.16		0.04	0.17		
v/c Ratio	0.36	0.88	0.18	0.59	0.72	0.21	0.67	0.93	0.16	0.76	0.48	
Uniform Delay, d1	23.4	28.5	21.4	32.9	24.2	19.2	19.5	33.4	26.9	22.0	30.2	
Progression Factor	1.00	1.00	1.00	0.78	0.71	0.20	0.84	0.71	0.34	0.72	0.77	
Incremental Delay, d2	1.5	9.8	0.8	3.1	2.4	0.6	3.3	14.5	0.2	8.9	0.5	
Delay (s)	25.0	38.3	22.2	28.6	19.6	4.5	19.7	38.1	9.2	24.7	23.6	
Level of Service	C	D	C	C	B	A	B	D	A	C	C	
Approach Delay (s)		34.4			16.9			29.2			24.1	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	155	71	83	192	129	587	44	453	70	304	233	128
Future Volume (vph)	155	71	83	192	129	587	44	453	70	304	233	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	0.91	0.91		1.00	1.00	1.00	0.97	0.95	1.00	0.97	0.95	
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1610	3148		1770	1863	1583	3433	3539	1583	3433	3351	
Flt Permitted	0.67	0.83		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1132	2644		1770	1863	1583	3433	3539	1583	3433	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)	168	77	90	209	140	638	48	492	76	330	253	139
RTOR Reduction (vph)	0	77	0	0	0	370	0	0	54	0	69	0
Lane Group Flow (vph)	104	154	0	209	140	268	48	492	22	330	323	0
Turn Type	Perm	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4					8			2			
Actuated Green, G (s)	13.4	13.4		15.0	32.9	32.9	3.8	26.3	26.3	17.3	39.8	
Effective Green, g (s)	13.4	13.4		15.0	32.9	32.9	3.8	26.3	26.3	17.3	39.8	
Actuated g/C Ratio	0.15	0.15		0.17	0.37	0.37	0.04	0.29	0.29	0.19	0.44	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
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)	168	393		295	681	578	144	1034	462	659	1481	
v/s Ratio Prot				c0.12	0.08		0.01	c0.14		c0.10	0.10	
v/s Ratio Perm	c0.09	0.06				0.17			0.01			
v/c Ratio	0.62	0.39		0.71	0.21	0.46	0.33	0.48	0.05	0.50	0.22	
Uniform Delay, d1	35.9	34.6		35.4	19.6	21.8	41.9	26.2	22.9	32.5	15.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.72	0.57	
Incremental Delay, d2	6.6	0.7		7.6	0.2	0.6	1.4	1.6	0.2	0.5	0.3	
Delay (s)	42.5	35.3		43.0	19.7	22.4	43.2	27.8	23.1	23.8	9.2	
Level of Service	D	D		D	B	C	D	C	C	C	A	
Approach Delay (s)		37.5			26.4			28.4			15.9	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	25.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	229	237	1	23	655	364	5	676	35	190	276	188
Future Volume (vph)	229	237	1	23	655	364	5	676	35	190	276	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00			0.95		1.00	0.99		1.00	0.94	
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3537			3350		1770	3513		1770	3324	
Flt Permitted	0.95	1.00			0.94		0.41	1.00		0.25	1.00	
Satd. Flow (perm)	1770	3537			3161		755	3513		462	3324	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	249	258	1	25	712	396	5	735	38	207	300	204
RTOR Reduction (vph)	0	1	0	0	79	0	0	4	0	0	122	0
Lane Group Flow (vph)	249	258	0	0	1054	0	5	769	0	207	382	0
Turn Type	Prot	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	16.2	44.7			24.0		36.3	36.3		36.3	36.3	
Effective Green, g (s)	16.2	44.7			24.0		36.3	36.3		36.3	36.3	
Actuated g/C Ratio	0.18	0.50			0.27		0.40	0.40		0.40	0.40	
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	318	1756			842		304	1416		186	1340	
v/s Ratio Prot	c0.14	0.07						0.22			0.11	
v/s Ratio Perm					c0.33		0.01			c0.45		
v/c Ratio	0.78	0.15			1.25		0.02	0.54		1.11	0.29	
Uniform Delay, d1	35.2	12.3			33.0		16.1	20.5		26.9	18.1	
Progression Factor	0.82	0.60			1.49		1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.1	0.0			122.4		0.1	1.5		99.5	0.5	
Delay (s)	40.1	7.4			171.7		16.2	22.0		126.4	18.6	
Level of Service	D	A			F		B	C		F	B	
Approach Delay (s)		23.4			171.7			22.0			50.0	
Approach LOS		C			F			C			D	

Intersection Summary			
HCM 2000 Control Delay	82.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	95	179	32	196	27	533	892	28	9	339	101
Future Volume (vph)	108	95	179	32	196	27	533	892	28	9	339	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		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	0.91	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00		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	1829		1770	3523		1770	4910	
Flt Permitted	0.37	1.00	1.00	0.69	1.00		0.43	1.00		0.22	1.00	
Satd. Flow (perm)	695	1863	1583	1286	1829		808	3523		404	4910	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	117	103	195	35	213	29	579	970	30	10	368	110
RTOR Reduction (vph)	0	0	157	0	6	0	0	2	0	0	54	0
Lane Group Flow (vph)	117	103	38	35	236	0	579	998	0	10	424	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	17.5	17.5	17.5	17.5	17.5		63.5	63.5		26.5	26.5	
Effective Green, g (s)	17.5	17.5	17.5	17.5	17.5		63.5	63.5		26.5	26.5	
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19		0.71	0.71		0.29	0.29	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
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)	135	362	307	250	355		917	2485		118	1445	
v/s Ratio Prot		0.06			0.13		c0.23	0.28			0.09	
v/s Ratio Perm	c0.17		0.02	0.03			c0.22			0.02		
v/c Ratio	0.87	0.28	0.12	0.14	0.67		0.63	0.40		0.08	0.29	
Uniform Delay, d1	35.1	30.9	29.9	30.0	33.5		9.9	5.4		23.0	24.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.60	0.51		1.00	1.00	
Incremental Delay, d2	40.3	0.4	0.2	0.3	4.7		1.2	0.4		1.4	0.5	
Delay (s)	75.4	31.3	30.1	30.3	38.2		7.2	3.2		24.4	25.0	
Level of Service	E	C	C	C	D		A	A		C	C	
Approach Delay (s)		43.2			37.2			4.7			25.0	
Approach LOS		D			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	81	0	0	0	100	1120	662	0	726	51
Future Volume (Veh/h)	0	0	81	0	0	0	100	1120	662	0	726	51
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	88	0	0	0	109	1217	720	0	789	55
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								206			797	
pX, platoon unblocked	0.71	0.71		0.71	0.71	0.71				0.71		
vC, conflicting volume	1643	2252	290	1786	2279	608	844			1217		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1093	1948	290	1294	1987	0	844			494		
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	88	100	100	100	86			100		
cM capacity (veh/h)	107	39	706	67	37	772	788			758		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	88	0	109	608	608	720	316	316	213
Volume Left	0	0	109	0	0	0	0	0	0
Volume Right	88	0	0	0	0	720	0	0	55
cSH	706	1700	788	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.12	0.00	0.14	0.36	0.36	0.42	0.19	0.19	0.13
Queue Length 95th (ft)	11	0	12	0	0	0	0	0	0
Control Delay (s)	10.8	0.0	10.3	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	A	B						
Approach Delay (s)	10.8	0.0	0.5				0.0		
Approach LOS	B	A							

Intersection Summary					
Average Delay	0.7				
Intersection Capacity Utilization	44.3%	ICU Level of Service		A	
Analysis Period (min)	15				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	930	22	33	63	0	39	0	913	15	3	803	0
Future Volume (vph)	930	22	33	63	0	39	0	913	15	3	803	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5		4.5		4.5		4.5	4.5	
Lane Util. Factor	0.97	1.00		1.00		1.00		0.91		1.00	0.91	
Frt	1.00	0.91		1.00		0.85		1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)	3433	1695		1770		1583		5073		1770	5085	
Flt Permitted	0.95	1.00		0.95		1.00		1.00		0.24	1.00	
Satd. Flow (perm)	3433	1695		1770		1583		5073		450	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1011	24	36	68	0	42	0	992	16	3	873	0
RTOR Reduction (vph)	0	29	0	0	0	40	0	1	0	0	0	0
Lane Group Flow (vph)	1011	31	0	68	0	2	0	1007	0	3	873	0
Turn Type	pm+pt	NA		Prot		Perm		NA		Perm	NA	
Protected Phases	7	4		3				2			6	
Permitted Phases	4					8				6		
Actuated Green, G (s)	30.3	18.5		7.3		3.3		50.7		50.7	50.7	
Effective Green, g (s)	30.3	18.5		7.3		3.3		50.7		50.7	50.7	
Actuated g/C Ratio	0.34	0.21		0.08		0.04		0.56		0.56	0.56	
Clearance Time (s)	4.5	4.5		4.5		4.5		4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0		3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	1155	348		143		58		2857		253	2864	
v/s Ratio Prot	c0.22	0.02		0.04				c0.20			0.17	
v/s Ratio Perm	0.08					0.00				0.01		
v/c Ratio	0.88	0.09		0.48		0.03		0.35		0.01	0.30	
Uniform Delay, d1	28.1	28.9		39.5		41.8		10.7		8.6	10.4	
Progression Factor	0.41	0.31		1.00		1.00		0.26		0.78	0.73	
Incremental Delay, d2	5.4	0.1		2.5		0.2		0.3		0.1	0.3	
Delay (s)	16.9	8.9		42.0		42.0		3.1		6.8	7.8	
Level of Service	B	A		D		D		A		A	A	
Approach Delay (s)		16.5			42.0			3.1			7.8	
Approach LOS		B			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	1011	0	0	1220	23	415	884	242	0	0	0
Future Volume (vph)	78	1011	0	0	1220	23	415	884	242	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	4.5				
Lane Util. Factor	1.00	0.95			0.91		0.86	0.86				
Frt	1.00	1.00			1.00		1.00	0.97				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1770	3539			5071		1522	4648				
Flt Permitted	0.15	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	272	3539			5071		1522	4648				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	1099	0	0	1326	25	451	961	263	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	46	0	0	0	0
Lane Group Flow (vph)	85	1099	0	0	1349	0	406	1223	0	0	0	0
Turn Type	Perm	NA			NA		pm+pt	NA				
Protected Phases		4			8		6	2				
Permitted Phases	4						2					
Actuated Green, G (s)	48.5	48.5			48.5		32.5	32.5				
Effective Green, g (s)	48.5	48.5			48.5		32.5	32.5				
Actuated g/C Ratio	0.54	0.54			0.54		0.36	0.36				
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5				
Lane Grp Cap (vph)	146	1907			2732		549	1678				
v/s Ratio Prot		0.31			0.27		c0.27	0.26				
v/s Ratio Perm	c0.31											
v/c Ratio	0.58	0.58			0.49		0.74	0.73				
Uniform Delay, d1	13.9	13.9			13.0		25.1	24.9				
Progression Factor	1.00	1.00			0.86		1.00	1.00				
Incremental Delay, d2	15.8	1.3			0.6		8.7	2.8				
Delay (s)	29.8	15.2			11.8		33.7	27.7				
Level of Service	C	B			B		C	C				
Approach Delay (s)		16.2			11.8			29.2			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	62.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	213	700	798	228
Future Volume (Veh/h)	0	0	213	700	798	228
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)	0	0	232	761	867	248
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)				369	243	
pX, platoon unblocked	0.84	0.84	0.84			
vC, conflicting volume	1709	413	1115			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1192	0	488			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	74			
cM capacity (veh/h)	113	915	904			

Direction, Lane #	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	232	254	254	254	347	347	421
Volume Left	232	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	248
cSH	904	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.26	0.15	0.15	0.15	0.20	0.20	0.25
Queue Length 95th (ft)	26	0	0	0	0	0	0
Control Delay (s)	10.4	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B						
Approach Delay (s)	2.4				0.0		
Approach LOS							

Intersection Summary			
Average Delay	1.1		
Intersection Capacity Utilization	57.9%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	97	495	21	190	1082	0	0	166	39
Future Volume (vph)	0	0	0	97	495	21	190	1082	0	0	166	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5		4.5	4.5			4.5	
Lane Util. Factor					0.91		1.00	0.95			0.95	
Frt					0.99		1.00	1.00			0.97	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					5019		1770	3539			3439	
Flt Permitted					0.99		0.61	1.00			1.00	
Satd. Flow (perm)					5019		1142	3539			3439	
Peak-hour factor, PHF	0.92	0.92	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	105	538	23	207	1176	0	0	180	42
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	16	0
Lane Group Flow (vph)	0	0	0	0	662	0	207	1176	0	0	206	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					24.5		56.5	56.5			56.5	
Effective Green, g (s)					24.5		56.5	56.5			56.5	
Actuated g/C Ratio					0.27		0.63	0.63			0.63	
Clearance Time (s)					4.5		4.5	4.5			4.5	
Lane Grp Cap (vph)					1366		716	2221			2158	
v/s Ratio Prot								c0.33			0.06	
v/s Ratio Perm					0.13		0.18					
v/c Ratio					0.48		0.29	0.53			0.10	
Uniform Delay, d1					27.5		7.6	9.3			6.6	
Progression Factor					0.28		0.23	0.21			1.00	
Incremental Delay, d2					1.1		0.8	0.7			0.1	
Delay (s)					8.7		2.5	2.7			6.7	
Level of Service					A		A	A			A	
Approach Delay (s)		0.0			8.7			2.6			6.7	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	4.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑						↑↑			↑↑	
Traffic Volume (vph)	82	289	21	0	0	0	0	1190	186	7	256	0
Future Volume (vph)	82	289	21	0	0	0	0	1190	186	7	256	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5			4.5	
Lane Util. Factor		0.95						0.95			0.95	
Frt		0.99						0.98			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		3474						3467			3534	
Flt Permitted		0.99						1.00			0.91	
Satd. Flow (perm)		3474						3467			3237	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	89	314	23	0	0	0	0	1293	202	8	278	0
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	421	0	0	0	0	0	1495	0	0	286	0
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4									6		
Actuated Green, G (s)		21.5						59.5			59.5	
Effective Green, g (s)		21.5						59.5			59.5	
Actuated g/C Ratio		0.24						0.66			0.66	
Clearance Time (s)		4.5						4.5			4.5	
Lane Grp Cap (vph)		829						2292			2140	
v/s Ratio Prot								c0.43				
v/s Ratio Perm		0.12									0.09	
v/c Ratio		0.51						0.65			0.13	
Uniform Delay, d1		29.7						9.1			5.7	
Progression Factor		1.00						0.66			1.23	
Incremental Delay, d2		2.2						1.1			0.1	
Delay (s)		31.9						7.1			7.1	
Level of Service		C						A			A	
Approach Delay (s)		31.9			0.0			7.1			7.1	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	695	114	72	414	245	150	1115	73	87	405	163
Future Volume (vph)	124	695	114	72	414	245	150	1115	73	87	405	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.98		1.00	0.94		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3464		1770	3342		1770	3507		1770	3539	1583
Flt Permitted	0.25	1.00		0.17	1.00		0.48	1.00		0.12	1.00	1.00
Satd. Flow (perm)	474	3464		317	3342		894	3507		229	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)	135	755	124	78	450	266	163	1212	79	95	440	177
RTOR Reduction (vph)	0	15	0	0	34	0	0	5	0	0	0	82
Lane Group Flow (vph)	135	864	0	78	682	0	163	1286	0	95	440	95
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	32.5	32.5		32.5	32.5		48.5	48.5		48.5	48.5	48.5
Effective Green, g (s)	32.5	32.5		32.5	32.5		48.5	48.5		48.5	48.5	48.5
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.54	0.54		0.54	0.54	0.54
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Grp Cap (vph)	171	1250		114	1206		481	1889		123	1907	853
v/s Ratio Prot		0.25			0.20			0.37			0.12	
v/s Ratio Perm	c0.29			0.25			0.18			c0.41		0.06
v/c Ratio	0.79	0.69		0.68	0.57		0.34	0.68		0.77	0.23	0.11
Uniform Delay, d1	25.7	24.5		24.4	23.1		11.7	15.1		16.4	10.9	10.2
Progression Factor	1.00	1.00		0.71	0.68		0.52	0.45		0.85	0.81	0.42
Incremental Delay, d2	30.0	3.2		27.9	1.9		1.5	1.6		36.6	0.3	0.3
Delay (s)	55.7	27.6		45.2	17.6		7.6	8.4		50.4	9.1	4.5
Level of Service	E	C		D	B		A	A		D	A	A
Approach Delay (s)		31.4			20.3			8.3			13.5	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	80.0%	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												
Traffic Volume (vph)	112	828	127	101	484	236	137	1037	85	86	467	176
Future Volume (vph)	112	828	127	101	484	236	137	1037	85	86	467	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		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	3469		1770	3539	1583	1770	3499		1770	3394	
Flt Permitted	0.40	1.00		0.14	1.00	1.00	0.32	1.00		0.12	1.00	
Satd. Flow (perm)	737	3469		262	3539	1583	596	3499		219	3394	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	122	900	138	110	526	257	149	1127	92	93	508	191
RTOR Reduction (vph)	0	13	0	0	0	28	0	7	0	0	43	0
Lane Group Flow (vph)	122	1025	0	110	526	229	149	1212	0	93	656	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	37.5	37.5		37.5	37.5	37.5	43.5	43.5		43.5	43.5	
Effective Green, g (s)	37.5	37.5		37.5	37.5	37.5	43.5	43.5		43.5	43.5	
Actuated g/C Ratio	0.42	0.42		0.42	0.42	0.42	0.48	0.48		0.48	0.48	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	307	1445		109	1474	659	288	1691		105	1640	
v/s Ratio Prot		0.30			0.15			0.35			0.19	
v/s Ratio Perm	0.17			c0.42		0.14	0.25			c0.42		
v/c Ratio	0.40	0.71		1.01	0.36	0.35	0.52	0.72		0.89	0.40	
Uniform Delay, d1	18.4	21.7		26.2	18.0	17.9	16.0	18.4		21.0	14.9	
Progression Factor	1.00	1.00		0.57	0.57	0.50	1.00	1.00		0.86	0.84	
Incremental Delay, d2	3.8	3.0		83.8	0.6	1.3	6.5	2.6		59.6	0.7	
Delay (s)	22.2	24.7		98.7	10.8	10.3	22.5	21.0		77.6	13.3	
Level of Service	C	C		F	B	B	C	C		E	B	
Approach Delay (s)		24.4			21.5			21.2			20.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	22.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	748	105	96	464	309	280
Future Volume (vph)	748	105	96	464	309	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3474		1770	3539	3433	1583
Flt Permitted	1.00		0.25	1.00	0.95	1.00
Satd. Flow (perm)	3474		458	3539	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	813	114	104	504	336	304
RTOR Reduction (vph)	12	0	0	0	0	108
Lane Group Flow (vph)	915	0	104	504	336	196
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	50.5		50.5	50.5	30.5	30.5
Effective Green, g (s)	50.5		50.5	50.5	30.5	30.5
Actuated g/C Ratio	0.56		0.56	0.56	0.34	0.34
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Lane Grp Cap (vph)	1949		256	1985	1163	536
v/s Ratio Prot	c0.26			0.14	0.10	
v/s Ratio Perm			0.23			c0.12
v/c Ratio	0.47		0.41	0.25	0.29	0.37
Uniform Delay, d1	11.8		11.2	10.1	21.8	22.5
Progression Factor	0.26		0.93	0.91	0.63	0.37
Incremental Delay, d2	0.6		4.5	0.3	0.5	1.5
Delay (s)	3.7		14.9	9.5	14.1	9.9
Level of Service	A		B	A	B	A
Approach Delay (s)	3.7			10.4	12.1	
Approach LOS	A			B	B	

Intersection Summary			
HCM 2000 Control Delay	8.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	809	129	69	581	81	184	425	140	32	190	64
Future Volume (vph)	86	809	129	69	581	81	184	425	140	32	190	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.98		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1770	3466		1770	3474			3398			3401	
Flt Permitted	0.31	1.00		0.18	1.00			0.76			0.82	
Satd. Flow (perm)	570	3466		332	3474			2619			2819	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	879	140	75	632	88	200	462	152	35	207	70
RTOR Reduction (vph)	0	14	0	0	12	0	0	22	0	0	30	0
Lane Group Flow (vph)	93	1005	0	75	708	0	0	792	0	0	282	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	42.6	42.6		42.6	42.6			38.4			38.4	
Effective Green, g (s)	42.6	42.6		42.6	42.6			38.4			38.4	
Actuated g/C Ratio	0.47	0.47		0.47	0.47			0.43			0.43	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Lane Grp Cap (vph)	269	1640		157	1644			1117			1202	
v/s Ratio Prot		c0.29			0.20							
v/s Ratio Perm	0.16			0.23				c0.30			0.10	
v/c Ratio	0.35	0.61		0.48	0.43			0.71			0.23	
Uniform Delay, d1	14.9	17.6		16.1	15.7			21.2			16.4	
Progression Factor	0.39	0.36		0.87	0.88			1.00			0.39	
Incremental Delay, d2	2.4	1.2		9.6	0.8			3.8			0.4	
Delay (s)	8.2	7.5		23.7	14.5			25.0			6.8	
Level of Service	A	A		C	B			C			A	
Approach Delay (s)		7.6			15.4			25.0			6.8	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	437	650	339	157	608	36	235	561	82	38	557	377
Future Volume (vph)	437	650	339	157	608	36	235	561	82	38	557	377
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.95		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3217		1770	3510		1770	3539	1583	1770	3539	1583
Flt Permitted	0.16	0.64		0.23	1.00		0.26	1.00	1.00	0.28	1.00	1.00
Satd. Flow (perm)	276	2071		430	3510		480	3539	1583	527	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)	475	707	368	171	661	39	255	610	89	41	605	410
RTOR Reduction (vph)	0	55	0	0	5	0	0	0	53	0	0	43
Lane Group Flow (vph)	385	1110	0	171	695	0	255	610	36	41	605	367
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4		3	8		5	2			6	7
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	44.4	44.4		26.5	20.1		36.6	36.6	36.6	21.6	21.6	41.4
Effective Green, g (s)	44.4	44.4		26.5	20.1		36.6	36.6	36.6	21.6	21.6	41.4
Actuated g/C Ratio	0.49	0.49		0.29	0.22		0.41	0.41	0.41	0.24	0.24	0.46
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
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)	429	1273		221	783		345	1439	643	126	849	728
v/s Ratio Prot	c0.20	c0.19		0.05	0.20		c0.09	0.17			0.17	0.11
v/s Ratio Perm	c0.25	0.24		0.17			c0.21		0.02	0.08		0.12
v/c Ratio	0.90	0.87		0.77	0.89		0.74	0.42	0.06	0.33	0.71	0.50
Uniform Delay, d1	22.6	20.3		24.8	33.9		29.0	19.1	16.2	28.2	31.4	17.1
Progression Factor	1.13	0.47		1.00	1.00		0.73	0.65	0.45	1.00	1.00	1.00
Incremental Delay, d2	15.2	4.7		15.4	11.9		4.4	0.5	0.1	6.7	5.1	0.6
Delay (s)	40.8	14.2		40.3	45.8		25.7	12.9	7.4	34.9	36.4	17.6
Level of Service	D	B		D	D		C	B	A	C	D	B
Approach Delay (s)		20.8			44.7			15.8			29.1	
Approach LOS		C			D			B			C	

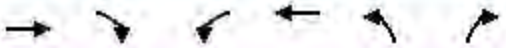
Intersection Summary			
HCM 2000 Control Delay	26.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	483	408	10	6	245	164	17	313	4	95	132	208
Future Volume (vph)	483	408	10	6	245	164	17	313	4	95	132	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
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		1.00	0.94		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1856		1770	1751		1770	1859		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.62	1.00		0.25	1.00	1.00
Satd. Flow (perm)	1770	1856		1770	1751		1157	1859		464	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)	525	443	11	7	266	178	18	340	4	103	143	226
RTOR Reduction (vph)	0	1	0	0	27	0	0	1	0	0	0	173
Lane Group Flow (vph)	525	453	0	7	417	0	18	343	0	103	143	53
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	32.2	54.2		1.0	23.0		21.3	21.3		21.3	21.3	21.3
Effective Green, g (s)	32.2	54.2		1.0	23.0		21.3	21.3		21.3	21.3	21.3
Actuated g/C Ratio	0.36	0.60		0.01	0.26		0.24	0.24		0.24	0.24	0.24
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
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)	633	1117		19	447		273	439		109	440	374
v/s Ratio Prot	c0.30	0.24		0.00	c0.24			0.18			0.08	
v/s Ratio Perm							0.02			c0.22		0.03
v/c Ratio	0.83	0.41		0.37	0.93		0.07	0.78		0.94	0.33	0.14
Uniform Delay, d1	26.4	9.4		44.2	32.8		26.6	32.2		33.8	28.4	27.1
Progression Factor	0.71	0.40		1.00	1.00		1.00	1.00		0.70	0.74	0.78
Incremental Delay, d2	7.4	0.2		11.7	26.6		0.5	13.0		54.6	1.2	0.5
Delay (s)	26.2	4.0		55.9	59.3		27.1	45.2		78.4	22.3	21.6
Level of Service	C	A		E	E		C	D		E	C	C
Approach Delay (s)		15.9			59.3			44.3			34.2	
Approach LOS		B			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	32.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	725	210	106	479	255	274
Future Volume (vph)	725	210	106	479	255	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3420		1770	3539	1770	1583
Flt Permitted	1.00		0.23	1.00	0.95	1.00
Satd. Flow (perm)	3420		424	3539	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	788	228	115	521	277	298
RTOR Reduction (vph)	30	0	0	0	0	140
Lane Group Flow (vph)	986	0	115	521	277	158
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Actuated Green, G (s)	54.5		54.5	54.5	26.5	26.5
Effective Green, g (s)	54.5		54.5	54.5	26.5	26.5
Actuated g/C Ratio	0.61		0.61	0.61	0.29	0.29
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Lane Grp Cap (vph)	2071		256	2143	521	466
v/s Ratio Prot	c0.29			0.15	c0.16	
v/s Ratio Perm			0.27			0.10
v/c Ratio	0.48		0.45	0.24	0.53	0.34
Uniform Delay, d1	9.8		9.6	8.2	26.6	24.9
Progression Factor	0.30		1.31	1.19	1.00	1.00
Incremental Delay, d2	0.6		4.6	0.2	3.9	2.0
Delay (s)	3.6		17.2	10.0	30.4	26.9
Level of Service	A		B	A	C	C
Approach Delay (s)	3.6			11.3	28.6	
Approach LOS	A			B	C	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	5	19	210	14	104	27	930	60	20	375	12
Future Volume (vph)	16	5	19	210	14	104	27	930	60	20	375	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt		0.93		1.00	0.87		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1706		1770	1616		1770	3539	1583	1770	3523	
Flt Permitted		0.89		0.73	1.00		0.51	1.00	1.00	0.25	1.00	
Satd. Flow (perm)		1542		1358	1616		943	3539	1583	459	3523	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	5	21	228	15	113	29	1011	65	22	408	13
RTOR Reduction (vph)	0	16	0	0	62	0	0	0	21	0	2	0
Lane Group Flow (vph)	0	27	0	228	66	0	29	1011	44	22	419	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		20.6		20.6	20.6		60.4	60.4	60.4	60.4	60.4	
Effective Green, g (s)		20.6		20.6	20.6		60.4	60.4	60.4	60.4	60.4	
Actuated g/C Ratio		0.23		0.23	0.23		0.67	0.67	0.67	0.67	0.67	
Clearance Time (s)		4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		352		310	369		632	2375	1062	308	2364	
v/s Ratio Prot					0.04			c0.29			0.12	
v/s Ratio Perm		0.02		c0.17			0.03		0.03	0.05		
v/c Ratio		0.08		0.74	0.18		0.05	0.43	0.04	0.07	0.18	
Uniform Delay, d1		27.2		32.2	27.9		5.0	6.8	5.0	5.1	5.5	
Progression Factor		1.00		1.00	1.00		2.58	2.69	5.52	1.01	1.09	
Incremental Delay, d2		0.1		8.8	0.2		0.1	0.4	0.0	0.4	0.1	
Delay (s)		27.3		40.9	28.1		13.1	18.7	27.7	5.6	6.2	
Level of Service		C		D	C		B	B	C	A	A	
Approach Delay (s)		27.3			36.3			19.1			6.1	
Approach LOS		C			D			B			A	

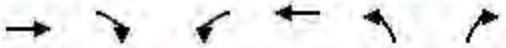
Intersection Summary			
HCM 2000 Control Delay	19.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	51.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	20	17	857	14	12	397
Future Volume (Veh/h)	20	17	857	14	12	397
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)	22	18	932	15	13	432
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
pX, platoon unblocked						
vC, conflicting volume	1182	474			947	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1182	474			947	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	88	97			98	
cM capacity (veh/h)	179	537			721	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	22	18	621	326	13	216	216
Volume Left	22	0	0	0	13	0	0
Volume Right	0	18	0	15	0	0	0
cSH	179	537	1700	1700	721	1700	1700
Volume to Capacity	0.12	0.03	0.37	0.19	0.02	0.13	0.13
Queue Length 95th (ft)	10	3	0	0	1	0	0
Control Delay (s)	27.8	11.9	0.0	0.0	10.1	0.0	0.0
Lane LOS	D	B			B		
Approach Delay (s)	20.7		0.0		0.3		
Approach LOS	C						

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	34.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1110	62	67	1038	116	109
Future Volume (vph)	1110	62	67	1038	116	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3511		1770	3539	1770	1583
Flt Permitted	1.00		0.14	1.00	0.95	1.00
Satd. Flow (perm)	3511		260	3539	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1207	67	73	1128	126	118
RTOR Reduction (vph)	8	0	0	0	0	35
Lane Group Flow (vph)	1266	0	73	1128	126	83
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	28.7		28.7	28.7	22.3	22.3
Effective Green, g (s)	28.7		28.7	28.7	22.3	22.3
Actuated g/C Ratio	0.48		0.48	0.48	0.37	0.37
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1679		124	1692	657	588
v/s Ratio Prot	c0.36			0.32	c0.07	
v/s Ratio Perm			0.28			0.05
v/c Ratio	0.75		0.59	0.67	0.19	0.14
Uniform Delay, d1	12.8		11.4	12.0	12.8	12.5
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0		7.0	1.0	0.6	0.5
Delay (s)	14.7		18.3	13.0	13.4	13.0
Level of Service	B		B	B	B	B
Approach Delay (s)	14.7			13.3	13.2	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection Sign configuration not allowed in HCM analysis.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	138	55	61	0	877	0	0	854	124
Future Volume (vph)	0	0	0	138	55	61	0	877	0	0	854	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.5	4.5	4.5		4.5			4.5	
Lane Util. Factor				1.00	1.00	1.00		0.91			0.86	
Frt				1.00	1.00	0.85		1.00			0.98	
Flt Protected				0.95	1.00	1.00		1.00			1.00	
Satd. Flow (prot)				1770	1863	1583		5085			6286	
Flt Permitted				0.95	1.00	1.00		1.00			1.00	
Satd. Flow (perm)				1770	1863	1583		5085			6286	
Peak-hour factor, PHF	0.92	0.92	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	150	60	66	0	953	0	0	928	135
RTOR Reduction (vph)	0	0	0	0	0	56	0	0	0	0	15	0
Lane Group Flow (vph)	0	0	0	150	60	10	0	953	0	0	1048	0
Turn Type				Prot	NA	Perm		NA			NA	
Protected Phases				3	8			2			6	
Permitted Phases						8						
Actuated Green, G (s)				13.0	13.0	13.0		68.0			68.0	
Effective Green, g (s)				13.0	13.0	13.0		68.0			68.0	
Actuated g/C Ratio				0.14	0.14	0.14		0.76			0.76	
Clearance Time (s)				4.5	4.5	4.5		4.5			4.5	
Vehicle Extension (s)				3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)				255	269	228		3842			4749	
v/s Ratio Prot				c0.08	0.03			c0.19			0.17	
v/s Ratio Perm						0.01						
v/c Ratio				0.59	0.22	0.04		0.25			0.22	
Uniform Delay, d1				36.0	34.0	33.1		3.3			3.2	
Progression Factor				1.00	1.00	1.00		1.00			0.22	
Incremental Delay, d2				3.4	0.4	0.1		0.2			0.1	
Delay (s)				39.4	34.5	33.2		3.5			0.8	
Level of Service				D	C	C		A			A	
Approach Delay (s)		0.0			36.9			3.5			0.8	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	32.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

2031 and 2040 Plus Project Level of Service Worksheets

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	32	118	154	0	205	0	703	154	132	1213	0
Future Volume (vph)	44	32	118	154	0	205	0	703	154	132	1213	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	0.97	1.00	1.00	1.00		1.00		0.95	1.00	1.00	0.91	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1863	1583	1770		1583		3539	1583	1770	5085	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	1863	1583	1770		1583		3539	1583	1770	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	48	35	128	167	0	223	0	764	167	143	1318	0
RTOR Reduction (vph)	0	0	116	0	0	0	0	0	103	0	0	0
Lane Group Flow (vph)	48	35	12	167	0	223	0	764	64	143	1318	0
Turn Type	Split	NA	Perm	Prot		Prot		NA	Perm	Prot	NA	
Protected Phases	3	3		4		4		6		5	2	
Permitted Phases			3						6			
Actuated Green, G (s)	8.5	8.5	8.5	21.5		21.5		28.5	28.5	13.5	46.5	
Effective Green, g (s)	8.5	8.5	8.5	21.5		21.5		28.5	28.5	13.5	46.5	
Actuated g/C Ratio	0.09	0.09	0.09	0.24		0.24		0.32	0.32	0.15	0.52	
Clearance Time (s)	4.5	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	
Lane Grp Cap (vph)	324	175	149	422		378		1120	501	265	2627	
v/s Ratio Prot	0.01	c0.02		0.09		c0.14		c0.22		0.08	c0.26	
v/s Ratio Perm			0.01						0.04			
v/c Ratio	0.15	0.20	0.08	0.40		0.59		0.68	0.13	0.54	0.50	
Uniform Delay, d1	37.4	37.6	37.2	28.8		30.3		26.8	21.9	35.4	14.2	
Progression Factor	0.81	0.82	0.63	1.00		1.00		1.61	3.78	1.38	0.59	
Incremental Delay, d2	0.9	2.5	1.0	2.8		6.6		3.1	0.5	6.5	0.6	
Delay (s)	31.3	33.4	24.3	31.6		37.0		46.2	83.3	55.4	9.0	
Level of Service	C	C	C	C		D		D	F	E	A	
Approach Delay (s)		27.4			34.6			52.8			13.6	
Approach LOS		C			C			D			B	

Intersection Summary			
HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	243	61	14	10	154	99	13	38	7	186	68	192
Future Volume (vph)	243	61	14	10	154	99	13	38	7	186	68	192
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Lane Util. Factor	0.97	1.00		1.00	0.95			0.95			1.00	1.00
Frt	1.00	0.97		1.00	0.94			0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.96	1.00
Satd. Flow (prot)	3433	1811		1770	3331			3434			1797	1583
Flt Permitted	0.95	1.00		0.70	1.00			0.99			0.96	1.00
Satd. Flow (perm)	3433	1811		1312	3331			3434			1797	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)	264	66	15	11	167	108	14	41	8	202	74	209
RTOR Reduction (vph)	0	7	0	0	67	0	0	7	0	0	0	136
Lane Group Flow (vph)	264	74	0	11	208	0	0	56	0	0	276	73
Turn Type	Prot	NA		Perm	NA		Split	NA		Split	NA	custom
Protected Phases	5	2			6		3	3		4	4	4
Permitted Phases				6								5
Actuated Green, G (s)	12.2	50.8		34.1	34.1			6.5			19.2	31.4
Effective Green, g (s)	12.2	50.8		34.1	34.1			6.5			19.2	31.4
Actuated g/C Ratio	0.14	0.56		0.38	0.38			0.07			0.21	0.35
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	465	1022		497	1262			248			383	631
v/s Ratio Prot	c0.08	0.04			c0.06			c0.02			c0.15	0.02
v/s Ratio Perm				0.01								0.02
v/c Ratio	0.57	0.07		0.02	0.16			0.22			0.72	0.12
Uniform Delay, d1	36.4	8.9		17.5	18.5			39.4			32.9	19.9
Progression Factor	1.38	0.34		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	1.5	0.1		0.0	0.1			2.1			6.5	0.1
Delay (s)	51.9	3.2		17.5	18.6			41.5			39.5	20.0
Level of Service	D	A		B	B			D			D	B
Approach Delay (s)		40.4			18.5			41.5			31.1	
Approach LOS		D			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	231	23	93	205	58	57
Future Volume (vph)	231	23	93	205	58	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	251	25	101	223	63	62

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total (vph)	276	101	223	63	62
Volume Left (vph)	0	101	0	63	0
Volume Right (vph)	25	0	0	0	62
Hadj (s)	-0.02	0.53	0.03	0.53	-0.67
Departure Headway (s)	5.0	5.7	5.2	6.5	5.3
Degree Utilization, x	0.39	0.16	0.32	0.11	0.09
Capacity (veh/h)	689	613	676	514	623
Control Delay (s)	11.1	8.5	9.4	9.1	7.6
Approach Delay (s)	11.1	9.1		8.4	
Approach LOS	B	A		A	

Intersection Summary				
Delay	9.8			
Level of Service	A			
Intersection Capacity Utilization	32.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	199	4	85	3	4	7	72	363	7	9	368	222
Future Volume (vph)	199	4	85	3	4	7	72	363	7	9	368	222
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)	216	4	92	3	4	8	78	395	8	10	400	241

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total (vph)	312	15	78	395	8	10	400	241
Volume Left (vph)	216	3	78	0	0	10	0	0
Volume Right (vph)	92	8	0	0	8	0	0	241
Hadj (s)	0.00	-0.25	0.53	0.03	-0.67	0.53	0.03	-0.67
Departure Headway (s)	6.3	7.1	6.8	6.3	3.2	6.9	6.4	3.2
Degree Utilization, x	0.55	0.03	0.15	0.70	0.01	0.02	0.71	0.21
Capacity (veh/h)	534	407	506	548	1121	498	541	1122
Control Delay (s)	16.6	10.3	9.8	21.3	5.0	8.9	22.6	5.9
Approach Delay (s)	16.6	10.3	19.2			16.2		
Approach LOS	C	B	C			C		

Intersection Summary				
Delay	17.2			
Level of Service	C			
Intersection Capacity Utilization	56.5%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	50	25	64	7	104	3	363	92	11	6	47	62
Future Volume (vph)	50	25	64	7	104	3	363	92	11	6	47	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	27	70	8	113	3	395	100	12	7	51	67

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1
Volume Total (vph)	81	70	124	507	125
Volume Left (vph)	54	0	8	395	7
Volume Right (vph)	0	70	3	12	67
Hadj (s)	0.37	-0.67	0.03	0.18	-0.28
Departure Headway (s)	6.8	5.7	6.0	5.1	5.2
Degree Utilization, x	0.15	0.11	0.21	0.72	0.18
Capacity (veh/h)	481	563	532	687	631
Control Delay (s)	9.8	8.2	10.6	19.9	9.4
Approach Delay (s)	9.1		10.6	19.9	9.4
Approach LOS	A		B	C	A

Intersection Summary				
Delay	15.4			
Level of Service	C			
Intersection Capacity Utilization	50.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	528	27	2	942	51	13	861	168
Future Volume (vph)	0	0	0	0	528	27	2	942	51	13	861	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor					0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt					1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected					1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)					3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted					1.00	1.00	0.24	1.00	1.00	0.21	1.00	1.00
Satd. Flow (perm)					3539	1583	447	3539	1583	388	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	0	574	29	2	1024	55	14	936	183
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	25	0	0	25
Lane Group Flow (vph)	0	0	0	0	574	29	2	1024	30	14	936	158
Turn Type	pm+pt				NA	Perm	Perm	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4			8			2			6	7
Permitted Phases	4					8	2		2	6		6
Actuated Green, G (s)					21.0	21.0	49.7	49.7	49.7	49.7	49.7	55.5
Effective Green, g (s)					21.0	21.0	49.7	49.7	49.7	49.7	49.7	55.5
Actuated g/C Ratio					0.23	0.23	0.55	0.55	0.55	0.55	0.55	0.62
Clearance Time (s)					4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)					3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)					825	369	246	1954	874	214	1954	1055
v/s Ratio Prot					c0.16			c0.29			0.26	c0.01
v/s Ratio Perm						0.02	0.00		0.02	0.04		0.09
v/c Ratio					0.70	0.08	0.01	0.52	0.03	0.07	0.48	0.15
Uniform Delay, d1					31.6	26.9	9.1	12.7	9.2	9.4	12.3	7.3
Progression Factor					1.62	1.70	1.00	1.00	1.00	0.51	0.40	0.10
Incremental Delay, d2					1.6	0.1	0.1	1.0	0.1	0.5	0.7	0.1
Delay (s)					52.7	45.8	9.1	13.7	9.3	5.2	5.6	0.8
Level of Service					D	D	A	B	A	A	A	A
Approach Delay (s)		0.0			52.4			13.5			4.8	
Approach LOS		A			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	48.1%	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												
Traffic Volume (vph)	31	117	10	184	531	406	4	19	27	27	33	20
Future Volume (vph)	31	117	10	184	531	406	4	19	27	27	33	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5			4.5			4.5	
Lane Util. Factor		0.95	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.95			0.93			0.97	
Flt Protected		0.99	1.00		0.99			1.00			0.98	
Satd. Flow (prot)		3502	1583		3320			1721			1770	
Flt Permitted		0.99	1.00		0.99			0.98			0.90	
Satd. Flow (perm)		3502	1583		3320			1701			1620	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	34	127	11	200	577	441	4	21	29	29	36	22
RTOR Reduction (vph)	0	0	8	0	95	0	0	23	0	0	14	0
Lane Group Flow (vph)	0	161	3	0	1123	0	0	31	0	0	73	0
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	
Protected Phases	2	2		1	1			8			4	
Permitted Phases			2				8			4		
Actuated Green, G (s)		22.3	22.3		36.1			18.1			18.1	
Effective Green, g (s)		22.3	22.3		36.1			18.1			18.1	
Actuated g/C Ratio		0.25	0.25		0.40			0.20			0.20	
Clearance Time (s)		4.5	4.5		4.5			4.5			4.5	
Vehicle Extension (s)		3.0	3.0		3.0			3.0			3.0	
Lane Grp Cap (vph)		867	392		1331			342			325	
v/s Ratio Prot		c0.05			c0.34							
v/s Ratio Perm			0.00					0.02			c0.05	
v/c Ratio		0.19	0.01		0.84			0.09			0.23	
Uniform Delay, d1		26.7	25.5		24.4			29.3			30.1	
Progression Factor		1.06	1.00		0.61			1.00			1.00	
Incremental Delay, d2		0.5	0.0		2.8			0.5			1.6	
Delay (s)		28.8	25.5		17.8			29.8			31.7	
Level of Service		C	C		B			C			C	
Approach Delay (s)		28.6			17.8			29.8			31.7	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	55.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	480	1755	229	115	838	0	0	865	55
Future Volume (vph)	0	0	0	480	1755	229	115	838	0	0	865	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.5	4.5		4.5	4.5			4.5	
Lane Util. Factor				0.86	0.86		1.00	0.91			0.91	
Frt				1.00	0.98		1.00	1.00			0.99	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1522	4719		1770	5085			5040	
Flt Permitted				0.95	1.00		0.21	1.00			1.00	
Satd. Flow (perm)				1522	4719		383	5085			5040	
Peak-hour factor, PHF	0.92	0.92	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	522	1908	249	125	911	0	0	940	60
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	0	470	2209	0	125	911	0	0	997	0
Turn Type				Prot	NA		Perm	NA			NA	
Protected Phases				3	8			2			6	
Permitted Phases							2					
Actuated Green, G (s)				44.5	44.5		36.5	36.5			36.5	
Effective Green, g (s)				44.5	44.5		36.5	36.5			36.5	
Actuated g/C Ratio				0.49	0.49		0.41	0.41			0.41	
Clearance Time (s)				4.5	4.5		4.5	4.5			4.5	
Lane Grp Cap (vph)				752	2333		155	2062			2044	
v/s Ratio Prot				0.31	c0.47			0.18			0.20	
v/s Ratio Perm							c0.33					
v/c Ratio				0.62	0.95		0.81	0.44			0.49	
Uniform Delay, d1				16.6	21.6		23.6	19.4			19.8	
Progression Factor				1.00	1.00		0.67	0.54			0.24	
Incremental Delay, d2				3.9	9.8		28.1	0.5			0.8	
Delay (s)				20.5	31.4		44.0	11.0			5.5	
Level of Service				C	C		D	B			A	
Approach Delay (s)		0.0			29.5			15.0			5.5	
Approach LOS		A			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	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												
Traffic Volume (vph)	107	57	18	0	0	0	0	519	118	64	1110	0
Future Volume (vph)	107	57	18	0	0	0	0	519	118	64	1110	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5						4.5		4.5	4.5	
Lane Util. Factor	0.91	0.91						0.91		1.00	0.91	
Frt	1.00	0.98						0.97		1.00	1.00	
Flt Protected	0.95	0.98						1.00		0.95	1.00	
Satd. Flow (prot)	1610	3252						4944		1770	5085	
Flt Permitted	0.95	0.98						1.00		0.34	1.00	
Satd. Flow (perm)	1610	3252						4944		634	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	116	62	20	0	0	0	0	564	128	70	1207	0
RTOR Reduction (vph)	0	14	0	0	0	0	0	41	0	0	0	0
Lane Group Flow (vph)	66	118	0	0	0	0	0	651	0	70	1207	0
Turn Type	Prot	NA						NA		pm+pt	NA	
Protected Phases	7	4						2		1	6	
Permitted Phases										6		
Actuated Green, G (s)	25.5	25.5						37.5		55.5	55.5	
Effective Green, g (s)	25.5	25.5						37.5		55.5	55.5	
Actuated g/C Ratio	0.28	0.28						0.42		0.62	0.62	
Clearance Time (s)	4.5	4.5						4.5		4.5	4.5	
Lane Grp Cap (vph)	456	921						2060		561	3135	
v/s Ratio Prot	c0.04	0.04						0.13		0.02	c0.24	
v/s Ratio Perm										0.06		
v/c Ratio	0.14	0.13						0.32		0.12	0.39	
Uniform Delay, d1	24.1	24.0						17.6		9.2	8.7	
Progression Factor	1.00	1.00						1.40		0.23	0.24	
Incremental Delay, d2	0.7	0.3						0.3		0.4	0.3	
Delay (s)	24.8	24.3						25.0		2.6	2.4	
Level of Service	C	C						C		A	A	
Approach Delay (s)		24.4			0.0			25.0			2.5	
Approach LOS		C			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	499	99	116	1239	47	123	413	129	78	1176	157
Future Volume (vph)	49	499	99	116	1239	47	123	413	129	78	1176	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.96		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	3539	1583	1770	5057		1770	4904		1770	4995	
Flt Permitted	0.14	1.00	1.00	0.29	1.00		0.16	1.00		0.28	1.00	
Satd. Flow (perm)	263	3539	1583	544	5057		305	4904		527	4995	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	53	542	108	126	1347	51	134	449	140	85	1278	171
RTOR Reduction (vph)	0	0	65	0	5	0	0	63	0	0	19	0
Lane Group Flow (vph)	53	542	43	126	1393	0	134	526	0	85	1430	0
Turn Type	Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	28.5	28.5	36.0	38.3	38.3		31.9	31.9		30.7	30.7	
Effective Green, g (s)	28.5	28.5	36.0	38.3	38.3		31.9	31.9		30.7	30.7	
Actuated g/C Ratio	0.32	0.32	0.40	0.43	0.43		0.35	0.35		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	
Lane Grp Cap (vph)	83	1120	633	303	2152		230	1738		266	1703	
v/s Ratio Prot		0.15	0.01	0.02	c0.28		c0.05	0.11		0.02	c0.29	
v/s Ratio Perm	0.20		0.02	0.15			0.16			0.09		
v/c Ratio	0.64	0.48	0.07	0.42	0.65		0.58	0.30		0.32	0.84	
Uniform Delay, d1	26.3	24.8	16.7	16.9	20.5		31.4	21.0		20.9	27.4	
Progression Factor	0.86	0.84	0.69	1.00	1.00		0.64	0.27		0.57	0.71	
Incremental Delay, d2	31.5	1.5	0.2	4.2	1.5		10.3	0.4		3.0	4.9	
Delay (s)	54.2	22.2	11.7	21.0	22.0		30.4	6.1		14.8	24.2	
Level of Service	D	C	B	C	C		C	A		B	C	
Approach Delay (s)		23.0			21.9			10.6			23.7	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	20.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	116	63	51	753	147	58	265	12	145	970	244
Future Volume (vph)	56	116	63	51	753	147	58	265	12	145	970	244
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3353		1770	3539	1583	1770	3539	1583	1770	4932	
Flt Permitted	0.18	1.00		0.63	1.00	1.00	0.16	1.00	1.00	0.58	1.00	
Satd. Flow (perm)	339	3353		1173	3539	1583	292	3539	1583	1072	4932	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	61	126	68	55	818	160	63	288	13	158	1054	265
RTOR Reduction (vph)	0	51	0	0	0	71	0	0	6	0	37	0
Lane Group Flow (vph)	61	143	0	55	818	89	63	288	7	158	1282	0
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	22.0	22.0		30.9	30.9	30.9	50.1	50.1	50.1	50.1	50.1	
Effective Green, g (s)	22.0	22.0		30.9	30.9	30.9	50.1	50.1	50.1	50.1	50.1	
Actuated g/C Ratio	0.24	0.24		0.34	0.34	0.34	0.56	0.56	0.56	0.56	0.56	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
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)	82	819		431	1215	543	162	1970	881	596	2745	
v/s Ratio Prot		0.04		0.01	c0.23			0.08			c0.26	
v/s Ratio Perm	c0.18			0.04		0.06	0.22		0.00	0.15		
v/c Ratio	0.74	0.17		0.13	0.67	0.16	0.39	0.15	0.01	0.27	0.47	
Uniform Delay, d1	31.4	26.8		20.4	25.2	20.6	11.3	9.6	8.9	10.4	12.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.72	0.52	1.00	0.27	0.24	
Incremental Delay, d2	30.1	0.1		0.1	1.5	0.1	6.8	0.2	0.0	1.0	0.5	
Delay (s)	61.5	26.9		20.5	26.7	20.7	15.0	5.2	8.9	3.8	3.4	
Level of Service	E	C		C	C	C	B	A	A	A	A	
Approach Delay (s)		35.2			25.5			7.0			3.4	
Approach LOS		D			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	444	199	253	1256	345	159	374	60	150	361	30
Future Volume (vph)	52	444	199	253	1256	345	159	374	60	150	361	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	1770	3498	
Flt Permitted	0.11	1.00	1.00	0.37	1.00	1.00	0.56	1.00	1.00	0.56	1.00	
Satd. Flow (perm)	207	3539	1583	693	3539	1583	1049	3539	1583	1049	3498	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	57	483	216	275	1365	375	173	407	65	163	392	33
RTOR Reduction (vph)	0	0	130	0	0	177	0	0	54	0	7	0
Lane Group Flow (vph)	57	483	86	275	1365	198	173	407	11	163	418	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	40.3	36.0	36.0	52.1	43.3	43.3	15.9	15.9	15.9	15.6	15.6	
Effective Green, g (s)	40.3	36.0	36.0	52.1	43.3	43.3	15.9	15.9	15.9	15.6	15.6	
Actuated g/C Ratio	0.45	0.40	0.40	0.58	0.48	0.48	0.18	0.18	0.18	0.17	0.17	
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)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	167	1415	633	539	1702	761	255	625	279	249	606	
v/s Ratio Prot	0.02	0.14		c0.07	c0.39		0.07	c0.11		0.06	c0.12	
v/s Ratio Perm	0.14		0.05	0.23		0.12	0.05		0.01	0.05		
v/c Ratio	0.34	0.34	0.14	0.51	0.80	0.26	0.68	0.65	0.04	0.65	0.69	
Uniform Delay, d1	16.5	18.8	17.1	10.1	19.7	13.8	34.3	34.5	30.7	33.9	34.9	
Progression Factor	1.00	1.00	1.00	0.70	0.68	0.16	0.91	0.91	1.00	0.94	0.95	
Incremental Delay, d2	1.2	0.7	0.4	0.1	0.4	0.1	6.7	2.3	0.1	6.0	3.2	
Delay (s)	17.8	19.4	17.6	7.1	13.8	2.3	38.1	33.9	30.8	37.9	36.3	
Level of Service	B	B	B	A	B	A	D	C	C	D	D	
Approach Delay (s)		18.8			10.7			34.7			36.7	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	116	68	72	106	128	336	40	179	101	430	150	235
Future Volume (vph)	116	68	72	106	128	336	40	179	101	430	150	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	0.91	0.91		1.00	1.00	1.00	0.97	0.95	1.00	0.97	0.95	
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1610	3150		1770	1863	1583	3433	3539	1583	3433	3215	
Flt Permitted	0.67	0.86		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1133	2746		1770	1863	1583	3433	3539	1583	3433	3215	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	126	74	78	115	139	365	43	195	110	467	163	255
RTOR Reduction (vph)	0	67	0	0	0	260	0	0	72	0	121	0
Lane Group Flow (vph)	87	124	0	115	139	105	43	195	38	467	297	0
Turn Type	Perm	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4					8			2			
Actuated Green, G (s)	12.4	12.4		9.1	26.0	26.0	3.3	31.3	31.3	19.2	47.2	
Effective Green, g (s)	12.4	12.4		9.1	26.0	26.0	3.3	31.3	31.3	19.2	47.2	
Actuated g/C Ratio	0.14	0.14		0.10	0.29	0.29	0.04	0.35	0.35	0.21	0.52	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
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)	156	378		178	538	457	125	1230	550	732	1686	
v/s Ratio Prot				c0.06	0.07		0.01	0.06		c0.14	c0.09	
v/s Ratio Perm	c0.08	0.05				0.07			0.02			
v/c Ratio	0.56	0.33		0.65	0.26	0.23	0.34	0.16	0.07	0.64	0.18	
Uniform Delay, d1	36.2	35.0		38.9	24.6	24.4	42.3	20.3	19.6	32.2	11.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.69	0.48	
Incremental Delay, d2	4.3	0.5		7.8	0.3	0.3	1.7	0.3	0.2	1.6	0.2	
Delay (s)	40.5	35.5		46.7	24.8	24.6	43.9	20.5	19.9	24.0	5.6	
Level of Service	D	D		D	C	C	D	C	B	C	A	
Approach Delay (s)		37.1			28.8			23.2			15.3	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	44.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	200	5	0	403	183	1	171	42	226	495	546
Future Volume (vph)	61	200	5	0	403	183	1	171	42	226	495	546
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00			0.95		1.00	0.97		1.00	0.92	
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3527			3373		1770	3434		1770	3261	
Flt Permitted	0.95	1.00			1.00		0.16	1.00		0.61	1.00	
Satd. Flow (perm)	1770	3527			3373		297	3434		1131	3261	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	66	217	5	0	438	199	1	186	46	246	538	593
RTOR Reduction (vph)	0	3	0	0	78	0	0	22	0	0	202	0
Lane Group Flow (vph)	66	219	0	0	559	0	1	210	0	246	930	0
Turn Type	Prot	NA			NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	5.6	26.0			15.9		35.0	35.0		35.0	35.0	
Effective Green, g (s)	5.6	26.0			15.9		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.08	0.37			0.23		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	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	141	1310			766		148	1717		565	1630	
v/s Ratio Prot	c0.04	0.06			c0.17			0.06			c0.29	
v/s Ratio Perm							0.00			0.22		
v/c Ratio	0.47	0.17			0.73		0.01	0.12		0.44	0.57	
Uniform Delay, d1	30.8	14.7			25.1		8.8	9.3		11.2	12.2	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.4	0.1			3.5		0.1	0.1		2.4	1.5	
Delay (s)	33.2	14.8			28.6		8.9	9.5		13.6	13.7	
Level of Service	C	B			C		A	A		B	B	
Approach Delay (s)		19.0			28.6			9.5			13.7	
Approach LOS		B			C			A			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)	70.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	69	167	29	153	10	190	265	12	11	1162	154
Future Volume (vph)	81	69	167	29	153	10	190	265	12	11	1162	154
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		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	0.91	
Frt	1.00	1.00	0.85	1.00	0.99		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	1845		1770	3516		1770	4996	
Flt Permitted	0.47	1.00	1.00	0.71	1.00		0.13	1.00		0.57	1.00	
Satd. Flow (perm)	871	1863	1583	1319	1845		236	3516		1058	4996	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	88	75	182	32	166	11	207	288	13	12	1263	167
RTOR Reduction (vph)	0	0	154	0	3	0	0	3	0	0	14	0
Lane Group Flow (vph)	88	75	28	32	174	0	207	298	0	12	1416	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	13.8	13.8	13.8	13.8	13.8		67.2	67.2		52.1	52.1	
Effective Green, g (s)	13.8	13.8	13.8	13.8	13.8		67.2	67.2		52.1	52.1	
Actuated g/C Ratio	0.15	0.15	0.15	0.15	0.15		0.75	0.75		0.58	0.58	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
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)	133	285	242	202	282		356	2625		612	2892	
v/s Ratio Prot		0.04			0.09		c0.07	0.08			0.28	
v/s Ratio Perm	c0.10		0.02	0.02			c0.36			0.01		
v/c Ratio	0.66	0.26	0.12	0.16	0.62		0.58	0.11		0.02	0.49	
Uniform Delay, d1	35.9	33.6	32.8	33.1	35.6		7.0	3.2		8.1	11.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.79	0.47		1.00	1.00	
Incremental Delay, d2	11.7	0.5	0.2	0.4	4.0		2.4	0.1		0.1	0.6	
Delay (s)	47.6	34.1	33.1	33.4	39.6		14.8	1.6		8.1	11.7	
Level of Service	D	C	C	C	D		B	A		A	B	
Approach Delay (s)		37.0			38.7			7.0			11.7	
Approach LOS		D			D			A			B	

Intersection Summary					
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.62				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)		13.5	
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												
Traffic Volume (veh/h)	0	0	64	0	0	0	57	371	235	0	1349	229
Future Volume (Veh/h)	0	0	64	0	0	0	57	371	235	0	1349	229
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	70	0	0	0	62	403	255	0	1466	249
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								206			797	
pX, platoon unblocked	0.91	0.91	0.90	0.91	0.91	0.99	0.90			0.99		
vC, conflicting volume	1916	2118	613	1086	2242	202	1715			403		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1594	1816	194	679	1953	172	1415			376		
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	90	100	100	100	86			100		
cM capacity (veh/h)	58	60	735	247	49	833	431			1167		

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	70	62	202	202	255	586	586	542
Volume Left	0	62	0	0	0	0	0	0
Volume Right	70	0	0	0	255	0	0	249
cSH	735	431	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.10	0.14	0.12	0.12	0.15	0.34	0.34	0.32
Queue Length 95th (ft)	8	12	0	0	0	0	0	0
Control Delay (s)	10.4	14.7	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	B						
Approach Delay (s)	10.4	1.3				0.0		
Approach LOS	B							

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	41.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	191	37	15	20	0	11	0	460	49	37	1376	0
Future Volume (vph)	191	37	15	20	0	11	0	460	49	37	1376	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5		4.5		4.5		4.5	4.5	
Lane Util. Factor	0.97	1.00		1.00		1.00		0.91		1.00	0.91	
Frt	1.00	0.96		1.00		0.85		0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)	3433	1783		1770		1583		5012		1770	5085	
Flt Permitted	0.95	1.00		0.95		1.00		1.00		0.43	1.00	
Satd. Flow (perm)	3433	1783		1770		1583		5012		810	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	208	40	16	22	0	12	0	500	53	40	1496	0
RTOR Reduction (vph)	0	14	0	0	0	12	0	9	0	0	0	0
Lane Group Flow (vph)	208	42	0	22	0	0	0	544	0	40	1496	0
Turn Type	pm+pt	NA		Prot		Perm		NA		Perm	NA	
Protected Phases	7	4		3				2			6	
Permitted Phases	4					8				6		
Actuated Green, G (s)	18.0	9.5		4.0		1.1		63.0		63.0	63.0	
Effective Green, g (s)	18.0	9.5		4.0		1.1		63.0		63.0	63.0	
Actuated g/C Ratio	0.20	0.11		0.04		0.01		0.70		0.70	0.70	
Clearance Time (s)	4.5	4.5		4.5		4.5		4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0		3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	686	188		78		19		3508		567	3559	
v/s Ratio Prot	c0.04	0.02		0.01				0.11			c0.29	
v/s Ratio Perm	0.02					0.00				0.05		
v/c Ratio	0.30	0.22		0.28		0.01		0.15		0.07	0.42	
Uniform Delay, d1	30.7	36.9		41.6		43.9		4.5		4.3	5.7	
Progression Factor	0.79	0.63		1.00		1.00		0.26		0.61	0.52	
Incremental Delay, d2	0.2	0.6		2.0		0.2		0.1		0.2	0.4	
Delay (s)	24.4	23.9		43.6		44.1		1.3		2.8	3.3	
Level of Service	C	C		D		D		A		A	A	
Approach Delay (s)		24.3			43.8			1.3			3.3	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	551	0	0	1499	20	120	161	95	0	0	0
Future Volume (vph)	63	551	0	0	1499	20	120	161	95	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	4.5				
Lane Util. Factor	1.00	0.95			0.91		0.86	0.86				
Frt	1.00	1.00			1.00		1.00	0.95				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1770	3539			5075		1522	4542				
Flt Permitted	0.12	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	216	3539			5075		1522	4542				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	68	599	0	0	1629	22	130	175	103	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	81	0	0	0	0
Lane Group Flow (vph)	68	599	0	0	1649	0	103	224	0	0	0	0
Turn Type	Perm	NA			NA		pm+pt	NA				
Protected Phases		4			8		6	2				
Permitted Phases	4						2					
Actuated Green, G (s)	61.5	61.5			61.5		19.5	19.5				
Effective Green, g (s)	61.5	61.5			61.5		19.5	19.5				
Actuated g/C Ratio	0.68	0.68			0.68		0.22	0.22				
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5				
Lane Grp Cap (vph)	147	2418			3467		329	984				
v/s Ratio Prot		0.17			c0.32		c0.07	0.05				
v/s Ratio Perm	0.32											
v/c Ratio	0.46	0.25			0.48		0.31	0.23				
Uniform Delay, d1	6.6	5.4			6.7		29.6	29.0				
Progression Factor	1.00	1.00			0.32		1.00	1.00				
Incremental Delay, d2	10.1	0.2			0.3		2.5	0.5				
Delay (s)	16.7	5.7			2.5		32.1	29.6				
Level of Service	B	A			A		C	C				
Approach Delay (s)		6.8			2.5			30.2			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	300	1564	60	87	267	0	0	338	41
Future Volume (vph)	0	0	0	300	1564	60	87	267	0	0	338	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5		4.5	4.5			4.5	
Lane Util. Factor					0.91		1.00	0.95			0.95	
Frt					1.00		1.00	1.00			0.98	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					5022		1770	3539			3481	
Flt Permitted					0.99		0.44	1.00			1.00	
Satd. Flow (perm)					5022		810	3539			3481	
Peak-hour factor, PHF	0.92	0.92	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	326	1700	65	95	290	0	0	367	45
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	10	0
Lane Group Flow (vph)	0	0	0	0	2087	0	95	290	0	0	402	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					53.5		27.5	27.5			27.5	
Effective Green, g (s)					53.5		27.5	27.5			27.5	
Actuated g/C Ratio					0.59		0.31	0.31			0.31	
Clearance Time (s)					4.5		4.5	4.5			4.5	
Lane Grp Cap (vph)					2985		247	1081			1063	
v/s Ratio Prot								0.08			0.12	
v/s Ratio Perm					0.42		c0.12					
v/c Ratio					0.70		0.38	0.27			0.38	
Uniform Delay, d1					12.7		24.6	23.6			24.5	
Progression Factor					0.17		0.61	0.62			1.00	
Incremental Delay, d2					0.5		4.4	0.6			1.0	
Delay (s)					2.7		19.5	15.3			25.6	
Level of Service					A		B	B			C	
Approach Delay (s)		0.0			2.7			16.3			25.6	
Approach LOS		A			A			B			C	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑						↑↑			↑↑	
Traffic Volume (vph)	35	133	152	0	0	0	0	319	61	0	638	0
Future Volume (vph)	35	133	152	0	0	0	0	319	61	0	638	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5			4.5	
Lane Util. Factor		0.95						0.95			0.95	
Frt		0.93						0.98			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		3270						3454			3539	
Flt Permitted		0.99						1.00			1.00	
Satd. Flow (perm)		3270						3454			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)	38	145	165	0	0	0	0	347	66	0	693	0
RTOR Reduction (vph)	0	109	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	239	0	0	0	0	0	413	0	0	693	0
Turn Type	Perm	NA						NA			NA	
Protected Phases		4						2			6	
Permitted Phases	4											
Actuated Green, G (s)		30.5						50.5			50.5	
Effective Green, g (s)		30.5						50.5			50.5	
Actuated g/C Ratio		0.34						0.56			0.56	
Clearance Time (s)		4.5						4.5			4.5	
Lane Grp Cap (vph)		1108						1938			1985	
v/s Ratio Prot								0.12			c0.20	
v/s Ratio Perm		0.07										
v/c Ratio		0.22						0.21			0.35	
Uniform Delay, d1		21.2						9.8			10.8	
Progression Factor		1.00						0.59			0.46	
Incremental Delay, d2		0.4						0.2			0.4	
Delay (s)		21.7						6.1			5.3	
Level of Service		C						A			A	
Approach Delay (s)		21.7			0.0			6.1			5.3	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	385	172	100	743	122	70	327	52	169	917	94
Future Volume (vph)	33	385	172	100	743	122	70	327	52	169	917	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.95		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3375		1770	3464		1770	3466		1770	3539	1583
Flt Permitted	0.17	1.00		0.34	1.00		0.20	1.00		0.49	1.00	1.00
Satd. Flow (perm)	308	3375		628	3464		373	3466		917	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)	36	418	187	109	808	133	76	355	57	184	997	102
RTOR Reduction (vph)	0	48	0	0	15	0	0	14	0	0	0	31
Lane Group Flow (vph)	36	557	0	109	926	0	76	398	0	184	997	71
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	35.5	35.5		35.5	35.5		45.5	45.5		45.5	45.5	45.5
Effective Green, g (s)	35.5	35.5		35.5	35.5		45.5	45.5		45.5	45.5	45.5
Actuated g/C Ratio	0.39	0.39		0.39	0.39		0.51	0.51		0.51	0.51	0.51
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Grp Cap (vph)	121	1331		247	1366		188	1752		463	1789	800
v/s Ratio Prot		0.17			c0.27			0.11			c0.28	
v/s Ratio Perm	0.12			0.17			0.20			0.20		0.04
v/c Ratio	0.30	0.42		0.44	0.68		0.40	0.23		0.40	0.56	0.09
Uniform Delay, d1	18.7	19.8		20.0	22.5		13.8	12.4		13.8	15.3	11.5
Progression Factor	1.00	1.00		0.74	0.74		0.75	0.66		0.69	0.67	0.49
Incremental Delay, d2	6.2	1.0		5.4	2.6		6.3	0.3		2.5	1.2	0.2
Delay (s)	24.9	20.7		20.1	19.2		16.7	8.4		12.0	11.5	5.9
Level of Service	C	C		C	B		B	A		B	B	A
Approach Delay (s)		21.0			19.3			9.7			11.1	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	391	120	49	645	83	107	357	41	115	822	137
Future Volume (vph)	29	391	120	49	645	83	107	357	41	115	822	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.98		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	3415		1770	3539	1583	1770	3484		1770	3463	
Flt Permitted	0.21	1.00		0.31	1.00	1.00	0.22	1.00		0.49	1.00	
Satd. Flow (perm)	396	3415		584	3539	1583	408	3484		921	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)	32	425	130	53	701	90	116	388	45	125	893	149
RTOR Reduction (vph)	0	32	0	0	0	64	0	10	0	0	15	0
Lane Group Flow (vph)	32	523	0	53	701	27	116	423	0	125	1027	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	26.5	26.5		26.5	26.5	26.5	54.5	54.5		54.5	54.5	
Effective Green, g (s)	26.5	26.5		26.5	26.5	26.5	54.5	54.5		54.5	54.5	
Actuated g/C Ratio	0.29	0.29		0.29	0.29	0.29	0.61	0.61		0.61	0.61	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	116	1005		171	1042	466	247	2109		557	2097	
v/s Ratio Prot		0.15			c0.20			0.12			c0.30	
v/s Ratio Perm	0.08			0.09		0.02	0.28			0.14		
v/c Ratio	0.28	0.52		0.31	0.67	0.06	0.47	0.20		0.22	0.49	
Uniform Delay, d1	24.4	26.5		24.7	27.9	22.8	9.8	8.0		8.1	10.0	
Progression Factor	1.00	1.00		0.56	0.55	0.48	1.00	1.00		0.87	0.86	
Incremental Delay, d2	5.8	1.9		4.3	3.2	0.2	6.3	0.2		0.8	0.7	
Delay (s)	30.2	28.4		18.1	18.6	11.1	16.1	8.2		7.9	9.2	
Level of Service	C	C		B	B	B	B	A		A	A	
Approach Delay (s)		28.5			17.8			9.9			9.1	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	346	222	204	808	186	106
Future Volume (vph)	346	222	204	808	186	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3332		1770	3539	3433	1583
Flt Permitted	1.00		0.40	1.00	0.95	1.00
Satd. Flow (perm)	3332		743	3539	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	376	241	222	878	202	115
RTOR Reduction (vph)	87	0	0	0	0	85
Lane Group Flow (vph)	530	0	222	878	202	30
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	57.5		57.5	57.5	23.5	23.5
Effective Green, g (s)	57.5		57.5	57.5	23.5	23.5
Actuated g/C Ratio	0.64		0.64	0.64	0.26	0.26
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Lane Grp Cap (vph)	2128		474	2261	896	413
v/s Ratio Prot	0.16			0.25	c0.06	
v/s Ratio Perm			c0.30			0.02
v/c Ratio	0.25		0.47	0.39	0.23	0.07
Uniform Delay, d1	7.0		8.4	7.8	26.1	25.0
Progression Factor	0.28		0.77	0.80	0.88	0.95
Incremental Delay, d2	0.3		2.6	0.4	0.5	0.3
Delay (s)	2.2		9.1	6.6	23.5	24.2
Level of Service	A		A	A	C	C
Approach Delay (s)	2.2			7.1	23.8	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	301	167	105	585	65	157	225	49	25	310	34
Future Volume (vph)	78	301	167	105	585	65	157	225	49	25	310	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.95		1.00	0.98			0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.98			1.00	
Satd. Flow (prot)	1770	3349		1770	3486			3417			3479	
Flt Permitted	0.31	1.00		0.42	1.00			0.67			0.91	
Satd. Flow (perm)	573	3349		782	3486			2344			3160	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	327	182	114	636	71	171	245	53	27	337	37
RTOR Reduction (vph)	0	85	0	0	10	0	0	11	0	0	8	0
Lane Group Flow (vph)	85	424	0	114	697	0	0	458	0	0	393	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	41.5	41.5		41.5	41.5			39.5			39.5	
Effective Green, g (s)	41.5	41.5		41.5	41.5			39.5			39.5	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.44			0.44	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Lane Grp Cap (vph)	264	1544		360	1607			1028			1386	
v/s Ratio Prot		0.13			c0.20							
v/s Ratio Perm	0.15			0.15				c0.20			0.12	
v/c Ratio	0.32	0.27		0.32	0.43			0.45			0.28	
Uniform Delay, d1	15.3	15.0		15.3	16.3			17.6			16.2	
Progression Factor	0.53	0.40		1.31	1.35			1.00			0.58	
Incremental Delay, d2	2.9	0.4		2.2	0.8			1.4			0.5	
Delay (s)	11.0	6.4		22.2	22.8			19.0			9.8	
Level of Service	B	A		C	C			B			A	
Approach Delay (s)		7.0			22.7			19.0			9.8	
Approach LOS		A			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	291	231	131	293	900	8	214	503	91	26	1025	740
Future Volume (vph)	291	231	131	293	900	8	214	503	91	26	1025	740
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.96		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3212		1770	3534		1770	3539	1583	1770	3539	1583
Flt Permitted	0.20	0.58		0.33	1.00		0.13	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	344	1881		612	3534		234	3539	1583	834	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)	316	251	142	318	978	9	233	547	99	28	1114	804
RTOR Reduction (vph)	0	40	0	0	1	0	0	0	57	0	0	39
Lane Group Flow (vph)	183	486	0	318	986	0	233	547	42	28	1114	765
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4		3	8		5	2			6	7
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	34.8	34.8		41.2	22.9		38.5	38.5	38.5	27.3	27.3	42.4
Effective Green, g (s)	34.8	34.8		41.2	22.9		38.5	38.5	38.5	27.3	27.3	42.4
Actuated g/C Ratio	0.39	0.39		0.46	0.25		0.43	0.43	0.43	0.30	0.30	0.47
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
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)	345	950		515	899		214	1513	677	252	1073	745
v/s Ratio Prot	0.09	0.09		c0.13	c0.28		c0.08	0.15			0.31	c0.17
v/s Ratio Perm	0.12	0.11		0.16			c0.38		0.03	0.03		0.31
v/c Ratio	0.53	0.51		0.62	1.10		1.09	0.36	0.06	0.11	1.04	1.03
Uniform Delay, d1	30.5	21.1		22.9	33.5		22.6	17.4	15.1	22.6	31.4	23.8
Progression Factor	0.73	0.66		1.00	1.00		1.32	1.05	1.48	1.00	1.00	1.00
Incremental Delay, d2	1.5	0.4		2.2	60.1		86.0	0.6	0.2	0.9	37.9	40.1
Delay (s)	23.7	14.3		25.1	93.7		115.8	18.9	22.6	23.5	69.2	63.9
Level of Service	C	B		C	F		F	B	C	C	E	E
Approach Delay (s)		16.7			77.0			45.0			66.4	
Approach LOS		B			E			D			E	

Intersection Summary			
HCM 2000 Control Delay	58.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	94.1%	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												
Traffic Volume (vph)	90	71	9	12	571	156	39	167	2	108	169	510
Future Volume (vph)	90	71	9	12	571	156	39	167	2	108	169	510
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.97		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1831		1770	1803		1770	1860		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.57	1.00		0.57	1.00	1.00
Satd. Flow (perm)	1770	1831		1770	1803		1056	1860		1056	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)	98	77	10	13	621	170	42	182	2	117	184	554
RTOR Reduction (vph)	0	4	0	0	11	0	0	1	0	0	0	235
Lane Group Flow (vph)	98	83	0	13	780	0	42	183	0	117	184	319
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	10.3	50.5		1.0	41.2		25.0	25.0		25.0	25.0	25.0
Effective Green, g (s)	10.3	50.5		1.0	41.2		25.0	25.0		25.0	25.0	25.0
Actuated g/C Ratio	0.11	0.56		0.01	0.46		0.28	0.28		0.28	0.28	0.28
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
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)	202	1027		19	825		293	516		293	517	439
v/s Ratio Prot	c0.06	0.05		0.01	c0.43			0.10			0.10	
v/s Ratio Perm							0.04			0.11		c0.20
v/c Ratio	0.49	0.08		0.68	0.94		0.14	0.36		0.40	0.36	0.73
Uniform Delay, d1	37.4	9.1		44.3	23.3		24.4	26.0		26.4	26.0	29.4
Progression Factor	0.71	0.83		1.00	1.00		1.00	1.00		0.49	0.49	0.13
Incremental Delay, d2	1.8	0.0		69.9	19.1		1.0	1.9		1.6	0.8	4.2
Delay (s)	28.3	7.5		114.2	42.4		25.5	28.0		14.5	13.7	8.2
Level of Service	C	A		F	D		C	C		B	B	A
Approach Delay (s)		18.6			43.6			27.5			10.2	
Approach LOS		B			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	25.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	86.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	375	144	553	202	0
Future Volume (vph)	0	375	144	553	202	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	0.85		1.00	1.00	1.00	
Flt Protected	1.00		0.95	1.00	0.95	
Satd. Flow (prot)	3008		1770	3539	1770	
Flt Permitted	1.00		0.50	1.00	0.95	
Satd. Flow (perm)	3008		932	3539	1770	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	408	157	601	220	0
RTOR Reduction (vph)	188	0	0	0	0	0
Lane Group Flow (vph)	220	0	157	601	220	0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Actuated Green, G (s)	48.5		48.5	48.5	32.5	
Effective Green, g (s)	48.5		48.5	48.5	32.5	
Actuated g/C Ratio	0.54		0.54	0.54	0.36	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Lane Grp Cap (vph)	1620		502	1907	639	
v/s Ratio Prot	0.07			c0.17	c0.12	
v/s Ratio Perm			0.17			
v/c Ratio	0.14		0.31	0.32	0.34	
Uniform Delay, d1	10.3		11.5	11.5	21.0	
Progression Factor	1.00		0.29	0.29	1.00	
Incremental Delay, d2	0.2		1.4	0.4	1.5	
Delay (s)	10.5		4.7	3.7	22.4	
Level of Service	B		A	A	C	
Approach Delay (s)	10.5			3.9	22.4	
Approach LOS	B			A	C	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
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												
Traffic Volume (vph)	4	4	6	100	4	24	20	592	169	62	420	12
Future Volume (vph)	4	4	6	100	4	24	20	592	169	62	420	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt		0.94		1.00	0.87		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1722		1770	1621		1770	3539	1583	1770	3525	
Flt Permitted		0.94		0.75	1.00		0.48	1.00	1.00	0.41	1.00	
Satd. Flow (perm)		1641		1393	1621		899	3539	1583	758	3525	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	4	7	109	4	26	22	643	184	67	457	13
RTOR Reduction (vph)	0	6	0	0	23	0	0	0	41	0	1	0
Lane Group Flow (vph)	0	9	0	109	7	0	22	643	143	67	469	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		11.0		11.0	11.0		70.0	70.0	70.0	70.0	70.0	
Effective Green, g (s)		11.0		11.0	11.0		70.0	70.0	70.0	70.0	70.0	
Actuated g/C Ratio		0.12		0.12	0.12		0.78	0.78	0.78	0.78	0.78	
Clearance Time (s)		4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		200		170	198		699	2752	1231	589	2741	
v/s Ratio Prot					0.00			c0.18			0.13	
v/s Ratio Perm		0.01		c0.08			0.02		0.09	0.09		
v/c Ratio		0.04		0.64	0.04		0.03	0.23	0.12	0.11	0.17	
Uniform Delay, d1		34.9		37.6	34.8		2.3	2.7	2.4	2.4	2.6	
Progression Factor		1.00		1.00	1.00		2.51	2.81	8.88	1.00	1.00	
Incremental Delay, d2		0.1		8.0	0.1		0.1	0.2	0.2	0.4	0.1	
Delay (s)		35.0		45.6	34.9		5.8	7.8	21.9	2.8	2.7	
Level of Service		C		D	C		A	A	C	A	A	
Approach Delay (s)		35.0			43.3			10.8			2.7	
Approach LOS		C			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	54	42	434	192	45	635
Future Volume (Veh/h)	54	42	434	192	45	635
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)	59	46	472	209	49	690
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						596
pX, platoon unblocked						
vC, conflicting volume	1020	340			681	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1020	340			681	
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	93			95	
cM capacity (veh/h)	220	655			907	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	59	46	315	366	49	345	345
Volume Left	59	0	0	0	49	0	0
Volume Right	0	46	0	209	0	0	0
cSH	220	655	1700	1700	907	1700	1700
Volume to Capacity	0.27	0.07	0.19	0.22	0.05	0.20	0.20
Queue Length 95th (ft)	26	6	0	0	4	0	0
Control Delay (s)	27.2	10.9	0.0	0.0	9.2	0.0	0.0
Lane LOS	D	B			A		
Approach Delay (s)	20.1		0.0		0.6		
Approach LOS	C						

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	34.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	639	59	81	1306	80	55
Future Volume (vph)	639	59	81	1306	80	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3494		1770	3539	1770	1583
Flt Permitted	1.00		0.31	1.00	0.95	1.00
Satd. Flow (perm)	3494		584	3539	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	695	64	88	1420	87	60
RTOR Reduction (vph)	13	0	0	0	0	39
Lane Group Flow (vph)	746	0	88	1420	87	21
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	26.4		26.4	26.4	19.6	19.6
Effective Green, g (s)	26.4		26.4	26.4	19.6	19.6
Actuated g/C Ratio	0.48		0.48	0.48	0.36	0.36
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1677		280	1698	630	564
v/s Ratio Prot	0.21			c0.40	c0.05	
v/s Ratio Perm			0.15			0.01
v/c Ratio	0.44		0.31	0.84	0.14	0.04
Uniform Delay, d1	9.5		8.8	12.4	12.0	11.5
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2		0.6	3.8	0.5	0.1
Delay (s)	9.6		9.4	16.2	12.4	11.7
Level of Service	A		A	B	B	B
Approach Delay (s)	9.6			15.8	12.1	
Approach LOS	A			B	B	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	48.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	113	61	38	0	627	0	0	1060	330
Future Volume (vph)	0	0	0	113	61	38	0	627	0	0	1060	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.5	4.5	4.5		4.5			4.5	
Lane Util. Factor				1.00	1.00	1.00		0.91			0.86	
Frt				1.00	1.00	0.85		1.00			0.96	
Flt Protected				0.95	1.00	1.00		1.00			1.00	
Satd. Flow (prot)				1770	1863	1583		5085			6179	
Flt Permitted				0.95	1.00	1.00		1.00			1.00	
Satd. Flow (perm)				1770	1863	1583		5085			6179	
Peak-hour factor, PHF	0.92	0.92	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	123	66	41	0	682	0	0	1152	359
RTOR Reduction (vph)	0	0	0	0	0	36	0	0	0	0	34	0
Lane Group Flow (vph)	0	0	0	123	66	5	0	682	0	0	1477	0
Turn Type				Prot	NA	Perm		NA			NA	
Protected Phases				3	8			2			6	
Permitted Phases						8						
Actuated Green, G (s)				11.6	11.6	11.6		69.4			69.4	
Effective Green, g (s)				11.6	11.6	11.6		69.4			69.4	
Actuated g/C Ratio				0.13	0.13	0.13		0.77			0.77	
Clearance Time (s)				4.5	4.5	4.5		4.5			4.5	
Vehicle Extension (s)				3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)				228	240	204		3921			4764	
v/s Ratio Prot				c0.07	0.04			0.13			c0.24	
v/s Ratio Perm						0.00						
v/c Ratio				0.54	0.28	0.03		0.17			0.31	
Uniform Delay, d1				36.7	35.4	34.3		2.7			3.1	
Progression Factor				1.00	1.00	1.00		0.36			0.23	
Incremental Delay, d2				2.4	0.6	0.1		0.1			0.1	
Delay (s)				39.1	36.0	34.3		1.1			0.8	
Level of Service				D	D	C		A			A	
Approach Delay (s)		0.0			37.4			1.1			0.8	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	4.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	361	65	49	91	0	165	0	1263	169	137	775	0
Future Volume (vph)	361	65	49	91	0	165	0	1263	169	137	775	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	0.97	1.00	1.00	1.00		1.00		0.95	1.00	1.00	0.91	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1863	1583	1770		1583		3539	1583	1770	5085	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	1863	1583	1770		1583		3539	1583	1770	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	392	71	53	99	0	179	0	1373	184	149	842	0
RTOR Reduction (vph)	0	0	46	0	0	0	0	0	73	0	0	0
Lane Group Flow (vph)	392	71	7	99	0	179	0	1373	111	149	842	0
Turn Type	Split	NA	Perm	Prot		Prot		NA	Perm	Prot	NA	
Protected Phases	3	3		4		4		6		5	2	
Permitted Phases			3						6			
Actuated Green, G (s)	11.5	11.5	11.5	12.5		12.5		38.5	38.5	9.5	52.5	
Effective Green, g (s)	11.5	11.5	11.5	12.5		12.5		38.5	38.5	9.5	52.5	
Actuated g/C Ratio	0.13	0.13	0.13	0.14		0.14		0.43	0.43	0.11	0.58	
Clearance Time (s)	4.5	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	
Lane Grp Cap (vph)	438	238	202	245		219		1513	677	186	2966	
v/s Ratio Prot	c0.11	0.04		0.06		c0.11		c0.39		c0.08	0.17	
v/s Ratio Perm			0.00						0.07			
v/c Ratio	0.89	0.30	0.03	0.40		0.82		0.91	0.16	0.80	0.28	
Uniform Delay, d1	38.7	35.6	34.4	35.4		37.6		24.1	15.8	39.3	9.4	
Progression Factor	1.12	1.11	1.00	1.00		1.00		1.21	2.30	1.35	0.43	
Incremental Delay, d2	20.1	2.6	0.3	4.9		27.5		7.5	0.4	28.4	0.2	
Delay (s)	63.4	42.2	34.6	40.2		65.2		36.7	36.8	81.5	4.3	
Level of Service	E	D	C	D		E		D	D	F	A	
Approach Delay (s)		57.5			56.3			36.7			15.9	
Approach LOS		E			E			D			B	

Intersection Summary			
HCM 2000 Control Delay	35.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	351	148	17	47	45	292	20	454	71	114	20	169
Future Volume (vph)	351	148	17	47	45	292	20	454	71	114	20	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Lane Util. Factor	0.97	1.00		1.00	0.95			0.95			1.00	1.00
Frt	1.00	0.98		1.00	0.87			0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.96	1.00
Satd. Flow (prot)	3433	1835		1770	3079			3464			1787	1583
Flt Permitted	0.95	1.00		0.95	1.00			1.00			0.96	1.00
Satd. Flow (perm)	3433	1835		1770	3079			3464			1787	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)	382	161	18	51	49	317	22	493	77	124	22	184
RTOR Reduction (vph)	0	5	0	0	286	0	0	13	0	0	0	165
Lane Group Flow (vph)	382	174	0	51	80	0	0	579	0	0	146	19
Turn Type	Split	NA		Split	NA		Split	NA		Split	NA	custom
Protected Phases	2	2		1	1		3	3		4	4	4
Permitted Phases												5
Actuated Green, G (s)	22.8	22.8		7.8	7.8			23.0			8.4	8.4
Effective Green, g (s)	22.8	22.8		7.8	7.8			23.0			8.4	8.4
Actuated g/C Ratio	0.29	0.29		0.10	0.10			0.29			0.11	0.11
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	978	522		172	300			995			187	166
v/s Ratio Prot	c0.11	0.09		c0.03	0.03			c0.17			c0.08	0.01
v/s Ratio Perm												
v/c Ratio	0.39	0.33		0.30	0.27			0.58			0.78	0.12
Uniform Delay, d1	23.0	22.6		33.6	33.4			24.4			34.9	32.4
Progression Factor	1.00	1.00		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	1.2	1.7		1.0	0.5			2.5			18.8	0.3
Delay (s)	24.2	24.3		34.5	33.9			26.9			53.7	32.8
Level of Service	C	C		C	C			C			D	C
Approach Delay (s)		24.2			34.0			26.9			42.0	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM 2000 Control Delay	30.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	159	19	52	241	98	160
Future Volume (vph)	159	19	52	241	98	160
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	173	21	57	262	107	174

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total (vph)	194	57	262	107	174
Volume Left (vph)	0	57	0	107	0
Volume Right (vph)	21	0	0	0	174
Hadj (s)	-0.03	0.53	0.03	0.53	-0.67
Departure Headway (s)	5.5	6.0	5.5	6.4	5.2
Degree Utilization, x	0.29	0.10	0.40	0.19	0.25
Capacity (veh/h)	625	567	624	533	651
Control Delay (s)	10.7	8.5	11.0	9.7	8.7
Approach Delay (s)	10.7	10.6		9.1	
Approach LOS	B	B		A	

Intersection Summary				
Delay	10.1			
Level of Service	B			
Intersection Capacity Utilization	28.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	252	5	62	6	6	13	51	619	7	7	261	235
Future Volume (vph)	252	5	62	6	6	13	51	619	7	7	261	235
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)	274	5	67	7	7	14	55	673	8	8	284	255

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total (vph)	346	28	55	673	8	8	284	255
Volume Left (vph)	274	7	55	0	0	8	0	0
Volume Right (vph)	67	14	0	0	8	0	0	255
Hadj (s)	0.08	-0.22	0.53	0.03	-0.67	0.53	0.03	-0.67
Departure Headway (s)	6.6	7.4	6.9	6.4	3.2	7.3	6.8	3.2
Degree Utilization, x	0.63	0.06	0.11	1.20	0.01	0.02	0.54	0.23
Capacity (veh/h)	531	434	508	566	1121	473	501	1122
Control Delay (s)	20.0	10.8	9.6	128.0	5.0	9.3	16.4	5.9
Approach Delay (s)	20.0	10.8	117.8			11.4		
Approach LOS	C	B	F			B		

Intersection Summary					
Delay	60.5				
Level of Service	F				
Intersection Capacity Utilization	70.6%	ICU Level of Service		C	
Analysis Period (min)	15				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	252	450	196	30	159	94	90	1013	0	75	768	311
Future Volume (vph)	252	450	196	30	159	94	90	1013	0	75	768	311
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.95		1.00	0.94		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3378		1770	3342		1770	3539		1770	3539	1583
Flt Permitted	0.35	1.00		0.38	1.00		0.34	1.00		0.95	1.00	1.00
Satd. Flow (perm)	659	3378		717	3342		629	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)	274	489	213	33	173	102	98	1101	0	82	835	338
RTOR Reduction (vph)	0	60	0	0	0	0	0	0	0	0	0	177
Lane Group Flow (vph)	274	642	0	33	275	0	98	1101	0	82	835	161
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Prot	NA	Perm
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4			6					2
Actuated Green, G (s)	28.6	28.6		12.7	12.7		40.3	40.3		7.6	43.0	43.0
Effective Green, g (s)	28.6	28.6		12.7	12.7		40.3	40.3		7.6	43.0	43.0
Actuated g/C Ratio	0.32	0.32		0.14	0.14		0.45	0.45		0.08	0.48	0.48
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
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)	350	1073		101	471		343	1584		149	1690	756
v/s Ratio Prot	c0.10	0.19			0.08		0.02	c0.31		0.05	c0.24	
v/s Ratio Perm	c0.15			0.05			0.11					0.10
v/c Ratio	0.78	0.60		0.33	0.58		0.29	0.70		0.55	0.49	0.21
Uniform Delay, d1	25.1	25.9		34.8	36.2		16.3	19.9		39.6	16.1	13.7
Progression Factor	0.60	0.48		1.00	1.00		0.64	0.71		1.37	0.45	0.12
Incremental Delay, d2	9.8	0.8		1.9	1.8		0.4	2.2		4.3	1.0	0.6
Delay (s)	25.0	13.1		36.7	38.0		10.9	16.4		58.6	8.2	2.3
Level of Service	C	B		D	D		B	B		E	A	A
Approach Delay (s)		16.5			37.9			15.9			9.9	
Approach LOS		B			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	65	41	109	13	65	28	95	165	20	12	32	26
Future Volume (vph)	65	41	109	13	65	28	95	165	20	12	32	26
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)	71	45	118	14	71	30	103	179	22	13	35	28

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1
Volume Total (vph)	116	118	115	304	76
Volume Left (vph)	71	0	14	103	13
Volume Right (vph)	0	118	30	22	28
Hadj (s)	0.34	-0.67	-0.10	0.06	-0.15
Departure Headway (s)	6.0	5.0	5.2	5.0	5.1
Degree Utilization, x	0.19	0.16	0.17	0.42	0.11
Capacity (veh/h)	563	676	628	693	642
Control Delay (s)	9.2	7.7	9.3	11.5	8.7
Approach Delay (s)	8.5		9.3	11.5	8.7
Approach LOS	A		A	B	A

Intersection Summary				
Delay	9.9			
Level of Service	A			
Intersection Capacity Utilization	41.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	322	484	116	0	274	14	68	766	147	41	829	124
Future Volume (vph)	322	484	116	0	274	14	68	766	147	41	829	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.97			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3437			3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.33	1.00			1.00	1.00	0.23	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)	622	3437			3539	1583	433	3539	1583	486	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)	350	526	126	0	298	15	74	833	160	45	901	135
RTOR Reduction (vph)	0	26	0	0	0	0	0	0	81	0	0	40
Lane Group Flow (vph)	350	626	0	0	298	15	74	833	79	45	901	95
Turn Type	pm+pt	NA			NA	Perm	Perm	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4			8			2			6	7
Permitted Phases	4					8	2		2	6		6
Actuated Green, G (s)	36.5	36.5			13.2	13.2	44.5	44.5	44.5	44.5	44.5	63.3
Effective Green, g (s)	36.5	36.5			13.2	13.2	44.5	44.5	44.5	44.5	44.5	63.3
Actuated g/C Ratio	0.41	0.41			0.15	0.15	0.49	0.49	0.49	0.49	0.49	0.70
Clearance Time (s)	4.5	4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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)	492	1393			519	232	214	1749	782	240	1749	1192
v/s Ratio Prot	c0.15	0.18			0.08			0.24			c0.25	0.02
v/s Ratio Perm	c0.14					0.01	0.17		0.05	0.09		0.04
v/c Ratio	0.71	0.45			0.57	0.06	0.35	0.48	0.10	0.19	0.52	0.08
Uniform Delay, d1	20.3	19.4			35.8	33.1	13.9	15.0	12.1	12.7	15.4	4.2
Progression Factor	0.60	0.53			1.40	1.51	1.00	1.00	1.00	1.09	1.09	0.15
Incremental Delay, d2	4.3	0.2			1.2	0.1	4.4	0.9	0.3	1.5	1.0	0.0
Delay (s)	16.5	10.5			51.2	50.1	18.3	16.0	12.4	15.4	17.7	0.6
Level of Service	B	B			D	D	B	B	B	B	B	A
Approach Delay (s)		12.6			51.1			15.6			15.5	
Approach LOS		B			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	67.5%	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												
Traffic Volume (vph)	71	589	23	80	312	77	6	78	231	82	28	30
Future Volume (vph)	71	589	23	80	312	77	6	78	231	82	28	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5			4.5			4.5	
Lane Util. Factor		0.95	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.98			0.90			0.97	
Flt Protected		0.99	1.00		0.99			1.00			0.97	
Satd. Flow (prot)		3520	1583		3423			1677			1757	
Flt Permitted		0.99	1.00		0.99			0.99			0.52	
Satd. Flow (perm)		3520	1583		3423			1670			938	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	77	640	25	87	339	84	7	85	251	89	30	33
RTOR Reduction (vph)	0	0	16	0	19	0	0	109	0	0	11	0
Lane Group Flow (vph)	0	717	9	0	491	0	0	234	0	0	141	0
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	
Protected Phases	2	2		1	1			8			4	
Permitted Phases			2				8			4		
Actuated Green, G (s)		32.4	32.4		17.4			26.7			26.7	
Effective Green, g (s)		32.4	32.4		17.4			26.7			26.7	
Actuated g/C Ratio		0.36	0.36		0.19			0.30			0.30	
Clearance Time (s)		4.5	4.5		4.5			4.5			4.5	
Vehicle Extension (s)		3.0	3.0		3.0			3.0			3.0	
Lane Grp Cap (vph)		1267	569		661			495			278	
v/s Ratio Prot		c0.20			c0.14							
v/s Ratio Perm			0.01					0.14			c0.15	
v/c Ratio		0.57	0.02		0.74			0.47			0.51	
Uniform Delay, d1		23.1	18.5		34.2			25.9			26.2	
Progression Factor		0.64	1.00		1.09			1.00			1.00	
Incremental Delay, d2		1.8	0.0		3.5			3.2			6.5	
Delay (s)		16.5	18.6		40.8			29.1			32.6	
Level of Service		B	B		D			C			C	
Approach Delay (s)		16.6			40.8			29.1			32.6	
Approach LOS		B			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	27.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	269	568	180	20	1770	0	0	643	25
Future Volume (vph)	0	0	0	269	568	180	20	1770	0	0	643	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.5	4.5		4.5	4.5			4.5	
Lane Util. Factor				0.86	0.86		1.00	0.91			0.91	
Frt				1.00	0.97		1.00	1.00			0.99	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1522	4630		1770	5085			5057	
Flt Permitted				0.95	1.00		0.35	1.00			1.00	
Satd. Flow (perm)				1522	4630		647	5085			5057	
Peak-hour factor, PHF	0.92	0.92	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	292	617	196	22	1924	0	0	699	27
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	4	0
Lane Group Flow (vph)	0	0	0	263	842	0	22	1924	0	0	722	0
Turn Type				Prot	NA		Perm	NA			NA	
Protected Phases				3	8			2			6	
Permitted Phases							2					
Actuated Green, G (s)				30.5	30.5		50.5	50.5			50.5	
Effective Green, g (s)				30.5	30.5		50.5	50.5			50.5	
Actuated g/C Ratio				0.34	0.34		0.56	0.56			0.56	
Clearance Time (s)				4.5	4.5		4.5	4.5			4.5	
Lane Grp Cap (vph)				515	1569		363	2853			2837	
v/s Ratio Prot				0.17	c0.18			c0.38			0.14	
v/s Ratio Perm							0.03					
v/c Ratio				0.51	0.54		0.06	0.67			0.25	
Uniform Delay, d1				23.8	24.0		9.0	13.9			10.1	
Progression Factor				1.00	1.00		0.86	0.66			0.96	
Incremental Delay, d2				3.6	1.3		0.1	0.6			0.2	
Delay (s)				27.4	25.4		7.9	9.8			9.9	
Level of Service				C	C		A	A			A	
Approach Delay (s)		0.0			25.8			9.8			9.9	
Approach LOS		A			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	243	66	84	0	0	0	0	611	93	56	977	0
Future Volume (vph)	243	66	84	0	0	0	0	611	93	56	977	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5						4.5		4.5	4.5	
Lane Util. Factor	0.91	0.91						0.91		1.00	0.91	
Frt	1.00	0.95						0.98		1.00	1.00	
Flt Protected	0.95	0.98						1.00		0.95	1.00	
Satd. Flow (prot)	1610	3159						4985		1770	5085	
Flt Permitted	0.95	0.98						1.00		0.30	1.00	
Satd. Flow (perm)	1610	3159						4985		561	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	264	72	91	0	0	0	0	664	101	61	1062	0
RTOR Reduction (vph)	0	57	0	0	0	0	0	22	0	0	0	0
Lane Group Flow (vph)	145	225	0	0	0	0	0	743	0	61	1062	0
Turn Type	Prot	NA						NA		pm+pt	NA	
Protected Phases	7	4						2		1	6	
Permitted Phases										6		
Actuated Green, G (s)	29.5	29.5						35.5		51.5	51.5	
Effective Green, g (s)	29.5	29.5						35.5		51.5	51.5	
Actuated g/C Ratio	0.33	0.33						0.39		0.57	0.57	
Clearance Time (s)	4.5	4.5						4.5		4.5	4.5	
Lane Grp Cap (vph)	527	1035						1966		475	2909	
v/s Ratio Prot	c0.09	0.07						0.15		0.02	c0.21	
v/s Ratio Perm										0.06		
v/c Ratio	0.28	0.22						0.38		0.13	0.37	
Uniform Delay, d1	22.4	21.9						19.4		11.9	10.4	
Progression Factor	1.00	1.00						0.95		0.37	0.40	
Incremental Delay, d2	1.3	0.5						0.4		0.5	0.3	
Delay (s)	23.6	22.4						18.9		5.0	4.5	
Level of Service	C	C						B		A	A	
Approach Delay (s)		22.8			0.0			18.9			4.5	
Approach LOS		C			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	968	193	114	936	124	98	704	120	103	657	122
Future Volume (vph)	91	968	193	114	936	124	98	704	120	103	657	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.98		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	3539	1583	1770	4996		1770	4974		1770	4966	
Flt Permitted	0.23	1.00	1.00	0.11	1.00		0.19	1.00		0.18	1.00	
Satd. Flow (perm)	436	3539	1583	200	4996		355	4974		331	4966	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	99	1052	210	124	1017	135	107	765	130	112	714	133
RTOR Reduction (vph)	0	0	43	0	19	0	0	27	0	0	30	0
Lane Group Flow (vph)	99	1052	167	124	1133	0	107	868	0	112	817	0
Turn Type	Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	35.5	35.5	43.0	46.5	46.5		31.0	23.5		29.0	22.5	
Effective Green, g (s)	35.5	35.5	43.0	46.5	46.5		31.0	23.5		29.0	22.5	
Actuated g/C Ratio	0.39	0.39	0.48	0.52	0.52		0.34	0.26		0.32	0.25	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	171	1395	756	216	2581		240	1298		210	1241	
v/s Ratio Prot		c0.30	0.02	c0.04	0.23		0.04	c0.17		c0.04	0.16	
v/s Ratio Perm	0.23		0.09	0.25			0.12			0.13		
v/c Ratio	0.58	0.75	0.22	0.57	0.44		0.45	0.67		0.53	0.66	
Uniform Delay, d1	21.4	23.5	13.7	15.6	13.6		31.5	29.8		33.3	30.3	
Progression Factor	0.58	0.57	0.51	1.00	1.00		0.56	0.38		0.80	0.61	
Incremental Delay, d2	10.8	3.0	0.5	10.6	0.5		5.8	2.7		9.1	2.7	
Delay (s)	23.2	16.5	7.5	26.3	14.1		23.4	14.1		35.8	21.1	
Level of Service	C	B	A	C	B		C	B		D	C	
Approach Delay (s)		15.6			15.3			15.1			22.8	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
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												
Traffic Volume (vph)	103	322	70	58	426	356	177	993	50	96	403	57
Future Volume (vph)	103	322	70	58	426	356	177	993	50	96	403	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3445		1770	3539	1583	1770	3539	1583	1770	4991	
Flt Permitted	0.35	1.00		0.38	1.00	1.00	0.46	1.00	1.00	0.20	1.00	
Satd. Flow (perm)	655	3445		714	3539	1583	854	3539	1583	378	4991	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	112	350	76	63	463	387	192	1079	54	104	438	62
RTOR Reduction (vph)	0	22	0	0	0	50	0	0	22	0	18	0
Lane Group Flow (vph)	112	404	0	63	463	337	192	1079	32	104	482	0
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	19.0	19.0		27.8	27.8	27.8	53.2	53.2	53.2	53.2	53.2	
Effective Green, g (s)	19.0	19.0		27.8	27.8	27.8	53.2	53.2	53.2	53.2	53.2	
Actuated g/C Ratio	0.21	0.21		0.31	0.31	0.31	0.59	0.59	0.59	0.59	0.59	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
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)	138	727		271	1093	488	504	2091	935	223	2950	
v/s Ratio Prot		0.12		0.01	0.13			c0.30			0.10	
v/s Ratio Perm	c0.17			0.06		c0.21	0.22		0.02	0.28		
v/c Ratio	0.81	0.56		0.23	0.42	0.69	0.38	0.52	0.03	0.47	0.16	
Uniform Delay, d1	33.8	31.7		27.4	24.7	27.3	9.7	10.8	7.7	10.4	8.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.73	0.75	1.17	0.55	0.39	
Incremental Delay, d2	29.1	0.9		0.4	0.3	4.0	1.9	0.8	0.1	6.6	0.1	
Delay (s)	62.9	32.7		27.8	25.0	31.4	8.9	8.9	9.1	12.3	3.4	
Level of Service	E	C		C	C	C	A	A	A	B	A	
Approach Delay (s)		38.9			27.9			8.9			4.9	
Approach LOS		D			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	18.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	952	265	118	869	303	288	699	153	246	312	49
Future Volume (vph)	47	952	265	118	869	303	288	699	153	246	312	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	1770	3467	
Flt Permitted	0.14	1.00	1.00	0.15	1.00	1.00	0.37	1.00	1.00	0.20	1.00	
Satd. Flow (perm)	263	3539	1583	270	3539	1583	698	3539	1583	367	3467	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	51	1035	288	128	945	329	313	760	166	267	339	53
RTOR Reduction (vph)	0	0	188	0	0	199	0	0	126	0	14	0
Lane Group Flow (vph)	51	1035	100	128	945	130	313	760	40	267	378	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	31.3	31.3	31.3	35.6	35.6	35.6	35.0	21.9	21.9	31.8	20.3	
Effective Green, g (s)	31.3	31.3	31.3	35.6	35.6	35.6	35.0	21.9	21.9	31.8	20.3	
Actuated g/C Ratio	0.35	0.35	0.35	0.40	0.40	0.40	0.39	0.24	0.24	0.35	0.23	
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)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	141	1230	550	228	1399	626	427	861	385	308	782	
v/s Ratio Prot	0.01	c0.29		0.05	c0.27		0.11	c0.21		c0.11	0.11	
v/s Ratio Perm	0.11		0.06	0.18		0.08	0.18		0.03	0.19		
v/c Ratio	0.36	0.84	0.18	0.56	0.68	0.21	0.73	0.88	0.10	0.87	0.48	
Uniform Delay, d1	22.2	27.1	20.4	31.5	22.4	17.9	20.7	32.8	26.4	23.5	30.3	
Progression Factor	1.00	1.00	1.00	0.76	0.69	0.21	0.72	0.70	0.42	0.95	1.04	
Incremental Delay, d2	1.6	7.1	0.7	2.2	1.9	0.5	5.7	9.6	0.1	21.3	0.5	
Delay (s)	23.8	34.1	21.2	26.3	17.3	4.2	20.6	32.7	11.3	43.7	32.0	
Level of Service	C	C	C	C	B	A	C	C	B	D	C	
Approach Delay (s)		31.0			15.1			26.8			36.7	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	25.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	80.8%	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												
Traffic Volume (vph)	158	71	95	157	129	523	54	451	69	303	233	130
Future Volume (vph)	158	71	95	157	129	523	54	451	69	303	233	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	0.91	0.91		1.00	1.00	1.00	0.97	0.95	1.00	0.97	0.95	
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1610	3134		1770	1863	1583	3433	3539	1583	3433	3349	
Flt Permitted	0.67	0.84		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1132	2651		1770	1863	1583	3433	3539	1583	3433	3349	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	172	77	103	171	140	568	59	490	75	329	253	141
RTOR Reduction (vph)	0	87	0	0	0	345	0	0	50	0	74	0
Lane Group Flow (vph)	110	155	0	171	140	223	59	490	25	329	320	0
Turn Type	Perm	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4					8			2			
Actuated Green, G (s)	13.6	13.6		13.4	31.5	31.5	5.1	29.7	29.7	15.3	39.9	
Effective Green, g (s)	13.6	13.6		13.4	31.5	31.5	5.1	29.7	29.7	15.3	39.9	
Actuated g/C Ratio	0.15	0.15		0.15	0.35	0.35	0.06	0.33	0.33	0.17	0.44	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
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)	171	400		263	652	554	194	1167	522	583	1484	
v/s Ratio Prot				c0.10	0.08		0.02	c0.14		c0.10	0.10	
v/s Ratio Perm	c0.10	0.06				0.14			0.02			
v/c Ratio	0.64	0.39		0.65	0.21	0.40	0.30	0.42	0.05	0.56	0.22	
Uniform Delay, d1	35.9	34.4		36.1	20.6	22.1	40.7	23.4	20.5	34.3	15.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.69	0.54	
Incremental Delay, d2	8.0	0.6		5.6	0.2	0.5	0.9	1.1	0.2	1.1	0.3	
Delay (s)	43.9	35.1		41.7	20.7	22.6	41.6	24.6	20.7	24.8	8.7	
Level of Service	D	D		D	C	C	D	C	C	C	A	
Approach Delay (s)		37.8			26.0			25.7			16.0	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	24.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	62.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	229	237	1	0	646	363	5	660	35	189	276	187
Future Volume (vph)	229	237	1	0	646	363	5	660	35	189	276	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00			0.95		1.00	0.99		1.00	0.94	
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3537			3348		1770	3512		1770	3325	
Flt Permitted	0.95	1.00			1.00		0.40	1.00		0.26	1.00	
Satd. Flow (perm)	1770	3537			3348		750	3512		484	3325	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	249	258	1	0	702	395	5	717	38	205	300	203
RTOR Reduction (vph)	0	0	0	0	71	0	0	3	0	0	106	0
Lane Group Flow (vph)	249	259	0	0	1026	0	5	752	0	205	397	0
Turn Type	Prot	NA			NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	17.4	54.4			32.5		46.6	46.6		46.6	46.6	
Effective Green, g (s)	17.4	54.4			32.5		46.6	46.6		46.6	46.6	
Actuated g/C Ratio	0.16	0.49			0.30		0.42	0.42		0.42	0.42	
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	279	1749			989		317	1487		205	1408	
v/s Ratio Prot	c0.14	0.07			c0.31			0.21			0.12	
v/s Ratio Perm							0.01			c0.42		
v/c Ratio	0.89	0.15			1.04		0.02	0.51		1.00	0.28	
Uniform Delay, d1	45.4	15.2			38.8		18.4	23.2		31.7	20.7	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	28.0	0.0			38.7		0.1	1.2		62.9	0.5	
Delay (s)	73.3	15.2			77.5		18.5	24.5		94.6	21.2	
Level of Service	E	B			E		B	C		F	C	
Approach Delay (s)		43.7			77.5			24.4			42.5	
Approach LOS		D			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	50.7	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)	13.5
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	95	179	32	196	27	533	892	28	9	346	101
Future Volume (vph)	108	95	179	32	196	27	533	892	28	9	346	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		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	0.91	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00		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	1829		1770	3523		1770	4913	
Flt Permitted	0.37	1.00	1.00	0.69	1.00		0.43	1.00		0.21	1.00	
Satd. Flow (perm)	695	1863	1583	1286	1829		792	3523		399	4913	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	117	103	195	35	213	29	579	970	30	10	376	110
RTOR Reduction (vph)	0	0	157	0	6	0	0	2	0	0	53	0
Lane Group Flow (vph)	117	103	38	35	236	0	579	998	0	10	433	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	17.5	17.5	17.5	17.5	17.5		63.5	63.5		25.5	25.5	
Effective Green, g (s)	17.5	17.5	17.5	17.5	17.5		63.5	63.5		25.5	25.5	
Actuated g/C Ratio	0.19	0.19	0.19	0.19	0.19		0.71	0.71		0.28	0.28	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
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)	135	362	307	250	355		922	2485		113	1392	
v/s Ratio Prot		0.06			0.13		c0.23	0.28			0.09	
v/s Ratio Perm	c0.17		0.02	0.03			c0.21			0.03		
v/c Ratio	0.87	0.28	0.12	0.14	0.67		0.63	0.40		0.09	0.31	
Uniform Delay, d1	35.1	30.9	29.9	30.0	33.5		9.9	5.4		23.7	25.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.69	0.64		1.00	1.00	
Incremental Delay, d2	40.3	0.4	0.2	0.3	4.7		1.1	0.4		1.5	0.6	
Delay (s)	75.4	31.3	30.1	30.3	38.2		8.0	3.9		25.2	25.9	
Level of Service	E	C	C	C	D		A	A		C	C	
Approach Delay (s)		43.2			37.2			5.4			25.9	
Approach LOS		D			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
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												
Traffic Volume (veh/h)	0	0	81	0	0	0	100	1125	646	0	708	51
Future Volume (Veh/h)	0	0	81	0	0	0	100	1125	646	0	708	51
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	88	0	0	0	109	1223	702	0	770	55
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								206			797	
pX, platoon unblocked	0.67	0.67		0.67	0.67	0.67				0.67		
vC, conflicting volume	1627	2238	284	1786	2266	612	825			1223		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	959	1868	284	1195	1909	0	825			358		
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	88	100	100	100	86			100		
cM capacity (veh/h)	127	42	713	75	39	729	801			805		

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	88	109	612	612	702	308	308	209
Volume Left	0	109	0	0	0	0	0	0
Volume Right	88	0	0	0	702	0	0	55
cSH	713	801	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.12	0.14	0.36	0.36	0.41	0.18	0.18	0.12
Queue Length 95th (ft)	11	12	0	0	0	0	0	0
Control Delay (s)	10.8	10.2	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	B						
Approach Delay (s)	10.8	0.5				0.0		
Approach LOS	B							

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	43.3%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	930	22	33	63	0	39	0	902	15	3	785	0
Future Volume (vph)	930	22	33	63	0	39	0	902	15	3	785	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5		4.5		4.5		4.5	4.5	
Lane Util. Factor	0.97	1.00		1.00		1.00		0.91		1.00	0.91	
Frt	1.00	0.91		1.00		0.85		1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)	3433	1695		1770		1583		5073		1770	5085	
Flt Permitted	0.95	1.00		0.95		1.00		1.00		0.24	1.00	
Satd. Flow (perm)	3433	1695		1770		1583		5073		442	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1011	24	36	68	0	42	0	980	16	3	853	0
RTOR Reduction (vph)	0	27	0	0	0	40	0	1	0	0	0	0
Lane Group Flow (vph)	1011	33	0	68	0	2	0	995	0	3	853	0
Turn Type	pm+pt	NA		Prot		Perm		NA		Perm	NA	
Protected Phases	7	4		3				2			6	
Permitted Phases	4					8				6		
Actuated Green, G (s)	34.3	22.3		7.5		3.3		46.7		46.7	46.7	
Effective Green, g (s)	34.3	22.3		7.5		3.3		46.7		46.7	46.7	
Actuated g/C Ratio	0.38	0.25		0.08		0.04		0.52		0.52	0.52	
Clearance Time (s)	4.5	4.5		4.5		4.5		4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0		3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	1308	419		147		58		2632		229	2638	
v/s Ratio Prot	c0.23	0.02		0.04				c0.20			0.17	
v/s Ratio Perm	0.07					0.00				0.01		
v/c Ratio	0.77	0.08		0.46		0.03		0.38		0.01	0.32	
Uniform Delay, d1	24.4	26.0		39.3		41.8		13.0		10.5	12.5	
Progression Factor	0.35	0.24		1.00		1.00		0.45		0.76	0.71	
Incremental Delay, d2	2.1	0.1		2.3		0.2		0.3		0.1	0.3	
Delay (s)	10.7	6.4		41.6		42.0		6.1		8.1	9.2	
Level of Service	B	A		D		D		A		A	A	
Approach Delay (s)		10.4			41.8			6.1			9.2	
Approach LOS		B			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	59.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	1011	0	0	1208	23	415	884	242	0	0	0
Future Volume (vph)	78	1011	0	0	1208	23	415	884	242	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	4.5				
Lane Util. Factor	1.00	0.95			0.91		0.86	0.86				
Frt	1.00	1.00			1.00		1.00	0.97				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1770	3539			5071		1522	4648				
Flt Permitted	0.15	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	273	3539			5071		1522	4648				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	1099	0	0	1313	25	451	961	263	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	43	0	0	0	0
Lane Group Flow (vph)	85	1099	0	0	1336	0	406	1226	0	0	0	0
Turn Type	Perm	NA			NA		pm+pt	NA				
Protected Phases		4			8		6	2				
Permitted Phases	4						2					
Actuated Green, G (s)	47.5	47.5			47.5		33.5	33.5				
Effective Green, g (s)	47.5	47.5			47.5		33.5	33.5				
Actuated g/C Ratio	0.53	0.53			0.53		0.37	0.37				
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5				
Lane Grp Cap (vph)	144	1867			2676		566	1730				
v/s Ratio Prot		0.31			0.26		c0.27	0.26				
v/s Ratio Perm	c0.31											
v/c Ratio	0.59	0.59			0.50		0.72	0.71				
Uniform Delay, d1	14.6	14.6			13.6		24.2	24.1				
Progression Factor	1.00	1.00			0.85		1.00	1.00				
Incremental Delay, d2	16.5	1.4			0.6		7.6	2.5				
Delay (s)	31.1	15.9			12.2		31.8	26.6				
Level of Service	C	B			B		C	C				
Approach Delay (s)		17.0			12.2			27.8			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	62.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	97	495	21	190	1091	0	0	154	39
Future Volume (vph)	0	0	0	97	495	21	190	1091	0	0	154	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5		4.5	4.5			4.5	
Lane Util. Factor					0.91		1.00	0.95			0.95	
Frt					0.99		1.00	1.00			0.97	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					5019		1770	3539			3433	
Flt Permitted					0.99		0.62	1.00			1.00	
Satd. Flow (perm)					5019		1156	3539			3433	
Peak-hour factor, PHF	0.92	0.92	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	105	538	23	207	1186	0	0	167	42
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	16	0
Lane Group Flow (vph)	0	0	0	0	662	0	207	1186	0	0	193	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					24.5		56.5	56.5			56.5	
Effective Green, g (s)					24.5		56.5	56.5			56.5	
Actuated g/C Ratio					0.27		0.63	0.63			0.63	
Clearance Time (s)					4.5		4.5	4.5			4.5	
Lane Grp Cap (vph)					1366		725	2221			2155	
v/s Ratio Prot								c0.34			0.06	
v/s Ratio Perm					0.13		0.18					
v/c Ratio					0.48		0.29	0.53			0.09	
Uniform Delay, d1					27.5		7.6	9.4			6.6	
Progression Factor					0.25		0.35	0.32			1.00	
Incremental Delay, d2					1.1		0.8	0.7			0.1	
Delay (s)					7.8		3.4	3.7			6.7	
Level of Service					A		A	A			A	
Approach Delay (s)		0.0			7.8			3.6			6.7	
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	0.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑						↑↑			↑↑	
Traffic Volume (vph)	91	289	21	0	0	0	0	1190	186	0	251	0
Future Volume (vph)	91	289	21	0	0	0	0	1190	186	0	251	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5			4.5	
Lane Util. Factor		0.95						0.95			0.95	
Frt		0.99						0.98			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		3472						3467			3539	
Flt Permitted		0.99						1.00			1.00	
Satd. Flow (perm)		3472						3467			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)	99	314	23	0	0	0	0	1293	202	0	273	0
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	431	0	0	0	0	0	1495	0	0	273	0
Turn Type	Perm	NA						NA			NA	
Protected Phases		4						2			6	
Permitted Phases	4											
Actuated Green, G (s)		20.5						60.5			60.5	
Effective Green, g (s)		20.5						60.5			60.5	
Actuated g/C Ratio		0.23						0.67			0.67	
Clearance Time (s)		4.5						4.5			4.5	
Lane Grp Cap (vph)		790						2330			2378	
v/s Ratio Prot								c0.43			0.08	
v/s Ratio Perm		0.12										
v/c Ratio		0.55						0.64			0.11	
Uniform Delay, d1		30.6						8.5			5.2	
Progression Factor		1.00						0.62			1.36	
Incremental Delay, d2		2.7						1.0			0.1	
Delay (s)		33.4						6.3			7.2	
Level of Service		C						A			A	
Approach Delay (s)		33.4			0.0			6.3			7.2	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	124	695	114	72	414	245	150	1115	73	87	400	163
Future Volume (vph)	124	695	114	72	414	245	150	1115	73	87	400	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.98		1.00	0.94		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3464		1770	3342		1770	3507		1770	3539	1583
Flt Permitted	0.25	1.00		0.17	1.00		0.48	1.00		0.12	1.00	1.00
Satd. Flow (perm)	474	3464		317	3342		900	3507		229	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)	135	755	124	78	450	266	163	1212	79	95	435	177
RTOR Reduction (vph)	0	15	0	0	34	0	0	5	0	0	0	82
Lane Group Flow (vph)	135	864	0	78	682	0	163	1286	0	95	435	95
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	32.5	32.5		32.5	32.5		48.5	48.5		48.5	48.5	48.5
Effective Green, g (s)	32.5	32.5		32.5	32.5		48.5	48.5		48.5	48.5	48.5
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.54	0.54		0.54	0.54	0.54
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Grp Cap (vph)	171	1250		114	1206		485	1889		123	1907	853
v/s Ratio Prot		0.25			0.20			0.37			0.12	
v/s Ratio Perm	c0.29			0.25			0.18			c0.41		0.06
v/c Ratio	0.79	0.69		0.68	0.57		0.34	0.68		0.77	0.23	0.11
Uniform Delay, d1	25.7	24.5		24.4	23.1		11.7	15.1		16.4	10.9	10.2
Progression Factor	1.00	1.00		0.74	0.70		0.52	0.45		0.89	0.80	0.40
Incremental Delay, d2	30.0	3.2		27.9	1.9		1.4	1.6		36.6	0.3	0.3
Delay (s)	55.7	27.6		46.0	18.1		7.5	8.4		51.2	9.0	4.4
Level of Service	E	C		D	B		A	A		D	A	A
Approach Delay (s)		31.4			20.8			8.3			13.5	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	80.0%	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												
Traffic Volume (vph)	112	828	127	94	484	236	137	1037	85	86	462	176
Future Volume (vph)	112	828	127	94	484	236	137	1037	85	86	462	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		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	3469		1770	3539	1583	1770	3499		1770	3393	
Flt Permitted	0.40	1.00		0.14	1.00	1.00	0.32	1.00		0.12	1.00	
Satd. Flow (perm)	737	3469		262	3539	1583	601	3499		219	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)	122	900	138	102	526	257	149	1127	92	93	502	191
RTOR Reduction (vph)	0	13	0	0	0	28	0	7	0	0	44	0
Lane Group Flow (vph)	122	1025	0	102	526	229	149	1212	0	93	649	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	37.5	37.5		37.5	37.5	37.5	43.5	43.5		43.5	43.5	
Effective Green, g (s)	37.5	37.5		37.5	37.5	37.5	43.5	43.5		43.5	43.5	
Actuated g/C Ratio	0.42	0.42		0.42	0.42	0.42	0.48	0.48		0.48	0.48	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	307	1445		109	1474	659	290	1691		105	1639	
v/s Ratio Prot		0.30			0.15			0.35			0.19	
v/s Ratio Perm	0.17			c0.39		0.14	0.25			c0.42		
v/c Ratio	0.40	0.71		0.94	0.36	0.35	0.51	0.72		0.89	0.40	
Uniform Delay, d1	18.4	21.7		25.1	18.0	17.9	16.0	18.4		21.0	14.9	
Progression Factor	1.00	1.00		0.47	0.39	0.28	1.00	1.00		0.85	0.84	
Incremental Delay, d2	3.8	3.0		65.6	0.6	1.3	6.4	2.6		59.6	0.7	
Delay (s)	22.2	24.7		77.4	7.6	6.2	22.4	21.0		77.5	13.1	
Level of Service	C	C		E	A	A	C	C		E	B	
Approach Delay (s)		24.4			15.3			21.2			20.7	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	20.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	748	105	96	464	309	280
Future Volume (vph)	748	105	96	464	309	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3474		1770	3539	3433	1583
Flt Permitted	1.00		0.25	1.00	0.95	1.00
Satd. Flow (perm)	3474		458	3539	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	813	114	104	504	336	304
RTOR Reduction (vph)	12	0	0	0	0	108
Lane Group Flow (vph)	915	0	104	504	336	196
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	50.5		50.5	50.5	30.5	30.5
Effective Green, g (s)	50.5		50.5	50.5	30.5	30.5
Actuated g/C Ratio	0.56		0.56	0.56	0.34	0.34
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Lane Grp Cap (vph)	1949		256	1985	1163	536
v/s Ratio Prot	c0.26			0.14	0.10	
v/s Ratio Perm			0.23			c0.12
v/c Ratio	0.47		0.41	0.25	0.29	0.37
Uniform Delay, d1	11.8		11.2	10.1	21.8	22.5
Progression Factor	0.27		0.84	0.81	0.62	0.34
Incremental Delay, d2	0.6		4.5	0.3	0.5	1.5
Delay (s)	3.8		13.9	8.5	13.9	9.1
Level of Service	A		B	A	B	A
Approach Delay (s)	3.8			9.5	11.6	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	809	129	69	574	81	184	425	140	32	190	64
Future Volume (vph)	86	809	129	69	574	81	184	425	140	32	190	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.98		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1770	3466		1770	3474			3398			3401	
Flt Permitted	0.31	1.00		0.18	1.00			0.76			0.82	
Satd. Flow (perm)	582	3466		339	3474			2617			2817	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	93	879	140	75	624	88	200	462	152	35	207	70
RTOR Reduction (vph)	0	14	0	0	12	0	0	22	0	0	30	0
Lane Group Flow (vph)	93	1005	0	75	700	0	0	792	0	0	282	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	43.3	43.3		43.3	43.3			37.7			37.7	
Effective Green, g (s)	43.3	43.3		43.3	43.3			37.7			37.7	
Actuated g/C Ratio	0.48	0.48		0.48	0.48			0.42			0.42	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Lane Grp Cap (vph)	280	1667		163	1671			1096			1180	
v/s Ratio Prot		c0.29			0.20							
v/s Ratio Perm	0.16			0.22				c0.30			0.10	
v/c Ratio	0.33	0.60		0.46	0.42			0.72			0.24	
Uniform Delay, d1	14.4	17.1		15.6	15.2			21.8			16.9	
Progression Factor	0.39	0.36		1.14	1.14			1.00			0.42	
Incremental Delay, d2	2.2	1.1		8.7	0.7			4.1			0.5	
Delay (s)	7.8	7.2		26.3	18.0			25.9			7.5	
Level of Service	A	A		C	B			C			A	
Approach Delay (s)		7.3			18.8			25.9			7.5	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	437	653	304	157	610	36	230	561	82	38	557	377
Future Volume (vph)	437	653	304	157	610	36	230	561	82	38	557	377
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.96		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3229		1770	3510		1770	3539	1583	1770	3539	1583
Flt Permitted	0.16	0.63		0.24	1.00		0.27	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)	276	2028		444	3510		498	3539	1583	538	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)	475	710	330	171	663	39	250	610	89	41	605	410
RTOR Reduction (vph)	0	46	0	0	5	0	0	0	53	0	0	39
Lane Group Flow (vph)	380	1089	0	171	697	0	250	610	36	41	605	371
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4		3	8		5	2			6	7
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	44.4	44.4		26.6	20.1		36.6	36.6	36.6	22.6	22.6	42.4
Effective Green, g (s)	44.4	44.4		26.6	20.1		36.6	36.6	36.6	22.6	22.6	42.4
Actuated g/C Ratio	0.49	0.49		0.30	0.22		0.41	0.41	0.41	0.25	0.25	0.47
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
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)	429	1264		226	783		336	1439	643	135	888	745
v/s Ratio Prot	c0.19	c0.19		0.05	0.20		c0.08	0.17			0.17	0.11
v/s Ratio Perm	c0.24	0.24		0.17			c0.22		0.02	0.08		0.12
v/c Ratio	0.89	0.86		0.76	0.89		0.74	0.42	0.06	0.30	0.68	0.50
Uniform Delay, d1	22.4	20.1		24.7	33.9		29.1	19.1	16.2	27.3	30.4	16.4
Progression Factor	1.04	0.47		1.00	1.00		0.73	0.65	0.45	1.00	1.00	1.00
Incremental Delay, d2	13.8	4.3		13.5	12.3		4.7	0.5	0.1	5.7	4.2	0.5
Delay (s)	37.1	13.8		38.2	46.2		26.0	12.9	7.4	33.0	34.7	17.0
Level of Service	D	B		D	D		C	B	A	C	C	B
Approach Delay (s)		19.6			44.6			15.8			27.7	
Approach LOS		B			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	25.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	483	408	10	6	245	164	17	313	4	95	132	208
Future Volume (vph)	483	408	10	6	245	164	17	313	4	95	132	208
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
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		1.00	0.94		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1856		1770	1751		1770	1859		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.62	1.00		0.25	1.00	1.00
Satd. Flow (perm)	1770	1856		1770	1751		1157	1859		464	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)	525	443	11	7	266	178	18	340	4	103	143	226
RTOR Reduction (vph)	0	1	0	0	27	0	0	1	0	0	0	173
Lane Group Flow (vph)	525	453	0	7	417	0	18	343	0	103	143	53
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	32.2	54.2		1.0	23.0		21.3	21.3		21.3	21.3	21.3
Effective Green, g (s)	32.2	54.2		1.0	23.0		21.3	21.3		21.3	21.3	21.3
Actuated g/C Ratio	0.36	0.60		0.01	0.26		0.24	0.24		0.24	0.24	0.24
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
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)	633	1117		19	447		273	439		109	440	374
v/s Ratio Prot	c0.30	0.24		0.00	c0.24			0.18			0.08	
v/s Ratio Perm							0.02			c0.22		0.03
v/c Ratio	0.83	0.41		0.37	0.93		0.07	0.78		0.94	0.33	0.14
Uniform Delay, d1	26.4	9.4		44.2	32.8		26.6	32.2		33.8	28.4	27.1
Progression Factor	0.76	0.29		1.00	1.00		1.00	1.00		0.71	0.75	0.80
Incremental Delay, d2	7.5	0.2		11.7	26.6		0.5	13.0		56.4	1.3	0.5
Delay (s)	27.6	2.9		55.9	59.3		27.1	45.2		80.3	22.5	22.3
Level of Service	C	A		E	E		C	D		F	C	C
Approach Delay (s)		16.1			59.3			44.3			35.0	
Approach LOS		B			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	33.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	86.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	725	210	106	472	255	274
Future Volume (vph)	725	210	106	472	255	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3420		1770	3539	1770	1583
Flt Permitted	1.00		0.23	1.00	0.95	1.00
Satd. Flow (perm)	3420		430	3539	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	788	228	115	513	277	298
RTOR Reduction (vph)	30	0	0	0	0	147
Lane Group Flow (vph)	986	0	115	513	277	151
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Actuated Green, G (s)	55.5		55.5	55.5	25.5	25.5
Effective Green, g (s)	55.5		55.5	55.5	25.5	25.5
Actuated g/C Ratio	0.62		0.62	0.62	0.28	0.28
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Lane Grp Cap (vph)	2109		265	2182	501	448
v/s Ratio Prot	c0.29			0.14	c0.16	
v/s Ratio Perm			0.27			0.10
v/c Ratio	0.47		0.43	0.24	0.55	0.34
Uniform Delay, d1	9.3		9.0	7.7	27.4	25.6
Progression Factor	0.31		1.37	0.62	1.00	1.00
Incremental Delay, d2	0.6		5.0	0.2	4.3	2.0
Delay (s)	3.5		17.3	5.0	31.8	27.6
Level of Service	A		B	A	C	C
Approach Delay (s)	3.5			7.3	29.6	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	5	19	210	14	104	25	898	60	20	374	12
Future Volume (vph)	14	5	19	210	14	104	25	898	60	20	374	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt		0.93		1.00	0.87		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1703		1770	1616		1770	3539	1583	1770	3523	
Flt Permitted		0.90		0.73	1.00		0.51	1.00	1.00	0.26	1.00	
Satd. Flow (perm)		1556		1360	1616		943	3539	1583	480	3523	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	15	5	21	228	15	113	27	976	65	22	407	13
RTOR Reduction (vph)	0	16	0	0	69	0	0	0	21	0	2	0
Lane Group Flow (vph)	0	25	0	228	59	0	27	976	44	22	418	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		20.6		20.6	20.6		60.4	60.4	60.4	60.4	60.4	
Effective Green, g (s)		20.6		20.6	20.6		60.4	60.4	60.4	60.4	60.4	
Actuated g/C Ratio		0.23		0.23	0.23		0.67	0.67	0.67	0.67	0.67	
Clearance Time (s)		4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		356		311	369		632	2375	1062	322	2364	
v/s Ratio Prot					0.04			c0.28			0.12	
v/s Ratio Perm		0.02		c0.17			0.03		0.03	0.05		
v/c Ratio		0.07		0.73	0.16		0.04	0.41	0.04	0.07	0.18	
Uniform Delay, d1		27.2		32.2	27.8		5.0	6.7	5.0	5.1	5.5	
Progression Factor		1.00		1.00	1.00		2.54	2.90	5.63	1.00	1.00	
Incremental Delay, d2		0.1		8.6	0.2		0.1	0.4	0.1	0.4	0.2	
Delay (s)		27.3		40.8	28.0		12.8	19.8	28.2	5.5	5.7	
Level of Service		C		D	C		B	B	C	A	A	
Approach Delay (s)		27.3			36.2			20.2			5.7	
Approach LOS		C			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	20.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	20	17	821	209	12	526
Future Volume (Veh/h)	20	17	821	209	12	526
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)	22	18	892	227	13	572
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						576
pX, platoon unblocked						
vC, conflicting volume	1318	560			1119	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1318	560			1119	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	85	96			98	
cM capacity (veh/h)	146	472			620	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	22	18	595	524	13	286	286
Volume Left	22	0	0	0	13	0	0
Volume Right	0	18	0	227	0	0	0
cSH	146	472	1700	1700	620	1700	1700
Volume to Capacity	0.15	0.04	0.35	0.31	0.02	0.17	0.17
Queue Length 95th (ft)	13	3	0	0	2	0	0
Control Delay (s)	34.0	12.9	0.0	0.0	10.9	0.0	0.0
Lane LOS	D	B			B		
Approach Delay (s)	24.5		0.0		0.2		
Approach LOS	C						

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	39.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1110	67	67	1038	122	109
Future Volume (vph)	1110	67	67	1038	122	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3509		1770	3539	1770	1583
Flt Permitted	1.00		0.14	1.00	0.95	1.00
Satd. Flow (perm)	3509		260	3539	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1207	73	73	1128	133	118
RTOR Reduction (vph)	8	0	0	0	0	35
Lane Group Flow (vph)	1272	0	73	1128	133	83
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	28.7		28.7	28.7	22.3	22.3
Effective Green, g (s)	28.7		28.7	28.7	22.3	22.3
Actuated g/C Ratio	0.48		0.48	0.48	0.37	0.37
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1678		124	1692	657	588
v/s Ratio Prot	c0.36			0.32	c0.08	
v/s Ratio Perm			0.28			0.05
v/c Ratio	0.76		0.59	0.67	0.20	0.14
Uniform Delay, d1	12.8		11.4	12.0	12.8	12.5
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0		7.0	1.0	0.7	0.5
Delay (s)	14.8		18.3	13.0	13.5	13.0
Level of Service	B		B	B	B	B
Approach Delay (s)	14.8			13.3	13.3	
Approach LOS	B			B	B	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	180	55	68	0	854	0	0	853	112
Future Volume (vph)	0	0	0	180	55	68	0	854	0	0	853	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.5	4.5	4.5		4.5			4.5	
Lane Util. Factor				1.00	1.00	1.00		0.91			0.86	
Frt				1.00	1.00	0.85		1.00			0.98	
Flt Protected				0.95	1.00	1.00		1.00			1.00	
Satd. Flow (prot)				1770	1863	1583		5085			6296	
Flt Permitted				0.95	1.00	1.00		1.00			1.00	
Satd. Flow (perm)				1770	1863	1583		5085			6296	
Peak-hour factor, PHF	0.92	0.92	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	196	60	74	0	928	0	0	927	122
RTOR Reduction (vph)	0	0	0	0	0	61	0	0	0	0	15	0
Lane Group Flow (vph)	0	0	0	196	60	13	0	928	0	0	1034	0
Turn Type				Prot	NA	Perm		NA			NA	
Protected Phases				3	8			2			6	
Permitted Phases						8						
Actuated Green, G (s)				15.4	15.4	15.4		65.6			65.6	
Effective Green, g (s)				15.4	15.4	15.4		65.6			65.6	
Actuated g/C Ratio				0.17	0.17	0.17		0.73			0.73	
Clearance Time (s)				4.5	4.5	4.5		4.5			4.5	
Vehicle Extension (s)				3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)				302	318	270		3706			4589	
v/s Ratio Prot				c0.11	0.03			c0.18			0.16	
v/s Ratio Perm						0.01						
v/c Ratio				0.65	0.19	0.05		0.25			0.23	
Uniform Delay, d1				34.8	31.9	31.2		4.0			4.0	
Progression Factor				1.00	1.00	1.00		0.53			0.46	
Incremental Delay, d2				4.8	0.3	0.1		0.2			0.1	
Delay (s)				39.5	32.2	31.2		2.3			1.9	
Level of Service				D	C	C		A			A	
Approach Delay (s)		0.0			36.3			2.3			1.9	
Approach LOS		A			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	247	62	15	11	157	100	14	39	7	189	69	196
Future Volume (vph)	247	62	15	11	157	100	14	39	7	189	69	196
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Lane Util. Factor	0.97	1.00		1.00	0.95			0.95			1.00	1.00
Frt	1.00	0.97		1.00	0.94			0.98			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.96	1.00
Satd. Flow (prot)	3433	1809		1770	3333			3434			1797	1583
Flt Permitted	0.95	1.00		0.70	1.00			0.99			0.96	1.00
Satd. Flow (perm)	3433	1809		1310	3333			3434			1797	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)	268	67	16	12	171	109	15	42	8	205	75	213
RTOR Reduction (vph)	0	7	0	0	68	0	0	7	0	0	0	138
Lane Group Flow (vph)	268	76	0	12	212	0	0	58	0	0	280	75
Turn Type	Prot	NA		Perm	NA		Split	NA		Split	NA	custom
Protected Phases	5	2			6		3	3		4	4	4
Permitted Phases				6								5
Actuated Green, G (s)	12.3	50.6		33.8	33.8			6.5			19.4	31.7
Effective Green, g (s)	12.3	50.6		33.8	33.8			6.5			19.4	31.7
Actuated g/C Ratio	0.14	0.56		0.38	0.38			0.07			0.22	0.35
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	469	1017		491	1251			248			387	636
v/s Ratio Prot	c0.08	0.04			c0.06			c0.02			c0.16	0.03
v/s Ratio Perm				0.01								0.02
v/c Ratio	0.57	0.07		0.02	0.17			0.23			0.72	0.12
Uniform Delay, d1	36.4	9.0		17.7	18.7			39.4			32.8	19.7
Progression Factor	1.38	0.34		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	1.6	0.1		0.0	0.1			2.2			6.6	0.1
Delay (s)	51.9	3.2		17.7	18.8			41.6			39.4	19.8
Level of Service	D	A		B	B			D			D	B
Approach Delay (s)		40.4			18.8			41.6			30.9	
Approach LOS		D			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	235	23	95	209	59	58
Future Volume (vph)	235	23	95	209	59	58
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	255	25	103	227	64	63

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total (vph)	280	103	227	64	63
Volume Left (vph)	0	103	0	64	0
Volume Right (vph)	25	0	0	0	63
Hadj (s)	-0.02	0.53	0.03	0.53	-0.67
Departure Headway (s)	5.0	5.7	5.2	6.5	5.3
Degree Utilization, x	0.39	0.16	0.33	0.12	0.09
Capacity (veh/h)	687	612	674	512	620
Control Delay (s)	11.3	8.6	9.5	9.2	7.6
Approach Delay (s)	11.3	9.2		8.4	
Approach LOS	B	A		A	

Intersection Summary				
Delay	9.8			
Level of Service	A			
Intersection Capacity Utilization	32.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	203	4	86	3	4	7	74	377	7	9	383	226
Future Volume (vph)	203	4	86	3	4	7	74	377	7	9	383	226
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)	221	4	93	3	4	8	80	410	8	10	416	246

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total (vph)	318	15	80	410	8	10	416	246
Volume Left (vph)	221	3	80	0	0	10	0	0
Volume Right (vph)	93	8	0	0	8	0	0	246
Hadj (s)	0.00	-0.25	0.53	0.03	-0.67	0.53	0.03	-0.67
Departure Headway (s)	6.4	7.2	6.9	6.4	3.2	7.0	6.5	3.2
Degree Utilization, x	0.57	0.03	0.15	0.73	0.01	0.02	0.75	0.22
Capacity (veh/h)	526	406	501	542	1121	493	536	1122
Control Delay (s)	17.4	10.5	10.0	23.7	5.0	8.9	25.3	5.9
Approach Delay (s)	17.4	10.5	21.2			18.0		
Approach LOS	C	B	C			C		

Intersection Summary				
Delay	18.9			
Level of Service	C			
Intersection Capacity Utilization	57.6%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	169	155	25	362	42	264	722	0	30	882	450
Future Volume (vph)	108	169	155	25	362	42	264	722	0	30	882	450
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.93		1.00	0.98		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3286		1770	3484		1770	3539		1770	3539	1583
Flt Permitted	0.23	1.00		0.54	1.00		0.22	1.00		0.95	1.00	1.00
Satd. Flow (perm)	431	3286		1008	3484		407	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)	117	184	168	27	393	46	287	785	0	33	959	489
RTOR Reduction (vph)	0	122	0	0	0	0	0	0	0	0	0	169
Lane Group Flow (vph)	117	230	0	27	439	0	287	785	0	33	959	320
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Prot	NA	Perm
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4			6					2
Actuated Green, G (s)	24.8	24.8		15.9	15.9		47.9	47.9		3.8	35.4	35.4
Effective Green, g (s)	24.8	24.8		15.9	15.9		47.9	47.9		3.8	35.4	35.4
Actuated g/C Ratio	0.28	0.28		0.18	0.18		0.53	0.53		0.04	0.39	0.39
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
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)	184	905		178	615		463	1883		74	1392	622
v/s Ratio Prot	c0.03	0.07			0.13		c0.11	0.22		0.02	c0.27	
v/s Ratio Perm	c0.14			0.03			0.22					0.20
v/c Ratio	0.64	0.25		0.15	0.71		0.62	0.42		0.45	0.69	0.52
Uniform Delay, d1	26.5	25.4		31.3	34.9		21.7	12.7		42.1	22.7	20.8
Progression Factor	0.84	0.72		1.00	1.00		0.49	0.26		1.42	0.61	0.31
Incremental Delay, d2	6.9	0.1		0.4	3.9		2.1	0.6		3.7	2.5	2.7
Delay (s)	29.1	18.3		31.7	38.8		12.9	3.9		63.3	16.4	9.2
Level of Service	C	B		C	D		B	A		E	B	A
Approach Delay (s)		21.0			38.4			6.3			15.1	
Approach LOS		C			D			A			B	

Intersection Summary				
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0	
Intersection Capacity Utilization	71.3%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	50	25	65	7	106	3	370	94	12	6	48	63
Future Volume (vph)	50	25	65	7	106	3	370	94	12	6	48	63
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	27	71	8	115	3	402	102	13	7	52	68

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1
Volume Total (vph)	81	71	126	517	127
Volume Left (vph)	54	0	8	402	7
Volume Right (vph)	0	71	3	13	68
Hadj (s)	0.37	-0.67	0.03	0.17	-0.28
Departure Headway (s)	6.8	5.8	6.1	5.1	5.2
Degree Utilization, x	0.15	0.11	0.21	0.73	0.19
Capacity (veh/h)	477	556	527	686	626
Control Delay (s)	9.9	8.3	10.7	20.8	9.4
Approach Delay (s)	9.1		10.7	20.8	9.4
Approach LOS	A		B	C	A

Intersection Summary				
Delay	15.9			
Level of Service	C			
Intersection Capacity Utilization	51.0%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	537	27	2	959	52	14	878	170
Future Volume (vph)	0	0	0	0	537	27	2	959	52	14	878	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor					0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt					1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected					1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)					3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted					1.00	1.00	0.23	1.00	1.00	0.20	1.00	1.00
Satd. Flow (perm)					3539	1583	429	3539	1583	371	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	0	584	29	2	1042	57	15	954	185
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	26	0	0	27
Lane Group Flow (vph)	0	0	0	0	584	29	2	1042	31	15	954	158
Turn Type	pm+pt				NA	Perm	Perm	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4			8			2			6	7
Permitted Phases	4					8	2		2	6		6
Actuated Green, G (s)					21.7	21.7	49.0	49.0	49.0	49.0	49.0	54.8
Effective Green, g (s)					21.7	21.7	49.0	49.0	49.0	49.0	49.0	54.8
Actuated g/C Ratio					0.24	0.24	0.54	0.54	0.54	0.54	0.54	0.61
Clearance Time (s)					4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)					3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)					853	381	233	1926	861	201	1926	1043
v/s Ratio Prot					c0.17			c0.29			0.27	c0.01
v/s Ratio Perm						0.02	0.00		0.02	0.04		0.09
v/c Ratio					0.68	0.08	0.01	0.54	0.04	0.07	0.50	0.15
Uniform Delay, d1					31.0	26.4	9.4	13.2	9.5	9.7	12.8	7.6
Progression Factor					1.65	1.74	1.00	1.00	1.00	0.45	0.38	0.12
Incremental Delay, d2					1.4	0.1	0.1	1.1	0.1	0.6	0.7	0.1
Delay (s)					52.6	45.9	9.4	14.3	9.6	5.0	5.6	1.0
Level of Service					D	D	A	B	A	A	A	A
Approach Delay (s)		0.0			52.2			14.1			4.8	
Approach LOS		A			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	119	11	187	540	413	4	19	27	27	34	20
Future Volume (vph)	32	119	11	187	540	413	4	19	27	27	34	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5			4.5			4.5	
Lane Util. Factor		0.95	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.95			0.93			0.97	
Flt Protected		0.99	1.00		0.99			1.00			0.98	
Satd. Flow (prot)		3502	1583		3320			1721			1771	
Flt Permitted		0.99	1.00		0.99			0.98			0.90	
Satd. Flow (perm)		3502	1583		3320			1701			1622	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	35	129	12	203	587	449	4	21	29	29	37	22
RTOR Reduction (vph)	0	0	9	0	95	0	0	23	0	0	14	0
Lane Group Flow (vph)	0	164	3	0	1144	0	0	31	0	0	74	0
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	
Protected Phases	2	2		1	1			8			4	
Permitted Phases			2				8			4		
Actuated Green, G (s)		22.3	22.3		36.1			18.1			18.1	
Effective Green, g (s)		22.3	22.3		36.1			18.1			18.1	
Actuated g/C Ratio		0.25	0.25		0.40			0.20			0.20	
Clearance Time (s)		4.5	4.5		4.5			4.5			4.5	
Vehicle Extension (s)		3.0	3.0		3.0			3.0			3.0	
Lane Grp Cap (vph)		867	392		1331			342			326	
v/s Ratio Prot		c0.05			c0.34							
v/s Ratio Perm			0.00					0.02			c0.05	
v/c Ratio		0.19	0.01		0.86			0.09			0.23	
Uniform Delay, d1		26.7	25.5		24.6			29.3			30.1	
Progression Factor		1.05	1.00		0.64			1.00			1.00	
Incremental Delay, d2		0.5	0.0		3.1			0.5			1.6	
Delay (s)		28.6	25.5		18.9			29.8			31.7	
Level of Service		C	C		B			C			C	
Approach Delay (s)		28.4			18.9			29.8			31.7	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	21.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	489	1787	233	117	962	0	0	880	56
Future Volume (vph)	0	0	0	489	1787	233	117	962	0	0	880	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.5	4.5		4.5	4.5			4.5	
Lane Util. Factor				0.86	0.86		1.00	0.91			0.95	
Frt				1.00	0.98		1.00	1.00			0.99	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1522	4719		1770	5085			3507	
Flt Permitted				0.95	1.00		0.21	1.00			1.00	
Satd. Flow (perm)				1522	4719		383	5085			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)	0	0	0	532	1942	253	127	1046	0	0	957	61
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	479	2248	0	127	1046	0	0	1018	0
Turn Type				Prot	NA		Perm	NA			NA	
Protected Phases				3	8			2			6	
Permitted Phases							2					
Actuated Green, G (s)				32.5	32.5		48.5	48.5			48.5	
Effective Green, g (s)				32.5	32.5		48.5	48.5			48.5	
Actuated g/C Ratio				0.36	0.36		0.54	0.54			0.54	
Clearance Time (s)				4.5	4.5		4.5	4.5			4.5	
Lane Grp Cap (vph)				549	1704		206	2740			1889	
v/s Ratio Prot				0.31	c0.48			0.21			0.29	
v/s Ratio Perm							c0.33					
v/c Ratio				0.87	1.32		0.62	0.38			0.54	
Uniform Delay, d1				26.8	28.8		14.3	12.0			13.5	
Progression Factor				1.00	1.00		0.87	0.70			0.87	
Incremental Delay, d2				17.2	147.9		10.1	0.3			0.5	
Delay (s)				44.1	176.7		22.5	8.8			12.2	
Level of Service				D	F		C	A			B	
Approach Delay (s)		0.0			153.4			10.2			12.2	
Approach LOS		A			F			B			B	

Intersection Summary			
HCM 2000 Control Delay	90.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	58	18	115	62	39	0	638	120	65	1015	336
Future Volume (vph)	0	58	18	115	62	39	0	638	120	65	1015	336
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00		0.95	1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	0.96	
Flt Protected		1.00	1.00	0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1863	1583	1770	1863	1583		3539	1583	1770	3407	
Flt Permitted		1.00	1.00	0.95	1.00	1.00		1.00	1.00	0.22	1.00	
Satd. Flow (perm)		1863	1583	1770	1863	1583		3539	1583	405	3407	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	63	20	125	67	42	0	693	130	71	1103	365
RTOR Reduction (vph)	0	0	16	0	0	34	0	0	85	0	36	0
Lane Group Flow (vph)	0	63	4	125	67	8	0	693	45	71	1432	0
Turn Type		NA	Perm	Split	NA	Perm		NA	Perm	pm+pt	NA	
Protected Phases		4		8	8			2		1	6	
Permitted Phases			4			8			2	6		
Actuated Green, G (s)		18.1	18.1	18.1	18.1	18.1		30.1	30.1	40.3	40.3	
Effective Green, g (s)		18.1	18.1	18.1	18.1	18.1		30.1	30.1	40.3	40.3	
Actuated g/C Ratio		0.20	0.20	0.20	0.20	0.20		0.33	0.33	0.45	0.45	
Clearance Time (s)		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Lane Grp Cap (vph)		374	318	355	374	318		1183	529	267	1525	
v/s Ratio Prot		c0.03		c0.07	0.04			0.20		0.02	c0.42	
v/s Ratio Perm			0.00			0.01			0.03	0.10		
v/c Ratio		0.17	0.01	0.35	0.18	0.03		0.59	0.09	0.27	0.94	
Uniform Delay, d1		29.7	28.8	30.9	29.8	28.9		24.8	20.5	15.7	23.7	
Progression Factor		1.00	1.00	1.00	1.00	1.00		1.00	1.33	0.54	0.87	
Incremental Delay, d2		1.0	0.1	2.7	1.0	0.2		1.8	0.3	1.4	8.3	
Delay (s)		30.7	28.9	33.6	30.8	29.0		26.7	27.6	9.9	28.9	
Level of Service		C	C	C	C	C		C	C	A	C	
Approach Delay (s)		30.3			32.0			26.8			28.0	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	28.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	508	101	118	1261	48	125	420	132	80	1197	160
Future Volume (vph)	49	508	101	118	1261	48	125	420	132	80	1197	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		1.00	0.95	1.00	1.00	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)	1770	3539	1583	1770	5057		1770	3539	1583	1770	3539	1583
Flt Permitted	0.19	1.00	1.00	0.22	1.00		0.10	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	345	3539	1583	411	5057		186	3539	1583	834	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)	53	552	110	128	1371	52	136	457	143	87	1301	174
RTOR Reduction (vph)	0	0	50	0	5	0	0	0	79	0	0	73
Lane Group Flow (vph)	53	552	60	128	1418	0	136	457	64	87	1301	101
Turn Type	Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	21.6	21.6	28.3	31.2	31.2		46.7	40.0	40.0	43.9	38.6	38.6
Effective Green, g (s)	21.6	21.6	28.3	31.2	31.2		46.7	40.0	40.0	43.9	38.6	38.6
Actuated g/C Ratio	0.24	0.24	0.31	0.35	0.35		0.52	0.44	0.44	0.49	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
Lane Grp Cap (vph)	82	849	497	219	1753		214	1572	703	461	1517	678
v/s Ratio Prot		0.16	0.01	0.03	c0.28		c0.05	0.13		0.01	c0.37	
v/s Ratio Perm	0.15		0.03	0.17			0.28		0.04	0.08		0.06
v/c Ratio	0.65	0.65	0.12	0.58	0.81		0.64	0.29	0.09	0.19	0.86	0.15
Uniform Delay, d1	30.8	30.8	22.0	21.8	26.7		33.0	15.9	14.5	14.9	23.2	15.7
Progression Factor	0.86	0.86	0.82	1.00	1.00		1.97	1.73	6.16	0.41	0.66	0.36
Incremental Delay, d2	32.6	3.8	0.5	10.9	4.2		11.5	0.4	0.2	0.8	6.1	0.4
Delay (s)	59.2	30.1	18.5	32.8	30.8		76.5	28.0	89.3	7.0	21.5	6.1
Level of Service	E	C	B	C	C		E	C	F	A	C	A
Approach Delay (s)		30.5			31.0			48.9			19.0	
Approach LOS		C			C			D			B	

Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	118	64	51	768	149	59	270	13	147	988	248
Future Volume (vph)	57	118	64	51	768	149	59	270	13	147	988	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3352		1770	3539	1583	1770	3539	1583	1770	4932	
Flt Permitted	0.18	1.00		0.63	1.00	1.00	0.15	1.00	1.00	0.57	1.00	
Satd. Flow (perm)	327	3352		1169	3539	1583	279	3539	1583	1067	4932	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	62	128	70	55	835	162	64	293	14	160	1074	270
RTOR Reduction (vph)	0	52	0	0	0	69	0	0	6	0	35	0
Lane Group Flow (vph)	62	146	0	55	835	93	64	293	8	160	1309	0
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	22.8	22.8		31.6	31.6	31.6	49.4	49.4	49.4	49.4	49.4	
Effective Green, g (s)	22.8	22.8		31.6	31.6	31.6	49.4	49.4	49.4	49.4	49.4	
Actuated g/C Ratio	0.25	0.25		0.35	0.35	0.35	0.55	0.55	0.55	0.55	0.55	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
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)	82	849		439	1242	555	153	1942	868	585	2707	
v/s Ratio Prot		0.04		0.01	c0.24			0.08			c0.27	
v/s Ratio Perm	c0.19			0.04		0.06	0.23		0.00	0.15		
v/c Ratio	0.76	0.17		0.13	0.67	0.17	0.42	0.15	0.01	0.27	0.48	
Uniform Delay, d1	31.0	26.2		19.9	24.8	20.1	11.9	10.0	9.2	10.8	12.5	
Progression Factor	1.00	1.00		0.78	0.84	0.79	1.11	0.99	1.00	0.34	0.30	
Incremental Delay, d2	32.1	0.1		0.1	1.1	0.1	8.1	0.2	0.0	1.0	0.6	
Delay (s)	63.1	26.3		15.6	22.0	16.0	21.3	10.0	9.2	4.7	4.2	
Level of Service	E	C		B	C	B	C	B	A	A	A	
Approach Delay (s)		35.1			20.8			11.9			4.3	
Approach LOS		D			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	452	203	258	1278	351	162	381	61	152	368	30
Future Volume (vph)	53	452	203	258	1278	351	162	381	61	152	368	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	1770	3499	
Flt Permitted	0.11	1.00	1.00	0.36	1.00	1.00	0.56	1.00	1.00	0.56	1.00	
Satd. Flow (perm)	213	3539	1583	675	3539	1583	1035	3539	1583	1035	3499	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	58	491	221	280	1389	382	176	414	66	165	400	33
RTOR Reduction (vph)	0	0	135	0	0	178	0	0	54	0	7	0
Lane Group Flow (vph)	58	491	86	280	1389	204	176	414	12	165	426	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	39.3	35.0	35.0	51.9	43.1	43.1	16.1	16.1	16.1	15.7	15.7	
Effective Green, g (s)	39.3	35.0	35.0	51.9	43.1	43.1	16.1	16.1	16.1	15.7	15.7	
Actuated g/C Ratio	0.44	0.39	0.39	0.58	0.48	0.48	0.18	0.18	0.18	0.17	0.17	
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)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	167	1376	615	540	1694	758	257	633	283	249	610	
v/s Ratio Prot	0.02	0.14		c0.07	c0.39		0.07	c0.12		0.06	c0.12	
v/s Ratio Perm	0.13		0.05	0.23		0.13	0.05		0.01	0.05		
v/c Ratio	0.35	0.36	0.14	0.52	0.82	0.27	0.68	0.65	0.04	0.66	0.70	
Uniform Delay, d1	17.2	19.5	17.8	10.3	20.1	14.0	34.3	34.4	30.6	33.9	34.9	
Progression Factor	1.99	0.55	1.74	0.71	0.61	0.15	0.92	0.92	1.00	0.61	0.62	
Incremental Delay, d2	1.1	0.6	0.4	0.1	0.4	0.1	7.0	2.3	0.1	6.4	3.5	
Delay (s)	35.2	11.3	31.3	7.3	12.6	2.2	38.6	33.9	30.6	27.3	25.3	
Level of Service	D	B	C	A	B	A	D	C	C	C	C	
Approach Delay (s)		18.8			10.0			34.8			25.8	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	69	73	108	130	342	41	182	103	437	152	241
Future Volume (vph)	118	69	73	108	130	342	41	182	103	437	152	241
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	0.91	0.91		1.00	1.00	1.00	0.97	0.95	1.00	0.97	0.95	
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1610	3151		1770	1863	1583	3433	3539	1583	3433	3213	
Flt Permitted	0.67	0.86		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1131	2734		1770	1863	1583	3433	3539	1583	3433	3213	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	128	75	79	117	141	372	45	198	112	475	165	262
RTOR Reduction (vph)	0	68	0	0	0	265	0	0	74	0	124	0
Lane Group Flow (vph)	87	127	0	117	141	107	45	198	38	475	303	0
Turn Type	Perm	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4					8			2			
Actuated Green, G (s)	12.4	12.4		9.1	26.0	26.0	3.0	30.7	30.7	19.8	47.5	
Effective Green, g (s)	12.4	12.4		9.1	26.0	26.0	3.0	30.7	30.7	19.8	47.5	
Actuated g/C Ratio	0.14	0.14		0.10	0.29	0.29	0.03	0.34	0.34	0.22	0.53	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
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)	155	376		178	538	457	114	1207	539	755	1695	
v/s Ratio Prot				c0.07	0.08		0.01	0.06		c0.14	c0.09	
v/s Ratio Perm	c0.08	0.05				0.07			0.02			
v/c Ratio	0.56	0.34		0.66	0.26	0.24	0.39	0.16	0.07	0.63	0.18	
Uniform Delay, d1	36.3	35.1		38.9	24.6	24.4	42.6	20.7	20.0	31.8	11.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.71	0.41	
Incremental Delay, d2	4.6	0.5		8.5	0.3	0.3	2.2	0.3	0.3	1.5	0.2	
Delay (s)	40.8	35.6		47.4	24.9	24.7	44.9	21.0	20.3	23.9	4.7	
Level of Service	D	D		D	C	C	D	C	C	C	A	
Approach Delay (s)		37.2			28.9			23.8			14.8	
Approach LOS		D			C			C			B	

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	211	5	0	410	186	1	175	43	230	504	556
Future Volume (vph)	62	211	5	0	410	186	1	175	43	230	504	556
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00			0.95		1.00	0.97		1.00	0.92	
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3528			3374		1770	3434		1770	3261	
Flt Permitted	0.95	1.00			1.00		0.15	1.00		0.60	1.00	
Satd. Flow (perm)	1770	3528			3374		284	3434		1126	3261	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	229	5	0	446	202	1	190	47	250	548	604
RTOR Reduction (vph)	0	3	0	0	78	0	0	22	0	0	202	0
Lane Group Flow (vph)	67	231	0	0	570	0	1	215	0	250	950	0
Turn Type	Prot	NA			NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	5.6	26.1			16.0		34.9	34.9		34.9	34.9	
Effective Green, g (s)	5.6	26.1			16.0		34.9	34.9		34.9	34.9	
Actuated g/C Ratio	0.08	0.37			0.23		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	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	141	1315			771		141	1712		561	1625	
v/s Ratio Prot	c0.04	0.07			c0.17			0.06			c0.29	
v/s Ratio Perm							0.00			0.22		
v/c Ratio	0.48	0.18			0.74		0.01	0.13		0.45	0.58	
Uniform Delay, d1	30.8	14.7			25.1		8.8	9.4		11.3	12.4	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.5	0.1			3.7		0.1	0.2		2.6	1.5	
Delay (s)	33.3	14.8			28.8		8.9	9.5		13.9	14.0	
Level of Service	C	B			C		A	A		B	B	
Approach Delay (s)		18.9			28.8			9.5			13.9	
Approach LOS		B			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	70	170	29	156	11	193	270	13	12	1184	157
Future Volume (vph)	82	70	170	29	156	11	193	270	13	12	1184	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		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	0.91	
Frt	1.00	1.00	0.85	1.00	0.99		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	1844		1770	3515		1770	4996	
Flt Permitted	0.46	1.00	1.00	0.71	1.00		0.12	1.00		0.56	1.00	
Satd. Flow (perm)	851	1863	1583	1318	1844		225	3515		1052	4996	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	89	76	185	32	170	12	210	293	14	13	1287	171
RTOR Reduction (vph)	0	0	156	0	3	0	0	3	0	0	14	0
Lane Group Flow (vph)	89	76	29	32	179	0	210	304	0	13	1444	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	14.0	14.0	14.0	14.0	14.0		67.0	67.0		51.7	51.7	
Effective Green, g (s)	14.0	14.0	14.0	14.0	14.0		67.0	67.0		51.7	51.7	
Actuated g/C Ratio	0.16	0.16	0.16	0.16	0.16		0.74	0.74		0.57	0.57	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
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)	132	289	246	205	286		352	2616		604	2869	
v/s Ratio Prot		0.04			0.10		c0.07	0.09			0.29	
v/s Ratio Perm	c0.10		0.02	0.02			c0.37			0.01		
v/c Ratio	0.67	0.26	0.12	0.16	0.62		0.60	0.12		0.02	0.50	
Uniform Delay, d1	35.8	33.5	32.7	32.9	35.5		7.7	3.2		8.3	11.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.79	0.37		1.00	1.00	
Incremental Delay, d2	12.8	0.5	0.2	0.4	4.2		2.7	0.1		0.1	0.6	
Delay (s)	48.6	33.9	32.9	33.2	39.8		16.4	1.3		8.3	12.1	
Level of Service	D	C	C	C	D		B	A		A	B	
Approach Delay (s)		37.1			38.8			7.4			12.1	
Approach LOS		D			D			A			B	

Intersection Summary				
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.63			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	65.5%	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												
Traffic Volume (veh/h)	0	0	65	0	0	0	58	377	240	0	1374	233
Future Volume (Veh/h)	0	0	65	0	0	0	58	377	240	0	1374	233
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	71	0	0	0	63	410	261	0	1493	253
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								206			797	
pX, platoon unblocked	0.90	0.90	0.89	0.90	0.90	0.99	0.89			0.99		
vC, conflicting volume	1950	2156	624	1105	2282	205	1746			410		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1602	1830	169	663	1970	172	1422			380		
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	91	100	100	100	85			100		
cM capacity (veh/h)	56	58	757	251	47	831	425			1162		

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	71	63	205	205	261	597	597	552
Volume Left	0	63	0	0	0	0	0	0
Volume Right	71	0	0	0	261	0	0	253
cSH	757	425	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.09	0.15	0.12	0.12	0.15	0.35	0.35	0.32
Queue Length 95th (ft)	8	13	0	0	0	0	0	0
Control Delay (s)	10.2	15.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	B						
Approach Delay (s)	10.2	1.3				0.0		
Approach LOS	B							

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	42.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	194	38	16	20	0	12	0	469	48	38	1401	0
Future Volume (vph)	194	38	16	20	0	12	0	469	48	38	1401	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5		4.5		4.5		4.5	4.5	
Lane Util. Factor	0.97	1.00		1.00		1.00		0.91		1.00	0.91	
Frt	1.00	0.96		1.00		0.85		0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)	3433	1781		1770		1583		5015		1770	5085	
Flt Permitted	0.95	1.00		0.95		1.00		1.00		0.43	1.00	
Satd. Flow (perm)	3433	1781		1770		1583		5015		802	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	211	41	17	22	0	13	0	510	52	41	1523	0
RTOR Reduction (vph)	0	15	0	0	0	13	0	9	0	0	0	0
Lane Group Flow (vph)	211	43	0	22	0	0	0	553	0	41	1523	0
Turn Type	pm+pt	NA		Prot		Perm		NA		Perm	NA	
Protected Phases	7	4		3				2			6	
Permitted Phases	4					8				6		
Actuated Green, G (s)	18.1	9.5		4.1		1.1		62.9		62.9	62.9	
Effective Green, g (s)	18.1	9.5		4.1		1.1		62.9		62.9	62.9	
Actuated g/C Ratio	0.20	0.11		0.05		0.01		0.70		0.70	0.70	
Clearance Time (s)	4.5	4.5		4.5		4.5		4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0		3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	690	187		80		19		3504		560	3553	
v/s Ratio Prot	c0.04	0.02		0.01				0.11			c0.30	
v/s Ratio Perm	0.02					0.00				0.05		
v/c Ratio	0.31	0.23		0.28		0.01		0.16		0.07	0.43	
Uniform Delay, d1	30.6	36.9		41.5		43.9		4.6		4.3	5.8	
Progression Factor	0.82	0.64		1.00		1.00		0.16		0.50	0.40	
Incremental Delay, d2	0.2	0.6		1.9		0.2		0.1		0.2	0.4	
Delay (s)	25.4	24.3		43.4		44.1		0.8		2.4	2.7	
Level of Service	C	C		D		D		A		A	A	
Approach Delay (s)		25.2			43.6			0.8			2.7	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	561	0	0	1526	20	122	164	97	0	0	0
Future Volume (vph)	64	561	0	0	1526	20	122	164	97	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	4.5				
Lane Util. Factor	1.00	0.95			0.91		0.86	0.86				
Frt	1.00	1.00			1.00		1.00	0.95				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1770	3539			5075		1522	4542				
Flt Permitted	0.11	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	207	3539			5075		1522	4542				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	70	610	0	0	1659	22	133	178	105	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	82	0	0	0	0
Lane Group Flow (vph)	70	610	0	0	1679	0	105	229	0	0	0	0
Turn Type	Perm	NA			NA		pm+pt	NA				
Protected Phases		4			8		6	2				
Permitted Phases	4						2					
Actuated Green, G (s)	61.5	61.5			61.5		19.5	19.5				
Effective Green, g (s)	61.5	61.5			61.5		19.5	19.5				
Actuated g/C Ratio	0.68	0.68			0.68		0.22	0.22				
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5				
Lane Grp Cap (vph)	141	2418			3467		329	984				
v/s Ratio Prot		0.17			0.33		c0.07	0.05				
v/s Ratio Perm	c0.34											
v/c Ratio	0.50	0.25			0.48		0.32	0.23				
Uniform Delay, d1	6.8	5.5			6.7		29.7	29.1				
Progression Factor	1.00	1.00			0.16		1.00	1.00				
Incremental Delay, d2	12.0	0.3			0.3		2.5	0.6				
Delay (s)	18.8	5.7			1.4		32.2	29.6				
Level of Service	B	A			A		C	C				
Approach Delay (s)		7.1			1.4			30.3			0.0	
Approach LOS		A			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	306	1593	61	88	164	0	0	344	42
Future Volume (vph)	0	0	0	306	1593	61	88	164	0	0	344	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5		4.5	4.5			4.5	
Lane Util. Factor					0.91		1.00	0.95			0.95	
Frt					1.00		1.00	1.00			0.98	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					5022		1770	3539			3481	
Flt Permitted					0.99		0.38	1.00			1.00	
Satd. Flow (perm)					5022		703	3539			3481	
Peak-hour factor, PHF	0.92	0.92	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	333	1732	66	96	178	0	0	374	46
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	0	0	0	2127	0	96	178	0	0	409	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					60.5		20.5	20.5			20.5	
Effective Green, g (s)					60.5		20.5	20.5			20.5	
Actuated g/C Ratio					0.67		0.23	0.23			0.23	
Clearance Time (s)					4.5		4.5	4.5			4.5	
Lane Grp Cap (vph)					3375		160	806			792	
v/s Ratio Prot								0.05			0.12	
v/s Ratio Perm					0.42		c0.14					
v/c Ratio					0.63		0.60	0.22			0.52	
Uniform Delay, d1					8.4		31.1	28.3			30.4	
Progression Factor					0.25		0.68	0.66			1.00	
Incremental Delay, d2					0.1		15.3	0.6			2.4	
Delay (s)					2.2		36.4	19.3			32.8	
Level of Service					A		D	B			C	
Approach Delay (s)		0.0			2.2			25.2			32.8	
Approach LOS		A			A			C			C	

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)	90.0	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	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	136	155	0	0	0	0	216	171	0	650	0
Future Volume (vph)	36	136	155	0	0	0	0	216	171	0	650	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5			4.5	
Lane Util. Factor		0.95						0.95			0.95	
Frt		0.93						0.93			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		3270						3305			3539	
Flt Permitted		0.99						1.00			1.00	
Satd. Flow (perm)		3270						3305			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)	39	148	168	0	0	0	0	235	186	0	707	0
RTOR Reduction (vph)	0	111	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	244	0	0	0	0	0	421	0	0	707	0
Turn Type	Perm	NA						NA			NA	
Protected Phases		4						2			6	
Permitted Phases	4											
Actuated Green, G (s)		30.5						50.5			50.5	
Effective Green, g (s)		30.5						50.5			50.5	
Actuated g/C Ratio		0.34						0.56			0.56	
Clearance Time (s)		4.5						4.5			4.5	
Lane Grp Cap (vph)		1108						1854			1985	
v/s Ratio Prot								0.13			c0.20	
v/s Ratio Perm		0.07										
v/c Ratio		0.22						0.23			0.36	
Uniform Delay, d1		21.3						9.9			10.8	
Progression Factor		1.00						0.67			0.54	
Incremental Delay, d2		0.5						0.3			0.4	
Delay (s)		21.7						7.0			6.3	
Level of Service		C						A			A	
Approach Delay (s)		21.7			0.0			7.0			6.3	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	90.0	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	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	392	176	102	757	124	71	333	53	172	933	96
Future Volume (vph)	34	392	176	102	757	124	71	333	53	172	933	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.95		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3375		1770	3464		1770	3466		1770	3539	1583
Flt Permitted	0.15	1.00		0.32	1.00		0.20	1.00		0.49	1.00	1.00
Satd. Flow (perm)	281	3375		605	3464		370	3466		911	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)	37	426	191	111	823	135	77	362	58	187	1014	104
RTOR Reduction (vph)	0	49	0	0	15	0	0	14	0	0	0	30
Lane Group Flow (vph)	37	568	0	111	943	0	77	406	0	187	1014	74
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	34.5	34.5		34.5	34.5		46.5	46.5		46.5	46.5	46.5
Effective Green, g (s)	34.5	34.5		34.5	34.5		46.5	46.5		46.5	46.5	46.5
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.52	0.52		0.52	0.52	0.52
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Grp Cap (vph)	107	1293		231	1327		191	1790		470	1828	817
v/s Ratio Prot		0.17			c0.27			0.12			c0.29	
v/s Ratio Perm	0.13			0.18			0.21			0.21		0.05
v/c Ratio	0.35	0.44		0.48	0.71		0.40	0.23		0.40	0.55	0.09
Uniform Delay, d1	19.7	20.6		21.0	23.5		13.3	11.9		13.2	14.7	11.0
Progression Factor	1.00	1.00		0.77	0.75		0.73	0.71		0.53	0.55	0.28
Incremental Delay, d2	8.6	1.1		6.7	3.1		6.2	0.3		2.5	1.2	0.2
Delay (s)	28.4	21.7		22.9	20.8		15.8	8.7		9.5	9.3	3.3
Level of Service	C	C		C	C		B	A		A	A	A
Approach Delay (s)		22.0			21.1			9.8			8.9	
Approach LOS		C			C			A			A	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
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												
Traffic Volume (vph)	29	398	122	49	658	84	109	364	42	117	837	140
Future Volume (vph)	29	398	122	49	658	84	109	364	42	117	837	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	0.98		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	3414		1770	3539	1583	1770	3484		1770	3463	
Flt Permitted	0.20	1.00		0.30	1.00	1.00	0.21	1.00		0.49	1.00	
Satd. Flow (perm)	368	3414		559	3539	1583	400	3484		912	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)	32	433	133	53	715	91	118	396	46	127	910	152
RTOR Reduction (vph)	0	32	0	0	0	65	0	10	0	0	15	0
Lane Group Flow (vph)	32	534	0	53	715	26	118	432	0	127	1047	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	25.9	25.9		25.9	25.9	25.9	55.1	55.1		55.1	55.1	
Effective Green, g (s)	25.9	25.9		25.9	25.9	25.9	55.1	55.1		55.1	55.1	
Actuated g/C Ratio	0.29	0.29		0.29	0.29	0.29	0.61	0.61		0.61	0.61	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	105	982		160	1018	455	244	2132		558	2120	
v/s Ratio Prot		0.16			c0.20			0.12			c0.30	
v/s Ratio Perm	0.09			0.09		0.02	0.30			0.14		
v/c Ratio	0.30	0.54		0.33	0.70	0.06	0.48	0.20		0.23	0.49	
Uniform Delay, d1	25.0	27.1		25.2	28.6	23.2	9.6	7.7		7.9	9.7	
Progression Factor	1.00	1.00		0.53	0.52	0.45	1.00	1.00		0.61	0.53	
Incremental Delay, d2	7.3	2.2		5.0	3.7	0.2	6.7	0.2		0.8	0.7	
Delay (s)	32.4	29.2		18.5	18.5	10.7	16.3	7.9		5.6	5.9	
Level of Service	C	C		B	B	B	B	A		A	A	
Approach Delay (s)		29.4			17.7			9.7			5.9	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	352	226	208	823	189	108
Future Volume (vph)	352	226	208	823	189	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frt	0.94		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3332		1770	3539	3433	1583
Flt Permitted	1.00		0.39	1.00	0.95	1.00
Satd. Flow (perm)	3332		736	3539	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	383	246	226	895	205	117
RTOR Reduction (vph)	86	0	0	0	0	88
Lane Group Flow (vph)	543	0	226	895	205	29
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	58.5		58.5	58.5	22.5	22.5
Effective Green, g (s)	58.5		58.5	58.5	22.5	22.5
Actuated g/C Ratio	0.65		0.65	0.65	0.25	0.25
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Lane Grp Cap (vph)	2165		478	2300	858	395
v/s Ratio Prot	0.16			0.25	c0.06	
v/s Ratio Perm			c0.31			0.02
v/c Ratio	0.25		0.47	0.39	0.24	0.07
Uniform Delay, d1	6.6		8.0	7.4	26.9	25.8
Progression Factor	0.40		0.76	0.80	0.82	0.71
Incremental Delay, d2	0.3		2.6	0.4	0.6	0.3
Delay (s)	2.9		8.7	6.3	22.7	18.7
Level of Service	A		A	A	C	B
Approach Delay (s)	2.9			6.8	21.2	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	45.1%	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												
Traffic Volume (vph)	80	307	170	107	596	66	160	229	49	25	315	35
Future Volume (vph)	80	307	170	107	596	66	160	229	49	25	315	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.95		1.00	0.98			0.98			0.99	
Flt Protected	0.95	1.00		0.95	1.00			0.98			1.00	
Satd. Flow (prot)	1770	3350		1770	3486			3418			3478	
Flt Permitted	0.30	1.00		0.41	1.00			0.67			0.91	
Satd. Flow (perm)	561	3350		771	3486			2335			3159	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	334	185	116	648	72	174	249	53	27	342	38
RTOR Reduction (vph)	0	84	0	0	9	0	0	11	0	0	8	0
Lane Group Flow (vph)	87	435	0	116	711	0	0	465	0	0	399	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	41.5	41.5		41.5	41.5			39.5			39.5	
Effective Green, g (s)	41.5	41.5		41.5	41.5			39.5			39.5	
Actuated g/C Ratio	0.46	0.46		0.46	0.46			0.44			0.44	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Lane Grp Cap (vph)	258	1544		355	1607			1024			1386	
v/s Ratio Prot		0.13			c0.20							
v/s Ratio Perm	0.16			0.15				c0.20			0.13	
v/c Ratio	0.34	0.28		0.33	0.44			0.45			0.29	
Uniform Delay, d1	15.5	15.0		15.4	16.4			17.7			16.2	
Progression Factor	0.47	0.32		1.42	1.47			1.00			0.57	
Incremental Delay, d2	3.2	0.4		2.3	0.8			1.5			0.5	
Delay (s)	10.5	5.2		24.3	24.9			19.2			9.7	
Level of Service	B	A		C	C			B			A	
Approach Delay (s)		6.0			24.8			19.2			9.7	
Approach LOS		A			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	296	235	134	299	916	8	218	512	93	26	1044	754
Future Volume (vph)	296	235	134	299	916	8	218	512	93	26	1044	754
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.96		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3211		1770	3534		1770	3539	1583	1770	3539	1583
Flt Permitted	0.19	0.57		0.32	1.00		0.12	1.00	1.00	0.44	1.00	1.00
Satd. Flow (perm)	320	1865		600	3534		219	3539	1583	826	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)	322	255	146	325	996	9	237	557	101	28	1135	820
RTOR Reduction (vph)	0	42	0	0	1	0	0	0	57	0	0	37
Lane Group Flow (vph)	187	494	0	325	1004	0	237	557	44	28	1135	783
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4		3	8		5	2			6	7
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	35.7	35.7		38.3	22.5		39.5	39.5	39.5	29.5	29.5	44.0
Effective Green, g (s)	35.7	35.7		38.3	22.5		39.5	39.5	39.5	29.5	29.5	44.0
Actuated g/C Ratio	0.40	0.40		0.43	0.25		0.44	0.44	0.44	0.33	0.33	0.49
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
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)	334	956		460	883		190	1553	694	270	1160	773
v/s Ratio Prot	0.09	0.08		0.12	c0.28		c0.08	0.16			0.32	c0.16
v/s Ratio Perm	0.13	0.12		0.18			c0.47		0.03	0.03		0.33
v/c Ratio	0.56	0.52		0.71	1.14		1.25	0.36	0.06	0.10	0.98	1.01
Uniform Delay, d1	31.1	20.6		25.3	33.8		23.2	16.8	14.6	21.1	29.9	23.0
Progression Factor	0.78	0.74		1.00	1.00		1.32	1.08	1.52	1.00	1.00	1.00
Incremental Delay, d2	1.9	0.4		4.9	75.6		146.2	0.6	0.2	0.8	21.7	35.5
Delay (s)	26.2	15.7		30.2	109.3		177.0	18.8	22.3	21.8	51.7	58.5
Level of Service	C	B		C	F		F	B	C	C	D	E
Approach Delay (s)		18.4			90.0			61.1			54.1	
Approach LOS		B			F			E			D	

Intersection Summary			
HCM 2000 Control Delay	59.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.21		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	95.6%	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												
Traffic Volume (vph)	91	73	9	13	581	159	40	170	2	110	172	519
Future Volume (vph)	91	73	9	13	581	159	40	170	2	110	172	519
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	0.98		1.00	0.97		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1831		1770	1803		1770	1860		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.56	1.00		0.56	1.00	1.00
Satd. Flow (perm)	1770	1831		1770	1803		1043	1860		1043	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)	99	79	10	14	632	173	43	185	2	120	187	564
RTOR Reduction (vph)	0	4	0	0	11	0	0	1	0	0	0	233
Lane Group Flow (vph)	99	85	0	14	794	0	43	186	0	120	187	331
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	10.3	50.8		1.0	41.5		24.7	24.7		24.7	24.7	24.7
Effective Green, g (s)	10.3	50.8		1.0	41.5		24.7	24.7		24.7	24.7	24.7
Actuated g/C Ratio	0.11	0.56		0.01	0.46		0.27	0.27		0.27	0.27	0.27
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
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)	202	1033		19	831		286	510		286	511	434
v/s Ratio Prot	c0.06	0.05		0.01	c0.44			0.10			0.10	
v/s Ratio Perm							0.04			0.11		c0.21
v/c Ratio	0.49	0.08		0.74	0.96		0.15	0.37		0.42	0.37	0.76
Uniform Delay, d1	37.4	9.0		44.4	23.4		24.7	26.3		26.8	26.3	30.0
Progression Factor	0.71	0.82		1.00	1.00		1.00	1.00		0.49	0.50	0.10
Incremental Delay, d2	1.9	0.0		88.4	20.9		1.1	2.0		2.0	0.9	5.7
Delay (s)	28.2	7.4		132.8	44.2		25.8	28.3		15.3	14.1	8.7
Level of Service	C	A		F	D		C	C		B	B	A
Approach Delay (s)		18.4			45.7			27.9			10.8	
Approach LOS		B			D			C			B	

Intersection Summary				
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5	
Intersection Capacity Utilization	87.8%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	0	381	146	563	206	0
Future Volume (vph)	0	381	146	563	206	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	0.95		1.00	0.95	1.00	
Frt	0.85		1.00	1.00	1.00	
Flt Protected	1.00		0.95	1.00	0.95	
Satd. Flow (prot)	3008		1770	3539	1770	
Flt Permitted	1.00		0.49	1.00	0.95	
Satd. Flow (perm)	3008		922	3539	1770	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	414	159	612	224	0
RTOR Reduction (vph)	196	0	0	0	0	0
Lane Group Flow (vph)	219	0	159	612	224	0
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Actuated Green, G (s)	47.5		47.5	47.5	33.5	
Effective Green, g (s)	47.5		47.5	47.5	33.5	
Actuated g/C Ratio	0.53		0.53	0.53	0.37	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Lane Grp Cap (vph)	1587		486	1867	658	
v/s Ratio Prot	0.07			c0.17	c0.13	
v/s Ratio Perm			0.17			
v/c Ratio	0.14		0.33	0.33	0.34	
Uniform Delay, d1	10.8		12.1	12.1	20.3	
Progression Factor	1.00		0.31	0.32	1.00	
Incremental Delay, d2	0.2		1.6	0.4	1.4	
Delay (s)	11.0		5.4	4.3	21.7	
Level of Service	B		A	A	C	
Approach Delay (s)	11.0			4.5	21.7	
Approach LOS	B			A	C	

Intersection Summary			
HCM 2000 Control Delay	9.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	43.1%	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												
Traffic Volume (vph)	4	4	6	102	4	24	20	602	172	63	427	13
Future Volume (vph)	4	4	6	102	4	24	20	602	172	63	427	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt		0.94		1.00	0.87		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1722		1770	1621		1770	3539	1583	1770	3524	
Flt Permitted		0.94		0.75	1.00		0.48	1.00	1.00	0.40	1.00	
Satd. Flow (perm)		1642		1393	1621		892	3539	1583	748	3524	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	4	7	111	4	26	22	654	187	68	464	14
RTOR Reduction (vph)	0	6	0	0	23	0	0	0	42	0	1	0
Lane Group Flow (vph)	0	9	0	111	7	0	22	654	145	68	477	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		11.1		11.1	11.1		69.9	69.9	69.9	69.9	69.9	
Effective Green, g (s)		11.1		11.1	11.1		69.9	69.9	69.9	69.9	69.9	
Actuated g/C Ratio		0.12		0.12	0.12		0.78	0.78	0.78	0.78	0.78	
Clearance Time (s)		4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		202		171	199		692	2748	1229	580	2736	
v/s Ratio Prot					0.00			c0.18			0.14	
v/s Ratio Perm		0.01		c0.08			0.02		0.09	0.09		
v/c Ratio		0.04		0.65	0.04		0.03	0.24	0.12	0.12	0.17	
Uniform Delay, d1		34.8		37.6	34.7		2.3	2.8	2.5	2.5	2.6	
Progression Factor		1.00		1.00	1.00		2.70	2.96	9.49	1.42	1.35	
Incremental Delay, d2		0.1		8.2	0.1		0.1	0.2	0.2	0.4	0.1	
Delay (s)		34.9		45.8	34.8		6.3	8.3	23.6	3.9	3.6	
Level of Service		C		D	C		A	A	C	A	A	
Approach Delay (s)		34.9			43.5			11.6			3.7	
Approach LOS		C			D			B			A	

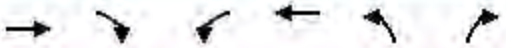
Intersection Summary			
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	44.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	55	43	441	197	46	649
Future Volume (Veh/h)	55	43	441	197	46	649
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)	60	47	479	214	50	705
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						564
pX, platoon unblocked						
vC, conflicting volume	1038	346			693	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1038	346			693	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	72	93			94	
cM capacity (veh/h)	214	650			898	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	60	47	319	374	50	352	352
Volume Left	60	0	0	0	50	0	0
Volume Right	0	47	0	214	0	0	0
cSH	214	650	1700	1700	898	1700	1700
Volume to Capacity	0.28	0.07	0.19	0.22	0.06	0.21	0.21
Queue Length 95th (ft)	28	6	0	0	4	0	0
Control Delay (s)	28.3	11.0	0.0	0.0	9.2	0.0	0.0
Lane LOS	D	B			A		
Approach Delay (s)	20.7		0.0		0.6		
Approach LOS	C						

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	35.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	654	61	83	1338	81	56
Future Volume (vph)	654	61	83	1338	81	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3494		1770	3539	1770	1583
Flt Permitted	1.00		0.31	1.00	0.95	1.00
Satd. Flow (perm)	3494		575	3539	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	711	66	90	1454	88	61
RTOR Reduction (vph)	12	0	0	0	0	40
Lane Group Flow (vph)	765	0	90	1454	88	21
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	30.5		30.5	30.5	20.5	20.5
Effective Green, g (s)	30.5		30.5	30.5	20.5	20.5
Actuated g/C Ratio	0.51		0.51	0.51	0.34	0.34
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1776		292	1798	604	540
v/s Ratio Prot	0.22			c0.41	c0.05	
v/s Ratio Perm			0.16			0.01
v/c Ratio	0.43		0.31	0.81	0.15	0.04
Uniform Delay, d1	9.3		8.6	12.3	13.7	13.2
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2		0.6	2.8	0.5	0.1
Delay (s)	9.5		9.2	15.1	14.2	13.3
Level of Service	A		A	B	B	B
Approach Delay (s)	9.5			14.8	13.8	
Approach LOS	A			B	B	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	8	20	658	0	0	1416
Future Volume (Veh/h)	8	20	658	0	0	1416
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)	9	22	715	0	0	1539
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			306			385
pX, platoon unblocked	0.71	0.89			0.89	
vC, conflicting volume	1484	358			715	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	187	38			439	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	98			100	
cM capacity (veh/h)	558	915			997	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	31	358	358	770	770
Volume Left	9	0	0	0	0
Volume Right	22	0	0	0	0
cSH	771	1700	1700	1700	1700
Volume to Capacity	0.04	0.21	0.21	0.45	0.45
Queue Length 95th (ft)	3	0	0	0	0
Control Delay (s)	9.9	0.0	0.0	0.0	0.0
Lane LOS	A				
Approach Delay (s)	9.9	0.0		0.0	
Approach LOS	A				

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	615	66	49	93	0	168	0	1285	172	140	789	0
Future Volume (vph)	615	66	49	93	0	168	0	1285	172	140	789	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor	0.97	1.00	1.00	1.00		1.00		0.95	1.00	1.00	0.91	
Frt	1.00	1.00	0.85	1.00		0.85		1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)	3433	1863	1583	1770		1583		3539	1583	1770	5085	
Flt Permitted	0.95	1.00	1.00	0.95		1.00		1.00	1.00	0.95	1.00	
Satd. Flow (perm)	3433	1863	1583	1770		1583		3539	1583	1770	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	668	72	53	101	0	183	0	1397	187	152	858	0
RTOR Reduction (vph)	0	0	42	0	0	0	0	0	78	0	0	0
Lane Group Flow (vph)	668	72	11	101	0	183	0	1397	109	152	858	0
Turn Type	Split	NA	Perm	Prot		Prot		NA	Perm	Prot	NA	
Protected Phases	3	3		4		4		6		5	2	
Permitted Phases			3						6			
Actuated Green, G (s)	18.5	18.5	18.5	10.5		10.5		35.0	35.0	8.0	47.5	
Effective Green, g (s)	18.5	18.5	18.5	10.5		10.5		35.0	35.0	8.0	47.5	
Actuated g/C Ratio	0.21	0.21	0.21	0.12		0.12		0.39	0.39	0.09	0.53	
Clearance Time (s)	4.5	4.5	4.5	4.5		4.5		4.5	4.5	4.5	4.5	
Lane Grp Cap (vph)	705	382	325	206		184		1376	615	157	2683	
v/s Ratio Prot	c0.19	0.04		0.06		c0.12		c0.39		c0.09	0.17	
v/s Ratio Perm			0.01						0.07			
v/c Ratio	0.95	0.19	0.03	0.49		0.99		1.02	0.18	0.97	0.32	
Uniform Delay, d1	35.3	29.5	28.6	37.2		39.7		27.5	18.1	40.9	12.1	
Progression Factor	0.94	0.90	1.00	1.10		1.07		1.30	2.48	1.28	0.79	
Incremental Delay, d2	19.5	0.8	0.1	6.7		58.9		24.9	0.5	61.2	0.3	
Delay (s)	52.7	27.4	28.7	47.8		101.4		60.5	45.2	113.5	9.8	
Level of Service	D	C	C	D		F		E	D	F	A	
Approach Delay (s)		48.8			82.3			58.7			25.4	
Approach LOS		D			F			E			C	

Intersection Summary			
HCM 2000 Control Delay	49.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	357	46	17	1	46	298	20	463	19	116	20	172
Future Volume (vph)	357	46	17	1	46	298	20	463	19	116	20	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Lane Util. Factor	0.97	1.00		1.00	0.95			0.95			1.00	1.00
Frt	1.00	0.96		1.00	0.87			0.99			1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00			0.96	1.00
Satd. Flow (prot)	3433	1789		1770	3079			3512			1787	1583
Flt Permitted	0.95	1.00		0.95	1.00			1.00			0.96	1.00
Satd. Flow (perm)	3433	1789		1770	3079			3512			1787	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)	388	50	18	1	50	324	22	503	21	126	22	187
RTOR Reduction (vph)	0	12	0	0	296	0	0	3	0	0	0	167
Lane Group Flow (vph)	388	56	0	1	78	0	0	543	0	0	148	20
Turn Type	Split	NA		Split	NA		Split	NA		Split	NA	custom
Protected Phases	2	2		1	1		3	3		4	4	4
Permitted Phases												5
Actuated Green, G (s)	29.8	29.8		7.8	7.8			25.0			9.4	9.4
Effective Green, g (s)	29.8	29.8		7.8	7.8			25.0			9.4	9.4
Actuated g/C Ratio	0.33	0.33		0.09	0.09			0.28			0.10	0.10
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	4.5
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	3.0
Lane Grp Cap (vph)	1136	592		153	266			975			186	165
v/s Ratio Prot	c0.11	0.03		0.00	c0.03			c0.15			c0.08	0.01
v/s Ratio Perm												
v/c Ratio	0.34	0.09		0.01	0.29			0.56			0.80	0.12
Uniform Delay, d1	22.7	20.8		37.6	38.5			27.8			39.4	36.5
Progression Factor	1.03	1.16		1.00	1.00			1.00			1.00	1.00
Incremental Delay, d2	0.7	0.3		0.0	0.6			2.3			20.5	0.3
Delay (s)	24.0	24.4		37.6	39.1			30.1			59.9	36.9
Level of Service	C	C		D	D			C			E	D
Approach Delay (s)		24.1			39.1			30.1			47.0	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	33.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	22.5
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Stop			Stop	Stop	
Traffic Volume (vph)	162	19	53	245	100	163
Future Volume (vph)	162	19	53	245	100	163
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	176	21	58	266	109	177

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	NB 2
Volume Total (vph)	197	58	266	109	177
Volume Left (vph)	0	58	0	109	0
Volume Right (vph)	21	0	0	0	177
Hadj (s)	-0.03	0.53	0.03	0.53	-0.67
Departure Headway (s)	5.5	6.1	5.6	6.4	5.2
Degree Utilization, x	0.30	0.10	0.41	0.19	0.26
Capacity (veh/h)	622	565	622	531	648
Control Delay (s)	10.8	8.5	11.2	9.7	8.8
Approach Delay (s)	10.8	10.7		9.1	
Approach LOS	B	B		A	

Intersection Summary				
Delay	10.2			
Level of Service	B			
Intersection Capacity Utilization	28.6%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	256	5	64	6	6	14	52	630	7	7	266	240
Future Volume (vph)	256	5	64	6	6	14	52	630	7	7	266	240
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)	278	5	70	7	7	15	57	685	8	8	289	261

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total (vph)	353	29	57	685	8	8	289	261
Volume Left (vph)	278	7	57	0	0	8	0	0
Volume Right (vph)	70	15	0	0	8	0	0	261
Hadj (s)	0.07	-0.23	0.53	0.03	-0.67	0.53	0.03	-0.67
Departure Headway (s)	6.6	7.4	7.0	6.5	3.2	7.4	6.9	3.2
Degree Utilization, x	0.64	0.06	0.11	1.23	0.01	0.02	0.55	0.23
Capacity (veh/h)	531	431	505	562	1121	471	499	1122
Control Delay (s)	20.7	10.9	9.7	140.3	5.0	9.3	16.9	6.0
Approach Delay (s)	20.7	10.9	129.0			11.7		
Approach LOS	C	B	F			B		

Intersection Summary					
Delay	65.6				
Level of Service	F				
Intersection Capacity Utilization	71.5%	ICU Level of Service		C	
Analysis Period (min)	15				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	458	200	30	162	96	91	1032	0	77	782	316
Future Volume (vph)	256	458	200	30	162	96	91	1032	0	77	782	316
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.95		1.00	0.94		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3378		1770	3342		1770	3539		1770	3539	1583
Flt Permitted	0.35	1.00		0.38	1.00		0.33	1.00		0.95	1.00	1.00
Satd. Flow (perm)	650	3378		708	3342		619	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)	278	498	217	33	176	104	99	1122	0	84	850	343
RTOR Reduction (vph)	0	60	0	0	0	0	0	0	0	0	0	177
Lane Group Flow (vph)	278	655	0	33	280	0	99	1122	0	84	850	166
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Prot	NA	Perm
Protected Phases	3	8			4		1	6		5	2	
Permitted Phases	8			4			6					2
Actuated Green, G (s)	28.0	28.0		12.8	12.8		40.8	40.8		7.7	43.6	43.6
Effective Green, g (s)	28.0	28.0		12.8	12.8		40.8	40.8		7.7	43.6	43.6
Actuated g/C Ratio	0.31	0.31		0.14	0.14		0.45	0.45		0.09	0.48	0.48
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
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)	335	1050		100	475		343	1604		151	1714	766
v/s Ratio Prot	c0.10	0.19			0.08		0.02	c0.32		0.05	c0.24	
v/s Ratio Perm	c0.16			0.05			0.11					0.10
v/c Ratio	0.83	0.62		0.33	0.59		0.29	0.70		0.56	0.50	0.22
Uniform Delay, d1	26.2	26.5		34.7	36.1		16.0	19.7		39.5	15.7	13.4
Progression Factor	0.59	0.48		1.00	1.00		0.66	0.73		1.36	0.58	0.23
Incremental Delay, d2	14.1	1.0		1.9	1.9		0.4	2.2		4.3	1.0	0.6
Delay (s)	29.6	13.9		36.7	38.0		10.9	16.5		58.1	10.1	3.6
Level of Service	C	B		D	D		B	B		E	B	A
Approach Delay (s)		18.3			37.9			16.0			11.5	
Approach LOS		B			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	66	42	111	14	66	28	97	168	20	13	33	26
Future Volume (vph)	66	42	111	14	66	28	97	168	20	13	33	26
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)	72	46	121	15	72	30	105	183	22	14	36	28

Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1
Volume Total (vph)	118	121	117	310	78
Volume Left (vph)	72	0	15	105	14
Volume Right (vph)	0	121	30	22	28
Hadj (s)	0.34	-0.67	-0.09	0.06	-0.15
Departure Headway (s)	6.0	5.0	5.3	5.0	5.1
Degree Utilization, x	0.20	0.17	0.17	0.43	0.11
Capacity (veh/h)	560	672	622	690	636
Control Delay (s)	9.3	7.8	9.4	11.7	8.8
Approach Delay (s)	8.5		9.4	11.7	8.8
Approach LOS	A		A	B	A

Intersection Summary				
Delay	10.0			
Level of Service	A			
Intersection Capacity Utilization	41.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	328	493	118	0	279	15	69	780	149	42	844	126
Future Volume (vph)	328	493	118	0	279	15	69	780	149	42	844	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.97			1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	3437			3539	1583	1770	3539	1583	1770	3539	1583
Flt Permitted	0.33	1.00			1.00	1.00	0.23	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)	614	3437			3539	1583	428	3539	1583	480	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)	357	536	128	0	303	16	75	848	162	46	917	137
RTOR Reduction (vph)	0	26	0	0	0	0	0	0	80	0	0	41
Lane Group Flow (vph)	357	638	0	0	303	16	75	848	82	46	917	96
Turn Type	pm+pt	NA			NA	Perm	Perm	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4			8			2			6	7
Permitted Phases	4					8	2		2	6		6
Actuated Green, G (s)	35.7	35.7			13.3	13.3	45.3	45.3	45.3	45.3	45.3	63.2
Effective Green, g (s)	35.7	35.7			13.3	13.3	45.3	45.3	45.3	45.3	45.3	63.2
Actuated g/C Ratio	0.40	0.40			0.15	0.15	0.50	0.50	0.50	0.50	0.50	0.70
Clearance Time (s)	4.5	4.5			4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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)	473	1363			522	233	215	1781	796	241	1781	1190
v/s Ratio Prot	c0.15	0.19			0.09			0.24			c0.26	0.02
v/s Ratio Perm	c0.15					0.01	0.18		0.05	0.10		0.04
v/c Ratio	0.75	0.47			0.58	0.07	0.35	0.48	0.10	0.19	0.51	0.08
Uniform Delay, d1	21.0	20.1			35.7	33.0	13.5	14.6	11.7	12.3	15.0	4.2
Progression Factor	0.60	0.53			1.41	1.52	1.00	1.00	1.00	0.71	0.66	0.15
Incremental Delay, d2	6.0	0.2			1.2	0.1	4.4	0.9	0.3	1.6	0.9	0.0
Delay (s)	18.6	11.0			51.6	50.4	17.9	15.5	12.0	10.2	10.8	0.7
Level of Service	B	B			D	D	B	B	B	B	B	A
Approach Delay (s)		13.6			51.6			15.1			9.5	
Approach LOS		B			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	73	599	23	81	317	79	6	80	235	83	28	30
Future Volume (vph)	73	599	23	81	317	79	6	80	235	83	28	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5			4.5			4.5	
Lane Util. Factor		0.95	1.00		0.95			1.00			1.00	
Frt		1.00	0.85		0.98			0.90			0.97	
Flt Protected		0.99	1.00		0.99			1.00			0.97	
Satd. Flow (prot)		3520	1583		3422			1677			1757	
Flt Permitted		0.99	1.00		0.99			0.99			0.52	
Satd. Flow (perm)		3520	1583		3422			1671			948	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	79	651	25	88	345	86	7	87	255	90	30	33
RTOR Reduction (vph)	0	0	16	0	19	0	0	108	0	0	11	0
Lane Group Flow (vph)	0	730	9	0	500	0	0	241	0	0	142	0
Turn Type	Split	NA	Perm	Split	NA		Perm	NA		Perm	NA	
Protected Phases	2	2		1	1			8			4	
Permitted Phases			2				8			4		
Actuated Green, G (s)		31.4	31.4		17.6			27.5			27.5	
Effective Green, g (s)		31.4	31.4		17.6			27.5			27.5	
Actuated g/C Ratio		0.35	0.35		0.20			0.31			0.31	
Clearance Time (s)		4.5	4.5		4.5			4.5			4.5	
Vehicle Extension (s)		3.0	3.0		3.0			3.0			3.0	
Lane Grp Cap (vph)		1228	552		669			510			289	
v/s Ratio Prot		c0.21			c0.15							
v/s Ratio Perm			0.01					0.14			c0.15	
v/c Ratio		0.59	0.02		0.75			0.47			0.49	
Uniform Delay, d1		24.1	19.2		34.1			25.4			25.5	
Progression Factor		0.61	1.00		1.03			1.00			1.00	
Incremental Delay, d2		2.0	0.0		3.4			3.1			5.9	
Delay (s)		16.6	19.2		38.4			28.5			31.4	
Level of Service		B	B		D			C			C	
Approach Delay (s)		16.7			38.4			28.5			31.4	
Approach LOS		B			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	274	578	183	20	2048	0	0	655	25
Future Volume (vph)	0	0	0	274	578	183	20	2048	0	0	655	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				4.5	4.5		4.5	4.5			4.5	
Lane Util. Factor				0.86	0.86		1.00	0.91			0.95	
Frt				1.00	0.97		1.00	1.00			0.99	
Flt Protected				0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)				1522	4630		1770	5085			3520	
Flt Permitted				0.95	1.00		0.33	1.00			1.00	
Satd. Flow (perm)				1522	4630		619	5085			3520	
Peak-hour factor, PHF	0.92	0.92	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	298	628	199	22	2226	0	0	712	27
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	0	0	0	268	857	0	22	2226	0	0	736	0
Turn Type				Prot	NA		Perm	NA			NA	
Protected Phases				3	8			2			6	
Permitted Phases							2					
Actuated Green, G (s)				27.5	27.5		53.5	53.5			53.5	
Effective Green, g (s)				27.5	27.5		53.5	53.5			53.5	
Actuated g/C Ratio				0.31	0.31		0.59	0.59			0.59	
Clearance Time (s)				4.5	4.5		4.5	4.5			4.5	
Lane Grp Cap (vph)				465	1414		367	3022			2092	
v/s Ratio Prot				0.18	c0.19			c0.44			0.21	
v/s Ratio Perm							0.04					
v/c Ratio				0.58	0.61		0.06	0.74			0.35	
Uniform Delay, d1				26.3	26.6		7.7	13.2			9.4	
Progression Factor				1.00	1.00		0.99	0.78			1.00	
Incremental Delay, d2				5.1	1.9		0.1	0.4			0.5	
Delay (s)				31.5	28.6		7.7	10.7			9.8	
Level of Service				C	C		A	B			A	
Approach Delay (s)		0.0			29.3			10.7			9.8	
Approach LOS		A			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	15.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	67	85	183	56	69	0	869	94	57	811	114
Future Volume (vph)	0	67	85	183	56	69	0	869	94	57	811	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00	1.00	1.00	1.00	1.00		0.95	1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	0.98	
Flt Protected		1.00	1.00	0.95	1.00	1.00		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1863	1583	1770	1863	1583		3539	1583	1770	3474	
Flt Permitted		1.00	1.00	0.71	1.00	1.00		1.00	1.00	0.15	1.00	
Satd. Flow (perm)		1863	1583	1322	1863	1583		3539	1583	283	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)	0	73	92	199	61	75	0	945	102	62	882	124
RTOR Reduction (vph)	0	0	64	0	0	53	0	0	62	0	18	0
Lane Group Flow (vph)	0	73	28	199	61	23	0	945	40	62	988	0
Turn Type		NA	Perm	Perm	NA	Perm		NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases			4	8		8			2	6		
Actuated Green, G (s)		18.0	18.0	18.0	18.0	18.0		23.5	23.5	33.0	33.0	
Effective Green, g (s)		18.0	18.0	18.0	18.0	18.0		23.5	23.5	33.0	33.0	
Actuated g/C Ratio		0.30	0.30	0.30	0.30	0.30		0.39	0.39	0.55	0.55	
Clearance Time (s)		4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	
Lane Grp Cap (vph)		558	474	396	558	474		1386	620	279	1910	
v/s Ratio Prot		0.04			0.03			c0.27		0.02	c0.28	
v/s Ratio Perm			0.02	c0.15		0.01			0.03	0.10		
v/c Ratio		0.13	0.06	0.50	0.11	0.05		0.68	0.06	0.22	0.52	
Uniform Delay, d1		15.3	15.0	17.3	15.2	14.9		15.1	11.4	8.1	8.5	
Progression Factor		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5	0.2	4.5	0.4	0.2		2.7	0.2	1.8	1.0	
Delay (s)		15.8	15.2	21.8	15.6	15.1		17.9	11.6	9.9	9.5	
Level of Service		B	B	C	B	B		B	B	A	A	
Approach Delay (s)		15.5			19.2			17.3			9.5	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	56.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	93	985	197	116	953	126	100	716	122	100	669	124
Future Volume (vph)	93	985	197	116	953	126	100	716	122	100	669	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.91		1.00	0.95	1.00	1.00	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)	1770	3539	1583	1770	4996		1770	3539	1583	1770	3539	1583
Flt Permitted	0.23	1.00	1.00	0.10	1.00		0.19	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)	427	3539	1583	191	4996		349	3539	1583	295	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)	101	1071	214	126	1036	137	109	778	133	109	727	135
RTOR Reduction (vph)	0	0	46	0	19	0	0	0	91	0	0	91
Lane Group Flow (vph)	101	1071	168	126	1154	0	109	778	42	109	727	44
Turn Type	Perm	NA	pm+ov	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8			2		2	6		6
Actuated Green, G (s)	34.5	34.5	40.2	45.5	45.5		31.6	25.9	25.9	30.4	25.3	25.3
Effective Green, g (s)	34.5	34.5	40.2	45.5	45.5		31.6	25.9	25.9	30.4	25.3	25.3
Actuated g/C Ratio	0.38	0.38	0.45	0.51	0.51		0.35	0.29	0.29	0.34	0.28	0.28
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
Lane Grp Cap (vph)	163	1356	707	210	2525		212	1018	455	183	994	444
v/s Ratio Prot		c0.30	0.02	c0.04	0.23		0.03	c0.22		c0.03	0.21	
v/s Ratio Perm	0.24		0.09	0.26			0.15		0.03	0.17		0.03
v/c Ratio	0.62	0.79	0.24	0.60	0.46		0.51	0.76	0.09	0.60	0.73	0.10
Uniform Delay, d1	22.4	24.5	15.4	16.5	14.3		33.5	29.3	23.4	35.1	29.3	23.9
Progression Factor	0.58	0.58	0.45	1.00	1.00		1.00	1.00	1.00	0.67	0.53	0.32
Incremental Delay, d2	13.1	3.7	0.6	12.1	0.6		8.6	5.5	0.4	13.0	4.6	0.4
Delay (s)	26.1	18.0	7.5	28.5	14.9		42.1	34.7	23.8	36.4	20.1	8.1
Level of Service	C	B	A	C	B		D	C	C	D	C	A
Approach Delay (s)		16.9			16.2			34.1			20.3	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
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												
Traffic Volume (vph)	105	328	71	59	433	363	180	1011	50	98	411	58
Future Volume (vph)	105	328	71	59	433	363	180	1011	50	98	411	58
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.91	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3445		1770	3539	1583	1770	3539	1583	1770	4991	
Flt Permitted	0.35	1.00		0.38	1.00	1.00	0.45	1.00	1.00	0.20	1.00	
Satd. Flow (perm)	645	3445		703	3539	1583	846	3539	1583	366	4991	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	114	357	77	64	471	395	196	1099	54	107	447	63
RTOR Reduction (vph)	0	21	0	0	0	51	0	0	22	0	18	0
Lane Group Flow (vph)	114	413	0	64	471	344	196	1099	32	107	492	0
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		4		3	8			2			6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	19.2	19.2		27.9	27.9	27.9	53.1	53.1	53.1	53.1	53.1	
Effective Green, g (s)	19.2	19.2		27.9	27.9	27.9	53.1	53.1	53.1	53.1	53.1	
Actuated g/C Ratio	0.21	0.21		0.31	0.31	0.31	0.59	0.59	0.59	0.59	0.59	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
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)	137	734		267	1097	490	499	2088	933	215	2944	
v/s Ratio Prot		0.12		0.01	0.13			c0.31			0.10	
v/s Ratio Perm	c0.18			0.06		c0.22	0.23		0.02	0.29		
v/c Ratio	0.83	0.56		0.24	0.43	0.70	0.39	0.53	0.03	0.50	0.17	
Uniform Delay, d1	33.9	31.6		27.5	24.7	27.4	9.8	11.0	7.7	10.7	8.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.91	0.90	1.40	0.82	0.49	
Incremental Delay, d2	33.0	1.0		0.5	0.3	4.5	1.9	0.8	0.1	7.7	0.1	
Delay (s)	66.9	32.6		28.0	25.0	31.9	10.8	10.6	10.8	16.5	4.2	
Level of Service	E	C		C	C	C	B	B	B	B	A	
Approach Delay (s)		39.8			28.1			10.7			6.4	
Approach LOS		D			C			B			A	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	67.5%	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												
Traffic Volume (vph)	48	969	270	120	885	308	293	712	155	250	317	49
Future Volume (vph)	48	969	270	120	885	308	293	712	155	250	317	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583	1770	3539	1583	1770	3469	
Flt Permitted	0.14	1.00	1.00	0.14	1.00	1.00	0.38	1.00	1.00	0.19	1.00	
Satd. Flow (perm)	264	3539	1583	264	3539	1583	699	3539	1583	362	3469	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	52	1053	293	130	962	335	318	774	168	272	345	53
RTOR Reduction (vph)	0	0	191	0	0	203	0	0	127	0	14	0
Lane Group Flow (vph)	52	1053	102	130	962	132	318	774	41	272	384	0
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2		2	6		6	8		8	4		
Actuated Green, G (s)	31.2	31.2	31.2	35.5	35.5	35.5	34.9	22.0	22.0	32.1	20.6	
Effective Green, g (s)	31.2	31.2	31.2	35.5	35.5	35.5	34.9	22.0	22.0	32.1	20.6	
Actuated g/C Ratio	0.35	0.35	0.35	0.39	0.39	0.39	0.39	0.24	0.24	0.36	0.23	
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)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	141	1226	548	226	1395	624	424	865	386	309	794	
v/s Ratio Prot	0.01	c0.30		0.05	c0.27		0.11	c0.22		c0.11	0.11	
v/s Ratio Perm	0.11		0.06	0.18		0.08	0.18		0.03	0.20		
v/c Ratio	0.37	0.86	0.19	0.58	0.69	0.21	0.75	0.89	0.11	0.88	0.48	
Uniform Delay, d1	22.4	27.4	20.5	31.9	22.7	18.0	20.9	32.9	26.4	23.4	30.1	
Progression Factor	0.40	0.43	0.02	0.79	0.72	0.29	0.75	0.69	0.38	0.92	1.02	
Incremental Delay, d2	1.2	6.0	0.5	2.5	2.0	0.5	6.5	10.5	0.1	23.5	0.5	
Delay (s)	10.3	17.8	0.9	27.6	18.3	5.8	22.2	33.3	10.1	45.1	31.0	
Level of Service	B	B	A	C	B	A	C	C	B	D	C	
Approach Delay (s)		14.0			16.2			27.4			36.8	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM 2000 Control Delay	21.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	82.0%	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												
Traffic Volume (vph)	161	73	96	160	131	533	55	459	70	308	238	132
Future Volume (vph)	161	73	96	160	131	533	55	459	70	308	238	132
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor	0.91	0.91		1.00	1.00	1.00	0.97	0.95	1.00	0.97	0.95	
Frt	1.00	0.94		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	0.99		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1610	3135		1770	1863	1583	3433	3539	1583	3433	3350	
Flt Permitted	0.67	0.83		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1130	2649		1770	1863	1583	3433	3539	1583	3433	3350	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	175	79	104	174	142	579	60	499	76	335	259	143
RTOR Reduction (vph)	0	88	0	0	0	344	0	0	51	0	72	0
Lane Group Flow (vph)	112	158	0	174	142	235	60	499	25	335	330	0
Turn Type	Perm	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4					8			2			
Actuated Green, G (s)	13.9	13.9		13.5	31.9	31.9	5.1	29.1	29.1	15.5	39.5	
Effective Green, g (s)	13.9	13.9		13.5	31.9	31.9	5.1	29.1	29.1	15.5	39.5	
Actuated g/C Ratio	0.15	0.15		0.15	0.35	0.35	0.06	0.32	0.32	0.17	0.44	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
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)	174	409		265	660	561	194	1144	511	591	1470	
v/s Ratio Prot				c0.10	0.08		0.02	c0.14		c0.10	0.10	
v/s Ratio Perm	c0.10	0.06				0.15			0.02			
v/c Ratio	0.64	0.39		0.66	0.22	0.42	0.31	0.44	0.05	0.57	0.22	
Uniform Delay, d1	35.7	34.2		36.1	20.3	22.0	40.8	24.0	20.9	34.2	15.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	0.83	0.80	
Incremental Delay, d2	7.9	0.6		5.8	0.2	0.5	0.9	1.2	0.2	1.1	0.3	
Delay (s)	43.6	34.8		41.8	20.5	22.5	41.7	25.2	21.1	29.6	12.9	
Level of Service	D	C		D	C	C	D	C	C	C	B	
Approach Delay (s)		37.6			26.0			26.3			20.5	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	233	242	1	0	658	370	5	672	36	192	281	190
Future Volume (vph)	233	242	1	0	658	370	5	672	36	192	281	190
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00			0.95		1.00	0.99		1.00	0.94	
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3537			3348		1770	3512		1770	3325	
Flt Permitted	0.95	1.00			1.00		0.40	1.00		0.26	1.00	
Satd. Flow (perm)	1770	3537			3348		740	3512		477	3325	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	253	263	1	0	715	402	5	730	39	209	305	207
RTOR Reduction (vph)	0	0	0	0	65	0	0	3	0	0	100	0
Lane Group Flow (vph)	253	264	0	0	1052	0	5	766	0	209	412	0
Turn Type	Prot	NA			NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	18.1	58.7			36.1		52.3	52.3		52.3	52.3	
Effective Green, g (s)	18.1	58.7			36.1		52.3	52.3		52.3	52.3	
Actuated g/C Ratio	0.15	0.49			0.30		0.44	0.44		0.44	0.44	
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	266	1730			1007		322	1530		207	1449	
v/s Ratio Prot	c0.14	0.07			c0.31			0.22			0.12	
v/s Ratio Perm							0.01			c0.44		
v/c Ratio	0.95	0.15			1.04		0.02	0.50		1.01	0.28	
Uniform Delay, d1	50.5	16.9			42.0		19.2	24.4		33.9	21.8	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	41.8	0.0			40.7		0.1	1.2		65.1	0.5	
Delay (s)	92.3	17.0			82.7		19.3	25.6		98.9	22.3	
Level of Service	F	B			F		B	C		F	C	
Approach Delay (s)		53.8			82.7			25.6			44.5	
Approach LOS		D			F			C			D	

Intersection Summary			
HCM 2000 Control Delay	55.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	88.3%	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												
Traffic Volume (vph)	110	97	182	33	200	27	542	909	28	9	352	103
Future Volume (vph)	110	97	182	33	200	27	542	909	28	9	352	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5	4.5	4.5	4.5		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	0.91	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00		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	1830		1770	3524		1770	4913	
Flt Permitted	0.37	1.00	1.00	0.69	1.00		0.42	1.00		0.21	1.00	
Satd. Flow (perm)	686	1863	1583	1284	1830		785	3524		388	4913	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	120	105	198	36	217	29	589	988	30	10	383	112
RTOR Reduction (vph)	0	0	159	0	6	0	0	2	0	0	54	0
Lane Group Flow (vph)	120	105	39	36	240	0	589	1016	0	10	441	0
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4			8		5	2			6	
Permitted Phases	4		4	8			2			6		
Actuated Green, G (s)	17.7	17.7	17.7	17.7	17.7		63.3	63.3		26.3	26.3	
Effective Green, g (s)	17.7	17.7	17.7	17.7	17.7		63.3	63.3		26.3	26.3	
Actuated g/C Ratio	0.20	0.20	0.20	0.20	0.20		0.70	0.70		0.29	0.29	
Clearance Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5		4.5	4.5	
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)	134	366	311	252	359		907	2478		113	1435	
v/s Ratio Prot		0.06			0.13		c0.23	0.29			0.09	
v/s Ratio Perm	c0.17		0.02	0.03			c0.22			0.03		
v/c Ratio	0.90	0.29	0.13	0.14	0.67		0.65	0.41		0.09	0.31	
Uniform Delay, d1	35.2	30.8	29.8	29.9	33.4		10.3	5.6		23.1	24.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.41	0.39		1.00	1.00	
Incremental Delay, d2	47.3	0.4	0.2	0.3	4.7		1.3	0.4		1.5	0.6	
Delay (s)	82.5	31.2	30.0	30.1	38.1		5.6	2.6		24.7	25.3	
Level of Service	F	C	C	C	D		A	A		C	C	
Approach Delay (s)		45.2			37.1			3.7			25.3	
Approach LOS		D			D			A			C	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	82	0	0	0	102	1145	658	0	721	52
Future Volume (Veh/h)	0	0	82	0	0	0	102	1145	658	0	721	52
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	89	0	0	0	111	1245	715	0	784	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)								206			797	
pX, platoon unblocked	0.76	0.76		0.76	0.76	0.76				0.76		
vC, conflicting volume	1657	2280	290	1817	2308	622	841			1245		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1229	2050	290	1441	2088	0	841			686		
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	87	100	100	100	86			100		
cM capacity (veh/h)	91	36	707	55	34	822	790			685		

Direction, Lane #	EB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3
Volume Total	89	111	622	622	715	314	314	214
Volume Left	0	111	0	0	0	0	0	0
Volume Right	89	0	0	0	715	0	0	57
cSH	707	790	1700	1700	1700	1700	1700	1700
Volume to Capacity	0.13	0.14	0.37	0.37	0.42	0.18	0.18	0.13
Queue Length 95th (ft)	11	12	0	0	0	0	0	0
Control Delay (s)	10.8	10.3	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	B						
Approach Delay (s)	10.8	0.6				0.0		
Approach LOS	B							

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	44.1%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	947	22	34	64	0	40	0	918	16	4	799	0
Future Volume (vph)	947	22	34	64	0	40	0	918	16	4	799	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5		4.5		4.5		4.5	4.5	
Lane Util. Factor	0.97	1.00		1.00		1.00		0.91		1.00	0.91	
Frt	1.00	0.91		1.00		0.85		1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95		1.00		1.00		0.95	1.00	
Satd. Flow (prot)	3433	1693		1770		1583		5073		1770	5085	
Flt Permitted	0.95	1.00		0.95		1.00		1.00		0.22	1.00	
Satd. Flow (perm)	3433	1693		1770		1583		5073		413	5085	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1029	24	37	70	0	43	0	998	17	4	868	0
RTOR Reduction (vph)	0	32	0	0	0	41	0	2	0	0	0	0
Lane Group Flow (vph)	1029	29	0	70	0	2	0	1013	0	4	868	0
Turn Type	pm+pt	NA		Prot		Perm		NA		Perm	NA	
Protected Phases	7	4		3				2			6	
Permitted Phases	4					8				6		
Actuated Green, G (s)	29.8	11.5		21.9		3.6		43.1		43.1	43.1	
Effective Green, g (s)	29.8	11.5		21.9		3.6		43.1		43.1	43.1	
Actuated g/C Ratio	0.33	0.13		0.24		0.04		0.48		0.48	0.48	
Clearance Time (s)	4.5	4.5		4.5		4.5		4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0		3.0		3.0		3.0	3.0	
Lane Grp Cap (vph)	1136	216		430		63		2429		197	2435	
v/s Ratio Prot	c0.30	0.02		c0.04				c0.20			0.17	
v/s Ratio Perm						0.00				0.01		
v/c Ratio	0.91	0.13		0.16		0.03		0.42		0.02	0.36	
Uniform Delay, d1	28.8	34.8		26.8		41.5		15.3		12.3	14.7	
Progression Factor	0.47	0.86		1.00		1.00		0.41		0.79	0.80	
Incremental Delay, d2	7.4	0.2		0.2		0.2		0.4		0.2	0.4	
Delay (s)	21.0	30.3		27.0		41.7		6.6		9.9	12.2	
Level of Service	C	C		C		D		A		A	B	
Approach Delay (s)		21.5			32.6			6.6			12.2	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	1029	0	0	1230	23	423	900	246	0	0	0
Future Volume (vph)	80	1029	0	0	1230	23	423	900	246	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	4.5				
Lane Util. Factor	1.00	0.95			0.91		0.86	0.86				
Frt	1.00	1.00			1.00		1.00	0.97				
Flt Protected	0.95	1.00			1.00		0.95	1.00				
Satd. Flow (prot)	1770	3539			5071		1522	4649				
Flt Permitted	0.14	1.00			1.00		0.95	1.00				
Satd. Flow (perm)	263	3539			5071		1522	4649				
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	1118	0	0	1337	25	460	978	267	0	0	0
RTOR Reduction (vph)	0	0	0	0	2	0	0	40	0	0	0	0
Lane Group Flow (vph)	87	1118	0	0	1360	0	414	1251	0	0	0	0
Turn Type	Perm	NA			NA		pm+pt	NA				
Protected Phases		4			8		6	2				
Permitted Phases	4						2					
Actuated Green, G (s)	47.5	47.5			47.5		33.5	33.5				
Effective Green, g (s)	47.5	47.5			47.5		33.5	33.5				
Actuated g/C Ratio	0.53	0.53			0.53		0.37	0.37				
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5				
Lane Grp Cap (vph)	138	1867			2676		566	1730				
v/s Ratio Prot		0.32			0.27		c0.27	0.27				
v/s Ratio Perm	c0.33											
v/c Ratio	0.63	0.60			0.51		0.73	0.72				
Uniform Delay, d1	15.0	14.7			13.7		24.4	24.3				
Progression Factor	1.00	1.00			0.68		1.00	1.00				
Incremental Delay, d2	19.9	1.4			0.6		8.1	2.7				
Delay (s)	34.9	16.1			10.0		32.5	26.9				
Level of Service	C	B			A		C	C				
Approach Delay (s)		17.5			10.0			28.3			0.0	
Approach LOS		B			A			C			A	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	98	504	21	193	864	0	0	157	40
Future Volume (vph)	0	0	0	98	504	21	193	864	0	0	157	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.5		4.5	4.5			4.5	
Lane Util. Factor					0.91		1.00	0.95			0.95	
Frt					0.99		1.00	1.00			0.97	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					5020		1770	3539			3433	
Flt Permitted					0.99		0.62	1.00			1.00	
Satd. Flow (perm)					5020		1151	3539			3433	
Peak-hour factor, PHF	0.92	0.92	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	107	548	23	210	939	0	0	171	43
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	19	0
Lane Group Flow (vph)	0	0	0	0	674	0	210	939	0	0	195	0
Turn Type				Perm	NA		Perm	NA			NA	
Protected Phases					8			2			6	
Permitted Phases				8			2					
Actuated Green, G (s)					30.5		50.5	50.5			50.5	
Effective Green, g (s)					30.5		50.5	50.5			50.5	
Actuated g/C Ratio					0.34		0.56	0.56			0.56	
Clearance Time (s)					4.5		4.5	4.5			4.5	
Lane Grp Cap (vph)					1701		645	1985			1926	
v/s Ratio Prot								c0.27			0.06	
v/s Ratio Perm					0.13		0.18					
v/c Ratio					0.40		0.33	0.47			0.10	
Uniform Delay, d1					22.7		10.6	11.8			9.2	
Progression Factor					0.14		0.54	0.51			1.00	
Incremental Delay, d2					0.6		1.0	0.6			0.1	
Delay (s)					3.8		6.7	6.6			9.3	
Level of Service					A		A	A			A	
Approach Delay (s)		0.0			3.8			6.7			9.3	
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	0.44		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	92	294	21	0	0	0	0	965	436	0	256	0
Future Volume (vph)	92	294	21	0	0	0	0	965	436	0	256	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5						4.5			4.5	
Lane Util. Factor		0.95						0.95			0.95	
Frt		0.99						0.95			1.00	
Flt Protected		0.99						1.00			1.00	
Satd. Flow (prot)		3472						3374			3539	
Flt Permitted		0.99						1.00			1.00	
Satd. Flow (perm)		3472						3374			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)	100	320	23	0	0	0	0	1049	474	0	278	0
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	438	0	0	0	0	0	1523	0	0	278	0
Turn Type	Perm	NA						NA			NA	
Protected Phases		4						2			6	
Permitted Phases	4											
Actuated Green, G (s)		19.5						61.5			61.5	
Effective Green, g (s)		19.5						61.5			61.5	
Actuated g/C Ratio		0.22						0.68			0.68	
Clearance Time (s)		4.5						4.5			4.5	
Lane Grp Cap (vph)		752						2305			2418	
v/s Ratio Prot								c0.45			0.08	
v/s Ratio Perm		0.13										
v/c Ratio		0.58						0.66			0.11	
Uniform Delay, d1		31.6						8.2			4.9	
Progression Factor		1.00						0.65			1.58	
Incremental Delay, d2		3.3						1.1			0.1	
Delay (s)		34.9						6.4			7.8	
Level of Service		C						A			A	
Approach Delay (s)		34.9			0.0			6.4			7.8	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	126	707	116	74	422	249	152	1135	75	88	407	166
Future Volume (vph)	126	707	116	74	422	249	152	1135	75	88	407	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.98		1.00	0.94		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3464		1770	3342		1770	3506		1770	3539	1583
Flt Permitted	0.25	1.00		0.16	1.00		0.48	1.00		0.12	1.00	1.00
Satd. Flow (perm)	459	3464		304	3342		892	3506		217	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)	137	768	126	80	459	271	165	1234	82	96	442	180
RTOR Reduction (vph)	0	15	0	0	32	0	0	6	0	0	0	83
Lane Group Flow (vph)	137	879	0	80	698	0	165	1310	0	96	442	97
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)	32.5	32.5		32.5	32.5		48.5	48.5		48.5	48.5	48.5
Effective Green, g (s)	32.5	32.5		32.5	32.5		48.5	48.5		48.5	48.5	48.5
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.54	0.54		0.54	0.54	0.54
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
Lane Grp Cap (vph)	165	1250		109	1206		480	1889		116	1907	853
v/s Ratio Prot		0.25			0.21			0.37			0.12	
v/s Ratio Perm	c0.30			0.26			0.18			c0.44		0.06
v/c Ratio	0.83	0.70		0.73	0.58		0.34	0.69		0.83	0.23	0.11
Uniform Delay, d1	26.2	24.6		25.0	23.2		11.7	15.3		17.3	10.9	10.2
Progression Factor	1.00	1.00		0.71	0.67		0.50	0.44		1.07	0.71	0.21
Incremental Delay, d2	36.2	3.3		34.5	2.0		1.5	1.6		46.5	0.3	0.3
Delay (s)	62.4	28.0		52.2	17.5		7.4	8.3		65.1	8.1	2.4
Level of Service	E	C		D	B		A	A		E	A	A
Approach Delay (s)		32.5			20.9			8.2			14.3	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	81.0%	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												
Traffic Volume (vph)	114	843	129	96	493	241	140	1055	86	87	470	179
Future Volume (vph)	114	843	129	96	493	241	140	1055	86	87	470	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		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	3469		1770	3539	1583	1770	3499		1770	3393	
Flt Permitted	0.39	1.00		0.14	1.00	1.00	0.31	1.00		0.11	1.00	
Satd. Flow (perm)	728	3469		255	3539	1583	586	3499		204	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)	124	916	140	104	536	262	152	1147	93	95	511	195
RTOR Reduction (vph)	0	13	0	0	0	25	0	7	0	0	44	0
Lane Group Flow (vph)	124	1043	0	104	536	237	152	1233	0	95	662	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	37.9	37.9		37.9	37.9	37.9	43.1	43.1		43.1	43.1	
Effective Green, g (s)	37.9	37.9		37.9	37.9	37.9	43.1	43.1		43.1	43.1	
Actuated g/C Ratio	0.42	0.42		0.42	0.42	0.42	0.48	0.48		0.48	0.48	
Clearance Time (s)	4.5	4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lane Grp Cap (vph)	306	1460		107	1490	666	280	1675		97	1624	
v/s Ratio Prot		0.30			0.15			0.35			0.20	
v/s Ratio Perm	0.17			c0.41		0.15	0.26			c0.47		
v/c Ratio	0.41	0.71		0.97	0.36	0.36	0.54	0.74		0.98	0.41	
Uniform Delay, d1	18.2	21.6		25.5	17.8	17.7	16.5	18.9		23.0	15.2	
Progression Factor	1.00	1.00		0.53	0.42	0.32	1.00	1.00		0.82	0.79	
Incremental Delay, d2	3.9	3.0		74.7	0.6	1.3	7.4	2.9		84.4	0.7	
Delay (s)	22.1	24.6		88.3	8.0	7.0	23.9	21.8		103.2	12.7	
Level of Service	C	C		F	A	A	C	C		F	B	
Approach Delay (s)		24.3			17.0			22.0			23.4	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	21.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	84.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	761	107	98	472	314	285
Future Volume (vph)	761	107	98	472	314	285
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	0.95		1.00	0.95	0.97	1.00
Frt	0.98		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3474		1770	3539	3433	1583
Flt Permitted	1.00		0.24	1.00	0.95	1.00
Satd. Flow (perm)	3474		454	3539	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	827	116	107	513	341	310
RTOR Reduction (vph)	12	0	0	0	0	110
Lane Group Flow (vph)	931	0	107	513	341	200
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	51.5		51.5	51.5	29.5	29.5
Effective Green, g (s)	51.5		51.5	51.5	29.5	29.5
Actuated g/C Ratio	0.57		0.57	0.57	0.33	0.33
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Lane Grp Cap (vph)	1987		259	2025	1125	518
v/s Ratio Prot	c0.27			0.14	0.10	
v/s Ratio Perm			0.24			c0.13
v/c Ratio	0.47		0.41	0.25	0.30	0.39
Uniform Delay, d1	11.2		10.8	9.6	22.6	23.3
Progression Factor	0.27		0.95	0.94	0.63	0.37
Incremental Delay, d2	0.5		4.6	0.3	0.5	1.7
Delay (s)	3.5		14.8	9.3	14.8	10.3
Level of Service	A		B	A	B	B
Approach Delay (s)	3.5			10.3	12.7	
Approach LOS	A			B	B	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	50.1%	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												
Traffic Volume (vph)	87	824	131	70	584	82	187	433	143	33	193	65
Future Volume (vph)	87	824	131	70	584	82	187	433	143	33	193	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Lane Util. Factor	1.00	0.95		1.00	0.95			0.95			0.95	
Frt	1.00	0.98		1.00	0.98			0.97			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)	1770	3467		1770	3474			3398			3401	
Flt Permitted	0.30	1.00		0.17	1.00			0.76			0.82	
Satd. Flow (perm)	565	3467		318	3474			2612			2803	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	95	896	142	76	635	89	203	471	155	36	210	71
RTOR Reduction (vph)	0	14	0	0	12	0	0	22	0	0	30	0
Lane Group Flow (vph)	95	1024	0	76	712	0	0	807	0	0	287	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	42.5	42.5		42.5	42.5			38.5			38.5	
Effective Green, g (s)	42.5	42.5		42.5	42.5			38.5			38.5	
Actuated g/C Ratio	0.47	0.47		0.47	0.47			0.43			0.43	
Clearance Time (s)	4.5	4.5		4.5	4.5			4.5			4.5	
Lane Grp Cap (vph)	266	1637		150	1640			1117			1199	
v/s Ratio Prot		c0.30			0.20							
v/s Ratio Perm	0.17			0.24				c0.31			0.10	
v/c Ratio	0.36	0.63		0.51	0.43			0.72			0.24	
Uniform Delay, d1	15.1	17.8		16.5	15.8			21.3			16.4	
Progression Factor	0.38	0.35		1.09	1.09			1.00			0.40	
Incremental Delay, d2	2.5	1.2		11.2	0.8			4.1			0.5	
Delay (s)	8.3	7.5		29.1	18.0			25.4			7.0	
Level of Service	A	A		C	B			C			A	
Approach Delay (s)		7.6			19.1			25.4			7.0	
Approach LOS		A			B			C			A	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	445	665	309	160	621	37	234	571	83	39	567	384
Future Volume (vph)	445	665	309	160	621	37	234	571	83	39	567	384
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.96		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3229		1770	3510		1770	3539	1583	1770	3539	1583
Flt Permitted	0.16	0.60		0.23	1.00		0.27	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)	273	1957		432	3510		501	3539	1583	536	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)	484	723	336	174	675	40	254	621	90	42	616	417
RTOR Reduction (vph)	0	46	0	0	5	0	0	0	53	0	0	38
Lane Group Flow (vph)	382	1115	0	174	710	0	254	621	37	42	616	379
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4		3	8		5	2			6	7
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	44.3	44.3		25.8	20.3		36.7	36.7	36.7	23.7	23.7	43.2
Effective Green, g (s)	44.3	44.3		25.8	20.3		36.7	36.7	36.7	23.7	23.7	43.2
Actuated g/C Ratio	0.49	0.49		0.29	0.23		0.41	0.41	0.41	0.26	0.26	0.48
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
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)	424	1238		205	791		324	1443	645	141	931	759
v/s Ratio Prot	c0.20	c0.20		0.05	0.20		c0.07	0.18			0.17	0.11
v/s Ratio Perm	c0.25	0.25		0.19			c0.25		0.02	0.08		0.13
v/c Ratio	0.90	0.90		0.85	0.90		0.78	0.43	0.06	0.30	0.66	0.50
Uniform Delay, d1	22.8	20.8		26.0	33.8		29.4	19.1	16.2	26.5	29.6	16.0
Progression Factor	0.95	0.49		1.00	1.00		0.73	0.65	0.49	1.00	1.00	1.00
Incremental Delay, d2	15.6	6.3		26.4	12.9		6.2	0.5	0.1	5.3	3.7	0.5
Delay (s)	37.2	16.6		52.4	46.7		27.6	12.9	8.1	31.8	33.3	16.5
Level of Service	D	B		D	D		C	B	A	C	C	B
Approach Delay (s)		21.7			47.8			16.3			26.7	
Approach LOS		C			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	26.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	89.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	492	414	11	6	249	167	17	319	4	97	135	211
Future Volume (vph)	492	414	11	6	249	167	17	319	4	97	135	211
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
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		1.00	0.94		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	1855		1770	1750		1770	1860		1770	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.61	1.00		0.23	1.00	1.00
Satd. Flow (perm)	1770	1855		1770	1750		1139	1860		425	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)	535	450	12	7	271	182	18	347	4	105	147	229
RTOR Reduction (vph)	0	1	0	0	27	0	0	1	0	0	0	176
Lane Group Flow (vph)	535	461	0	7	426	0	18	350	0	105	147	53
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		6
Actuated Green, G (s)	32.4	54.6		1.0	23.2		20.9	20.9		20.9	20.9	20.9
Effective Green, g (s)	32.4	54.6		1.0	23.2		20.9	20.9		20.9	20.9	20.9
Actuated g/C Ratio	0.36	0.61		0.01	0.26		0.23	0.23		0.23	0.23	0.23
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	4.5
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)	637	1125		19	451		264	431		98	432	367
v/s Ratio Prot	c0.30	0.25		0.00	c0.24			0.19			0.08	
v/s Ratio Perm							0.02			c0.25		0.03
v/c Ratio	0.84	0.41		0.37	0.95		0.07	0.81		1.07	0.34	0.14
Uniform Delay, d1	26.4	9.3		44.2	32.8		27.0	32.7		34.5	28.8	27.5
Progression Factor	0.73	0.27		1.00	1.00		1.00	1.00		0.82	0.87	1.10
Incremental Delay, d2	8.0	0.2		11.7	28.7		0.5	15.3		92.6	1.4	0.5
Delay (s)	27.3	2.7		55.9	61.5		27.5	48.0		120.8	26.4	30.7
Level of Service	C	A		E	E		C	D		F	C	C
Approach Delay (s)		15.9			61.4			47.0			49.1	
Approach LOS		B			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	36.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	738	213	108	480	260	279
Future Volume (vph)	738	213	108	480	260	279
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3420		1770	3539	1770	1583
Flt Permitted	1.00		0.22	1.00	0.95	1.00
Satd. Flow (perm)	3420		419	3539	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	802	232	117	522	283	303
RTOR Reduction (vph)	30	0	0	0	0	143
Lane Group Flow (vph)	1004	0	117	522	283	160
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	2			6	8	
Permitted Phases			6			8
Actuated Green, G (s)	55.5		55.5	55.5	25.5	25.5
Effective Green, g (s)	55.5		55.5	55.5	25.5	25.5
Actuated g/C Ratio	0.62		0.62	0.62	0.28	0.28
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Lane Grp Cap (vph)	2109		258	2182	501	448
v/s Ratio Prot	c0.29			0.15	c0.16	
v/s Ratio Perm			0.28			0.10
v/c Ratio	0.48		0.45	0.24	0.56	0.36
Uniform Delay, d1	9.4		9.2	7.8	27.5	25.7
Progression Factor	0.29		1.28	0.62	1.00	1.00
Incremental Delay, d2	0.6		5.5	0.3	4.6	2.2
Delay (s)	3.3		17.3	5.1	32.1	27.9
Level of Service	A		B	A	C	C
Approach Delay (s)	3.3			7.3	29.9	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	5	19	213	15	106	25	914	61	20	380	13
Future Volume (vph)	15	5	19	213	15	106	25	914	61	20	380	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt		0.93		1.00	0.87		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1705		1770	1617		1770	3539	1583	1770	3522	
Flt Permitted		0.89		0.73	1.00		0.50	1.00	1.00	0.25	1.00	
Satd. Flow (perm)		1548		1359	1617		937	3539	1583	469	3522	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	5	21	232	16	115	27	993	66	22	413	14
RTOR Reduction (vph)	0	16	0	0	65	0	0	0	22	0	2	0
Lane Group Flow (vph)	0	26	0	232	66	0	27	993	44	22	425	0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)		20.8		20.8	20.8		60.2	60.2	60.2	60.2	60.2	
Effective Green, g (s)		20.8		20.8	20.8		60.2	60.2	60.2	60.2	60.2	
Actuated g/C Ratio		0.23		0.23	0.23		0.67	0.67	0.67	0.67	0.67	
Clearance Time (s)		4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		357		314	373		626	2367	1058	313	2355	
v/s Ratio Prot					0.04			c0.28			0.12	
v/s Ratio Perm		0.02		c0.17			0.03		0.03	0.05		
v/c Ratio		0.07		0.74	0.18		0.04	0.42	0.04	0.07	0.18	
Uniform Delay, d1		27.1		32.1	27.7		5.1	6.9	5.1	5.2	5.6	
Progression Factor		1.00		1.00	1.00		2.60	2.91	5.77	1.00	1.00	
Incremental Delay, d2		0.1		8.8	0.2		0.1	0.4	0.1	0.4	0.2	
Delay (s)		27.1		40.9	28.0		13.3	20.3	29.4	5.6	5.8	
Level of Service		C		D	C		B	C	C	A	A	
Approach Delay (s)		27.1			36.2			20.7			5.8	
Approach LOS		C			D			C			A	

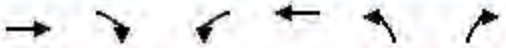
Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	51.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	20	17	835	214	13	539
Future Volume (Veh/h)	20	17	835	214	13	539
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)	22	18	908	233	14	586
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)						549
pX, platoon unblocked						
vC, conflicting volume	1346	570			1141	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1346	570			1141	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	84	96			98	
cM capacity (veh/h)	139	464			608	

Direction, Lane #	WB 1	WB 2	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	22	18	605	536	14	293	293
Volume Left	22	0	0	0	14	0	0
Volume Right	0	18	0	233	0	0	0
cSH	139	464	1700	1700	608	1700	1700
Volume to Capacity	0.16	0.04	0.36	0.32	0.02	0.17	0.17
Queue Length 95th (ft)	14	3	0	0	2	0	0
Control Delay (s)	35.6	13.1	0.0	0.0	11.1	0.0	0.0
Lane LOS	E	B			B		
Approach Delay (s)	25.5		0.0		0.3		
Approach LOS	D						

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1137	69	69	1063	125	112
Future Volume (vph)	1137	69	69	1063	125	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	4.5
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.99		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3509		1770	3539	1770	1583
Flt Permitted	1.00		0.14	1.00	0.95	1.00
Satd. Flow (perm)	3509		257	3539	1770	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1236	75	75	1155	136	122
RTOR Reduction (vph)	8	0	0	0	0	32
Lane Group Flow (vph)	1303	0	75	1155	136	90
Turn Type	NA		Perm	NA	Prot	Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	29.0		29.0	29.0	22.0	22.0
Effective Green, g (s)	29.0		29.0	29.0	22.0	22.0
Actuated g/C Ratio	0.48		0.48	0.48	0.37	0.37
Clearance Time (s)	4.5		4.5	4.5	4.5	4.5
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1696		124	1710	649	580
v/s Ratio Prot	c0.37			0.33	c0.08	
v/s Ratio Perm			0.29			0.06
v/c Ratio	0.77		0.60	0.68	0.21	0.15
Uniform Delay, d1	12.7		11.3	11.9	13.0	12.8
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	2.1		8.1	1.1	0.7	0.6
Delay (s)	14.9		19.4	13.0	13.8	13.3
Level of Service	B		B	B	B	B
Approach Delay (s)	14.9			13.4	13.6	
Approach LOS	B			B	B	

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)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	42	43	900	0	0	983
Future Volume (Veh/h)	42	43	900	0	0	983
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)	46	47	978	0	0	1068
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage veh)						
Upstream signal (ft)			304			386
pX, platoon unblocked	0.90	0.81			0.81	
vC, conflicting volume	1512	489			978	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	415	0			492	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	91	95			100	
cM capacity (veh/h)	509	874			861	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	93	489	489	534	534
Volume Left	46	0	0	0	0
Volume Right	47	0	0	0	0
cSH	645	1700	1700	1700	1700
Volume to Capacity	0.14	0.29	0.29	0.31	0.31
Queue Length 95th (ft)	13	0	0	0	0
Control Delay (s)	11.5	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	11.5	0.0		0.0	
Approach LOS	B				

Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	Err%	ICU Level of Service		H
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	199	107	130	427	469	222
Future Volume (vph)	199	107	130	427	469	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.95		1.00	1.00	0.96	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1719		1770	1863	1782	
Flt Permitted	0.97		0.25	1.00	1.00	
Satd. Flow (perm)	1719		467	1863	1782	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	216	116	141	464	510	241
RTOR Reduction (vph)	35	0	0	0	25	0
Lane Group Flow (vph)	297	0	141	464	726	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	14.6		36.4	36.4	36.4	
Effective Green, g (s)	14.6		36.4	36.4	36.4	
Actuated g/C Ratio	0.24		0.61	0.61	0.61	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	418		283	1130	1081	
v/s Ratio Prot	c0.17			0.25	c0.41	
v/s Ratio Perm			0.30			
v/c Ratio	0.71		0.50	0.41	0.67	
Uniform Delay, d1	20.8		6.7	6.2	7.8	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	5.6		6.1	1.1	3.3	
Delay (s)	26.4		12.8	7.3	11.2	
Level of Service	C		B	A	B	
Approach Delay (s)	26.4			8.6	11.2	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	252	81	149	779	313	235
Future Volume (vph)	252	81	149	779	313	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.94	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1736		1770	1863	1755	
Flt Permitted	0.96		0.35	1.00	1.00	
Satd. Flow (perm)	1736		644	1863	1755	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	274	88	162	847	340	255
RTOR Reduction (vph)	21	0	0	0	41	0
Lane Group Flow (vph)	341	0	162	847	554	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	15.5		35.5	35.5	35.5	
Effective Green, g (s)	15.5		35.5	35.5	35.5	
Actuated g/C Ratio	0.26		0.59	0.59	0.59	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	448		381	1102	1038	
v/s Ratio Prot	c0.20			c0.45	0.32	
v/s Ratio Perm			0.25			
v/c Ratio	0.76		0.43	0.77	0.53	
Uniform Delay, d1	20.5		6.7	9.2	7.3	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	7.5		3.4	5.2	2.0	
Delay (s)	28.0		10.1	14.3	9.3	
Level of Service	C		B	B	A	
Approach Delay (s)	28.0			13.7	9.3	
Approach LOS	C			B	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)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	203	109	133	435	478	226
Future Volume (vph)	203	109	133	435	478	226
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.95		1.00	1.00	0.96	
Flt Protected	0.97		0.95	1.00	1.00	
Satd. Flow (prot)	1719		1770	1863	1782	
Flt Permitted	0.97		0.24	1.00	1.00	
Satd. Flow (perm)	1719		445	1863	1782	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	221	118	145	473	520	246
RTOR Reduction (vph)	35	0	0	0	25	0
Lane Group Flow (vph)	304	0	145	473	741	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	14.8		36.2	36.2	36.2	
Effective Green, g (s)	14.8		36.2	36.2	36.2	
Actuated g/C Ratio	0.25		0.60	0.60	0.60	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	424		268	1124	1075	
v/s Ratio Prot	c0.18			0.25	c0.42	
v/s Ratio Perm			0.33			
v/c Ratio	0.72		0.54	0.42	0.69	
Uniform Delay, d1	20.7		7.0	6.3	8.1	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	5.7		7.6	1.2	3.6	
Delay (s)	26.4		14.6	7.5	11.7	
Level of Service	C		B	A	B	
Approach Delay (s)	26.4			9.2	11.7	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	256	83	152	793	319	240
Future Volume (vph)	256	83	152	793	319	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.97		1.00	1.00	0.94	
Flt Protected	0.96		0.95	1.00	1.00	
Satd. Flow (prot)	1736		1770	1863	1755	
Flt Permitted	0.96		0.34	1.00	1.00	
Satd. Flow (perm)	1736		625	1863	1755	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	278	90	165	862	347	261
RTOR Reduction (vph)	21	0	0	0	41	0
Lane Group Flow (vph)	347	0	165	862	567	0
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	
Permitted Phases			2			
Actuated Green, G (s)	15.6		35.4	35.4	35.4	
Effective Green, g (s)	15.6		35.4	35.4	35.4	
Actuated g/C Ratio	0.26		0.59	0.59	0.59	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	451		368	1099	1035	
v/s Ratio Prot	c0.20			c0.46	0.32	
v/s Ratio Perm			0.26			
v/c Ratio	0.77		0.45	0.78	0.55	
Uniform Delay, d1	20.5		6.9	9.4	7.5	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	7.9		3.9	5.6	2.1	
Delay (s)	28.5		10.8	15.0	9.5	
Level of Service	C		B	B	A	
Approach Delay (s)	28.5			14.3	9.5	
Approach LOS	C			B	A	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	60.0	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

2031 and 2040 Mitigation Level of Service Worksheets

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	291	230	131	293	957	8	228	503	91	26	1025	740
Future Volume (vph)	291	230	131	293	957	8	228	503	91	26	1025	740
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	0.91	0.91		1.00	0.95		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.96		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	0.99		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1610	3212		1770	3535		1770	3539	1583	1770	3539	1583
Flt Permitted	0.17	0.57		0.45	1.00		0.12	1.00	1.00	0.45	1.00	1.00
Satd. Flow (perm)	290	1849		833	3535		222	3539	1583	834	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)	316	250	142	318	1040	9	248	547	99	28	1114	804
RTOR Reduction (vph)	0	38	0	0	1	0	0	0	55	0	0	39
Lane Group Flow (vph)	183	487	0	318	1048	0	248	547	44	28	1114	765
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm	NA	pm+ov
Protected Phases	7	4		3	8		5	2			6	7
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	36.1	36.1		36.7	23.7		40.1	40.1	40.1	29.1	29.1	41.8
Effective Green, g (s)	36.1	36.1		36.7	23.7		40.1	40.1	40.1	29.1	29.1	41.8
Actuated g/C Ratio	0.40	0.40		0.41	0.26		0.45	0.45	0.45	0.32	0.32	0.46
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
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)	302	933		475	930		210	1576	705	269	1144	814
v/s Ratio Prot	0.09	0.07		0.10	c0.30		c0.09	0.15			0.31	c0.13
v/s Ratio Perm	0.16	0.14		0.18			c0.44		0.03	0.03		0.35
v/c Ratio	0.61	0.52		0.67	1.13		1.18	0.35	0.06	0.10	0.97	0.94
Uniform Delay, d1	20.6	20.4		19.2	33.1		21.7	16.4	14.2	21.3	30.1	22.9
Progression Factor	0.61	0.46		1.00	1.00		1.27	1.20	2.01	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.5		3.6	71.0		118.5	0.6	0.2	0.8	21.0	18.3
Delay (s)	15.6	10.0		22.8	104.2		146.2	20.2	28.7	22.1	51.1	41.2
Level of Service	B	A		C	F		F	C	C	C	D	D
Approach Delay (s)		11.4			85.3			56.1			46.6	
Approach LOS		B			F			E			D	

Intersection Summary			
HCM 2000 Control Delay	54.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	96.4%	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												
Traffic Volume (vph)	229	237	1	23	655	364	5	676	35	190	276	188
Future Volume (vph)	229	237	1	23	655	364	5	676	35	190	276	188
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
Lane Util. Factor	1.00	0.95			0.95		1.00	0.95		1.00	0.95	
Frt	1.00	1.00			0.95		1.00	0.99		1.00	0.94	
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3537			3350		1770	3513		1770	3324	
Flt Permitted	0.95	1.00			0.94		0.40	1.00		0.25	1.00	
Satd. Flow (perm)	1770	3537			3159		743	3513		463	3324	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	249	258	1	25	712	396	5	735	38	207	300	204
RTOR Reduction (vph)	0	0	0	0	59	0	0	3	0	0	100	0
Lane Group Flow (vph)	249	259	0	0	1074	0	5	770	0	207	404	0
Turn Type	Prot	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	18.0	60.0			37.5		51.0	51.0		51.0	51.0	
Effective Green, g (s)	18.0	60.0			37.5		51.0	51.0		51.0	51.0	
Actuated g/C Ratio	0.15	0.50			0.31		0.42	0.42		0.42	0.42	
Clearance Time (s)	4.5	4.5			4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	265	1768			987		315	1493		196	1412	
v/s Ratio Prot	c0.14	0.07						0.22			0.12	
v/s Ratio Perm					c0.34		0.01			c0.45		
v/c Ratio	0.94	0.15			1.09		0.02	0.52		1.06	0.29	
Uniform Delay, d1	50.5	16.2			41.2		20.0	25.4		34.5	22.6	
Progression Factor	1.00	1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	38.7	0.0			55.7		0.1	1.3		79.9	0.5	
Delay (s)	89.2	16.2			96.9		20.1	26.7		114.4	23.1	
Level of Service	F	B			F		C	C		F	C	
Approach Delay (s)		52.0			96.9			26.6			49.7	
Approach LOS		D			F			C			D	

Intersection Summary			
HCM 2000 Control Delay	61.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.5
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	199	4	85	3	4	7	72	370	7	9	377	222
Future Volume (vph)	199	4	85	3	4	7	72	370	7	9	377	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.97			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1729			1712		1770	1863	1583	1770	1863	1583
Flt Permitted		0.78			0.94		0.47	1.00	1.00	0.48	1.00	1.00
Satd. Flow (perm)		1403			1626		880	1863	1583	892	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)	216	4	92	3	4	8	78	402	8	10	410	241
RTOR Reduction (vph)	0	30	0	0	6	0	0	0	3	0	0	105
Lane Group Flow (vph)	0	282	0	0	9	0	78	402	5	10	410	136
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		17.1			17.1		33.9	33.9	33.9	33.9	33.9	33.9
Effective Green, g (s)		17.1			17.1		33.9	33.9	33.9	33.9	33.9	33.9
Actuated g/C Ratio		0.29			0.29		0.56	0.56	0.56	0.56	0.56	0.56
Clearance Time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		399			463		497	1052	894	503	1052	894
v/s Ratio Prot								0.22			c0.22	
v/s Ratio Perm		c0.20			0.01		0.09		0.00	0.01		0.09
v/c Ratio		0.71			0.02		0.16	0.38	0.01	0.02	0.39	0.15
Uniform Delay, d1		19.2			15.4		6.2	7.2	5.7	5.7	7.3	6.2
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		5.6			0.0		0.7	1.1	0.0	0.1	1.1	0.4
Delay (s)		24.8			15.4		6.9	8.3	5.7	5.8	8.4	6.6
Level of Service		C			B		A	A	A	A	A	A
Approach Delay (s)		24.8			15.4			8.0			7.7	
Approach LOS		C			B			A			A	

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)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	252	5	62	6	6	13	51	619	7	7	261	235
Future Volume (vph)	252	5	62	6	6	13	51	619	7	7	261	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.97			0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1745			1716		1770	1863	1583	1770	1863	1583
Flt Permitted		0.75			0.91		0.58	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)		1364			1584		1073	1863	1583	496	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)	274	5	67	7	7	14	55	673	8	8	284	255
RTOR Reduction (vph)	0	15	0	0	10	0	0	0	4	0	0	114
Lane Group Flow (vph)	0	331	0	0	18	0	55	673	4	8	284	141
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		17.9			17.9		33.1	33.1	33.1	33.1	33.1	33.1
Effective Green, g (s)		17.9			17.9		33.1	33.1	33.1	33.1	33.1	33.1
Actuated g/C Ratio		0.30			0.30		0.55	0.55	0.55	0.55	0.55	0.55
Clearance Time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		406			472		591	1027	873	273	1027	873
v/s Ratio Prot								c0.36			0.15	
v/s Ratio Perm		c0.24			0.01		0.05		0.00	0.02		0.09
v/c Ratio		0.81			0.04		0.09	0.66	0.01	0.03	0.28	0.16
Uniform Delay, d1		19.5			14.9		6.4	9.4	6.0	6.1	7.1	6.6
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		11.8			0.0		0.3	3.3	0.0	0.2	0.7	0.4
Delay (s)		31.4			15.0		6.7	12.7	6.1	6.3	7.8	7.0
Level of Service		C			B		A	B	A	A	A	A
Approach Delay (s)		31.4			15.0			12.2			7.4	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	203	4	86	3	4	7	74	377	7	9	383	226
Future Volume (vph)	203	4	86	3	4	7	74	377	7	9	383	226
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.96			0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.97			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1729			1712		1770	1863	1583	1770	1863	1583
Flt Permitted		0.78			0.94		0.47	1.00	1.00	0.47	1.00	1.00
Satd. Flow (perm)		1402			1626		869	1863	1583	878	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)	221	4	93	3	4	8	80	410	8	10	416	246
RTOR Reduction (vph)	0	30	0	0	6	0	0	0	4	0	0	108
Lane Group Flow (vph)	0	288	0	0	9	0	80	410	4	10	416	138
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		17.3			17.3		33.7	33.7	33.7	33.7	33.7	33.7
Effective Green, g (s)		17.3			17.3		33.7	33.7	33.7	33.7	33.7	33.7
Actuated g/C Ratio		0.29			0.29		0.56	0.56	0.56	0.56	0.56	0.56
Clearance Time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		404			468		488	1046	889	493	1046	889
v/s Ratio Prot								0.22			c0.22	
v/s Ratio Perm		c0.21			0.01		0.09		0.00	0.01		0.09
v/c Ratio		0.71			0.02		0.16	0.39	0.01	0.02	0.40	0.16
Uniform Delay, d1		19.1			15.3		6.3	7.4	5.8	5.8	7.4	6.3
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		5.9			0.0		0.7	1.1	0.0	0.1	1.1	0.4
Delay (s)		25.0			15.3		7.1	8.5	5.8	5.9	8.6	6.7
Level of Service		C			B		A	A	A	A	A	A
Approach Delay (s)		25.0			15.3			8.2			7.8	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	256	5	64	6	6	14	52	630	7	7	266	240
Future Volume (vph)	256	5	64	6	6	14	52	630	7	7	266	240
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.97			0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96			0.99		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1744			1712		1770	1863	1583	1770	1863	1583
Flt Permitted		0.75			0.91		0.57	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)		1363			1583		1063	1863	1583	475	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)	278	5	70	7	7	15	57	685	8	8	289	261
RTOR Reduction (vph)	0	16	0	0	10	0	0	0	4	0	0	118
Lane Group Flow (vph)	0	337	0	0	19	0	57	685	4	8	289	143
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)		18.1			18.1		32.9	32.9	32.9	32.9	32.9	32.9
Effective Green, g (s)		18.1			18.1		32.9	32.9	32.9	32.9	32.9	32.9
Actuated g/C Ratio		0.30			0.30		0.55	0.55	0.55	0.55	0.55	0.55
Clearance Time (s)		4.5			4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		411			477		582	1021	868	260	1021	868
v/s Ratio Prot								c0.37			0.16	
v/s Ratio Perm		c0.25			0.01		0.05		0.00	0.02		0.09
v/c Ratio		0.82			0.04		0.10	0.67	0.01	0.03	0.28	0.16
Uniform Delay, d1		19.4			14.8		6.5	9.7	6.1	6.2	7.2	6.7
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		12.1			0.0		0.3	3.5	0.0	0.2	0.7	0.4
Delay (s)		31.5			14.8		6.8	13.2	6.1	6.4	7.9	7.1
Level of Service		C			B		A	B	A	A	A	A
Approach Delay (s)		31.5			14.8			12.6			7.5	
Approach LOS		C			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	14.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Air Quality, Greenhouse Gas, and Health Risk Calculations

Unmitigated Final EIR Project

Off-Road Equipment	HP Rating	Hours	(lb/hr) ROG	(lb/hr) CO	(lb/hr) NOX	(lb/hr) SOX	(lb/hr) PM10	(lb/hr) PM2.5	(lb/hr) CO2	(lb/hr) CH4	Emissions (lbs) ROG	CO	NOX	SOX	PM10	PM2.5	CO2	CH4	CO2e
Asphalt Paver	224	83	0.096219	0.306812	0.823589	0.001376	0.029997	0.029098	122.2913	0.008682	8.0	25.5	68.4	0.1	2.5	2.4	10150.2	0.7	10165.3
Asphalt Paver	35	120	0.082099	0.269557	0.216492	0.000309	0.018532	0.017976	23.92655	0.007408	9.9	32.3	26.0	0.0	2.2	2.2	2871.2	0.9	2889.9
Backhoe	50	41	0.051274	0.364663	0.333077	0.000775	0.018901	0.018334	66.79721	0.004626	2.1	15.0	13.7	0.0	0.8	0.8	2738.7	0.2	2742.7
Crawler Backhoe	266	12	0.09137	0.348282	0.596387	0.001932	0.020044	0.019442	171.737	0.008244	1.1	4.2	7.2	0.0	0.2	0.2	2060.8	0.1	2062.9
Tractor Backhoe	62	2675	0.049709	0.283857	0.234245	0.000392	0.012081	0.011719	30.3471	0.004485	133.0	759.3	626.6	1.0	32.3	31.3	81178.5	12.0	81430.4
Tractor Backhoe	98	3240	0.043487	0.342622	0.29366	0.000607	0.018357	0.017807	51.72802	0.003924	140.9	1110.1	951.5	2.0	59.5	57.7	167598.8	12.7	167865.8
Excavator	120	1334	0.069294	0.501744	0.442525	0.000864	0.028931	0.028063	73.62307	0.006252	92.4	669.3	590.3	1.2	38.6	37.4	98213.2	8.3	98388.3
8T Crane	50	1838	0.064589	0.252711	0.201938	0.0003	0.01513	0.014676	23.1867	0.005828	118.7	464.5	371.2	0.6	27.8	27.0	42617.1	10.7	42842.1
10T Crane	120	0	0.063871	0.34863	0.38575	0.000588	0.030642	0.029722	50.14797	0.005763	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35T Crane	175	1093	0.075221	0.476621	0.502915	0.000904	0.028272	0.027424	80.3446	0.006787	82.2	520.9	549.7	1.0	30.9	30.0	87816.6	7.4	87972.4
50T Crane	250	170	0.07866	0.252136	0.616831	0.001262	0.021189	0.020553	112.1589	0.007097	13.4	42.9	104.9	0.2	3.6	3.5	19067.0	1.2	19092.4
100T Crane	400	2843	0.096129	0.326836	0.69988	0.001414	0.025385	0.024624	144.081	0.008674	273.3	929.2	1989.8	4.0	72.2	70.0	409622.3	24.7	410140.2
140T Crane	450	154	0.108145	0.36769	0.787364	0.001591	0.028559	0.027702	162.0911	0.009758	16.7	56.6	121.3	0.2	4.4	4.3	24962.0	1.5	24993.6
175T Crane	500	41	0.120161	0.408545	0.874849	0.001768	0.031732	0.03078	180.1013	0.010842	4.9	16.8	35.9	0.1	1.3	1.3	7384.2	0.4	7393.5
200T Crane	550	49679	0.132177	0.449399	0.962334	0.001945	0.034905	0.033858	198.1114	0.011926	6566.4	22325.7	47807.8	96.6	1734.0	1682.0	9841976.2	592.5	9854418.2
Air Compressor	49	760	0.051782	0.214174	0.184788	0.000288	0.013056	0.012664	22.27126	0.004672	39.4	162.8	140.4	0.2	9.9	9.6	16926.2	3.6	17000.7
Air Compressor	120	4935	0.058164	0.313021	0.393537	0.000711	0.024634	0.023895	63.60731	0.005248	287.0	1544.8	1942.1	3.5	121.6	117.9	313902.1	25.9	314446.0
Concrete Mixer	20	8232	0.008662	0.041629	0.053759	0.000109	0.002193	0.002127	7.248148	0.000782	71.3	342.7	442.5	0.9	18.1	17.5	59666.8	6.4	59801.9
Concrete Pump	30	6	0.045793	0.272172	0.330641	0.00059	0.018942	0.018374	49.60666	0.004132	0.3	1.6	2.0	0.0	0.1	0.1	297.6	0.0	298.2
Roller	120	880	0.068263	0.388482	0.448478	0.00077	0.029074	0.028202	67.04405	0.006159	60.1	341.9	394.7	0.7	25.6	24.8	58998.8	5.4	59112.6
Drill Rig	249	1790	0.053756	0.342582	0.249932	0.002116	0.006828	0.006624	188.1019	0.00485	96.2	613.2	447.4	3.8	12.2	11.9	336702.4	8.7	336884.7
Drill Rig	474	4561	0.088668	0.551156	0.403468	0.003056	0.011209	0.010873	311.3086	0.008	404.4	2513.8	1840.2	13.9	51.1	49.6	1419878.7	36.5	1420645.0
Drill Rig	580	16858	0.132064	0.820109	0.602858	0.00462	0.016706	0.016205	463.2009	0.011916	2226.3	13825.4	10163.0	77.9	281.6	273.2	7808640.1	200.9	7812858.6
Drill Rig	580	17575	0.132064	0.820109	0.602858	0.00462	0.016706	0.016205	463.2009	0.011916	2321.0	14413.4	10595.2	81.2	293.6	284.8	8140755.1	209.4	8145153.0
D6 Tractor	215	282	0.133304	0.417938	1.043014	0.001869	0.03855	0.037393	166.1315	0.012028	37.6	117.9	294.1	0.5	10.9	10.5	46849.1	3.4	46920.3
Boom Lift	65	445	0.064589	0.252711	0.201938	0.0003	0.01513	0.014676	23.1867	0.005828	28.7	112.5	89.9	0.1	6.7	6.5	10318.1	2.6	10372.5
Excavator CAT307	54	0	0.046808	0.252087	0.200215	0.000323	0.011054	0.010722	25.01754	0.004223	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator CAT321	148	3754	0.069294	0.501744	0.442525	0.000864	0.028931	0.028063	73.62307	0.006252	260.1	1883.5	1661.2	3.2	108.6	105.3	276381.0	23.5	276873.9
Excavator CAT324	190	80	0.082387	0.664068	0.506902	0.001263	0.02643	0.025637	112.2216	0.007434	6.6	53.1	40.6	0.1	2.1	2.1	8977.7	0.6	8990.2
Excavator CAT330	235	0	0.09333	0.33234	0.598381	0.001785	0.020201	0.019595	158.6828	0.008421	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator CAT336	266	14269	0.09333	0.33234	0.598381	0.001785	0.020201	0.019595	158.6828	0.008421	1331.7	4742.2	8538.3	25.5	288.2	279.6	2264244.7	120.2	2266768.0
Excavator CAT345	345	1495	0.113598	0.400618	0.693245	0.00204	0.024313	0.023584	196.2091	0.01025	169.8	598.9	1036.4	3.0	36.3	35.3	293332.6	15.3	293654.3
Forklift CAT TL-1055	125	23718	0.026472	0.211761	0.174533	0.000366	0.010802	0.010478	31.22492	0.002389	627.9	5022.5	4139.6	8.7	256.2	248.5	740592.6	56.7	741782.2
Generator 5kW	15	34037	0.012261	0.064385	0.085235	0.000159	0.00429	0.004162	10.20766	0.001106	417.3	2191.5	2901.1	5.4	146.0	141.6	347438.1	37.7	348228.9
Grader CAT14	180	3639	0.105909	0.729413	0.700188	0.001394	0.038491	0.037336	123.9215	0.009556	385.4	2654.3	2548.0	5.1	140.1	135.9	450950.4	34.8	451680.7
Loader Deere 210	78	1344	0.074242	0.319812	0.259094	0.000403	0.017448	0.016925	31.14967	0.006699	99.8	429.8	348.2	0.5	23.5	22.7	41865.2	9.0	42054.2
Loader CAT950	130	1225	0.065966	0.401558	0.412143	0.000691	0.030685	0.029765	58.91351	0.005952	80.8	491.9	504.9	0.8	37.6	36.5	72169.0	7.3	72322.2
Loader CAT963	150	2824	0.065966	0.401558	0.412143	0.000691	0.030685	0.029765	58.91351	0.005952	186.3	1134.0	1163.9	2.0	86.7	84.1	166371.7	16.8	166724.7
Loader CAT966	170	108169	0.088786	0.622687	0.590182	0.001196	0.032334	0.031364	106.3152	0.008011	9603.9	67355.4	63839.4	129.4	3497.5	3392.6	11500008.8	866.5	11518206.3
Loader CAT IT62	207	31758	0.091694	0.473199	0.652182	0.001436	0.028343	0.027492	127.646	0.008273	2912.0	15027.9	20712.0	45.6	900.1	873.1	4053780.1	262.7	4059297.8
Loader CAT980	355	825	0.094601	0.323711	0.714183	0.001676	0.024351	0.023621	148.9767	0.008536	78.0	267.1	589.2	1.4	20.1	19.5	122905.8	7.0	123053.7
Skid Steer Loader	50	488	0.025253	0.214562	0.179886	0.000375	0.00735	0.00713	30.27763	0.002279	12.3	104.7	87.8	0.2	3.6	3.5	14775.5	1.1	14798.8
Pavement Broom	74	12480	0.082099	0.269557	0.216492	0.000309	0.018532	0.017976	23.92655	0.007408	1024.6	3364.1	2701.8	3.9	231.3	224.3	298603.4	92.4	300544.8
Forktruck	74	2377	0.082099	0.269557	0.216492	0.000309	0.018532	0.017976	23.92655	0.007408	195.1	640.7	514.6	0.7	44.1	42.7	56873.4	17.6	57243.2
Manlift 40ft	50	12547	0.033638	0.150605	0.152478	0.000254	0.009254	0.008976	19.61275	0.003035	422.1	1889.6	1913.1	3.2	116.1	112.6	246081.2	38.1	246880.9
Manlift 80ft	74	345	0.033162	0.191258	0.204503	0.00035	0.013102	0.012709	28.84229	0.002992	11.4	66.0	70.6	0.1	4.5	4.4	9950.6	1.0	9972.3
Compactor CAT CB54	130	156	0.080548	0.380873	0.486882	0.000639	0.040033	0.038832	54.49936	0.007268	12.6	59.4	76.0	0.1	6.2	6.1	8501.9	1.1	8525.7
Compactor CAT CB64	130	165	0.080548	0.380873	0.486882	0.000639	0.040033	0.038832	54.49936	0.007268	13.3	62.8	80.3	0.1	6.6	6.4	8992.4	1.2	9017.6
Compactor CAT 433	100	4	0.080548	0.380873	0.486882	0.000639	0.040033	0.038832	54.49936	0.007268	0.3	1.5	1.9	0.0	0.2	0.2	218.0	0.0	218.6

Compactor CAT CP56	145	972	0.080548	0.380873	0.486882	0.000639	0.040033	0.038832	54.49936	0.007268		78.3	370.2	473.2	0.6	38.9	37.7	52973.4	7.1	53121.7
Compactor CAT PS360	130	202	0.080548	0.380873	0.486882	0.000639	0.040033	0.038832	54.49936	0.007268		16.3	76.9	98.4	0.1	8.1	7.8	11008.9	1.5	11039.7
Compactor CAT CS423	80	4096	0.082099	0.269557	0.216492	0.000309	0.018532	0.017976	23.92655	0.007408		336.3	1104.1	886.7	1.3	75.9	73.6	98003.2	30.3	98640.3
Scraper CAT 615	250	50	0.170437	0.532359	1.355816	0.002357	0.05014	0.048636	209.4703	0.015378		8.5	26.6	67.8	0.1	2.5	2.4	10473.5	0.8	10489.7
Skid Steer CAT 226	58	35486	0.026321	0.203471	0.17869	0.00033	0.006505	0.00631	25.51916	0.002375		934.0	7220.4	6341.0	11.7	230.8	223.9	905573.1	84.3	907342.9
Skid Steer CAT 246	80	7721	0.012398	0.133999	0.098489	0.000251	0.004746	0.004604	21.38091	0.001119		95.7	1034.6	760.4	1.9	36.6	35.5	165082.0	8.6	165263.4
Rack Truck		12480	0.00557	0.037009	0.279642	0.001008	0.022802	0.00925	108.9657	0.003261		69.5	461.9	3489.9	12.6	284.6	115.4	1359892.1	40.7	1360746.7
Mechanics Truck		3120	0.001204	0.075044	0.007394	0.000226	0.010474	0.004215	22.51813	0.00034		3.8	234.1	23.1	0.7	32.7	13.1	70256.6	1.1	70278.9
Oil dist Truck		177	0.001204	0.075044	0.007394	0.000226	0.010474	0.004215	22.51813	0.00034		0.2	13.3	1.3	0.0	1.9	0.7	3985.7	0.1	3987.0
Pickup 1/2T		321189	0.002048	0.106169	0.010292	0.000211	0.010524	0.004261	20.93382	0.000522		657.9	34100.4	3305.7	67.7	3380.1	1368.4	6723713.4	167.5	6727231.7
Pickup 3/4T		299334	0.001204	0.075044	0.007394	0.000226	0.010474	0.004215	22.51813	0.00034		360.4	22463.4	2213.2	67.6	3135.2	1261.6	6740443.0	101.8	6742580.0
Tractor 6x4		6260	0.013788	0.05546	0.419738	0.001278	0.023416	0.009838	133.9301	0.00064		86.3	347.2	2627.6	8.0	146.6	61.6	838402.7	4.0	838486.9
Water truck		44839	0.001204	0.075044	0.007394	0.000226	0.010474	0.004215	22.51813	0.00034		54.0	3364.9	331.5	10.1	469.6	189.0	1009690.6	15.2	1010010.7
											total	33,588	239,821	213,704	711	16,641	11,924	67,983,704	3,250	68,051,949

On-Road Equipment	**Hours**	**(lb/hr) ROG**	**(lb/hr) CO**	**(lb/hr) NOX**	**(lb/hr) SOX**	**(lb/hr) PM10**	**(lb/hr) PM2.5**	**(lb/hr) CO2**	**(lb/hr) CH4**		**ROG**	**CO**	**NOX**	**SOX**	**PM10**	**PM2.5**	**CO2**	**CH4**	**CO2e**
											Emissions (lbs)								
Dump Truck	82	0.00557	0.037009	0.279642	0.001008	0.022802	0.00925	108.9657	0.003261		0.5	3.0	22.9	0.1	1.9	0.8	8935.2	0.3	8940.8
End Dump 10CY	24744	0.00557	0.037009	0.279642	0.001008	0.022802	0.00925	108.9657	0.003261		137.8	915.8	6919.5	24.9	564.2	228.9	2696247.6	80.7	2697942.0
End Dump 15CY	118513	0.00557	0.037009	0.279642	0.001008	0.022802	0.00925	108.9657	0.003261		660.1	4386.1	33141.2	119.4	2702.4	1096.3	12913853.7	386.4	12921969.1
Flatbed 10T	60887	0.00557	0.037009	0.279642	0.001008	0.022802	0.00925	108.9657	0.003261		339.2	2253.4	17026.5	61.4	1388.4	563.2	6634595.5	198.5	6638764.8
Flatbed 2T	120	0.00557	0.037009	0.279642	0.001008	0.022802	0.00925	108.9657	0.003261		0.7	4.4	33.6	0.1	2.7	1.1	13075.9	0.4	13084.1
Flatbed 20T	22859	0.00557	0.037009	0.279642	0.001008	0.022802	0.00925	108.9657	0.003261		127.3	846.0	6392.3	23.0	521.2	211.5	2490847.3	74.5	2492412.6
Employee Commutes	167310	0.000689	0.052913	0.003519	0.000178	0.010467	0.004209	17.80674	0.000209		115.3	8852.8	588.8	29.9	1751.2	704.1	2979239.6	35.0	2979974.4
										total	1,381	17,262	64,125	259	6,932	2,806	27,736,795	776	27,753,088

	Daily Acres	**lb/acre PM**	**Daily Emissions (lbs) PM10**	**PM2.5**
Fugitive Dust	15	20	300.0	63.0

	ROG	**CO**	**NOX**	**SOX**	**PM10**	**PM2.5**	**CO2**	**CH4**	**CO2e**
Total (lb)	34,969	257,083	277,829	970	473,573	109,230	95,720,499	4,026	95,805,037
Daily (lb)	23.3	171.4	185.2	0.6	315.7	72.8	63,813.7	2.7	63,870.0
Annual (T)	2.9	21.4	23.2	0.1	39.5	9.1	7,976.7	0.3	7,983.8

On-site Emissions

	ROG	**CO**	**NOX**	**SOX**	**PM10**	**PM2.5**	**CO2**	**CH4**	**CO2e**
Total (lb)	33657.1	240684.4	216910.6	724.3	466987.4	106564.8	69370543.6	3288.6	69439603.9
Daily (lb)	22.43808	160.4563	144.607	0.482889	311.3249	71.04317	46247.02906	2.19239	46293.1
Annual (T)	2.80476	20.05703	18.07588	0.060361	38.91562	8.880397	5780.878633	0.274049	5786.6

Total Emissions (tons)	**ROG**	**CO**	**NOX**	**SOX**	**PM10**	**PM2.5**	**CO2**	**CH4**	**CO2e**
Off-road	16.8	119.9	106.9	0.4	8.3	6.0	33,991.9	1.6	34,026.0
On-Road	0.7	8.6	32.1	0.1	3.5	1.4	13,868.4	0.4	13,876.5
Fugitive Dust					225.0	47.3			
Total	17.5	128.5	138.9	0.5	236.8	54.6	47,860.2	2.0	47,902.5
Annual	2.9	21.4	23.2	0.1	39.5	9.1	7,976.7	0.3	7,983.8

Mitigated Final EIR Project

										RD reduction	0.95	0.9	0.9	1	0.7	0.7	0.8		
Off-Road			**(lb/hr)**	**(lb/hr)**	**(lb/hr)**	**(lb/hr)**	**(lb/hr)**	**(lb/hr)**	**(lb/hr)**	**(lb/hr)**				**Emissions (lbs)**					
Equipment	**HP Rating**	**Hours**	**ROG**	**CO**	**NOX**	**SOX**	**PM10**	**PM2.5**	**CO2**	**CH4**	**ROG**	**CO**	**NOX**	**SOX**	**PM10**	**PM2.5**	**CO2**	**CH4**	**CO2e**
Asphalt Paver	224	83	0.040774	0.028648	0.084842	0.001530142	0.003483	0.003378	120.8164	0.008682	3.2	2.1	6.3	0.1	0.2	0.2	8,022.2	0.7	8037.3
Asphalt Paver	35	120	0.006189	0.004348	0.012878	0.000232254	0.000529	0.000513	18.3382	0.007408	0.7	0.5	1.4	0.0	0.0	0.0	1,760.5	0.9	1779.1
Backhoe	50	41	0.006826	0.004796	0.014203	0.000256162	0.000583	0.000566	20.22595	0.004626	0.3	0.2	0.5	0.0	0.0	0.0	663.4	0.2	667.4
Crawler Backhoe	266	12	0.036315	0.025515	0.075562	0.001362783	0.003102	0.003009	107.6021	0.008244	0.4	0.3	0.8	0.0	0.0	0.0	1,033.0	0.1	1035.1
Tractor Backhoe	62	2675	0.008464	0.005947	0.017612	0.000317641	0.000723	0.000701	25.08018	0.004485	21.5	14.3	42.4	0.8	1.4	1.3	53,671.6	12.0	53923.5
Tractor Backhoe	98	3240	0.013379	0.0094	0.027839	0.000502078	0.001143	0.001109	39.64287	0.003924	41.2	27.4	81.2	1.6	2.6	2.5	102,754.3	12.7	103021.3
Excavator	120	1334	0.020434	0.012377	0.042519	0.000766834	0.001745	0.001693	60.54737	0.006252	25.9	14.9	51.0	1.0	1.6	1.6	64,616.2	8.3	64791.3
8T Crane	50	1838	0.006312	0.004282	0.013134	0.000236881	0.000539	0.000523	18.70357	0.005828	11.0	7.1	21.7	0.4	0.7	0.7	27,501.7	10.7	27726.7
10T Crane	120	0	0.015149	0.010277	0.031522	0.000568515	0.001294	0.001255	44.88857	0.005763	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
35T Crane	175	1093	0.022093	0.014987	0.04597	0.000829084	0.001887	0.001831	65.46249	0.006787	22.9	14.7	45.2	0.9	1.4	1.4	57,240.4	7.4	57396.2
50T Crane	250	170	0.031561	0.02141	0.065672	0.001184406	0.002696	0.002615	93.51784	0.007097	5.1	3.3	10.0	0.2	0.3	0.3	12,718.4	1.2	12743.8
100T Crane	400	2843	0.050498	0.034257	0.105075	0.00189505	0.004314	0.004184	149.6286	0.008674	136.4	87.7	268.9	5.4	8.6	8.3	340,315.2	24.7	340833.0
140T Crane	450	154	0.05681	0.038539	0.118209	0.002131931	0.004853	0.004707	168.3321	0.009758	8.3	5.3	16.4	0.3	0.5	0.5	20,738.5	1.5	20770.1
175T Crane	500	41	0.063123	0.042821	0.131343	0.002368812	0.005392	0.00523	187.0357	0.010842	2.5	1.6	4.8	0.1	0.2	0.2	6,134.8	0.4	6144.1
200T Crane	550	49679	0.069435	0.047103	0.144478	0.002605693	0.005931	0.005753	205.7393	0.011926	3,277.0	2,106.0	6,459.8	129.4	206.3	200.1	8,176,736.5	592.5	8189178.5
Air Compressor	49	760	0.006905	0.004852	0.014368	0.000259137	0.00059	0.000572	20.46083	0.004672	5.0	3.3	9.8	0.2	0.3	0.3	12,440.2	3.6	12514.8
Air Compressor	120	4935	0.001691	0.001188	0.003519	6.34621E-05	0.000144	0.00014	5.010817	0.005248	7.9	5.3	15.6	0.3	0.5	0.5	19,782.7	25.9	20326.6
Concrete Mixer	20	8232	0.002818	0.00198	0.005865	0.00010577	0.000241	0.000234	8.351361	0.000782	22.0	14.7	43.4	0.9	1.4	1.3	54,998.7	6.4	55133.8
Concrete Pump	30	6	0.004228	0.00297	0.008797	0.000158655	0.000361	0.00035	12.52704	0.004132	0.0	0.0	0.0	0.0	0.0	0.0	60.1	0.0	60.7
Roller	120	880	0.020258	0.014233	0.042152	0.000760223	0.00173	0.001679	60.02541	0.006159	16.9	11.3	33.4	0.7	1.1	1.0	42,257.9	5.4	42371.7
Drill Rig	249	1790	0.031435	0.01904	0.065409	0.001179668	0.002685	0.002605	93.14377	0.00485	53.5	30.7	105.4	2.1	3.4	3.3	133,381.9	8.7	133564.2
Drill Rig	474	4561	0.05984	0.036245	0.124514	0.002245634	0.005112	0.004958	177.3098	0.008	259.3	148.8	511.1	10.2	16.3	15.8	646,968.1	36.5	647734.4
Drill Rig	580	16858	0.073222	0.04435	0.152358	0.002747822	0.006255	0.006067	216.9614	0.011916	1,172.7	672.9	2,311.6	46.3	73.8	71.6	2,926,028.2	200.9	2930246.7
Drill Rig	580	17575	0.073222	0.04435	0.152358	0.002747822	0.006255	0.006067	216.9614	0.011916	1,222.5	701.5	2,409.9	48.3	76.9	74.6	3,050,477.3	209.4	3054875.2
D6 Tractor	215	282	0.037242	0.025264	0.077493	0.001397599	0.003181	0.003086	110.3511	0.012028	10.0	6.4	19.7	0.4	0.6	0.6	24,895.2	3.4	24966.4
Boom Lift	65	445	0.009065	0.006369	0.018862	0.000340172	0.000774	0.000751	26.85919	0.005828	3.8	2.6	7.6	0.2	0.2	0.2	9,561.9	2.6	9616.3
Excavator CAT307	54	0	0.009195	0.00557	0.019133	0.000345075	0.000785	0.000762	27.24632	0.004223	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator CAT321	148	3754	0.025202	0.015265	0.05244	0.000945762	0.002153	0.002088	74.67509	0.006252	89.9	51.6	177.2	3.6	5.7	5.5	224,264.2	23.5	224757.1
Excavator CAT324	190	80	0.032354	0.019597	0.067321	0.001214154	0.002764	0.002681	95.86666	0.007434	2.5	1.4	4.8	0.1	0.2	0.2	6,135.5	0.6	6148.0
Excavator CAT330	235	0	0.040017	0.024238	0.083266	0.001501717	0.003418	0.003316	158.6828	0.008421	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Excavator CAT336	266	14269	0.045296	0.027435	0.09425	0.001699815	0.003869	0.003753	134.2133	0.008421	614.0	352.3	1,210.4	24.3	38.6	37.5	1,532,072.0	120.2	1534595.3
Excavator CAT345	345	1495	0.058748	0.035583	0.122241	0.002204648	0.005018	0.004868	174.0737	0.01025	83.4	47.9	164.5	3.3	5.3	5.1	208,192.1	15.3	208513.9
Forklift CAT TL-1055	125	23718	0.017432	0.012248	0.036272	0.000654178	0.001489	0.001444	51.6523	0.002389	392.8	261.4	774.3	15.5	24.7	24.0	980,071.4	56.7	981261.0
Generator 5kW	15	34037	0.003259	0.004027	0.073706	0.000122297	0.000557	0.00054	9.656261	0.001106	105.4	123.4	2,257.9	4.2	13.3	12.9	262,936.1	37.7	263726.9
Grader CAT14	180	3639	0.030387	0.018405	0.063228	0.001140335	0.002596	0.002518	90.03811	0.009556	105.0	60.3	207.1	4.1	6.6	6.4	262,118.9	34.8	262849.2
Loader Deere 210	78	1344	0.010649	0.007482	0.022157	0.000399613	0.00091	0.000882	31.55249	0.006699	13.6	9.0	26.8	0.5	0.9	0.8	33,925.2	9.0	34114.3
Loader CAT950	130	1225	0.017748	0.01247	0.036929	0.000666022	0.001516	0.001471	52.58748	0.005952	20.7	13.7	40.7	0.8	1.3	1.3	51,535.7	7.3	51688.8
Loader CAT963	150	2824	0.020478	0.014388	0.04261	0.000768487	0.001749	0.001697	60.67786	0.005952	54.9	36.6	108.3	2.2	3.5	3.4	137,083.4	16.8	137436.4
Loader CAT966	170	108169	0.023209	0.016306	0.048292	0.000870952	0.001982	0.001923	68.76824	0.008011	2,384.9	1,587.5	4,701.3	94.2	150.1	145.6	5,950,873.2	866.5	5969070.7
Loader CAT IT62	207	31758	0.02826	0.019855	0.058802	0.001060512	0.002414	0.002342	83.73544	0.008273	852.6	567.5	1,680.7	33.7	53.7	52.1	2,127,416.2	262.7	2132933.8
Loader CAT980	355	825	0.048465	0.034052	0.100844	0.001818752	0.00414	0.004016	143.6043	0.008536	38.0	25.3	74.9	1.5	2.4	2.3	94,778.8	7.0	94926.7
Skid Steer Loader	50	488	0.006826	0.004796	0.014203	0.000256162	0.000583	0.000566	20.22595	0.002279	3.2	2.1	6.2	0.1	0.2	0.2	7,896.2	1.1	7919.6
Pavement Broom	74	12480	0.01032	0.007251	0.021473	0.000387273	0.000882	0.000855	30.57816	0.007408	122.4	81.4	241.2	4.8	7.7	7.5	305,292.4	92.4	307233.8
Forktruck	74	2377	0.01032	0.007251	0.021473	0.000387273	0.000882	0.000855	30.57816	0.007408	23.3	15.5	45.9	0.9	1.5	1.4	58,147.4	17.6	58517.2
Manlift 40ft	50	12547	0.006973	0.004899	0.014509	0.000261671	0.000596	0.000578	20.66092	0.003035	83.1	55.3	163.8	3.3	5.2	5.1	207,386.0	38.1	208185.8
Manlift 80ft	74	345	0.01032	0.007251	0.021473	0.000387273	0.000882	0.000855	30.57816	0.002992	3.4	2.3	6.7	0.1	0.2	0.2	8,439.6	1.0	8461.3
Compactor CAT CB54	130	156	0.021946	0.015419	0.045665	0.000823575	0.001875	0.001818	65.02752	0.007268	3.3	2.2	6.4	0.1	0.2	0.2	8,115.4	1.1	8139.2
Compactor CAT CB64	130	165	0.021946	0.015419	0.045665	0.000823575	0.001875	0.001818	65.02752	0.007268	3.4	2.3	6.8	0.1	0.2	0.2	8,583.6	1.2	8608.8
Compactor CAT 433	100	4	0.016882	0.011861	0.035127	0.00063352	0.001442	0.001399	50.02117	0.007268	0.1	0.0	0.1	0.0	0.0	0.0	160.1	0.0	160.7

Compactor CAT CP56	145	972	0.024478	0.017199	0.050934	0.000918603	0.002091	0.002028	72.5307	0.007268		22.6	15.0	44.6	0.9	1.4	1.4	56,399.9	7.1	56548.2
Compactor CAT PS360	130	202	0.021946	0.015419	0.045665	0.000823575	0.001875	0.001818	65.02752	0.007268		4.2	2.8	8.3	0.2	0.3	0.3	10,508.4	1.5	10539.3
Compactor CAT CS423	80	4096	0.013505	0.009489	0.028101	0.000506816	0.001154	0.001119	40.01694	0.007408		52.6	35.0	103.6	2.1	3.3	3.2	131,127.5	30.3	131764.7
Scraper CAT 615	250	50	0.042204	0.025563	0.087817	0.001583799	0.003605	0.003497	125.0529	0.015378		2.0	1.2	4.0	0.1	0.1	0.1	5,002.1	0.8	5018.3
Skid Steer CAT 226	58	35486	0.007918	0.005563	0.016476	0.000297148	0.000676	0.000656	23.4621	0.002375		266.9	177.7	526.2	10.5	16.8	16.3	666,061.0	84.3	667830.8
Skid Steer CAT 246	80	7721	0.010922	0.007674	0.022725	0.00040986	0.000933	0.000905	32.36152	0.001119		80.1	53.3	157.9	3.2	5.0	4.9	199,890.7	8.6	200072.0
Rack Truck		12480	0.00557	0.037009	0.279642	0.001007826	0.022802	0.00925	108.9657	0.003261		66.0	415.7	3,140.9	12.6	199.2	80.8	1,087,913.7	40.7	1088768.3
Mechanics Truck		3120	0.001204	0.075044	0.007394	0.000225873	0.010474	0.004215	22.51813	0.00034		3.6	210.7	20.8	0.7	22.9	9.2	56,205.3	1.1	56227.5
Oil dist Truck		177	0.001204	0.075044	0.007394	0.000225873	0.010474	0.004215	22.51813	0.00034		0.2	12.0	1.2	0.0	1.3	0.5	3,188.6	0.1	3189.8
Pickup 1/2T		321189	0.002048	0.106169	0.010292	0.000210644	0.010524	0.004261	20.93382	0.000522		625.0	30,690.4	2,975.2	67.7	2,366.1	957.9	5,378,970.7	167.5	5382489.0
Pickup 3/4T		299334	0.001204	0.075044	0.007394	0.000225873	0.010474	0.004215	22.51813	0.00034		342.4	20,217.0	1,991.9	67.6	2,194.6	883.1	5,392,354.4	101.8	5394491.4
Tractor 6x4		6260	0.013788	0.05546	0.419738	0.001277756	0.023416	0.009838	133.9301	0.00064		82.0	312.5	2,364.8	8.0	102.6	43.1	670,722.2	4.0	670806.3
Water truck		44839	0.001204	0.075044	0.007394	0.000225873	0.010474	0.004215	22.51813	0.00034		51.3	3,028.4	298.4	10.1	328.7	132.3	807,752.5	15.2	808072.6
											total	12,929	62,353	36,022	631	5,962	2,831	42,736,279	3,250	42,804,525

On-Road		**(lb/hr)**	**(lb/hr)**	**(lb/hr)**	**(lb/hr)**	**(lb/hr)**	**(lb/hr)**	**(lb/hr)**	**(lb/hr)**		**Emissions (lbs)**								
Equipment	**Hours**	**ROG**	**CO**	**NOX**	**SOX**	**PM10**	**PM2.5**	**CO2**	**CH4**		**ROG**	**CO**	**NOX**	**SOX**	**PM10**	**PM2.5**	**CO2**	**CH4**	**CO2e**
Dump Truck	82	0.00557	0.037009	0.279642	0.001007826	0.022802	0.00925	108.9657	0.003261		0.5	3.0	22.9	0.1	1.9	0.8	8935.2	0.3	8940.8
End Dump 10CY	24744	0.00557	0.037009	0.279642	0.001007826	0.022802	0.00925	108.9657	0.003261		137.8	915.8	6919.5	24.9	564.2	228.9	2696247.6	80.7	2697942.0
End Dump 15CY	118513	0.00557	0.037009	0.279642	0.001007826	0.022802	0.00925	108.9657	0.003261		660.1	4386.1	33141.2	119.4	2702.4	1096.3	12913853.7	386.4	12921969.1
Flatbed 10T	60887	0.00557	0.037009	0.279642	0.001007826	0.022802	0.00925	108.9657	0.003261		339.2	2253.4	17026.5	61.4	1388.4	563.2	6634595.5	198.5	6638764.8
Flatbed 2T	120	0.00557	0.037009	0.279642	0.001007826	0.022802	0.00925	108.9657	0.003261		0.7	4.4	33.6	0.1	2.7	1.1	13075.9	0.4	13084.1
Flatbed 20T	22859	0.00557	0.037009	0.279642	0.001007826	0.022802	0.00925	108.9657	0.003261		127.3	846.0	6392.3	23.0	521.2	211.5	2490847.3	74.5	2492412.6
Employee Commutes	167310	0.000689	0.052913	0.003519	0.000178494	0.010467	0.004209	17.80674	0.000209		115.3	8852.8	588.8	29.9	1751.2	704.1	2979239.6	35.0	2979974.4
										total	1,381	17,262	64,125	259	6,932	2,806	27,736,795	776	27,753,088

	Daily Acres	**lb/acre PM**
Fugitive Dust	15	10

	Daily Emissions (lbs)	
	PM10	**PM2.5**
	150.0	31.5

	ROG	**CO**	**NOX**	**SOX**	**PM10**	**PM2.5**	**CO2**	**CH4**	**CO2e**
Total (lb)	14,310	79,615	100,146	890	237,894	52,887	70,473,074	4,026	70,557,613
Daily (lb)	9.5	53.1	66.8	0.6	158.6	35.3	46,982.0	2.7	47,038.4
Annual (T)	1.2	6.6	8.3	0.1	19.8	4.4	5,872.8	0.3	5,879.8

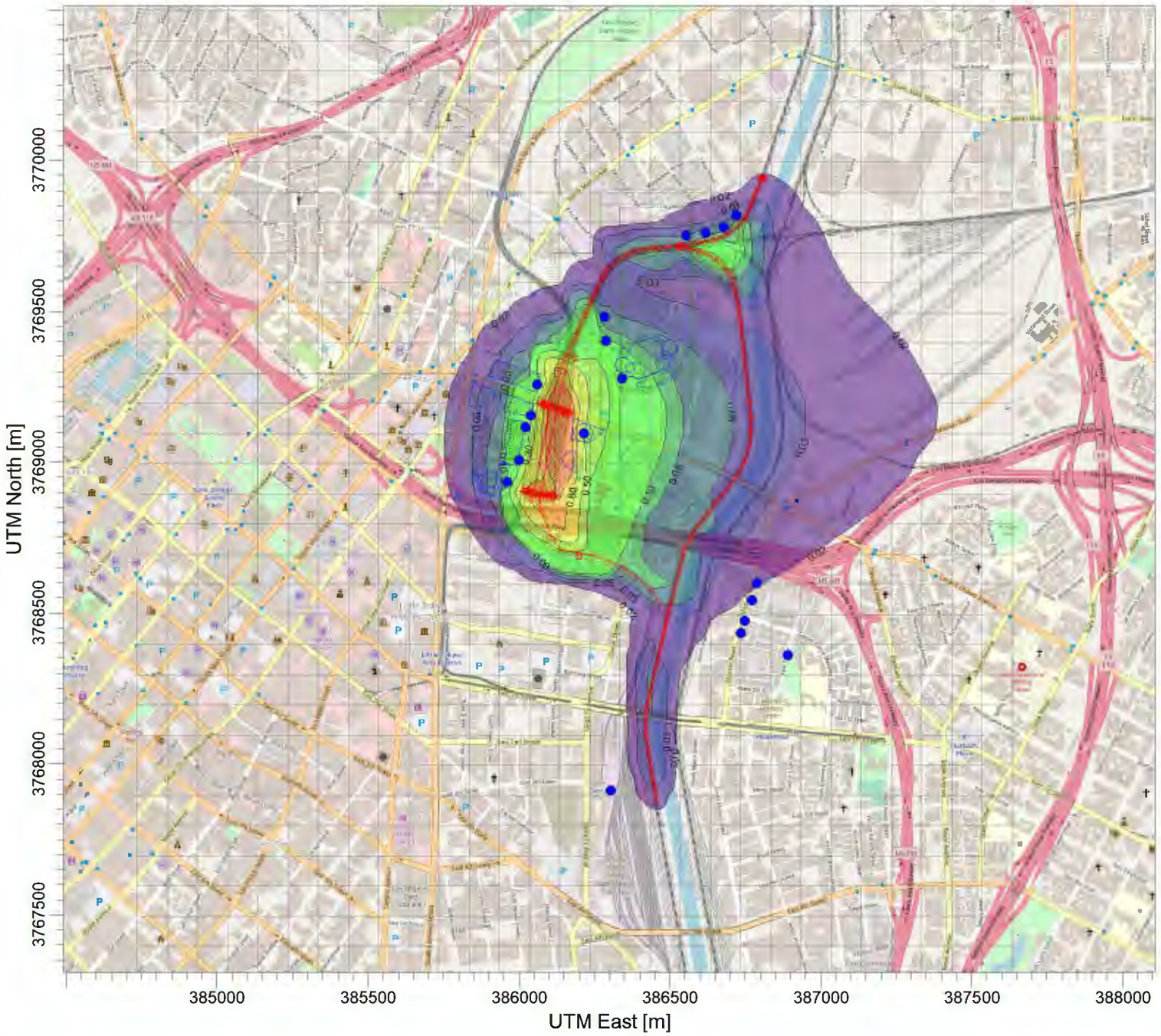
On-site Emissions

	ROG	**CO**	**NOX**	**SOX**	**PM10**	**PM2.5**	**CO2**	**CH4**	**CO2e**
Total (lb)	12997.8	63216.5	39227.9	644.1	231308.7	50221.6	44123119.0	3288.6	44192179.3
Daily (lb)	8.66519	42.14431	26.15197	0.429424	154.2058	33.48104	29415.41267	2.19239	29461.5
Annual (T)	1.083149	5.268039	3.268996	0.053678	19.27573	4.18513	3676.926583	0.274049	3682.7

Total Emissions (tons)	**ROG**	**CO**	**NOX**	**SOX**	**PM10**	**PM2.5**	**CO2**	**CH4**	**CO2e**
Off-road	6.5	31.2	18.0	0.3	3.0	1.4	21,368.1	1.6	21,402.3
On-Road	0.7	8.6	32.1	0.1	3.5	1.4	13,868.4	0.4	13,876.5
Fugitive Dust					112.5	23.6			
Total	7.2	39.8	50.1	0.4	118.9	26.4	35,236.5	2.0	35,278.8
Annual	1.2	6.6	8.3	0.1	19.8	4.4	5,872.8	0.3	5,879.8

PROJECT TITLE:

METRO LINKUS DPM Construction AtGrade UnMitigated Isopleth Concentrations
PM10 (Assume DPM) in ug/L



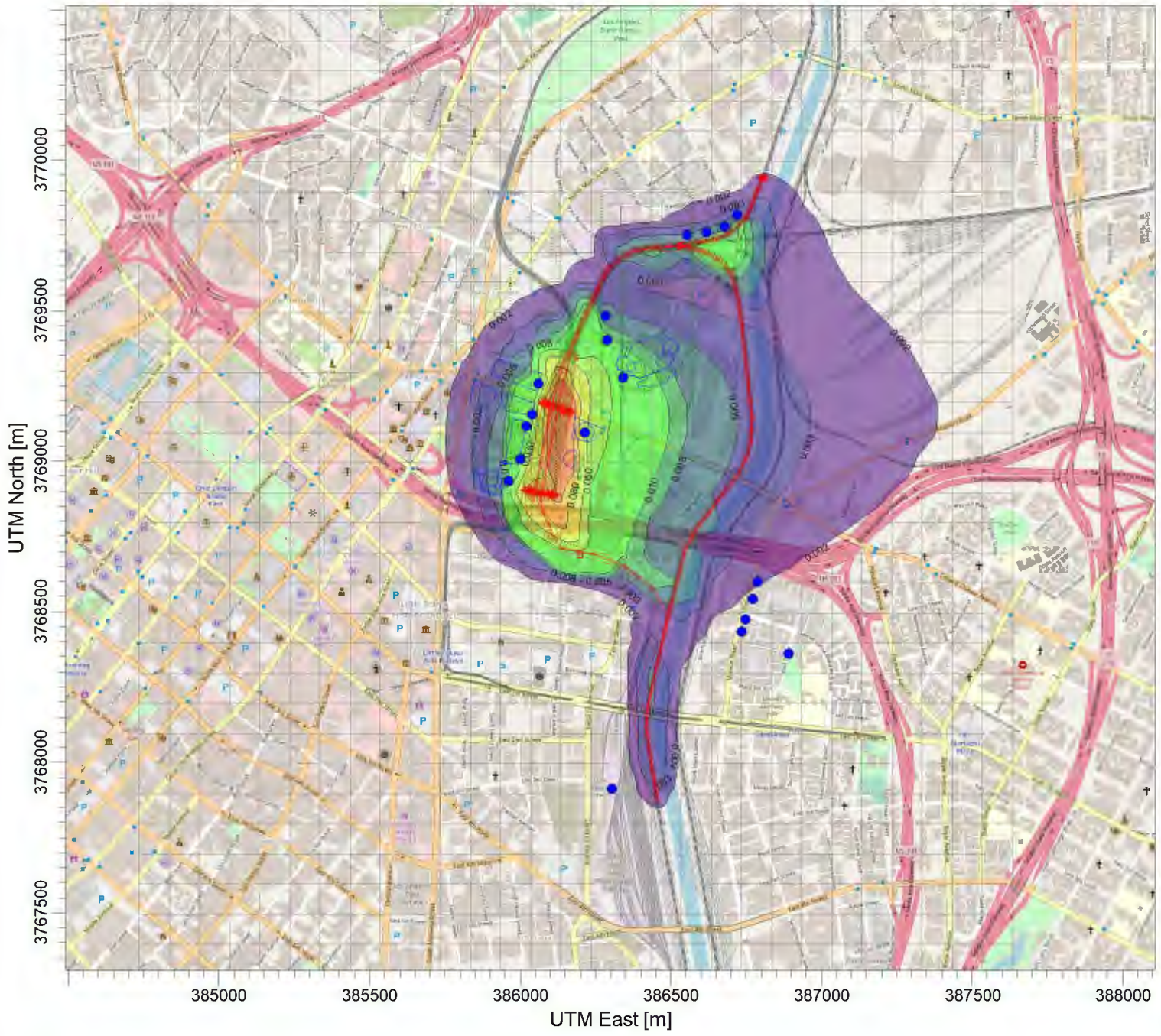
PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 5 YEARS FOR SOURCE GROUP: ALL ug/m^3

Max: 1.61 [ug/m^3] at (386135.34, 3769095.66)

COMMENTS: Construction Reduced At-Grade UnMitigated Annual Averages 5/19/2019 model rub	SOURCES: **35**	COMPANY NAME:	
	RECEPTORS: **1519**	MODELER:	
	OUTPUT TYPE: **Concentration**	SCALE: 1:19,198 0 0.5 km	
	MAX: **1.61 ug/m^3**	DATE: **5/19/2019**	PROJECT NO.: **HDR-LINKUS-Rev5**

PROJECT TITLE:

METRO LINKUS DPM Construction AtGrade Mitigated Isopleth Concentrations
PM10 (Assume DPM) in ug/L



PLOT FILE OF ANNUAL VALUES AVERAGED ACROSS 5 YEARS FOR SOURCE GROUP: ALL ug/m^3

Max: 0.165 [ug/m^3] at (386135.34, 3769095.66)

COMMENTS: Construction Reduced At-Grade Mitigated Annual ALL_Averages 5/19/2019 model run	SOURCES: **35**	COMPANY NAME:
	RECEPTORS: **1519**	MODELER:
	OUTPUT TYPE: **Concentration**	SCALE: 1:19,197 0 0.5 km
	MAX: **0.165 ug/m^3**	DATE: **5/19/2019**
		PROJECT NO.: **HDR-LINKUS-Rev5**

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