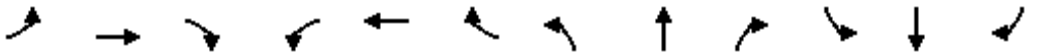
Appendix G

ALTERNATIVE 6B (BUILD)

INTERSECTION ANALYSIS WORKSHEETS

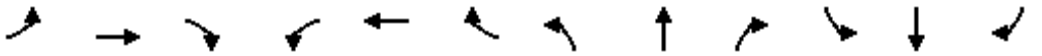
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.95	1.00
Satd. Flow (prot)	2949	4121	1360	2730	4368	1360	1444	1444	1248		1520	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.95	1.00
Satd. Flow (perm)	2949	4121	1360	2730	4368	1360	1444	1444	1248		1520	1360
Volume (vph)	65	620	30	140	250	90	15	0	55	45	0	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	68	653	32	147	263	95	16	0	58	47	0	26
RTOR Reduction (vph)	0	0	14	0	0	32	0	0	25	0	0	9
Lane Group Flow (vph)	68	653	18	147	263	63	8	8	33	0	47	17
Heavy Vehicles (%)	0%	6%	0%	8%	0%	0%	0%	0%	9%	0%	0%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Split		custom	Split		custom
Protected Phases	5	2	4	1	6	8	4	4	4	8	8	8
Permitted Phases			2			6			2			6
Actuated Green, G (s)	4.9	38.1	42.1	9.5	42.7	49.8	4.0	4.0	42.1		7.1	49.8
Effective Green, g (s)	4.9	38.1	42.1	9.5	42.7	49.8	4.0	4.0	42.1		7.1	49.8
Actuated g/C Ratio	0.07	0.51	0.56	0.13	0.57	0.67	0.05	0.05	0.56		0.10	0.67
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	193	2102	766	347	2497	907	77	77	703		144	907
v/s Ratio Prot	0.02	c0.16	0.00	c0.05	0.06	0.01	c0.01	0.01	0.00		c0.03	0.00
v/s Ratio Perm			0.01			0.04			0.02			0.01
v/c Ratio	0.35	0.31	0.02	0.42	0.11	0.07	0.10	0.10	0.05		0.33	0.02
Uniform Delay, d1	33.4	10.7	7.2	30.1	7.3	4.4	33.6	33.6	7.3		31.6	4.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.1	0.4	0.0	0.8	0.0	0.0	0.6	0.6	0.0		1.3	0.0
Delay (s)	34.5	11.0	7.2	30.9	7.3	4.4	34.2	34.2	7.3		32.9	4.2
Level of Service	C	B	A	C	A	A	C	C	A		C	A
Approach Delay (s)		13.0			13.6			13.2			22.7	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	13.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	74.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	38.6%	ICU Level of Service	A
Analysis Period (min)	15		

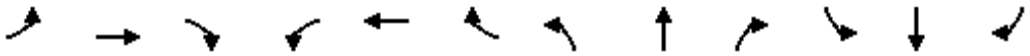
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1394	3992		1462	4082	1347	1490	2841	1308	1490	2923	1214
Flt Permitted	0.06	1.00		0.25	1.00	1.00	0.69	1.00	1.00	0.72	1.00	1.00
Satd. Flow (perm)	90	3992		387	4082	1347	1076	2841	1308	1137	2923	1214
Volume (vph)	175	940	45	110	2440	460	55	45	55	175	100	295
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	184	989	47	116	2568	484	58	47	58	184	105	311
RTOR Reduction (vph)	0	5	0	0	0	126	0	0	45	0	0	3
Lane Group Flow (vph)	184	1031	0	116	2568	358	58	47	13	184	105	308
Heavy Vehicles (%)	9%	9%	2%	4%	7%	1%	2%	7%	4%	2%	4%	12%
Turn Type	pm+pt			pm+pt		Perm	Perm		pm+ov	Perm		pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	74.2	65.2		69.8	63.0	63.0	16.0	16.0	22.8	16.0	16.0	25.0
Effective Green, g (s)	74.2	65.2		69.8	63.0	63.0	16.0	16.0	22.8	16.0	16.0	25.0
Actuated g/C Ratio	0.74	0.65		0.70	0.63	0.63	0.16	0.16	0.23	0.16	0.16	0.25
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	184	2603		343	2572	849	172	455	351	182	468	352
v/s Ratio Prot	c0.09	0.26		0.02	0.63			0.02	0.00		0.04	c0.08
v/s Ratio Perm	c0.65			0.21		0.27	0.05		0.01	c0.16		0.17
v/c Ratio	1.00	0.40		0.34	1.00	0.42	0.34	0.10	0.04	1.01	0.22	0.88
Uniform Delay, d1	31.6	8.2		5.0	18.5	9.3	37.3	35.9	30.1	42.0	36.6	36.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	66.3	0.5		0.6	17.4	1.5	1.2	0.1	0.0	69.6	1.1	20.7
Delay (s)	97.9	8.6		5.6	35.8	10.9	38.5	36.0	30.1	111.6	37.7	56.7
Level of Service	F	A		A	D	B	D	D	C	F	D	E
Approach Delay (s)		22.1			30.9			34.8			70.2	
Approach LOS		C			C			C			E	

Intersection Summary			
HCM Average Control Delay	33.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.7%	ICU Level of Service	F
Analysis Period (min)	15		

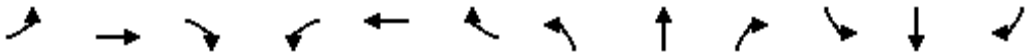
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0						4.0			4.0	
Lane Util. Factor	1.00	0.86						1.00			1.00	
Frt	1.00	0.99						0.88			1.00	
Flt Protected	0.95	1.00						1.00			0.96	
Satd. Flow (prot)	1267	5335						1396			1529	
Flt Permitted	0.95	1.00						1.00			0.96	
Satd. Flow (perm)	1267	5335						1396			1529	
Volume (vph)	10	1360	130	0	0	0	0	15	120	145	35	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	1432	137	0	0	0	0	16	126	153	37	0
RTOR Reduction (vph)	0	16	0	0	0	0	0	92	0	0	0	0
Lane Group Flow (vph)	11	1553	0	0	0	0	0	50	0	0	190	0
Heavy Vehicles (%)	20%	2%	0%	0%	0%	0%	0%	0%	1%	0%	3%	0%
Turn Type	Split									Split		
Protected Phases	2	2						8		4	4	
Permitted Phases												
Actuated Green, G (s)	32.0	32.0						21.6			15.0	
Effective Green, g (s)	32.0	32.0						21.6			15.0	
Actuated g/C Ratio	0.40	0.40						0.27			0.19	
Clearance Time (s)	4.0	4.0						4.0			4.0	
Vehicle Extension (s)	3.0	3.0						3.0			3.0	
Lane Grp Cap (vph)	503	2118						374			285	
v/s Ratio Prot	0.01	c0.29						c0.04			c0.12	
v/s Ratio Perm												
v/c Ratio	0.02	0.73						0.13			0.67	
Uniform Delay, d1	14.8	20.7						22.4			30.5	
Progression Factor	1.00	1.00						1.00			1.00	
Incremental Delay, d2	0.0	1.3						0.7			5.8	
Delay (s)	14.8	22.0						23.1			36.3	
Level of Service	B	C						C			D	
Approach Delay (s)		22.0			0.0			23.1			36.3	
Approach LOS		C			A			C			D	

Intersection Summary			
HCM Average Control Delay	23.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	80.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.4%	ICU Level of Service	B
Analysis Period (min)	15		

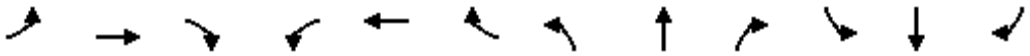
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0					4.0	4.0		4.0	
Lane Util. Factor		0.91	1.00					0.95	1.00		0.95	
Frt		1.00	0.85					1.00	0.85		1.00	
Flt Protected		1.00	1.00					1.00	1.00		0.99	
Satd. Flow (prot)		4239	1308					2841	1259		2916	
Flt Permitted		1.00	1.00					1.00	1.00		0.77	
Satd. Flow (perm)		4239	1308					2841	1259		2274	
Volume (vph)	25	1160	440	0	0	0	0	365	280	130	505	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	1221	463	0	0	0	0	384	295	137	532	0
RTOR Reduction (vph)	0	0	133	0	0	0	0	0	17	0	0	0
Lane Group Flow (vph)	0	1247	330	0	0	0	0	384	278	0	669	0
Heavy Vehicles (%)	0%	3%	4%	0%	0%	0%	0%	7%	8%	0%	4%	0%
Turn Type	Split		Perm						Perm	Perm		
Protected Phases	4	4						2			6	
Permitted Phases			4						2	6		
Actuated Green, G (s)		36.1	36.1					44.4	44.4		44.4	
Effective Green, g (s)		36.1	36.1					44.4	44.4		44.4	
Actuated g/C Ratio		0.41	0.41					0.50	0.50		0.50	
Clearance Time (s)		4.0	4.0					4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0					3.0	3.0		3.0	
Lane Grp Cap (vph)		1729	534					1425	632		1141	
v/s Ratio Prot		c0.29						0.14				
v/s Ratio Perm			0.25						0.22		c0.29	
v/c Ratio		0.72	0.62					0.27	0.44		0.59	
Uniform Delay, d1		22.0	20.7					12.7	14.1		15.6	
Progression Factor		1.00	1.00					1.00	1.00		1.00	
Incremental Delay, d2		1.5	2.1					0.5	2.2		2.2	
Delay (s)		23.5	22.9					13.2	16.3		17.8	
Level of Service		C	C					B	B		B	
Approach Delay (s)		23.3			0.0			14.5			17.8	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	20.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	88.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.91						1.00			1.00	
Frt		1.00						0.95			1.00	
Flt Protected		0.99						1.00			0.98	
Satd. Flow (prot)		4210						1505			1479	
Flt Permitted		0.99						1.00			0.79	
Satd. Flow (perm)		4210						1505			1187	
Volume (vph)	220	1515	35	0	0	0	0	95	50	30	60	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	1595	37	0	0	0	0	100	53	32	63	0
RTOR Reduction (vph)	0	1	0	0	0	0	0	22	0	0	0	0
Lane Group Flow (vph)	0	1863	0	0	0	0	0	131	0	0	95	0
Heavy Vehicles (%)	2%	3%	0%	0%	0%	0%	0%	2%	0%	13%	3%	0%
Turn Type	Split									Perm		
Protected Phases	2	2						8			4	
Permitted Phases										4		
Actuated Green, G (s)		69.0						12.9			12.9	
Effective Green, g (s)		69.0						12.9			12.9	
Actuated g/C Ratio		0.77						0.14			0.14	
Clearance Time (s)		4.0						4.0			4.0	
Vehicle Extension (s)		3.0						3.0			3.0	
Lane Grp Cap (vph)		3231						216			170	
v/s Ratio Prot		c0.44						c0.09				
v/s Ratio Perm											0.08	
v/c Ratio		0.58						0.61			0.56	
Uniform Delay, d1		4.4						36.1			35.9	
Progression Factor		1.00						1.00			1.00	
Incremental Delay, d2		0.8						4.7			3.9	
Delay (s)		5.1						40.8			39.8	
Level of Service		A						D			D	
Approach Delay (s)		5.1			0.0			40.8			39.8	
Approach LOS		A			A			D			D	

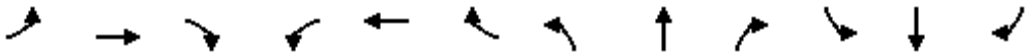
Intersection Summary			
HCM Average Control Delay	9.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	89.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0						4.0		4.0	4.0	
Lane Util. Factor		0.91						1.00		1.00	1.00	
Frt		1.00						0.99		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		4129						1542		1520	1553	
Flt Permitted		0.99						1.00		0.24	1.00	
Satd. Flow (perm)		4129						1542		387	1553	
Volume (vph)	260	1295	40	0	0	0	0	400	20	70	415	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	274	1363	42	0	0	0	0	421	21	74	437	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	1677	0	0	0	0	0	440	0	74	437	0
Heavy Vehicles (%)	2%	5%	6%	0%	0%	0%	0%	3%	5%	0%	3%	0%
Turn Type	Split									Perm		
Protected Phases	2	2						4			8	
Permitted Phases										8		
Actuated Green, G (s)		51.5						29.4		29.4	29.4	
Effective Green, g (s)		51.5						29.4		29.4	29.4	
Actuated g/C Ratio		0.58						0.33		0.33	0.33	
Clearance Time (s)		4.0						4.0		4.0	4.0	
Vehicle Extension (s)		3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		2392						510		128	514	
v/s Ratio Prot		c0.41						c0.29			0.28	
v/s Ratio Perm										0.19		
v/c Ratio		0.70						0.86		0.58	0.85	
Uniform Delay, d1		13.2						27.9		24.6	27.7	
Progression Factor		1.00						1.00		1.00	1.00	
Incremental Delay, d2		1.7						14.0		6.2	12.7	
Delay (s)		15.0						41.9		30.8	40.4	
Level of Service		B						D		C	D	
Approach Delay (s)		15.0			0.0			41.9			39.0	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM Average Control Delay	24.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	88.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

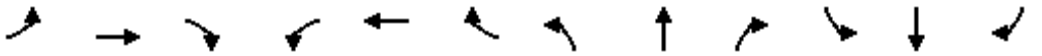
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)					4.0			4.0			4.0	
Lane Util. Factor					0.91			1.00			1.00	
Frt					1.00			1.00			0.88	
Flt Protected					1.00			0.96			1.00	
Satd. Flow (prot)					4264			1516			1385	
Flt Permitted					1.00			0.51			1.00	
Satd. Flow (perm)					4264			806			1385	
Volume (vph)	0	0	0	45	1270	35	180	35	0	0	20	200
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	47	1337	37	189	37	0	0	21	211
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	0	0	13	0
Lane Group Flow (vph)	0	0	0	0	1419	0	0	226	0	0	219	0
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	1%	3%	0%	0%	15%	0%
Turn Type				Split			Perm					
Protected Phases				6	6			8			4	
Permitted Phases							8					
Actuated Green, G (s)					46.5			24.3			24.3	
Effective Green, g (s)					46.5			24.3			24.3	
Actuated g/C Ratio					0.59			0.31			0.31	
Clearance Time (s)					4.0			4.0			4.0	
Vehicle Extension (s)					3.0			3.0			3.0	
Lane Grp Cap (vph)					2516			249			427	
v/s Ratio Prot					c0.33						0.16	
v/s Ratio Perm								c0.28				
v/c Ratio					0.56			0.91			0.51	
Uniform Delay, d1					9.9			26.2			22.4	
Progression Factor					1.00			1.00			1.00	
Incremental Delay, d2					0.9			33.2			1.0	
Delay (s)					10.8			59.4			23.4	
Level of Service					B			E			C	
Approach Delay (s)		0.0			10.8			59.4			23.4	
Approach LOS		A			B			E			C	

Intersection Summary			
HCM Average Control Delay	18.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	78.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

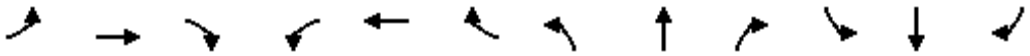
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)					4.0		4.0	4.0			4.0	4.0
Lane Util. Factor					0.91		1.00	1.00			1.00	1.00
Frt					0.99		1.00	1.00			1.00	0.85
Flt Protected					0.99		0.95	1.00			1.00	1.00
Satd. Flow (prot)					4194		1520	1509			1553	1320
Flt Permitted					0.99		0.39	1.00			1.00	1.00
Satd. Flow (perm)					4194		627	1509			1553	1320
Volume (vph)	0	0	0	130	890	65	275	445	0	0	390	185
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	137	937	68	289	468	0	0	411	195
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	0	0	14
Lane Group Flow (vph)	0	0	0	0	1136	0	289	468	0	0	411	181
Heavy Vehicles (%)	0%	0%	0%	1%	2%	14%	0%	6%	0%	0%	3%	3%
Turn Type				Split			Perm					Perm
Protected Phases				6	6			8			4	
Permitted Phases							8					4
Actuated Green, G (s)					35.4		35.6	35.6			35.6	35.6
Effective Green, g (s)					35.4		35.6	35.6			35.6	35.6
Actuated g/C Ratio					0.45		0.45	0.45			0.45	0.45
Clearance Time (s)					4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)					3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)					1879		283	680			700	595
v/s Ratio Prot					c0.27			0.31			0.26	
v/s Ratio Perm							c0.46					0.14
v/c Ratio					0.60		1.02	0.69			0.59	0.30
Uniform Delay, d1					16.5		21.7	17.3			16.2	13.8
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					1.5		59.0	2.9			1.3	0.3
Delay (s)					18.0		80.7	20.2			17.5	14.1
Level of Service					B		F	C			B	B
Approach Delay (s)		0.0			18.0			43.3			16.4	
Approach LOS		A			B			D			B	

Intersection Summary			
HCM Average Control Delay	25.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	79.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.1%	ICU Level of Service	D
Analysis Period (min)	15		

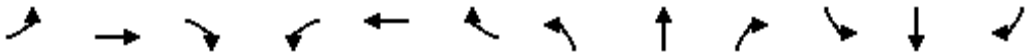
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.96		1.00	0.92		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	1532		1476	1470		1520	1472		1520	1533	
Flt Permitted	0.60	1.00		0.71	1.00		0.35	1.00		0.43	1.00	
Satd. Flow (perm)	960	1532		1101	1470		568	1472		687	1533	
Volume (vph)	20	50	20	90	50	60	20	430	85	40	630	20
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	53	21	95	53	63	21	453	89	42	663	21
RTOR Reduction (vph)	0	16	0	0	49	0	0	5	0	0	1	0
Lane Group Flow (vph)	21	58	0	95	67	0	21	537	0	42	683	0
Heavy Vehicles (%)	0%	0%	0%	3%	0%	0%	0%	6%	6%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	13.3	13.3		13.3	13.3		73.3	73.3		73.3	73.3	
Effective Green, g (s)	13.3	13.3		13.3	13.3		73.3	73.3		73.3	73.3	
Actuated g/C Ratio	0.14	0.14		0.14	0.14		0.77	0.77		0.77	0.77	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	135	215		155	207		440	1141		532	1188	
v/s Ratio Prot		0.04			0.05			0.36			c0.45	
v/s Ratio Perm	0.02			c0.09			0.04			0.06		
v/c Ratio	0.16	0.27		0.61	0.32		0.05	0.47		0.08	0.58	
Uniform Delay, d1	35.7	36.3		38.2	36.6		2.5	3.8		2.6	4.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	0.7		7.0	0.9		0.2	1.4		0.3	2.0	
Delay (s)	36.3	37.0		45.2	37.5		2.7	5.2		2.8	6.4	
Level of Service	D	D		D	D		A	A		A	A	
Approach Delay (s)		36.8			41.0			5.1			6.2	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	94.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.1%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00		0.95	1.00		0.95	
Frt	1.00	0.94		1.00	1.00	0.85		1.00	0.85		0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.97	1.00		0.97	
Satd. Flow (prot)	760	2032		1809	1600	1133		1612	747		2375	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.97	1.00		0.97	
Satd. Flow (perm)	760	2032		1809	1600	1133		1612	747		2375	
Volume (vph)	5	45	30	565	15	465	135	110	445	540	45	330
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	47	32	595	16	489	142	116	468	568	47	347
RTOR Reduction (vph)	0	27	0	0	0	0	0	0	392	0	78	0
Lane Group Flow (vph)	5	52	0	595	16	489	0	258	76	0	884	0
Heavy Vehicles (%)	100%	0%	100%	63%	0%	20%	70%	100%	82%	16%	100%	9%
Turn Type	Prot			Prot		Free	Split		Perm	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						Free			8			
Actuated Green, G (s)	1.0	17.0		25.0	41.0	100.0		16.0	16.0		26.0	
Effective Green, g (s)	1.0	17.0		25.0	41.0	100.0		16.0	16.0		26.0	
Actuated g/C Ratio	0.01	0.17		0.25	0.41	1.00		0.16	0.16		0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	
Lane Grp Cap (vph)	8	345		452	656	1133		258	120		618	
v/s Ratio Prot	0.01	0.03		c0.33	0.01			c0.16			c0.37	
v/s Ratio Perm						c0.43			0.10			
v/c Ratio	0.62	0.15		1.32	0.02	0.43		1.00	0.63		1.43	
Uniform Delay, d1	49.3	35.4		37.5	17.6	0.0		42.0	39.2		37.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	97.8	0.9		157.4	0.1	1.2		56.0	10.3		202.6	
Delay (s)	147.1	36.3		194.9	17.6	1.2		98.0	49.6		239.6	
Level of Service	F	D		F	B	A		F	D		F	
Approach Delay (s)		42.9			106.2			66.8			239.6	
Approach LOS		D			F			E			F	

Intersection Summary			
HCM Average Control Delay	139.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.6%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.91	0.91		0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.90	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1407	2690	1271	2268	2643	1133	1369	1992	917		2203	1308
Flt Permitted	0.30	1.00	1.00	0.95	1.00	1.00	0.67	1.00	1.00		1.00	1.00
Satd. Flow (perm)	438	2690	1271	2268	2643	1133	963	1992	917		2203	1308
Volume (vph)	165	885	15	215	865	5	35	70	265	0	125	45
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	174	932	16	226	911	5	37	74	279	0	132	47
RTOR Reduction (vph)	0	0	8	0	0	1	0	120	124	0	0	41
Lane Group Flow (vph)	174	932	8	226	911	4	37	93	16	0	132	6
Heavy Vehicles (%)	8%	13%	7%	30%	15%	20%	11%	26%	35%	0%	38%	4%
Turn Type	Perm		Perm	Prot		Perm	Perm		Over	Perm		Perm
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2		2			6	8			4		4
Actuated Green, G (s)	28.2	28.2	28.2	6.0	38.2	38.2	7.3	7.3	6.0		7.3	7.3
Effective Green, g (s)	28.2	28.2	28.2	6.0	38.2	38.2	7.3	7.3	6.0		7.3	7.3
Actuated g/C Ratio	0.53	0.53	0.53	0.11	0.71	0.71	0.14	0.14	0.11		0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	231	1418	670	254	1887	809	131	272	103		301	178
v/s Ratio Prot		0.35		c0.10	0.34			0.05	0.02		c0.06	
v/s Ratio Perm	c0.40		0.01			0.00	0.04					0.00
v/c Ratio	0.75	0.66	0.01	0.89	0.48	0.00	0.28	0.34	0.15		0.44	0.04
Uniform Delay, d1	9.9	9.2	6.0	23.4	3.3	2.2	20.7	20.9	21.5		21.2	20.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	20.1	2.4	0.0	29.1	0.2	0.0	1.2	0.8	0.7		1.0	0.1
Delay (s)	30.1	11.6	6.1	52.5	3.5	2.2	21.9	21.7	22.1		22.2	20.1
Level of Service	C	B	A	D	A	A	C	C	C		C	C
Approach Delay (s)		14.3			13.2			21.9			21.7	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	53.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.6%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1382	3283		1126	3412	1236	1434	2432	1088	1256	2472	1225
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1382	3283		1126	3412	1236	1434	2432	1088	1256	2472	1225
Volume (vph)	335	1115	5	65	1565	670	35	400	40	535	350	170
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	353	1174	5	68	1647	705	37	421	42	563	368	179
RTOR Reduction (vph)	0	1	0	0	0	16	0	0	20	0	0	64
Lane Group Flow (vph)	353	1178	0	68	1647	689	37	421	22	563	368	115
Heavy Vehicles (%)	10%	33%	20%	35%	28%	10%	6%	25%	25%	21%	23%	11%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6	7	3	8	1	7	4	5
Permitted Phases						6			8			4
Actuated Green, G (s)	14.0	38.0		7.0	31.0	54.0	9.6	17.6	24.6	23.0	31.0	45.0
Effective Green, g (s)	14.0	38.0		7.0	31.0	54.0	9.6	17.6	24.6	23.0	31.0	45.0
Actuated g/C Ratio	0.14	0.37		0.07	0.31	0.53	0.09	0.17	0.24	0.23	0.31	0.44
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	190	1228		78	1041	657	135	421	306	284	754	591
v/s Ratio Prot	c0.26	0.36		0.06	c0.48	0.24	0.03	c0.17	0.01	c0.45	0.15	0.03
v/s Ratio Perm						0.32			0.02			0.07
v/c Ratio	1.86	0.96		0.87	1.58	1.05	0.27	1.00	0.07	1.98	0.49	0.20
Uniform Delay, d1	43.8	31.1		46.9	35.3	23.8	42.8	42.0	29.7	39.3	28.8	17.3
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	405.6	17.7		60.6	266.6	48.6	1.1	43.9	0.1	454.5	0.5	0.2
Delay (s)	449.4	48.7		107.5	301.9	72.4	43.9	85.9	29.8	493.8	29.3	17.4
Level of Service	F	D		F	F	E	D	F	C	F	C	B
Approach Delay (s)		141.0			229.6			78.0			263.0	
Approach LOS		F			F			E			F	

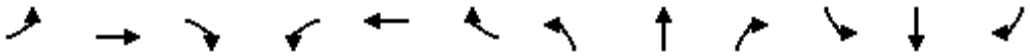
Intersection Summary			
HCM Average Control Delay	198.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.61		
Actuated Cycle Length (s)	101.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	119.6%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	1.00		1.00	0.95		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	2763		1520	2783		2835	2830		1520	2895	
Flt Permitted	0.14	1.00		0.38	1.00		0.40	1.00		0.32	1.00	
Satd. Flow (perm)	222	2763		615	2783		1186	2830		510	2895	
Volume (vph)	25	490	130	125	1300	45	225	295	150	55	325	45
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	516	137	132	1368	47	237	311	158	58	342	47
RTOR Reduction (vph)	0	20	0	0	2	0	0	69	0	0	12	0
Lane Group Flow (vph)	26	633	0	132	1413	0	237	400	0	58	377	0
Heavy Vehicles (%)	0%	7%	5%	0%	9%	0%	4%	3%	0%	0%	3%	4%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	63.3	63.3		63.3	63.3		21.6	21.6		21.6	21.6	
Effective Green, g (s)	63.3	63.3		63.3	63.3		21.6	21.6		21.6	21.6	
Actuated g/C Ratio	0.68	0.68		0.68	0.68		0.23	0.23		0.23	0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	151	1883		419	1896		276	658		119	673	
v/s Ratio Prot		0.23			c0.51			0.14			0.13	
v/s Ratio Perm	0.12			0.21			c0.20			0.11		
v/c Ratio	0.17	0.34		0.32	0.75		0.86	0.61		0.49	0.56	
Uniform Delay, d1	5.3	6.1		6.0	9.6		34.2	31.9		30.9	31.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.5	0.5		0.4	1.6		22.3	1.6		3.1	1.1	
Delay (s)	7.8	6.6		6.4	11.2		56.5	33.5		34.0	32.5	
Level of Service	A	A		A	B		E	C		C	C	
Approach Delay (s)		6.6			10.8			41.2			32.7	
Approach LOS		A			B			D			C	

Intersection Summary			
HCM Average Control Delay	19.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	92.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		

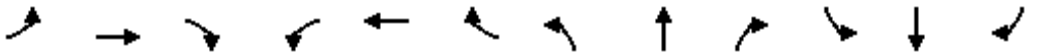
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1407	2841	1347	1505	2739	1153	2949	2904		2891	2934	
Flt Permitted	0.13	1.00	1.00	0.25	1.00	1.00	0.16	1.00		0.21	1.00	
Satd. Flow (perm)	193	2841	1347	390	2739	1153	509	2904		651	2934	
Volume (vph)	75	750	200	110	1175	40	250	550	85	45	545	55
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	789	211	116	1237	42	263	579	89	47	574	58
RTOR Reduction (vph)	0	0	52	0	0	19	0	12	0	0	8	0
Lane Group Flow (vph)	79	789	159	116	1237	23	263	656	0	47	624	0
Heavy Vehicles (%)	8%	7%	1%	1%	11%	18%	0%	3%	0%	2%	2%	4%
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	51.0	47.8	53.8	58.4	51.5	54.7	32.9	26.9		27.3	24.1	
Effective Green, g (s)	51.0	47.8	53.8	58.4	51.5	54.7	32.9	26.9		27.3	24.1	
Actuated g/C Ratio	0.51	0.47	0.53	0.58	0.51	0.54	0.33	0.27		0.27	0.24	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	136	1347	772	302	1399	671	311	775		247	701	
v/s Ratio Prot	c0.02	0.28	0.01	0.03	c0.45	0.00	c0.05	c0.23		0.01	0.21	
v/s Ratio Perm	0.27		0.11	0.20		0.02	0.23			0.05		
v/c Ratio	0.58	0.59	0.21	0.38	0.88	0.03	0.85	0.85		0.19	0.89	
Uniform Delay, d1	15.7	19.3	12.3	11.2	22.0	10.7	28.1	35.0		27.9	37.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.2	1.9	0.1	0.8	7.0	0.0	18.6	8.5		0.4	13.5	
Delay (s)	21.9	21.2	12.4	12.0	29.0	10.8	46.7	43.5		28.3	50.6	
Level of Service	C	C	B	B	C	B	D	D		C	D	
Approach Delay (s)		19.5			27.0			44.4			49.1	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	32.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		

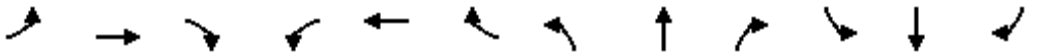
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.91			0.91		1.00	0.95		1.00	0.95	1.00
Frt		0.98			0.98		1.00	0.95		1.00	1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3988			3877		1505	2852		1520	3010	1360
Flt Permitted		1.00			0.91		0.33	1.00		0.12	1.00	1.00
Satd. Flow (perm)		3988			3542		518	2852		197	3010	1360
Volume (vph)	0	815	125	20	1080	165	175	685	370	75	610	40
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	858	132	21	1137	174	184	721	389	79	642	42
RTOR Reduction (vph)	0	19	0	0	18	0	0	43	0	0	0	17
Lane Group Flow (vph)	0	971	0	0	1314	0	184	1067	0	79	642	25
Heavy Vehicles (%)	0%	8%	3%	0%	12%	1%	1%	1%	1%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		43.4			43.4		39.8	39.8		39.8	39.8	39.8
Effective Green, g (s)		43.4			43.4		39.8	39.8		39.8	39.8	39.8
Actuated g/C Ratio		0.48			0.48		0.44	0.44		0.44	0.44	0.44
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1898			1686		226	1245		86	1314	594
v/s Ratio Prot		0.24						0.37			0.21	
v/s Ratio Perm					c0.37		0.35			c0.40		0.02
v/c Ratio		0.51			0.78		0.81	0.86		0.92	0.49	0.04
Uniform Delay, d1		16.6			19.9		22.5	23.1		24.2	18.4	14.8
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		1.0			2.3		19.7	6.0		69.7	0.3	0.0
Delay (s)		17.5			22.3		42.1	29.1		93.8	18.7	14.8
Level of Service		B			C		D	C		F	B	B
Approach Delay (s)		17.5			22.3			31.0			26.3	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	91.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.7%	ICU Level of Service	F
Analysis Period (min)	15		

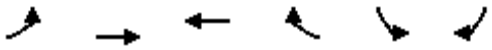
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	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)	1505	2841	1308	1490	2769		1505	1584	1360	1490	1553	1347
Flt Permitted	0.41	1.00	1.00	0.17	1.00		0.42	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)	643	2841	1308	272	2769		663	1584	1360	427	1553	1347
Volume (vph)	95	880	50	215	550	65	75	370	45	130	270	115
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	926	53	226	579	68	79	389	47	137	284	121
RTOR Reduction (vph)	0	0	30	0	8	0	0	0	23	0	0	78
Lane Group Flow (vph)	100	926	23	226	639	0	79	389	24	137	284	43
Heavy Vehicles (%)	1%	7%	4%	2%	9%	0%	1%	1%	0%	2%	3%	1%
Turn Type	pm+pt		Perm	pm+pt			Perm		pm+ov	Perm		pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	44.2	39.6	39.6	55.4	46.8		27.6	27.6	39.4	27.6	27.6	32.2
Effective Green, g (s)	44.2	39.6	39.6	55.4	46.8		27.6	27.6	39.4	27.6	27.6	32.2
Actuated g/C Ratio	0.49	0.44	0.44	0.61	0.51		0.30	0.30	0.43	0.30	0.30	0.35
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	356	1236	569	324	1424		201	480	649	130	471	536
v/s Ratio Prot	0.01	c0.33		c0.09	0.23			0.25	0.00		0.18	0.00
v/s Ratio Perm	0.12		0.02	0.33			0.12		0.01	c0.32		0.03
v/c Ratio	0.28	0.75	0.04	0.70	0.45		0.39	0.81	0.04	1.05	0.60	0.08
Uniform Delay, d1	12.9	21.5	14.8	12.0	14.0		25.1	29.3	14.9	31.7	27.0	19.5
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	4.2	0.1	6.4	0.2		1.3	10.0	0.0	94.0	2.2	0.1
Delay (s)	13.3	25.7	14.9	18.4	14.2		26.3	39.3	14.9	125.7	29.2	19.6
Level of Service	B	C	B	B	B		C	D	B	F	C	B
Approach Delay (s)		24.1			15.3			35.1			51.5	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	91.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.91		1.00	1.00
Frt	1.00	1.00	0.98		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1448	2739	3908		1041	1295
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1448	2739	3908		1041	1295
Volume (vph)	230	1000	1175	205	135	265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	242	1053	1237	216	142	279
RTOR Reduction (vph)	0	0	26	0	0	201
Lane Group Flow (vph)	242	1053	1427	0	142	78
Heavy Vehicles (%)	5%	11%	6%	28%	46%	5%
Turn Type	Prot					Over
Protected Phases	5	2	6		4	5
Permitted Phases						
Actuated Green, G (s)	26.9	72.1	41.2		16.7	26.9
Effective Green, g (s)	26.9	72.1	41.2		16.7	26.9
Actuated g/C Ratio	0.28	0.74	0.43		0.17	0.28
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	402	2040	1663		180	360
v/s Ratio Prot	c0.17	0.38	c0.37		c0.14	0.06
v/s Ratio Perm						
v/c Ratio	0.60	0.52	0.86		0.79	0.22
Uniform Delay, d1	30.3	5.1	25.2		38.4	26.8
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	2.5	0.9	4.6		20.1	0.3
Delay (s)	32.8	6.1	29.8		58.5	27.1
Level of Service	C	A	C		E	C
Approach Delay (s)		11.1	29.8		37.7	
Approach LOS		B	C		D	

Intersection Summary			
HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	96.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		

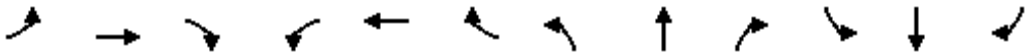
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.88	0.91		1.00	0.91
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1322	2063	3529		1277	3165
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1322	2063	3529		1277	3165
Volume (vph)	135	305	500	40	360	430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	321	526	42	379	453
RTOR Reduction (vph)	0	272	8	0	0	0
Lane Group Flow (vph)	142	49	560	0	379	453
Heavy Vehicles (%)	15%	16%	23%	15%	19%	38%
Turn Type		Prot			Prot	
Protected Phases	4	4	2		1	6
Permitted Phases						
Actuated Green, G (s)	15.8	15.8	26.1		50.1	80.2
Effective Green, g (s)	15.8	15.8	26.1		50.1	80.2
Actuated g/C Ratio	0.15	0.15	0.25		0.48	0.77
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	201	313	886		615	2441
v/s Ratio Prot	c0.11	0.02	c0.16		c0.30	0.14
v/s Ratio Perm						
v/c Ratio	0.71	0.16	0.63		0.62	0.19
Uniform Delay, d1	41.9	38.3	34.7		19.9	3.2
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	10.8	0.2	3.4		1.8	0.2
Delay (s)	52.7	38.5	38.1		21.7	3.3
Level of Service	D	D	D		C	A
Approach Delay (s)	42.9		38.1			11.7
Approach LOS	D		D			B

Intersection Summary			
HCM Average Control Delay	27.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	104.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

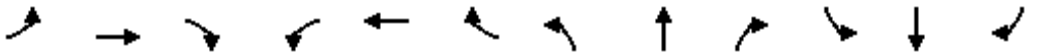
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1476	2627		1448	2717		1063	2762		1476	2769	
Flt Permitted	0.95	1.00		0.95	1.00		0.60	1.00		0.49	1.00	
Satd. Flow (perm)	1476	2627		1448	2717		673	2762		758	2769	
Volume (vph)	65	1435	75	80	1795	320	100	290	55	145	205	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	68	1511	79	84	1889	337	105	305	58	153	216	26
RTOR Reduction (vph)	0	4	0	0	14	0	0	16	0	0	10	0
Lane Group Flow (vph)	68	1586	0	84	2212	0	105	347	0	153	232	0
Heavy Vehicles (%)	3%	15%	12%	5%	11%	0%	43%	6%	15%	3%	8%	8%
Turn Type	Prot			Prot			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases							8			4		
Actuated Green, G (s)	4.0	57.0		6.0	59.0		15.3	15.3		13.2	13.2	
Effective Green, g (s)	4.0	57.0		6.0	59.0		15.3	15.3		13.2	13.2	
Actuated g/C Ratio	0.04	0.57		0.06	0.59		0.15	0.15		0.13	0.13	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	59	1508		87	1614		132	426		137	368	
v/s Ratio Prot	0.05	c0.60		0.06	c0.81		0.06	c0.13		c0.06	0.08	
v/s Ratio Perm							0.07			c0.09		
v/c Ratio	1.15	1.05		0.97	1.37		0.80	0.81		1.12	0.63	
Uniform Delay, d1	47.6	21.1		46.5	20.1		39.9	40.6		49.4	40.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	164.7	38.1		84.3	170.7		27.3	11.4		111.7	3.5	
Delay (s)	212.4	59.3		130.8	190.9		67.2	52.0		161.0	44.3	
Level of Service	F	E		F	F		E	D		F	D	
Approach Delay (s)		65.6			188.7			55.4			89.5	
Approach LOS		E			F			E			F	

Intersection Summary			
HCM Average Control Delay	125.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	99.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	109.8%	ICU Level of Service	H
Analysis Period (min)	15		

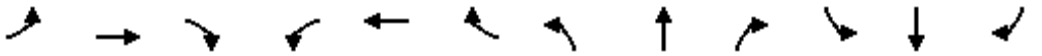
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1188	4200	1320	1476	4160	1360	1394	2841	1308	1520	2980	1320
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.31	1.00	1.00	0.17	1.00	1.00
Satd. Flow (perm)	1188	4200	1320	1476	4160	1360	459	2841	1308	268	2980	1320
Volume (vph)	90	1225	140	65	1690	115	170	850	85	75	585	130
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	95	1289	147	68	1779	121	179	895	89	79	616	137
RTOR Reduction (vph)	0	0	84	0	0	45	0	0	10	0	0	2
Lane Group Flow (vph)	95	1289	63	68	1779	76	179	895	79	79	616	135
Heavy Vehicles (%)	28%	4%	3%	3%	5%	0%	9%	7%	4%	0%	2%	3%
Turn Type	Prot		Perm	Prot		Perm	Perm		pm+ov	Perm		pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases			2			6	8		8	4		4
Actuated Green, G (s)	8.0	43.0	43.0	7.0	42.0	42.0	38.0	38.0	45.0	38.0	38.0	46.0
Effective Green, g (s)	8.0	43.0	43.0	7.0	42.0	42.0	38.0	38.0	45.0	38.0	38.0	46.0
Actuated g/C Ratio	0.08	0.43	0.43	0.07	0.42	0.42	0.38	0.38	0.45	0.38	0.38	0.46
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	95	1806	568	103	1747	571	174	1080	641	102	1132	660
v/s Ratio Prot	c0.08	0.31		0.05	c0.43			0.32	0.01		0.21	0.02
v/s Ratio Perm			0.05			0.06	c0.39		0.05	0.29		0.09
v/c Ratio	1.00	0.71	0.11	0.66	1.02	0.13	1.03	0.83	0.12	0.77	0.54	0.21
Uniform Delay, d1	46.0	23.4	17.1	45.3	29.0	17.8	31.0	28.1	16.0	27.2	24.2	16.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	92.3	2.4	0.4	14.7	26.2	0.1	76.0	5.4	0.1	29.9	0.5	0.2
Delay (s)	138.3	25.9	17.5	60.1	55.2	17.9	107.0	33.4	16.1	57.1	24.8	16.3
Level of Service	F	C	B	E	E	B	F	C	B	E	C	B
Approach Delay (s)		32.0			53.1			43.4			26.4	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	41.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.9%	ICU Level of Service	E
Analysis Period (min)	15		

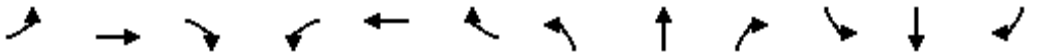
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		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)	2863	4162		2920	4142		1505	2980	1360	1520	2980	1320
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2863	4162		2920	4142		1505	2980	1360	1520	2980	1320
Volume (vph)	115	1075	95	185	1230	55	320	520	60	100	680	90
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	121	1132	100	195	1295	58	337	547	63	105	716	95
RTOR Reduction (vph)	0	10	0	0	5	0	0	0	35	0	0	46
Lane Group Flow (vph)	121	1222	0	195	1348	0	337	547	28	105	716	49
Heavy Vehicles (%)	3%	4%	0%	1%	5%	0%	1%	2%	0%	0%	2%	3%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Actuated Green, G (s)	5.0	31.0		7.0	33.0		22.8	36.7	43.7	10.1	24.0	29.0
Effective Green, g (s)	5.0	31.0		7.0	33.0		22.8	36.7	43.7	10.1	24.0	29.0
Actuated g/C Ratio	0.05	0.31		0.07	0.33		0.23	0.36	0.43	0.10	0.24	0.29
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	142	1280		203	1356		340	1085	590	152	710	380
v/s Ratio Prot	0.04	c0.29		0.07	c0.33		c0.22	0.18	0.00	0.07	c0.24	0.01
v/s Ratio Perm									0.02			0.03
v/c Ratio	0.85	0.95		0.96	0.99		0.99	0.50	0.05	0.69	1.01	0.13
Uniform Delay, d1	47.5	34.2		46.8	33.8		38.9	25.0	16.5	43.8	38.4	26.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	36.0	16.4		51.7	22.9		46.3	0.4	0.0	12.7	35.9	0.2
Delay (s)	83.5	50.6		98.4	56.7		85.2	25.3	16.5	56.5	74.3	26.7
Level of Service	F	D		F	E		F	C	B	E	E	C
Approach Delay (s)		53.5			62.0			46.0			67.3	
Approach LOS		D			E			D			E	

Intersection Summary			
HCM Average Control Delay	57.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	100.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		

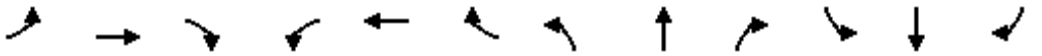
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.99		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)	1421	4162		1490	4082		1490	2961		1520	3010	1295
Flt Permitted	0.95	1.00		0.95	1.00		0.27	1.00		0.27	1.00	1.00
Satd. Flow (perm)	1421	4162		1490	4082		418	2961		433	3010	1295
Volume (vph)	245	945	75	165	1310	130	45	455	60	95	520	130
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	258	995	79	174	1379	137	47	479	63	100	547	137
RTOR Reduction (vph)	0	8	0	0	12	0	0	11	0	0	0	5
Lane Group Flow (vph)	258	1066	0	174	1504	0	47	531	0	100	547	132
Heavy Vehicles (%)	7%	4%	1%	2%	6%	1%	2%	1%	0%	0%	1%	5%
Turn Type	Prot			Prot			Perm			Perm		pm+ov
Protected Phases	5	2		1	6			8			4	5
Permitted Phases							8			4		4
Actuated Green, G (s)	20.9	43.0		15.6	37.7		23.3	23.3		23.3	23.3	44.2
Effective Green, g (s)	20.9	43.0		15.6	37.7		23.3	23.3		23.3	23.3	44.2
Actuated g/C Ratio	0.22	0.46		0.17	0.40		0.25	0.25		0.25	0.25	0.47
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	316	1906		248	1639		104	735		107	747	665
v/s Ratio Prot	c0.18	0.26		0.12	c0.37			0.18			0.18	0.04
v/s Ratio Perm							0.11			c0.23		0.06
v/c Ratio	0.82	0.56		0.70	0.92		0.45	0.72		0.93	0.73	0.20
Uniform Delay, d1	34.7	18.5		37.0	26.6		29.9	32.3		34.6	32.4	14.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	14.9	1.2		8.7	8.5		3.1	3.5		65.9	3.7	0.1
Delay (s)	49.6	19.7		45.6	35.1		33.0	35.9		100.5	36.2	14.7
Level of Service	D	B		D	D		C	D		F	D	B
Approach Delay (s)		25.5			36.2			35.6			40.6	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	33.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	93.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.4%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00		1.00	0.98		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)	1476	4185		1490	4089		1505	1584	1360	1490	1569	1333
Flt Permitted	0.09	1.00		0.15	1.00		0.26	1.00	1.00	0.24	1.00	1.00
Satd. Flow (perm)	139	4185		242	4089		418	1584	1360	369	1569	1333
Volume (vph)	430	1365	45	60	1620	265	225	380	20	115	215	205
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	453	1437	47	63	1705	279	237	400	21	121	226	216
RTOR Reduction (vph)	0	3	0	0	22	0	0	0	15	0	0	8
Lane Group Flow (vph)	453	1481	0	63	1962	0	237	400	6	121	226	208
Heavy Vehicles (%)	3%	4%	0%	2%	5%	2%	1%	1%	0%	2%	2%	2%
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	63.8	54.3		46.3	40.8		29.0	21.0	26.5	21.0	17.0	36.0
Effective Green, g (s)	63.8	54.3		46.3	40.8		29.0	21.0	26.5	21.0	17.0	36.0
Actuated g/C Ratio	0.63	0.54		0.46	0.40		0.29	0.21	0.26	0.21	0.17	0.36
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	340	2254		179	1655		207	330	412	121	265	529
v/s Ratio Prot	c0.25	0.35		0.02	0.48		c0.09	c0.25	0.00	0.04	0.14	0.07
v/s Ratio Perm	c0.59			0.14			0.24		0.00	0.17		0.08
v/c Ratio	1.33	0.66		0.35	1.19		1.14	1.21	0.01	1.00	0.85	0.39
Uniform Delay, d1	32.1	16.6		15.4	30.0		34.1	39.9	27.5	40.5	40.7	24.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	168.4	1.5		1.2	89.9		107.1	120.2	0.0	81.8	22.4	0.5
Delay (s)	200.5	18.1		16.6	119.9		141.2	160.1	27.5	122.4	63.0	24.7
Level of Service	F	B		B	F		F	F	C	F	E	C
Approach Delay (s)		60.8			116.7			149.0			61.1	
Approach LOS		E			F			F			E	

Intersection Summary			
HCM Average Control Delay	94.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	100.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	117.1%	ICU Level of Service	H
Analysis Period (min)	15		

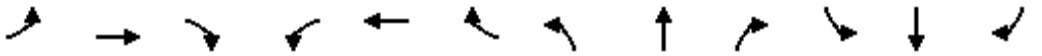
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.95	1.00	1.00	0.95
Frt	0.99	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.96	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	2007	903	2512	925	987	2375
Flt Permitted	0.96	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	2007	903	2512	925	987	2375
Volume (vph)	150	300	710	380	480	865
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	316	747	400	505	911
RTOR Reduction (vph)	5	11	0	144	0	0
Lane Group Flow (vph)	163	295	747	256	505	911
Heavy Vehicles (%)	47%	37%	21%	47%	54%	28%
Turn Type		pm+ov		pm+ov	Prot	
Protected Phases	8	1	2	8	1	6
Permitted Phases		8		2		
Actuated Green, G (s)	14.1	59.1	28.9	43.0	45.0	77.9
Effective Green, g (s)	14.1	59.1	28.9	43.0	45.0	77.9
Actuated g/C Ratio	0.14	0.59	0.29	0.43	0.45	0.78
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	283	570	726	435	444	1850
v/s Ratio Prot	0.08	0.23	c0.30	c0.08	c0.51	0.38
v/s Ratio Perm		0.09		0.19		
v/c Ratio	0.58	0.52	1.03	0.59	1.14	0.49
Uniform Delay, d1	40.2	12.1	35.5	21.7	27.5	4.0
Progression Factor	0.65	0.75	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.1	0.6	41.0	2.0	86.0	0.9
Delay (s)	28.1	9.7	76.6	23.8	113.5	4.9
Level of Service	C	A	E	C	F	A
Approach Delay (s)	16.2		58.2			43.6
Approach LOS	B		E			D

Intersection Summary			
HCM Average Control Delay	44.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		

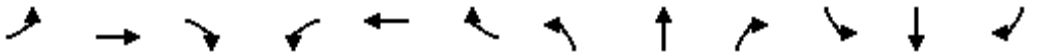
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1094	2504		1267	2533	986	844	844		1927	958	938
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.73	1.00		0.59	1.00	1.00
Satd. Flow (perm)	1094	2504		1267	2533	986	646	844		1195	958	938
Volume (vph)	225	415	10	5	565	205	5	20	5	505	45	310
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	237	437	11	5	595	216	5	21	5	532	47	326
RTOR Reduction (vph)	0	1	0	0	0	125	0	4	0	0	0	79
Lane Group Flow (vph)	237	447	0	5	595	91	5	22	0	532	47	247
Heavy Vehicles (%)	39%	21%	20%	20%	20%	38%	80%	85%	80%	53%	67%	45%
Turn Type	Prot			Prot		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases						8	2			6		6
Actuated Green, G (s)	26.3	50.7		0.8	25.2	42.1	16.4	15.6		36.5	31.7	58.0
Effective Green, g (s)	26.3	50.7		0.8	25.2	42.1	16.4	15.6		36.5	31.7	58.0
Actuated g/C Ratio	0.26	0.51		0.01	0.25	0.42	0.16	0.16		0.36	0.32	0.58
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	288	1270		10	638	415	108	132		560	304	544
v/s Ratio Prot	c0.22	0.18		0.00	c0.23	0.04	0.00	0.03		c0.16	0.05	0.12
v/s Ratio Perm						0.06	0.01			c0.19		0.14
v/c Ratio	0.82	0.35		0.50	0.93	0.22	0.05	0.17		0.95	0.15	0.45
Uniform Delay, d1	34.7	14.8		49.4	36.6	18.5	35.2	36.6		29.5	24.5	12.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.63	0.69	0.53
Incremental Delay, d2	17.0	0.2		34.4	20.6	0.3	0.2	2.7		12.0	0.4	0.2
Delay (s)	51.7	15.0		83.8	57.2	18.7	35.3	39.2		30.6	17.2	6.6
Level of Service	D	B		F	E	B	D	D		C	B	A
Approach Delay (s)		27.7			47.2			38.6			21.3	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	32.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

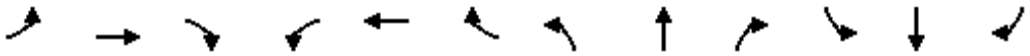
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		0.97	0.95		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.98		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1505	2940		2920	2921		1505	2895	1347	2920	2815	1347
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1505	2940		2920	2921		1505	2895	1347	2920	2815	1347
Volume (vph)	115	760	140	300	935	230	300	450	545	285	405	160
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	1.00
Adj. Flow (vph)	121	800	147	316	984	242	316	474	574	300	426	160
RTOR Reduction (vph)	0	15	0	0	22	0	0	0	23	0	0	56
Lane Group Flow (vph)	121	932	0	316	1204	0	316	474	551	300	426	104
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	5%	1%	1%	8%	1%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Actuated Green, G (s)	8.0	31.0		17.0	40.0		20.0	23.3	40.3	12.7	16.0	24.0
Effective Green, g (s)	8.0	31.0		17.0	40.0		20.0	23.3	40.3	12.7	16.0	24.0
Actuated g/C Ratio	0.08	0.31		0.17	0.40		0.20	0.23	0.40	0.13	0.16	0.24
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	120	911		496	1168		301	675	543	371	450	377
v/s Ratio Prot	0.08	0.32		0.11	c0.41		0.21	0.16	c0.17	0.10	c0.15	0.02
v/s Ratio Perm									0.24			0.06
v/c Ratio	1.01	1.02		0.64	1.03		1.05	0.70	1.02	0.81	0.95	0.28
Uniform Delay, d1	46.0	34.5		38.6	30.0		40.0	35.2	29.9	42.5	41.6	30.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	84.4	35.7		2.7	34.7		65.5	3.3	42.5	12.2	29.0	0.4
Delay (s)	130.4	70.2		41.3	64.7		105.5	38.5	72.4	54.7	70.6	31.3
Level of Service	F	E		D	E		F	D	E	D	E	C
Approach Delay (s)		77.1			59.9			68.3			58.1	
Approach LOS		E			E			E			E	

Intersection Summary			
HCM Average Control Delay	65.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.3%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.96		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1476	4210		1448	4242		1505	2791		1490	2887	
Flt Permitted	0.16	1.00		0.16	1.00		0.18	1.00		0.24	1.00	
Satd. Flow (perm)	246	4210		241	4242		284	2791		384	2887	
Volume (vph)	120	1025	130	120	1290	175	205	560	210	50	415	155
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	126	1079	137	126	1358	184	216	589	221	53	437	163
RTOR Reduction (vph)	0	19	0	0	22	0	0	47	0	0	48	0
Lane Group Flow (vph)	126	1197	0	126	1520	0	216	763	0	53	552	0
Heavy Vehicles (%)	3%	2%	2%	5%	1%	2%	1%	2%	11%	2%	1%	1%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	31.1	31.1		30.8	30.8		32.9	26.5		21.4	19.0	
Effective Green, g (s)	31.1	31.1		30.8	30.8		32.9	26.5		21.4	19.0	
Actuated g/C Ratio	0.38	0.38		0.38	0.38		0.40	0.33		0.26	0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	181	1607		173	1603		263	908		133	673	
v/s Ratio Prot	0.05	c0.28		0.05	c0.36		c0.10	c0.27		0.01	0.19	
v/s Ratio Perm	0.22			0.23			0.23			0.09		
v/c Ratio	0.70	0.74		0.73	0.95		0.82	0.84		0.40	0.82	
Uniform Delay, d1	28.4	21.8		19.3	24.6		18.5	25.5		23.2	29.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.0	3.2		14.2	12.2		18.3	7.1		2.0	7.9	
Delay (s)	39.4	25.0		33.5	36.8		36.8	32.6		25.1	37.6	
Level of Service	D	C		C	D		D	C		C	D	
Approach Delay (s)		26.3			36.6			33.5			36.6	
Approach LOS		C			D			C			D	

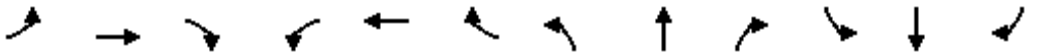
Intersection Summary			
HCM Average Control Delay	33.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	81.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.91		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	2920	4282	1347	2782	4282	1360	1505	4094		1505	2980	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	2920	4282	1347	2782	4282	1360	1505	4094		1505	2980	1360
Volume (vph)	220	1050	170	155	1270	50	295	660	275	175	555	165
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	1105	179	163	1337	53	311	695	289	184	584	174
RTOR Reduction (vph)	0	0	17	0	0	16	0	68	0	0	0	43
Lane Group Flow (vph)	232	1105	162	163	1337	37	311	916	0	184	584	131
Heavy Vehicles (%)	1%	2%	1%	6%	2%	0%	1%	2%	2%	1%	2%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	9.5	38.0	61.8	8.9	37.4	53.4	23.8	30.6		16.0	22.8	32.3
Effective Green, g (s)	9.5	38.0	61.8	8.9	37.4	53.4	23.8	30.6		16.0	22.8	32.3
Actuated g/C Ratio	0.09	0.35	0.56	0.08	0.34	0.49	0.22	0.28		0.15	0.21	0.29
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	253	1486	760	226	1463	663	327	1144		220	620	401
v/s Ratio Prot	c0.08	0.26	0.05	0.06	c0.31	0.01	c0.21	0.22		0.12	c0.20	0.03
v/s Ratio Perm			0.07			0.02						0.07
v/c Ratio	0.92	0.74	0.21	0.72	0.91	0.06	0.95	0.80		0.84	0.94	0.33
Uniform Delay, d1	49.6	31.5	11.8	49.1	34.5	14.8	42.3	36.6		45.5	42.7	30.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	34.8	3.4	0.1	10.8	9.1	0.0	36.8	4.1		23.2	22.8	0.5
Delay (s)	84.4	34.9	12.0	59.9	43.6	14.8	79.1	40.7		68.6	65.5	30.6
Level of Service	F	C	B	E	D	B	E	D		E	E	C
Approach Delay (s)		39.8			44.3			50.0			59.6	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM Average Control Delay	47.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	109.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

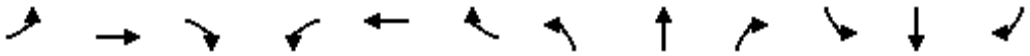
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.99		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2920	4248		1476	4144		2891	3010	1333	2891	2980	1360
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2920	4248		1476	4144		2891	3010	1333	2891	2980	1360
Volume (vph)	280	960	55	130	1210	360	160	785	325	160	485	115
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.95	0.95	0.95
Adj. Flow (vph)	295	1011	58	137	1274	379	168	826	361	168	511	121
RTOR Reduction (vph)	0	7	0	0	60	0	0	0	166	0	0	90
Lane Group Flow (vph)	295	1062	0	137	1593	0	168	826	195	168	511	31
Heavy Vehicles (%)	1%	2%	2%	3%	2%	1%	2%	1%	2%	2%	2%	0%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases									8			4
Actuated Green, G (s)	9.0	33.4		10.6	35.0		7.0	24.0	24.0	6.0	23.0	23.0
Effective Green, g (s)	9.0	33.4		10.6	35.0		7.0	24.0	24.0	6.0	23.0	23.0
Actuated g/C Ratio	0.10	0.37		0.12	0.39		0.08	0.27	0.27	0.07	0.26	0.26
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	292	1576		174	1612		225	803	355	193	762	348
v/s Ratio Prot	c0.10	0.25		0.09	c0.38		0.06	c0.27		0.06	c0.17	
v/s Ratio Perm									0.15			0.02
v/c Ratio	1.01	0.67		0.79	0.99		0.75	1.03	0.55	0.87	0.67	0.09
Uniform Delay, d1	40.5	23.7		38.6	27.3		40.6	33.0	28.3	41.6	30.1	25.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	55.3	2.3		20.6	19.4		12.6	39.3	1.7	32.0	2.3	0.1
Delay (s)	95.8	26.1		59.2	46.7		53.3	72.3	30.1	73.6	32.4	25.6
Level of Service	F	C		E	D		D	E	C	E	C	C
Approach Delay (s)		41.1			47.7			58.7			40.1	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM Average Control Delay	47.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.3%	ICU Level of Service	F
Analysis Period (min)	15		

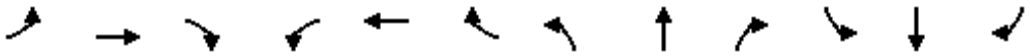
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97	
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)	2835	4282	1347	2891	4241	1347	2920	4282	1333	2891	4122	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	2835	4282	1347	2891	4241	1347	2920	4282	1333	2891	4122	
Volume (vph)	90	1045	280	285	1385	370	105	1160	105	370	845	210
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	95	1100	295	300	1458	389	111	1221	111	389	889	221
RTOR Reduction (vph)	0	0	23	0	0	6	0	0	52	0	51	0
Lane Group Flow (vph)	95	1100	272	300	1458	383	111	1221	59	389	1059	0
Heavy Vehicles (%)	4%	2%	1%	2%	3%	1%	1%	2%	2%	2%	3%	2%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		Over	Prot		
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	
Permitted Phases			2			6						
Actuated Green, G (s)	4.0	25.0	35.7	10.0	31.0	44.0	10.7	26.0	10.0	13.0	28.3	
Effective Green, g (s)	4.0	25.0	35.7	10.0	31.0	44.0	10.7	26.0	10.0	13.0	28.3	
Actuated g/C Ratio	0.04	0.28	0.40	0.11	0.34	0.49	0.12	0.29	0.11	0.14	0.31	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	126	1189	594	321	1461	718	347	1237	148	418	1296	
v/s Ratio Prot	0.03	c0.26	0.05	0.10	c0.34	0.08	0.04	c0.29	0.04	c0.13	0.26	
v/s Ratio Perm			0.15			0.21						
v/c Ratio	0.75	0.93	0.46	0.93	1.00	0.53	0.32	0.99	0.40	0.93	0.82	
Uniform Delay, d1	42.5	31.6	20.0	39.7	29.5	15.9	36.3	31.8	37.2	38.1	28.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	22.2	13.4	0.6	33.4	22.9	0.8	0.5	22.3	1.8	27.3	4.1	
Delay (s)	64.8	45.0	20.6	73.0	52.3	16.7	36.9	54.1	39.0	65.4	32.6	
Level of Service	E	D	C	E	D	B	D	D	D	E	C	
Approach Delay (s)		41.4			48.8			51.6			41.1	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	46.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	87.6%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	4149		1505	2951	1333	1448	4028		2891	4031	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1490	4149		1505	2951	1333	1448	4028		2891	4031	
Volume (vph)	265	480	125	120	905	485	80	570	105	170	495	120
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	279	505	132	126	953	511	84	600	111	179	521	126
RTOR Reduction (vph)	0	47	0	0	0	399	0	27	0	0	40	0
Lane Group Flow (vph)	279	590	0	126	953	112	84	684	0	179	607	0
Heavy Vehicles (%)	2%	2%	2%	1%	3%	2%	5%	7%	0%	2%	5%	6%
Turn Type	Prot			Prot		Over	Prot			Prot		
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	19.0	38.0		15.6	34.6	11.9	6.3	18.0		11.9	23.6	
Effective Green, g (s)	19.0	38.0		15.6	34.6	11.9	6.3	18.0		11.9	23.6	
Actuated g/C Ratio	0.19	0.38		0.16	0.35	0.12	0.06	0.18		0.12	0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	285	1585		236	1026	159	92	729		346	956	
v/s Ratio Prot	c0.19	0.14		0.08	c0.32	0.08	0.06	c0.17		0.06	c0.15	
v/s Ratio Perm												
v/c Ratio	0.98	0.37		0.53	0.93	0.71	0.91	0.94		0.52	0.64	
Uniform Delay, d1	40.1	22.2		38.6	31.3	42.1	46.3	40.2		41.1	34.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	46.9	0.7		2.3	13.9	13.3	65.7	19.6		1.3	1.4	
Delay (s)	87.0	22.8		40.9	45.2	55.4	112.0	59.8		42.4	35.5	
Level of Service	F	C		D	D	E	F	E		D	D	
Approach Delay (s)		42.4			48.1			65.3			37.0	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM Average Control Delay	47.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	99.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	2587	1193	2690	1193	2564	2667
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	2587	1193	2690	1193	2564	2667
Volume (vph)	160	160	585	310	230	680
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	168	168	616	326	242	716
RTOR Reduction (vph)	0	65	0	116	0	0
Lane Group Flow (vph)	168	103	616	210	242	716
Heavy Vehicles (%)	14%	14%	13%	14%	15%	14%
Turn Type		pt+ov		pm+ov	Prot	
Protected Phases	7	7 5	6	7	5	2
Permitted Phases				6		
Actuated Green, G (s)	11.5	38.5	37.1	48.6	23.0	64.1
Effective Green, g (s)	11.5	38.5	37.1	48.6	23.0	64.1
Actuated g/C Ratio	0.14	0.46	0.44	0.58	0.28	0.77
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	356	549	1194	751	705	2045
v/s Ratio Prot	c0.06	0.09	c0.23	0.04	0.09	c0.27
v/s Ratio Perm				0.14		
v/c Ratio	0.47	0.19	0.52	0.28	0.34	0.35
Uniform Delay, d1	33.2	13.3	16.8	8.7	24.3	3.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.2	1.6	0.2	0.3	0.5
Delay (s)	34.2	13.5	18.4	8.9	24.5	3.6
Level of Service	C	B	B	A	C	A
Approach Delay (s)	23.9		15.1			8.9
Approach LOS	C		B			A

Intersection Summary			
HCM Average Control Delay	13.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	83.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

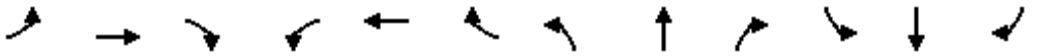
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3900	1183	1333	3900	2564	1225
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3900	1183	1333	3900	2564	1225
Volume (vph)	575	165	150	1720	450	90
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	605	174	158	1811	474	95
RTOR Reduction (vph)	0	131	0	0	0	54
Lane Group Flow (vph)	605	43	158	1811	474	41
Heavy Vehicles (%)	12%	15%	14%	12%	15%	11%
Turn Type		Over	Prot			pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases						8
Actuated Green, G (s)	34.8	20.3	14.7	53.5	20.3	35.0
Effective Green, g (s)	34.8	20.3	14.7	53.5	20.3	35.0
Actuated g/C Ratio	0.43	0.25	0.18	0.65	0.25	0.43
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1659	294	240	2551	636	584
v/s Ratio Prot	0.16	0.04	0.12	c0.46	c0.18	0.01
v/s Ratio Perm						0.02
v/c Ratio	0.36	0.15	0.66	0.71	0.75	0.07
Uniform Delay, d1	16.0	24.0	31.2	9.1	28.4	13.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.2	6.4	0.9	4.7	0.1
Delay (s)	16.6	24.2	37.6	10.1	33.1	13.8
Level of Service	B	C	D	B	C	B
Approach Delay (s)	18.3			12.3	29.9	
Approach LOS	B			B	C	

Intersection Summary			
HCM Average Control Delay	16.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	81.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

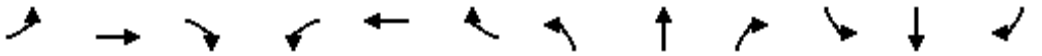
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		0.97	0.95	1.00	1.00	0.91	0.91	1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.88	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1434	4036		2835	2923	1320	1490	2410	1146	1382	2868	1360
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1434	4036		2835	2923	1320	1490	2410	1146	1382	2868	1360
Volume (vph)	50	580	65	820	1595	70	250	50	360	40	250	45
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	611	68	863	1679	74	263	53	379	42	263	47
RTOR Reduction (vph)	0	13	0	0	0	25	0	164	130	0	0	24
Lane Group Flow (vph)	53	666	0	863	1679	49	263	78	60	42	263	23
Heavy Vehicles (%)	6%	7%	3%	4%	4%	3%	2%	2%	8%	10%	6%	0%
Turn Type	Prot			Prot		pm+ov	Prot		Over	Prot		pm+ov
Protected Phases	5	2		1	6	7	3	8	1	7	4	5
Permitted Phases						6						4
Actuated Green, G (s)	4.0	22.0		31.0	49.0	65.3	15.8	13.1	31.0	16.3	13.6	17.6
Effective Green, g (s)	4.0	22.0		31.0	49.0	65.3	15.8	13.1	31.0	16.3	13.6	17.6
Actuated g/C Ratio	0.04	0.22		0.32	0.50	0.66	0.16	0.13	0.32	0.17	0.14	0.18
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	58	902		893	1456	876	239	321	361	229	396	243
v/s Ratio Prot	0.04	c0.16		0.30	c0.57	0.01	c0.18	0.03	0.05	0.03	c0.09	0.00
v/s Ratio Perm						0.03						0.01
v/c Ratio	0.91	0.74		0.97	1.15	0.06	1.10	0.24	0.17	0.18	0.66	0.10
Uniform Delay, d1	47.0	35.5		33.2	24.7	5.8	41.3	38.2	24.4	35.3	40.2	33.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	86.9	5.4		22.1	77.2	0.0	87.7	0.4	0.2	0.4	4.2	0.2
Delay (s)	133.9	40.9		55.3	101.9	5.8	129.0	38.6	24.6	35.7	44.4	33.9
Level of Service	F	D		E	F	A	F	D	C	D	D	C
Approach Delay (s)		47.6			83.8			69.0			42.0	
Approach LOS		D			F			E			D	

Intersection Summary			
HCM Average Control Delay	72.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	98.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	93.7%	ICU Level of Service	F
Analysis Period (min)	15		

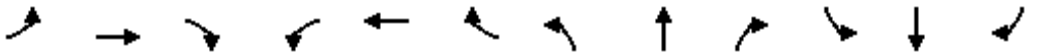
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2808	4200	1333	2891	4282	1347	2891	3010	1360	2920	2980	1333
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2808	4200	1333	2891	4282	1347	2891	3010	1360	2920	2980	1333
Volume (vph)	330	840	275	65	1580	145	230	510	80	135	595	435
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	347	884	289	68	1663	153	242	537	84	142	626	458
RTOR Reduction (vph)	0	0	43	0	0	26	0	0	57	0	0	5
Lane Group Flow (vph)	347	884	246	68	1663	127	242	537	27	142	626	453
Heavy Vehicles (%)	5%	4%	2%	2%	2%	1%	2%	1%	0%	1%	2%	2%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	13.0	43.0	51.0	4.8	34.8	40.8	8.0	21.0	25.8	6.0	19.0	32.0
Effective Green, g (s)	13.0	43.0	51.0	4.8	34.8	40.8	8.0	21.0	25.8	6.0	19.0	32.0
Actuated g/C Ratio	0.14	0.47	0.56	0.05	0.38	0.45	0.09	0.23	0.28	0.07	0.21	0.35
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	402	1989	807	153	1641	665	255	696	386	193	624	470
v/s Ratio Prot	0.12	0.21	0.03	0.02	c0.39	0.01	0.08	c0.18	0.00	0.05	c0.21	c0.14
v/s Ratio Perm			0.16			0.08			0.02			0.20
v/c Ratio	0.86	0.44	0.31	0.44	1.01	0.19	0.95	0.77	0.07	0.74	1.00	0.96
Uniform Delay, d1	38.0	15.9	10.5	41.7	28.0	15.1	41.2	32.7	23.7	41.6	35.9	28.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	17.1	0.7	0.2	2.1	25.6	0.1	42.0	5.3	0.1	13.6	36.8	32.0
Delay (s)	55.2	16.7	10.7	43.8	53.6	15.2	83.2	38.0	23.8	55.2	72.7	60.9
Level of Service	E	B	B	D	D	B	F	D	C	E	E	E
Approach Delay (s)		24.3			50.1			49.3			66.3	
Approach LOS		C			D			D			E	

Intersection Summary			
HCM Average Control Delay	46.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	90.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		

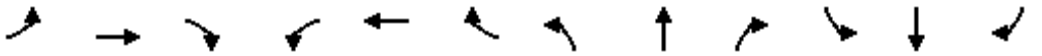
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1490	4200	1333	1505	4199		2920	3010	1360	2920	3010	1347
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1490	4200	1333	1505	4199		2920	3010	1360	2920	3010	1347
Volume (vph)	145	815	175	90	1385	105	225	405	65	205	745	215
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	153	858	184	95	1458	111	237	426	68	216	784	226
RTOR Reduction (vph)	0	0	76	0	8	0	0	0	46	0	0	6
Lane Group Flow (vph)	153	858	108	95	1561	0	237	426	22	216	784	220
Heavy Vehicles (%)	2%	4%	2%	1%	3%	2%	1%	1%	0%	1%	1%	1%
Turn Type	Prot		pm+ov	Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases			2						8			4
Actuated Green, G (s)	10.9	40.1	48.1	10.4	39.6		8.0	22.3	32.7	11.7	26.0	36.9
Effective Green, g (s)	10.9	40.1	48.1	10.4	39.6		8.0	22.3	32.7	11.7	26.0	36.9
Actuated g/C Ratio	0.11	0.40	0.48	0.10	0.39		0.08	0.22	0.33	0.12	0.26	0.37
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	162	1676	691	156	1655		232	668	443	340	779	548
v/s Ratio Prot	c0.10	0.20	0.01	0.06	c0.37		c0.08	0.14	0.01	0.07	c0.26	0.04
v/s Ratio Perm			0.07						0.01			0.12
v/c Ratio	0.94	0.51	0.16	0.61	0.94		1.02	0.64	0.05	0.64	1.01	0.40
Uniform Delay, d1	44.5	22.8	14.8	43.1	29.4		46.2	35.4	23.2	42.4	37.2	23.6
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	54.0	1.1	0.1	6.6	11.3		64.8	2.0	0.0	3.9	33.8	0.5
Delay (s)	98.5	23.9	14.9	49.7	40.6		111.0	37.4	23.3	46.2	71.1	24.1
Level of Service	F	C	B	D	D		F	D	C	D	E	C
Approach Delay (s)		32.1			41.2			60.0			58.0	
Approach LOS		C			D			E			E	

Intersection Summary			
HCM Average Control Delay	46.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	100.5	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.5%	ICU Level of Service	E
Analysis Period (min)	15		

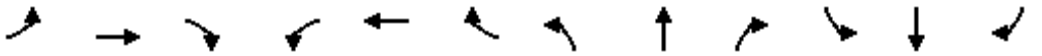
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91		1.00	0.91	1.00	0.97	0.91	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)	2835	4241	1308	2891	4219		1476	4282	1347	2949	4282	1333
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2835	4241	1308	2891	4219		1476	4282	1347	2949	4282	1333
Volume (vph)	195	760	150	385	1330	170	100	680	245	445	1170	235
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	205	800	158	405	1400	179	105	716	258	468	1232	247
RTOR Reduction (vph)	0	0	12	0	16	0	0	0	17	0	0	27
Lane Group Flow (vph)	205	800	146	405	1563	0	105	716	241	468	1232	220
Heavy Vehicles (%)	4%	3%	4%	2%	2%	0%	3%	2%	1%	0%	2%	2%
Turn Type	Prot		pm+ov	Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases			2						8			4
Actuated Green, G (s)	8.0	30.5	38.5	16.5	39.0		8.0	21.0	37.5	16.0	29.0	37.0
Effective Green, g (s)	8.0	30.5	38.5	16.5	39.0		8.0	21.0	37.5	16.0	29.0	37.0
Actuated g/C Ratio	0.08	0.30	0.38	0.16	0.39		0.08	0.21	0.38	0.16	0.29	0.37
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	227	1294	556	477	1645		118	899	559	472	1242	493
v/s Ratio Prot	c0.07	0.19	0.02	0.14	c0.37		0.07	0.17	0.07	c0.16	c0.29	0.04
v/s Ratio Perm			0.09						0.11			0.13
v/c Ratio	0.90	0.62	0.26	0.85	0.95		0.89	0.80	0.43	0.99	0.99	0.45
Uniform Delay, d1	45.6	29.8	21.0	40.5	29.6		45.6	37.5	23.3	41.9	35.4	23.8
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	34.6	2.2	0.3	13.2	12.4		49.7	4.9	0.5	39.1	23.5	0.6
Delay (s)	80.2	32.0	21.3	53.8	41.9		95.3	42.4	23.8	81.0	58.9	24.4
Level of Service	F	C	C	D	D		F	D	C	F	E	C
Approach Delay (s)		39.0			44.4			43.1			59.8	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM Average Control Delay	48.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

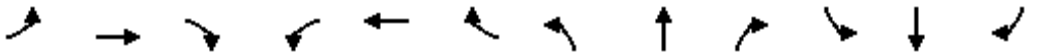
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2920	4204		2920	2980	1360	2920	4241	1347	2920	2980	1333
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2920	4204		2920	2980	1360	2920	4241	1347	2920	2980	1333
Volume (vph)	145	1165	175	145	990	230	210	325	100	170	860	175
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	153	1226	184	153	1042	242	221	342	105	179	905	184
RTOR Reduction (vph)	0	20	0	0	0	74	0	0	25	0	0	16
Lane Group Flow (vph)	153	1390	0	153	1042	168	221	342	80	179	905	168
Heavy Vehicles (%)	1%	2%	1%	1%	2%	0%	1%	3%	1%	1%	2%	2%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6	7	3	8	1	7	4	5
Permitted Phases						6			8			4
Actuated Green, G (s)	6.8	38.0		6.0	37.2	47.4	8.0	29.6	35.6	10.2	31.8	38.6
Effective Green, g (s)	6.8	38.0		6.0	37.2	47.4	8.0	29.6	35.6	10.2	31.8	38.6
Actuated g/C Ratio	0.07	0.38		0.06	0.37	0.47	0.08	0.30	0.36	0.10	0.32	0.39
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	199	1601		176	1111	646	234	1258	480	298	950	569
v/s Ratio Prot	c0.05	0.33		0.05	c0.35	0.03	c0.08	0.08	0.01	0.06	c0.30	0.02
v/s Ratio Perm						0.10			0.05			0.11
v/c Ratio	0.77	0.87		0.87	0.94	0.26	0.94	0.27	0.17	0.60	0.95	0.30
Uniform Delay, d1	45.7	28.6		46.5	30.2	15.7	45.7	26.9	22.0	42.9	33.3	21.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.2	6.7		33.6	14.4	0.2	43.3	0.1	0.2	3.4	18.7	0.3
Delay (s)	62.0	35.2		80.1	44.5	15.9	89.0	27.0	22.1	46.2	51.9	21.5
Level of Service	E	D		F	D	B	F	C	C	D	D	C
Approach Delay (s)		37.9			43.5			46.7			46.7	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	43.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	99.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.1%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1462	2923	1320	2920	2980	1333	2863	2980	1347	1462	2895	1347
Flt Permitted	0.21	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	317	2923	1320	2920	2980	1333	2863	2980	1347	1462	2895	1347
Volume (vph)	70	700	80	435	960	145	230	565	235	125	785	150
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	737	84	458	1011	153	242	595	247	132	826	158
RTOR Reduction (vph)	0	0	17	0	0	44	0	0	56	0	0	24
Lane Group Flow (vph)	74	737	67	458	1011	109	242	595	191	132	826	134
Heavy Vehicles (%)	4%	4%	3%	1%	2%	2%	3%	2%	1%	4%	5%	1%
Turn Type	pm+pt		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	5
Permitted Phases	2		2			6			8			4
Actuated Green, G (s)	32.0	28.0	37.0	17.0	41.0	56.1	9.0	23.6	40.6	15.1	29.7	33.7
Effective Green, g (s)	32.0	28.0	37.0	17.0	41.0	56.1	9.0	23.6	40.6	15.1	29.7	33.7
Actuated g/C Ratio	0.32	0.28	0.37	0.17	0.41	0.56	0.09	0.24	0.41	0.15	0.30	0.34
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	148	821	490	498	1225	750	258	705	549	221	862	455
v/s Ratio Prot	0.02	0.25	0.01	c0.16	c0.34	0.02	c0.08	0.20	0.06	0.09	c0.29	0.01
v/s Ratio Perm	0.14		0.04			0.06			0.08			0.09
v/c Ratio	0.50	0.90	0.14	0.92	0.83	0.15	0.94	0.84	0.35	0.60	0.96	0.29
Uniform Delay, d1	24.6	34.5	20.8	40.7	26.2	10.4	45.1	36.3	20.4	39.5	34.4	24.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.6	14.6	0.1	22.0	4.7	0.1	39.1	9.1	0.4	4.3	20.9	0.4
Delay (s)	27.2	49.1	20.9	62.7	30.8	10.5	84.1	45.4	20.8	43.8	55.3	24.6
Level of Service	C	D	C	E	C	B	F	D	C	D	E	C
Approach Delay (s)		44.6			37.9			48.4			49.6	
Approach LOS		D			D			D			D	

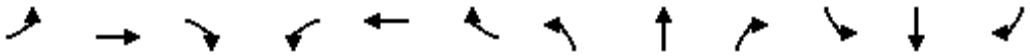
Intersection Summary			
HCM Average Control Delay	44.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	99.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	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	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1476	2873		1476	2951	1308	1421	2800		1407	2741	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1476	2873		1476	2951	1308	1421	2800		1407	2741	
Volume (vph)	80	470	65	40	800	70	75	380	15	50	530	105
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	495	68	42	842	74	79	400	16	53	558	111
RTOR Reduction (vph)	0	11	0	0	0	41	0	3	0	0	16	0
Lane Group Flow (vph)	84	552	0	42	842	33	79	413	0	53	653	0
Heavy Vehicles (%)	3%	4%	3%	3%	3%	4%	7%	8%	7%	8%	8%	9%
Turn Type	Prot			Prot		pm+ov	Prot			Prot		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.2	41.0		4.2	38.0	44.3	7.2	32.5		6.3	31.6	
Effective Green, g (s)	7.2	41.0		4.2	38.0	44.3	7.2	32.5		6.3	31.6	
Actuated g/C Ratio	0.07	0.41		0.04	0.38	0.44	0.07	0.32		0.06	0.32	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	106	1178		62	1121	632	102	910		89	866	
v/s Ratio Prot	c0.06	c0.19		0.03	c0.29	0.00	c0.06	0.15		0.04	c0.24	
v/s Ratio Perm						0.02						
v/c Ratio	0.79	0.47		0.68	0.75	0.05	0.77	0.45		0.60	0.75	
Uniform Delay, d1	45.7	21.5		47.2	26.9	15.9	45.6	26.7		45.6	30.7	
Progression Factor	1.00	1.00		1.34	0.49	0.01	1.00	1.00		1.00	1.00	
Incremental Delay, d2	32.1	1.3		21.8	3.9	0.0	29.9	1.6		10.3	6.1	
Delay (s)	77.8	22.9		85.4	17.0	0.2	75.5	28.4		55.9	36.8	
Level of Service	E	C		F	B	A	E	C		E	D	
Approach Delay (s)		30.0			18.7			35.9			38.2	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM Average Control Delay	29.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

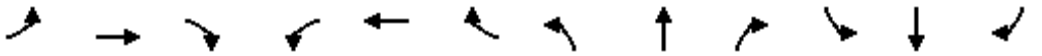
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	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)	1520	2923	1360	1462	2980	1333	1490	2739	1295	1448	2934	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1520	2923	1360	1462	2980	1333	1490	2739	1295	1448	2934	
Volume (vph)	20	565	25	405	875	430	45	225	325	330	600	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	595	26	426	921	453	47	237	342	347	632	32
RTOR Reduction (vph)	0	0	20	0	0	81	0	0	42	0	3	0
Lane Group Flow (vph)	21	595	6	426	921	372	47	237	300	347	661	0
Heavy Vehicles (%)	0%	4%	0%	4%	2%	2%	2%	11%	5%	5%	3%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	1.6	18.2	22.2	27.0	43.6	65.6	4.0	16.8	43.8	22.0	34.8	
Effective Green, g (s)	1.6	18.2	22.2	27.0	43.6	65.6	4.0	16.8	43.8	22.0	34.8	
Actuated g/C Ratio	0.02	0.18	0.22	0.27	0.44	0.66	0.04	0.17	0.44	0.22	0.35	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	24	532	356	395	1299	928	60	460	619	319	1021	
v/s Ratio Prot	0.01	c0.20	0.00	c0.29	0.31	0.09	0.03	0.09	0.13	c0.24	c0.23	
v/s Ratio Perm			0.00			0.19			0.10			
v/c Ratio	0.88	1.12	0.02	1.08	0.71	0.40	0.78	0.52	0.49	1.09	0.65	
Uniform Delay, d1	49.1	40.9	30.4	36.5	23.0	8.0	47.6	37.9	20.1	39.0	27.4	
Progression Factor	0.97	0.81	0.37	0.78	0.34	1.10	1.00	1.00	1.00	0.64	0.59	
Incremental Delay, d2	125.5	75.3	0.0	40.3	0.3	0.0	47.5	4.1	0.6	72.3	2.7	
Delay (s)	173.1	108.6	11.2	68.8	8.2	8.8	95.1	42.0	20.7	97.2	19.0	
Level of Service	F	F	B	E	A	A	F	D	C	F	B	
Approach Delay (s)		106.8			22.7			34.3			45.9	
Approach LOS		F			C			C			D	

Intersection Summary			
HCM Average Control Delay	43.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.6%	ICU Level of Service	E
Analysis Period (min)	15		

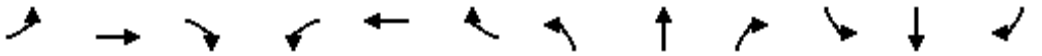
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1299	2951	1248	1490	2951	1320	1505	2980	1360	1490	2923	1333
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1299	2951	1248	1490	2951	1320	1505	2980	1360	1490	2923	1333
Volume (vph)	175	1115	115	255	1500	290	145	460	55	145	515	115
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	184	1174	121	268	1579	305	153	484	58	153	542	121
RTOR Reduction (vph)	0	0	45	0	0	35	0	0	24	0	0	20
Lane Group Flow (vph)	184	1174	76	268	1579	271	153	484	34	153	542	101
Heavy Vehicles (%)	17%	3%	9%	2%	3%	3%	1%	2%	0%	2%	4%	2%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.0	39.0	48.0	18.0	45.0	54.0	9.0	18.0	36.0	9.0	18.0	30.0
Effective Green, g (s)	12.0	39.0	48.0	18.0	45.0	54.0	9.0	18.0	36.0	9.0	18.0	30.0
Actuated g/C Ratio	0.12	0.39	0.48	0.18	0.45	0.54	0.09	0.18	0.36	0.09	0.18	0.30
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	156	1151	599	268	1328	766	135	536	490	134	526	453
v/s Ratio Prot	0.14	c0.40	0.01	0.18	c0.53	0.03	0.10	0.16	0.01	c0.10	c0.19	0.03
v/s Ratio Perm			0.05			0.17			0.01			0.05
v/c Ratio	1.18	1.02	0.13	1.00	1.19	0.35	1.13	0.90	0.07	1.14	1.03	0.22
Uniform Delay, d1	44.0	30.5	14.4	41.0	27.5	13.1	45.5	40.1	21.0	45.5	41.0	26.3
Progression Factor	0.84	0.78	0.83	0.71	0.81	0.27	1.00	1.00	1.00	0.88	0.65	0.44
Incremental Delay, d2	111.5	25.1	0.1	43.3	90.1	0.2	117.7	21.1	0.1	112.9	43.2	0.2
Delay (s)	148.5	48.8	12.0	72.6	112.3	3.7	163.2	61.2	21.1	153.2	69.7	11.8
Level of Service	F	D	B	E	F	A	F	E	C	F	E	B
Approach Delay (s)		58.2			92.0			80.3			76.8	
Approach LOS		E			F			F			E	

Intersection Summary			
HCM Average Control Delay	78.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	100.5%	ICU Level of Service	G
Analysis Period (min)	15		

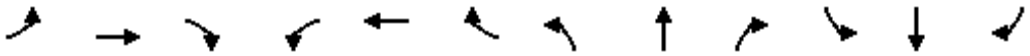
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1505	2951	1347	1490	2923	1259	1490	3010	1347	1369	3010	1347
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1505	2951	1347	1490	2923	1259	1490	3010	1347	1369	3010	1347
Volume (vph)	110	1055	120	100	1155	260	220	370	270	380	595	85
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	116	1111	126	105	1216	274	232	389	284	400	626	89
RTOR Reduction (vph)	0	0	32	0	0	23	0	0	44	0	0	39
Lane Group Flow (vph)	116	1111	94	105	1216	251	232	389	240	400	626	50
Heavy Vehicles (%)	1%	3%	1%	2%	4%	8%	2%	1%	1%	11%	1%	1%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	6.0	35.0	51.0	7.0	36.0	61.0	16.0	17.0	24.0	25.0	26.0	32.0
Effective Green, g (s)	6.0	35.0	51.0	7.0	36.0	61.0	16.0	17.0	24.0	25.0	26.0	32.0
Actuated g/C Ratio	0.06	0.35	0.51	0.07	0.36	0.61	0.16	0.17	0.24	0.25	0.26	0.32
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	90	1033	741	104	1052	818	238	512	377	342	783	485
v/s Ratio Prot	c0.08	0.38	0.02	0.07	c0.42	0.08	0.16	0.13	0.04	c0.29	c0.21	0.01
v/s Ratio Perm			0.05			0.12			0.13			0.03
v/c Ratio	1.29	1.08	0.13	1.01	1.16	0.31	0.97	0.76	0.64	1.17	0.80	0.10
Uniform Delay, d1	47.0	32.5	12.8	46.5	32.0	9.4	41.8	39.6	34.1	37.5	34.6	23.9
Progression Factor	0.73	0.31	0.15	0.87	0.53	0.05	1.00	1.00	1.00	0.84	0.84	0.62
Incremental Delay, d2	148.2	39.0	0.0	28.9	71.3	0.0	50.8	10.2	3.5	102.0	8.0	0.1
Delay (s)	182.7	49.0	2.0	69.4	88.1	0.5	92.6	49.7	37.6	133.7	37.1	14.9
Level of Service	F	D	A	E	F	A	F	D	D	F	D	B
Approach Delay (s)		56.1			71.8			56.9			70.0	
Approach LOS		E			E			E			E	

Intersection Summary			
HCM Average Control Delay	64.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	95.6%	ICU Level of Service	F
Analysis Period (min)	15		

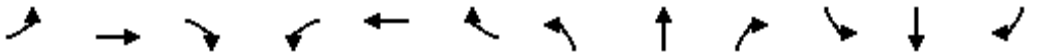
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1490	2980	1320	1505	2921		2835	2951	1360	2863	2842	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1490	2980	1320	1505	2921		2835	2951	1360	2863	2842	
Volume (vph)	150	1075	105	490	1050	150	320	485	210	375	430	115
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	1132	111	516	1105	158	337	511	221	395	453	121
RTOR Reduction (vph)	0	0	35	0	11	0	0	0	4	0	24	0
Lane Group Flow (vph)	158	1132	76	516	1252	0	337	511	217	395	550	0
Heavy Vehicles (%)	2%	2%	3%	1%	2%	3%	4%	3%	0%	3%	4%	2%
Turn Type	Prot		pm+ov	Prot			Prot		pm+ov	Prot		
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	11.2	31.0	40.0	25.0	44.8		9.0	17.0	42.0	11.0	19.0	
Effective Green, g (s)	11.2	31.0	40.0	25.0	44.8		9.0	17.0	42.0	11.0	19.0	
Actuated g/C Ratio	0.11	0.31	0.40	0.25	0.45		0.09	0.17	0.42	0.11	0.19	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	167	924	581	376	1309		255	502	626	315	540	
v/s Ratio Prot	0.11	c0.38	0.01	c0.34	0.43		0.12	0.17	0.09	c0.14	c0.19	
v/s Ratio Perm			0.05						0.07			
v/c Ratio	0.95	1.23	0.13	1.37	0.96		1.32	1.02	0.35	1.25	1.02	
Uniform Delay, d1	44.1	34.5	19.0	37.5	26.7		45.5	41.5	19.7	44.5	40.5	
Progression Factor	1.08	0.66	0.28	0.70	0.49		1.00	1.00	1.00	0.85	0.62	
Incremental Delay, d2	10.7	102.2	0.0	169.1	2.2		169.5	44.8	0.3	127.0	32.0	
Delay (s)	58.4	125.0	5.2	195.2	15.3		215.0	86.3	20.0	164.7	56.9	
Level of Service	E	F	A	F	B		F	F	C	F	E	
Approach Delay (s)		108.0			67.5			113.1			100.8	
Approach LOS		F			E			F			F	

Intersection Summary			
HCM Average Control Delay	93.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	110.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1505	2980	1308	2835	2980	1320	1462	2980	1333	1476	2951	1347
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1505	2980	1308	2835	2980	1320	1462	2980	1333	1476	2951	1347
Volume (vph)	140	1230	185	105	1285	180	250	345	45	70	350	140
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	1295	195	111	1353	189	263	363	47	74	368	147
RTOR Reduction (vph)	0	0	19	0	0	64	0	0	34	0	0	39
Lane Group Flow (vph)	147	1295	176	111	1353	125	263	363	13	74	368	108
Heavy Vehicles (%)	1%	2%	4%	4%	2%	3%	4%	2%	2%	3%	3%	1%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	9.0	46.0	63.0	4.0	41.0	52.0	17.0	23.0	27.0	11.0	17.0	26.0
Effective Green, g (s)	9.0	46.0	63.0	4.0	41.0	52.0	17.0	23.0	27.0	11.0	17.0	26.0
Actuated g/C Ratio	0.09	0.46	0.63	0.04	0.41	0.52	0.17	0.23	0.27	0.11	0.17	0.26
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	135	1371	824	113	1222	686	249	685	413	162	502	404
v/s Ratio Prot	0.10	c0.43	0.04	0.04	c0.45	0.02	c0.18	0.12	0.00	0.05	c0.12	0.02
v/s Ratio Perm			0.10			0.07			0.01			0.06
v/c Ratio	1.09	0.94	0.21	0.98	1.11	0.18	1.06	0.53	0.03	0.46	0.73	0.27
Uniform Delay, d1	45.5	25.8	7.9	48.0	29.5	12.7	41.5	33.8	26.9	41.7	39.3	29.4
Progression Factor	1.24	0.26	0.06	1.00	1.00	1.00	1.00	1.00	1.00	0.63	0.62	0.54
Incremental Delay, d2	51.4	1.7	0.0	78.7	60.4	0.1	72.6	2.9	0.0	1.6	7.2	0.3
Delay (s)	107.8	8.3	0.5	126.6	89.9	12.9	114.1	36.7	26.9	28.0	31.8	16.1
Level of Service	F	A	A	F	F	B	F	D	C	C	C	B
Approach Delay (s)		16.3			83.6			66.3			27.4	
Approach LOS		B			F			E			C	

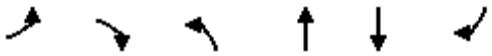
Intersection Summary			
HCM Average Control Delay	49.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	92.7%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	0.98			0.98			0.98	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.98	
Satd. Flow (prot)	1520	2905		1476	2903			1525			1481	
Flt Permitted	0.95	1.00		0.95	1.00			0.93			0.85	
Satd. Flow (perm)	1520	2905		1476	2903			1425			1277	
Volume (vph)	5	785	35	40	1135	130	20	75	15	95	120	45
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	826	37	42	1195	137	21	79	16	100	126	47
RTOR Reduction (vph)	0	3	0	0	8	0	0	6	0	0	8	0
Lane Group Flow (vph)	5	860	0	42	1324	0	0	110	0	0	265	0
Heavy Vehicles (%)	0%	4%	3%	3%	3%	4%	0%	3%	0%	3%	4%	4%
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	0.8	54.8		4.2	58.2			29.0			29.0	
Effective Green, g (s)	0.8	54.8		4.2	58.2			29.0			29.0	
Actuated g/C Ratio	0.01	0.55		0.04	0.58			0.29			0.29	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	12	1592		62	1690			413			370	
v/s Ratio Prot	0.00	0.30		c0.03	c0.46							
v/s Ratio Perm								0.08			c0.21	
v/c Ratio	0.42	0.54		0.68	0.78			0.27			0.72	
Uniform Delay, d1	49.4	14.5		47.2	16.1			27.3			31.8	
Progression Factor	1.00	1.00		1.30	0.45			1.00			1.00	
Incremental Delay, d2	21.8	1.3		18.6	2.6			1.6			11.3	
Delay (s)	71.1	15.8		79.9	9.9			28.9			43.1	
Level of Service	E	B		E	A			C			D	
Approach Delay (s)		16.1			12.1			28.9			43.1	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM Average Control Delay	17.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

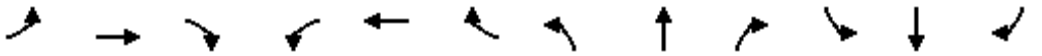
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1476	1320	1394	2789	2757	
Flt Permitted	0.95	1.00	0.36	1.00	1.00	
Satd. Flow (perm)	1476	1320	522	2789	2757	
Volume (vph)	95	140	90	535	670	55
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	147	95	563	705	58
RTOR Reduction (vph)	0	126	0	0	6	0
Lane Group Flow (vph)	100	21	95	563	757	0
Heavy Vehicles (%)	3%	3%	9%	9%	9%	9%
Turn Type		custom	Perm			
Protected Phases				2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	8.6	8.6	43.4	43.4	43.4	
Effective Green, g (s)	8.6	8.6	43.4	43.4	43.4	
Actuated g/C Ratio	0.14	0.14	0.72	0.72	0.72	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	212	189	378	2017	1994	
v/s Ratio Prot				0.20	c0.27	
v/s Ratio Perm	c0.07	0.02	0.18			
v/c Ratio	0.47	0.11	0.25	0.28	0.38	
Uniform Delay, d1	23.6	22.4	2.8	2.9	3.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.7	0.3	1.6	0.3	0.6	
Delay (s)	25.3	22.6	4.4	3.2	3.7	
Level of Service	C	C	A	A	A	
Approach Delay (s)	23.7			3.4	3.7	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	6.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

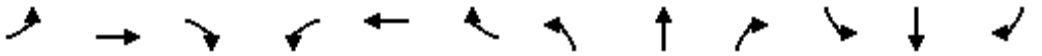
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1505	2980	1333	2920	2980	1333	1505	2739	1308	1476	2868	1347
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1505	2980	1333	2920	2980	1333	1505	2739	1308	1476	2868	1347
Volume (vph)	70	725	130	190	1020	120	150	375	25	145	485	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	763	137	200	1074	126	158	395	26	153	511	105
RTOR Reduction (vph)	0	0	35	0	0	58	0	0	17	0	0	64
Lane Group Flow (vph)	74	763	102	200	1074	68	158	395	9	153	511	41
Heavy Vehicles (%)	1%	2%	2%	1%	2%	2%	1%	11%	4%	3%	6%	1%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	6.9	36.1	49.3	10.9	40.1	54.2	13.2	22.9	33.8	14.1	23.8	30.7
Effective Green, g (s)	6.9	36.1	49.3	10.9	40.1	54.2	13.2	22.9	33.8	14.1	23.8	30.7
Actuated g/C Ratio	0.07	0.36	0.49	0.11	0.40	0.54	0.13	0.23	0.34	0.14	0.24	0.31
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	104	1076	710	318	1195	722	199	627	442	208	683	467
v/s Ratio Prot	0.05	0.26	0.02	c0.07	c0.36	0.01	c0.10	0.14	0.00	0.10	c0.18	0.01
v/s Ratio Perm			0.06			0.04			0.00			0.02
v/c Ratio	0.71	0.71	0.14	0.63	0.90	0.09	0.79	0.63	0.02	0.74	0.75	0.09
Uniform Delay, d1	45.6	27.4	13.8	42.6	28.0	11.1	42.1	34.7	22.1	41.2	35.3	24.7
Progression Factor	1.00	1.00	1.00	1.33	0.24	0.40	0.78	0.68	2.11	1.00	1.00	1.00
Incremental Delay, d2	20.4	2.2	0.1	1.9	4.7	0.0	17.5	4.3	0.0	12.7	7.4	0.1
Delay (s)	66.0	29.6	13.9	58.7	11.6	4.4	50.5	27.9	46.6	53.8	42.7	24.8
Level of Service	E	C	B	E	B	A	D	C	D	D	D	C
Approach Delay (s)		30.2			17.7			34.9			42.4	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		

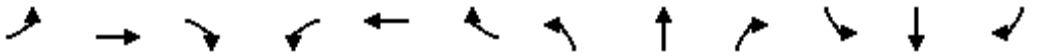
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1505	2951	1271	1505	2980	1333	2920	2890		2920	2914	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1505	2951	1271	1505	2980	1333	2920	2890		2920	2914	
Volume (vph)	125	560	130	80	995	130	190	490	100	145	500	95
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	132	589	137	84	1047	137	200	516	105	153	526	100
RTOR Reduction (vph)	0	0	69	0	0	72	0	17	0	0	16	0
Lane Group Flow (vph)	132	589	68	84	1047	65	200	604	0	153	610	0
Heavy Vehicles (%)	1%	3%	7%	1%	2%	2%	1%	2%	5%	1%	2%	1%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	11.7	41.4	49.5	8.7	38.4	45.6	8.1	26.7		7.2	25.8	
Effective Green, g (s)	11.7	41.4	49.5	8.7	38.4	45.6	8.1	26.7		7.2	25.8	
Actuated g/C Ratio	0.12	0.41	0.50	0.09	0.38	0.46	0.08	0.27		0.07	0.26	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	176	1222	629	131	1144	608	237	772		210	752	
v/s Ratio Prot	c0.09	0.20	0.01	0.06	c0.35	0.01	0.07	c0.21		0.05	c0.21	
v/s Ratio Perm			0.04			0.04						
v/c Ratio	0.75	0.48	0.11	0.64	0.92	0.11	0.84	0.78		0.73	0.81	
Uniform Delay, d1	42.7	21.5	13.5	44.1	29.3	15.6	45.3	34.0		45.4	34.8	
Progression Factor	1.06	1.01	3.67	0.88	0.47	1.16	0.66	0.53		0.91	1.32	
Incremental Delay, d2	12.0	0.2	0.1	1.0	1.3	0.0	14.7	4.7		6.2	4.8	
Delay (s)	57.2	21.9	49.5	39.7	15.1	18.1	44.5	22.6		47.3	50.7	
Level of Service	E	C	D	D	B	B	D	C		D	D	
Approach Delay (s)		31.8			17.0			28.0			50.1	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM Average Control Delay	29.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

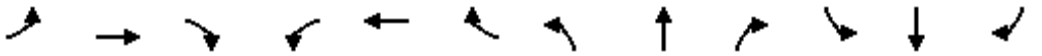
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2891	2841	1088	2920	2951	1347	2681	2980	1347	2920	3010	1333
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2891	2841	1088	2920	2951	1347	2681	2980	1347	2920	3010	1333
Volume (vph)	105	1190	165	100	1640	320	150	855	110	180	425	50
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	1253	174	105	1726	337	158	900	116	189	447	53
RTOR Reduction (vph)	0	0	41	0	0	7	0	0	18	0	0	10
Lane Group Flow (vph)	111	1253	133	105	1726	330	158	900	98	189	447	43
Heavy Vehicles (%)	2%	7%	25%	1%	3%	1%	10%	2%	1%	1%	1%	2%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	4.0	47.0	55.0	4.0	47.0	52.0	8.0	28.0	32.0	5.0	25.0	29.0
Effective Green, g (s)	4.0	47.0	55.0	4.0	47.0	52.0	8.0	28.0	32.0	5.0	25.0	29.0
Actuated g/C Ratio	0.04	0.47	0.55	0.04	0.47	0.52	0.08	0.28	0.32	0.05	0.25	0.29
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	116	1335	598	117	1387	754	214	834	431	146	753	440
v/s Ratio Prot	0.04	c0.44	0.02	0.04	c0.58	0.02	c0.06	c0.30	0.01	c0.06	0.15	0.00
v/s Ratio Perm			0.10			0.22			0.06			0.03
v/c Ratio	0.96	0.94	0.22	0.90	1.24	0.44	0.74	1.08	0.23	1.29	0.59	0.10
Uniform Delay, d1	47.9	25.1	11.5	47.8	26.5	14.9	45.0	36.0	24.9	47.5	33.0	25.9
Progression Factor	0.89	0.82	0.42	1.21	0.68	0.63	0.81	0.64	0.56	0.93	0.78	0.55
Incremental Delay, d2	68.0	12.3	0.2	48.0	115.5	0.4	11.4	53.4	0.2	169.7	3.0	0.1
Delay (s)	110.5	32.8	5.1	105.7	133.6	9.8	48.0	76.3	14.1	213.7	28.8	14.3
Level of Service	F	C	A	F	F	A	D	E	B	F	C	B
Approach Delay (s)		35.3			113.0			66.4			78.4	
Approach LOS		D			F			E			E	

Intersection Summary			
HCM Average Control Delay	77.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		

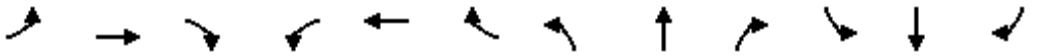
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.95		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2891	3978		1490	2951	1320	2782	2951	1308	2891	2951	1320
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2891	3978		1490	2951	1320	2782	2951	1308	2891	2951	1320
Volume (vph)	290	725	360	125	660	140	285	780	185	365	735	330
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	305	763	379	132	695	147	300	821	195	384	774	347
RTOR Reduction (vph)	0	90	0	0	0	19	0	0	18	0	0	20
Lane Group Flow (vph)	305	1052	0	132	695	128	300	821	177	384	774	327
Heavy Vehicles (%)	2%	5%	3%	2%	3%	3%	6%	3%	4%	2%	3%	3%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	12.5	27.8		10.2	25.5	40.4	12.9	31.1	41.3	14.9	33.1	45.6
Effective Green, g (s)	12.5	27.8		10.2	25.5	40.4	12.9	31.1	41.3	14.9	33.1	45.6
Actuated g/C Ratio	0.12	0.28		0.10	0.26	0.40	0.13	0.31	0.41	0.15	0.33	0.46
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	361	1106		152	753	586	359	918	593	431	977	655
v/s Ratio Prot	c0.11	c0.26		0.09	0.24	0.03	0.11	c0.28	0.03	c0.13	0.26	0.06
v/s Ratio Perm						0.06			0.11			0.19
v/c Ratio	0.84	0.95		0.87	0.92	0.22	0.84	0.89	0.30	0.89	0.79	0.50
Uniform Delay, d1	42.8	35.4		44.2	36.3	19.5	42.5	32.9	19.7	41.8	30.3	19.2
Progression Factor	0.84	0.45		0.79	0.36	0.10	0.86	0.50	0.39	0.91	0.83	0.76
Incremental Delay, d2	6.6	7.7		26.5	11.8	0.1	12.4	10.6	0.2	19.9	6.5	0.6
Delay (s)	42.7	23.8		61.6	24.8	2.0	49.1	26.9	7.9	58.1	31.8	15.2
Level of Service	D	C		E	C	A	D	C	A	E	C	B
Approach Delay (s)		27.8			26.3			29.1			34.7	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	29.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		

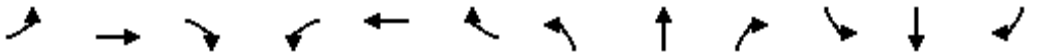
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1421	2951	1333	1505	2923	1347	1476	2980	1333	1505	2951	1347
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1421	2951	1333	1505	2923	1347	1476	2980	1333	1505	2951	1347
Volume (vph)	180	750	330	125	610	75	165	525	220	75	505	160
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	189	789	347	132	642	79	174	553	232	79	532	168
RTOR Reduction (vph)	0	0	66	0	0	53	0	0	54	0	0	62
Lane Group Flow (vph)	189	789	281	132	642	26	174	553	178	79	532	106
Heavy Vehicles (%)	7%	3%	2%	1%	4%	1%	3%	2%	2%	1%	3%	1%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	17.8	31.0	46.7	11.4	24.6	32.3	15.7	33.9	45.3	7.7	25.9	43.7
Effective Green, g (s)	17.8	31.0	46.7	11.4	24.6	32.3	15.7	33.9	45.3	7.7	25.9	43.7
Actuated g/C Ratio	0.18	0.31	0.47	0.11	0.25	0.32	0.16	0.34	0.45	0.08	0.26	0.44
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	253	915	676	172	719	489	232	1010	657	116	764	643
v/s Ratio Prot	c0.13	c0.27	0.07	0.09	0.22	0.00	c0.12	0.19	0.03	0.05	c0.18	0.03
v/s Ratio Perm			0.15			0.01			0.10			0.05
v/c Ratio	0.75	0.86	0.42	0.77	0.89	0.05	0.75	0.55	0.27	0.68	0.70	0.16
Uniform Delay, d1	39.0	32.5	17.6	43.0	36.4	23.3	40.3	26.8	17.1	45.0	33.5	17.1
Progression Factor	0.82	0.46	0.06	1.00	1.00	1.00	0.81	1.00	0.92	0.91	0.47	0.40
Incremental Delay, d2	6.0	4.5	0.2	18.3	13.4	0.0	11.9	2.0	0.2	10.3	3.4	0.1
Delay (s)	37.9	19.5	1.2	61.3	49.9	23.4	44.5	28.7	15.9	51.2	19.1	6.9
Level of Service	D	B	A	E	D	C	D	C	B	D	B	A
Approach Delay (s)		17.3			49.2			28.5			19.7	
Approach LOS		B			D			C			B	

Intersection Summary			
HCM Average Control Delay	27.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

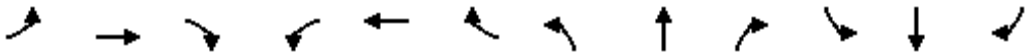
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		1.00	0.91		0.97	0.95		1.00	0.95	1.00
Frt	1.00	0.96		1.00	0.99		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)	2891	4082		1505	4258		2835	2893		1490	2923	1295
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	2891	4082		1505	4258		2835	2893		1490	2923	1295
Volume (vph)	470	350	145	160	1215	55	150	585	50	55	470	605
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	495	368	153	168	1279	58	158	616	53	58	495	637
RTOR Reduction (vph)	0	69	0	0	5	0	0	6	0	0	0	4
Lane Group Flow (vph)	495	452	0	168	1332	0	158	663	0	58	495	633
Heavy Vehicles (%)	2%	2%	3%	1%	2%	0%	4%	4%	2%	2%	4%	5%
Turn Type	Prot			Prot			Prot			Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	27.0	42.5		14.5	30.0		6.0	23.0		4.0	21.0	48.0
Effective Green, g (s)	27.0	42.5		14.5	30.0		6.0	23.0		4.0	21.0	48.0
Actuated g/C Ratio	0.27	0.42		0.14	0.30		0.06	0.23		0.04	0.21	0.48
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	781	1735		218	1277		170	665		60	614	622
v/s Ratio Prot	0.17	0.11		0.11	c0.31		0.06	c0.23		0.04	0.17	c0.27
v/s Ratio Perm												0.21
v/c Ratio	0.63	0.26		0.77	1.04		0.93	1.00		0.97	0.81	1.02
Uniform Delay, d1	32.1	18.6		41.1	35.0		46.8	38.5		47.9	37.6	26.0
Progression Factor	1.00	1.00		1.14	0.69		1.00	1.00		0.75	0.92	1.06
Incremental Delay, d2	1.7	0.1		4.0	25.5		48.3	34.1		100.6	10.4	39.6
Delay (s)	33.8	18.7		50.7	49.6		95.0	72.6		136.8	44.8	67.1
Level of Service	C	B		D	D		F	E		F	D	E
Approach Delay (s)		26.1			49.7			76.9			61.2	
Approach LOS		C			D			E			E	

Intersection Summary			
HCM Average Control Delay	52.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		

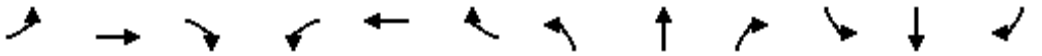
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.91	1.00	1.00	0.91	
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)	1520	2980	1320	2891	2980	1360	1462	4282	1333	1520	4251	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1520	2980	1320	2891	2980	1360	1462	4282	1333	1520	4251	
Volume (vph)	30	340	90	400	1090	40	270	950	495	115	995	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	358	95	421	1147	42	284	1000	521	121	1047	63
RTOR Reduction (vph)	0	0	15	0	0	21	0	0	78	0	7	0
Lane Group Flow (vph)	32	358	80	421	1147	21	284	1000	443	121	1103	0
Heavy Vehicles (%)	0%	2%	3%	2%	2%	0%	4%	2%	2%	0%	2%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	2.4	16.8	34.8	24.8	39.2	50.2	18.0	31.4	56.2	11.0	24.4	
Effective Green, g (s)	2.4	16.8	34.8	24.8	39.2	50.2	18.0	31.4	56.2	11.0	24.4	
Actuated g/C Ratio	0.02	0.17	0.35	0.25	0.39	0.50	0.18	0.31	0.56	0.11	0.24	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	36	501	459	717	1168	683	263	1345	802	167	1037	
v/s Ratio Prot	0.02	c0.12	0.03	0.15	c0.38	0.00	c0.19	0.23	0.14	0.08	c0.26	
v/s Ratio Perm			0.03			0.01			0.20			
v/c Ratio	0.89	0.71	0.17	0.59	0.98	0.03	1.08	0.74	0.55	0.72	1.06	
Uniform Delay, d1	48.7	39.3	22.6	33.1	30.1	12.6	41.0	30.7	13.9	43.0	37.8	
Progression Factor	0.81	0.82	0.67	0.95	0.95	0.74	0.82	0.85	0.56	0.65	0.59	
Incremental Delay, d2	98.9	4.4	0.2	0.9	18.3	0.0	77.6	3.7	0.8	12.0	44.1	
Delay (s)	138.3	36.8	15.3	32.3	46.9	9.4	111.1	29.8	8.6	40.0	66.3	
Level of Service	F	D	B	C	D	A	F	C	A	D	E	
Approach Delay (s)		39.3			42.1			36.5			63.7	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM Average Control Delay	45.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		

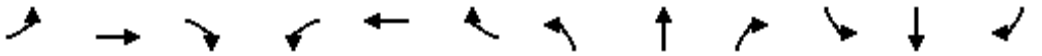
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1490	2935		1520	2949		1462	3010	1347	2891	2980	1333
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1490	2935		1520	2949		1462	3010	1347	2891	2980	1333
Volume (vph)	95	950	115	70	875	70	190	340	295	340	305	185
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	1000	121	74	921	74	200	358	311	358	321	195
RTOR Reduction (vph)	0	9	0	0	6	0	0	0	31	0	0	70
Lane Group Flow (vph)	100	1112	0	74	989	0	200	358	280	358	321	125
Heavy Vehicles (%)	2%	2%	1%	0%	2%	1%	4%	1%	1%	2%	2%	2%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases									2			6
Actuated Green, G (s)	13.7	41.9		9.1	37.3		15.5	18.0	27.1	15.0	17.5	31.2
Effective Green, g (s)	13.7	41.9		9.1	37.3		15.5	18.0	27.1	15.0	17.5	31.2
Actuated g/C Ratio	0.14	0.42		0.09	0.37		0.16	0.18	0.27	0.15	0.18	0.31
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	204	1230		138	1100		227	542	365	434	522	416
v/s Ratio Prot	0.07	c0.38		0.05	c0.34		c0.14	0.12	0.07	c0.12	0.11	0.04
v/s Ratio Perm									0.14			0.05
v/c Ratio	0.49	0.90		0.54	0.90		0.88	0.66	0.77	0.82	0.61	0.30
Uniform Delay, d1	39.9	27.2		43.4	29.6		41.3	38.2	33.6	41.2	38.1	26.1
Progression Factor	0.85	0.76		0.87	0.53		1.10	1.14	1.70	0.62	0.58	1.32
Incremental Delay, d2	1.6	8.3		1.0	2.7		14.8	2.5	3.9	10.1	4.4	0.3
Delay (s)	35.3	29.0		38.5	18.5		60.2	45.9	61.0	35.4	26.6	34.7
Level of Service	D	C		D	B		E	D	E	D	C	C
Approach Delay (s)		29.5			19.8			54.6			32.0	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	32.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.7%	ICU Level of Service	D
Analysis Period (min)	15		

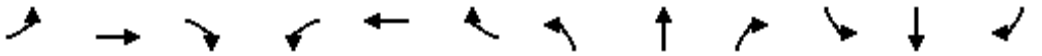
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		0.97	0.95	1.00
Frt	1.00	1.00		1.00	0.97		1.00	0.97		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)	1490	4280		1505	4129		1520	2908		2891	2951	1308
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1490	4280		1505	4129		1520	2908		2891	2951	1308
Volume (vph)	295	925	5	135	1380	320	15	475	100	245	250	285
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	311	974	5	142	1453	337	16	500	105	258	263	300
RTOR Reduction (vph)	0	1	0	0	38	0	0	18	0	0	0	41
Lane Group Flow (vph)	311	978	0	142	1752	0	16	587	0	258	263	259
Heavy Vehicles (%)	2%	2%	0%	1%	3%	2%	0%	2%	1%	2%	3%	4%
Turn Type	Prot			Prot			Prot			Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	18.0	42.5		13.5	38.0		1.6	17.6		10.4	26.4	44.4
Effective Green, g (s)	18.0	42.5		13.5	38.0		1.6	17.6		10.4	26.4	44.4
Actuated g/C Ratio	0.18	0.42		0.14	0.38		0.02	0.18		0.10	0.26	0.44
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	268	1819		203	1569		24	512		301	779	581
v/s Ratio Prot	c0.21	0.23		0.09	c0.42		0.01	c0.20		c0.09	0.09	0.08
v/s Ratio Perm												0.12
v/c Ratio	1.16	0.54		0.70	1.12		0.67	1.15		0.86	0.34	0.45
Uniform Delay, d1	41.0	21.4		41.3	31.0		48.9	41.2		44.1	29.7	19.3
Progression Factor	0.92	0.83		1.12	0.50		0.90	0.44		0.84	0.86	0.90
Incremental Delay, d2	90.5	0.1		7.6	59.7		32.9	78.7		20.4	1.2	0.5
Delay (s)	128.3	18.0		53.7	75.1		77.2	97.0		57.2	26.9	17.8
Level of Service	F	B		D	E		E	F		E	C	B
Approach Delay (s)		44.6			73.5			96.5			33.1	
Approach LOS		D			E			F			C	

Intersection Summary			
HCM Average Control Delay	61.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		

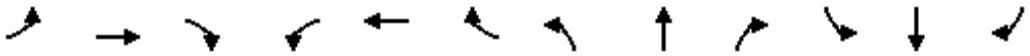
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.98		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2920	4198		2891	4142		2891	2980	1347	2891	2923	1333
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2920	4198		2891	4142		2891	2980	1347	2891	2923	1333
Volume (vph)	360	830	125	125	955	205	290	635	160	165	590	210
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	379	874	132	132	1005	216	305	668	168	174	621	221
RTOR Reduction (vph)	0	20	0	0	34	0	0	0	29	0	0	12
Lane Group Flow (vph)	379	986	0	132	1187	0	305	668	139	174	621	209
Heavy Vehicles (%)	1%	2%	2%	2%	3%	1%	2%	2%	1%	2%	4%	2%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases									2			6
Actuated Green, G (s)	14.9	37.1		8.5	30.7		12.0	30.4	38.9	8.0	26.4	41.3
Effective Green, g (s)	14.9	37.1		8.5	30.7		12.0	30.4	38.9	8.0	26.4	41.3
Actuated g/C Ratio	0.15	0.37		0.08	0.31		0.12	0.30	0.39	0.08	0.26	0.41
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	435	1557		246	1272		347	906	578	231	772	604
v/s Ratio Prot	c0.13	0.23		0.05	c0.29		0.11	c0.22	0.02	0.06	c0.21	0.05
v/s Ratio Perm									0.08			0.11
v/c Ratio	0.87	0.63		0.54	0.93		0.88	0.74	0.24	0.75	0.80	0.35
Uniform Delay, d1	41.6	25.9		43.9	33.7		43.3	31.2	20.6	45.0	34.4	20.1
Progression Factor	0.65	0.45		1.00	1.00		0.61	0.49	0.26	0.92	0.47	0.20
Incremental Delay, d2	13.4	0.6		2.2	12.4		20.3	5.0	0.2	9.0	6.0	0.2
Delay (s)	40.5	12.2		46.1	46.1		46.8	20.3	5.5	50.6	22.2	4.3
Level of Service	D	B		D	D		D	C	A	D	C	A
Approach Delay (s)		20.0			46.1			25.2			23.1	
Approach LOS		B			D			C			C	

Intersection Summary			
HCM Average Control Delay	29.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

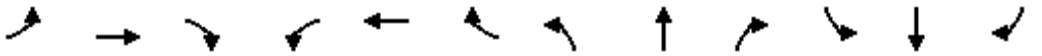
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1505	2980	1360	1476	2980	1347	1505	2918		1505	2912	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1505	2980	1360	1476	2980	1347	1505	2918		1505	2912	
Volume (vph)	145	870	65	105	1015	75	225	740	70	120	585	115
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	153	916	68	111	1068	79	237	779	74	126	616	121
RTOR Reduction (vph)	0	0	33	0	0	35	0	7	0	0	17	0
Lane Group Flow (vph)	153	916	35	111	1068	44	237	846	0	126	721	0
Heavy Vehicles (%)	1%	2%	0%	3%	2%	1%	1%	3%	1%	1%	2%	1%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	10.0	36.0	51.0	8.0	34.0	43.0	15.0	31.0		9.0	25.0	
Effective Green, g (s)	10.0	36.0	51.0	8.0	34.0	43.0	15.0	31.0		9.0	25.0	
Actuated g/C Ratio	0.10	0.36	0.51	0.08	0.34	0.43	0.15	0.31		0.09	0.25	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	151	1073	748	118	1013	579	226	905		135	728	
v/s Ratio Prot	c0.10	0.31	0.01	0.08	c0.36	0.01	c0.16	c0.29		0.08	c0.25	
v/s Ratio Perm			0.02			0.03						
v/c Ratio	1.01	0.85	0.05	0.94	1.05	0.08	1.05	0.93		0.93	0.99	
Uniform Delay, d1	45.0	29.6	12.3	45.8	33.0	16.8	42.5	33.5		45.2	37.4	
Progression Factor	1.24	0.53	0.13	1.03	0.71	0.91	0.53	0.78		0.84	0.81	
Incremental Delay, d2	73.6	6.2	0.0	47.3	37.8	0.0	64.7	14.2		50.3	27.7	
Delay (s)	129.4	21.9	1.6	94.5	61.1	15.4	87.1	40.3		88.3	58.0	
Level of Service	F	C	A	F	E	B	F	D		F	E	
Approach Delay (s)		35.2			61.2			50.5			62.5	
Approach LOS		D			E			D			E	

Intersection Summary			
HCM Average Control Delay	52.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		

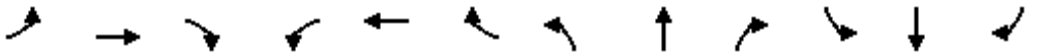
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1520	2980	1333	1520	2951	1347	2920	3010	1347	2920	3010	1347
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1520	2980	1333	1520	2951	1347	2920	3010	1347	2920	3010	1347
Volume (vph)	40	1640	105	45	1065	75	225	585	125	170	695	90
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	1726	111	47	1121	79	237	616	132	179	732	95
RTOR Reduction (vph)	0	0	22	0	0	33	0	0	10	0	0	34
Lane Group Flow (vph)	42	1726	89	47	1121	46	237	616	122	179	732	61
Heavy Vehicles (%)	0%	2%	2%	0%	3%	1%	1%	1%	1%	1%	1%	1%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	4.0	50.8	57.8	4.0	50.8	57.8	7.0	22.2	26.2	7.0	22.2	26.2
Effective Green, g (s)	4.0	50.8	57.8	4.0	50.8	57.8	7.0	22.2	26.2	7.0	22.2	26.2
Actuated g/C Ratio	0.04	0.51	0.58	0.04	0.51	0.58	0.07	0.22	0.26	0.07	0.22	0.26
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	61	1514	770	61	1499	832	204	668	407	204	668	353
v/s Ratio Prot	0.03	c0.58	0.01	c0.03	0.38	0.00	0.08	c0.20	0.01	0.06	c0.24	0.01
v/s Ratio Perm			0.06			0.03			0.08			0.04
v/c Ratio	0.69	1.14	0.12	0.77	0.75	0.05	1.16	0.92	0.30	0.88	1.10	0.17
Uniform Delay, d1	47.4	24.6	9.5	47.5	19.5	9.2	46.5	38.1	29.6	46.1	38.9	28.5
Progression Factor	1.13	0.97	0.73	1.31	0.32	0.01	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	24.5	70.5	0.1	25.6	1.1	0.0	113.5	20.2	0.4	31.8	63.9	0.2
Delay (s)	78.1	94.4	7.0	88.1	7.3	0.1	160.0	58.3	30.0	77.8	102.8	28.8
Level of Service	E	F	A	F	A	A	F	E	C	E	F	C
Approach Delay (s)		88.9			9.9			79.0			91.4	
Approach LOS		F			A			E			F	

Intersection Summary			
HCM Average Control Delay	68.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		

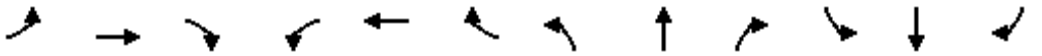
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2863	4325	1283	2949	2980	1333	2863	2980	1360	2863	2980	1333
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2863	4325	1283	2949	2980	1333	2863	2980	1360	2863	2980	1333
Volume (vph)	235	1495	145	25	740	165	400	550	55	560	605	145
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	247	1574	153	26	779	174	421	579	58	589	637	153
RTOR Reduction (vph)	0	0	53	0	0	19	0	0	7	0	0	18
Lane Group Flow (vph)	247	1574	100	26	779	155	421	579	51	589	637	135
Heavy Vehicles (%)	3%	1%	6%	0%	2%	2%	3%	2%	0%	3%	2%	2%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	10.8	37.0	52.8	3.2	29.4	51.1	15.8	22.1	25.3	21.7	28.0	38.8
Effective Green, g (s)	10.8	37.0	52.8	3.2	29.4	51.1	15.8	22.1	25.3	21.7	28.0	38.8
Actuated g/C Ratio	0.11	0.37	0.53	0.03	0.29	0.51	0.16	0.22	0.25	0.22	0.28	0.39
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	309	1600	677	94	876	734	452	659	344	621	834	571
v/s Ratio Prot	0.09	c0.36	0.02	0.01	c0.26	0.05	0.15	c0.19	0.00	c0.21	0.21	0.03
v/s Ratio Perm			0.05			0.07			0.03			0.08
v/c Ratio	0.80	0.98	0.15	0.28	0.89	0.21	0.93	0.88	0.15	0.95	0.76	0.24
Uniform Delay, d1	43.5	31.2	12.1	47.3	33.7	13.4	41.6	37.7	29.0	38.6	33.0	20.6
Progression Factor	0.92	0.54	1.06	0.98	0.99	1.17	1.21	0.76	0.69	0.72	0.88	1.04
Incremental Delay, d2	1.4	3.9	0.0	0.1	1.2	0.0	25.3	14.9	0.2	23.3	6.4	0.2
Delay (s)	41.4	20.8	12.8	46.5	34.5	15.7	75.6	43.5	20.1	50.9	35.4	21.6
Level of Service	D	C	B	D	C	B	E	D	C	D	D	C
Approach Delay (s)		22.7			31.5			55.0			40.5	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	35.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.0%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.94	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	4244	4282	1347	2863	4241	1333	2920	2895	1248	2808	2841	1347
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	4244	4282	1347	2863	4241	1333	2920	2895	1248	2808	2841	1347
Volume (vph)	585	965	190	30	1095	95	675	695	65	125	230	535
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	616	1016	200	32	1153	100	711	732	68	132	242	563
RTOR Reduction (vph)	0	0	70	0	0	23	0	0	32	0	0	4
Lane Group Flow (vph)	616	1016	130	32	1153	77	711	732	36	132	242	559
Heavy Vehicles (%)	1%	2%	1%	3%	3%	2%	1%	5%	9%	5%	7%	1%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	21.0	42.8	64.8	3.2	25.0	32.0	22.0	31.0	34.2	7.0	16.0	37.0
Effective Green, g (s)	21.0	42.8	64.8	3.2	25.0	32.0	22.0	31.0	34.2	7.0	16.0	37.0
Actuated g/C Ratio	0.21	0.43	0.65	0.03	0.25	0.32	0.22	0.31	0.34	0.07	0.16	0.37
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	891	1833	927	92	1060	480	642	897	427	197	455	498
v/s Ratio Prot	0.15	0.24	0.03	0.01	c0.27	0.01	c0.24	0.25	0.00	0.05	0.09	c0.24
v/s Ratio Perm			0.07			0.05			0.03			0.18
v/c Ratio	0.69	0.55	0.14	0.35	1.09	0.16	1.11	0.82	0.08	0.67	0.53	1.12
Uniform Delay, d1	36.5	21.4	6.8	47.4	37.5	24.4	39.0	31.9	22.3	45.4	38.6	31.5
Progression Factor	0.78	1.35	3.18	0.58	0.46	0.18	1.16	1.19	1.70	0.87	0.91	1.19
Incremental Delay, d2	0.7	0.4	0.0	1.1	47.9	0.1	61.9	5.0	0.1	8.6	4.4	78.0
Delay (s)	29.1	29.4	21.7	28.6	65.1	4.4	107.2	43.1	37.9	48.2	39.3	115.5
Level of Service	C	C	C	C	E	A	F	D	D	D	D	F
Approach Delay (s)		28.5			59.5			73.0			86.4	
Approach LOS		C			E			E			F	

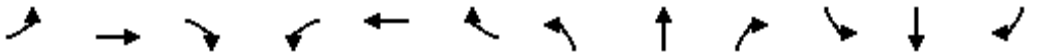
Intersection Summary			
HCM Average Control Delay	57.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.11		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	97.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2863	4150		2863	4127		2920	2980	1333	2920	2951	1236
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2863	4150		2863	4127		2920	2980	1333	2920	2951	1236
Volume (vph)	400	750	180	280	895	230	220	705	190	440	595	185
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	421	789	189	295	942	242	232	742	200	463	626	195
RTOR Reduction (vph)	0	41	0	0	45	0	0	0	17	0	0	11
Lane Group Flow (vph)	421	937	0	295	1139	0	232	742	183	463	626	184
Heavy Vehicles (%)	3%	2%	3%	3%	3%	1%	1%	2%	2%	1%	3%	10%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases									2			6
Actuated Green, G (s)	15.0	30.0		13.0	28.0		10.0	25.0	38.0	16.0	31.0	46.0
Effective Green, g (s)	15.0	30.0		13.0	28.0		10.0	25.0	38.0	16.0	31.0	46.0
Actuated g/C Ratio	0.15	0.30		0.13	0.28		0.10	0.25	0.38	0.16	0.31	0.46
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	429	1245		372	1156		292	745	507	467	915	618
v/s Ratio Prot	c0.15	0.23		0.10	c0.28		0.08	c0.25	0.05	c0.16	0.21	0.04
v/s Ratio Perm									0.09			0.10
v/c Ratio	0.98	0.75		0.79	0.98		0.79	1.00	0.36	0.99	0.68	0.30
Uniform Delay, d1	42.4	31.6		42.2	35.8		44.0	37.4	22.3	41.9	30.2	16.9
Progression Factor	0.69	0.41		1.00	1.00		0.75	0.71	0.38	1.00	1.00	1.00
Incremental Delay, d2	36.2	2.4		11.0	22.7		8.1	23.6	0.2	39.3	4.1	0.3
Delay (s)	65.5	15.3		53.2	58.5		41.3	50.3	8.6	81.2	34.4	17.2
Level of Service	E	B		D	E		D	D	A	F	C	B
Approach Delay (s)		30.5			57.4			41.4			48.6	
Approach LOS		C			E			D			D	

Intersection Summary			
HCM Average Control Delay	44.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		

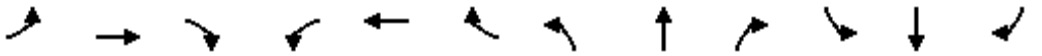
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1490	2923	1347	2782	2951	1308	1490	2980	1295	1490	2923	1333
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1490	2923	1347	2782	2951	1308	1490	2980	1295	1490	2923	1333
Volume (vph)	65	785	90	210	1125	105	105	930	270	55	395	50
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	68	826	95	221	1184	111	111	979	284	58	416	53
RTOR Reduction (vph)	0	0	41	0	0	24	0	0	38	0	0	37
Lane Group Flow (vph)	68	826	54	221	1184	87	111	979	246	58	416	16
Heavy Vehicles (%)	2%	4%	1%	6%	3%	4%	2%	2%	5%	2%	4%	2%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	5.0	37.0	48.7	10.0	42.0	46.0	11.7	33.0	43.0	4.0	25.3	30.3
Effective Green, g (s)	5.0	37.0	48.7	10.0	42.0	46.0	11.7	33.0	43.0	4.0	25.3	30.3
Actuated g/C Ratio	0.05	0.37	0.49	0.10	0.42	0.46	0.12	0.33	0.43	0.04	0.25	0.30
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	75	1082	656	278	1239	654	174	983	609	60	740	404
v/s Ratio Prot	0.05	0.28	0.01	c0.08	c0.40	0.01	0.07	c0.33	0.04	c0.04	0.14	0.00
v/s Ratio Perm			0.03			0.06			0.15			0.01
v/c Ratio	0.91	0.76	0.08	0.79	0.96	0.13	0.64	1.00	0.40	0.97	0.56	0.04
Uniform Delay, d1	47.3	27.7	13.7	44.0	28.1	15.5	42.1	33.4	19.7	47.9	32.5	24.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.84	0.58	0.13	0.81	0.74	0.77
Incremental Delay, d2	72.1	5.1	0.1	14.5	16.9	0.1	5.1	22.7	0.3	89.7	2.4	0.0
Delay (s)	119.4	32.8	13.8	58.5	45.0	15.6	40.6	42.1	2.9	128.5	26.5	18.8
Level of Service	F	C	B	E	D	B	D	D	A	F	C	B
Approach Delay (s)		36.9			44.8			33.9			36.9	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	38.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.7%	ICU Level of Service	E
Analysis Period (min)	15		

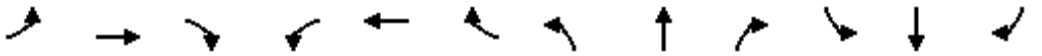
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1505	2980	1347	1505	2951	1347	2920	2980	1347	2920	2951	1320
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1505	2980	1347	1505	2951	1347	2920	2980	1347	2920	2951	1320
Volume (vph)	90	940	105	150	1230	125	170	615	125	140	435	70
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	95	989	111	158	1295	132	179	647	132	147	458	74
RTOR Reduction (vph)	0	0	61	0	0	33	0	0	21	0	0	19
Lane Group Flow (vph)	95	989	50	158	1295	99	179	647	111	147	458	55
Heavy Vehicles (%)	1%	2%	1%	1%	3%	1%	1%	2%	1%	1%	3%	3%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.0	36.6	44.6	15.9	45.5	51.9	8.0	25.1	41.0	6.4	23.5	30.5
Effective Green, g (s)	7.0	36.6	44.6	15.9	45.5	51.9	8.0	25.1	41.0	6.4	23.5	30.5
Actuated g/C Ratio	0.07	0.37	0.45	0.16	0.46	0.52	0.08	0.25	0.41	0.06	0.24	0.30
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	105	1091	601	239	1343	753	234	748	552	187	693	455
v/s Ratio Prot	0.06	c0.33	0.01	0.10	c0.44	0.01	c0.06	c0.22	0.03	0.05	0.16	0.01
v/s Ratio Perm			0.03			0.07			0.05			0.03
v/c Ratio	0.90	0.91	0.08	0.66	0.96	0.13	0.76	0.86	0.20	0.79	0.66	0.12
Uniform Delay, d1	46.2	30.1	15.9	39.5	26.5	12.4	45.1	35.8	19.0	46.1	34.6	25.1
Progression Factor	0.59	0.93	4.35	0.82	0.73	0.60	1.11	0.48	0.56	0.77	0.79	0.65
Incremental Delay, d2	42.2	7.0	0.0	4.1	11.7	0.0	9.6	9.0	0.1	18.3	4.6	0.1
Delay (s)	69.5	35.1	69.4	36.5	31.1	7.4	59.8	26.2	10.7	53.8	32.0	16.4
Level of Service	E	D	E	D	C	A	E	C	B	D	C	B
Approach Delay (s)		41.0			29.7			30.3			35.0	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	33.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		

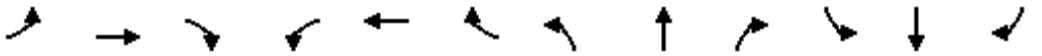
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91		0.97	0.95		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	2920	4241	1320	1490	4229		2863	2828		2920	3900	1333
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	2920	4241	1320	1490	4229		2863	2828		2920	3900	1333
Volume (vph)	235	965	165	60	1165	105	270	580	65	75	235	195
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	247	1016	174	63	1226	111	284	611	68	79	247	205
RTOR Reduction (vph)	0	0	106	0	14	0	0	11	0	0	0	164
Lane Group Flow (vph)	247	1016	68	63	1323	0	284	668	0	79	247	41
Heavy Vehicles (%)	1%	3%	3%	2%	2%	2%	3%	6%	5%	1%	12%	2%
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	9.7	31.1	31.1	6.2	27.6		10.7	23.5		3.2	16.0	16.0
Effective Green, g (s)	9.7	31.1	31.1	6.2	27.6		10.7	23.5		3.2	16.0	16.0
Actuated g/C Ratio	0.12	0.39	0.39	0.08	0.35		0.13	0.29		0.04	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	354	1649	513	115	1459		383	831		117	780	267
v/s Ratio Prot	0.08	c0.24		0.04	c0.31		c0.10	c0.24		0.03	0.06	
v/s Ratio Perm			0.05									0.03
v/c Ratio	0.70	0.62	0.13	0.55	0.91		0.74	0.80		0.68	0.32	0.15
Uniform Delay, d1	33.7	19.7	15.8	35.5	25.0		33.3	26.1		37.9	27.3	26.4
Progression Factor	0.63	0.37	0.37	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.7	1.4	0.4	5.3	9.8		7.5	8.2		14.3	1.1	1.2
Delay (s)	26.1	8.7	6.3	40.8	34.7		40.9	34.3		52.2	28.4	27.6
Level of Service	C	A	A	D	C		D	C		D	C	C
Approach Delay (s)		11.4			35.0			36.2			31.6	
Approach LOS		B			D			D			C	

Intersection Summary			
HCM Average Control Delay	27.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		

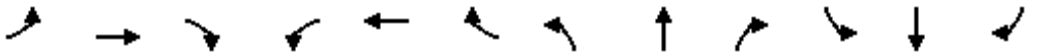
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1490	4238		1462	4110		1505	2895	1320	1490	2764	1320
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1490	4238		1462	4110		1505	2895	1320	1490	2764	1320
Volume (vph)	60	775	50	50	1080	305	70	560	35	135	350	35
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	816	53	53	1137	321	74	589	37	142	368	37
RTOR Reduction (vph)	0	8	0	0	51	0	0	0	21	0	0	23
Lane Group Flow (vph)	63	861	0	53	1407	0	74	589	16	142	368	14
Heavy Vehicles (%)	2%	2%	4%	4%	3%	2%	1%	5%	3%	2%	10%	3%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases									2			6
Actuated Green, G (s)	5.6	27.2		15.6	37.2		8.1	28.9	44.5	12.3	33.1	38.7
Effective Green, g (s)	5.6	27.2		15.6	37.2		8.1	28.9	44.5	12.3	33.1	38.7
Actuated g/C Ratio	0.06	0.27		0.16	0.37		0.08	0.29	0.44	0.12	0.33	0.39
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	83	1153		228	1529		122	837	587	183	915	564
v/s Ratio Prot	0.04	c0.20		0.04	c0.34		0.05	c0.20	0.00	c0.10	0.13	0.00
v/s Ratio Perm									0.01			0.01
v/c Ratio	0.76	0.75		0.23	0.92		0.61	0.70	0.03	0.78	0.40	0.03
Uniform Delay, d1	46.5	33.3		37.0	30.0		44.4	31.7	15.6	42.5	25.8	19.0
Progression Factor	0.62	0.61		1.00	1.00		1.00	1.00	1.00	1.41	0.45	0.43
Incremental Delay, d2	26.8	2.2		0.5	9.2		8.3	4.9	0.0	12.4	0.8	0.0
Delay (s)	55.8	22.3		37.5	39.2		52.7	36.7	15.6	72.4	12.6	8.2
Level of Service	E	C		D	D		D	D	B	E	B	A
Approach Delay (s)		24.6			39.1			37.2			27.8	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	33.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		

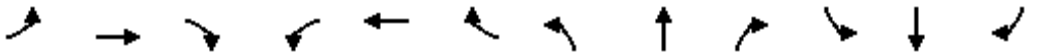
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.99		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)	1490	2912		1490	2900		1476	2930		1434	2923	1320
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1490	2912		1490	2900		1476	2930		1434	2923	1320
Volume (vph)	165	1145	40	45	940	60	40	450	50	80	320	90
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	174	1205	42	47	989	63	42	474	53	84	337	95
RTOR Reduction (vph)	0	2	0	0	5	0	0	9	0	0	0	59
Lane Group Flow (vph)	174	1245	0	47	1047	0	42	518	0	84	337	36
Heavy Vehicles (%)	2%	4%	0%	2%	4%	2%	3%	2%	4%	6%	4%	3%
Turn Type	Prot			Prot			Prot			Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	13.5	51.4		4.0	41.9		4.2	21.6		7.0	24.4	37.9
Effective Green, g (s)	13.5	51.4		4.0	41.9		4.2	21.6		7.0	24.4	37.9
Actuated g/C Ratio	0.14	0.51		0.04	0.42		0.04	0.22		0.07	0.24	0.38
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	201	1497		60	1215		62	633		100	713	553
v/s Ratio Prot	c0.12	c0.43		0.03	0.36		0.03	c0.18		c0.06	c0.12	0.01
v/s Ratio Perm												0.02
v/c Ratio	0.87	0.83		0.78	0.86		0.68	0.82		0.84	0.47	0.07
Uniform Delay, d1	42.4	20.6		47.6	26.4		47.2	37.3		45.9	32.3	19.8
Progression Factor	1.00	1.00		1.00	1.00		1.31	0.35		1.00	1.00	1.00
Incremental Delay, d2	29.9	5.5		47.5	8.2		19.6	8.6		43.1	2.2	0.0
Delay (s)	72.3	26.1		95.1	34.6		81.7	21.8		89.0	34.5	19.8
Level of Service	E	C		F	C		F	C		F	C	B
Approach Delay (s)		31.8			37.2			26.2			40.7	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	33.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	79.2%	ICU Level of Service	D
Analysis Period (min)	15		

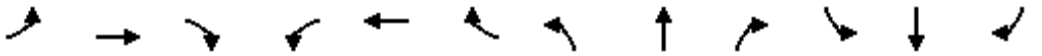
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1448	2951	1333	1520	2951	1347	1505	2980	1347	1476	2923	1283
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1448	2951	1333	1520	2951	1347	1505	2980	1347	1476	2923	1283
Volume (vph)	215	940	50	50	675	240	95	625	185	120	225	110
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	226	989	53	53	711	253	100	658	195	126	237	116
RTOR Reduction (vph)	0	0	26	0	0	73	0	0	58	0	0	62
Lane Group Flow (vph)	226	989	27	53	711	180	100	658	137	126	237	54
Heavy Vehicles (%)	5%	3%	2%	0%	3%	1%	1%	2%	1%	3%	4%	6%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	18.5	39.1	50.3	5.7	26.3	36.9	11.2	28.6	34.3	10.6	28.0	46.5
Effective Green, g (s)	18.5	39.1	50.3	5.7	26.3	36.9	11.2	28.6	34.3	10.6	28.0	46.5
Actuated g/C Ratio	0.18	0.39	0.50	0.06	0.26	0.37	0.11	0.29	0.34	0.11	0.28	0.46
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	268	1154	724	87	776	497	169	852	462	156	818	648
v/s Ratio Prot	c0.16	c0.34	0.00	0.03	c0.24	0.04	0.07	c0.22	0.02	c0.09	0.08	0.02
v/s Ratio Perm			0.02			0.10			0.08			0.03
v/c Ratio	0.84	0.86	0.04	0.61	0.92	0.36	0.59	0.77	0.30	0.81	0.29	0.08
Uniform Delay, d1	39.4	27.9	12.6	46.1	35.8	23.0	42.2	32.7	24.0	43.7	28.2	14.9
Progression Factor	0.63	0.26	0.02	0.94	0.78	0.43	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.1	4.8	0.0	8.0	11.4	0.3	5.5	6.7	0.4	25.5	0.9	0.1
Delay (s)	41.0	12.1	0.2	51.3	39.2	10.3	47.7	39.4	24.4	69.2	29.1	14.9
Level of Service	D	B	A	D	D	B	D	D	C	E	C	B
Approach Delay (s)		16.8			32.6			37.2			36.2	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	28.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

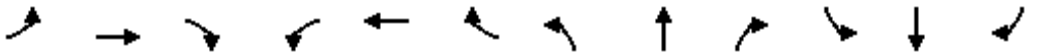
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1490	2980	1347	1490	2980	1360	1505	2980	1360	1476	2951	1308
Flt Permitted	0.32	1.00	1.00	0.23	1.00	1.00	0.24	1.00	1.00	0.43	1.00	1.00
Satd. Flow (perm)	508	2980	1347	354	2980	1360	379	2980	1360	660	2951	1308
Volume (vph)	365	520	160	45	580	55	270	570	30	40	405	250
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	384	547	168	47	611	58	284	600	32	42	426	263
RTOR Reduction (vph)	0	0	71	0	0	42	0	0	19	0	0	65
Lane Group Flow (vph)	384	547	97	47	611	16	284	600	13	42	426	198
Heavy Vehicles (%)	2%	2%	1%	2%	2%	0%	1%	2%	0%	3%	3%	4%
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	40.1	40.1	57.7	22.5	22.5	27.3	34.3	34.3	39.1	21.5	21.5	43.9
Effective Green, g (s)	40.1	40.1	57.7	22.5	22.5	27.3	34.3	34.3	39.1	21.5	21.5	43.9
Actuated g/C Ratio	0.40	0.40	0.58	0.22	0.22	0.27	0.34	0.34	0.39	0.22	0.22	0.44
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	424	1195	831	134	671	426	328	1022	532	181	634	574
v/s Ratio Prot	c0.20	0.18	0.02	0.02	c0.21	0.00	c0.15	0.20	0.00	0.01	c0.14	0.08
v/s Ratio Perm	0.16		0.05	0.06		0.01	c0.14		0.01	0.04		0.07
v/c Ratio	0.91	0.46	0.12	0.35	0.91	0.04	0.87	0.59	0.02	0.23	0.67	0.35
Uniform Delay, d1	30.0	22.0	9.6	31.7	37.8	26.7	27.4	27.0	18.7	32.9	36.0	18.6
Progression Factor	0.50	0.41	0.01	1.06	1.08	2.15	0.46	0.47	0.56	1.00	1.00	1.00
Incremental Delay, d2	15.2	0.2	0.0	0.7	8.8	0.0	14.8	1.7	0.0	0.7	5.6	0.4
Delay (s)	30.2	9.2	0.1	34.4	49.5	57.5	27.3	14.2	10.4	33.6	41.6	18.9
Level of Service	C	A	A	C	D	E	C	B	B	C	D	B
Approach Delay (s)		15.1			49.1			18.2			33.0	
Approach LOS		B			D			B			C	

Intersection Summary			
HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		

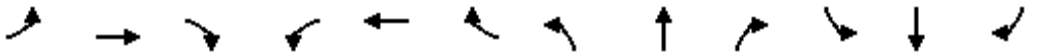
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.95	1.00	0.97	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)	1476	4030		1216	4246		2782	2951	1271	2217	2923	1320
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1476	4030		1216	4246		2782	2951	1271	2217	2923	1320
Volume (vph)	470	995	340	20	945	50	560	610	45	55	255	310
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	495	1047	358	21	995	53	589	642	47	58	268	326
RTOR Reduction (vph)	0	46	0	0	5	0	0	0	33	0	0	286
Lane Group Flow (vph)	495	1359	0	21	1043	0	589	642	14	58	268	40
Heavy Vehicles (%)	3%	5%	2%	25%	2%	4%	6%	3%	7%	33%	4%	3%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	42.6	67.0		4.2	28.6		26.8	38.8	38.8	4.0	16.0	16.0
Effective Green, g (s)	42.6	67.0		4.2	28.6		26.8	38.8	38.8	4.0	16.0	16.0
Actuated g/C Ratio	0.33	0.52		0.03	0.22		0.21	0.30	0.30	0.03	0.12	0.12
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	484	2077		39	934		574	881	379	68	360	162
v/s Ratio Prot	c0.34	0.34		0.02	c0.25		c0.21	0.22		0.03	c0.09	
v/s Ratio Perm									0.01			0.03
v/c Ratio	1.02	0.65		0.54	1.12		1.03	0.73	0.04	0.85	0.74	0.25
Uniform Delay, d1	43.7	23.0		61.9	50.7		51.6	40.9	32.3	62.7	55.0	51.6
Progression Factor	0.68	0.50		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	46.1	1.6		13.5	67.1		44.4	5.3	0.2	60.8	13.1	3.6
Delay (s)	75.9	13.0		75.5	117.8		96.0	46.1	32.5	123.5	68.1	55.2
Level of Service	E	B		E	F		F	D	C	F	E	E
Approach Delay (s)		29.4			117.0			68.6			66.6	
Approach LOS		C			F			E			E	

Intersection Summary			
HCM Average Control Delay	63.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		

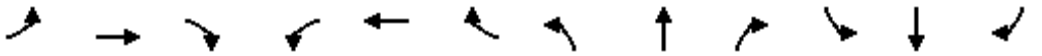
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1490	2789	1271	1434	2923	1333	1490	2980	1320	1490	2895	1320
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1490	2789	1271	1434	2923	1333	1490	2980	1320	1490	2895	1320
Volume (vph)	125	495	15	190	885	95	100	950	175	120	660	155
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	132	521	16	200	932	100	105	1000	184	126	695	163
RTOR Reduction (vph)	0	0	11	0	0	30	0	0	42	0	0	48
Lane Group Flow (vph)	132	521	5	200	932	71	105	1000	142	126	695	115
Heavy Vehicles (%)	2%	9%	7%	6%	4%	2%	2%	2%	3%	2%	5%	3%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	9.0	24.4	33.9	16.6	32.0	41.0	9.5	34.0	50.6	9.0	33.5	42.5
Effective Green, g (s)	9.0	24.4	33.9	16.6	32.0	41.0	9.5	34.0	50.6	9.0	33.5	42.5
Actuated g/C Ratio	0.09	0.24	0.34	0.17	0.32	0.41	0.10	0.34	0.51	0.09	0.34	0.42
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	134	681	482	238	935	600	142	1013	721	134	970	614
v/s Ratio Prot	c0.09	0.19	0.00	c0.14	c0.32	0.01	0.07	c0.34	0.03	c0.08	0.24	0.02
v/s Ratio Perm			0.00			0.04			0.07			0.07
v/c Ratio	0.99	0.77	0.01	0.84	1.00	0.12	0.74	0.99	0.20	0.94	0.72	0.19
Uniform Delay, d1	45.4	35.1	21.9	40.4	33.9	18.3	44.0	32.8	13.5	45.2	29.1	18.0
Progression Factor	0.52	1.04	1.90	1.00	1.00	1.00	0.85	1.48	2.07	1.49	0.15	0.01
Incremental Delay, d2	67.9	4.5	0.0	22.5	28.4	0.1	5.9	12.7	0.0	37.8	2.2	0.1
Delay (s)	91.7	40.9	41.7	63.0	62.4	18.4	43.5	61.4	28.0	105.3	6.7	0.3
Level of Service	F	D	D	E	E	B	D	E	C	F	A	A
Approach Delay (s)		51.0			58.9			55.2			18.2	
Approach LOS		D			E			E			B	

Intersection Summary			
HCM Average Control Delay	46.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	89.7%	ICU Level of Service	E
Analysis Period (min)	15		

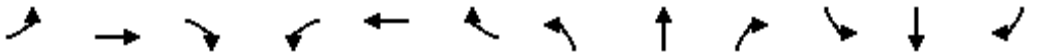
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		0.97	0.91	1.00	1.00	0.91	0.88	0.97	0.91	0.88
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1568	4350		2928	4297	1350	1538	4107	2355	2956	4071	2422
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1568	4350		2928	4297	1350	1538	4107	2355	2956	4071	2422
Volume (vph)	150	725	40	225	480	385	50	900	610	245	1205	805
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	763	42	237	505	405	53	947	642	258	1268	847
RTOR Reduction (vph)	0	6	0	0	0	93	0	0	53	0	0	92
Lane Group Flow (vph)	158	799	0	237	505	312	53	947	589	258	1268	755
Heavy Vehicles (%)	3%	6%	3%	7%	8%	7%	5%	13%	8%	6%	14%	5%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	18.0	23.2		16.0	21.2	34.8	4.8	31.2	47.2	13.6	40.0	58.0
Effective Green, g (s)	18.0	23.2		16.0	21.2	34.8	4.8	31.2	47.2	13.6	40.0	58.0
Actuated g/C Ratio	0.18	0.23		0.16	0.21	0.35	0.05	0.31	0.47	0.14	0.40	0.58
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	282	1009		468	911	524	74	1281	1112	402	1628	1502
v/s Ratio Prot	0.10	c0.18		0.08	0.12	c0.08	0.03	0.23	0.08	0.09	c0.31	0.09
v/s Ratio Perm						0.15			0.17			0.22
v/c Ratio	0.56	0.79		0.51	0.55	0.59	0.72	0.74	0.53	0.64	0.78	0.50
Uniform Delay, d1	37.4	36.1		38.4	35.2	26.8	46.9	30.8	18.6	40.9	26.1	12.4
Progression Factor	0.89	1.01		0.68	0.67	1.04	1.45	0.23	0.37	1.04	0.42	1.80
Incremental Delay, d2	2.5	6.2		0.8	2.2	1.6	12.0	1.5	0.2	2.6	2.8	0.1
Delay (s)	35.7	42.6		27.0	25.6	29.6	79.8	8.6	7.0	45.2	13.9	22.5
Level of Service	D	D		C	C	C	E	A	A	D	B	C
Approach Delay (s)		41.5			27.3			10.3			20.3	
Approach LOS		D			C			B			C	

Intersection Summary			
HCM Average Control Delay	22.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.8%	ICU Level of Service	C
Analysis Period (min)	15		

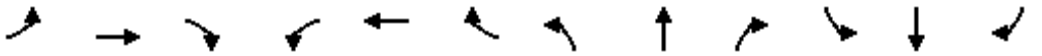
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1553	3047	1225	3072	4641	1389	1615	4462	1376	1357	3967	1363
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1553	3047	1225	3072	4641	1389	1615	4462	1376	1357	3967	1363
Volume (vph)	125	545	80	465	350	520	25	1145	765	70	470	540
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	132	574	84	489	368	547	26	1205	805	74	495	568
RTOR Reduction (vph)	0	0	62	0	0	125	0	0	0	0	0	87
Lane Group Flow (vph)	132	574	22	489	368	422	26	1205	805	74	495	481
Heavy Vehicles (%)	4%	6%	18%	2%	0%	4%	0%	4%	5%	19%	17%	6%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		Free	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2		1	6	7
Permitted Phases			4			8			Free			6
Actuated Green, G (s)	16.7	25.8	31.4	21.0	30.1	53.3	5.6	34.0	120.0	23.2	51.6	68.3
Effective Green, g (s)	16.7	25.8	31.4	21.0	30.1	53.3	5.6	34.0	120.0	23.2	51.6	68.3
Actuated g/C Ratio	0.14	0.22	0.26	0.18	0.25	0.44	0.05	0.28	1.00	0.19	0.43	0.57
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	216	655	361	538	1164	617	75	1264	1376	262	1706	776
v/s Ratio Prot	0.09	c0.19	0.00	c0.16	0.08	c0.13	0.02	c0.27		0.05	0.12	0.09
v/s Ratio Perm			0.02			0.17			c0.58			0.27
v/c Ratio	0.61	0.88	0.06	0.91	0.32	0.68	0.35	0.95	0.59	0.28	0.29	0.62
Uniform Delay, d1	48.6	45.6	33.2	48.6	36.6	26.6	55.4	42.2	0.0	41.3	22.3	17.2
Progression Factor	0.56	0.50	0.05	0.73	0.63	1.21	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.5	13.9	0.1	14.4	0.5	2.2	2.8	16.4	1.8	0.6	0.4	1.5
Delay (s)	31.8	36.6	1.8	50.0	23.4	34.3	58.2	58.6	1.8	41.9	22.7	18.7
Level of Service	C	D	A	D	C	C	E	E	A	D	C	B
Approach Delay (s)		32.1			36.9			36.1			21.9	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	32.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		

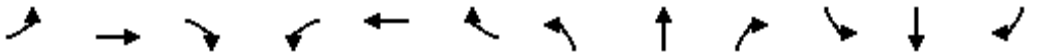
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1394	4160	1308	1462	4241	1295	2835	2866		1421	2923	1248
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1394	4160	1308	1462	4241	1295	2835	2866		1421	2923	1248
Volume (vph)	110	245	195	50	280	475	255	685	85	355	810	190
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	116	258	205	53	295	500	268	721	89	374	853	200
RTOR Reduction (vph)	0	0	103	0	0	58	0	9	0	0	0	42
Lane Group Flow (vph)	116	258	102	53	295	442	268	801	0	374	853	158
Heavy Vehicles (%)	9%	5%	4%	4%	3%	5%	4%	3%	15%	7%	4%	9%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2		1	6	7
Permitted Phases			4			8						6
Actuated Green, G (s)	9.9	14.5	28.3	8.4	13.0	41.0	13.8	33.1		28.0	47.3	57.2
Effective Green, g (s)	9.9	14.5	28.3	8.4	13.0	41.0	13.8	33.1		28.0	47.3	57.2
Actuated g/C Ratio	0.10	0.14	0.28	0.08	0.13	0.41	0.14	0.33		0.28	0.47	0.57
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	138	603	370	123	551	531	391	949		398	1383	764
v/s Ratio Prot	c0.08	0.06	0.04	0.04	0.07	c0.23	0.09	c0.28		c0.26	0.29	0.02
v/s Ratio Perm			0.04			0.11						0.11
v/c Ratio	0.84	0.43	0.28	0.43	0.54	0.83	0.69	0.84		0.94	0.62	0.21
Uniform Delay, d1	44.3	39.0	27.9	43.5	40.7	26.4	41.0	31.0		35.2	19.6	10.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		0.87	0.82	0.64
Incremental Delay, d2	34.5	0.5	0.4	2.4	1.0	10.8	4.9	9.1		27.9	1.9	0.1
Delay (s)	78.8	39.5	28.3	45.9	41.7	37.2	46.0	40.1		58.4	17.9	6.8
Level of Service	E	D	C	D	D	D	D	D		E	B	A
Approach Delay (s)		43.4			39.3			41.6			27.0	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	36.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		

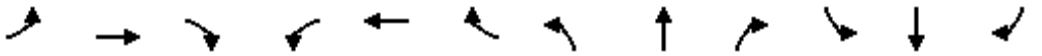
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1357	3971	1162	1520	4007	1320	1382	2980	1347	1520	3010	1172
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1357	3971	1162	1520	4007	1320	1382	2980	1347	1520	3010	1172
Volume (vph)	495	970	30	25	535	80	40	605	95	205	485	180
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	521	1021	32	26	563	84	42	637	100	216	511	189
RTOR Reduction (vph)	0	0	15	0	0	59	0	0	50	0	0	72
Lane Group Flow (vph)	521	1021	17	26	563	25	42	637	50	216	511	117
Heavy Vehicles (%)	12%	10%	17%	0%	9%	3%	10%	2%	1%	0%	1%	16%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	35.9	46.5	52.7	5.3	15.9	29.7	6.2	18.4	23.7	13.8	26.0	61.9
Effective Green, g (s)	35.9	46.5	52.7	5.3	15.9	29.7	6.2	18.4	23.7	13.8	26.0	61.9
Actuated g/C Ratio	0.36	0.46	0.53	0.05	0.16	0.30	0.06	0.18	0.24	0.14	0.26	0.62
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	487	1847	659	81	637	445	86	548	319	210	783	725
v/s Ratio Prot	c0.38	0.26	0.00	0.02	c0.14	0.01	0.03	c0.21	0.01	c0.14	0.17	0.06
v/s Ratio Perm			0.01			0.01			0.03			0.04
v/c Ratio	1.07	0.55	0.03	0.32	0.88	0.06	0.49	1.16	0.16	1.03	0.65	0.16
Uniform Delay, d1	32.0	19.3	11.3	45.6	41.1	25.1	45.4	40.8	30.2	43.1	33.0	8.1
Progression Factor	1.00	1.00	1.00	0.69	0.22	0.02	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	60.7	0.4	0.0	1.9	12.0	0.0	4.3	91.8	0.2	69.7	4.2	0.1
Delay (s)	92.8	19.6	11.4	33.2	21.0	0.6	49.7	132.6	30.5	112.8	37.2	8.2
Level of Service	F	B	B	C	C	A	D	F	C	F	D	A
Approach Delay (s)		43.7			18.9			115.0			49.0	
Approach LOS		D			B			F			D	

Intersection Summary			
HCM Average Control Delay	54.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	91.5%	ICU Level of Service	F
Analysis Period (min)	15		

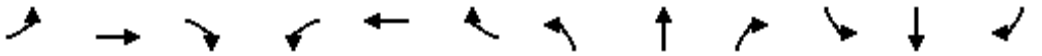
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1495	4036	1389	1509	3804	1350	1524	3136	1389	1495	3106	1363
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1495	4036	1389	1509	3804	1350	1524	3136	1389	1495	3106	1363
Volume (vph)	275	1485	120	75	950	60	160	695	145	120	650	195
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	299	1614	130	82	1033	65	174	755	158	130	707	212
RTOR Reduction (vph)	0	0	74	0	0	47	0	0	24	0	0	25
Lane Group Flow (vph)	299	1614	56	82	1033	18	174	755	134	130	707	187
Heavy Vehicles (%)	8%	15%	4%	7%	22%	7%	6%	3%	4%	8%	4%	6%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	21.0	43.0	43.0	6.0	28.0	28.0	12.0	26.0	32.0	9.0	23.0	44.0
Effective Green, g (s)	21.0	43.0	43.0	6.0	28.0	28.0	12.0	26.0	32.0	9.0	23.0	44.0
Actuated g/C Ratio	0.21	0.43	0.43	0.06	0.28	0.28	0.12	0.26	0.32	0.09	0.23	0.44
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	314	1735	597	91	1065	378	183	815	500	135	714	654
v/s Ratio Prot	c0.20	c0.40		0.05	0.27		c0.11	c0.24	0.02	0.09	0.23	0.06
v/s Ratio Perm			0.04			0.01			0.08			0.08
v/c Ratio	0.95	0.93	0.09	0.90	0.97	0.05	0.95	0.93	0.27	0.96	0.99	0.29
Uniform Delay, d1	39.0	27.1	16.9	46.7	35.6	26.3	43.7	36.1	25.3	45.3	38.4	17.9
Progression Factor	0.85	0.76	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	33.9	8.9	0.3	62.8	21.2	0.2	52.1	16.3	0.3	65.7	31.1	0.2
Delay (s)	67.1	29.6	14.6	109.5	56.8	26.5	95.8	52.3	25.6	111.0	69.5	18.2
Level of Service	E	C	B	F	E	C	F	D	C	F	E	B
Approach Delay (s)		34.2			58.8			55.4			64.3	
Approach LOS		C			E			E			E	

Intersection Summary			
HCM Average Control Delay	49.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1495	3868	1290	1509	4181	1350	1524	3136	1389	1495	3106	1363
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1495	3868	1290	1509	4181	1350	1524	3136	1389	1495	3106	1363
Volume (vph)	275	1485	210	75	950	60	160	695	145	120	650	195
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	299	1614	228	82	1033	65	174	755	158	130	707	212
RTOR Reduction (vph)	0	0	130	0	0	47	0	0	24	0	0	25
Lane Group Flow (vph)	299	1614	98	82	1033	18	174	755	134	130	707	187
Heavy Vehicles (%)	8%	20%	12%	7%	11%	7%	6%	3%	4%	8%	4%	6%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	20.9	43.0	43.0	6.0	28.1	28.1	12.0	26.0	32.0	9.0	23.0	43.9
Effective Green, g (s)	20.9	43.0	43.0	6.0	28.1	28.1	12.0	26.0	32.0	9.0	23.0	43.9
Actuated g/C Ratio	0.21	0.43	0.43	0.06	0.28	0.28	0.12	0.26	0.32	0.09	0.23	0.44
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	312	1663	555	91	1175	379	183	815	500	135	714	653
v/s Ratio Prot	c0.20	c0.42		0.05	0.25		c0.11	c0.24	0.02	0.09	0.23	0.06
v/s Ratio Perm			0.08			0.01			0.08			0.08
v/c Ratio	0.96	0.97	0.18	0.90	0.88	0.05	0.95	0.93	0.27	0.96	0.99	0.29
Uniform Delay, d1	39.1	27.9	17.6	46.7	34.3	26.2	43.7	36.1	25.3	45.3	38.4	18.0
Progression Factor	0.90	0.50	0.40	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	30.2	12.0	0.4	62.8	9.5	0.2	52.1	16.3	0.3	65.7	31.1	0.2
Delay (s)	65.3	25.9	7.5	109.5	43.8	26.4	95.8	52.3	25.6	111.0	69.5	18.2
Level of Service	E	C	A	F	D	C	F	D	C	F	E	B
Approach Delay (s)		29.5			47.4			55.4			64.3	
Approach LOS		C			D			E			E	

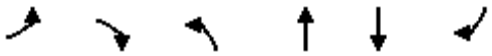
Intersection Summary			
HCM Average Control Delay	45.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1369	4007	1248	1369	4082	1225	1345	2815	1259	1520	2815	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1369	4007	1248	1369	4082	1225	1345	2815	1259	1520	2815	1360
Volume (vph)	100	700	285	280	590	95	40	370	40	20	420	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	737	300	295	621	100	42	389	42	21	442	11
RTOR Reduction (vph)	0	0	131	0	0	68	0	0	18	0	0	6
Lane Group Flow (vph)	105	737	169	295	621	32	42	389	24	21	442	5
Heavy Vehicles (%)	11%	9%	9%	11%	7%	11%	13%	8%	8%	0%	8%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	20.1	22.0	30.5	24.8	26.7	32.0	8.5	31.9	56.7	5.3	28.7	48.8
Effective Green, g (s)	20.1	22.0	30.5	24.8	26.7	32.0	8.5	31.9	56.7	5.3	28.7	48.8
Actuated g/C Ratio	0.20	0.22	0.30	0.25	0.27	0.32	0.08	0.32	0.57	0.05	0.29	0.49
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	275	882	431	340	1090	392	114	898	764	81	808	664
v/s Ratio Prot	0.08	c0.18	c0.03	c0.22	0.15	0.00	0.03	c0.14	0.01	0.01	c0.16	0.00
v/s Ratio Perm			0.10			0.02			0.01			0.00
v/c Ratio	0.38	0.84	0.39	0.87	0.57	0.08	0.37	0.43	0.03	0.26	0.55	0.01
Uniform Delay, d1	34.6	37.3	27.4	36.0	31.7	23.7	43.2	26.9	9.5	45.5	30.2	13.2
Progression Factor	0.55	0.64	0.89	0.49	0.44	0.62	1.20	0.80	0.33	1.00	1.00	1.00
Incremental Delay, d2	0.7	5.5	0.5	8.5	0.2	0.0	1.0	0.8	0.0	1.7	2.7	0.0
Delay (s)	19.9	29.4	25.0	26.1	14.1	14.7	52.8	22.3	3.2	47.2	32.8	13.2
Level of Service	B	C	C	C	B	B	D	C	A	D	C	B
Approach Delay (s)		27.4			17.7			23.3			33.0	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

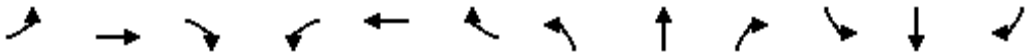
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	200	185	0	65	295	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	211	195	0	68	311	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					843	
pX, platoon unblocked						
vC, conflicting volume	345	311	311			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	345	311	311			
tC, single (s)	6.8	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	66	71	100			
cM capacity (veh/h)	626	682	1261			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	211	195	34	34	311
Volume Left	211	0	0	0	0
Volume Right	0	195	0	0	0
cSH	626	682	1700	1700	1700
Volume to Capacity	0.34	0.29	0.02	0.02	0.18
Queue Length 95th (ft)	37	29	0	0	0
Control Delay (s)	13.6	12.4	0.0	0.0	0.0
Lane LOS	B	B			
Approach Delay (s)	13.0		0.0		0.0
Approach LOS	B				

Intersection Summary			
Average Delay	6.7		
Intersection Capacity Utilization	33.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)				4.0	4.0			4.0			4.0	
Lane Util. Factor				1.00	0.95			1.00			1.00	
Frt				1.00	1.00			1.00			0.88	
Flt Protected				0.95	1.00			0.98			1.00	
Satd. Flow (prot)				1490	2891			1432			1372	
Flt Permitted				0.95	1.00			0.91			1.00	
Satd. Flow (perm)				1490	2891			1339			1372	
Volume (vph)	0	0	0	5	405	5	5	5	0	0	10	130
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	5	426	5	5	5	0	0	11	137
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	99	0
Lane Group Flow (vph)	0	0	0	5	430	0	0	10	0	0	49	0
Heavy Vehicles (%)	2%	2%	2%	2%	5%	2%	2%	16%	2%	2%	3%	2%
Turn Type				Split			Perm					
Protected Phases				6	6			8			4	
Permitted Phases							8					
Actuated Green, G (s)				24.0	24.0			22.0			22.0	
Effective Green, g (s)				24.0	24.0			22.0			22.0	
Actuated g/C Ratio				0.30	0.30			0.28			0.28	
Clearance Time (s)				4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)				447	867			368			377	
v/s Ratio Prot				0.00	c0.15						c0.04	
v/s Ratio Perm								0.01				
v/c Ratio				0.01	0.50			0.03			0.13	
Uniform Delay, d1				19.7	23.0			21.2			21.8	
Progression Factor				1.00	1.00			1.00			1.00	
Incremental Delay, d2				0.0	2.0			0.1			0.7	
Delay (s)				19.7	25.1			21.3			22.5	
Level of Service				B	C			C			C	
Approach Delay (s)		0.0			25.0			21.3			22.5	
Approach LOS		A			C			C			C	

Intersection Summary			
HCM Average Control Delay	24.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	34.0
Intersection Capacity Utilization	30.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3010	1204	1505	3010	1462	1360
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3010	1204	1505	3010	1462	1360
Volume (vph)	1015	110	560	1265	260	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1068	116	589	1332	274	63
RTOR Reduction (vph)	0	51	0	0	0	42
Lane Group Flow (vph)	1068	65	589	1332	274	21
Heavy Vehicles (%)	1%	13%	1%	1%	4%	0%
Turn Type		pm+ov	Prot			Over
Protected Phases	4	5	3	8	5	3
Permitted Phases		4				
Actuated Green, G (s)	24.0	35.0	23.0	51.0	11.0	23.0
Effective Green, g (s)	24.0	35.0	23.0	51.0	11.0	23.0
Actuated g/C Ratio	0.34	0.50	0.33	0.73	0.16	0.33
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1032	671	495	2193	230	447
v/s Ratio Prot	c0.35	0.02	c0.39	0.44	c0.19	0.02
v/s Ratio Perm		0.04				
v/c Ratio	1.03	0.10	1.19	0.61	1.19	0.05
Uniform Delay, d1	23.0	9.2	23.5	4.6	29.5	16.0
Progression Factor	0.36	0.02	1.00	1.00	1.00	1.00
Incremental Delay, d2	33.9	0.0	104.1	1.3	120.8	0.0
Delay (s)	42.3	0.2	127.6	5.9	150.3	16.1
Level of Service	D	A	F	A	F	B
Approach Delay (s)	38.2			43.2	125.2	
Approach LOS	D			D	F	

Intersection Summary			
HCM Average Control Delay	49.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	97.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2951	1248	1490	2980	2891	1333
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2951	1248	1490	2980	2891	1333
Volume (vph)	805	360	290	1235	620	320
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	847	379	305	1300	653	337
RTOR Reduction (vph)	0	244	0	0	0	0
Lane Group Flow (vph)	847	135	305	1300	653	337
Heavy Vehicles (%)	3%	9%	2%	2%	2%	2%
Turn Type		Perm	Prot			Free
Protected Phases	4		3	8		
Permitted Phases		4			2	Free
Actuated Green, G (s)	25.0	25.0	16.0	45.0	17.0	70.0
Effective Green, g (s)	25.0	25.0	16.0	45.0	17.0	70.0
Actuated g/C Ratio	0.36	0.36	0.23	0.64	0.24	1.00
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	1054	446	341	1916	702	1333
v/s Ratio Prot	c0.29		c0.20	0.44		
v/s Ratio Perm		0.11			c0.23	0.25
v/c Ratio	0.80	0.30	0.89	0.68	0.93	0.25
Uniform Delay, d1	20.3	16.2	26.2	7.9	25.9	0.0
Progression Factor	1.00	1.00	0.81	0.52	1.00	1.00
Incremental Delay, d2	6.5	1.7	18.6	1.4	18.9	0.5
Delay (s)	26.8	18.0	39.9	5.5	44.9	0.5
Level of Service	C	B	D	A	D	A
Approach Delay (s)	24.1			12.0	29.7	
Approach LOS	C			B	C	

Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3010			3010	1448	1271
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3010			3010	1448	1271
Volume (vph)	930	0	0	1750	60	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	979	0	0	1842	63	105
RTOR Reduction (vph)	0	0	0	0	0	94
Lane Group Flow (vph)	979	0	0	1842	63	11
Heavy Vehicles (%)	1%	0%	0%	1%	5%	7%
Turn Type						custom
Protected Phases	4			8	5	2
Permitted Phases						
Actuated Green, G (s)	63.6			63.6	8.4	8.4
Effective Green, g (s)	63.6			63.6	8.4	8.4
Actuated g/C Ratio	0.80			0.80	0.11	0.11
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2393			2393	152	133
v/s Ratio Prot	0.33			c0.61	c0.04	0.01
v/s Ratio Perm						
v/c Ratio	0.41			0.77	0.41	0.08
Uniform Delay, d1	2.5			4.3	33.5	32.3
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.5			2.5	1.8	0.3
Delay (s)	3.0			6.8	35.3	32.6
Level of Service	A			A	D	C
Approach Delay (s)	3.0			6.8	33.6	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	7.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	930	360	320	1490	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	979	379	337	1568	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				630		
pX, platoon unblocked					0.73	
vC, conflicting volume			979		2626	679
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			979		2855	679
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			52		100	100
cM capacity (veh/h)			695		5	399

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	653	705	337	784	784
Volume Left	0	0	337	0	0
Volume Right	0	379	0	0	0
cSH	1700	1700	695	1700	1700
Volume to Capacity	0.38	0.41	0.48	0.46	0.46
Queue Length 95th (ft)	0	0	67	0	0
Control Delay (s)	0.0	0.0	15.0	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		2.6		
Approach LOS					

Intersection Summary			
Average Delay	1.5		
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.95	1.00		0.91		0.97		1.00			
Frt		1.00	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		2951	1333		4112		2891		1225			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		2951	1333		4112		2891		1225			
Volume (vph)	0	810	280	0	875	240	570	0	260	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	853	295	0	921	253	600	0	274	0	0	0
RTOR Reduction (vph)	0	0	123	0	65	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	853	172	0	1109	0	600	0	274	0	0	0
Heavy Vehicles (%)	0%	3%	2%	0%	3%	2%	2%	0%	11%	0%	0%	0%
Turn Type			Perm				Prot		Free			
Protected Phases		4			8		5					
Permitted Phases			4						Free			
Actuated Green, G (s)		35.0	35.0		35.0		17.0		60.0			
Effective Green, g (s)		35.0	35.0		35.0		17.0		60.0			
Actuated g/C Ratio		0.58	0.58		0.58		0.28		1.00			
Clearance Time (s)		4.0	4.0		4.0		4.0					
Vehicle Extension (s)		3.0	3.0		3.0		3.0					
Lane Grp Cap (vph)		1721	778		2399		819		1225			
v/s Ratio Prot		c0.29			0.27		c0.21					
v/s Ratio Perm			0.13						0.22			
v/c Ratio		0.50	0.22		0.46		0.73		0.22			
Uniform Delay, d1		7.3	6.0		7.1		19.4		0.0			
Progression Factor		0.76	0.06		1.00		1.00		1.00			
Incremental Delay, d2		0.9	0.5		0.6		3.4		0.4			
Delay (s)		6.5	0.9		7.8		22.9		0.4			
Level of Service		A	A		A		C		A			
Approach Delay (s)		5.1			7.8			15.8			0.0	
Approach LOS		A			A			B			A	

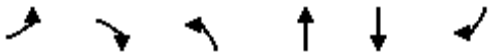
Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1900	1900	1600	1600	1900	1900	1900	1600	1900	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.91	0.91		0.95	1.00				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		2868	1386		2980	1295				2756		2347
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		2868	1386		2980	1295				2756		2347
Volume (vph)	0	850	810	0	1215	230	0	0	0	240	0	630
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	895	853	0	1279	242	0	0	0	253	0	663
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	0	0	0	53
Lane Group Flow (vph)	0	917	828	0	1279	242	0	0	0	253	0	610
Heavy Vehicles (%)	0%	1%	6%	0%	2%	5%	0%	0%	0%	7%	0%	2%
Turn Type			custom			custom				Prot		custom
Protected Phases		4			8					1		6
Permitted Phases			1 4			1 8						
Actuated Green, G (s)		33.7	60.0		33.7	60.0				18.3		18.3
Effective Green, g (s)		33.7	60.0		33.7	60.0				18.3		18.3
Actuated g/C Ratio		0.56	1.00		0.56	1.00				0.31		0.31
Clearance Time (s)		4.0			4.0					4.0		4.0
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Lane Grp Cap (vph)		1611	1386		1674	1295				841		716
v/s Ratio Prot		0.32			c0.43					0.09		c0.26
v/s Ratio Perm			0.60			0.19						
v/c Ratio		0.57	0.60		0.76	0.19				0.30		0.85
Uniform Delay, d1		8.5	0.0		10.1	0.0				16.0		19.6
Progression Factor		1.00	1.00		0.73	1.00				1.00		1.00
Incremental Delay, d2		1.5	0.7		2.7	0.1				0.2		9.6
Delay (s)		9.9	0.7		10.1	0.1				16.2		29.2
Level of Service		A	A		B	A				B		C
Approach Delay (s)		5.6			8.5			0.0			25.6	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

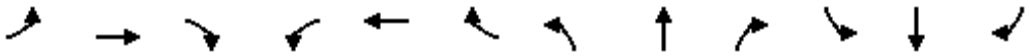
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1520	1271	1394	2951	1553	1236
Flt Permitted	0.95	1.00	0.61	1.00	1.00	1.00
Satd. Flow (perm)	1520	1271	901	2951	1553	1236
Volume (vph)	5	265	90	160	220	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	279	95	168	232	11
RTOR Reduction (vph)	0	239	0	0	0	4
Lane Group Flow (vph)	5	40	95	168	232	7
Heavy Vehicles (%)	0%	7%	9%	3%	3%	10%
Turn Type		Perm	Perm			Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	6.5	6.5	30.5	30.5	30.5	30.5
Effective Green, g (s)	6.5	6.5	30.5	30.5	30.5	30.5
Actuated g/C Ratio	0.14	0.14	0.68	0.68	0.68	0.68
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	220	184	611	2000	1053	838
v/s Ratio Prot	0.00			0.06	c0.15	
v/s Ratio Perm		c0.03	0.11			0.01
v/c Ratio	0.02	0.22	0.16	0.08	0.22	0.01
Uniform Delay, d1	16.5	17.0	2.6	2.5	2.7	2.4
Progression Factor	1.00	1.00	0.61	0.61	1.00	1.00
Incremental Delay, d2	0.0	0.6	0.5	0.1	0.5	0.0
Delay (s)	16.6	17.6	2.1	1.6	3.2	2.4
Level of Service	B	B	A	A	A	A
Approach Delay (s)	17.6			1.8	3.2	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.9%	ICU Level of Service	A
Analysis Period (min)	15		

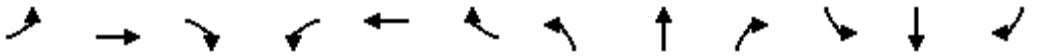
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0		4.0			
Lane Util. Factor		0.86	0.86		0.86	0.86	0.97		0.88			
Frt		1.00	0.85		0.98	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4087	1083		3947	1158	2863		2347			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4087	1083		3947	1158	2863		2347			
Volume (vph)	0	1385	670	0	1225	1240	420	0	400	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1458	705	0	1289	1305	442	0	421	0	0	0
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	4	0	0	0
Lane Group Flow (vph)	0	1458	705	0	1441	1136	442	0	417	0	0	0
Heavy Vehicles (%)	0%	1%	8%	0%	3%	1%	3%	0%	2%	0%	0%	0%
Turn Type			custom			custom	Prot		custom			
Protected Phases		4			8		5		2			
Permitted Phases			4 5			5 8						
Actuated Green, G (s)		33.0	90.0		33.0	90.0	49.0		49.0			
Effective Green, g (s)		33.0	90.0		33.0	90.0	49.0		49.0			
Actuated g/C Ratio		0.37	1.00		0.37	1.00	0.54		0.54			
Clearance Time (s)		4.0			4.0		4.0		4.0			
Vehicle Extension (s)		3.0			3.0		3.0		3.0			
Lane Grp Cap (vph)		1499	1083		1447	1158	1559		1278			
v/s Ratio Prot		0.36			0.37		0.15		0.18			
v/s Ratio Perm			0.65			c0.98						
v/c Ratio		0.97	0.65		1.00	0.98	0.28		0.33			
Uniform Delay, d1		28.1	0.0		28.4	0.0	11.0		11.4			
Progression Factor		0.95	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		14.2	1.0		22.7	21.9	0.1		0.2			
Delay (s)		40.9	1.0		51.1	21.9	11.1		11.5			
Level of Service		D	A		D	C	B		B			
Approach Delay (s)		27.9			38.3			11.3			0.0	
Approach LOS		C			D			B			A	

Intersection Summary			
HCM Average Control Delay	30.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

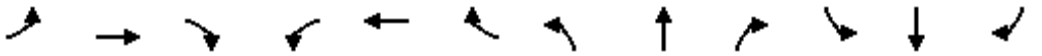
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.86	0.86		0.86	0.86				0.97		0.88
Frt		0.99	0.85		0.93	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3959	1136		3737	1136				2808		2324
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3959	1136		3737	1136				2808		2324
Volume (vph)	0	1685	820	0	575	1070	0	0	0	370	0	600
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1774	863	0	605	1126	0	0	0	389	0	632
RTOR Reduction (vph)	0	9	197	0	157	0	0	0	0	0	0	490
Lane Group Flow (vph)	0	1921	510	0	1011	563	0	0	0	389	0	142
Heavy Vehicles (%)	0%	3%	3%	0%	2%	3%	0%	0%	0%	5%	0%	3%
Turn Type			Perm			custom				Prot		custom
Protected Phases		4			8					1		
Permitted Phases			4			1 8						6
Actuated Green, G (s)		64.9	64.9		64.9	90.0				17.1		17.1
Effective Green, g (s)		64.9	64.9		64.9	90.0				17.1		17.1
Actuated g/C Ratio		0.72	0.72		0.72	1.00				0.19		0.19
Clearance Time (s)		4.0	4.0		4.0					4.0		4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		2855	819		2695	1136				534		442
v/s Ratio Prot		c0.49			0.27					c0.14		
v/s Ratio Perm			0.45			0.50						0.06
v/c Ratio		0.67	0.62		0.38	0.50				0.73		0.32
Uniform Delay, d1		6.8	6.4		4.8	0.0				34.3		31.4
Progression Factor		1.00	1.00		0.60	1.00				1.00		1.00
Incremental Delay, d2		1.3	3.5		0.4	0.1				4.9		0.4
Delay (s)		8.1	9.9		3.2	0.1				39.2		31.9
Level of Service		A	A		A	A				D		C
Approach Delay (s)		8.6			2.2			0.0			34.7	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	11.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
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												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.91					0.97	1.00	0.88
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (prot)		4378	1403		4378					3013	1635	2445
Flt Permitted		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (perm)		4378	1403		4378					3013	1635	2445
Volume (vph)	0	650	290	0	1335	0	0	0	0	265	455	650
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	684	305	0	1405	0	0	0	0	279	479	684
RTOR Reduction (vph)	0	0	128	0	0	0	0	0	0	0	0	16
Lane Group Flow (vph)	0	684	177	0	1405	0	0	0	0	279	479	668
Heavy Vehicles (%)	0%	6%	3%	3%	6%	0%	0%	0%	0%	4%	4%	4%
Turn Type			Perm							Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		57.3	57.3		57.3					34.7	34.7	34.7
Effective Green, g (s)		57.3	57.3		57.3					34.7	34.7	34.7
Actuated g/C Ratio		0.57	0.57		0.57					0.35	0.35	0.35
Clearance Time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2509	804		2509					1046	567	848
v/s Ratio Prot		0.16			c0.32					0.09	c0.29	
v/s Ratio Perm			0.13									0.27
v/c Ratio		0.27	0.22		0.56					0.27	0.84	0.79
Uniform Delay, d1		10.8	10.4		13.4					23.5	30.2	29.3
Progression Factor		1.00	1.00		0.71					1.00	1.00	1.00
Incremental Delay, d2		0.3	0.6		0.8					0.1	11.1	4.9
Delay (s)		11.1	11.1		10.4					23.6	41.3	34.2
Level of Service		B	B		B					C	D	C
Approach Delay (s)		11.1			10.4			0.0			34.5	
Approach LOS		B			B			A			C	

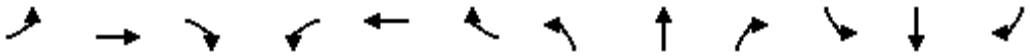
Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4420	1363	1538	4550	3042	1302
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4420	1363	1538	4550	3042	1302
Volume (vph)	510	420	450	465	160	240
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	537	442	474	489	168	253
RTOR Reduction (vph)	0	0	0	0	0	227
Lane Group Flow (vph)	537	442	474	489	168	26
Heavy Vehicles (%)	5%	6%	5%	2%	3%	11%
Turn Type		Free	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	38.8	120.0	57.0	99.8	12.2	12.2
Effective Green, g (s)	38.8	120.0	57.0	99.8	12.2	12.2
Actuated g/C Ratio	0.32	1.00	0.48	0.83	0.10	0.10
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1429	1363	731	3784	309	132
v/s Ratio Prot	c0.12		c0.31	0.11	c0.06	
v/s Ratio Perm		0.32				0.02
v/c Ratio	0.38	0.32	0.65	0.13	0.54	0.19
Uniform Delay, d1	31.3	0.0	23.9	1.9	51.3	49.4
Progression Factor	1.00	1.00	0.75	0.98	1.00	1.00
Incremental Delay, d2	0.8	0.6	1.7	0.1	2.0	0.7
Delay (s)	32.0	0.6	19.6	1.9	53.2	50.1
Level of Service	C	A	B	A	D	D
Approach Delay (s)	17.9			10.6	51.4	
Approach LOS	B			B	D	

Intersection Summary			
HCM Average Control Delay	20.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	15		

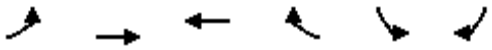
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1900	1700	1700	1900	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0		4.0		4.0			
Lane Util. Factor	0.97	0.91			0.91		0.97		1.00			
Frt	1.00	1.00			0.99		1.00		0.85			
Flt Protected	0.95	1.00			1.00		0.95		1.00			
Satd. Flow (prot)	2487	4631			4341		2748		1268			
Flt Permitted	0.95	1.00			1.00		0.95		1.00			
Satd. Flow (perm)	2487	4631			4341		2748		1268			
Volume (vph)	75	1845	0	0	1130	115	85	0	125	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	2005	0	0	1228	125	92	0	136	0	0	0
RTOR Reduction (vph)	0	0	0	0	8	0	0	0	14	0	0	0
Lane Group Flow (vph)	82	2005	0	0	1345	0	92	0	122	0	0	0
Heavy Vehicles (%)	26%	12%	0%	0%	17%	26%	14%	0%	14%	0%	0%	0%
Turn Type	Prot						custom		custom			
Protected Phases	7	4			8							
Permitted Phases							2		2			
Actuated Green, G (s)	7.2	77.7			66.5		14.3		14.3			
Effective Green, g (s)	7.2	77.7			66.5		14.3		14.3			
Actuated g/C Ratio	0.07	0.78			0.66		0.14		0.14			
Clearance Time (s)	4.0	4.0			4.0		4.0		4.0			
Vehicle Extension (s)	3.0	3.0			3.0		3.0		3.0			
Lane Grp Cap (vph)	179	3598			2887		393		181			
v/s Ratio Prot	0.03	c0.43			0.31							
v/s Ratio Perm							0.03		c0.10			
v/c Ratio	0.46	0.56			0.47		0.23		0.68			
Uniform Delay, d1	44.5	4.4			8.1		38.0		40.6			
Progression Factor	0.91	1.19			0.23		1.00		1.00			
Incremental Delay, d2	1.5	0.5			0.3		0.3		9.6			
Delay (s)	42.1	5.7			2.1		38.3		50.2			
Level of Service	D	A			A		D		D			
Approach Delay (s)		7.1			2.1			45.4			0.0	
Approach LOS		A			A			D			A	

Intersection Summary			
HCM Average Control Delay	7.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

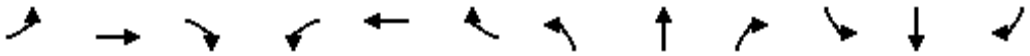
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.81	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6206	4433		3303	2493
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6206	4433		3303	2493
Volume (vph)	0	680	1215	0	1240	1160
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	739	1321	0	1348	1261
RTOR Reduction (vph)	0	0	0	0	0	4
Lane Group Flow (vph)	0	739	1321	0	1348	1257
Heavy Vehicles (%)	0%	24%	17%	0%	6%	14%
Turn Type						custom
Protected Phases		4	8			
Permitted Phases					6	6
Actuated Green, G (s)		35.0	35.0		57.0	57.0
Effective Green, g (s)		35.0	35.0		57.0	57.0
Actuated g/C Ratio		0.35	0.35		0.57	0.57
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		2172	1552		1883	1421
v/s Ratio Prot		0.12	c0.30			
v/s Ratio Perm					0.41	c0.50
v/c Ratio		0.34	0.85		0.72	0.88
Uniform Delay, d1		24.0	30.1		15.6	18.6
Progression Factor		0.43	0.54		1.00	1.00
Incremental Delay, d2		0.4	5.6		2.4	8.3
Delay (s)		10.8	21.9		18.0	27.0
Level of Service		B	C		B	C
Approach Delay (s)		10.8	21.9		22.3	
Approach LOS		B	C		C	

Intersection Summary			
HCM Average Control Delay	20.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

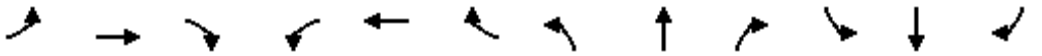
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	0.97	0.91			0.81	1.00	0.97		1.00			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	2779	4759			7125	1282	1990		1077			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2779	4759			7125	1282	1990		1077			
Volume (vph)	75	1845	0	0	1130	115	305	0	215	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	82	2005	0	0	1228	125	332	0	234	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	69	0	0	4	0	0	0
Lane Group Flow (vph)	82	2005	0	0	1228	56	332	0	230	0	0	0
Heavy Vehicles (%)	26%	9%	2%	2%	8%	26%	76%	2%	50%	2%	2%	2%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	6.3	55.0			44.7	44.7	37.0		37.0			
Effective Green, g (s)	6.3	55.0			44.7	44.7	37.0		37.0			
Actuated g/C Ratio	0.06	0.55			0.45	0.45	0.37		0.37			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	175	2617			3185	573	736		398			
v/s Ratio Prot	0.03	c0.42			0.17							
v/s Ratio Perm						0.04	0.17		c0.21			
v/c Ratio	0.47	0.77			0.39	0.10	0.45		0.58			
Uniform Delay, d1	45.2	17.5			18.5	16.0	23.8		25.2			
Progression Factor	0.85	0.99			0.73	1.90	1.00		1.00			
Incremental Delay, d2	1.5	1.7			0.2	0.2	2.0		6.0			
Delay (s)	40.0	19.1			13.7	30.5	25.8		31.2			
Level of Service	D	B			B	C	C		C			
Approach Delay (s)		19.9			15.3			28.0			0.0	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
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												
Ideal Flow (vphpl)	1900	1900	1700	1700	1900	1900	1700	1700	1700	1900	1700	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0		4.0
Lane Util. Factor		0.81	0.88	0.97	0.91					0.97		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		6750	1817	2611	4217					3303		2493
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		6750	1817	2611	4217					3303		2493
Volume (vph)	0	680	430	90	1345	0	0	0	0	1240	0	1160
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	739	467	98	1462	0	0	0	0	1348	0	1261
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	4
Lane Group Flow (vph)	0	739	467	98	1462	0	0	0	0	1348	0	1257
Heavy Vehicles (%)	0%	14%	40%	20%	23%	0%	0%	0%	0%	6%	0%	14%
Turn Type			Free	Prot						custom		custom
Protected Phases		4		3	8							
Permitted Phases			Free							6		6
Actuated Green, G (s)		27.6	100.0	6.4	38.0					54.0		54.0
Effective Green, g (s)		27.6	100.0	6.4	38.0					54.0		54.0
Actuated g/C Ratio		0.28	1.00	0.06	0.38					0.54		0.54
Clearance Time (s)		4.0		4.0	4.0					4.0		4.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0		3.0
Lane Grp Cap (vph)		1863	1817	167	1602					1784		1346
v/s Ratio Prot		0.11		0.04	c0.35							
v/s Ratio Perm			0.26							0.41		c0.50
v/c Ratio		0.40	0.26	0.59	0.91					0.76		0.93
Uniform Delay, d1		29.4	0.0	45.5	29.4					17.9		21.3
Progression Factor		1.00	1.00	1.36	0.57					1.00		1.00
Incremental Delay, d2		0.6	0.3	4.9	8.9					3.0		13.1
Delay (s)		30.1	0.3	66.7	25.8					20.9		34.4
Level of Service		C	A	E	C					C		C
Approach Delay (s)		18.6			28.4			0.0			27.4	
Approach LOS		B			C			A			C	

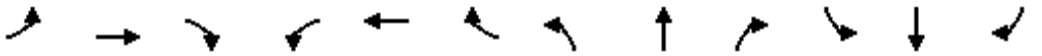
Intersection Summary			
HCM Average Control Delay	25.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	5	0	0	0	0	0	20	60	0	10	465	5
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	5	0	0	0	0	0	21	63	0	11	489	5
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)											1108	
pX, platoon unblocked												
vC, conflicting volume	616	616	489	616	621	63	495			63		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	616	616	489	616	621	63	495			63		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	99	100	100	100	100	100	98			99		
cM capacity (veh/h)	398	398	583	398	395	1007	1079			1552		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	5	84	0	11	489	5
Volume Left	5	21	0	11	0	0
Volume Right	0	0	0	0	0	5
cSH	398	1079	1700	1552	1700	1700
Volume to Capacity	0.01	0.02	0.00	0.01	0.29	0.00
Queue Length 95th (ft)	1	1	0	1	0	0
Control Delay (s)	14.2	2.2	0.0	7.3	0.0	0.0
Lane LOS	B	A		A		
Approach Delay (s)	14.2	2.2		0.2		
Approach LOS	B					

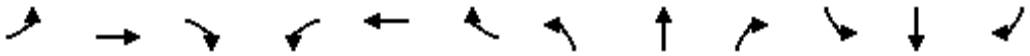
Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	34.5%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1505	4007	1347	1520	4044	1360	1333	1600	1271	1520	1600	1038
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.73	1.00	1.00	0.72	1.00	1.00
Satd. Flow (perm)	1505	4007	1347	1520	4044	1360	1024	1600	1271	1156	1600	1038
Volume (vph)	95	1020	275	150	2420	30	75	50	145	75	40	95
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	1074	289	158	2547	32	79	53	153	79	42	100
RTOR Reduction (vph)	0	0	124	0	0	7	0	0	51	0	0	4
Lane Group Flow (vph)	100	1074	165	158	2547	25	79	53	102	79	42	96
Heavy Vehicles (%)	1%	9%	1%	0%	8%	0%	14%	0%	7%	0%	0%	31%
Turn Type	Prot		Perm	Prot		Perm	Perm		pm+ov	Perm		pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases			2			6	8		8	4		4
Actuated Green, G (s)	7.0	57.2	57.2	14.8	65.0	65.0	16.0	16.0	30.8	16.0	16.0	23.0
Effective Green, g (s)	7.0	57.2	57.2	14.8	65.0	65.0	16.0	16.0	30.8	16.0	16.0	23.0
Actuated g/C Ratio	0.07	0.57	0.57	0.15	0.65	0.65	0.16	0.16	0.31	0.16	0.16	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	105	2292	770	225	2629	884	164	256	442	185	256	280
v/s Ratio Prot	c0.07	0.27		0.10	c0.63			0.03	0.03		0.03	0.02
v/s Ratio Perm			0.12			0.02	c0.08		0.05	0.07		0.07
v/c Ratio	0.95	0.47	0.21	0.70	0.97	0.03	0.48	0.21	0.23	0.43	0.16	0.34
Uniform Delay, d1	46.3	12.5	10.4	40.5	16.5	6.2	38.2	36.5	25.8	37.9	36.2	32.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	72.2	0.7	0.6	9.5	11.6	0.1	2.2	0.4	0.3	7.1	1.4	0.7
Delay (s)	118.5	13.2	11.1	50.0	28.2	6.3	40.4	36.9	26.1	44.9	37.6	32.9
Level of Service	F	B	B	D	C	A	D	D	C	D	D	C
Approach Delay (s)		20.0			29.2			32.1			38.1	
Approach LOS		B			C			C			D	

Intersection Summary			
HCM Average Control Delay	26.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.4%	ICU Level of Service	E
Analysis Period (min)	15		

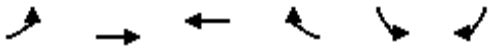
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.91		1.00	1.00			0.95	
Frt					0.99		1.00	1.00			0.99	
Flt Protected					0.98		0.95	1.00			1.00	
Satd. Flow (prot)					4131		1394	1524			2919	
Flt Permitted					0.98		0.47	1.00			1.00	
Satd. Flow (perm)					4131		684	1524			2919	
Volume (vph)	0	0	0	215	310	40	70	385	0	0	355	35
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	226	326	42	74	405	0	0	374	37
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	0	11	0
Lane Group Flow (vph)	0	0	0	0	588	0	74	405	0	0	400	0
Heavy Vehicles (%)	0%	0%	0%	5%	1%	3%	9%	5%	0%	0%	3%	0%
Turn Type				Split			Perm					
Protected Phases				6	6			8			4	
Permitted Phases							8					
Actuated Green, G (s)					35.5		22.0	22.0			22.0	
Effective Green, g (s)					35.5		22.0	22.0			22.0	
Actuated g/C Ratio					0.54		0.34	0.34			0.34	
Clearance Time (s)					4.0		4.0	4.0			4.0	
Vehicle Extension (s)					3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)					2239		230	512			980	
v/s Ratio Prot					c0.14			c0.27			0.14	
v/s Ratio Perm							0.11					
v/c Ratio					0.26		0.32	0.79			0.41	
Uniform Delay, d1					8.0		16.2	19.7			16.7	
Progression Factor					1.00		1.00	1.00			1.00	
Incremental Delay, d2					0.3		0.8	8.2			0.3	
Delay (s)					8.3		17.0	27.8			17.0	
Level of Service					A		B	C			B	
Approach Delay (s)		0.0			8.3			26.2			17.0	
Approach LOS		A			A			C			B	

Intersection Summary			
HCM Average Control Delay	16.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	65.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		

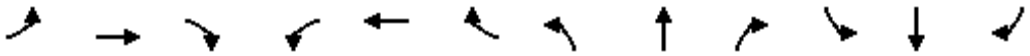
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	0	1375	0	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	1447	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)			342			
pX, platoon unblocked	0.79				0.79	0.79
vC, conflicting volume	1447				1447	724
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1305				1305	394
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	427				123	485

Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	965	482	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.57	0.28	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0		0.0
Approach LOS			A

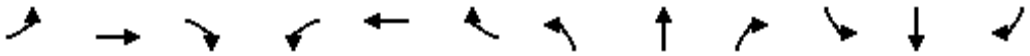
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	41.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		1.00			0.99		1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1504			1485		1520	2922		1462	2869	
Flt Permitted		0.84			0.90		0.38	1.00		0.13	1.00	
Satd. Flow (perm)		1289			1346		605	2922		199	2869	
Volume (vph)	165	240	15	25	75	10	25	1330	95	55	555	45
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	174	253	16	26	79	11	26	1400	100	58	584	47
RTOR Reduction (vph)	0	2	0	0	7	0	0	9	0	0	10	0
Lane Group Flow (vph)	0	441	0	0	110	0	26	1491	0	58	621	0
Heavy Vehicles (%)	4%	4%	0%	8%	5%	0%	0%	3%	3%	4%	5%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		21.0			21.0		31.0	31.0		31.0	31.0	
Effective Green, g (s)		21.0			21.0		31.0	31.0		31.0	31.0	
Actuated g/C Ratio		0.35			0.35		0.52	0.52		0.52	0.52	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		451			471		313	1510		103	1482	
v/s Ratio Prot								c0.51			0.22	
v/s Ratio Perm		c0.34			0.08		0.04			0.29		
v/c Ratio		0.98			0.23		0.08	0.99		0.56	0.42	
Uniform Delay, d1		19.3			13.8		7.3	14.3		9.9	8.9	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		36.2			0.3		0.5	20.4		20.4	0.9	
Delay (s)		55.5			14.1		7.8	34.7		30.3	9.8	
Level of Service		E			B		A	C		C	A	
Approach Delay (s)		55.5			14.1			34.3			11.5	
Approach LOS		E			B			C			B	

Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	94.5%	ICU Level of Service	F
Analysis Period (min)	15		

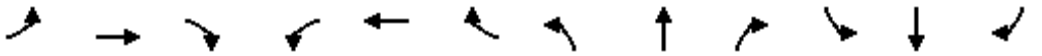
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2916		1490	2967		1490	2963		1520	2886	
Flt Permitted	0.16	1.00		0.35	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	248	2916		543	2967		1490	2963		1520	2886	
Volume (vph)	50	525	95	210	1035	30	120	655	30	10	350	35
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	553	100	221	1089	32	126	689	32	11	368	37
RTOR Reduction (vph)	0	16	0	0	2	0	0	3	0	0	7	0
Lane Group Flow (vph)	53	637	0	221	1119	0	126	718	0	11	398	0
Heavy Vehicles (%)	2%	2%	1%	2%	2%	3%	2%	2%	0%	0%	4%	3%
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	51.8	51.8		51.8	51.8		11.6	35.4		0.8	24.6	
Effective Green, g (s)	51.8	51.8		51.8	51.8		11.6	35.4		0.8	24.6	
Actuated g/C Ratio	0.52	0.52		0.52	0.52		0.12	0.35		0.01	0.25	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	128	1510		281	1537		173	1049		12	710	
v/s Ratio Prot		0.22			0.38		c0.08	c0.24		0.01	0.14	
v/s Ratio Perm	0.21			c0.41								
v/c Ratio	0.41	0.42		0.79	0.73		0.73	0.68		0.92	0.56	
Uniform Delay, d1	14.8	14.9		19.6	18.6		42.7	27.5		49.6	33.0	
Progression Factor	1.00	1.00		0.31	0.29		1.28	0.17		1.35	0.49	
Incremental Delay, d2	9.6	0.9		16.0	2.4		6.0	1.5		196.0	2.8	
Delay (s)	24.4	15.7		22.1	7.7		60.4	6.1		262.7	18.8	
Level of Service	C	B		C	A		E	A		F	B	
Approach Delay (s)		16.4			10.1			14.2			25.3	
Approach LOS		B			B			B			C	

Intersection Summary			
HCM Average Control Delay	14.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

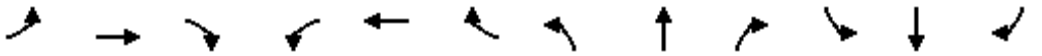
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1476	2980	1320	2920	2980	1347	2863	2951	1360	2920	2895	2280
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1476	2980	1320	2920	2980	1347	2863	2951	1360	2920	2895	2280
Volume (vph)	155	605	285	180	345	610	445	320	245	310	365	420
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.90	0.95	0.95	0.95	0.95
Adj. Flow (vph)	163	637	300	189	363	642	468	356	258	326	384	442
RTOR Reduction (vph)	0	0	46	0	0	0	0	0	55	0	0	324
Lane Group Flow (vph)	163	637	254	189	363	642	468	356	203	326	384	118
Heavy Vehicles (%)	3%	2%	3%	1%	2%	1%	3%	3%	0%	1%	5%	5%
Turn Type	Prot		pm+ov	Prot		Free	Prot		pm+ov	Prot		Over
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases			2			Free			8			
Actuated Green, G (s)	24.9	30.3	49.9	11.0	16.4	93.2	19.6	16.3	27.3	19.6	16.3	24.9
Effective Green, g (s)	24.9	30.3	49.9	11.0	16.4	93.2	19.6	16.3	27.3	19.6	16.3	24.9
Actuated g/C Ratio	0.27	0.33	0.54	0.12	0.18	1.00	0.21	0.17	0.29	0.21	0.17	0.27
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	394	969	707	345	524	1347	602	516	457	614	506	609
v/s Ratio Prot	0.11	c0.21	0.08	0.06	0.12		c0.16	0.12	0.05	0.11	c0.13	0.05
v/s Ratio Perm			0.12			c0.48			0.10			
v/c Ratio	0.41	0.66	0.36	0.55	0.69	0.48	0.78	0.69	0.44	0.53	0.76	0.19
Uniform Delay, d1	28.1	27.0	12.5	38.8	36.0	0.0	34.7	36.1	26.8	32.7	36.6	26.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	3.5	0.3	1.8	3.9	1.2	6.3	3.8	0.7	0.9	6.4	0.2
Delay (s)	28.8	30.5	12.8	40.5	40.0	1.2	41.0	39.9	27.5	33.6	43.0	26.5
Level of Service	C	C	B	D	D	A	D	D	C	C	D	C
Approach Delay (s)		25.4			19.2			37.4			34.0	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	93.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.3%	ICU Level of Service	C
Analysis Period (min)	15		

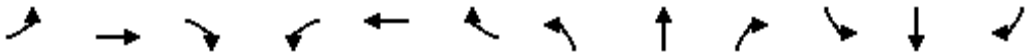
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.95		1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.97	1.00
Satd. Flow (prot)	1520	4195		1505	2950		1505	1524	1360		1513	1320
Flt Permitted	0.48	1.00		0.44	1.00		0.70	1.00	1.00		0.82	1.00
Satd. Flow (perm)	769	4195		690	2950		1102	1524	1360		1283	1320
Volume (vph)	35	380	60	110	415	35	205	20	100	60	30	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	37	400	63	116	437	37	216	21	105	63	32	32
RTOR Reduction (vph)	0	15	0	0	4	0	0	0	68	0	0	22
Lane Group Flow (vph)	37	448	0	116	470	0	216	21	38	0	95	10
Heavy Vehicles (%)	0%	2%	2%	1%	2%	0%	1%	5%	0%	2%	3%	3%
Turn Type	pm+pt			pm+pt			Perm		pm+ov	Perm		pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	36.0	32.1		42.0	35.1		17.6	17.6	24.5		17.6	21.5
Effective Green, g (s)	36.0	32.1		42.0	35.1		17.6	17.6	24.5		17.6	21.5
Actuated g/C Ratio	0.52	0.47		0.61	0.51		0.26	0.26	0.36		0.26	0.31
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	446	1963		504	1509		283	391	565		329	491
v/s Ratio Prot	0.00	0.11		c0.02	c0.16			0.01	0.01			0.00
v/s Ratio Perm	0.04			0.12			c0.20		0.02		0.07	0.01
v/c Ratio	0.08	0.23		0.23	0.31		0.76	0.05	0.07		0.29	0.02
Uniform Delay, d1	7.9	10.9		5.7	9.7		23.6	19.2	14.5		20.5	16.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.3		0.2	0.1		11.5	0.1	0.0		0.5	0.0
Delay (s)	8.0	11.1		5.9	9.8		35.1	19.3	14.6		21.0	16.3
Level of Service	A	B		A	A		D	B	B		C	B
Approach Delay (s)		10.9			9.1			27.8			19.8	
Approach LOS		B			A			C			B	

Intersection Summary			
HCM Average Control Delay	14.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	68.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.4%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.91	0.91		0.91	0.91		1.00	0.95	1.00	1.00	0.91	
Frt	1.00	0.94		1.00	0.93		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	0.98		0.95	0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1356	2614		1370	2639		1505	2980	1333	1490	4163	
Flt Permitted	0.95	0.98		0.95	0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1356	2614		1370	2639		1505	2980	1333	1490	4163	
Volume (vph)	660	65	295	70	25	40	155	1155	365	60	1535	380
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	695	68	311	74	26	42	163	1216	384	63	1616	400
RTOR Reduction (vph)	0	97	0	0	38	0	0	0	100	0	32	0
Lane Group Flow (vph)	348	629	0	46	58	0	163	1216	284	63	1984	0
Heavy Vehicles (%)	2%	0%	2%	1%	0%	3%	1%	2%	2%	2%	2%	1%
Turn Type	Split			Split			Prot		pm+ov	Prot		
Protected Phases	4	4		8	8		5	2	8	1	6	
Permitted Phases									2			
Actuated Green, G (s)	30.0	30.0		11.2	11.2		12.8	62.6	73.8	6.3	56.1	
Effective Green, g (s)	30.0	30.0		11.2	11.2		12.8	62.6	73.8	6.3	56.1	
Actuated g/C Ratio	0.24	0.24		0.09	0.09		0.10	0.50	0.59	0.05	0.44	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	323	622		122	234		153	1479	780	74	1852	
v/s Ratio Prot	c0.26	0.24		c0.03	0.02		c0.11	0.41	0.03	0.04	c0.48	
v/s Ratio Perm									0.18			
v/c Ratio	1.08	1.01		0.38	0.25		1.07	0.82	0.36	0.85	1.07	
Uniform Delay, d1	48.0	48.0		54.2	53.5		56.6	27.0	13.8	59.4	35.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	72.2	39.0		2.0	0.6		91.2	5.3	0.3	57.1	42.9	
Delay (s)	120.3	87.0		56.1	54.1		147.9	32.3	14.1	116.5	77.9	
Level of Service	F	F		E	D		F	C	B	F	E	
Approach Delay (s)		97.8			54.7			39.0			79.1	
Approach LOS		F			D			D			E	

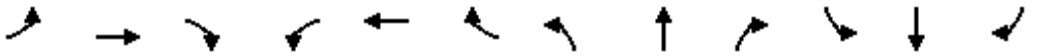
Intersection Summary			
HCM Average Control Delay	68.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	126.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1505	2917		1490	2905		1490	2926		1462	2862	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1505	2917		1490	2905		1490	2926		1462	2862	
Volume (vph)	175	870	155	200	740	140	120	585	45	25	255	65
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	184	916	163	211	779	147	126	616	47	26	268	68
RTOR Reduction (vph)	0	15	0	0	16	0	0	5	0	0	22	0
Lane Group Flow (vph)	184	1064	0	211	910	0	126	658	0	26	314	0
Heavy Vehicles (%)	1%	2%	1%	2%	2%	3%	2%	3%	0%	4%	3%	3%
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.9	38.2		15.6	38.9		11.3	27.8		2.4	18.9	
Effective Green, g (s)	14.9	38.2		15.6	38.9		11.3	27.8		2.4	18.9	
Actuated g/C Ratio	0.15	0.38		0.16	0.39		0.11	0.28		0.02	0.19	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	224	1114		232	1130		168	813		35	541	
v/s Ratio Prot	0.12	c0.36		c0.14	0.31		c0.08	c0.22		0.02	0.11	
v/s Ratio Perm												
v/c Ratio	0.82	0.96		0.91	0.81		0.75	0.81		0.74	0.58	
Uniform Delay, d1	41.3	30.1		41.5	27.2		43.0	33.6		48.5	36.9	
Progression Factor	1.00	1.00		1.03	0.60		0.63	0.69		1.28	0.66	
Incremental Delay, d2	20.9	17.1		18.4	1.8		8.1	4.0		56.8	4.3	
Delay (s)	62.1	47.2		61.3	18.2		35.3	27.0		119.0	28.6	
Level of Service	E	D		E	B		D	C		F	C	
Approach Delay (s)		49.4			26.2			28.4			35.1	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	35.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		

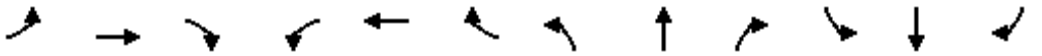
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		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)	1505	4235		1490	4149		1505	2925		1490	2980	1347
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1505	4235		1490	4149		1505	2925		1490	2980	1347
Volume (vph)	135	760	70	45	965	175	80	315	45	120	250	85
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	800	74	47	1016	184	84	332	47	126	263	89
RTOR Reduction (vph)	0	11	0	0	27	0	0	11	0	0	0	50
Lane Group Flow (vph)	142	863	0	47	1173	0	84	368	0	126	263	39
Heavy Vehicles (%)	1%	2%	0%	2%	3%	2%	1%	2%	2%	2%	2%	1%
Turn Type	Prot			Prot			Prot			Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	14.7	41.5		4.8	31.6		8.7	22.9		14.8	29.0	43.7
Effective Green, g (s)	14.7	41.5		4.8	31.6		8.7	22.9		14.8	29.0	43.7
Actuated g/C Ratio	0.15	0.42		0.05	0.32		0.09	0.23		0.15	0.29	0.44
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	221	1758		72	1311		131	670		221	864	589
v/s Ratio Prot	c0.09	0.20		0.03	c0.28		0.06	c0.13		c0.08	0.09	0.01
v/s Ratio Perm												0.02
v/c Ratio	0.64	0.49		0.65	0.89		0.64	0.55		0.57	0.30	0.07
Uniform Delay, d1	40.2	21.5		46.8	32.6		44.1	34.0		39.6	27.6	16.3
Progression Factor	1.00	1.00		0.92	0.55		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.3	0.2		1.9	0.9		10.3	3.2		3.5	0.9	0.0
Delay (s)	46.4	21.7		45.1	18.8		54.4	37.2		43.2	28.6	16.4
Level of Service	D	C		D	B		D	D		D	C	B
Approach Delay (s)		25.2			19.8			40.3			30.1	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	26.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

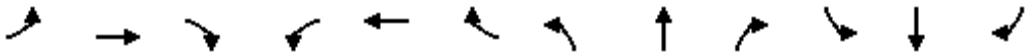
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2835	2951	1333	2863	2951	1333	1505	2951	1347	1394	2895	1193
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2835	2951	1333	2863	2951	1333	1505	2951	1347	1394	2895	1193
Volume (vph)	340	870	45	105	840	105	130	1005	70	35	315	135
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	916	47	111	884	111	137	1058	74	37	332	142
RTOR Reduction (vph)	0	0	23	0	0	14	0	0	40	0	0	90
Lane Group Flow (vph)	358	916	24	111	884	97	137	1058	34	37	332	52
Heavy Vehicles (%)	4%	3%	2%	3%	3%	2%	1%	3%	1%	9%	5%	14%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	13.0	34.7	51.7	9.3	31.0	35.0	17.0	36.0	45.3	4.0	23.0	36.0
Effective Green, g (s)	13.0	34.7	51.7	9.3	31.0	35.0	17.0	36.0	45.3	4.0	23.0	36.0
Actuated g/C Ratio	0.13	0.35	0.52	0.09	0.31	0.35	0.17	0.36	0.45	0.04	0.23	0.36
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	369	1024	742	266	915	467	256	1062	664	56	666	429
v/s Ratio Prot	0.13	c0.31	0.01	0.04	c0.30	0.01	c0.09	c0.36	0.00	0.03	0.11	0.02
v/s Ratio Perm			0.01			0.06			0.02			0.03
v/c Ratio	0.97	0.89	0.03	0.42	0.97	0.21	0.54	1.00	0.05	0.66	0.50	0.12
Uniform Delay, d1	43.3	30.9	11.9	42.8	34.0	22.8	37.9	31.9	15.3	47.3	33.5	21.4
Progression Factor	1.00	1.00	1.00	0.53	0.38	0.22	0.62	0.34	0.03	0.97	0.61	2.38
Incremental Delay, d2	38.8	10.1	0.0	0.8	18.1	0.2	1.2	20.0	0.0	14.3	1.4	0.1
Delay (s)	82.1	41.0	11.9	23.6	30.9	5.3	24.7	30.8	0.5	60.2	21.8	51.0
Level of Service	F	D	B	C	C	A	C	C	A	E	C	D
Approach Delay (s)		51.1			27.6			28.4			32.7	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	35.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.7%	ICU Level of Service	E
Analysis Period (min)	15		

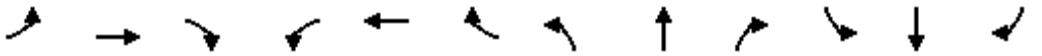
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	
Frt		1.00			0.98		1.00	1.00	0.85	1.00	0.97	
Flt Protected		1.00			1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		2862			2879		1520	2923	1308	1299	2913	
Flt Permitted		1.00			1.00		0.58	1.00	1.00	0.13	1.00	
Satd. Flow (perm)		2862			2879		927	2923	1308	183	2913	
Volume (vph)	30	700	20	50	630	85	30	820	100	30	190	40
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	737	21	53	663	89	32	863	105	32	200	42
RTOR Reduction (vph)	0	2	0	0	9	0	0	0	12	0	18	0
Lane Group Flow (vph)	0	788	0	0	796	0	32	863	93	32	224	0
Heavy Vehicles (%)	0%	6%	0%	2%	3%	8%	0%	4%	4%	17%	2%	0%
Turn Type	Split			Split			Perm		pm+ov	Perm		
Protected Phases	4	4		8	8			2	8		6	
Permitted Phases							2		2	6		
Actuated Green, G (s)		28.0			28.0		32.0	32.0	60.0	32.0	32.0	
Effective Green, g (s)		28.0			28.0		32.0	32.0	60.0	32.0	32.0	
Actuated g/C Ratio		0.28			0.28		0.32	0.32	0.60	0.32	0.32	
Clearance Time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		801			806		297	935	837	59	932	
v/s Ratio Prot		c0.28			c0.28			c0.30	0.03		0.08	
v/s Ratio Perm							0.03		0.04	0.17		
v/c Ratio		0.98			0.99		0.11	0.92	0.11	0.54	0.24	
Uniform Delay, d1		35.8			35.8		23.9	32.8	8.6	28.0	25.0	
Progression Factor		0.33			0.93		0.65	0.65	0.78	1.00	1.00	
Incremental Delay, d2		20.6			20.5		0.5	11.3	0.0	31.4	0.6	
Delay (s)		32.4			53.7		16.1	32.7	6.7	59.4	25.7	
Level of Service		C			D		B	C	A	E	C	
Approach Delay (s)		32.4			53.7			29.4			29.6	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM Average Control Delay	37.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.0%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1490	2868	1320	1490	2923	1320	2863	2951	1360	2835	2868	1295
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1490	2868	1320	1490	2923	1320	2863	2951	1360	2835	2868	1295
Volume (vph)	130	780	30	45	690	75	185	990	60	115	470	130
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	137	821	32	47	726	79	195	1042	63	121	495	137
RTOR Reduction (vph)	0	0	17	0	0	54	0	0	23	0	0	29
Lane Group Flow (vph)	137	821	15	47	726	25	195	1042	40	121	495	108
Heavy Vehicles (%)	2%	6%	3%	2%	4%	3%	3%	3%	0%	4%	6%	5%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.3	34.8	46.8	4.0	26.5	31.5	12.0	40.2	44.2	5.0	33.2	45.5
Effective Green, g (s)	12.3	34.8	46.8	4.0	26.5	31.5	12.0	40.2	44.2	5.0	33.2	45.5
Actuated g/C Ratio	0.12	0.35	0.47	0.04	0.26	0.32	0.12	0.40	0.44	0.05	0.33	0.46
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	183	998	618	60	775	469	344	1186	601	142	952	641
v/s Ratio Prot	0.09	c0.29	0.00	0.03	c0.25	0.00	0.07	c0.35	0.00	c0.04	0.17	0.02
v/s Ratio Perm			0.01			0.02			0.03			0.06
v/c Ratio	0.75	0.82	0.02	0.78	0.94	0.05	0.57	0.88	0.07	0.85	0.52	0.17
Uniform Delay, d1	42.4	29.8	14.3	47.6	35.9	23.9	41.5	27.6	16.0	47.1	27.0	16.1
Progression Factor	1.19	1.26	1.86	1.01	0.41	0.00	1.00	1.00	1.00	0.79	0.44	0.22
Incremental Delay, d2	15.2	5.5	0.0	31.7	12.6	0.0	2.1	9.4	0.0	35.3	2.0	0.1
Delay (s)	65.6	43.1	26.7	79.8	27.3	0.0	43.7	37.0	16.1	72.7	13.7	3.7
Level of Service	E	D	C	E	C	A	D	D	B	E	B	A
Approach Delay (s)		45.7			27.7			37.0			21.4	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM Average Control Delay	34.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		

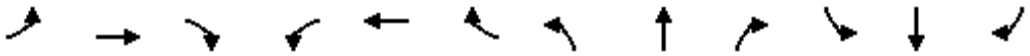
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1041	1236	2413	1079	1345	2413
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1041	1236	2413	1079	1345	2413
Volume (vph)	140	125	590	305	230	1105
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	132	621	321	242	1163
RTOR Reduction (vph)	0	47	0	196	0	0
Lane Group Flow (vph)	147	85	621	125	242	1163
Heavy Vehicles (%)	46%	10%	26%	26%	13%	26%
Turn Type		pm+ov		Perm	Prot	
Protected Phases	8	1	2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)	11.3	24.7	23.3	23.3	13.4	40.7
Effective Green, g (s)	11.3	24.7	23.3	23.3	13.4	40.7
Actuated g/C Ratio	0.19	0.41	0.39	0.39	0.22	0.68
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	196	591	937	419	300	1637
v/s Ratio Prot	c0.14	0.03	0.26		c0.18	c0.48
v/s Ratio Perm		0.04		0.12		
v/c Ratio	0.75	0.14	0.66	0.30	0.81	0.71
Uniform Delay, d1	23.0	11.0	15.1	12.7	22.1	6.0
Progression Factor	0.70	1.79	1.00	1.00	0.99	0.92
Incremental Delay, d2	12.0	0.1	3.7	1.8	14.5	2.6
Delay (s)	28.0	19.8	18.8	14.5	36.5	8.1
Level of Service	C	B	B	B	D	A
Approach Delay (s)	24.1		17.3			13.0
Approach LOS	C		B			B

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	53.7%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		0.97	0.95	1.00	1.00	0.91	1.00	0.97	0.91	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
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)	2863	2944		2863	2951	1015	1407	4200	1320	1695	3922	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	2863	2944		2863	2951	1015	1407	4200	1320	1695	3922	
Volume (vph)	540	500	10	230	515	285	25	1370	260	130	970	505
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	568	526	11	242	542	300	26	1442	274	137	1021	532
RTOR Reduction (vph)	0	2	0	0	0	6	0	0	67	0	91	0
Lane Group Flow (vph)	568	535	0	242	542	294	26	1442	207	137	1462	0
Heavy Vehicles (%)	3%	3%	0%	3%	3%	34%	8%	4%	3%	74%	6%	5%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	19.0	22.2		14.8	18.0	30.0	2.4	35.0	49.8	12.0	44.6	
Effective Green, g (s)	19.0	22.2		14.8	18.0	30.0	2.4	35.0	49.8	12.0	44.6	
Actuated g/C Ratio	0.19	0.22		0.15	0.18	0.30	0.02	0.35	0.50	0.12	0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	544	654		424	531	305	34	1470	657	203	1749	
v/s Ratio Prot	c0.20	c0.18		0.08	c0.18	c0.12	0.02	c0.34	0.05	0.08	0.37	
v/s Ratio Perm						0.17			0.11			
v/c Ratio	1.04	0.82		0.57	1.02	0.97	0.76	0.98	0.31	0.67	0.84	
Uniform Delay, d1	40.5	37.0		39.6	41.0	34.5	48.5	32.2	14.9	42.1	24.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	50.6	7.9		1.9	44.4	41.8	66.1	19.4	0.3	8.6	4.9	
Delay (s)	91.1	44.9		41.5	85.4	76.3	114.6	51.5	15.2	50.7	29.4	
Level of Service	F	D		D	F	E	F	D	B	D	C	
Approach Delay (s)		68.6			73.1			46.8			31.1	
Approach LOS		E			E			D			C	

Intersection Summary			
HCM Average Control Delay	51.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.91	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2923	727	2730	4160	1134	1283
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2923	727	2730	4160	1134	1283
Volume (vph)	735	70	195	700	280	255
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	774	74	205	737	295	268
RTOR Reduction (vph)	0	48	0	0	0	31
Lane Group Flow (vph)	774	26	205	737	295	237
Heavy Vehicles (%)	4%	87%	8%	5%	34%	6%
Turn Type		Perm	Prot			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4				2
Actuated Green, G (s)	21.0	21.0	6.0	31.0	21.0	27.0
Effective Green, g (s)	21.0	21.0	6.0	31.0	21.0	27.0
Actuated g/C Ratio	0.35	0.35	0.10	0.52	0.35	0.45
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1023	254	273	2149	397	663
v/s Ratio Prot	c0.26		c0.08	0.18	c0.26	0.04
v/s Ratio Perm		0.04				0.15
v/c Ratio	0.76	0.10	0.75	0.34	0.74	0.36
Uniform Delay, d1	17.2	13.1	26.3	8.5	17.1	10.8
Progression Factor	1.00	1.00	1.00	1.00	0.97	0.71
Incremental Delay, d2	5.2	0.8	11.0	0.4	9.3	0.3
Delay (s)	22.5	13.9	37.3	9.0	25.9	7.9
Level of Service	C	B	D	A	C	A
Approach Delay (s)	21.7			15.1	17.3	
Approach LOS	C			B	B	

Intersection Summary			
HCM Average Control Delay	18.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

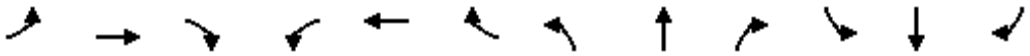
Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0				4.0	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95				1.00	0.95		1.00	0.95	1.00	
Frt	1.00	0.96				1.00	0.97		1.00	1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00		0.95	1.00	1.00	
Satd. Flow (prot)	1490	2856				1463	2900		1505	2923	1336	
Flt Permitted	0.95	1.00				0.95	1.00		0.95	1.00	1.00	
Satd. Flow (perm)	1490	2856				1463	2900		1505	2923	1336	
Volume (vph)	150	575	95	125	20	140	570	135	115	980	115	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	605	100	132	21	147	600	142	121	1032	121	26
RTOR Reduction (vph)	0	15	0	0	0	0	21	0	0	0	8	0
Lane Group Flow (vph)	158	822	0	0	0	168	721	0	121	1032	139	0
Heavy Vehicles (%)	2%	2%	2%	2%	3%	4%	2%	1%	1%	4%	2%	1%
Turn Type	Prot				Prot	Prot			Prot		Perm	
Protected Phases	7	4			3	3	8		5	2		
Permitted Phases											2	
Actuated Green, G (s)	11.9	28.0				11.0	27.1		11.0	36.0	36.0	
Effective Green, g (s)	11.9	28.0				11.0	27.1		11.0	36.0	36.0	
Actuated g/C Ratio	0.12	0.28				0.11	0.27		0.11	0.36	0.36	
Clearance Time (s)	4.0	4.0				4.0	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0				3.0	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	177	800				161	786		166	1052	481	
v/s Ratio Prot	0.11	c0.29				c0.11	0.25		0.08	c0.35		
v/s Ratio Perm											0.10	
v/c Ratio	0.89	1.03				1.04	0.92		0.73	0.98	0.29	
Uniform Delay, d1	43.4	36.0				44.5	35.4		43.1	31.7	22.9	
Progression Factor	0.93	0.90				1.00	1.00		0.96	0.93	1.05	
Incremental Delay, d2	27.8	32.5				82.9	15.4		12.5	21.1	1.3	
Delay (s)	68.3	64.8				127.4	50.7		53.7	50.6	25.3	
Level of Service	E	E				F	D		D	D	C	
Approach Delay (s)		65.4					64.9			48.1		
Approach LOS		E					E			D		

Intersection Summary			
HCM Average Control Delay	51.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBL2	SBL	SBT	SBR
Lane Configurations				
Ideal Flow (vphpl)	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0	4.0
Lane Util. Factor		1.00	0.95	1.00
Frt		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00
Satd. Flow (prot)		1498	2868	1333
Flt Permitted		0.95	1.00	1.00
Satd. Flow (perm)		1498	2868	1333
Volume (vph)	100	30	575	80
Peak-hour factor, PHF	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	32	605	84
RTOR Reduction (vph)	0	0	0	45
Lane Group Flow (vph)	0	137	605	39
Heavy Vehicles (%)	1%	3%	6%	2%
Turn Type	Prot	Prot		pm+ov
Protected Phases	1	1	6	7
Permitted Phases				6
Actuated Green, G (s)		9.0	34.0	45.9
Effective Green, g (s)		9.0	34.0	45.9
Actuated g/C Ratio		0.09	0.34	0.46
Clearance Time (s)		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0
Lane Grp Cap (vph)		135	975	665
v/s Ratio Prot		c0.09	0.21	0.01
v/s Ratio Perm				0.02
v/c Ratio		1.01	0.62	0.06
Uniform Delay, d1		45.5	27.6	15.0
Progression Factor		0.71	0.42	0.07
Incremental Delay, d2		66.9	2.0	0.0
Delay (s)		99.0	13.5	1.1
Level of Service		F	B	A
Approach Delay (s)			26.5	
Approach LOS			C	

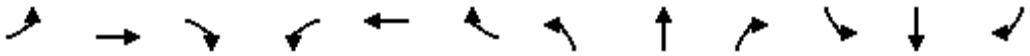
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0		4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00		1.00	0.97	1.00		1.00	0.95			0.95	
Frt	1.00		0.85	1.00	0.92		1.00	1.00			1.00	
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1462		1360	2808	1414		1520	2868			2883	
Flt Permitted	0.23		1.00	0.95	1.00		0.15	1.00			1.00	
Satd. Flow (perm)	352		1360	2808	1414		241	2868			2883	
Volume (vph)	25	0	20	720	185	220	80	1480	0	0	1050	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	0	21	758	195	232	84	1558	0	0	1105	26
RTOR Reduction (vph)	0	0	14	0	21	0	0	0	0	0	1	0
Lane Group Flow (vph)	26	0	7	758	406	0	84	1558	0	0	1130	0
Heavy Vehicles (%)	4%	0%	0%	5%	5%	3%	0%	6%	0%	0%	5%	8%
Turn Type	custom		custom	Perm			pm+pt					
Protected Phases					8		5	2			6	
Permitted Phases	4		4	8			2					
Actuated Green, G (s)	31.3		31.3	31.3	31.3		60.7	60.7			53.4	
Effective Green, g (s)	31.3		31.3	31.3	31.3		60.7	60.7			53.4	
Actuated g/C Ratio	0.31		0.31	0.31	0.31		0.61	0.61			0.53	
Clearance Time (s)	4.0		4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	110		426	879	443		188	1741			1540	
v/s Ratio Prot					c0.29		0.01	c0.54			0.39	
v/s Ratio Perm	0.07		0.00	0.27			0.26					
v/c Ratio	0.24		0.02	0.86	0.92		0.45	0.89			0.73	
Uniform Delay, d1	25.5		23.7	32.3	33.1		11.5	16.9			17.8	
Progression Factor	1.00		1.00	1.00	1.00		0.90	0.44			1.00	
Incremental Delay, d2	1.1		0.0	8.7	23.4		0.2	0.8			3.1	
Delay (s)	26.6		23.7	41.0	56.5		10.5	8.2			21.0	
Level of Service	C		C	D	E		B	A			C	
Approach Delay (s)		25.3			46.6			8.3			21.0	
Approach LOS		C			D			A			C	

Intersection Summary			
HCM Average Control Delay	23.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		

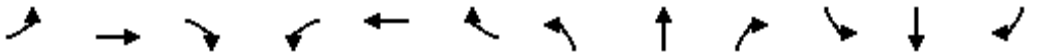
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0					4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00					1.00	0.95		1.00	0.95	
Frt		0.99					1.00	0.99		1.00	0.97	
Flt Protected		0.98					0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1504					1394	2848		1462	2788	
Flt Permitted		0.98					0.15	1.00		0.08	1.00	
Satd. Flow (perm)		1504					217	2848		126	2788	
Volume (vph)	160	215	45	0	0	0	35	1445	80	395	1095	270
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	168	226	47	0	0	0	37	1521	84	416	1153	284
RTOR Reduction (vph)	0	5	0	0	0	0	0	4	0	0	21	0
Lane Group Flow (vph)	0	437	0	0	0	0	37	1601	0	416	1416	0
Heavy Vehicles (%)	3%	3%	2%	0%	0%	0%	9%	6%	4%	4%	6%	5%
Turn Type	Perm						pm+pt			pm+pt		
Protected Phases		4					5	2		1	6	
Permitted Phases	4						2			6		
Actuated Green, G (s)		25.0					47.4	45.0		67.0	60.6	
Effective Green, g (s)		25.0					47.4	45.0		67.0	60.6	
Actuated g/C Ratio		0.25					0.47	0.45		0.67	0.61	
Clearance Time (s)		4.0					4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0					3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		376					131	1282		325	1690	
v/s Ratio Prot							0.01	0.56		c0.23	0.51	
v/s Ratio Perm		0.29					0.13			c0.63		
v/c Ratio		1.16					0.28	1.25		1.28	0.84	
Uniform Delay, d1		37.5					14.7	27.5		33.0	15.8	
Progression Factor		1.00					1.07	0.66		0.92	0.86	
Incremental Delay, d2		97.9					0.6	115.2		140.0	3.2	
Delay (s)		135.4					16.3	133.3		170.4	16.8	
Level of Service		F					B	F		F	B	
Approach Delay (s)		135.4			0.0			130.7			51.3	
Approach LOS		F			A			F			D	

Intersection Summary			
HCM Average Control Delay	93.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.23		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	113.6%	ICU Level of Service	H
Analysis Period (min)	15		

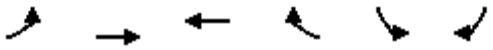
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.98		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)	1476	4040		1345	4131		1520	2903		1476	2980	1360
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1476	4040		1345	4131		1520	2903		1476	2980	1360
Volume (vph)	235	800	85	40	1215	150	50	505	25	210	810	250
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	247	842	89	42	1279	158	53	532	26	221	853	263
RTOR Reduction (vph)	0	12	0	0	15	0	0	3	0	0	0	15
Lane Group Flow (vph)	247	919	0	42	1422	0	53	555	0	221	853	248
Heavy Vehicles (%)	3%	6%	12%	13%	4%	4%	0%	4%	4%	3%	2%	0%
Turn Type	Prot			Prot			Prot			Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	16.0	45.8		4.8	34.6		4.0	18.4		15.0	29.4	45.4
Effective Green, g (s)	16.0	45.8		4.8	34.6		4.0	18.4		15.0	29.4	45.4
Actuated g/C Ratio	0.16	0.46		0.05	0.35		0.04	0.18		0.15	0.29	0.45
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	236	1850		65	1429		61	534		221	876	617
v/s Ratio Prot	c0.17	0.23		0.03	c0.34		0.03	0.19		c0.15	c0.29	0.06
v/s Ratio Perm												0.12
v/c Ratio	1.05	0.50		0.65	1.00		0.87	1.04		1.00	0.97	0.40
Uniform Delay, d1	42.0	19.0		46.8	32.6		47.7	40.8		42.5	34.9	18.2
Progression Factor	0.94	0.32		1.00	1.00		0.76	0.55		1.00	1.00	1.00
Incremental Delay, d2	66.6	0.2		20.0	22.5		35.8	34.7		60.5	24.7	0.4
Delay (s)	106.0	6.3		66.7	55.1		72.1	57.1		103.0	59.6	18.7
Level of Service	F	A		E	E		E	E		F	E	B
Approach Delay (s)		27.2			55.4			58.4			58.7	
Approach LOS		C			E			E			E	

Intersection Summary			
HCM Average Control Delay	49.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1421	3865	4200	1347	2920	1347
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1421	3865	4200	1347	2920	1347
Volume (vph)	150	850	2625	340	415	170
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	895	2763	358	437	179
RTOR Reduction (vph)	0	0	0	108	0	134
Lane Group Flow (vph)	158	895	2763	250	437	45
Heavy Vehicles (%)	7%	13%	4%	1%	1%	1%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	14.0	103.0	85.0	85.0	19.0	19.0
Effective Green, g (s)	14.0	103.0	85.0	85.0	19.0	19.0
Actuated g/C Ratio	0.11	0.79	0.65	0.65	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	153	3062	2746	881	427	197
v/s Ratio Prot	c0.11	0.23	c0.66		c0.15	
v/s Ratio Perm				0.19		0.03
v/c Ratio	1.03	0.29	1.01	0.28	1.02	0.23
Uniform Delay, d1	58.0	3.6	22.5	9.6	55.5	49.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	81.7	0.1	18.7	0.2	49.6	2.7
Delay (s)	139.7	3.7	41.2	9.7	105.1	51.7
Level of Service	F	A	D	A	F	D
Approach Delay (s)		24.1	37.6		89.6	
Approach LOS		C	D		F	

Intersection Summary			
HCM Average Control Delay	41.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	2137	1015	2090		1322	2303
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	2137	1015	2090		1322	2303
Volume (vph)	125	65	645	90	55	505
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	132	68	679	95	58	532
RTOR Reduction (vph)	0	53	14	0	0	0
Lane Group Flow (vph)	132	15	760	0	58	532
Heavy Vehicles (%)	38%	34%	46%	20%	15%	32%
Turn Type		pm+ov			Prot	
Protected Phases	8	1	2		1	6
Permitted Phases		8				
Actuated Green, G (s)	8.5	12.9	35.1		4.4	43.5
Effective Green, g (s)	8.5	12.9	35.1		4.4	43.5
Actuated g/C Ratio	0.14	0.22	0.59		0.07	0.72
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	303	286	1223		97	1670
v/s Ratio Prot	c0.06	0.00	c0.36		c0.04	0.23
v/s Ratio Perm		0.01				
v/c Ratio	0.44	0.05	0.62		0.60	0.32
Uniform Delay, d1	23.6	18.7	8.1		26.9	3.0
Progression Factor	1.00	1.00	0.26		1.00	1.00
Incremental Delay, d2	1.0	0.1	2.0		9.5	0.5
Delay (s)	24.6	18.8	4.1		36.5	3.5
Level of Service	C	B	A		D	A
Approach Delay (s)	22.6		4.1			6.7
Approach LOS	C		A			A

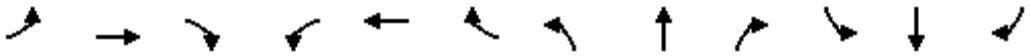
Intersection Summary			
HCM Average Control Delay	7.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frt	0.96		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	2429		1256	2714	1288	1133
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	2429		1256	2714	1288	1133
Volume (vph)	305	120	70	755	125	20
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	321	126	74	795	132	21
RTOR Reduction (vph)	49	0	0	0	0	15
Lane Group Flow (vph)	398	0	74	795	132	6
Heavy Vehicles (%)	10%	45%	21%	12%	18%	20%
Turn Type			Prot			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases						2
Actuated Green, G (s)	30.6		6.4	41.0	11.0	17.4
Effective Green, g (s)	30.6		6.4	41.0	11.0	17.4
Actuated g/C Ratio	0.51		0.11	0.68	0.18	0.29
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1239		134	1855	236	404
v/s Ratio Prot	0.16		c0.06	c0.29	c0.10	0.00
v/s Ratio Perm						0.00
v/c Ratio	0.32		0.55	0.43	0.56	0.02
Uniform Delay, d1	8.6		25.4	4.3	22.3	15.2
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7		4.9	0.7	2.9	0.0
Delay (s)	9.3		30.3	5.0	25.2	15.2
Level of Service	A		C	A	C	B
Approach Delay (s)	9.3			7.1	23.8	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	9.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	39.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Lane Util. Factor		0.91	1.00	1.00	0.91		0.97	1.00				
Frt		1.00	0.85	1.00	1.00		1.00	0.85				
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (prot)		4044	680	760	4007		1474	680				
Flt Permitted		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (perm)		4044	680	760	4007		1474	680				
Volume (vph)	0	1380	420	10	1910	0	520	0	10	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1453	442	11	2011	0	547	0	11	0	0	0
RTOR Reduction (vph)	0	0	170	0	0	0	0	8	0	0	0	0
Lane Group Flow (vph)	0	1453	272	11	2011	0	547	3	0	0	0	0
Heavy Vehicles (%)	0%	8%	100%	100%	9%	0%	100%	0%	100%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm	Prot			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8				6		
Actuated Green, G (s)		55.4	55.4	1.6	61.0		21.0	21.0				
Effective Green, g (s)		55.4	55.4	1.6	61.0		21.0	21.0				
Actuated g/C Ratio		0.62	0.62	0.02	0.68		0.23	0.23				
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0				
Lane Grp Cap (vph)		2489	419	14	2716		344	159				
v/s Ratio Prot		0.36		0.01	c0.50		c0.37	0.00				
v/s Ratio Perm			0.40									
v/c Ratio		0.58	0.65	0.79	0.74		1.59	0.02				
Uniform Delay, d1		10.4	11.1	44.0	9.4		34.5	26.6				
Progression Factor		1.00	1.00	0.76	0.47		1.00	1.00				
Incremental Delay, d2		1.0	7.6	126.0	1.8		279.0	0.0				
Delay (s)		11.4	18.7	159.4	6.2		313.5	26.6				
Level of Service		B	B	F	A		F	C				
Approach Delay (s)		13.1			7.0			307.8			0.0	
Approach LOS		B			A			F			A	

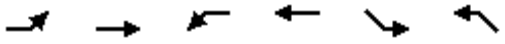
Intersection Summary			
HCM Average Control Delay	47.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2863	3865	2633	4200	2808	2417
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2863	3865	2633	4200	2808	2417
Volume (vph)	560	550	210	980	490	160
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	589	579	221	1032	516	168
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	589	579	221	1032	516	168
Heavy Vehicles (%)	3%	13%	12%	4%	5%	22%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	25.0	46.1	11.7	32.8	20.2	20.2
Effective Green, g (s)	25.0	46.1	11.7	32.8	20.2	20.2
Actuated g/C Ratio	0.28	0.51	0.13	0.36	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	795	1980	342	1531	630	542
v/s Ratio Prot	c0.21	0.15	0.08	c0.25	c0.18	0.07
v/s Ratio Perm						
v/c Ratio	0.74	0.29	0.65	0.67	0.82	0.31
Uniform Delay, d1	29.6	12.6	37.2	24.1	33.2	29.1
Progression Factor	0.67	0.36	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.3	4.2	2.4	8.2	0.3
Delay (s)	23.0	4.8	41.3	26.5	41.3	29.4
Level of Service	C	A	D	C	D	C
Approach Delay (s)		14.0		29.1		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	25.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2457	3551	1843	4241	2610	2782
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2457	3551	1843	4241	2610	2782
Volume (vph)	570	515	10	1665	430	240
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	600	542	11	1753	453	253
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	600	542	11	1753	453	253
Heavy Vehicles (%)	20%	23%	60%	3%	13%	6%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	20.0	53.2	0.8	34.0	14.0	14.0
Effective Green, g (s)	20.0	53.2	0.8	34.0	14.0	14.0
Actuated g/C Ratio	0.25	0.67	0.01	0.42	0.18	0.18
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	614	2361	18	1802	457	487
v/s Ratio Prot	c0.24	0.15	0.01	c0.41	c0.17	0.09
v/s Ratio Perm						
v/c Ratio	0.98	0.23	0.61	0.97	0.99	0.52
Uniform Delay, d1	29.8	5.3	39.4	22.5	32.9	29.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	30.3	0.2	48.7	15.7	39.7	0.9
Delay (s)	60.0	5.5	88.1	38.2	72.6	30.9
Level of Service	E	A	F	D	E	C
Approach Delay (s)		34.2		38.5		
Approach LOS		C		D		

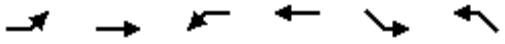
Intersection Summary			
HCM Average Control Delay	40.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2920	2980	2681	4368	2891	2949
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2920	2980	2681	4368	2891	2949
Volume (vph)	620	765	560	755	370	140
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	653	805	589	795	389	147
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	653	805	589	795	389	147
Heavy Vehicles (%)	1%	2%	10%	0%	2%	0%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	34.0	50.8	28.2	45.0	19.0	19.0
Effective Green, g (s)	34.0	50.8	28.2	45.0	19.0	19.0
Actuated g/C Ratio	0.31	0.46	0.26	0.41	0.17	0.17
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	903	1376	687	1787	499	509
v/s Ratio Prot	c0.22	c0.27	c0.22	0.18	c0.13	0.05
v/s Ratio Perm						
v/c Ratio	0.72	0.59	0.86	0.44	0.78	0.29
Uniform Delay, d1	33.8	21.8	39.0	23.5	43.5	39.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.9	1.8	10.3	0.8	7.6	0.3
Delay (s)	36.7	23.7	49.3	24.3	51.1	39.9
Level of Service	D	C	D	C	D	D
Approach Delay (s)		29.5		34.9		
Approach LOS		C		C		

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2542	4160	2949	4200	2949	2705
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2542	4160	2949	4200	2949	2705
Volume (vph)	270	360	510	1020	420	670
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	379	537	1074	442	705
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	284	379	537	1074	442	705
Heavy Vehicles (%)	16%	5%	0%	4%	0%	9%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	8.7	15.3	12.5	19.1	17.0	17.0
Effective Green, g (s)	8.7	15.3	12.5	19.1	17.0	17.0
Actuated g/C Ratio	0.15	0.27	0.22	0.34	0.30	0.30
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	389	1121	649	1412	883	810
v/s Ratio Prot	c0.11	0.09	0.18	c0.26	0.15	c0.26
v/s Ratio Perm						
v/c Ratio	0.73	0.34	0.83	0.76	0.50	0.87
Uniform Delay, d1	22.9	16.7	21.1	16.8	16.4	18.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.9	0.2	8.5	2.5	0.4	10.1
Delay (s)	29.8	16.9	29.7	19.3	16.8	28.9
Level of Service	C	B	C	B	B	C
Approach Delay (s)		22.4		22.7		
Approach LOS		C		C		

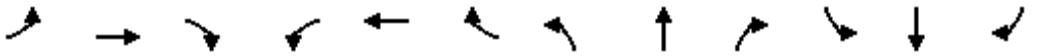
Intersection Summary			
HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	56.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2756	4282	2808	4241	2835	2681
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2756	4282	2808	4241	2835	2681
Volume (vph)	270	855	300	685	510	130
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	900	316	721	537	137
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	284	900	316	721	537	137
Heavy Vehicles (%)	7%	2%	5%	3%	4%	10%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	6.0	14.3	6.0	14.3	10.0	10.0
Effective Green, g (s)	6.0	14.3	6.0	14.3	10.0	10.0
Actuated g/C Ratio	0.14	0.34	0.14	0.34	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	391	1448	398	1434	670	634
v/s Ratio Prot	0.10	c0.21	c0.11	0.17	c0.19	0.05
v/s Ratio Perm						
v/c Ratio	0.73	0.62	0.79	0.50	0.80	0.22
Uniform Delay, d1	17.4	11.7	17.6	11.2	15.2	13.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.6	0.8	10.4	0.3	6.9	0.2
Delay (s)	24.0	12.6	28.0	11.4	22.1	13.2
Level of Service	C	B	C	B	C	B
Approach Delay (s)		15.3		16.5		
Approach LOS		B		B		

Intersection Summary			
HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	42.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.1%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Lane Util. Factor	1.00	0.91			0.91	1.00			0.88	0.97		1.00
Frt	1.00	1.00			1.00	0.85			0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (prot)	1520	4264			4241	1333			2370	2891		1295
Flt Permitted	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (perm)	1520	4264			4241	1333			2370	2891		1295
Volume (vph)	90	1875	55	0	1750	155	0	0	415	475	0	15
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	95	1974	58	0	1842	163	0	0	437	500	0	16
RTOR Reduction (vph)	0	3	0	0	0	98	0	0	15	0	0	13
Lane Group Flow (vph)	95	2029	0	0	1842	65	0	0	422	500	0	3
Heavy Vehicles (%)	0%	2%	2%	0%	3%	2%	0%	0%	1%	2%	0%	5%
Turn Type	Prot					Perm			custom	Prot		custom
Protected Phases	7	4			8					6		
Permitted Phases						8			2			6
Actuated Green, G (s)	6.0	46.0			36.0	36.0			16.0	16.0		16.0
Effective Green, g (s)	6.0	46.0			36.0	36.0			16.0	16.0		16.0
Actuated g/C Ratio	0.07	0.51			0.40	0.40			0.18	0.18		0.18
Clearance Time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0			3.0	3.0		3.0
Lane Grp Cap (vph)	101	2179			1696	533			421	514		230
v/s Ratio Prot	0.06	c0.48			c0.43					c0.17		
v/s Ratio Perm						0.05			c0.18			0.00
v/c Ratio	0.94	0.93			1.09	0.12			1.00	0.97		0.01
Uniform Delay, d1	41.8	20.5			27.0	17.0			37.0	36.8		30.5
Progression Factor	1.00	1.00			0.72	0.25			1.00	0.96		0.90
Incremental Delay, d2	70.3	8.7			48.9	0.4			44.6	31.0		0.0
Delay (s)	112.1	29.2			68.4	4.8			81.6	66.2		27.5
Level of Service	F	C			E	A			F	E		C
Approach Delay (s)		32.9			63.2			81.6			65.0	
Approach LOS		C			E			F			E	

Intersection Summary			
HCM Average Control Delay	52.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2863	4325	2891	4200	2756	2891
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2863	4325	2891	4200	2756	2891
Volume (vph)	350	835	730	645	270	520
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	368	879	768	679	284	547
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	368	879	768	679	284	547
Heavy Vehicles (%)	3%	1%	2%	4%	7%	2%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	18.1	29.8	27.6	39.3	20.6	20.6
Effective Green, g (s)	18.1	29.8	27.6	39.3	20.6	20.6
Actuated g/C Ratio	0.20	0.33	0.31	0.44	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	576	1432	887	1834	631	662
v/s Ratio Prot	0.13	c0.20	c0.27	0.16	0.10	c0.19
v/s Ratio Perm						
v/c Ratio	0.64	0.61	0.87	0.37	0.45	0.83
Uniform Delay, d1	33.0	25.3	29.5	17.0	29.8	33.0
Progression Factor	0.79	0.74	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	0.6	8.9	0.6	0.5	8.3
Delay (s)	26.9	19.4	38.3	17.6	30.3	41.3
Level of Service	C	B	D	B	C	D
Approach Delay (s)		21.6		28.6		
Approach LOS		C		C		

Intersection Summary			
HCM Average Control Delay	28.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.95	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2835	2951	2863	2951	2835	2835
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2835	2951	2863	2951	2835	2835
Volume (vph)	280	935	570	810	220	280
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	295	984	600	853	232	295
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	295	984	600	853	232	295
Heavy Vehicles (%)	4%	3%	3%	3%	4%	4%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	12.5	34.4	22.1	44.0	11.5	11.5
Effective Green, g (s)	12.5	34.4	22.1	44.0	11.5	11.5
Actuated g/C Ratio	0.16	0.43	0.28	0.55	0.14	0.14
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	443	1269	791	1623	408	408
v/s Ratio Prot	0.10	c0.33	c0.21	0.29	0.08	c0.10
v/s Ratio Perm						
v/c Ratio	0.67	0.78	0.76	0.53	0.57	0.72
Uniform Delay, d1	31.8	19.5	26.5	11.4	31.9	32.7
Progression Factor	1.00	1.00	0.49	0.15	1.00	1.00
Incremental Delay, d2	3.8	4.7	2.4	0.7	1.8	6.2
Delay (s)	35.5	24.2	15.4	2.4	33.8	39.0
Level of Service	D	C	B	A	C	D
Approach Delay (s)		26.8		7.8		
Approach LOS		C		A		

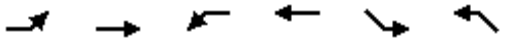
Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	4160	2782	4325	2808	2920
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	4160	2782	4325	2808	2920
Volume (vph)	520	820	440	1305	310	730
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	547	863	463	1374	326	768
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	547	863	463	1374	326	768
Heavy Vehicles (%)	2%	5%	6%	1%	5%	1%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	27.8	49.7	31.0	52.9	37.3	37.3
Effective Green, g (s)	27.8	49.7	31.0	52.9	37.3	37.3
Actuated g/C Ratio	0.21	0.38	0.24	0.41	0.29	0.29
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	618	1590	663	1760	806	838
v/s Ratio Prot	c0.19	0.21	0.17	c0.32	0.12	c0.26
v/s Ratio Perm						
v/c Ratio	0.89	0.54	0.70	0.78	0.40	0.92
Uniform Delay, d1	49.6	31.3	45.2	33.5	37.4	44.8
Progression Factor	1.00	1.00	0.41	0.28	1.00	1.00
Incremental Delay, d2	14.2	1.3	1.3	1.4	0.3	14.5
Delay (s)	63.8	32.6	19.6	10.7	37.7	59.4
Level of Service	E	C	B	B	D	E
Approach Delay (s)		44.7		13.0		
Approach LOS		D		B		

Intersection Summary			
HCM Average Control Delay	33.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		

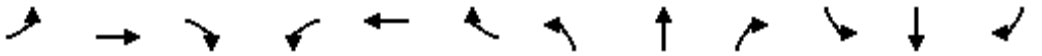
c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2949	4325	2863	4368	2863	2920
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2949	4325	2863	4368	2863	2920
Volume (vph)	550	830	410	1240	350	670
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	579	874	432	1305	368	705
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	579	874	432	1305	368	705
Heavy Vehicles (%)	0%	1%	3%	0%	3%	1%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	28.6	51.6	31.0	54.0	35.4	35.4
Effective Green, g (s)	28.6	51.6	31.0	54.0	35.4	35.4
Actuated g/C Ratio	0.22	0.40	0.24	0.42	0.27	0.27
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	649	1717	683	1814	780	795
v/s Ratio Prot	c0.20	0.20	0.15	c0.30	0.13	c0.24
v/s Ratio Perm						
v/c Ratio	0.89	0.51	0.63	0.72	0.47	0.89
Uniform Delay, d1	49.2	29.6	44.4	31.7	39.5	45.4
Progression Factor	1.00	1.00	0.48	0.35	1.00	1.00
Incremental Delay, d2	14.5	1.1	1.2	1.6	0.5	11.7
Delay (s)	63.7	30.7	22.4	12.6	39.9	57.0
Level of Service	E	C	C	B	D	E
Approach Delay (s)		43.9		15.0		
Approach LOS		D		B		

Intersection Summary			
HCM Average Control Delay	34.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.8%	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												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.88	0.97	0.95	1.00	0.97	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3343	2707	3335	3312	1583	3400	1686		1770	1810	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3343	2707	3335	3312	1583	3400	1686		1770	1810	1583
Volume (vph)	30	990	560	160	750	25	310	150	200	30	120	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	1042	589	168	789	26	326	158	211	32	126	32
RTOR Reduction (vph)	0	0	215	0	0	11	0	49	0	0	0	28
Lane Group Flow (vph)	32	1042	374	168	789	15	326	320	0	32	126	4
Heavy Vehicles (%)	2%	8%	5%	5%	9%	2%	3%	3%	3%	2%	5%	2%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	3.6	45.2	63.5	8.6	50.2	58.8	18.3	21.6		8.6	11.9	11.9
Effective Green, g (s)	3.6	45.2	63.5	8.6	50.2	58.8	18.3	21.6		8.6	11.9	11.9
Actuated g/C Ratio	0.04	0.45	0.64	0.09	0.50	0.59	0.18	0.22		0.09	0.12	0.12
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	64	1511	1827	287	1663	994	622	364		152	215	188
v/s Ratio Prot	0.02	c0.31	0.04	c0.05	c0.24	0.00	c0.10	c0.19		0.02	0.07	
v/s Ratio Perm			0.10			0.01						0.00
v/c Ratio	0.50	0.69	0.20	0.59	0.47	0.02	0.52	0.88		0.21	0.59	0.02
Uniform Delay, d1	47.3	21.8	7.7	44.0	16.3	8.6	36.9	37.9		42.5	41.7	38.9
Progression Factor	0.81	0.42	0.45	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.5	1.9	0.0	3.0	1.0	0.0	0.8	20.5		0.7	4.0	0.0
Delay (s)	43.0	11.0	3.5	47.0	17.2	8.6	37.7	58.4		43.2	45.8	38.9
Level of Service	D	B	A	D	B	A	D	E		D	D	D
Approach Delay (s)		9.0			22.1			48.7			44.2	
Approach LOS		A			C			D			D	

Intersection Summary			
HCM Average Control Delay	22.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.7%	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												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3343	1599	3433	3505	1615	3433	3314		1805	1740	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1805	3343	1599	3433	3505	1615	3433	3314		1805	1740	
Volume (vph)	10	1040	330	140	770	5	555	855	160	5	400	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	1095	347	147	811	5	584	900	168	5	421	11
RTOR Reduction (vph)	0	0	0	0	0	2	0	13	0	0	1	0
Lane Group Flow (vph)	11	1095	347	147	811	3	584	1055	0	5	431	0
Heavy Vehicles (%)	0%	8%	1%	2%	3%	0%	2%	4%	19%	0%	9%	0%
Turn Type	Prot		Free	Prot		pm+ov	Prot			Prot		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			Free			8						
Actuated Green, G (s)	1.6	41.4	120.0	8.4	48.2	62.8	22.3	39.6		14.6	31.9	
Effective Green, g (s)	1.6	41.4	120.0	8.4	48.2	62.8	22.3	39.6		14.6	31.9	
Actuated g/C Ratio	0.01	0.34	1.00	0.07	0.40	0.52	0.19	0.33		0.12	0.27	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	24	1153	1599	240	1408	899	638	1094		220	463	
v/s Ratio Prot	0.01	c0.33		c0.04	c0.23	0.00	c0.17	c0.32		0.00	0.25	
v/s Ratio Perm			0.22			0.00						
v/c Ratio	0.46	0.95	0.22	0.61	0.58	0.00	0.92	0.96		0.02	0.93	
Uniform Delay, d1	58.8	38.3	0.0	54.2	27.9	13.7	47.9	39.5		46.4	43.0	
Progression Factor	0.76	0.51	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	9.8	13.5	0.2	4.6	1.7	0.0	17.8	19.1		0.0	25.6	
Delay (s)	54.3	32.9	0.2	58.8	29.7	13.7	65.7	58.6		46.5	68.6	
Level of Service	D	C	A	E	C	B	E	E		D	E	
Approach Delay (s)		25.3			34.0			61.1			68.4	
Approach LOS		C			C			E			E	

Intersection Summary			
HCM Average Control Delay	44.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.6%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.88	0.91		0.97	0.95
Frt		0.85	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2347	4273		2891	2980
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2347	4273		2891	2980
Volume (vph)	0	540	695	10	1520	915
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	568	732	11	1600	963
RTOR Reduction (vph)	0	19	2	0	0	0
Lane Group Flow (vph)	0	549	741	0	1600	963
Turn Type		Over			Prot	
Protected Phases		1	2		1	6
Permitted Phases						
Actuated Green, G (s)		35.6	16.4		35.6	60.0
Effective Green, g (s)		35.6	16.4		35.6	60.0
Actuated g/C Ratio		0.59	0.27		0.59	1.00
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1393	1168		1715	2980
v/s Ratio Prot		0.23	c0.17		c0.55	0.32
v/s Ratio Perm						
v/c Ratio		0.39	0.63		0.93	0.32
Uniform Delay, d1		6.5	19.2		11.1	0.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.2	2.6		9.8	0.3
Delay (s)		6.7	21.8		20.9	0.3
Level of Service		A	C		C	A
Approach Delay (s)	6.7		21.8			13.2
Approach LOS	A		C			B

Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)				4.0	4.0	
Lane Util. Factor				0.95	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				2980	2891	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				2980	2891	
Volume (vph)	0	0	0	1375	1235	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	1447	1300	0
RTOR Reduction (vph)	0	0	0	0	15	0
Lane Group Flow (vph)	0	0	0	1447	1285	0
Turn Type						
Protected Phases				8	2	
Permitted Phases						
Actuated Green, G (s)				27.0	25.0	
Effective Green, g (s)				27.0	25.0	
Actuated g/C Ratio				0.45	0.42	
Clearance Time (s)				4.0	4.0	
Vehicle Extension (s)				3.0	3.0	
Lane Grp Cap (vph)				1341	1205	
v/s Ratio Prot				c0.49	c0.44	
v/s Ratio Perm						
v/c Ratio				1.08	1.07	
Uniform Delay, d1				16.5	17.5	
Progression Factor				1.00	1.00	
Incremental Delay, d2				48.9	45.5	
Delay (s)				65.4	63.0	
Level of Service				E	E	
Approach Delay (s)	0.0			65.4	63.0	
Approach LOS	A			E	E	

Intersection Summary			
HCM Average Control Delay	64.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1310	210	0	0	0	190
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1379	221	0	0	0	200
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	1309			432		
pX, platoon unblocked						
vC, conflicting volume			1600		1379	689
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1600		1379	689
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	48
cM capacity (veh/h)			405		136	388

Direction, Lane #	EB 1	EB 2	EB 3	NB 1
Volume Total	689	689	221	200
Volume Left	0	0	0	0
Volume Right	0	0	221	200
cSH	1700	1700	1700	388
Volume to Capacity	0.41	0.41	0.13	0.52
Queue Length 95th (ft)	0	0	0	71
Control Delay (s)	0.0	0.0	0.0	23.7
Lane LOS				C
Approach Delay (s)	0.0			23.7
Approach LOS				C

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	2492			2357	760	680
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	2492			2357	760	680
Volume (vph)	270	0	0	235	85	105
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	0	0	247	89	111
RTOR Reduction (vph)	0	0	0	0	0	36
Lane Group Flow (vph)	284	0	0	247	89	75
Heavy Vehicles (%)	22%	0%	0%	29%	100%	100%
Turn Type						Perm
Protected Phases	4			8	2	
Permitted Phases						2
Actuated Green, G (s)	11.4			11.4	40.6	40.6
Effective Green, g (s)	11.4			11.4	40.6	40.6
Actuated g/C Ratio	0.19			0.19	0.68	0.68
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	473			448	514	460
v/s Ratio Prot	c0.11			0.10	c0.12	
v/s Ratio Perm						0.11
v/c Ratio	0.60			0.55	0.17	0.16
Uniform Delay, d1	22.2			22.0	3.6	3.5
Progression Factor	0.75			1.00	1.00	1.00
Incremental Delay, d2	2.1			1.5	0.7	0.8
Delay (s)	18.8			23.5	4.3	4.3
Level of Service	B			C	A	A
Approach Delay (s)	18.8			23.5	4.3	
Approach LOS	B			C	A	

Intersection Summary			
HCM Average Control Delay	16.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	23.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	0.95	1.00	1.00	0.95		
Frt	1.00	0.85	1.00	1.00		
Flt Protected	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	2492	680	760	2555		
Flt Permitted	1.00	1.00	0.95	1.00		
Satd. Flow (perm)	2492	680	760	2555		
Volume (vph)	270	95	115	205	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	100	121	216	0	0
RTOR Reduction (vph)	0	35	0	0	0	0
Lane Group Flow (vph)	284	65	121	216	0	0
Heavy Vehicles (%)	22%	100%	100%	19%	0%	0%
Turn Type		Perm	Prot			
Protected Phases	4		3	8		
Permitted Phases		4				
Actuated Green, G (s)	39.2	39.2	12.8	60.0		
Effective Green, g (s)	39.2	39.2	12.8	60.0		
Actuated g/C Ratio	0.65	0.65	0.21	1.00		
Clearance Time (s)	4.0	4.0	4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	1628	444	162	2555		
v/s Ratio Prot	c0.11		c0.16	0.08		
v/s Ratio Perm		0.10				
v/c Ratio	0.17	0.15	0.75	0.08		
Uniform Delay, d1	4.1	4.0	22.1	0.0		
Progression Factor	1.00	1.00	0.59	1.00		
Incremental Delay, d2	0.1	0.2	15.6	0.0		
Delay (s)	4.1	4.1	28.7	0.0		
Level of Service	A	A	C	A		
Approach Delay (s)	4.1			10.3	0.0	
Approach LOS	A			B	A	

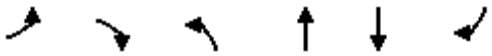
Intersection Summary			
HCM Average Control Delay	7.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	23.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.94		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1448	1143	1295	1322	1224		1448	2604		1126	2890	
Flt Permitted	0.39	1.00	1.00	0.66	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	587	1143	1295	923	1224		1448	2604		1126	2890	
Volume (vph)	10	140	580	75	80	50	250	650	150	75	550	7
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	147	611	79	84	53	263	684	158	79	579	7
RTOR Reduction (vph)	0	0	65	0	22	0	0	18	0	0	1	0
Lane Group Flow (vph)	11	147	546	79	115	0	263	824	0	79	585	0
Heavy Vehicles (%)	5%	40%	5%	15%	20%	28%	5%	5%	50%	35%	5%	5%
Turn Type	pm+pt		pm+ov	pm+pt			Prot			Prot		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	16.1	16.1	45.1	21.2	21.2		29.0	51.7		10.3	33.0	
Effective Green, g (s)	16.1	16.1	45.1	21.2	21.2		29.0	51.7		10.3	33.0	
Actuated g/C Ratio	0.16	0.16	0.45	0.21	0.21		0.29	0.52		0.10	0.33	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	101	184	584	219	259		420	1346		116	954	
v/s Ratio Prot	0.00	0.13	c0.27	0.02	c0.09		0.18	c0.32		0.07	0.20	
v/s Ratio Perm	0.02		0.15	0.06								
v/c Ratio	0.11	0.80	0.94	0.36	0.44		0.63	0.61		0.68	0.61	
Uniform Delay, d1	35.7	40.4	26.1	34.0	34.3		30.8	17.1		43.3	28.1	
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	21.0	22.4	1.0	1.2		2.9	2.1		15.2	2.9	
Delay (s)	36.2	61.4	48.4	35.0	35.5		33.7	19.1		58.5	31.1	
Level of Service	D	E	D	C	D		C	B		E	C	
Approach Delay (s)		50.7			35.3			22.6			34.3	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	34.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	0.86	0.95	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1966	1046	1169	5242	2811	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1966	1046	1169	5242	2811	
Volume (vph)	260	115	160	1230	910	75
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	274	121	168	1295	958	79
RTOR Reduction (vph)	0	102	0	0	6	0
Lane Group Flow (vph)	274	19	168	1295	1031	0
Heavy Vehicles (%)	50%	30%	30%	5%	5%	30%
Turn Type		Perm	Prot			
Protected Phases	4		5	2	3 6	
Permitted Phases		4				
Actuated Green, G (s)	15.6	15.6	17.1	45.7	55.3	
Effective Green, g (s)	15.6	15.6	17.1	45.7	55.3	
Actuated g/C Ratio	0.16	0.16	0.17	0.46	0.55	
Clearance Time (s)	4.0	4.0	4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	307	163	200	2396	1554	
v/s Ratio Prot	c0.14		c0.14	0.25	c0.37	
v/s Ratio Perm		0.02				
v/c Ratio	0.89	0.12	0.84	0.54	0.66	
Uniform Delay, d1	41.4	36.3	40.1	19.6	15.8	
Progression Factor	1.00	1.00	1.00	1.00	0.40	
Incremental Delay, d2	26.1	0.3	25.4	0.9	0.7	
Delay (s)	67.4	36.6	65.5	20.5	7.0	
Level of Service	E	D	E	C	A	
Approach Delay (s)	58.0			25.6	7.0	
Approach LOS	E			C	A	

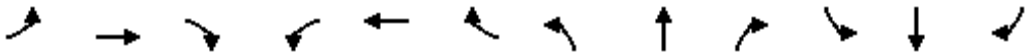
Intersection Summary			
HCM Average Control Delay	23.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		0.97	1.00			0.95	0.88	1.00	0.95	
Frt		0.93		1.00	0.86			1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1427		2808	1318			2667	2196	1490	2812	
Flt Permitted		0.91		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1332		2808	1318			2667	2196	1490	2812	
Volume (vph)	5	0	5	470	5	50	0	1090	400	30	515	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	0	5	495	5	53	0	1147	421	32	542	5
RTOR Reduction (vph)	0	4	0	0	32	0	0	0	229	0	1	0
Lane Group Flow (vph)	0	6	0	495	26	0	0	1147	192	32	546	0
Heavy Vehicles (%)	2%	2%	2%	5%	2%	5%	2%	14%	9%	2%	8%	2%
Turn Type	Perm			Prot					Prot	Prot		
Protected Phases		4		3	8			2	2	1	6	
Permitted Phases	4											
Actuated Green, G (s)		15.6		20.3	39.9			45.7	45.7	2.4	31.0	
Effective Green, g (s)		15.6		20.3	39.9			45.7	45.7	2.4	31.0	
Actuated g/C Ratio		0.16		0.20	0.40			0.46	0.46	0.02	0.31	
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		208		570	526			1219	1004	36	872	
v/s Ratio Prot				c0.18	c0.02			c0.43	0.09	0.02	c0.19	
v/s Ratio Perm		0.00										
v/c Ratio		0.03		0.87	0.05			0.94	0.19	0.89	0.63	
Uniform Delay, d1		35.8		38.6	18.4			25.9	16.2	48.7	29.5	
Progression Factor		1.00		1.00	1.00			0.39	0.19	1.00	1.00	
Incremental Delay, d2		0.1		13.2	0.0			12.9	0.3	104.6	3.4	
Delay (s)		35.8		51.8	18.5			23.0	3.4	153.2	32.9	
Level of Service		D		D	B			C	A	F	C	
Approach Delay (s)		35.8			48.3			17.8			39.6	
Approach LOS		D			D			B			D	

Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		

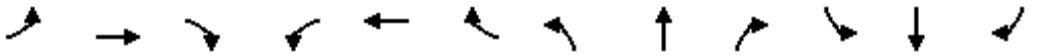
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	1.00					0.86	1.00	0.97	0.91	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3136	1389					5268	1403	3042	4071	
Flt Permitted		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3136	1389					5268	1403	3042	4071	
Volume (vph)	0	150	595	0	0	0	0	1560	340	230	1240	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	158	626	0	0	0	0	1642	358	242	1305	0
RTOR Reduction (vph)	0	0	14	0	0	0	0	0	236	0	0	0
Lane Group Flow (vph)	0	158	612	0	0	0	0	1642	122	242	1305	0
Heavy Vehicles (%)	0%	3%	4%	0%	0%	0%	0%	11%	3%	3%	14%	0%
Turn Type			Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)		45.0	45.0					34.0	34.0	9.0	47.0	
Effective Green, g (s)		45.0	45.0					34.0	34.0	9.0	47.0	
Actuated g/C Ratio		0.45	0.45					0.34	0.34	0.09	0.47	
Clearance Time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0					3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		1411	625					1791	477	274	1913	
v/s Ratio Prot		0.05						c0.31		c0.08	0.32	
v/s Ratio Perm			c0.44						0.09			
v/c Ratio		0.11	0.98					0.92	0.26	0.88	0.68	
Uniform Delay, d1		15.9	27.0					31.6	23.8	45.0	20.7	
Progression Factor		0.71	0.53					1.00	1.00	1.12	0.94	
Incremental Delay, d2		0.0	26.1					8.9	1.3	19.3	1.3	
Delay (s)		11.3	40.5					40.6	25.1	69.8	20.7	
Level of Service		B	D					D	C	E	C	
Approach Delay (s)		34.6			0.0			37.8			28.4	
Approach LOS		C			A			D			C	

Intersection Summary			
HCM Average Control Delay	33.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		

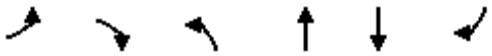
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.81	0.81	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1741	4107	1175	1346	4962	709	1242	1133	1257	808	1615	722
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.55	1.00	1.00	0.56	1.00	1.00
Satd. Flow (perm)	1741	4107	1175	1346	4962	709	718	1133	1257	474	1615	722
Volume (vph)	290	560	90	140	2055	180	50	50	30	90	310	220
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	315	609	98	152	2234	196	54	54	33	98	337	239
RTOR Reduction (vph)	0	0	54	0	0	91	0	0	23	0	0	35
Lane Group Flow (vph)	315	609	44	152	2234	105	54	54	10	98	337	204
Heavy Vehicles (%)	80%	13%	23%	20%	11%	65%	30%	50%	15%	100%	100%	100%
Turn Type	Prot		Perm	Prot		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	17.0	44.6	44.6	15.6	43.2	53.4	16.8	13.6	29.2	27.8	20.6	37.6
Effective Green, g (s)	17.0	44.6	44.6	15.6	43.2	53.4	16.8	13.6	29.2	27.8	20.6	37.6
Actuated g/C Ratio	0.17	0.45	0.45	0.16	0.43	0.53	0.17	0.14	0.29	0.28	0.21	0.38
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	296	1832	524	210	2144	407	137	154	417	166	333	300
v/s Ratio Prot	c0.18	0.15		0.11	c0.45	0.03	0.01	0.05	0.00	c0.06	c0.21	0.12
v/s Ratio Perm			0.04			0.12	0.05		0.00	0.10		0.17
v/c Ratio	1.06	0.33	0.08	0.72	1.04	0.26	0.39	0.35	0.02	0.59	1.01	0.68
Uniform Delay, d1	41.5	18.0	15.9	40.2	28.4	12.6	36.2	39.2	25.2	29.8	39.7	26.2
Progression Factor	1.00	1.00	1.00	1.00	0.78	0.77	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	70.3	0.5	0.3	5.6	26.0	0.2	1.9	1.4	0.0	5.5	52.4	6.2
Delay (s)	111.8	18.5	16.3	45.6	48.0	9.9	38.1	40.6	25.3	35.3	92.1	32.4
Level of Service	F	B	B	D	D	A	D	D	C	D	F	C
Approach Delay (s)		47.0			45.0			36.0			62.7	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM Average Control Delay	47.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

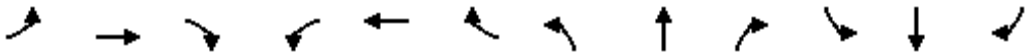
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0	
Lane Util. Factor		0.88		0.91	0.91	
Frt		0.85		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		2469		4219	4107	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		2469		4219	4107	
Volume (vph)	0	740	0	1435	1515	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	779	0	1511	1595	0
RTOR Reduction (vph)	0	16	0	0	0	0
Lane Group Flow (vph)	0	763	0	1511	1595	0
Heavy Vehicles (%)	0%	3%	0%	10%	13%	0%
Turn Type		custom				
Protected Phases				2	6	
Permitted Phases		4				
Actuated Green, G (s)		34.7		57.3	57.3	
Effective Green, g (s)		34.7		57.3	57.3	
Actuated g/C Ratio		0.35		0.57	0.57	
Clearance Time (s)		4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0	
Lane Grp Cap (vph)		857		2417	2353	
v/s Ratio Prot				0.36	c0.39	
v/s Ratio Perm		c0.31				
v/c Ratio		0.89		0.63	0.68	
Uniform Delay, d1		30.9		14.2	14.9	
Progression Factor		1.00		1.33	1.00	
Incremental Delay, d2		11.4		0.9	1.6	
Delay (s)		42.3		19.8	16.5	
Level of Service		D		B	B	
Approach Delay (s)	42.3			19.8	16.5	
Approach LOS	D			B	B	

Intersection Summary			
HCM Average Control Delay	22.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		

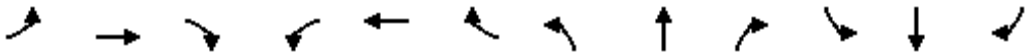
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	1.00		1.00	0.99		1.00	0.95		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1407	2895		1520	2927		1520	1416		1520	1447	
Flt Permitted	0.95	1.00		0.45	1.00		0.57	1.00		0.59	1.00	
Satd. Flow (perm)	1407	2895		723	2927		916	1416		945	1447	
Volume (vph)	25	510	0	5	875	65	5	90	50	40	115	35
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	537	0	5	921	68	5	95	53	42	121	37
RTOR Reduction (vph)	0	0	0	0	5	0	0	20	0	0	11	0
Lane Group Flow (vph)	26	537	0	5	984	0	5	128	0	42	147	0
Heavy Vehicles (%)	8%	5%	0%	0%	3%	0%	0%	3%	14%	0%	6%	9%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	5.1	67.0		57.9	57.9		25.0	25.0		25.0	25.0	
Effective Green, g (s)	5.1	67.0		57.9	57.9		25.0	25.0		25.0	25.0	
Actuated g/C Ratio	0.05	0.67		0.58	0.58		0.25	0.25		0.25	0.25	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	72	1940		419	1695		229	354		236	362	
v/s Ratio Prot	c0.02	0.19			c0.34			0.09			c0.10	
v/s Ratio Perm				0.01			0.01			0.04		
v/c Ratio	0.36	0.28		0.01	0.58		0.02	0.36		0.18	0.41	
Uniform Delay, d1	45.9	6.7		8.9	13.4		28.3	30.9		29.4	31.3	
Progression Factor	1.53	0.13		0.11	0.09		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.8	0.3		0.0	1.1		0.2	2.8		1.6	3.3	
Delay (s)	73.0	1.2		1.0	2.3		28.5	33.8		31.1	34.6	
Level of Service	E	A		A	A		C	C		C	C	
Approach Delay (s)		4.5			2.3			33.6			33.9	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	8.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.2%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.99		1.00	0.96		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1490	2901		1520	2934		1505	1513		1520	1478	
Flt Permitted	0.95	1.00		0.95	1.00		0.55	1.00		0.60	1.00	
Satd. Flow (perm)	1490	2901		1520	2934		875	1513		953	1478	
Volume (vph)	45	795	95	30	1230	55	100	95	35	70	90	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	837	100	32	1295	58	105	100	37	74	95	63
RTOR Reduction (vph)	0	9	0	0	3	0	0	13	0	0	24	0
Lane Group Flow (vph)	47	928	0	32	1350	0	105	124	0	74	134	0
Heavy Vehicles (%)	2%	3%	4%	0%	3%	2%	1%	2%	0%	0%	3%	0%
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	4.2	62.4		3.6	61.8		22.0	22.0		22.0	22.0	
Effective Green, g (s)	4.2	62.4		3.6	61.8		22.0	22.0		22.0	22.0	
Actuated g/C Ratio	0.04	0.62		0.04	0.62		0.22	0.22		0.22	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	63	1810		55	1813		193	333		210	325	
v/s Ratio Prot	c0.03	0.32		0.02	c0.46			0.08			0.09	
v/s Ratio Perm							c0.12			0.08		
v/c Ratio	0.75	0.51		0.58	0.74		0.54	0.37		0.35	0.41	
Uniform Delay, d1	47.4	10.4		47.5	13.5		34.6	33.1		33.0	33.5	
Progression Factor	1.19	0.40		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	33.5	0.9		14.7	2.8		10.6	3.2		4.6	3.8	
Delay (s)	89.8	5.1		62.2	16.3		45.1	36.3		37.6	37.3	
Level of Service	F	A		E	B		D	D		D	D	
Approach Delay (s)		9.1			17.4			40.1			37.4	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

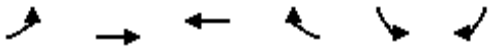
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1462	1308	1468	1308	1394	1391
Flt Permitted	0.95	1.00	1.00	1.00	0.69	1.00
Satd. Flow (perm)	1462	1308	1468	1308	1006	1391
Volume (vph)	75	235	105	25	70	75
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	247	111	26	74	79
RTOR Reduction (vph)	0	210	0	7	0	0
Lane Group Flow (vph)	79	37	111	19	74	79
Heavy Vehicles (%)	4%	4%	9%	4%	9%	15%
Turn Type		custom		Perm	Perm	
Protected Phases			2			6
Permitted Phases	8	8		2	6	
Actuated Green, G (s)	9.1	9.1	42.9	42.9	42.9	42.9
Effective Green, g (s)	9.1	9.1	42.9	42.9	42.9	42.9
Actuated g/C Ratio	0.15	0.15	0.71	0.71	0.71	0.71
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	222	198	1050	935	719	995
v/s Ratio Prot			c0.08			0.06
v/s Ratio Perm	c0.05	0.03		0.01	0.07	
v/c Ratio	0.36	0.19	0.11	0.02	0.10	0.08
Uniform Delay, d1	22.8	22.2	2.6	2.5	2.6	2.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.5	0.2	0.0	0.3	0.2
Delay (s)	23.8	22.7	2.8	2.5	2.9	2.7
Level of Service	C	C	A	A	A	A
Approach Delay (s)	23.0		2.8			2.8
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.15		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.5%	ICU Level of Service	A
Analysis Period (min)	15		

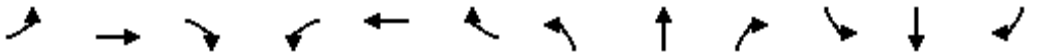
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0			4.0
Lane Util. Factor		0.95	0.95			1.00
Frt		1.00	1.00			0.86
Flt Protected		1.00	1.00			1.00
Satd. Flow (prot)		2923	2915			1344
Flt Permitted		1.00	1.00			1.00
Satd. Flow (perm)		2923	2915			1344
Volume (vph)	0	1110	1400	25	0	40
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1168	1474	26	0	42
RTOR Reduction (vph)	0	0	2	0	0	6
Lane Group Flow (vph)	0	1168	1498	0	0	36
Heavy Vehicles (%)	0%	4%	4%	4%	0%	3%
Turn Type						custom
Protected Phases		4	8			
Permitted Phases						6
Actuated Green, G (s)		23.9	23.9			8.1
Effective Green, g (s)		23.9	23.9			8.1
Actuated g/C Ratio		0.60	0.60			0.20
Clearance Time (s)		4.0	4.0			4.0
Vehicle Extension (s)		3.0	3.0			3.0
Lane Grp Cap (vph)		1746	1742			272
v/s Ratio Prot		0.40	c0.51			
v/s Ratio Perm						c0.03
v/c Ratio		0.67	0.86			0.13
Uniform Delay, d1		5.4	6.7			13.1
Progression Factor		1.00	1.00			1.00
Incremental Delay, d2		2.1	5.8			0.2
Delay (s)		7.5	12.5			13.3
Level of Service		A	B			B
Approach Delay (s)		7.5	12.5		13.3	
Approach LOS		A	B		B	

Intersection Summary			
HCM Average Control Delay	10.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.9%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0				4.0			4.0
Lane Util. Factor		0.95			0.95				1.00			1.00
Frt		1.00			1.00				0.86			0.86
Flt Protected		1.00			1.00				1.00			1.00
Satd. Flow (prot)		2917			2920				1384			1384
Flt Permitted		1.00			1.00				1.00			1.00
Satd. Flow (perm)		2917			2920				1384			1384
Volume (vph)	0	1260	15	0	1040	10	0	0	10	0	0	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1326	16	0	1095	11	0	0	11	0	0	11
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	9	0	0	9
Lane Group Flow (vph)	0	1341	0	0	1105	0	0	0	2	0	0	2
Heavy Vehicles (%)	0%	4%	7%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Turn Type									custom			custom
Protected Phases		4			8							
Permitted Phases									2			6
Actuated Green, G (s)		24.3			24.3				7.7			7.7
Effective Green, g (s)		24.3			24.3				7.7			7.7
Actuated g/C Ratio		0.61			0.61				0.19			0.19
Clearance Time (s)		4.0			4.0				4.0			4.0
Vehicle Extension (s)		3.0			3.0				3.0			3.0
Lane Grp Cap (vph)		1772			1774				266			266
v/s Ratio Prot		c0.46			0.38							
v/s Ratio Perm									c0.00			0.00
v/c Ratio		0.76			0.62				0.01			0.01
Uniform Delay, d1		5.7			5.0				13.1			13.1
Progression Factor		1.00			1.00				1.00			1.00
Incremental Delay, d2		3.1			1.7				0.0			0.0
Delay (s)		8.8			6.6				13.1			13.1
Level of Service		A			A				B			B
Approach Delay (s)		8.8			6.6			13.1			13.1	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	75	200	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	79	211	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			0		263	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		263	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		100	100
cM capacity (veh/h)			1629		675	1091

Direction, Lane #	WB 1	WB 2	NB 1
Volume Total	149	140	0
Volume Left	79	0	0
Volume Right	0	0	0
cSH	1629	1700	1700
Volume to Capacity	0.05	0.08	0.00
Queue Length 95th (ft)	4	0	0
Control Delay (s)	4.1	0.0	0.0
Lane LOS	A		A
Approach Delay (s)	2.1		0.0
Approach LOS			A

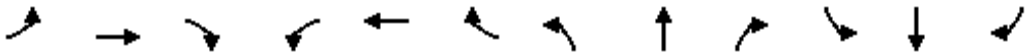
Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	11.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	465	100	0	1275	0	165
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	489	105	0	1342	0	174
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	619			1280		
pX, platoon unblocked			0.93		0.86	0.93
vC, conflicting volume			595		1213	297
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			484		831	163
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	78
cM capacity (veh/h)			1010		269	794

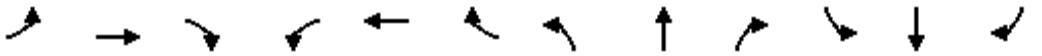
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	326	268	671	671	174
Volume Left	0	0	0	0	0
Volume Right	0	105	0	0	174
cSH	1700	1700	1700	1700	794
Volume to Capacity	0.19	0.16	0.39	0.39	0.22
Queue Length 95th (ft)	0	0	0	0	21
Control Delay (s)	0.0	0.0	0.0	0.0	10.8
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.8
Approach LOS					B

Intersection Summary			
Average Delay	0.9		
Intersection Capacity Utilization	45.2%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	147	529	187	155	888	203	91	974	91	111	1170	196
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1598	4411		1598	4463		1598	3154		1598	3127	
Flt Permitted	0.17	1.00		0.35	1.00		0.11	1.00		0.16	1.00	
Satd. Flow (perm)	292	4411		595	4463		192	3154		268	3127	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	155	557	197	163	935	214	96	1025	96	117	1232	206
RTOR Reduction (vph)	0	25	0	0	53	0	0	10	0	0	19	0
Lane Group Flow (vph)	155	729	0	163	1096	0	96	1111	0	117	1419	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	27.0	27.0		19.0	19.0		35.0	35.0		35.0	35.0	
Effective Green, g (s)	27.0	27.0		19.0	19.0		35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.39	0.39		0.27	0.27		0.50	0.50		0.50	0.50	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	187	1701		162	1211		96	1577		134	1564	
v/s Ratio Prot	c0.05	0.17			0.25			0.35			0.45	
v/s Ratio Perm	0.27			c0.27			c0.50			0.44		
v/c Ratio	0.83	0.43		1.01	0.90		1.00	0.70		0.87	0.91	
Uniform Delay, d1	18.3	15.8		25.5	24.6		17.5	13.5		15.5	16.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	25.0	0.2		72.3	9.7		91.9	1.5		42.1	7.9	
Delay (s)	43.3	16.0		97.8	34.3		109.4	15.0		57.7	24.0	
Level of Service	D	B		F	C		F	B		E	C	
Approach Delay (s)		20.7			42.2			22.4			26.5	
Approach LOS		C			D			C			C	

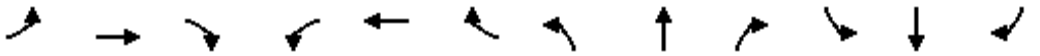
Intersection Summary			
HCM Average Control Delay	28.6	HCM Level of Service	C
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	552	0	0	575	0	0	0	0	0	0	120
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	581	0	0	605	0	0	0	0	0	0	126
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	605			581			783	1186	194	799	1186	202
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	605			581			783	1186	194	799	1186	202
tC, single (s)	4.3			4.3			7.7	6.7	7.1	7.7	6.7	7.1
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	100			100			100	100	100	100	100	84
cM capacity (veh/h)	916			936			227	176	791	263	176	781

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	232	232	116	0	202	202	202	0	126
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0	0	126
cSH	1700	1700	1700	1700	1700	1700	1700	1700	781
Volume to Capacity	0.14	0.14	0.07	0.00	0.12	0.12	0.12	0.00	0.16
Queue Length 95th (ft)	0	0	0	0	0	0	0	0	14
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5
Lane LOS								A	B
Approach Delay (s)	0.0			0.0				0.0	10.5
Approach LOS								A	B

Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	25.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	368	13	39	912	89	19	84	34	79	102	181
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.98	1.00
Satd. Flow (prot)	1598	3179		1598	3153			1666	1430		1646	1430
Flt Permitted	0.17	1.00		0.49	1.00			0.94	1.00		0.84	1.00
Satd. Flow (perm)	286	3179		826	3153			1582	1430		1408	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	117	387	14	41	960	94	20	88	36	83	107	191
RTOR Reduction (vph)	0	4	0	0	12	0	0	0	21	0	0	89
Lane Group Flow (vph)	117	397	0	41	1042	0	0	108	15	0	190	102
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	44.0	44.0		44.0	44.0			38.0	38.0		38.0	38.0
Effective Green, g (s)	44.0	44.0		44.0	44.0			38.0	38.0		38.0	38.0
Actuated g/C Ratio	0.49	0.49		0.49	0.49			0.42	0.42		0.42	0.42
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	140	1554		404	1541			668	604		594	604
v/s Ratio Prot		0.12			0.33							
v/s Ratio Perm	c0.41			0.05				0.07	0.01		c0.13	0.07
v/c Ratio	0.84	0.26		0.10	0.68			0.16	0.03		0.32	0.17
Uniform Delay, d1	19.9	13.4		12.4	17.6			16.1	15.2		17.4	16.2
Progression Factor	1.00	1.00		1.00	1.00			0.73	0.54		0.94	0.94
Incremental Delay, d2	32.9	0.1		0.1	1.2			0.5	0.1		1.2	0.5
Delay (s)	52.8	13.5		12.5	18.8			12.2	8.3		17.6	15.7
Level of Service	D	B		B	B			B	A		B	B
Approach Delay (s)		22.4			18.5			11.2			16.6	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	18.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



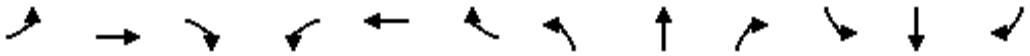
Movement	EBL	EBT	EBR	WBT	WBR	WBR2	SBL2	SBL	SBR	SEL	SET	SER
Lane Configurations												
Volume (vph)	3	382	186	796	187	0	12	0	6	50	88	5
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)		4.0	4.0	4.0				4.0		4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	0.95				1.00		1.00	1.00	1.00
Frt		1.00	0.85	0.97				0.96		1.00	1.00	0.85
Flt Protected		1.00	1.00	1.00				0.97		0.95	1.00	1.00
Satd. Flow (prot)		3194	1430	3104				1557		1598	1682	1430
Flt Permitted		0.95	1.00	1.00				0.97		0.49	1.00	1.00
Satd. Flow (perm)		3034	1430	3104				1557		817	1682	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	3	402	196	838	197	0	13	0	6	53	93	5
RTOR Reduction (vph)	0	0	123	0	0	0	0	0	0	0	0	3
Lane Group Flow (vph)	0	405	73	1035	0	0	0	19	0	53	93	2
Turn Type	Perm		Perm			Perm	Perm			Perm		Perm
Protected Phases		4		4				7			6	
Permitted Phases	4		4			4	7			6		6
Actuated Green, G (s)		33.3	33.3	33.3				3.2		41.5	41.5	41.5
Effective Green, g (s)		33.3	33.3	33.3				3.2		41.5	41.5	41.5
Actuated g/C Ratio		0.37	0.37	0.37				0.04		0.46	0.46	0.46
Clearance Time (s)		4.0	4.0	4.0				4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0				3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1123	529	1148				55		377	776	659
v/s Ratio Prot				c0.33							0.06	
v/s Ratio Perm		0.13	0.05					0.01		0.06		0.00
v/c Ratio		0.36	0.14	0.90				0.35		0.14	0.12	0.00
Uniform Delay, d1		20.6	18.8	26.8				42.4		14.0	13.8	13.1
Progression Factor		1.00	1.00	1.05				1.00		1.00	1.00	1.00
Incremental Delay, d2		0.2	0.1	8.6				3.8		0.2	0.1	0.0
Delay (s)		20.8	18.9	36.6				46.1		14.1	13.9	13.1
Level of Service		C	B	D				D		B	B	B
Approach Delay (s)		20.2		36.6				46.1			14.0	
Approach LOS		C		D				D			B	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



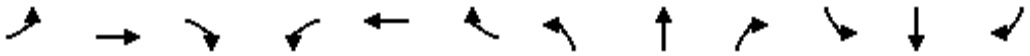
Movement	NWL	NWT	NWR2
Lane Configurations			
Volume (vph)	343	296	5
Ideal Flow (vphpl)	1850	1850	1850
Total Lost time (s)	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00
Frt	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00
Satd. Flow (prot)	1598	1682	1430
Flt Permitted	0.70	1.00	1.00
Satd. Flow (perm)	1172	1682	1430
Peak-hour factor, PHF	0.95	0.95	0.95
Adj. Flow (vph)	361	312	5
RTOR Reduction (vph)	0	0	3
Lane Group Flow (vph)	361	312	2
Turn Type	Perm		Perm
Protected Phases		2	
Permitted Phases	2		2
Actuated Green, G (s)	41.5	41.5	41.5
Effective Green, g (s)	41.5	41.5	41.5
Actuated g/C Ratio	0.46	0.46	0.46
Clearance Time (s)	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0
Lane Grp Cap (vph)	540	776	659
v/s Ratio Prot		0.19	
v/s Ratio Perm	c0.31		0.00
v/c Ratio	0.67	0.40	0.00
Uniform Delay, d1	18.9	16.0	13.1
Progression Factor	0.47	0.52	0.40
Incremental Delay, d2	5.4	1.3	0.0
Delay (s)	14.3	9.6	5.2
Level of Service	B	A	A
Approach Delay (s)		12.0	
Approach LOS		B	

Intersection Summary



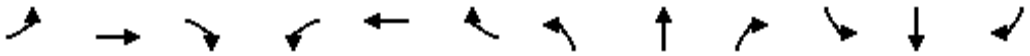
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	58	485	0	0	718	2	488	35	237	11	0	96
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95			1.00	
Frt	1.00	1.00			1.00		1.00	0.90			0.88	
Flt Protected	0.95	1.00			1.00		0.95	0.99			0.99	
Satd. Flow (prot)	1598	3195			3194		1518	1424			1471	
Flt Permitted	0.18	1.00			1.00		0.95	0.99			0.99	
Satd. Flow (perm)	305	3195			3194		1518	1424			1471	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	61	511	0	0	756	2	514	37	249	12	0	101
RTOR Reduction (vph)	0	0	0	0	0	0	0	61	0	0	93	0
Lane Group Flow (vph)	61	511	0	0	758	0	416	323	0	0	20	0
Turn Type	Perm						Split			Split		
Protected Phases		4			8		2	2		6	6	
Permitted Phases	4											
Actuated Green, G (s)	27.5	27.5			27.5		43.0	43.0			7.5	
Effective Green, g (s)	27.5	27.5			27.5		43.0	43.0			7.5	
Actuated g/C Ratio	0.31	0.31			0.31		0.48	0.48			0.08	
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	93	976			976		725	680			123	
v/s Ratio Prot		0.16			c0.24		c0.27	0.23			c0.01	
v/s Ratio Perm	0.20											
v/c Ratio	0.66	0.52			0.78		0.57	0.48			0.17	
Uniform Delay, d1	27.1	25.8			28.5		16.9	15.9			38.3	
Progression Factor	0.72	0.84			0.62		1.00	1.00			0.81	
Incremental Delay, d2	14.9	0.5			3.6		3.3	2.4			0.6	
Delay (s)	34.5	22.2			21.2		20.2	18.3			31.7	
Level of Service	C	C			C		C	B			C	
Approach Delay (s)		23.6			21.2			19.3			31.7	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM Average Control Delay	21.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



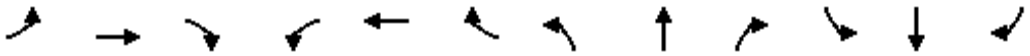
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	419	38	68	633	82	40	207	23	42	180	36
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1598	3156		1598	3141		1598	3195	1430	1598	3115	
Flt Permitted	0.21	1.00		0.39	1.00		0.61	1.00	1.00	0.62	1.00	
Satd. Flow (perm)	352	3156		648	3141		1026	3195	1430	1035	3115	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	441	40	72	666	86	42	218	24	44	189	38
RTOR Reduction (vph)	0	13	0	0	19	0	0	0	10	0	11	0
Lane Group Flow (vph)	84	468	0	72	733	0	42	218	14	44	216	0
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	30.1	30.1		30.1	30.1		51.9	51.9	51.9	51.9	51.9	
Effective Green, g (s)	30.1	30.1		30.1	30.1		51.9	51.9	51.9	51.9	51.9	
Actuated g/C Ratio	0.33	0.33		0.33	0.33		0.58	0.58	0.58	0.58	0.58	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	118	1056		217	1050		592	1842	825	597	1796	
v/s Ratio Prot		0.15			0.23			0.07			c0.07	
v/s Ratio Perm	c0.24			0.11			0.04		0.01	0.04		
v/c Ratio	0.71	0.44		0.33	0.70		0.07	0.12	0.02	0.07	0.12	
Uniform Delay, d1	26.2	23.4		22.4	26.0		8.4	8.7	8.1	8.4	8.7	
Progression Factor	0.91	1.00		0.61	0.60		0.51	0.45	0.35	1.08	1.04	
Incremental Delay, d2	14.1	0.2		0.8	1.7		0.2	0.1	0.0	0.2	0.1	
Delay (s)	37.9	23.7		14.5	17.4		4.5	4.0	2.9	9.3	9.2	
Level of Service	D	C		B	B		A	A	A	A	A	
Approach Delay (s)		25.8			17.1			4.0			9.2	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	16.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	22	287	9	8	868	27	90	63	27	45	59	83
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			1.00			0.98			0.94	
Flt Protected		1.00			1.00			0.98			0.99	
Satd. Flow (prot)		3172			3180			1608			1562	
Flt Permitted		0.87			0.95			0.78			0.90	
Satd. Flow (perm)		2764			3029			1281			1425	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	23	302	9	8	914	28	95	66	28	47	62	87
RTOR Reduction (vph)	0	3	0	0	3	0	0	6	0	0	25	0
Lane Group Flow (vph)	0	331	0	0	947	0	0	183	0	0	171	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		37.8			37.8			44.2			44.2	
Effective Green, g (s)		37.8			37.8			44.2			44.2	
Actuated g/C Ratio		0.42			0.42			0.49			0.49	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1161			1272			629			700	
v/s Ratio Prot												
v/s Ratio Perm		0.12			c0.31			c0.14			0.12	
v/c Ratio		0.29			0.74			0.29			0.24	
Uniform Delay, d1		17.2			22.0			13.6			13.2	
Progression Factor		1.00			0.92			1.14			1.00	
Incremental Delay, d2		0.1			1.9			1.2			0.8	
Delay (s)		17.3			22.2			16.6			14.1	
Level of Service		B			C			B			B	
Approach Delay (s)		17.3			22.2			16.6			14.1	
Approach LOS		B			C			B			B	

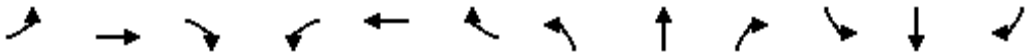
Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	489	29	7	1064	51	55	412	16	55	246	241
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.99			0.99		1.00	0.99		1.00	0.93	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3148			3173		1598	3177		1598	2958	
Flt Permitted		0.62			0.95		0.34	1.00		0.39	1.00	
Satd. Flow (perm)		1978			3021		573	3177		656	2958	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	515	31	7	1120	54	58	434	17	58	259	254
RTOR Reduction (vph)	0	4	0	0	4	0	0	3	0	0	67	0
Lane Group Flow (vph)	0	642	0	0	1177	0	58	448	0	58	446	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		55.0			55.0		27.0	27.0		27.0	27.0	
Effective Green, g (s)		55.0			55.0		27.0	27.0		27.0	27.0	
Actuated g/C Ratio		0.61			0.61		0.30	0.30		0.30	0.30	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		1209			1846		172	953		197	887	
v/s Ratio Prot								0.14			c0.15	
v/s Ratio Perm		0.32			c0.39		0.10			0.09		
v/c Ratio		0.53			0.64		0.34	0.47		0.29	0.50	
Uniform Delay, d1		10.1			11.2		24.5	25.7		24.2	26.0	
Progression Factor		1.00			0.69		0.97	1.01		1.00	1.00	
Incremental Delay, d2		1.7			1.6		5.2	1.7		3.8	2.0	
Delay (s)		11.8			9.3		29.0	27.5		28.0	28.0	
Level of Service		B			A		C	C		C	C	
Approach Delay (s)		11.8			9.3			27.7			28.0	
Approach LOS		B			A			C			C	

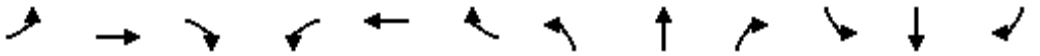
Intersection Summary			
HCM Average Control Delay	16.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	113	25	31	269	18	32	192	19	39	334	65
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0			5.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.97			0.99		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	
Satd. Flow (prot)	1598	3110			3153		1598	1682	1430	1598	1641	
Flt Permitted	0.95	1.00			1.00		0.34	1.00	1.00	0.57	1.00	
Satd. Flow (perm)	1598	3110			3153		564	1682	1430	962	1641	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	119	26	33	283	19	34	202	20	41	352	68
RTOR Reduction (vph)	0	21	0	0	5	0	0	0	10	0	8	0
Lane Group Flow (vph)	112	124	0	0	330	0	34	202	10	41	412	0
Turn Type	Split			Split			custom		custom	custom		
Protected Phases	3	3		6	6			4			4	
Permitted Phases							8 4		8 4	8 4		
Actuated Green, G (s)	16.0	16.0			16.0		45.0	25.0	45.0	45.0	25.0	
Effective Green, g (s)	16.0	16.0			16.0		45.0	25.0	45.0	45.0	25.0	
Actuated g/C Ratio	0.18	0.18			0.18		0.50	0.28	0.50	0.50	0.28	
Clearance Time (s)	4.0	4.0			5.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	284	553			561		282	467	715	481	456	
v/s Ratio Prot	c0.07	0.04			c0.10			0.12			c0.25	
v/s Ratio Perm							c0.06		0.01	0.04		
v/c Ratio	0.39	0.23			0.59		0.12	0.43	0.01	0.09	0.90	
Uniform Delay, d1	32.7	31.7			34.0		12.0	26.7	11.3	11.8	31.3	
Progression Factor	1.00	1.00			1.00		1.07	1.11	1.26	1.00	1.00	
Incremental Delay, d2	4.1	0.9			4.5		0.6	1.9	0.0	0.3	23.9	
Delay (s)	36.8	32.6			38.5		13.3	31.6	14.3	12.1	55.2	
Level of Service	D	C			D		B	C	B	B	E	
Approach Delay (s)		34.4			38.5			27.8			51.4	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	40.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	46	212	12	12	378	33	111	218	78	44	89	109
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	5.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.96		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1598	1668		1598	1661		1598	1615		1598	2932	
Flt Permitted	0.95	1.00		0.95	1.00		0.62	1.00		0.33	1.00	
Satd. Flow (perm)	1598	1668		1598	1661		1044	1615		556	2932	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	223	13	13	398	35	117	229	82	46	94	115
RTOR Reduction (vph)	0	1	0	0	2	0	0	12	0	0	87	0
Lane Group Flow (vph)	48	235	0	13	431	0	117	299	0	46	122	0
Turn Type	Prot			Prot			custom			custom		
Protected Phases	1	6		7	2			8			8	
Permitted Phases							4			4		
Actuated Green, G (s)	7.1	71.3		5.8	69.0		30.9	28.9		30.9	28.9	
Effective Green, g (s)	7.1	71.3		5.8	69.0		30.9	28.9		30.9	28.9	
Actuated g/C Ratio	0.06	0.59		0.05	0.58		0.26	0.24		0.26	0.24	
Clearance Time (s)	4.0	4.0		4.0	5.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	2.0		3.0	4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)	95	991		77	955		269	389		143	706	
v/s Ratio Prot	c0.03	0.14		0.01	c0.26			c0.19			0.04	
v/s Ratio Perm							0.11			0.08		
v/c Ratio	0.51	0.24		0.17	0.45		0.43	0.77		0.32	0.17	
Uniform Delay, d1	54.7	11.5		54.8	14.6		37.3	42.4		36.1	36.1	
Progression Factor	1.00	1.00		1.00	1.00		1.01	1.01		1.01	1.03	
Incremental Delay, d2	1.5	0.6		1.0	1.5		1.1	9.3		1.2	0.1	
Delay (s)	56.3	12.1		55.8	16.2		38.8	52.3		37.5	37.2	
Level of Service	E	B		E	B		D	D		D	D	
Approach Delay (s)		19.5			17.3			48.6			37.3	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM Average Control Delay	30.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.0
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	EBR2	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2	SBL	SBT
Lane Configurations												
Volume (vph)	139	223	26	263	78	53	145	9	7	33	98	107
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	5.0	5.5		5.0		5.0	5.0				5.0	5.0
Lane Util. Factor	1.00	1.00		1.00		1.00	1.00				1.00	1.00
Frt	1.00	0.85		0.97		1.00	0.99				1.00	0.99
Flt Protected	1.00	1.00		1.00		0.95	1.00				0.95	1.00
Satd. Flow (prot)	1682	1430		1630		1598	1658				1598	1658
Flt Permitted	1.00	1.00		1.00		0.67	1.00				0.62	1.00
Satd. Flow (perm)	1682	1430		1630		1129	1658				1038	1658
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	146	235	27	277	82	56	153	9	7	35	103	113
RTOR Reduction (vph)	0	4	0	10	0	0	1	0	0	0	0	2
Lane Group Flow (vph)	146	258	0	349	0	56	168	0	0	0	138	123
Turn Type		pm+ov				Perm				Perm	Perm	
Protected Phases	3	2		4			1					1
Permitted Phases		3		8 3		1				1	1	
Actuated Green, G (s)	10.0	28.7		19.0		48.0	48.0				48.0	48.0
Effective Green, g (s)	10.0	28.7		19.0		48.0	48.0				48.0	48.0
Actuated g/C Ratio	0.08	0.24		0.16		0.40	0.40				0.40	0.40
Clearance Time (s)	5.0	5.5		5.0		5.0	5.0				5.0	5.0
Vehicle Extension (s)	4.0	4.0		3.0		3.0	3.0				3.0	3.0
Lane Grp Cap (vph)	140	408		326		452	663				415	663
v/s Ratio Prot	0.09	0.10		c0.08			0.10					0.07
v/s Ratio Perm		0.08		0.13		0.05					c0.13	
v/c Ratio	1.04	0.63		1.07		0.12	0.25				0.33	0.18
Uniform Delay, d1	55.0	40.9		50.5		22.7	24.0				24.9	23.3
Progression Factor	1.00	1.00		1.00		1.00	1.00				1.00	1.00
Incremental Delay, d2	87.9	3.6		69.7		0.6	0.9				2.1	0.6
Delay (s)	142.9	44.5		120.2		23.3	25.0				27.1	23.9
Level of Service	F	D		F		C	C				C	C
Approach Delay (s)	79.7			120.2			24.5					25.6
Approach LOS	E			F			C					C

Intersection Summary			
HCM Average Control Delay	78.0	HCM Level of Service	E
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	29.3
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

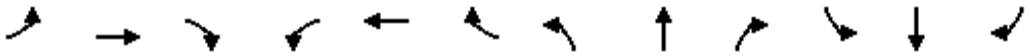


Movement	SBR	NWL	NWR	NWR2
Lane Configurations				
Volume (vph)	11	270	152	34
Ideal Flow (vphpl)	1850	1850	1850	1850
Total Lost time (s)		5.5		
Lane Util. Factor		0.97		
Frt		0.94		
Flt Protected		0.97		
Satd. Flow (prot)		2975		
Flt Permitted		0.97		
Satd. Flow (perm)		2975		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95
Adj. Flow (vph)	12	284	160	36
RTOR Reduction (vph)	0	5	0	0
Lane Group Flow (vph)	0	475	0	0
Turn Type				
Protected Phases		2		
Permitted Phases				
Actuated Green, G (s)		18.7		
Effective Green, g (s)		18.7		
Actuated g/C Ratio		0.16		
Clearance Time (s)		5.5		
Vehicle Extension (s)		4.0		
Lane Grp Cap (vph)		464		
v/s Ratio Prot		c0.16		
v/s Ratio Perm				
v/c Ratio		1.02		
Uniform Delay, d1		50.6		
Progression Factor		1.00		
Incremental Delay, d2		47.9		
Delay (s)		98.6		
Level of Service		F		
Approach Delay (s)		98.6		
Approach LOS		F		

Intersection Summary

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	28	616	8	138	1631	59	30	52	23	39	167	242
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1598	4583		1598	3195	1430	1598	3050		1598	3195	1430
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1598	4583		1598	3195	1430	1598	3050		1598	3195	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	29	648	8	145	1717	62	32	55	24	41	176	255
RTOR Reduction (vph)	0	1	0	0	0	7	0	21	0	0	0	224
Lane Group Flow (vph)	29	655	0	145	1717	55	32	58	0	41	176	31
Turn Type	Prot			Prot		Perm	Prot			Prot		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases						6						8
Actuated Green, G (s)	2.4	48.0		12.8	58.4	58.4	2.4	10.8		2.4	10.8	10.8
Effective Green, g (s)	2.4	48.0		12.8	58.4	58.4	2.4	10.8		2.4	10.8	10.8
Actuated g/C Ratio	0.03	0.53		0.14	0.65	0.65	0.03	0.12		0.03	0.12	0.12
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	43	2444		227	2073	928	43	366		43	383	172
v/s Ratio Prot	0.02	0.14		c0.09	c0.54		0.02	0.02		c0.03	c0.06	
v/s Ratio Perm						0.04						0.02
v/c Ratio	0.67	0.27		0.64	0.83	0.06	0.74	0.16		0.95	0.46	0.18
Uniform Delay, d1	43.4	11.4		36.4	12.0	5.8	43.5	35.5		43.7	36.9	35.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	34.5	0.3		5.8	4.0	0.1	50.5	0.2		118.5	0.9	0.5
Delay (s)	77.9	11.7		42.2	16.0	5.9	94.0	35.7		162.3	37.8	36.1
Level of Service	E	B		D	B	A	F	D		F	D	D
Approach Delay (s)		14.5			17.6			52.5			47.7	
Approach LOS		B			B			D			D	

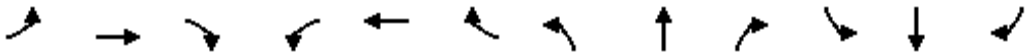
Intersection Summary			
HCM Average Control Delay	22.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	129	563	51	42	546	360	94	679	53	438	642	234
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		0.97	0.95	
Frt	1.00	0.99		1.00	0.94		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1598	3155		1598	3005		3100	3161		3100	3068	
Flt Permitted	0.24	1.00		0.32	1.00		0.24	1.00		0.31	1.00	
Satd. Flow (perm)	396	3155		534	3005		799	3161		1019	3068	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	136	593	54	44	575	379	99	715	56	461	676	246
RTOR Reduction (vph)	0	14	0	0	110	0	0	12	0	0	59	0
Lane Group Flow (vph)	136	633	0	44	844	0	99	760	0	461	864	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	17.0	17.0		17.0	17.0		25.0	25.0		25.0	25.0	
Effective Green, g (s)	17.0	17.0		17.0	17.0		25.0	25.0		25.0	25.0	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.50	0.50		0.50	0.50	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	135	1073		182	1022		400	1581		510	1534	
v/s Ratio Prot		0.20			0.28			0.24			0.28	
v/s Ratio Perm	c0.34			0.08			0.12			c0.45		
v/c Ratio	1.01	0.59		0.24	0.83		0.25	0.48		0.90	0.56	
Uniform Delay, d1	16.5	13.6		11.9	15.1		7.1	8.2		11.4	8.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	79.4	2.4		3.1	7.6		1.5	1.0		22.0	1.5	
Delay (s)	95.9	16.0		15.0	22.7		8.6	9.3		33.4	10.2	
Level of Service	F	B		B	C		A	A		C	B	
Approach Delay (s)		29.9			22.4			9.2			17.9	
Approach LOS		C			C			A			B	

Intersection Summary			
HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

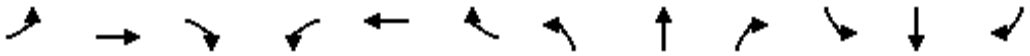
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	17	1048	28	47	959	59	7	2	38	53	9	19
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	18	1103	29	49	1009	62	7	2	40	56	9	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		663										
pX, platoon unblocked				0.91			0.91	0.91	0.91	0.91	0.91	
vC, conflicting volume	1072			1133			1782	2324	566	1768	2308	536
vC1, stage 1 conf vol							1154	1154		1139	1139	
vC2, stage 2 conf vol							628	1171		628	1168	
vCu, unblocked vol	1072			943			1658	2255	319	1643	2237	536
tC, single (s)	4.3			4.3			7.7	6.7	7.1	7.7	6.7	7.1
tC, 2 stage (s)							6.7	5.7		6.7	5.7	
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	97			92			96	99	93	67	94	96
cM capacity (veh/h)	601			613			187	164	594	169	159	469

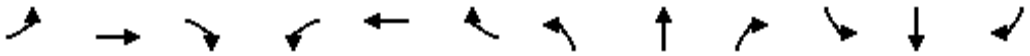
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	569	581	554	567	49	85
Volume Left	18	0	49	0	7	56
Volume Right	0	29	0	62	40	20
cSH	601	1700	613	1700	414	197
Volume to Capacity	0.03	0.34	0.08	0.33	0.12	0.43
Queue Length 95th (ft)	2	0	7	0	10	50
Control Delay (s)	0.8	0.0	2.2	0.0	14.9	36.6
Lane LOS	A		A		B	E
Approach Delay (s)	0.4		1.1		14.9	36.6
Approach LOS					B	E

Intersection Summary				
Average Delay	2.3			
Intersection Capacity Utilization	83.0%	ICU Level of Service	E	
Analysis Period (min)	15			



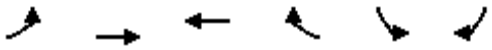
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	564	131	20	775	75	368	351	131	46	161	299
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.96		1.00	0.90	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1598	3105		1598	3195	1430	1598	1613		1598	1518	
Flt Permitted	0.25	1.00		0.25	1.00	1.00	0.41	1.00		0.40	1.00	
Satd. Flow (perm)	426	3105		426	3195	1430	694	1613		664	1518	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	107	594	138	21	816	79	387	369	138	48	169	315
RTOR Reduction (vph)	0	37	0	0	0	48	0	24	0	0	10	0
Lane Group Flow (vph)	107	695	0	21	816	31	387	483	0	48	474	0
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	15.8	15.8		15.8	15.8	15.8	31.0	31.0		31.0	31.0	
Effective Green, g (s)	15.8	15.8		15.8	15.8	15.8	31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29	0.29	0.57	0.57		0.57	0.57	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	123	895		123	921	412	393	912		376	859	
v/s Ratio Prot		0.22			c0.26			0.30			0.31	
v/s Ratio Perm	0.25			0.05		0.02	c0.56			0.07		
v/c Ratio	0.87	0.78		0.17	0.89	0.08	0.98	0.53		0.13	0.55	
Uniform Delay, d1	18.5	17.9		14.6	18.6	14.2	11.7	7.4		5.6	7.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	43.5	4.3		0.7	10.2	0.1	41.0	0.6		0.2	0.8	
Delay (s)	62.1	22.2		15.3	28.9	14.3	52.7	7.9		5.7	8.3	
Level of Service	E	C		B	C	B	D	A		A	A	
Approach Delay (s)		27.2			27.3			27.3			8.0	
Approach LOS		C			C			C			A	

Intersection Summary			
HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	54.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



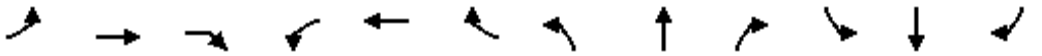
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	648	21	17	414	0	5	0	48	80	13	27
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frt		1.00			1.00			0.88		1.00	0.90	
Flt Protected		1.00			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1675			1678			1468		1598	1514	
Flt Permitted		1.00			0.86			1.00		0.95	1.00	
Satd. Flow (perm)		1675			1452			1468		1598	1514	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	682	22	18	436	0	5	0	51	84	14	28
RTOR Reduction (vph)	0	2	0	0	0	0	0	36	0	0	25	0
Lane Group Flow (vph)	0	702	0	0	454	0	0	20	0	84	17	0
Turn Type				Perm			Split			Split		
Protected Phases		4			8		2	2		6	6	
Permitted Phases				8								
Actuated Green, G (s)		42.9			42.9			26.3		8.8	8.8	
Effective Green, g (s)		42.9			42.9			26.3		8.8	8.8	
Actuated g/C Ratio		0.48			0.48			0.29		0.10	0.10	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		798			692			429		156	148	
v/s Ratio Prot		c0.42						c0.01		c0.05	0.01	
v/s Ratio Perm					0.31							
v/c Ratio		0.88			0.66			0.05		0.54	0.11	
Uniform Delay, d1		21.2			17.9			22.9		38.7	37.0	
Progression Factor		1.00			0.83			1.00		1.00	1.00	
Incremental Delay, d2		11.1			1.8			0.2		3.5	0.3	
Delay (s)		32.3			16.6			23.1		42.2	37.4	
Level of Service		C			B			C		D	D	
Approach Delay (s)		32.3			16.6			23.1			40.6	
Approach LOS		C			B			C			D	

Intersection Summary			
HCM Average Control Delay	27.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



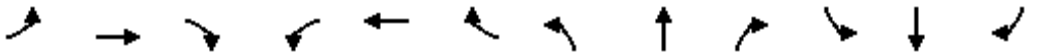
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	146	182	1228	197	0	0
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95	0.95			
Frt	1.00	1.00	0.98			
Flt Protected	0.95	1.00	1.00			
Satd. Flow (prot)	1598	3195	3129			
Flt Permitted	0.95	1.00	1.00			
Satd. Flow (perm)	1598	3195	3129			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	154	192	1293	207	0	0
RTOR Reduction (vph)	0	0	30	0	0	0
Lane Group Flow (vph)	154	192	1470	0	0	0
Turn Type	Prot					
Protected Phases	7	4	8			
Permitted Phases						
Actuated Green, G (s)	5.6	36.0	22.4			
Effective Green, g (s)	5.6	36.0	22.4			
Actuated g/C Ratio	0.16	1.00	0.62			
Clearance Time (s)	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0			
Lane Grp Cap (vph)	249	3195	1947			
v/s Ratio Prot	c0.10	0.06	c0.47			
v/s Ratio Perm						
v/c Ratio	0.62	0.06	0.75			
Uniform Delay, d1	14.2	0.0	4.8			
Progression Factor	1.00	1.00	1.00			
Incremental Delay, d2	4.5	0.0	1.7			
Delay (s)	18.7	0.0	6.6			
Level of Service	B	A	A			
Approach Delay (s)		8.3	6.6		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM Average Control Delay	6.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	36.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	488	210	51	136	2	210	25	644	237	474	619	280
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1598	3101		1598	1682	1430	1598	4591	1430	1598	3195	1430
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1598	3101		1598	1682	1430	1598	4591	1430	1598	3195	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	514	221	54	143	2	221	26	678	249	499	652	295
RTOR Reduction (vph)	0	0	0	0	0	197	0	0	0	0	0	122
Lane Group Flow (vph)	514	275	0	143	2	24	26	678	249	499	652	173
Turn Type	Split			Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	42.0	42.0		15.1	15.1	15.1	3.6	26.6	26.6	41.0	64.0	64.0
Effective Green, g (s)	42.0	42.0		15.1	15.1	15.1	3.6	26.6	26.6	41.0	64.0	64.0
Actuated g/C Ratio	0.30	0.30		0.11	0.11	0.11	0.03	0.19	0.19	0.29	0.45	0.45
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	477	926		171	181	153	41	868	270	466	1453	650
v/s Ratio Prot	c0.32	0.09		c0.09	0.00		0.02	0.15		c0.31	0.20	
v/s Ratio Perm						0.02			c0.17			0.12
v/c Ratio	1.08	0.30		0.84	0.01	0.16	0.63	0.78	0.92	1.07	0.45	0.27
Uniform Delay, d1	49.3	38.0		61.6	56.1	57.0	67.9	54.3	56.0	49.8	26.3	23.8
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	63.7	0.2		28.3	0.0	0.5	27.9	4.6	34.6	61.9	0.2	0.2
Delay (s)	113.0	38.2		89.9	56.2	57.5	95.8	58.9	90.7	111.8	26.5	24.0
Level of Service	F	D		F	E	E	F	E	F	F	C	C
Approach Delay (s)		86.9			70.1			68.2			55.4	
Approach LOS		F			E			E			E	

Intersection Summary			
HCM Average Control Delay	67.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	140.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	84.2%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.95	0.95	1.00		1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.95	1.00
Satd. Flow (prot)	2949	4160	1360	2808	3284	1360	1444	1444	1308		1520	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.95	1.00		0.95	1.00
Satd. Flow (perm)	2949	4160	1360	2808	3284	1360	1444	1444	1308		1520	1360
Volume (vph)	30	615	25	90	225	105	110	0	355	5	0	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	647	26	95	237	111	116	0	374	5	0	11
RTOR Reduction (vph)	0	0	11	0	0	47	0	0	164	0	0	5
Lane Group Flow (vph)	32	647	15	95	237	64	58	58	210	0	5	6
Heavy Vehicles (%)	0%	5%	0%	5%	33%	0%	0%	0%	4%	0%	0%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Split		custom	Split		custom
Protected Phases	5	2	4	1	6	8	4	4	4	8	8	8
Permitted Phases			2			6			2			6
Actuated Green, G (s)	2.5	27.6	36.1	7.7	32.8	37.4	8.5	8.5	36.1		4.6	37.4
Effective Green, g (s)	2.5	27.6	36.1	7.7	32.8	37.4	8.5	8.5	36.1		4.6	37.4
Actuated g/C Ratio	0.04	0.43	0.56	0.12	0.51	0.58	0.13	0.13	0.56		0.07	0.58
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	114	1783	762	336	1673	790	191	191	733		109	790
v/s Ratio Prot	0.01	c0.16	0.00	c0.03	0.07	c0.01	c0.04	0.04	0.04		0.00	0.00
v/s Ratio Perm			0.01			0.04			0.12			0.00
v/c Ratio	0.28	0.36	0.02	0.28	0.14	0.08	0.30	0.30	0.29		0.05	0.01
Uniform Delay, d1	30.1	12.5	6.3	25.8	8.4	5.9	25.3	25.3	7.4		27.9	5.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.3	0.6	0.0	0.5	0.0	0.0	0.9	0.9	0.2		0.2	0.0
Delay (s)	31.4	13.0	6.3	26.3	8.4	6.0	26.2	26.2	7.6		28.0	5.7
Level of Service	C	B	A	C	A	A	C	C	A		C	A
Approach Delay (s)		13.6			11.6			12.0			12.7	
Approach LOS		B			B			B			B	

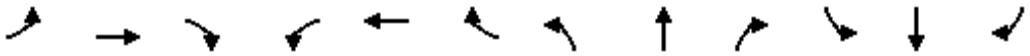
Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	64.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1382	3925		1520	4082	1360	1476	3040	1360	1520	3040	1225
Flt Permitted	0.08	1.00		0.08	1.00	1.00	0.68	1.00	1.00	0.62	1.00	1.00
Satd. Flow (perm)	112	3925		134	4082	1360	1059	3040	1360	990	3040	1225
Volume (vph)	250	1935	50	80	1655	280	150	180	90	180	105	175
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	263	2037	53	84	1742	295	158	189	95	189	111	184
RTOR Reduction (vph)	0	3	0	0	0	110	0	0	7	0	0	4
Lane Group Flow (vph)	263	2087	0	84	1742	185	158	189	88	189	111	180
Heavy Vehicles (%)	10%	10%	44%	0%	7%	0%	3%	0%	0%	0%	0%	11%
Turn Type	pm+pt			pm+pt		Perm	Perm		pm+ov	Perm		pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases	2			6		6	8		8	4		4
Actuated Green, G (s)	69.0	60.0		52.8	47.8	47.8	23.0	23.0	28.0	23.0	23.0	40.2
Effective Green, g (s)	69.0	60.0		52.8	47.8	47.8	23.0	23.0	28.0	23.0	23.0	40.2
Actuated g/C Ratio	0.69	0.60		0.53	0.48	0.48	0.23	0.23	0.28	0.23	0.23	0.40
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	296	2355		140	1951	650	244	699	435	228	699	541
v/s Ratio Prot	c0.15	0.53		0.03	0.43			0.06	0.01		0.04	0.06
v/s Ratio Perm	c0.46			0.29		0.14	0.15		0.05	c0.19		0.09
v/c Ratio	0.89	0.89		0.60	0.89	0.29	0.65	0.27	0.20	0.83	0.16	0.33
Uniform Delay, d1	29.2	17.1		13.4	23.8	15.8	34.8	31.6	27.5	36.6	30.8	20.6
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	25.8	5.4		6.8	6.7	1.1	5.8	0.2	0.2	28.0	0.5	0.4
Delay (s)	55.0	22.5		20.2	30.5	16.9	40.6	31.8	27.7	64.7	31.3	21.0
Level of Service	E	C		C	C	B	D	C	C	E	C	C
Approach Delay (s)		26.1			28.2			34.1			40.4	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	28.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		

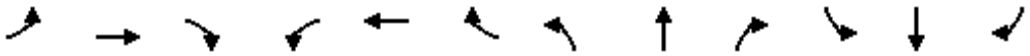
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0						4.0			4.0	
Lane Util. Factor	1.00	0.86						1.00			1.00	
Frt	1.00	0.99						0.88			1.00	
Flt Protected	0.95	1.00						1.00			1.00	
Satd. Flow (prot)	1520	5423						1402			1600	
Flt Permitted	0.95	1.00						1.00			1.00	
Satd. Flow (perm)	1520	5423						1402			1600	
Volume (vph)	10	1360	50	0	0	0	0	20	220	0	5	0
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	11	1447	53	0	0	0	0	21	234	0	5	0
RTOR Reduction (vph)	0	5	0	0	0	0	0	138	0	0	0	0
Lane Group Flow (vph)	11	1495	0	0	0	0	0	117	0	0	5	0
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Split									Split		
Protected Phases	2	2						8		4	4	
Permitted Phases												
Actuated Green, G (s)	26.7	26.7						27.7			1.0	
Effective Green, g (s)	26.7	26.7						27.7			1.0	
Actuated g/C Ratio	0.40	0.40						0.41			0.01	
Clearance Time (s)	4.0	4.0						4.0			4.0	
Vehicle Extension (s)	3.0	3.0						3.0			3.0	
Lane Grp Cap (vph)	602	2148						576			24	
v/s Ratio Prot	0.01	c0.28						c0.08			c0.00	
v/s Ratio Perm												
v/c Ratio	0.02	0.70						0.20			0.21	
Uniform Delay, d1	12.4	17.0						12.8			32.8	
Progression Factor	1.00	1.00						1.00			1.00	
Incremental Delay, d2	0.0	1.0						0.8			4.3	
Delay (s)	12.4	18.0						13.6			37.1	
Level of Service	B	B						B			D	
Approach Delay (s)		17.9			0.0			13.6			37.1	
Approach LOS		B			A			B			D	

Intersection Summary				
HCM Average Control Delay	17.3	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.44			
Actuated Cycle Length (s)	67.4	Sum of lost time (s)	12.0	
Intersection Capacity Utilization	48.5%	ICU Level of Service	A	
Analysis Period (min)	15			

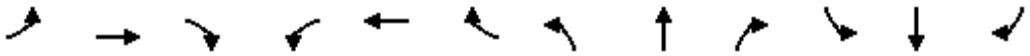
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0					4.0	4.0		4.0	
Lane Util. Factor		0.91	1.00					0.95	1.00		0.95	
Frt		1.00	0.85					1.00	0.85		1.00	
Flt Protected		1.00	1.00					1.00	1.00		0.99	
Satd. Flow (prot)		4234	1271					3010	1225		2853	
Flt Permitted		1.00	1.00					1.00	1.00		0.72	
Satd. Flow (perm)		4234	1271					3010	1225		2086	
Volume (vph)	100	1235	225	0	0	0	0	490	210	100	295	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	1300	237	0	0	0	0	516	221	105	311	0
RTOR Reduction (vph)	0	0	116	0	0	0	0	0	20	0	0	0
Lane Group Flow (vph)	0	1405	121	0	0	0	0	516	201	0	416	0
Heavy Vehicles (%)	0%	3%	7%	0%	0%	0%	0%	1%	11%	0%	7%	0%
Turn Type	Split		Perm						Perm	Perm		
Protected Phases	4	4						2			6	
Permitted Phases			4						2	6		
Actuated Green, G (s)		37.9	37.9					40.4	40.4		40.4	
Effective Green, g (s)		37.9	37.9					40.4	40.4		40.4	
Actuated g/C Ratio		0.44	0.44					0.47	0.47		0.47	
Clearance Time (s)		4.0	4.0					4.0	4.0		4.0	
Vehicle Extension (s)		3.0	3.0					3.0	3.0		3.0	
Lane Grp Cap (vph)		1859	558					1409	573		977	
v/s Ratio Prot		c0.33						0.17				
v/s Ratio Perm			0.10						0.16		c0.20	
v/c Ratio		0.76	0.22					0.37	0.35		0.43	
Uniform Delay, d1		20.3	15.0					14.7	14.6		15.2	
Progression Factor		1.00	1.00					1.00	1.00		1.00	
Incremental Delay, d2		1.8	0.2					0.7	1.7		1.4	
Delay (s)		22.1	15.2					15.5	16.3		16.6	
Level of Service		C	B					B	B		B	
Approach Delay (s)		21.1			0.0			15.7			16.6	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	19.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	86.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		

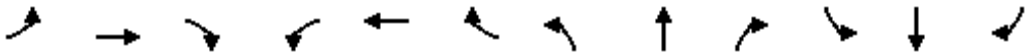
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0						4.0			4.0	
Lane Util. Factor		0.91						1.00			1.00	
Frt		1.00						0.96			1.00	
Flt Protected		1.00						1.00			0.99	
Satd. Flow (prot)		4239						1447			1502	
Flt Permitted		1.00						1.00			0.87	
Satd. Flow (perm)		4239						1447			1320	
Volume (vph)	150	1370	50	0	0	0	0	100	35	30	75	0
Peak-hour factor, PHF	0.95	0.95	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	1442	50	0	0	0	0	105	37	32	79	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	15	0	0	0	0
Lane Group Flow (vph)	0	1648	0	0	0	0	0	127	0	0	111	0
Heavy Vehicles (%)	0%	2%	11%	0%	0%	0%	0%	9%	0%	0%	7%	0%
Turn Type	Split									Perm		
Protected Phases	2	2						8			4	
Permitted Phases										4		
Actuated Green, G (s)		66.0						12.8			12.8	
Effective Green, g (s)		66.0						12.8			12.8	
Actuated g/C Ratio		0.76						0.15			0.15	
Clearance Time (s)		4.0						4.0			4.0	
Vehicle Extension (s)		3.0						3.0			3.0	
Lane Grp Cap (vph)		3223						213			195	
v/s Ratio Prot		c0.39						c0.09				
v/s Ratio Perm											0.08	
v/c Ratio		0.51						0.59			0.57	
Uniform Delay, d1		4.1						34.6			34.4	
Progression Factor		1.00						1.00			1.00	
Incremental Delay, d2		0.6						4.4			3.8	
Delay (s)		4.7						39.0			38.2	
Level of Service		A						D			D	
Approach Delay (s)		4.7			0.0			39.0			38.2	
Approach LOS		A			A			D			D	

Intersection Summary			
HCM Average Control Delay	9.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	86.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.8%	ICU Level of Service	B
Analysis Period (min)	15		

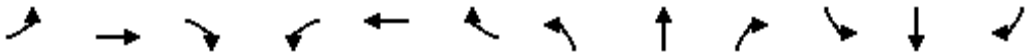
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0						4.0		4.0	4.0	
Lane Util. Factor		0.91						1.00		1.00	1.00	
Frt		0.99						0.98		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		4190						1558		1490	1538	
Flt Permitted		0.99						1.00		0.20	1.00	
Satd. Flow (perm)		4190						1558		316	1538	
Volume (vph)	240	555	50	0	0	0	0	655	100	210	365	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	253	584	53	0	0	0	0	689	105	221	384	0
RTOR Reduction (vph)	0	6	0	0	0	0	0	7	0	0	0	0
Lane Group Flow (vph)	0	884	0	0	0	0	0	787	0	221	384	0
Heavy Vehicles (%)	2%	2%	0%	0%	0%	0%	0%	1%	0%	2%	4%	0%
Turn Type	Split									Perm		
Protected Phases	2	2						4			8	
Permitted Phases										8		
Actuated Green, G (s)		25.5						50.0		50.0	50.0	
Effective Green, g (s)		25.5						50.0		50.0	50.0	
Actuated g/C Ratio		0.31						0.60		0.60	0.60	
Clearance Time (s)		4.0						4.0		4.0	4.0	
Vehicle Extension (s)		3.0						3.0		3.0	3.0	
Lane Grp Cap (vph)		1280						933		189	921	
v/s Ratio Prot		c0.21						0.51			0.25	
v/s Ratio Perm										c0.70		
v/c Ratio		0.69						0.84		1.17	0.42	
Uniform Delay, d1		25.5						13.6		16.8	9.0	
Progression Factor		1.00						1.00		1.00	1.00	
Incremental Delay, d2		3.1						7.0		118.5	0.3	
Delay (s)		28.6						20.6		135.2	9.3	
Level of Service		C						C		F	A	
Approach Delay (s)		28.6			0.0			20.6			55.3	
Approach LOS		C			A			C			E	

Intersection Summary			
HCM Average Control Delay	32.9	HCM Level of Service	C
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	83.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.8%	ICU Level of Service	F
Analysis Period (min)	15		

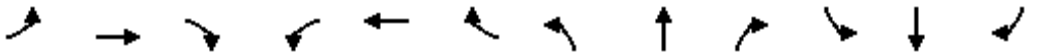
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)					4.0			4.0			4.0	
Lane Util. Factor					0.91			1.00			1.00	
Frt					1.00			1.00			0.87	
Flt Protected					1.00			0.97			1.00	
Satd. Flow (prot)					4299			1449			1355	
Flt Permitted					1.00			0.77			1.00	
Satd. Flow (perm)					4299			1148			1355	
Volume (vph)	0	0	0	80	805	15	120	100	0	0	5	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	84	847	16	126	105	0	0	5	105
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	62	0
Lane Group Flow (vph)	0	0	0	0	946	0	0	231	0	0	48	0
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	2%	14%	0%	0%	0%	3%
Turn Type				Split			Perm					
Protected Phases				6	6			8			4	
Permitted Phases							8					
Actuated Green, G (s)					46.8			19.3			19.3	
Effective Green, g (s)					46.8			19.3			19.3	
Actuated g/C Ratio					0.63			0.26			0.26	
Clearance Time (s)					4.0			4.0			4.0	
Vehicle Extension (s)					3.0			3.0			3.0	
Lane Grp Cap (vph)					2715			299			353	
v/s Ratio Prot					c0.22						0.04	
v/s Ratio Perm								c0.20				
v/c Ratio					0.35			0.77			0.14	
Uniform Delay, d1					6.4			25.4			21.0	
Progression Factor					1.00			1.00			1.00	
Incremental Delay, d2					0.4			11.7			0.2	
Delay (s)					6.8			37.1			21.2	
Level of Service					A			D			C	
Approach Delay (s)		0.0			6.8			37.1			21.2	
Approach LOS		A			A			D			C	

Intersection Summary			
HCM Average Control Delay	13.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	74.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		

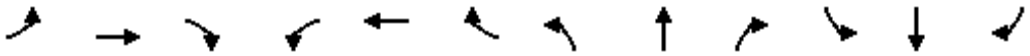
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)					4.0		4.0	4.0			4.0	4.0
Lane Util. Factor					0.91		1.00	1.00			1.00	1.00
Frt					0.98		1.00	1.00			1.00	0.85
Flt Protected					0.99		0.95	1.00			1.00	1.00
Satd. Flow (prot)					4202		1505	1569			1538	1308
Flt Permitted					0.99		0.37	1.00			1.00	1.00
Satd. Flow (perm)					4202		589	1569			1538	1308
Volume (vph)	0	0	0	110	515	120	310	650	0	0	480	75
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	116	542	126	326	684	0	0	505	79
RTOR Reduction (vph)	0	0	0	0	24	0	0	0	0	0	0	24
Lane Group Flow (vph)	0	0	0	0	760	0	326	684	0	0	505	55
Heavy Vehicles (%)	0%	0%	0%	0%	1%	0%	1%	2%	0%	0%	4%	4%
Turn Type				Split			Perm					Perm
Protected Phases				6	6			8			4	
Permitted Phases							8					4
Actuated Green, G (s)					25.6		40.9	40.9			40.9	40.9
Effective Green, g (s)					25.6		40.9	40.9			40.9	40.9
Actuated g/C Ratio					0.34		0.55	0.55			0.55	0.55
Clearance Time (s)					4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)					3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)					1444		323	861			844	718
v/s Ratio Prot					c0.18			0.44			0.33	
v/s Ratio Perm							c0.55					0.04
v/c Ratio					0.53		1.01	0.79			0.60	0.08
Uniform Delay, d1					19.6		16.8	13.4			11.3	7.9
Progression Factor					1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2					1.4		52.4	5.1			1.1	0.0
Delay (s)					21.0		69.2	18.5			12.4	8.0
Level of Service					C		E	B			B	A
Approach Delay (s)		0.0			21.0			34.9			11.8	
Approach LOS		A			C			C			B	

Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	74.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.8%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.93		1.00	0.91		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	1490		1462	1456		1520	1554		1520	1535	
Flt Permitted	0.48	1.00		0.64	1.00		0.40	1.00		0.31	1.00	
Satd. Flow (perm)	762	1490		982	1456		640	1554		493	1535	
Volume (vph)	10	60	50	135	70	105	35	645	50	40	525	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	63	53	142	74	111	37	679	53	42	553	11
RTOR Reduction (vph)	0	33	0	0	60	0	0	2	0	0	1	0
Lane Group Flow (vph)	11	83	0	142	125	0	37	730	0	42	563	0
Heavy Vehicles (%)	0%	0%	0%	4%	0%	0%	0%	2%	0%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	17.7	17.7		17.7	17.7		66.6	66.6		66.6	66.6	
Effective Green, g (s)	17.7	17.7		17.7	17.7		66.6	66.6		66.6	66.6	
Actuated g/C Ratio	0.19	0.19		0.19	0.19		0.72	0.72		0.72	0.72	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	146	286		188	279		462	1121		356	1108	
v/s Ratio Prot		0.06			0.09			c0.47			0.37	
v/s Ratio Perm	0.01			c0.14			0.06			0.09		
v/c Ratio	0.08	0.29		0.76	0.45		0.08	0.65		0.12	0.51	
Uniform Delay, d1	30.6	31.9		35.3	33.0		3.8	6.7		3.9	5.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.2	0.6		15.8	1.1		0.3	2.9		0.7	1.7	
Delay (s)	30.8	32.5		51.0	34.1		4.1	9.7		4.6	7.3	
Level of Service	C	C		D	C		A	A		A	A	
Approach Delay (s)		32.3			41.5			9.4			7.1	
Approach LOS		C			D			A			A	

Intersection Summary			
HCM Average Control Delay	16.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	92.3	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.1%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00		0.95	1.00		0.95	
Frt	1.00	0.85		1.00	1.00	0.85		1.00	0.85		1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.98	1.00		0.97	
Satd. Flow (prot)	1520	1699		1866	1600	1320		1659	712		2237	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.98	1.00		0.97	
Satd. Flow (perm)	1520	1699		1866	1600	1320		1659	712		2237	
Volume (vph)	5	5	410	565	50	400	115	190	195	320	125	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	5	432	595	53	421	121	200	205	337	132	11
RTOR Reduction (vph)	0	372	0	0	0	231	0	0	0	0	2	0
Lane Group Flow (vph)	5	65	0	595	53	190	0	321	205	0	478	0
Heavy Vehicles (%)	0%	0%	53%	58%	0%	3%	68%	87%	91%	11%	84%	0%
Turn Type	Prot			Prot		Perm	Split		Free	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			Free			
Actuated Green, G (s)	0.8	13.8		32.2	45.2	45.2		18.0	100.0		20.0	
Effective Green, g (s)	0.8	13.8		32.2	45.2	45.2		18.0	100.0		20.0	
Actuated g/C Ratio	0.01	0.14		0.32	0.45	0.45		0.18	1.00		0.20	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	12	234		601	723	597		299	712		447	
v/s Ratio Prot	0.00	0.04		c0.32	0.03			c0.19			c0.21	
v/s Ratio Perm						0.14			c0.29			
v/c Ratio	0.42	0.28		0.99	0.07	0.32		1.07	0.29		1.23dl	
Uniform Delay, d1	49.4	38.6		33.7	15.5	17.5		41.0	0.0		40.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	21.8	2.9		34.1	0.2	1.4		73.0	1.0		62.6	
Delay (s)	71.1	41.5		67.8	15.7	18.9		114.0	1.0		102.6	
Level of Service	E	D		E	B	B		F	A		F	
Approach Delay (s)		41.9			46.0			69.9			102.6	
Approach LOS		D			D			E			F	

Intersection Summary			
HCM Average Control Delay	61.1	HCM Level of Service	E
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.7%	ICU Level of Service	D
Analysis Period (min)	15		

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

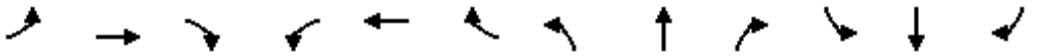
c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.91	0.91		0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89	0.85		1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00		1.00	1.00
Satd. Flow (prot)	1448	2621	1360	2499	2815	1360	1520	1893	884		2667	1360
Flt Permitted	0.15	1.00	1.00	0.95	1.00	1.00	0.61	1.00	1.00		1.00	1.00
Satd. Flow (perm)	225	2621	1360	2499	2815	1360	982	1893	884		2667	1360
Volume (vph)	100	1065	35	165	1255	10	10	100	625	0	210	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	1121	37	174	1321	11	11	105	658	0	221	63
RTOR Reduction (vph)	0	0	19	0	0	4	0	159	299	0	0	45
Lane Group Flow (vph)	105	1121	18	174	1321	7	11	275	30	0	221	18
Heavy Vehicles (%)	5%	16%	0%	18%	8%	0%	0%	25%	40%	0%	14%	0%
Turn Type	Perm		Perm	Prot		Perm	Perm		Over	Perm		Perm
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2		2			6	8			4		4
Actuated Green, G (s)	27.1	27.1	27.1	5.1	36.2	36.2	12.0	12.0	5.1		12.0	12.0
Effective Green, g (s)	27.1	27.1	27.1	5.1	36.2	36.2	12.0	12.0	5.1		12.0	12.0
Actuated g/C Ratio	0.48	0.48	0.48	0.09	0.64	0.64	0.21	0.21	0.09		0.21	0.21
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	108	1264	656	227	1813	876	210	404	80		569	290
v/s Ratio Prot		0.43		0.07	c0.47			c0.15	0.03		0.08	
v/s Ratio Perm	c0.47		0.01			0.01	0.01					0.01
v/c Ratio	0.97	0.89	0.03	0.77	0.73	0.01	0.05	0.92dr	0.37		0.39	0.06
Uniform Delay, d1	14.2	13.2	7.6	25.0	6.7	3.6	17.6	20.3	24.0		19.0	17.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	79.4	9.4	0.1	14.3	1.5	0.0	0.1	4.7	2.9		0.4	0.1
Delay (s)	93.6	22.6	7.7	39.3	8.2	3.6	17.7	25.0	27.0		19.4	17.7
Level of Service	F	C	A	D	A	A	B	C	C		B	B
Approach Delay (s)		28.0			11.8			25.7			19.0	
Approach LOS		C			B			C			B	

Intersection Summary			
HCM Average Control Delay	20.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	56.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

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

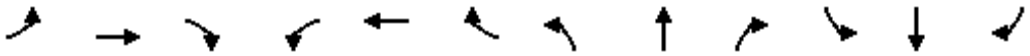
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1434	3640		1520	3702	1115	1143	2338	1023	1160	2576	1295
Flt Permitted	0.95	1.00		0.19	1.00	1.00	0.63	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1434	3640		296	3702	1115	753	2338	1023	1160	2576	1295
Volume (vph)	360	1695	5	15	910	470	15	285	30	440	190	295
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	379	1784	5	16	958	495	16	300	32	463	200	311
RTOR Reduction (vph)	0	0	0	0	0	40	0	0	27	0	0	1
Lane Group Flow (vph)	379	1789	0	16	958	455	16	300	5	463	200	310
Heavy Vehicles (%)	6%	20%	0%	0%	18%	22%	33%	30%	33%	31%	18%	5%
Turn Type	Prot			pm+pt		pm+ov	Perm		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6	7		8	1	7	4	5
Permitted Phases				6		6	8		8			4
Actuated Green, G (s)	23.6	45.2		24.0	24.0	56.0	15.8	15.8	18.2	32.0	51.8	75.4
Effective Green, g (s)	23.6	45.2		24.0	24.0	56.0	15.8	15.8	18.2	32.0	51.8	75.4
Actuated g/C Ratio	0.21	0.41		0.22	0.22	0.50	0.14	0.14	0.16	0.29	0.46	0.68
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	304	1477		90	798	561	107	332	204	333	1198	923
v/s Ratio Prot	0.26	c0.49		0.00	c0.26	0.23		c0.13	0.00	c0.40	0.08	0.07
v/s Ratio Perm				0.03		0.18	0.02		0.00			0.17
v/c Ratio	1.25	1.21		0.18	1.20	0.81	0.15	0.90	0.03	1.39	0.17	0.34
Uniform Delay, d1	43.9	33.1		36.7	43.7	23.3	41.9	47.1	39.2	39.7	17.3	7.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	135.5	101.6		0.9	102.2	8.7	0.6	26.5	0.1	193.2	0.1	0.2
Delay (s)	179.4	134.7		37.7	145.9	32.0	42.6	73.6	39.2	232.9	17.4	7.7
Level of Service	F	F		D	F	C	D	E	D	F	B	A
Approach Delay (s)		142.5			106.3			69.0			116.7	
Approach LOS		F			F			E			F	

Intersection Summary			
HCM Average Control Delay	121.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	111.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		

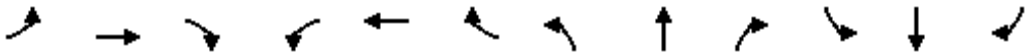
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.99		1.00	0.96		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1434	2739		1520	2883		2891	2899		1520	2942	
Flt Permitted	0.22	1.00		0.11	1.00		0.44	1.00		0.23	1.00	
Satd. Flow (perm)	329	2739		177	2883		1332	2899		373	2942	
Volume (vph)	80	1360	155	125	1020	45	230	365	130	70	280	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	1432	163	132	1074	47	242	384	137	74	295	32
RTOR Reduction (vph)	0	9	0	0	3	0	0	36	0	0	8	0
Lane Group Flow (vph)	84	1586	0	132	1118	0	242	485	0	74	319	0
Heavy Vehicles (%)	6%	10%	3%	0%	5%	0%	2%	1%	0%	0%	2%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	71.0	71.0		71.0	71.0		20.7	20.7		20.7	20.7	
Effective Green, g (s)	71.0	71.0		71.0	71.0		20.7	20.7		20.7	20.7	
Actuated g/C Ratio	0.71	0.71		0.71	0.71		0.21	0.21		0.21	0.21	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	234	1951		126	2053		277	602		77	611	
v/s Ratio Prot		0.58			0.39			0.17			0.11	
v/s Ratio Perm	0.25			c0.75			0.18			c0.20		
v/c Ratio	0.36	0.81		1.05	0.54		0.87	0.80		0.96	0.52	
Uniform Delay, d1	5.5	9.8		14.4	6.7		38.2	37.6		39.1	35.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.2	3.8		93.5	0.3		24.8	7.7		88.9	0.8	
Delay (s)	9.8	13.7		107.8	7.0		63.0	45.3		128.0	35.9	
Level of Service	A	B		F	A		E	D		F	D	
Approach Delay (s)		13.5			17.7			50.9			52.9	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM Average Control Delay	25.6	HCM Level of Service	C
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	99.7	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		

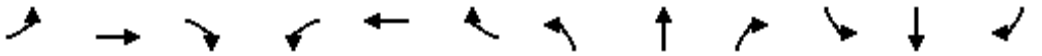
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1448	2764	1308	1520	2868	1360	2863	2888		2949	2942	
Flt Permitted	0.10	1.00	1.00	0.09	1.00	1.00	0.21	1.00		0.13	1.00	
Satd. Flow (perm)	148	2764	1308	139	2868	1360	647	2888		414	2942	
Volume (vph)	95	1340	120	140	1170	135	145	795	170	140	580	70
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	1411	126	147	1232	142	153	837	179	147	611	74
RTOR Reduction (vph)	0	0	38	0	0	26	0	18	0	0	9	0
Lane Group Flow (vph)	100	1411	88	147	1232	117	153	998	0	147	676	0
Heavy Vehicles (%)	5%	10%	4%	0%	6%	0%	3%	3%	0%	0%	1%	7%
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	50.0	46.0	50.0	50.0	46.0	50.0	34.0	30.0		34.0	30.0	
Effective Green, g (s)	50.0	46.0	50.0	50.0	46.0	50.0	34.0	30.0		34.0	30.0	
Actuated g/C Ratio	0.50	0.46	0.50	0.50	0.46	0.50	0.34	0.30		0.34	0.30	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	126	1271	706	125	1319	734	309	866		242	883	
v/s Ratio Prot	0.03	0.51	0.00	c0.05	0.43	0.01	0.02	c0.35		c0.02	0.23	
v/s Ratio Perm	0.37		0.06	c0.54		0.08	0.15			0.18		
v/c Ratio	0.79	1.11	0.12	1.18	0.93	0.16	0.50	1.15		0.61	0.77	
Uniform Delay, d1	18.3	27.0	13.3	23.6	25.6	13.6	24.1	35.0		26.4	31.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	28.1	61.1	0.1	135.5	12.2	0.1	1.3	81.7		4.3	4.0	
Delay (s)	46.4	88.1	13.4	159.0	37.7	13.7	25.3	116.7		30.6	35.8	
Level of Service	D	F	B	F	D	B	C	F		C	D	
Approach Delay (s)		79.8			47.2			104.7			34.9	
Approach LOS		E			D			F			C	

Intersection Summary			
HCM Average Control Delay	68.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	103.8%	ICU Level of Service	G
Analysis Period (min)	15		

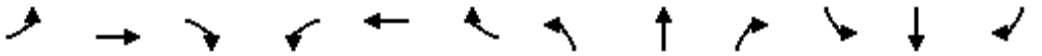
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.91			0.91		1.00	0.95		1.00	0.95	1.00
Frt		0.99			0.98		1.00	0.96		1.00	1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3892			4041		1490	2877		1520	3010	1360
Flt Permitted		0.91			0.88		0.37	1.00		0.11	1.00	1.00
Satd. Flow (perm)		3533			3558		574	2877		178	3010	1360
Volume (vph)	20	1295	95	20	960	135	225	850	325	140	570	170
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	1363	100	21	1011	142	237	895	342	147	600	179
RTOR Reduction (vph)	0	8	0	0	18	0	0	7	0	0	0	23
Lane Group Flow (vph)	0	1476	0	0	1156	0	237	1230	0	147	600	156
Heavy Vehicles (%)	0%	12%	0%	0%	7%	0%	2%	1%	2%	0%	1%	0%
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		43.0			43.0		49.0	49.0		49.0	49.0	49.0
Effective Green, g (s)		43.0			43.0		49.0	49.0		49.0	49.0	49.0
Actuated g/C Ratio		0.43			0.43		0.49	0.49		0.49	0.49	0.49
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1519			1530		281	1410		87	1475	666
v/s Ratio Prot								0.43			0.20	
v/s Ratio Perm		c0.42			0.32		0.41			c0.83		0.11
v/c Ratio		0.97			0.76		0.84	0.87		1.69	0.41	0.23
Uniform Delay, d1		27.9			24.1		22.2	22.7		25.5	16.2	14.7
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		17.3			2.2		20.0	6.2		354.7	0.2	0.2
Delay (s)		45.2			26.2		42.2	28.9		380.2	16.4	14.9
Level of Service		D			C		D	C		F	B	B
Approach Delay (s)		45.2			26.2			31.1			73.9	
Approach LOS		D			C			C			E	

Intersection Summary			
HCM Average Control Delay	41.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.35		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	108.5%	ICU Level of Service	G
Analysis Period (min)	15		

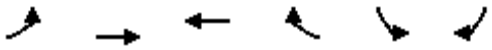
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	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)	1520	2789	1360	1520	2848		1520	1584	1360	1520	1584	1360
Flt Permitted	0.12	1.00	1.00	0.10	1.00		0.15	1.00	1.00	0.31	1.00	1.00
Satd. Flow (perm)	195	2789	1360	155	2848		232	1584	1360	501	1584	1360
Volume (vph)	105	1260	65	170	1095	155	55	375	65	180	515	155
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	1326	68	179	1153	163	58	395	68	189	542	163
RTOR Reduction (vph)	0	0	37	0	11	0	0	0	13	0	0	28
Lane Group Flow (vph)	111	1326	31	179	1305	0	58	395	55	189	542	135
Heavy Vehicles (%)	0%	9%	0%	0%	5%	3%	0%	1%	0%	0%	1%	0%
Turn Type	pm+pt		Perm	pm+pt			Perm		pm+ov	Perm		pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	46.0	46.0	46.0	48.4	48.4		35.0	35.0	42.0	35.0	35.0	39.6
Effective Green, g (s)	46.0	46.0	46.0	48.4	48.4		35.0	35.0	42.0	35.0	35.0	39.6
Actuated g/C Ratio	0.46	0.46	0.46	0.48	0.48		0.35	0.35	0.42	0.35	0.35	0.40
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	151	1283	626	171	1378		81	554	626	175	554	593
v/s Ratio Prot	0.03	c0.48		0.07	c0.46			0.25	0.01		0.34	0.01
v/s Ratio Perm	0.31		0.02	c0.44			0.25		0.03	c0.38		0.09
v/c Ratio	0.74	1.03	0.05	1.05	0.95		0.72	0.71	0.09	1.08	0.98	0.23
Uniform Delay, d1	34.3	27.0	14.9	24.5	24.6		28.2	28.1	17.5	32.5	32.1	20.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.9	34.2	0.2	81.7	13.5		25.8	4.3	0.1	91.0	32.3	0.2
Delay (s)	51.2	61.2	15.1	106.3	38.0		54.0	32.5	17.5	123.5	64.5	20.2
Level of Service	D	E	B	F	D		D	C	B	F	E	C
Approach Delay (s)		58.4			46.2			32.9			68.9	
Approach LOS		E			D			C			E	

Intersection Summary			
HCM Average Control Delay	53.4	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.91		0.97	1.00
Frt	1.00	1.00	0.95		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1434	2789	3942		2587	1259
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1434	2789	3942		2587	1259
Volume (vph)	235	1580	1390	640	210	125
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	247	1663	1463	674	221	132
RTOR Reduction (vph)	0	0	76	0	0	105
Lane Group Flow (vph)	247	1663	2061	0	221	27
Heavy Vehicles (%)	6%	9%	4%	9%	14%	8%
Turn Type	Prot					Over
Protected Phases	5	2	6		4	5
Permitted Phases						
Actuated Green, G (s)	22.3	86.1	59.8		13.7	22.3
Effective Green, g (s)	22.3	86.1	59.8		13.7	22.3
Actuated g/C Ratio	0.21	0.80	0.55		0.13	0.21
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	297	2228	2187		329	260
v/s Ratio Prot	c0.17	0.60	c0.52		c0.09	0.02
v/s Ratio Perm						
v/c Ratio	0.83	0.75	0.94		0.67	0.11
Uniform Delay, d1	41.0	5.4	22.4		44.9	34.7
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	17.7	2.3	9.0		5.3	0.2
Delay (s)	58.6	7.7	31.4		50.2	34.8
Level of Service	E	A	C		D	C
Approach Delay (s)		14.3	31.4		44.5	
Approach LOS		B	C		D	

Intersection Summary			
HCM Average Control Delay	25.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	107.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.5%	ICU Level of Service	D
Analysis Period (min)	15		

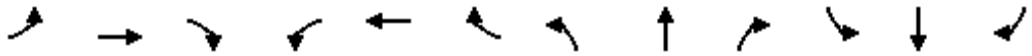
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.88	0.91		1.00	0.91
Frt	1.00	0.85	1.00		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1267	2237	3622		1369	3766
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1267	2237	3622		1369	3766
Volume (vph)	50	825	735	25	310	750
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	868	774	26	326	789
RTOR Reduction (vph)	0	751	3	0	0	0
Lane Group Flow (vph)	53	117	797	0	326	789
Heavy Vehicles (%)	20%	7%	20%	20%	11%	16%
Turn Type		Prot			Prot	
Protected Phases	4	4	2		1	6
Permitted Phases						
Actuated Green, G (s)	12.9	12.9	33.2		37.2	74.4
Effective Green, g (s)	12.9	12.9	33.2		37.2	74.4
Actuated g/C Ratio	0.14	0.14	0.35		0.39	0.78
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	172	303	1262		534	2940
v/s Ratio Prot	0.04	c0.05	c0.22		c0.24	0.21
v/s Ratio Perm						
v/c Ratio	0.31	0.39	0.63		0.61	0.27
Uniform Delay, d1	37.2	37.6	25.9		23.3	2.9
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	1.0	0.8	2.4		2.1	0.2
Delay (s)	38.2	38.4	28.3		25.3	3.1
Level of Service	D	D	C		C	A
Approach Delay (s)	38.4		28.3			9.6
Approach LOS	D		C			A

Intersection Summary			
HCM Average Control Delay	24.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	95.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	58.5%	ICU Level of Service	B
Analysis Period (min)	15		

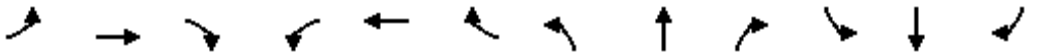
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.99		1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	2678		1277	2911		950	2808		1462	2736	
Flt Permitted	0.95	1.00		0.95	1.00		0.60	1.00		0.48	1.00	
Satd. Flow (perm)	1520	2678		1277	2911		604	2808		733	2736	
Volume (vph)	35	1510	200	105	1355	50	225	630	55	140	220	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	37	1589	211	111	1426	53	237	663	58	147	232	5
RTOR Reduction (vph)	0	11	0	0	2	0	0	6	0	0	2	0
Lane Group Flow (vph)	37	1789	0	111	1477	0	237	715	0	147	235	0
Heavy Vehicles (%)	0%	8%	38%	19%	4%	0%	60%	6%	18%	4%	11%	0%
Turn Type	Prot			Prot			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases							8			4		
Actuated Green, G (s)	2.4	50.0		7.6	55.2		23.0	23.0		13.4	13.4	
Effective Green, g (s)	2.4	50.0		7.6	55.2		23.0	23.0		13.4	13.4	
Actuated g/C Ratio	0.02	0.49		0.07	0.54		0.23	0.23		0.13	0.13	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	36	1318		96	1582		186	636		133	361	
v/s Ratio Prot	0.02	c0.67		0.09	c0.51		c0.18	0.25		c0.05	0.09	
v/s Ratio Perm							0.11			c0.09		
v/c Ratio	1.03	1.36		1.16	0.93		1.27	1.12		1.11	0.65	
Uniform Delay, d1	49.6	25.8		47.0	21.5		38.0	39.3		50.5	41.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	158.4	166.0		140.0	10.5		158.4	74.9		109.1	4.2	
Delay (s)	208.0	191.8		187.0	32.0		196.4	114.2		159.6	46.1	
Level of Service	F	F		F	C		F	F		F	D	
Approach Delay (s)		192.1			42.8			134.5			89.5	
Approach LOS		F			D			F			F	

Intersection Summary			
HCM Average Control Delay	122.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	101.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	109.3%	ICU Level of Service	H
Analysis Period (min)	15		

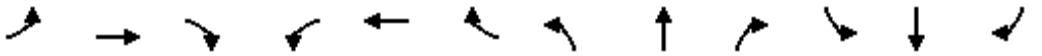
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1462	4160	1333	1520	4241	1360	1476	2980	1360	1520	2980	1308
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.33	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	1462	4160	1333	1520	4241	1360	513	2980	1360	288	2980	1308
Volume (vph)	125	1820	220	70	1200	75	195	810	125	50	550	245
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	132	1916	232	74	1263	79	205	853	132	53	579	258
RTOR Reduction (vph)	0	0	76	0	0	48	0	0	2	0	0	6
Lane Group Flow (vph)	132	1916	156	74	1263	31	205	853	130	53	579	252
Heavy Vehicles (%)	4%	5%	2%	0%	3%	0%	3%	2%	0%	0%	2%	4%
Turn Type	Prot		Perm	Prot		Perm	Perm		pm+ov	Perm		pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases			2			6	8		8	4		4
Actuated Green, G (s)	12.0	46.0	46.0	5.0	39.0	39.0	37.0	37.0	42.0	37.0	37.0	49.0
Effective Green, g (s)	12.0	46.0	46.0	5.0	39.0	39.0	37.0	37.0	42.0	37.0	37.0	49.0
Actuated g/C Ratio	0.12	0.46	0.46	0.05	0.39	0.39	0.37	0.37	0.42	0.37	0.37	0.49
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	175	1914	613	76	1654	530	190	1103	626	107	1103	693
v/s Ratio Prot	0.09	c0.46		0.05	c0.30			0.29	0.01		0.19	0.04
v/s Ratio Perm			0.12			0.02	c0.40		0.09	0.18		0.15
v/c Ratio	0.75	1.00	0.25	0.97	0.76	0.06	1.08	0.77	0.21	0.50	0.52	0.36
Uniform Delay, d1	42.6	27.0	16.5	47.4	26.5	19.0	31.5	27.8	18.4	24.3	24.6	15.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.7	20.8	1.0	93.6	2.2	0.0	87.9	3.4	0.2	3.6	0.5	0.3
Delay (s)	59.3	47.8	17.5	141.1	28.6	19.1	119.4	31.2	18.6	27.9	25.1	16.2
Level of Service	E	D	B	F	C	B	F	C	B	C	C	B
Approach Delay (s)		45.4			34.0			45.0			22.7	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM Average Control Delay	39.0	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		

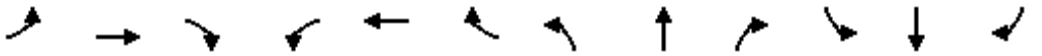
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.98		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)	2835	4138		2891	4167		1520	3010	1360	1490	2980	1283
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2835	4138		2891	4167		1520	3010	1360	1490	2980	1283
Volume (vph)	130	1645	90	235	985	165	195	555	75	325	665	85
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	137	1732	95	247	1037	174	205	584	79	342	700	89
RTOR Reduction (vph)	0	6	0	0	23	0	0	0	27	0	0	43
Lane Group Flow (vph)	137	1821	0	247	1188	0	205	584	52	342	700	46
Heavy Vehicles (%)	4%	5%	0%	2%	3%	0%	0%	1%	0%	2%	2%	6%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Actuated Green, G (s)	7.0	41.0		7.0	41.0		13.0	17.0	24.0	19.0	23.0	30.0
Effective Green, g (s)	7.0	41.0		7.0	41.0		13.0	17.0	24.0	19.0	23.0	30.0
Actuated g/C Ratio	0.07	0.41		0.07	0.41		0.13	0.17	0.24	0.19	0.23	0.30
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	198	1697		202	1708		198	512	326	283	685	385
v/s Ratio Prot	0.05	c0.44		c0.09	0.29		0.13	c0.19	0.01	c0.23	0.23	0.01
v/s Ratio Perm									0.03			0.03
v/c Ratio	0.69	1.07		1.22	0.70		1.04	1.14	0.16	1.21	1.02	0.12
Uniform Delay, d1	45.4	29.5		46.5	24.3		43.5	41.5	30.0	40.5	38.5	25.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.0	44.4		136.2	1.3		73.5	84.6	0.2	122.1	40.0	0.1
Delay (s)	55.4	73.9		182.7	25.6		117.0	126.1	30.2	162.6	78.5	25.5
Level of Service	E	E		F	C		F	F	C	F	E	C
Approach Delay (s)		72.6			52.2			115.2			99.8	
Approach LOS		E			D			F			F	

Intersection Summary			
HCM Average Control Delay	79.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		

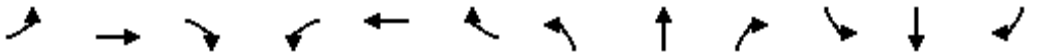
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		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)	1421	4134		1476	4189		1520	2959		1520	3010	1308
Flt Permitted	0.95	1.00		0.95	1.00		0.24	1.00		0.11	1.00	1.00
Satd. Flow (perm)	1421	4134		1476	4189		380	2959		175	3010	1308
Volume (vph)	150	1880	120	145	1125	125	55	1025	140	135	815	235
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	1979	126	153	1184	132	58	1079	147	142	858	247
RTOR Reduction (vph)	0	7	0	0	13	0	0	10	0	0	0	4
Lane Group Flow (vph)	158	2098	0	153	1303	0	58	1216	0	142	858	243
Heavy Vehicles (%)	7%	5%	0%	3%	3%	0%	0%	1%	0%	0%	1%	4%
Turn Type	Prot			Prot			Perm			Perm		pm+ov
Protected Phases	5	2		1	6			8			4	5
Permitted Phases							8			4		4
Actuated Green, G (s)	7.0	33.0		7.0	33.0		48.0	48.0		48.0	48.0	55.0
Effective Green, g (s)	7.0	33.0		7.0	33.0		48.0	48.0		48.0	48.0	55.0
Actuated g/C Ratio	0.07	0.33		0.07	0.33		0.48	0.48		0.48	0.48	0.55
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	99	1364		103	1382		182	1420		84	1445	772
v/s Ratio Prot	0.11	c0.51		c0.10	0.31			0.41			0.29	0.02
v/s Ratio Perm							0.15			c0.81		0.16
v/c Ratio	1.60	1.54		1.49	0.94		0.32	0.86		1.69	0.59	0.32
Uniform Delay, d1	46.5	33.5		46.5	32.6		16.0	23.0		26.0	18.9	12.2
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	310.3	246.0		262.9	12.9		1.0	5.3		356.4	0.7	0.2
Delay (s)	356.8	279.5		309.4	45.5		17.0	28.2		382.4	19.6	12.5
Level of Service	F	F		F	D		B	C		F	B	B
Approach Delay (s)		284.9			73.0			27.7			59.5	
Approach LOS		F			E			C			E	

Intersection Summary			
HCM Average Control Delay	137.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	117.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.99		1.00	0.98		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)	1476	4184		1520	4149		1520	1569	1360	1520	1584	1333
Flt Permitted	0.11	1.00		0.13	1.00		0.13	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	178	4184		206	4149		206	1569	1360	206	1584	1333
Volume (vph)	295	1935	70	165	1185	200	100	640	120	200	750	775
Peak-hour factor, PHF	0.95	1.00	1.00	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	311	1935	70	174	1247	211	105	674	126	211	789	816
RTOR Reduction (vph)	0	4	0	0	23	0	0	0	6	0	0	14
Lane Group Flow (vph)	311	2001	0	174	1435	0	105	674	120	211	789	802
Heavy Vehicles (%)	3%	4%	0%	0%	3%	3%	0%	2%	0%	0%	1%	2%
Turn Type	pm+pt			pm+pt			pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	47.0	37.0		37.0	31.0		35.0	35.0	41.0	37.0	37.0	49.0
Effective Green, g (s)	47.0	37.0		37.0	31.0		35.0	35.0	41.0	37.0	37.0	49.0
Actuated g/C Ratio	0.47	0.37		0.37	0.31		0.35	0.35	0.41	0.37	0.37	0.49
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	239	1548		155	1286		125	549	612	155	586	653
v/s Ratio Prot	c0.16	0.48		0.07	0.35		0.03	c0.43	0.01	0.08	c0.50	0.15
v/s Ratio Perm	c0.46			0.35			0.26		0.08	c0.42		0.45
v/c Ratio	1.30	1.29		1.12	1.12		0.84	1.23	0.20	1.36	1.35	1.23
Uniform Delay, d1	27.9	31.5		49.2	34.5		44.6	32.5	18.9	49.2	31.5	25.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	162.7	136.7		109.0	63.1		36.5	117.8	0.2	198.4	167.0	116.0
Delay (s)	190.6	168.2		158.2	97.6		81.2	150.3	19.1	247.6	198.5	141.5
Level of Service	F	F		F	F		F	F	B	F	F	F
Approach Delay (s)		171.2			104.1			124.0			178.6	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	150.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.28		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	123.9%	ICU Level of Service	H
Analysis Period (min)	15		

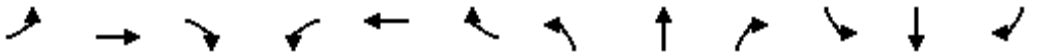
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.95	1.00	1.00	0.95
Frt	0.89	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.99	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1886	854	2598	1133	1197	2714
Flt Permitted	0.99	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1886	854	2598	1133	1197	2714
Volume (vph)	95	465	1335	815	260	1260
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	489	1405	858	274	1326
RTOR Reduction (vph)	203	15	0	65	0	0
Lane Group Flow (vph)	141	230	1405	793	274	1326
Heavy Vehicles (%)	45%	45%	17%	20%	27%	12%
Turn Type		pm+ov		pm+ov	Prot	
Protected Phases	8	1	2	8	1	6
Permitted Phases		8		2		
Actuated Green, G (s)	17.0	38.0	50.0	67.0	21.0	75.0
Effective Green, g (s)	17.0	38.0	50.0	67.0	21.0	75.0
Actuated g/C Ratio	0.17	0.38	0.50	0.67	0.21	0.75
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	321	359	1299	804	251	2036
v/s Ratio Prot	0.08	0.13	c0.54	c0.17	c0.23	0.49
v/s Ratio Perm		0.13		0.53		
v/c Ratio	0.44	0.64	1.08	0.99	1.09	0.65
Uniform Delay, d1	37.2	25.4	25.0	16.1	39.5	6.1
Progression Factor	0.51	0.53	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	2.4	50.2	28.1	83.4	1.6
Delay (s)	19.4	15.8	75.2	44.1	122.9	7.7
Level of Service	B	B	E	D	F	A
Approach Delay (s)	17.9		63.4			27.5
Approach LOS	B		E			C

Intersection Summary			
HCM Average Control Delay	44.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

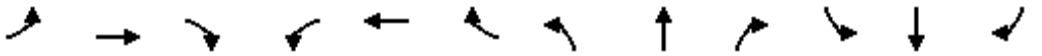
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1056	2414		1520	2452	993	1520	1107		2077	1203	1046
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.75	1.00		0.53	1.00	1.00
Satd. Flow (perm)	1056	2414		1520	2452	993	1195	1107		1156	1203	1046
Volume (vph)	240	745	5	5	450	300	5	20	5	825	15	235
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	253	784	5	5	474	316	5	21	5	868	16	247
RTOR Reduction (vph)	0	1	0	0	0	174	0	4	0	0	0	83
Lane Group Flow (vph)	253	788	0	5	474	142	5	22	0	868	16	164
Heavy Vehicles (%)	44%	26%	0%	0%	24%	37%	0%	50%	0%	42%	33%	30%
Turn Type	Prot			Prot		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases						8	2			6		6
Actuated Green, G (s)	24.2	40.4		0.8	17.0	45.0	14.8	14.8		42.0	42.0	66.2
Effective Green, g (s)	24.2	40.4		0.8	17.0	45.0	14.8	14.8		42.0	42.0	66.2
Actuated g/C Ratio	0.24	0.40		0.01	0.17	0.45	0.15	0.15		0.42	0.42	0.66
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	256	975		12	417	447	179	164		743	505	734
v/s Ratio Prot	c0.24	0.33		0.00	c0.19	0.09	0.00	c0.02		c0.33	0.01	0.05
v/s Ratio Perm						0.05	0.00			c0.16		0.10
v/c Ratio	0.99	0.81		0.42	1.14	0.32	0.03	0.13		1.17	0.03	0.22
Uniform Delay, d1	37.8	26.4		49.4	41.5	17.7	36.4	37.0		27.0	17.0	6.7
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.97	1.02	1.26
Incremental Delay, d2	52.4	5.0		21.8	86.9	0.4	0.1	1.7		77.2	0.0	0.0
Delay (s)	90.2	31.4		71.1	128.4	18.1	36.5	38.7		103.4	17.3	8.5
Level of Service	F	C		E	F	B	D	D		F	B	A
Approach Delay (s)		45.7			84.2			38.3			81.4	
Approach LOS		D			F			D			F	

Intersection Summary			
HCM Average Control Delay	69.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.2%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		0.97	0.95		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.99		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1520	2989		2920	2926		1505	2868	1347	2920	2868	1360
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1520	2989		2920	2926		1505	2868	1347	2920	2868	1360
Volume (vph)	185	1160	60	345	670	165	335	605	340	510	575	85
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	195	1221	63	363	705	174	353	637	358	537	605	89
RTOR Reduction (vph)	0	4	0	0	22	0	0	0	7	0	0	49
Lane Group Flow (vph)	195	1280	0	363	857	0	353	637	351	537	605	40
Heavy Vehicles (%)	0%	1%	0%	1%	1%	0%	1%	6%	1%	1%	6%	0%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Actuated Green, G (s)	14.5	37.0		10.0	32.5		18.0	23.0	33.0	14.0	19.0	33.5
Effective Green, g (s)	14.5	37.0		10.0	32.5		18.0	23.0	33.0	14.0	19.0	33.5
Actuated g/C Ratio	0.14	0.37		0.10	0.32		0.18	0.23	0.33	0.14	0.19	0.34
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	220	1106		292	951		271	660	445	409	545	510
v/s Ratio Prot	0.13	c0.43		c0.12	0.29		c0.23	0.22	0.08	c0.18	c0.21	0.01
v/s Ratio Perm									0.18			0.02
v/c Ratio	0.89	1.16		1.24	0.90		1.30	0.97	0.79	1.31	1.11	0.08
Uniform Delay, d1	41.9	31.5		45.0	32.2		41.0	38.1	30.4	43.0	40.5	22.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	31.8	81.3		135.0	11.5		160.4	26.4	9.0	157.4	72.3	0.1
Delay (s)	73.7	112.8		180.0	43.7		201.4	64.5	39.4	200.4	112.8	22.8
Level of Service	E	F		F	D		F	E	D	F	F	C
Approach Delay (s)		107.7			83.5			93.7			144.5	
Approach LOS		F			F			F			F	

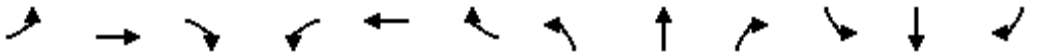
Intersection Summary			
HCM Average Control Delay	107.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	106.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.98		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	4262		1476	4245		1490	2859		1462	2928	
Flt Permitted	0.16	1.00		0.16	1.00		0.21	1.00		0.28	1.00	
Satd. Flow (perm)	261	4262		254	4245		322	2859		425	2928	
Volume (vph)	125	1350	155	175	1270	155	315	600	115	130	395	95
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	132	1421	163	184	1337	163	332	632	121	137	416	100
RTOR Reduction (vph)	0	18	0	0	19	0	0	20	0	0	27	0
Lane Group Flow (vph)	132	1566	0	184	1481	0	332	733	0	137	489	0
Heavy Vehicles (%)	0%	1%	0%	3%	1%	3%	2%	2%	13%	4%	1%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	29.0	29.0		30.5	30.5		32.5	23.5		20.5	15.5	
Effective Green, g (s)	29.0	29.0		30.5	30.5		32.5	23.5		20.5	15.5	
Actuated g/C Ratio	0.36	0.36		0.38	0.38		0.41	0.30		0.26	0.19	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	166	1555		190	1629		323	845		175	571	
v/s Ratio Prot	0.04	c0.37		0.07	c0.35		c0.17	0.26		0.05	0.17	
v/s Ratio Perm	0.24			c0.30			c0.25			0.15		
v/c Ratio	0.80	1.01		0.97	0.91		1.03	0.87		0.78	0.86	
Uniform Delay, d1	27.9	25.2		23.0	23.2		19.2	26.5		25.1	30.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	22.5	24.6		55.5	7.8		57.4	9.4		20.1	12.1	
Delay (s)	50.4	49.8		78.5	31.0		76.6	35.9		45.2	43.0	
Level of Service	D	D		E	C		E	D		D	D	
Approach Delay (s)		49.9			36.2			48.4			43.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	44.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	79.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	97.2%	ICU Level of Service	F
Analysis Period (min)	15		

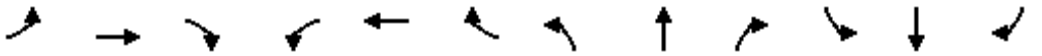
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.91		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	2949	4282	1333	2835	4325	1360	1490	4005		1476	3010	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	2949	4282	1333	2835	4325	1360	1490	4005		1476	3010	1360
Volume (vph)	200	1255	300	285	1370	65	330	610	255	170	705	240
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	211	1321	316	300	1442	68	347	642	268	179	742	253
RTOR Reduction (vph)	0	0	7	0	0	25	0	68	0	0	0	36
Lane Group Flow (vph)	211	1321	309	300	1442	43	347	842	0	179	742	217
Heavy Vehicles (%)	0%	2%	2%	4%	1%	0%	2%	1%	12%	3%	1%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	8.0	34.0	58.0	11.0	37.0	53.0	24.0	33.0		16.0	25.0	33.0
Effective Green, g (s)	8.0	34.0	58.0	11.0	37.0	53.0	24.0	33.0		16.0	25.0	33.0
Actuated g/C Ratio	0.07	0.31	0.53	0.10	0.34	0.48	0.22	0.30		0.15	0.23	0.30
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	214	1324	703	284	1455	655	325	1202		215	684	408
v/s Ratio Prot	0.07	0.31	0.10	c0.11	c0.33	0.01	c0.23	0.21		0.12	c0.25	0.04
v/s Ratio Perm			0.14			0.02						0.12
v/c Ratio	0.99	1.00	0.44	1.06	0.99	0.07	1.07	0.70		0.83	1.08	0.53
Uniform Delay, d1	50.9	38.0	16.0	49.5	36.3	15.2	43.0	34.1		45.7	42.5	32.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	57.0	24.2	0.4	69.0	21.4	0.0	69.0	1.9		23.2	59.7	1.3
Delay (s)	108.0	62.2	16.4	118.5	57.7	15.3	112.0	36.0		68.9	102.2	33.4
Level of Service	F	E	B	F	E	B	F	D		E	F	C
Approach Delay (s)		59.6			66.2			57.0			82.3	
Approach LOS		E			E			E			F	

Intersection Summary			
HCM Average Control Delay	65.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	96.6%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.99		1.00	0.98		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)	2949	4246		1476	4245		2949	3010	1295	2920	3010	1360
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2949	4246		1476	4245		2949	3010	1295	2920	3010	1360
Volume (vph)	135	1295	90	180	1170	135	205	765	220	375	720	195
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	1363	95	189	1232	142	216	805	232	395	758	205
RTOR Reduction (vph)	0	9	0	0	16	0	0	0	125	0	0	116
Lane Group Flow (vph)	142	1449	0	189	1358	0	216	805	107	395	758	90
Heavy Vehicles (%)	0%	2%	0%	3%	1%	4%	0%	1%	5%	1%	1%	0%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases									8			4
Actuated Green, G (s)	6.0	29.0		11.0	34.0		7.0	22.0	22.0	12.0	27.0	27.0
Effective Green, g (s)	6.0	29.0		11.0	34.0		7.0	22.0	22.0	12.0	27.0	27.0
Actuated g/C Ratio	0.07	0.32		0.12	0.38		0.08	0.24	0.24	0.13	0.30	0.30
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	197	1368		180	1604		229	736	317	389	903	408
v/s Ratio Prot	0.05	c0.34		c0.13	0.32		0.07	c0.27		c0.14	0.25	
v/s Ratio Perm									0.08			0.07
v/c Ratio	0.72	1.06		1.05	0.85		0.94	1.09	0.34	1.02	0.84	0.22
Uniform Delay, d1	41.2	30.5		39.5	25.6		41.3	34.0	28.0	39.0	29.5	23.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.2	41.7		80.9	4.3		43.6	61.7	0.6	49.6	6.9	0.3
Delay (s)	53.4	72.2		120.4	30.0		84.9	95.7	28.6	88.6	36.4	23.9
Level of Service	D	E		F	C		F	F	C	F	D	C
Approach Delay (s)		70.6			40.9			81.4			49.7	
Approach LOS		E			D			F			D	

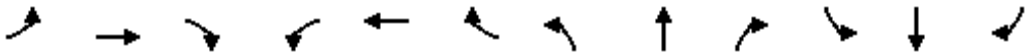
Intersection Summary			
HCM Average Control Delay	60.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	95.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	
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)	2863	4241	1271	2891	4282	1333	2835	4282	1320	2920	4197	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	2863	4241	1271	2891	4282	1333	2835	4282	1320	2920	4197	
Volume (vph)	200	1495	365	300	1055	290	280	860	165	405	945	125
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	211	1574	384	316	1111	305	295	905	174	426	995	132
RTOR Reduction (vph)	0	0	6	0	0	13	0	0	109	0	19	0
Lane Group Flow (vph)	211	1574	378	316	1111	292	295	905	65	426	1108	0
Heavy Vehicles (%)	3%	3%	7%	2%	2%	2%	4%	2%	3%	1%	2%	4%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		Over	Prot		
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	
Permitted Phases			2			6						
Actuated Green, G (s)	8.9	32.0	41.0	10.0	33.1	46.1	9.0	19.0	10.0	13.0	23.0	
Effective Green, g (s)	8.9	32.0	41.0	10.0	33.1	46.1	9.0	19.0	10.0	13.0	23.0	
Actuated g/C Ratio	0.10	0.36	0.46	0.11	0.37	0.51	0.10	0.21	0.11	0.14	0.26	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	283	1508	636	321	1575	742	284	904	147	422	1073	
v/s Ratio Prot	0.07	c0.37	0.06	c0.11	0.26	0.06	0.10	c0.21	0.05	0.15	c0.26	
v/s Ratio Perm			0.24			0.16						
v/c Ratio	0.75	1.04	0.59	0.98	0.71	0.39	1.04	1.00	0.44	1.01	1.03	
Uniform Delay, d1	39.4	29.0	18.3	39.9	24.3	13.4	40.5	35.5	37.4	38.5	33.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	10.2	35.5	1.5	45.7	1.5	0.3	63.8	30.2	2.1	46.2	36.3	
Delay (s)	49.6	64.5	19.8	85.6	25.7	13.8	104.3	65.7	39.5	84.7	69.8	
Level of Service	D	E	B	F	C	B	F	E	D	F	E	
Approach Delay (s)		55.1			34.6			70.7			73.9	
Approach LOS		E			C			E			E	

Intersection Summary			
HCM Average Control Delay	57.3	HCM Level of Service	E
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.3%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.96		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)	1462	4205		1520	2951	1333	1520	4042		2863	4122	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1462	4205		1520	2951	1333	1520	4042		2863	4122	
Volume (vph)	140	1095	130	165	560	215	120	375	125	365	665	220
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	1153	137	174	589	226	126	395	132	384	700	232
RTOR Reduction (vph)	0	15	0	0	0	186	0	61	0	0	59	0
Lane Group Flow (vph)	147	1275	0	174	589	40	126	466	0	384	873	0
Heavy Vehicles (%)	4%	2%	4%	0%	3%	2%	0%	4%	4%	3%	2%	2%
Turn Type	Prot			Prot		Over	Prot			Prot		
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	25.6	36.0		13.4	23.8	17.5	10.5	15.7		17.5	22.7	
Effective Green, g (s)	25.6	36.0		13.4	23.8	17.5	10.5	15.7		17.5	22.7	
Actuated g/C Ratio	0.26	0.37		0.14	0.24	0.18	0.11	0.16		0.18	0.23	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	380	1535		207	712	237	162	644		508	949	
v/s Ratio Prot	0.10	c0.30		c0.11	0.20	0.03	0.08	c0.12		0.13	c0.21	
v/s Ratio Perm												
v/c Ratio	0.39	0.83		0.84	0.83	0.17	0.78	0.72		0.76	0.92	
Uniform Delay, d1	30.0	28.5		41.6	35.5	34.4	42.9	39.4		38.5	37.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	5.4		25.2	7.8	0.3	20.6	4.0		6.3	13.5	
Delay (s)	30.7	33.9		66.8	43.3	34.7	63.5	43.4		44.8	50.6	
Level of Service	C	C		E	D	C	E	D		D	D	
Approach Delay (s)		33.6			45.5			47.3			48.9	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	42.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	98.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	2633	1225	2512	1106	2437	2533
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	2633	1225	2512	1106	2437	2533
Volume (vph)	330	375	815	155	165	560
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	347	395	858	163	174	589
RTOR Reduction (vph)	0	59	0	43	0	0
Lane Group Flow (vph)	347	336	858	120	174	589
Heavy Vehicles (%)	12%	11%	21%	23%	21%	20%
Turn Type		pt+ov		pm+ov	Prot	
Protected Phases	7	7 5	6	7	5	2
Permitted Phases				6		
Actuated Green, G (s)	19.5	35.6	47.2	66.7	12.1	63.3
Effective Green, g (s)	19.5	35.6	47.2	66.7	12.1	63.3
Actuated g/C Ratio	0.21	0.39	0.52	0.73	0.13	0.70
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	565	480	1306	861	325	1766
v/s Ratio Prot	0.13	c0.27	c0.34	0.03	0.07	0.23
v/s Ratio Perm				0.08		
v/c Ratio	0.61	0.70	0.66	0.14	0.54	0.33
Uniform Delay, d1	32.2	23.1	15.9	3.6	36.7	5.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	4.6	2.6	0.1	1.7	0.5
Delay (s)	34.2	27.7	18.5	3.6	38.4	5.9
Level of Service	C	C	B	A	D	A
Approach Delay (s)	30.8		16.1			13.3
Approach LOS	C		B			B

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	90.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

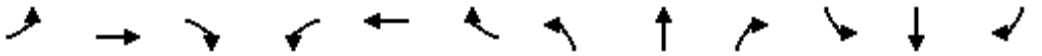
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3971	1225	1357	3971	2417	1115
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3971	1225	1357	3971	2417	1115
Volume (vph)	1640	540	165	765	185	135
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1726	568	174	805	195	142
RTOR Reduction (vph)	0	475	0	0	0	5
Lane Group Flow (vph)	1726	93	174	805	195	137
Heavy Vehicles (%)	10%	11%	12%	10%	22%	22%
Turn Type		Over	Prot			pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases						8
Actuated Green, G (s)	48.4	14.7	14.5	66.9	14.7	29.2
Effective Green, g (s)	48.4	14.7	14.5	66.9	14.7	29.2
Actuated g/C Ratio	0.54	0.16	0.16	0.75	0.16	0.33
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2145	201	220	2965	397	413
v/s Ratio Prot	c0.43	0.08	c0.13	0.20	c0.08	0.05
v/s Ratio Perm						0.07
v/c Ratio	0.80	0.46	0.79	0.27	0.49	0.33
Uniform Delay, d1	16.8	33.9	36.1	3.6	34.0	22.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.3	1.7	17.4	0.0	1.0	0.5
Delay (s)	20.1	35.6	53.5	3.7	35.0	23.3
Level of Service	C	D	D	A	D	C
Approach Delay (s)	23.9			12.5	30.1	
Approach LOS	C			B	C	

Intersection Summary			
HCM Average Control Delay	21.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	89.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		0.97	0.95	1.00	1.00	0.91	0.91	1.00	0.95	1.00
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.91	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1448	4136		2835	2895	1360	1490	2565	1190	1462	2980	1360
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1448	4136		2835	2895	1360	1490	2565	1190	1462	2980	1360
Volume (vph)	100	1575	365	480	710	30	275	325	1000	115	600	55
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	1658	384	505	747	32	289	342	1053	121	632	58
RTOR Reduction (vph)	0	38	0	0	0	16	0	210	319	0	0	42
Lane Group Flow (vph)	105	2004	0	505	747	16	289	658	208	121	632	16
Heavy Vehicles (%)	5%	3%	1%	4%	5%	0%	2%	2%	4%	4%	2%	0%
Turn Type	Prot			Prot		pm+ov	Prot		Over	Prot		pm+ov
Protected Phases	5	2		1	6	7	3	8	1	7	4	5
Permitted Phases						6						4
Actuated Green, G (s)	9.6	39.0		13.0	42.4	50.4	14.0	24.0	13.0	8.0	18.0	27.6
Effective Green, g (s)	9.6	39.0		13.0	42.4	50.4	14.0	24.0	13.0	8.0	18.0	27.6
Actuated g/C Ratio	0.10	0.39		0.13	0.42	0.50	0.14	0.24	0.13	0.08	0.18	0.28
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	139	1613		369	1227	685	209	616	155	117	536	375
v/s Ratio Prot	0.07	c0.48		c0.18	0.26	0.00	c0.19	0.26	0.17	0.08	c0.21	0.00
v/s Ratio Perm						0.01						0.01
v/c Ratio	0.76	1.24		1.37	0.61	0.02	1.38	1.07	1.34	1.03	1.18	0.04
Uniform Delay, d1	44.1	30.5		43.5	22.4	12.4	43.0	38.0	43.5	46.0	41.0	26.5
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	20.6	114.6		182.3	0.9	0.0	199.2	56.0	189.9	92.7	98.7	0.0
Delay (s)	64.6	145.1		225.8	23.2	12.5	242.2	94.0	233.4	138.7	139.7	26.6
Level of Service	E	F		F	C	B	F	F	F	F	F	C
Approach Delay (s)		141.1			102.6			163.0			131.4	
Approach LOS		F			F			F			F	

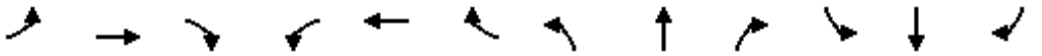
Intersection Summary			
HCM Average Control Delay	137.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.27		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	113.2%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2891	4282	1333	2949	4241	1320	2891	2980	1360	2949	2980	1333
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2891	4282	1333	2949	4241	1320	2891	2980	1360	2949	2980	1333
Volume (vph)	415	1680	215	80	765	170	215	655	110	180	585	230
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	437	1768	226	84	805	179	226	689	116	189	616	242
RTOR Reduction (vph)	0	0	19	0	0	22	0	0	8	0	0	20
Lane Group Flow (vph)	437	1768	207	84	805	157	226	689	108	189	616	222
Heavy Vehicles (%)	2%	2%	2%	0%	3%	3%	2%	2%	0%	0%	2%	2%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	16.4	41.0	49.4	4.0	28.6	35.6	8.4	22.0	26.0	7.0	20.6	37.0
Effective Green, g (s)	16.4	41.0	49.4	4.0	28.6	35.6	8.4	22.0	26.0	7.0	20.6	37.0
Actuated g/C Ratio	0.18	0.46	0.55	0.04	0.32	0.40	0.09	0.24	0.29	0.08	0.23	0.41
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	527	1951	791	131	1348	581	270	728	393	229	682	548
v/s Ratio Prot	0.15	c0.41	0.02	0.03	c0.19	0.02	0.08	c0.23	0.01	0.06	c0.21	0.07
v/s Ratio Perm			0.13			0.10			0.07			0.09
v/c Ratio	0.83	0.91	0.26	0.64	0.60	0.27	0.84	0.95	0.28	0.83	0.90	0.41
Uniform Delay, d1	35.5	22.7	10.7	42.3	25.8	18.4	40.1	33.4	24.7	40.9	33.7	18.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	10.4	7.6	0.2	10.3	0.7	0.3	19.7	21.1	0.4	20.9	15.3	0.5
Delay (s)	45.9	30.3	10.9	52.5	26.6	18.7	59.8	54.5	25.1	61.8	49.0	19.2
Level of Service	D	C	B	D	C	B	E	D	C	E	D	B
Approach Delay (s)		31.3			27.3			52.3			44.4	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	36.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		

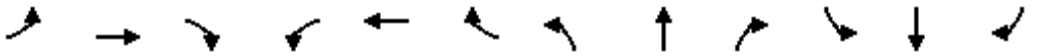
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1490	4282	1333	1520	4158		2891	3010	1360	2949	3010	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1490	4282	1333	1520	4158		2891	3010	1360	2949	3010	1360
Volume (vph)	285	1520	270	165	675	130	290	1175	150	140	595	160
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	300	1600	284	174	711	137	305	1237	158	147	626	168
RTOR Reduction (vph)	0	0	34	0	29	0	0	0	1	0	0	15
Lane Group Flow (vph)	300	1600	250	174	819	0	305	1237	157	147	626	153
Heavy Vehicles (%)	2%	2%	2%	0%	3%	0%	2%	1%	0%	0%	1%	0%
Turn Type	Prot		pm+ov	Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases			2						8			4
Actuated Green, G (s)	21.5	34.0	49.3	10.0	22.5		15.3	36.0	46.0	4.0	24.7	46.2
Effective Green, g (s)	21.5	34.0	49.3	10.0	22.5		15.3	36.0	46.0	4.0	24.7	46.2
Actuated g/C Ratio	0.22	0.34	0.49	0.10	0.22		0.15	0.36	0.46	0.04	0.25	0.46
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	320	1456	710	152	936		442	1084	626	118	743	683
v/s Ratio Prot	c0.20	c0.37	0.05	0.11	0.20		0.11	c0.41	0.03	c0.05	0.21	0.05
v/s Ratio Perm			0.13						0.09			0.06
v/c Ratio	0.94	1.10	0.35	1.14	0.88		0.69	1.14	0.25	1.25	0.84	0.22
Uniform Delay, d1	38.6	33.0	15.6	45.0	37.4		40.1	32.0	16.5	48.0	35.8	16.1
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	33.9	55.5	0.3	117.2	9.2		4.6	74.9	0.2	163.0	8.6	0.2
Delay (s)	72.5	88.5	15.9	162.2	46.6		44.7	106.9	16.7	211.0	44.4	16.3
Level of Service	E	F	B	F	D		D	F	B	F	D	B
Approach Delay (s)		76.9			66.3			87.4			65.4	
Approach LOS		E			E			F			E	

Intersection Summary			
HCM Average Control Delay	76.2	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.4%	ICU Level of Service	G
Analysis Period (min)	15		

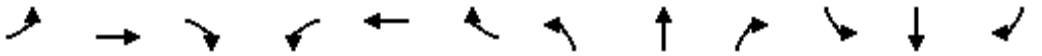
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91		1.00	0.91	1.00	0.97	0.91	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)	2863	4282	1360	2891	4220		1476	4282	1347	2949	4282	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2863	4282	1360	2891	4220		1476	4282	1347	2949	4282	1360
Volume (vph)	195	1380	130	285	1075	135	170	1195	475	225	895	125
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	205	1453	137	300	1132	142	179	1258	500	237	942	132
RTOR Reduction (vph)	0	0	7	0	16	0	0	0	5	0	0	32
Lane Group Flow (vph)	205	1453	130	300	1258	0	179	1258	495	237	942	101
Heavy Vehicles (%)	3%	2%	0%	2%	2%	0%	3%	2%	1%	0%	2%	0%
Turn Type	Prot		pm+ov	Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases			2						8			4
Actuated Green, G (s)	11.0	34.0	47.0	11.0	34.0		13.0	30.0	41.0	9.0	26.0	37.0
Effective Green, g (s)	11.0	34.0	47.0	11.0	34.0		13.0	30.0	41.0	9.0	26.0	37.0
Actuated g/C Ratio	0.11	0.34	0.47	0.11	0.34		0.13	0.30	0.41	0.09	0.26	0.37
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	315	1456	694	318	1435		192	1285	606	265	1113	503
v/s Ratio Prot	0.07	c0.34	0.02	0.10	0.30		c0.12	c0.29	c0.09	0.08	0.22	0.02
v/s Ratio Perm			0.07						0.28			0.05
v/c Ratio	0.65	1.00	0.19	0.94	0.88		0.93	0.98	0.82	0.89	0.85	0.20
Uniform Delay, d1	42.7	33.0	15.4	44.2	31.0		43.1	34.7	26.2	45.0	35.1	21.4
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.8	23.1	0.1	35.6	6.3		45.8	20.0	8.3	29.3	6.1	0.2
Delay (s)	47.4	56.1	15.5	79.8	37.4		88.9	54.7	34.5	74.3	41.2	21.6
Level of Service	D	E	B	E	D		F	D	C	E	D	C
Approach Delay (s)		52.0			45.5			52.6			45.2	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	49.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	89.7%	ICU Level of Service	E
Analysis Period (min)	15		

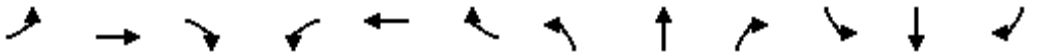
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2920	4212		2920	2980	1347	2891	4282	1333	2920	2980	1333
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2920	4212		2920	2980	1347	2891	4282	1333	2920	2980	1333
Volume (vph)	575	1290	185	365	1615	490	290	1065	275	530	1080	270
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	605	1358	195	384	1700	516	305	1121	289	558	1137	284
RTOR Reduction (vph)	0	19	0	0	0	1	0	0	4	0	0	1
Lane Group Flow (vph)	605	1534	0	384	1700	516	305	1121	285	558	1137	283
Heavy Vehicles (%)	1%	2%	0%	1%	2%	1%	2%	2%	2%	1%	2%	2%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6	7	3	8	1	7	4	5
Permitted Phases						6			8			4
Actuated Green, G (s)	12.0	37.0		13.0	38.0	50.0	7.0	22.0	35.0	12.0	27.0	39.0
Effective Green, g (s)	12.0	37.0		13.0	38.0	50.0	7.0	22.0	35.0	12.0	27.0	39.0
Actuated g/C Ratio	0.12	0.37		0.13	0.38	0.50	0.07	0.22	0.35	0.12	0.27	0.39
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	350	1558		380	1132	674	202	942	467	350	805	573
v/s Ratio Prot	c0.21	0.36		0.13	c0.57	0.09	0.11	c0.26	0.08	c0.19	c0.38	0.06
v/s Ratio Perm						0.29			0.13			0.15
v/c Ratio	1.73	0.98		1.01	1.50	0.76	1.51	1.19	0.61	1.59	1.41	0.49
Uniform Delay, d1	44.0	31.2		43.5	31.0	20.2	46.5	39.0	26.9	44.0	36.5	23.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	339.6	19.4		48.8	230.5	5.2	253.4	96.2	2.4	280.6	193.0	0.7
Delay (s)	383.6	50.7		92.3	261.5	25.4	299.9	135.2	29.2	324.6	229.5	23.7
Level of Service	F	D		F	F	C	F	F	C	F	F	C
Approach Delay (s)		144.0			189.6			146.6			226.8	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	177.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.45		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	131.1%	ICU Level of Service	H
Analysis Period (min)	15		

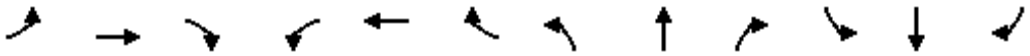
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1476	2980	1360	2863	2980	1360	2730	2980	1360	1520	2980	1360
Flt Permitted	0.47	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	732	2980	1360	2863	2980	1360	2730	2980	1360	1520	2980	1360
Volume (vph)	175	875	130	200	275	120	120	910	260	165	615	55
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	184	921	137	211	289	126	126	958	274	174	647	58
RTOR Reduction (vph)	0	0	42	0	0	71	0	0	34	0	0	32
Lane Group Flow (vph)	184	921	95	211	289	55	126	958	240	174	647	26
Heavy Vehicles (%)	3%	2%	0%	3%	2%	0%	8%	2%	0%	0%	2%	0%
Turn Type	pm+pt		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	5
Permitted Phases	2		2			6			8			4
Actuated Green, G (s)	39.3	29.0	36.7	7.0	25.7	35.7	7.7	28.0	35.0	10.0	30.3	40.6
Effective Green, g (s)	39.3	29.0	36.7	7.0	25.7	35.7	7.7	28.0	35.0	10.0	30.3	40.6
Actuated g/C Ratio	0.44	0.32	0.41	0.08	0.29	0.40	0.09	0.31	0.39	0.11	0.34	0.45
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	405	960	615	223	851	539	234	927	529	169	1003	674
v/s Ratio Prot	c0.05	c0.31	0.01	c0.07	0.10	0.01	0.05	c0.32	0.04	c0.11	0.22	0.00
v/s Ratio Perm	0.15		0.06			0.03			0.14			0.01
v/c Ratio	0.45	0.96	0.15	0.95	0.34	0.10	0.54	1.03	0.45	1.03	0.65	0.04
Uniform Delay, d1	16.5	29.9	16.8	41.3	25.4	17.1	39.4	31.0	20.4	40.0	25.3	13.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8	20.7	0.1	44.9	0.2	0.1	2.4	38.5	0.6	77.2	1.4	0.0
Delay (s)	17.3	50.7	17.0	86.2	25.7	17.2	41.8	69.5	21.0	117.2	26.7	13.8
Level of Service	B	D	B	F	C	B	D	E	C	F	C	B
Approach Delay (s)		42.0			44.4			57.2			43.8	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM Average Control Delay	47.8	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		

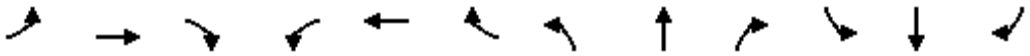
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1434	2903		1520	2951	1360	1421	2777		1434	2752	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1434	2903		1520	2951	1360	1421	2777		1434	2752	
Volume (vph)	80	860	55	20	590	40	70	690	45	85	440	90
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	905	58	21	621	42	74	726	47	89	463	95
RTOR Reduction (vph)	0	5	0	0	0	25	0	5	0	0	17	0
Lane Group Flow (vph)	84	958	0	21	621	17	74	768	0	89	541	0
Heavy Vehicles (%)	6%	4%	0%	0%	3%	0%	7%	9%	0%	6%	8%	6%
Turn Type	Prot			Prot		pm+ov	Prot			Prot		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.9	40.6		1.6	34.3	41.5	8.2	34.6		7.2	33.6	
Effective Green, g (s)	7.9	40.6		1.6	34.3	41.5	8.2	34.6		7.2	33.6	
Actuated g/C Ratio	0.08	0.41		0.02	0.34	0.42	0.08	0.35		0.07	0.34	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	113	1179		24	1012	564	117	961		103	925	
v/s Ratio Prot	0.06	c0.33		0.01	c0.21	0.00	0.05	c0.28		c0.06	0.20	
v/s Ratio Perm						0.01						
v/c Ratio	0.74	0.81		0.88	0.61	0.03	0.63	0.80		0.86	0.59	
Uniform Delay, d1	45.1	26.3		49.1	27.3	17.3	44.4	29.6		45.9	27.4	
Progression Factor	1.00	1.00		0.53	0.31	0.20	1.00	1.00		1.00	1.00	
Incremental Delay, d2	22.9	6.2		120.8	2.5	0.0	10.6	6.9		48.2	2.7	
Delay (s)	68.0	32.5		146.8	11.1	3.5	55.1	36.5		94.1	30.1	
Level of Service	E	C		F	B	A	E	D		F	C	
Approach Delay (s)		35.4			14.8			38.1			38.9	
Approach LOS		D			B			D			D	

Intersection Summary			
HCM Average Control Delay	32.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

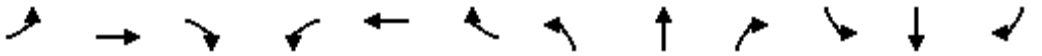
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	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)	1520	2980	1360	1476	2951	1333	1520	2895	1308	1476	2897	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1520	2980	1360	1476	2951	1333	1520	2895	1308	1476	2897	
Volume (vph)	35	1010	25	165	565	310	35	720	485	400	355	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	37	1063	26	174	595	326	37	758	511	421	374	32
RTOR Reduction (vph)	0	0	16	0	0	60	0	0	25	0	6	0
Lane Group Flow (vph)	37	1063	10	174	595	266	37	758	486	421	400	0
Heavy Vehicles (%)	0%	2%	0%	3%	3%	2%	0%	5%	4%	3%	4%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	4.2	31.2	36.8	9.0	36.0	57.8	5.6	22.0	31.0	21.8	38.2	
Effective Green, g (s)	4.2	31.2	36.8	9.0	36.0	57.8	5.6	22.0	31.0	21.8	38.2	
Actuated g/C Ratio	0.04	0.31	0.37	0.09	0.36	0.58	0.06	0.22	0.31	0.22	0.38	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	64	930	500	133	1062	824	85	637	405	322	1107	
v/s Ratio Prot	0.02	c0.36	0.00	c0.12	0.20	0.07	0.02	0.26	c0.11	c0.29	0.14	
v/s Ratio Perm			0.01			0.13			0.26			
v/c Ratio	0.58	1.14	0.02	1.31	0.56	0.32	0.44	1.19	1.20	1.31	0.36	
Uniform Delay, d1	47.0	34.4	20.1	45.5	25.7	11.0	45.7	39.0	34.5	39.1	22.2	
Progression Factor	0.79	0.63	1.12	1.47	0.31	0.18	1.00	1.00	1.00	0.74	0.19	
Incremental Delay, d2	10.3	75.5	0.0	153.7	0.6	0.1	3.5	100.5	111.7	151.9	0.6	
Delay (s)	47.3	97.3	22.6	220.4	8.5	2.0	49.2	139.5	146.2	181.1	4.9	
Level of Service	D	F	C	F	A	A	D	F	F	F	A	
Approach Delay (s)		93.9			40.2			139.6			94.6	
Approach LOS		F			D			F			F	

Intersection Summary			
HCM Average Control Delay	94.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	107.3%	ICU Level of Service	G
Analysis Period (min)	15		

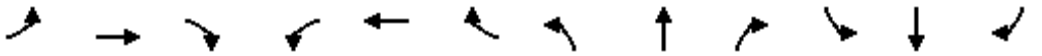
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1369	2951	1360	1490	2951	1347	1520	2980	1320	1476	2980	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1369	2951	1360	1490	2951	1347	1520	2980	1320	1476	2980	1360
Volume (vph)	175	1440	125	255	925	385	85	875	185	385	575	85
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	184	1516	132	268	974	405	89	921	195	405	605	89
RTOR Reduction (vph)	0	0	44	0	0	37	0	0	9	0	0	38
Lane Group Flow (vph)	184	1516	88	268	974	368	89	921	186	405	605	51
Heavy Vehicles (%)	11%	3%	0%	2%	3%	1%	0%	2%	3%	3%	2%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	13.0	33.0	40.9	11.0	31.0	47.0	7.9	24.0	35.0	16.0	32.1	45.1
Effective Green, g (s)	13.0	33.0	40.9	11.0	31.0	47.0	7.9	24.0	35.0	16.0	32.1	45.1
Actuated g/C Ratio	0.13	0.33	0.41	0.11	0.31	0.47	0.08	0.24	0.35	0.16	0.32	0.45
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	178	974	611	164	915	687	120	715	462	236	957	613
v/s Ratio Prot	0.13	c0.51	0.01	c0.18	0.33	0.09	0.06	c0.31	0.04	c0.27	0.20	0.01
v/s Ratio Perm			0.05			0.19			0.10			0.03
v/c Ratio	1.03	1.56	0.14	1.63	1.06	0.54	0.74	1.29	0.40	1.72	0.63	0.08
Uniform Delay, d1	43.5	33.5	18.6	44.5	34.5	18.8	45.1	38.0	24.6	42.0	28.9	15.7
Progression Factor	0.75	0.68	0.54	0.82	0.53	0.13	1.00	1.00	1.00	0.68	0.53	0.31
Incremental Delay, d2	29.5	250.9	0.0	299.7	41.2	0.4	21.6	140.1	0.6	334.5	2.2	0.0
Delay (s)	62.1	273.7	10.0	336.3	59.5	2.9	66.7	178.1	25.2	363.2	17.5	4.9
Level of Service	E	F	A	F	E	A	E	F	C	F	B	A
Approach Delay (s)		233.4			90.7			145.1			143.8	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	157.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.52		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	131.4%	ICU Level of Service	H
Analysis Period (min)	15		

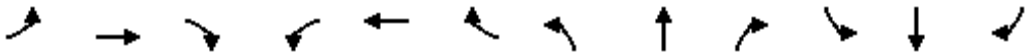
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1520	2951	1320	1520	2923	1295	1476	3010	1333	1421	3010	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1520	2951	1320	1520	2923	1295	1476	3010	1333	1421	3010	1360
Volume (vph)	100	1335	195	140	1060	320	195	510	215	410	360	95
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	1405	205	147	1116	337	205	537	226	432	379	100
RTOR Reduction (vph)	0	0	50	0	0	24	0	0	22	0	0	65
Lane Group Flow (vph)	105	1405	155	147	1116	313	205	537	204	432	379	35
Heavy Vehicles (%)	0%	3%	3%	0%	4%	5%	3%	1%	2%	7%	1%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.0	36.0	54.0	7.0	36.0	58.0	18.0	19.0	26.0	22.0	23.0	30.0
Effective Green, g (s)	7.0	36.0	54.0	7.0	36.0	58.0	18.0	19.0	26.0	22.0	23.0	30.0
Actuated g/C Ratio	0.07	0.36	0.54	0.07	0.36	0.58	0.18	0.19	0.26	0.22	0.23	0.30
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	106	1062	766	106	1052	803	266	572	400	313	692	462
v/s Ratio Prot	0.07	c0.48	0.04	c0.10	0.38	0.09	0.14	c0.18	0.04	c0.30	0.13	0.01
v/s Ratio Perm			0.08			0.16			0.12			0.02
v/c Ratio	0.99	1.32	0.20	1.39	1.06	0.39	0.77	0.94	0.51	1.38	0.55	0.08
Uniform Delay, d1	46.5	32.0	11.9	46.5	32.0	11.4	39.0	39.9	31.6	39.0	33.9	25.1
Progression Factor	0.98	0.67	0.35	0.77	0.53	0.25	1.00	1.00	1.00	1.06	0.75	0.16
Incremental Delay, d2	23.9	146.0	0.0	179.4	29.8	0.0	12.9	25.2	1.0	188.7	2.9	0.1
Delay (s)	69.6	167.3	4.1	215.4	46.9	2.9	51.9	65.1	32.6	229.9	28.3	4.1
Level of Service	E	F	A	F	D	A	D	E	C	F	C	A
Approach Delay (s)		141.8			53.1			54.7			121.2	
Approach LOS		F			D			D			F	

Intersection Summary			
HCM Average Control Delay	94.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.26		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	110.1%	ICU Level of Service	H
Analysis Period (min)	15		

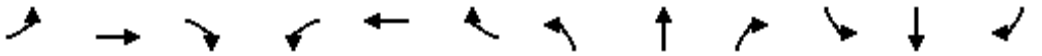
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1520	2951	1295	1505	2888		2891	2951	1333	2863	2901	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1520	2951	1295	1505	2888		2891	2951	1333	2863	2901	
Volume (vph)	110	1795	110	335	1275	285	210	450	310	455	585	95
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	116	1889	116	353	1342	300	221	474	326	479	616	100
RTOR Reduction (vph)	0	0	19	0	19	0	0	0	1	0	13	0
Lane Group Flow (vph)	116	1889	97	353	1623	0	221	474	325	479	703	0
Heavy Vehicles (%)	0%	3%	5%	1%	2%	4%	2%	3%	2%	3%	3%	0%
Turn Type	Prot		pm+ov	Prot			Prot		pm+ov	Prot		
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	5.0	41.0	46.0	15.0	51.0		5.0	17.0	32.0	11.0	23.0	
Effective Green, g (s)	5.0	41.0	46.0	15.0	51.0		5.0	17.0	32.0	11.0	23.0	
Actuated g/C Ratio	0.05	0.41	0.46	0.15	0.51		0.05	0.17	0.32	0.11	0.23	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	76	1210	648	226	1473		145	502	480	315	667	
v/s Ratio Prot	0.08	c0.64	0.01	c0.23	0.56		0.08	0.16	0.10	c0.17	c0.24	
v/s Ratio Perm			0.07						0.14			
v/c Ratio	1.53	1.56	0.15	1.56	1.10		1.52	0.94	0.68	1.52	1.05	
Uniform Delay, d1	47.5	29.5	15.7	42.5	24.5		47.5	41.0	29.5	44.5	38.5	
Progression Factor	1.05	0.61	0.27	0.86	0.46		1.00	1.00	1.00	0.68	0.40	
Incremental Delay, d2	242.9	252.9	0.0	263.5	51.7		267.7	28.5	3.8	242.8	40.9	
Delay (s)	292.7	271.0	4.3	300.0	63.0		315.2	69.5	33.3	272.9	56.3	
Level of Service	F	F	A	F	E		F	E	C	F	E	
Approach Delay (s)		257.6			105.0			111.1			143.1	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	164.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.47		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	124.5%	ICU Level of Service	H
Analysis Period (min)	15		

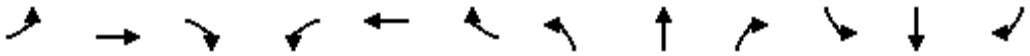
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1490	2951	1308	2863	2980	1308	1490	2951	1360	1520	2951	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1490	2951	1308	2863	2980	1308	1490	2951	1360	1520	2951	1360
Volume (vph)	265	1740	230	180	1215	115	215	565	65	130	505	125
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	279	1832	242	189	1279	121	226	595	68	137	532	132
RTOR Reduction (vph)	0	0	6	0	0	22	0	0	22	0	0	19
Lane Group Flow (vph)	279	1832	236	189	1279	99	226	595	46	137	532	113
Heavy Vehicles (%)	2%	3%	4%	3%	2%	4%	2%	3%	0%	0%	3%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	14.0	49.0	61.0	5.0	40.0	49.0	12.0	21.0	26.0	9.0	18.0	32.0
Effective Green, g (s)	14.0	49.0	61.0	5.0	40.0	49.0	12.0	21.0	26.0	9.0	18.0	32.0
Actuated g/C Ratio	0.14	0.49	0.61	0.05	0.40	0.49	0.12	0.21	0.26	0.09	0.18	0.32
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	209	1446	850	143	1192	693	179	620	408	137	531	490
v/s Ratio Prot	c0.19	c0.62	0.03	0.07	0.43	0.01	c0.15	c0.20	0.01	0.09	0.18	0.03
v/s Ratio Perm			0.15			0.06			0.03			0.05
v/c Ratio	1.33	1.27	0.28	1.32	1.07	0.14	1.26	0.96	0.11	1.00	1.00	0.23
Uniform Delay, d1	43.0	25.5	9.2	47.5	30.0	14.0	44.0	39.1	28.2	45.5	41.0	25.0
Progression Factor	0.86	0.59	0.27	1.00	1.00	1.00	1.00	1.00	1.00	0.72	0.56	0.39
Incremental Delay, d2	153.7	120.7	0.0	185.2	48.0	0.1	155.0	27.5	0.1	61.5	31.7	0.2
Delay (s)	190.8	135.6	2.5	232.7	78.0	14.1	199.0	66.6	28.3	94.2	54.6	9.8
Level of Service	F	F	A	F	E	B	F	E	C	F	D	A
Approach Delay (s)		128.4			91.6			97.3			54.0	
Approach LOS		F			F			F			D	

Intersection Summary			
HCM Average Control Delay	102.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	107.3%	ICU Level of Service	G
Analysis Period (min)	15		

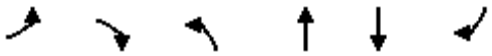
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	1.00		1.00	0.98			0.98			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.98	
Satd. Flow (prot)	1520	2916		1520	2867			1499			1483	
Flt Permitted	0.95	1.00		0.95	1.00			0.91			0.79	
Satd. Flow (perm)	1520	2916		1520	2867			1377			1192	
Volume (vph)	15	1150	25	20	955	150	30	90	15	95	65	45
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	16	1211	26	21	1005	158	32	95	16	100	68	47
RTOR Reduction (vph)	0	1	0	0	12	0	0	4	0	0	10	0
Lane Group Flow (vph)	16	1236	0	21	1151	0	0	139	0	0	205	0
Heavy Vehicles (%)	0%	4%	0%	0%	4%	3%	0%	6%	0%	5%	0%	0%
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	1.6	57.0		2.0	57.4			29.0			29.0	
Effective Green, g (s)	1.6	57.0		2.0	57.4			29.0			29.0	
Actuated g/C Ratio	0.02	0.57		0.02	0.57			0.29			0.29	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	24	1662		30	1646			399			346	
v/s Ratio Prot	0.01	c0.42		0.01	c0.40							
v/s Ratio Perm								0.10			c0.17	
v/c Ratio	0.67	0.74		0.70	0.70			0.35			0.59	
Uniform Delay, d1	48.9	16.0		48.7	15.2			28.0			30.4	
Progression Factor	1.00	1.00		0.74	0.33			1.00			1.00	
Incremental Delay, d2	52.8	3.1		41.0	1.8			2.4			7.3	
Delay (s)	101.7	19.1		77.2	6.9			30.4			37.7	
Level of Service	F	B		E	A			C			D	
Approach Delay (s)		20.2			8.1			30.4			37.7	
Approach LOS		C			A			C			D	

Intersection Summary			
HCM Average Control Delay	16.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1434	1283	1462	2895	2822	
Flt Permitted	0.95	1.00	0.37	1.00	1.00	
Satd. Flow (perm)	1434	1283	569	2895	2822	
Volume (vph)	85	90	120	750	625	70
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	95	126	789	658	74
RTOR Reduction (vph)	0	82	0	0	9	0
Lane Group Flow (vph)	89	13	126	789	723	0
Heavy Vehicles (%)	6%	6%	4%	5%	6%	7%
Turn Type		custom	Perm			
Protected Phases				2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	8.4	8.4	43.6	43.6	43.6	
Effective Green, g (s)	8.4	8.4	43.6	43.6	43.6	
Actuated g/C Ratio	0.14	0.14	0.73	0.73	0.73	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	201	180	413	2104	2051	
v/s Ratio Prot				c0.27	0.26	
v/s Ratio Perm	c0.06	0.01	0.22			
v/c Ratio	0.44	0.07	0.31	0.38	0.35	
Uniform Delay, d1	23.7	22.4	2.9	3.1	3.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.6	0.2	1.9	0.5	0.5	
Delay (s)	25.2	22.6	4.8	3.6	3.5	
Level of Service	C	C	A	A	A	
Approach Delay (s)	23.9			3.8	3.5	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	5.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1520	2980	1360	2891	2951	1360	1490	2868	1360	1520	2923	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1520	2980	1360	2891	2951	1360	1490	2868	1360	1520	2923	1360
Volume (vph)	90	1080	110	320	975	70	220	540	70	150	360	70
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	95	1137	116	337	1026	74	232	568	74	158	379	74
RTOR Reduction (vph)	0	0	20	0	0	37	0	0	34	0	0	49
Lane Group Flow (vph)	95	1137	96	337	1026	37	232	568	40	158	379	25
Heavy Vehicles (%)	0%	2%	0%	2%	3%	0%	2%	6%	0%	0%	4%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.1	39.0	55.0	12.0	38.9	49.9	16.0	22.0	34.0	11.0	17.0	29.1
Effective Green, g (s)	12.1	39.0	55.0	12.0	38.9	49.9	16.0	22.0	34.0	11.0	17.0	29.1
Actuated g/C Ratio	0.12	0.39	0.55	0.12	0.39	0.50	0.16	0.22	0.34	0.11	0.17	0.29
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	184	1162	802	347	1148	733	238	631	517	167	497	450
v/s Ratio Prot	0.06	c0.38	0.02	c0.12	0.35	0.01	c0.16	c0.20	0.01	0.10	0.13	0.01
v/s Ratio Perm			0.05			0.02			0.02			0.01
v/c Ratio	0.52	0.98	0.12	0.97	0.89	0.05	0.97	0.90	0.08	0.95	0.76	0.06
Uniform Delay, d1	41.2	30.1	10.8	43.8	28.6	12.9	41.8	37.9	22.4	44.2	39.6	25.5
Progression Factor	1.00	1.00	1.00	0.83	0.28	0.00	0.69	0.32	0.13	1.00	1.00	1.00
Incremental Delay, d2	2.4	21.1	0.1	8.9	1.0	0.0	29.2	8.1	0.0	53.4	10.6	0.1
Delay (s)	43.6	51.2	10.9	45.1	8.9	0.0	58.0	20.1	2.9	97.6	50.2	25.6
Level of Service	D	D	B	D	A	A	E	C	A	F	D	C
Approach Delay (s)		47.2			16.9			28.7			59.5	
Approach LOS		D			B			C			E	

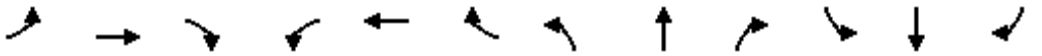
Intersection Summary			
HCM Average Control Delay	35.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	2980	1295	1520	2951	1333	2782	2901		2891	2948	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1520	2980	1295	1520	2951	1333	2782	2901		2891	2948	
Volume (vph)	170	820	185	95	975	230	175	920	185	215	735	125
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	179	863	195	100	1026	242	184	968	195	226	774	132
RTOR Reduction (vph)	0	0	51	0	0	27	0	17	0	0	14	0
Lane Group Flow (vph)	179	863	144	100	1026	215	184	1146	0	226	892	0
Heavy Vehicles (%)	0%	2%	5%	0%	3%	2%	6%	2%	3%	2%	1%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	10.0	31.6	38.6	8.4	30.0	37.0	7.0	37.0		7.0	37.0	
Effective Green, g (s)	10.0	31.6	38.6	8.4	30.0	37.0	7.0	37.0		7.0	37.0	
Actuated g/C Ratio	0.10	0.32	0.39	0.08	0.30	0.37	0.07	0.37		0.07	0.37	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	152	942	552	128	885	547	195	1073		202	1091	
v/s Ratio Prot	c0.12	0.29	0.02	0.07	c0.35	0.03	0.07	c0.40		c0.08	0.30	
v/s Ratio Perm			0.09			0.13						
v/c Ratio	1.18	0.92	0.26	0.78	1.16	0.39	0.94	1.07		1.12	0.82	
Uniform Delay, d1	45.0	32.9	21.0	44.9	35.0	23.2	46.3	31.5		46.5	28.5	
Progression Factor	0.88	0.47	0.11	1.03	0.66	0.39	0.82	0.52		0.73	0.28	
Incremental Delay, d2	102.2	5.6	0.1	2.9	73.0	0.0	9.2	32.8		83.4	3.9	
Delay (s)	141.6	21.0	2.4	49.2	96.1	9.1	47.2	49.2		117.4	11.9	
Level of Service	F	C	A	D	F	A	D	D		F	B	
Approach Delay (s)		35.5			77.3			48.9			32.9	
Approach LOS		D			E			D			C	

Intersection Summary			
HCM Average Control Delay	49.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		

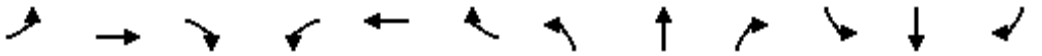
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2949	2951	1236	2949	2951	1333	2782	3010	1360	2949	3010	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2949	2951	1236	2949	2951	1333	2782	3010	1360	2949	3010	1360
Volume (vph)	115	1170	155	80	1555	285	160	855	100	190	450	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	121	1232	163	84	1637	300	168	900	105	200	474	63
RTOR Reduction (vph)	0	0	40	0	0	6	0	0	19	0	0	13
Lane Group Flow (vph)	121	1232	123	84	1637	294	168	900	86	200	474	50
Heavy Vehicles (%)	0%	3%	10%	0%	3%	2%	6%	1%	0%	0%	1%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	4.0	44.7	52.7	6.3	47.0	53.0	8.0	27.0	33.3	6.0	25.0	29.0
Effective Green, g (s)	4.0	44.7	52.7	6.3	47.0	53.0	8.0	27.0	33.3	6.0	25.0	29.0
Actuated g/C Ratio	0.04	0.45	0.53	0.06	0.47	0.53	0.08	0.27	0.33	0.06	0.25	0.29
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	118	1319	701	186	1387	760	223	813	453	177	753	394
v/s Ratio Prot	0.04	c0.42	0.01	0.03	c0.55	0.02	0.06	c0.30	0.01	c0.07	0.16	0.01
v/s Ratio Perm			0.09			0.20			0.05			0.03
v/c Ratio	1.03	0.93	0.18	0.45	1.18	0.39	0.75	1.11	0.19	1.13	0.63	0.13
Uniform Delay, d1	48.0	26.3	12.3	45.2	26.5	13.9	45.0	36.5	23.7	47.0	33.4	26.2
Progression Factor	1.18	0.47	0.08	0.78	0.56	0.46	0.65	0.55	0.41	0.65	0.50	0.35
Incremental Delay, d2	67.4	7.4	0.1	1.3	87.1	0.3	10.6	61.9	0.2	87.3	1.9	0.1
Delay (s)	124.0	19.7	1.1	36.5	102.1	6.7	39.7	82.0	9.9	117.8	18.7	9.2
Level of Service	F	B	A	D	F	A	D	F	A	F	B	A
Approach Delay (s)		26.1			85.2			69.5			44.8	
Approach LOS		C			F			E			D	

Intersection Summary			
HCM Average Control Delay	59.9	HCM Level of Service	E
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	102.8%	ICU Level of Service	G
Analysis Period (min)	15		

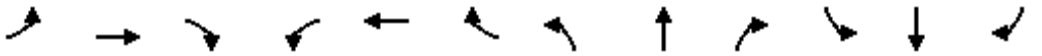
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2891	4115		1476	2980	1333	2835	2951	1308	2891	2980	1333
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2891	4115		1476	2980	1333	2835	2951	1308	2891	2980	1333
Volume (vph)	235	890	150	160	725	210	500	795	140	240	690	225
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	247	937	158	168	763	221	526	837	147	253	726	237
RTOR Reduction (vph)	0	23	0	0	0	22	0	0	11	0	0	20
Lane Group Flow (vph)	247	1072	0	168	763	199	526	837	136	253	726	217
Heavy Vehicles (%)	2%	4%	3%	3%	2%	2%	4%	3%	4%	2%	2%	2%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	10.6	26.7		12.3	28.4	39.4	19.0	34.0	46.3	11.0	26.0	36.6
Effective Green, g (s)	10.6	26.7		12.3	28.4	39.4	19.0	34.0	46.3	11.0	26.0	36.6
Actuated g/C Ratio	0.11	0.27		0.12	0.28	0.39	0.19	0.34	0.46	0.11	0.26	0.37
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	306	1099		182	846	579	539	1003	658	318	775	541
v/s Ratio Prot	0.09	c0.26		c0.11	0.26	0.04	c0.19	c0.28	0.03	0.09	c0.24	0.04
v/s Ratio Perm						0.11			0.08			0.12
v/c Ratio	0.81	0.98		0.92	0.90	0.34	0.98	0.83	0.21	0.80	0.94	0.40
Uniform Delay, d1	43.7	36.3		43.4	34.5	21.2	40.3	30.4	15.9	43.4	36.2	23.6
Progression Factor	1.09	0.71		0.79	0.39	0.11	0.96	0.73	0.60	0.93	0.68	0.53
Incremental Delay, d2	6.2	11.8		27.2	6.7	0.2	27.9	6.4	0.1	12.6	19.8	0.5
Delay (s)	54.0	37.4		61.3	20.1	2.6	66.7	28.8	9.6	52.8	44.4	12.9
Level of Service	D	D		E	C	A	E	C	A	D	D	B
Approach Delay (s)		40.4			22.8			40.1			40.0	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	36.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		

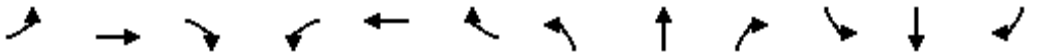
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1462	2951	1320	1448	2951	1360	1476	2980	1333	1520	2951	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1462	2951	1320	1448	2951	1360	1476	2980	1333	1520	2951	1360
Volume (vph)	265	820	180	195	740	175	200	635	265	185	525	160
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	279	863	189	205	779	184	211	668	279	195	553	168
RTOR Reduction (vph)	0	0	51	0	0	53	0	0	41	0	0	41
Lane Group Flow (vph)	279	863	138	205	779	131	211	668	238	195	553	127
Heavy Vehicles (%)	4%	3%	3%	5%	3%	0%	3%	2%	2%	0%	3%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	20.0	31.7	46.7	15.3	27.0	40.0	15.0	24.0	39.3	13.0	22.0	42.0
Effective Green, g (s)	20.0	31.7	46.7	15.3	27.0	40.0	15.0	24.0	39.3	13.0	22.0	42.0
Actuated g/C Ratio	0.20	0.32	0.47	0.15	0.27	0.40	0.15	0.24	0.39	0.13	0.22	0.42
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	292	935	669	222	797	598	221	715	577	198	649	626
v/s Ratio Prot	c0.19	c0.29	0.03	0.14	c0.26	0.03	c0.14	c0.22	0.06	0.13	0.19	0.04
v/s Ratio Perm			0.07			0.07			0.12			0.05
v/c Ratio	0.96	0.92	0.21	0.92	0.98	0.22	0.95	0.93	0.41	0.98	0.85	0.20
Uniform Delay, d1	39.6	33.0	15.7	41.8	36.2	19.7	42.2	37.2	22.0	43.4	37.4	18.4
Progression Factor	0.74	0.27	0.02	1.00	1.00	1.00	0.71	0.40	0.12	0.60	0.74	0.92
Incremental Delay, d2	25.8	7.9	0.1	39.6	26.1	0.2	32.2	13.0	0.3	35.9	5.8	0.1
Delay (s)	55.0	16.9	0.3	81.4	62.3	19.9	62.1	27.9	3.0	61.9	33.5	17.1
Level of Service	D	B	A	F	E	B	E	C	A	E	C	B
Approach Delay (s)		22.5			59.0			28.1			36.5	
Approach LOS		C			E			C			D	

Intersection Summary			
HCM Average Control Delay	36.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		

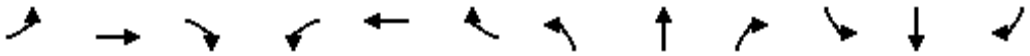
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		1.00	0.91		0.97	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.99		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)	2863	4248		1520	4240		2949	2917		1476	2923	1320
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	2863	4248		1520	4240		2949	2917		1476	2923	1320
Volume (vph)	345	990	65	70	725	60	160	740	80	145	510	365
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	363	1042	68	74	763	63	168	779	84	153	537	384
RTOR Reduction (vph)	0	7	0	0	9	0	0	8	0	0	0	27
Lane Group Flow (vph)	363	1103	0	74	817	0	168	855	0	153	537	357
Heavy Vehicles (%)	3%	2%	0%	0%	2%	0%	0%	3%	0%	3%	4%	3%
Turn Type	Prot			Prot			Prot			Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	14.7	30.8		5.6	21.7		11.0	35.2		12.4	36.6	51.3
Effective Green, g (s)	14.7	30.8		5.6	21.7		11.0	35.2		12.4	36.6	51.3
Actuated g/C Ratio	0.15	0.31		0.06	0.22		0.11	0.35		0.12	0.37	0.51
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	421	1308		85	920		324	1027		183	1070	677
v/s Ratio Prot	c0.13	c0.26		0.05	0.19		0.06	c0.29		c0.10	0.18	0.08
v/s Ratio Perm												0.19
v/c Ratio	0.86	0.84		0.87	0.89		0.52	0.83		0.84	0.50	0.53
Uniform Delay, d1	41.7	32.3		46.8	38.0		42.0	29.7		42.8	24.6	16.3
Progression Factor	1.00	1.00		1.47	0.52		1.00	1.00		0.82	0.32	0.67
Incremental Delay, d2	16.4	5.1		35.0	5.6		1.4	7.9		9.1	0.5	0.2
Delay (s)	58.1	37.5		103.6	25.3		43.4	37.6		44.4	8.4	11.2
Level of Service	E	D		F	C		D	D		D	A	B
Approach Delay (s)		42.6			31.7			38.5			14.5	
Approach LOS		D			C			D			B	

Intersection Summary			
HCM Average Control Delay	32.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		

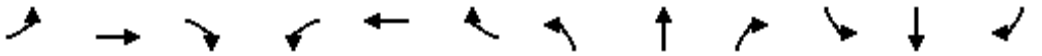
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.91	1.00	1.00	0.91	
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)	1476	2980	1320	2920	2980	1360	1476	4282	1347	1520	4253	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1476	2980	1320	2920	2980	1360	1476	4282	1347	1520	4253	
Volume (vph)	160	890	190	340	655	115	185	1360	460	120	900	50
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	168	937	200	358	689	121	195	1432	484	126	947	53
RTOR Reduction (vph)	0	0	7	0	0	55	0	0	24	0	6	0
Lane Group Flow (vph)	168	937	193	358	689	66	195	1432	460	126	994	0
Heavy Vehicles (%)	3%	2%	3%	1%	2%	0%	3%	2%	1%	0%	2%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	14.0	30.0	44.0	12.0	28.0	36.0	14.0	34.0	46.0	8.0	28.0	
Effective Green, g (s)	14.0	30.0	44.0	12.0	28.0	36.0	14.0	34.0	46.0	8.0	28.0	
Actuated g/C Ratio	0.14	0.30	0.44	0.12	0.28	0.36	0.14	0.34	0.46	0.08	0.28	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	207	894	634	350	834	490	207	1456	674	122	1191	
v/s Ratio Prot	0.11	c0.31	0.04	c0.12	0.23	0.01	c0.13	c0.33	0.08	0.08	0.23	
v/s Ratio Perm			0.10			0.04			0.26			
v/c Ratio	0.81	1.05	0.30	1.02	0.83	0.13	0.94	0.98	0.68	1.03	0.83	
Uniform Delay, d1	41.7	35.0	18.1	44.0	33.7	21.5	42.6	32.7	21.3	46.0	33.8	
Progression Factor	0.50	0.54	0.14	0.86	0.81	1.17	0.91	0.76	0.58	0.85	0.43	
Incremental Delay, d2	12.3	35.9	0.1	42.8	4.1	0.1	39.2	17.1	2.2	68.7	3.9	
Delay (s)	33.0	54.7	2.7	80.5	31.5	25.3	78.0	42.0	14.6	107.8	18.4	
Level of Service	C	D	A	F	C	C	E	D	B	F	B	
Approach Delay (s)		44.0			45.9			39.0			28.4	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	39.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.2%	ICU Level of Service	F
Analysis Period (min)	15		

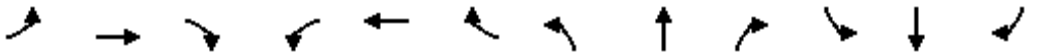
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.98		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1520	2940		1520	2946		2891	3010	1333	2863	3010	1320
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1520	2940		1520	2946		2891	3010	1333	2863	3010	1320
Volume (vph)	120	1090	125	110	870	85	210	455	240	195	525	185
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	126	1147	132	116	916	89	221	479	253	205	553	195
RTOR Reduction (vph)	0	9	0	0	8	0	0	0	24	0	0	34
Lane Group Flow (vph)	126	1270	0	116	997	0	221	479	229	205	553	161
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	2%	1%	2%	3%	1%	3%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases									2			6
Actuated Green, G (s)	13.4	45.0		9.0	40.6		8.0	22.0	31.0	8.0	22.0	35.4
Effective Green, g (s)	13.4	45.0		9.0	40.6		8.0	22.0	31.0	8.0	22.0	35.4
Actuated g/C Ratio	0.13	0.45		0.09	0.41		0.08	0.22	0.31	0.08	0.22	0.35
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	204	1323		137	1196		231	662	413	229	662	467
v/s Ratio Prot	0.08	c0.43		0.08	c0.34		c0.08	0.16	0.05	0.07	c0.18	0.05
v/s Ratio Perm									0.12			0.08
v/c Ratio	0.62	0.96		0.85	0.83		0.96	0.72	0.55	0.90	0.84	0.34
Uniform Delay, d1	40.9	26.6		44.8	26.7		45.8	36.2	28.7	45.6	37.3	23.8
Progression Factor	0.66	0.48		1.27	0.27		0.95	1.17	2.08	0.81	0.76	0.50
Incremental Delay, d2	1.9	7.5		4.6	0.5		24.4	2.4	0.6	4.5	1.2	0.0
Delay (s)	29.0	20.2		61.3	7.8		67.9	44.6	60.4	41.3	29.5	11.8
Level of Service	C	C		E	A		E	D	E	D	C	B
Approach Delay (s)		21.0			13.3			54.2			28.4	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	27.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		

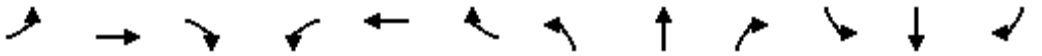
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		0.97	0.95	1.00
Frt	1.00	1.00		1.00	0.98		1.00	0.96		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)	1490	4279		1520	4177		1520	2878		2891	2980	1333
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1490	4279		1520	4177		1520	2878		2891	2980	1333
Volume (vph)	260	1515	10	125	1350	265	30	535	190	270	430	270
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	274	1595	11	132	1421	279	32	563	200	284	453	284
RTOR Reduction (vph)	0	1	0	0	29	0	0	37	0	0	0	46
Lane Group Flow (vph)	274	1605	0	132	1671	0	32	726	0	284	453	238
Heavy Vehicles (%)	2%	2%	0%	0%	2%	2%	0%	2%	0%	2%	2%	2%
Turn Type	Prot			Prot			Prot			Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	16.0	41.1		9.9	35.0		3.6	23.4		9.6	29.4	45.4
Effective Green, g (s)	16.0	41.1		9.9	35.0		3.6	23.4		9.6	29.4	45.4
Actuated g/C Ratio	0.16	0.41		0.10	0.35		0.04	0.23		0.10	0.29	0.45
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	238	1759		150	1462		55	673		278	876	605
v/s Ratio Prot	c0.18	c0.38		0.09	c0.40		0.02	c0.25		c0.10	0.15	0.06
v/s Ratio Perm												0.12
v/c Ratio	1.15	0.91		0.88	1.14		0.58	1.08		1.02	0.52	0.39
Uniform Delay, d1	42.0	27.8		44.5	32.5		47.5	38.3		45.2	29.4	18.1
Progression Factor	0.91	0.74		0.79	0.44		0.78	0.63		0.74	0.62	0.59
Incremental Delay, d2	94.1	5.1		29.0	69.9		9.6	51.7		56.8	2.0	0.4
Delay (s)	132.2	25.6		64.0	84.2		46.5	75.8		90.4	20.1	11.1
Level of Service	F	C		E	F		D	E		F	C	B
Approach Delay (s)		41.1			82.7			74.6			37.1	
Approach LOS		D			F			E			D	

Intersection Summary			
HCM Average Control Delay	59.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.3%	ICU Level of Service	G
Analysis Period (min)	15		

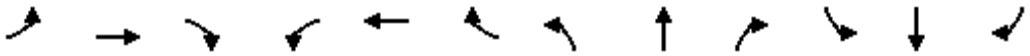
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.98		1.00	0.98		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)	2920	4208		2891	4213		2891	2980	1360	2949	2980	1360
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2920	4208		2891	4213		2891	2980	1360	2949	2980	1360
Volume (vph)	435	1300	200	230	980	140	315	930	115	265	675	190
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	458	1368	211	242	1032	147	332	979	121	279	711	200
RTOR Reduction (vph)	0	21	0	0	19	0	0	0	4	0	0	7
Lane Group Flow (vph)	458	1558	0	242	1160	0	332	979	117	279	711	193
Heavy Vehicles (%)	1%	2%	0%	2%	2%	0%	2%	2%	0%	0%	2%	0%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases									2			6
Actuated Green, G (s)	15.0	35.0		8.0	28.0		12.0	32.0	40.0	9.0	29.0	44.0
Effective Green, g (s)	15.0	35.0		8.0	28.0		12.0	32.0	40.0	9.0	29.0	44.0
Actuated g/C Ratio	0.15	0.35		0.08	0.28		0.12	0.32	0.40	0.09	0.29	0.44
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	438	1473		231	1180		347	954	544	265	864	653
v/s Ratio Prot	c0.16	c0.37		0.08	0.28		0.11	c0.33	0.02	c0.09	0.24	0.04
v/s Ratio Perm									0.07			0.10
v/c Ratio	1.05	1.06		1.05	0.98		0.96	1.03	0.21	1.05	0.82	0.30
Uniform Delay, d1	42.5	32.5		46.0	35.8		43.7	34.0	19.7	45.5	33.1	18.0
Progression Factor	0.68	0.39		1.00	1.00		0.67	0.57	0.49	0.67	0.79	0.46
Incremental Delay, d2	36.3	31.5		72.3	22.1		30.6	32.1	0.1	50.9	4.0	0.1
Delay (s)	65.0	44.1		118.3	57.8		60.0	51.5	9.8	81.5	30.2	8.4
Level of Service	E	D		F	E		E	D	A	F	C	A
Approach Delay (s)		48.8			68.1			50.0			38.6	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM Average Control Delay	51.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.7%	ICU Level of Service	F
Analysis Period (min)	15		

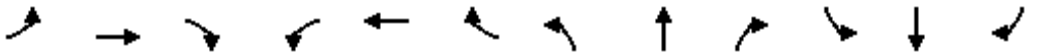
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	2980	1360	1520	2980	1360	1520	2909		1520	2909	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1520	2980	1360	1520	2980	1360	1520	2909		1520	2909	
Volume (vph)	125	955	145	80	1065	105	130	750	100	70	780	105
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	132	1005	153	84	1121	111	137	789	105	74	821	111
RTOR Reduction (vph)	0	0	30	0	0	41	0	10	0	0	10	0
Lane Group Flow (vph)	132	1005	123	84	1121	70	137	884	0	74	922	0
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	3%	0%	0%	3%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	8.0	37.0	46.0	6.0	35.0	40.0	9.0	36.0		5.0	32.0	
Effective Green, g (s)	8.0	37.0	46.0	6.0	35.0	40.0	9.0	36.0		5.0	32.0	
Actuated g/C Ratio	0.08	0.37	0.46	0.06	0.35	0.40	0.09	0.36		0.05	0.32	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	122	1103	626	91	1043	544	137	1047		76	931	
v/s Ratio Prot	c0.09	0.34	0.02	0.06	c0.38	0.01	c0.09	0.30		0.05	c0.32	
v/s Ratio Perm			0.07			0.04						
v/c Ratio	1.08	0.91	0.20	0.92	1.07	0.13	1.00	0.84		0.97	0.99	
Uniform Delay, d1	46.0	29.9	16.0	46.8	32.5	19.0	45.5	29.4		47.4	33.8	
Progression Factor	1.40	0.29	0.08	0.94	0.86	0.63	1.05	0.85		0.89	0.73	
Incremental Delay, d2	82.3	6.4	0.1	31.0	39.6	0.0	48.1	3.5		77.7	22.5	
Delay (s)	146.8	15.0	1.3	74.9	67.4	12.0	96.0	28.5		120.0	47.1	
Level of Service	F	B	A	E	E	B	F	C		F	D	
Approach Delay (s)		26.9			63.2			37.4			52.5	
Approach LOS		C			E			D			D	

Intersection Summary			
HCM Average Control Delay	45.1	HCM Level of Service	D
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.6%	ICU Level of Service	F
Analysis Period (min)	15		

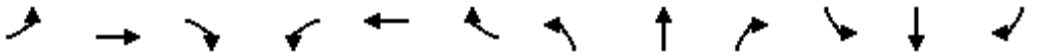
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1520	2951	1360	1520	2980	1360	2949	3010	1360	2949	3010	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1520	2951	1360	1520	2980	1360	2949	3010	1360	2949	3010	1360
Volume (vph)	50	1320	105	115	1560	80	75	590	70	130	380	70
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	1389	111	121	1642	84	79	621	74	137	400	74
RTOR Reduction (vph)	0	0	53	0	0	22	0	0	16	0	0	16
Lane Group Flow (vph)	53	1389	58	121	1642	62	79	621	58	137	400	58
Heavy Vehicles (%)	0%	3%	0%	0%	2%	0%	0%	1%	0%	0%	1%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	4.0	48.4	52.4	9.6	54.0	59.0	4.0	21.0	30.6	5.0	22.0	26.0
Effective Green, g (s)	4.0	48.4	52.4	9.6	54.0	59.0	4.0	21.0	30.6	5.0	22.0	26.0
Actuated g/C Ratio	0.04	0.48	0.52	0.10	0.54	0.59	0.04	0.21	0.31	0.05	0.22	0.26
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	61	1428	767	146	1609	802	118	632	416	147	662	408
v/s Ratio Prot	0.03	0.47	0.00	c0.08	c0.55	0.00	0.03	c0.21	0.01	c0.05	0.13	0.01
v/s Ratio Perm			0.04			0.04			0.03			0.04
v/c Ratio	0.87	0.97	0.08	0.83	1.02	0.08	0.67	0.98	0.14	0.93	0.60	0.14
Uniform Delay, d1	47.7	25.2	11.8	44.4	23.0	8.8	47.3	39.3	25.2	47.3	35.1	28.4
Progression Factor	0.90	0.54	0.05	0.81	0.37	0.07	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	55.5	14.1	0.0	3.7	12.8	0.0	13.5	31.8	0.2	53.9	4.1	0.2
Delay (s)	98.6	27.6	0.6	39.7	21.4	0.6	60.8	71.1	25.3	101.3	39.1	28.6
Level of Service	F	C	A	D	C	A	E	E	C	F	D	C
Approach Delay (s)		28.1			21.6			65.7			51.8	
Approach LOS		C			C			E			D	

Intersection Summary			
HCM Average Control Delay	34.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		

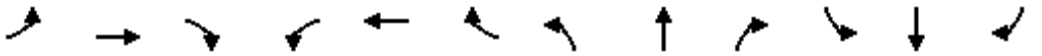
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2891	4282	1308	2949	3010	1360	2835	2980	1360	2891	2980	1347
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2891	4282	1308	2949	3010	1360	2835	2980	1360	2891	2980	1347
Volume (vph)	320	1305	335	60	1635	140	570	460	45	605	1285	505
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	337	1374	353	63	1721	147	600	484	47	637	1353	532
RTOR Reduction (vph)	0	0	10	0	0	15	0	0	10	0	0	1
Lane Group Flow (vph)	337	1374	343	63	1721	132	600	484	37	637	1353	531
Heavy Vehicles (%)	2%	2%	4%	0%	1%	0%	4%	2%	0%	2%	2%	1%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.0	38.6	50.6	3.2	34.8	57.8	12.0	19.2	22.4	23.0	30.2	37.2
Effective Green, g (s)	7.0	38.6	50.6	3.2	34.8	57.8	12.0	19.2	22.4	23.0	30.2	37.2
Actuated g/C Ratio	0.07	0.39	0.51	0.03	0.35	0.58	0.12	0.19	0.22	0.23	0.30	0.37
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	202	1653	714	94	1047	840	340	572	359	665	900	555
v/s Ratio Prot	c0.12	c0.32	0.06	0.02	c0.57	0.04	c0.21	0.16	0.00	0.22	c0.45	0.07
v/s Ratio Perm			0.20			0.06			0.02			0.33
v/c Ratio	1.67	0.83	0.48	0.67	1.64	0.16	1.76	0.85	0.10	0.96	1.50	0.96
Uniform Delay, d1	46.5	27.8	16.1	47.9	32.6	9.8	44.0	39.0	30.8	38.0	34.9	30.6
Progression Factor	0.85	0.84	1.22	0.83	1.16	1.73	1.24	0.72	0.42	1.01	0.76	0.81
Incremental Delay, d2	315.1	2.5	0.3	11.0	292.4	0.1	354.9	13.3	0.1	23.6	232.0	26.4
Delay (s)	354.4	25.7	20.1	50.5	330.3	17.0	409.6	41.4	13.0	62.0	258.3	51.2
Level of Service	F	C	C	D	F	B	F	D	B	E	F	D
Approach Delay (s)		78.4			297.3			235.5			165.0	
Approach LOS		E			F			F			F	

Intersection Summary			
HCM Average Control Delay	185.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	139.3%	ICU Level of Service	H
Analysis Period (min)	15		

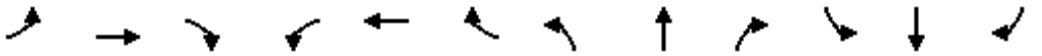
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.94	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	4244	4241	1333	2681	4160	1360	2920	2895	1214	2808	2951	1347
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	4244	4241	1333	2681	4160	1360	2920	2895	1214	2808	2951	1347
Volume (vph)	590	1225	275	50	1005	130	395	545	85	200	430	365
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	621	1289	289	53	1058	137	416	574	89	211	453	384
RTOR Reduction (vph)	0	0	40	0	0	21	0	0	20	0	0	14
Lane Group Flow (vph)	621	1289	249	53	1058	116	416	574	69	211	453	370
Heavy Vehicles (%)	1%	3%	2%	10%	5%	0%	1%	5%	12%	5%	3%	1%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	16.8	44.0	60.5	4.0	31.2	41.2	16.5	26.0	30.0	10.0	19.5	36.3
Effective Green, g (s)	16.8	44.0	60.5	4.0	31.2	41.2	16.5	26.0	30.0	10.0	19.5	36.3
Actuated g/C Ratio	0.17	0.44	0.60	0.04	0.31	0.41	0.16	0.26	0.30	0.10	0.20	0.36
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	713	1866	806	107	1298	560	482	753	413	281	575	543
v/s Ratio Prot	c0.15	0.30	0.05	0.02	c0.25	0.02	c0.14	c0.20	0.01	0.08	c0.15	0.11
v/s Ratio Perm			0.14			0.06			0.05			0.16
v/c Ratio	0.87	0.69	0.31	0.50	0.82	0.21	0.86	0.76	0.17	0.75	0.79	0.68
Uniform Delay, d1	40.5	22.5	9.6	47.0	31.7	18.9	40.7	34.1	25.8	43.8	38.3	27.0
Progression Factor	0.82	0.56	1.44	0.70	0.59	0.32	0.64	0.83	0.64	0.72	0.69	0.90
Incremental Delay, d2	6.9	1.2	0.1	1.4	2.3	0.1	1.6	0.7	0.0	8.3	8.1	2.7
Delay (s)	40.3	13.8	13.9	34.3	21.0	6.1	27.6	29.1	16.5	40.0	34.6	26.9
Level of Service	D	B	B	C	C	A	C	C	B	D	C	C
Approach Delay (s)		21.3			19.9			27.5			32.9	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		

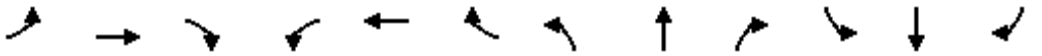
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.97		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2835	4133		2949	4167		2920	2980	1360	2863	2980	1295
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2835	4133		2949	4167		2920	2980	1360	2863	2980	1295
Volume (vph)	380	950	250	180	980	215	350	785	105	180	745	200
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	400	1000	263	189	1032	226	368	826	111	189	784	211
RTOR Reduction (vph)	0	47	0	0	35	0	0	0	12	0	0	7
Lane Group Flow (vph)	400	1216	0	189	1223	0	368	826	99	189	784	204
Heavy Vehicles (%)	4%	3%	0%	0%	2%	2%	1%	2%	0%	3%	2%	5%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases									2			6
Actuated Green, G (s)	14.0	34.1		8.9	29.0		13.0	34.0	42.9	7.0	28.0	42.0
Effective Green, g (s)	14.0	34.1		8.9	29.0		13.0	34.0	42.9	7.0	28.0	42.0
Actuated g/C Ratio	0.14	0.34		0.09	0.29		0.13	0.34	0.43	0.07	0.28	0.42
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	397	1409		262	1208		380	1013	638	200	834	544
v/s Ratio Prot	0.14	c0.29		0.06	c0.29		c0.13	0.28	0.01	0.07	c0.26	0.05
v/s Ratio Perm									0.06			0.11
v/c Ratio	1.01	0.86		0.72	1.01		0.97	0.82	0.16	0.94	0.94	0.38
Uniform Delay, d1	43.0	30.8		44.3	35.5		43.3	30.1	17.5	46.3	35.2	20.0
Progression Factor	0.60	0.42		1.00	1.00		0.96	0.93	1.64	1.00	1.00	1.00
Incremental Delay, d2	41.6	4.5		9.4	29.0		7.9	0.7	0.0	47.7	19.6	0.4
Delay (s)	67.4	17.4		53.7	64.5		49.5	28.9	28.7	94.0	54.8	20.4
Level of Service	E	B		D	E		D	C	C	F	D	C
Approach Delay (s)		29.4			63.1			34.7			54.9	
Approach LOS		C			E			C			D	

Intersection Summary			
HCM Average Control Delay	44.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.7%	ICU Level of Service	E
Analysis Period (min)	15		

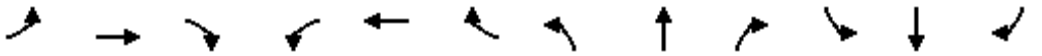
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1520	2951	1320	2891	2951	1360	1476	2951	1320	1520	2980	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1520	2951	1320	2891	2951	1360	1476	2951	1320	1520	2980	1360
Volume (vph)	55	1145	175	265	1070	50	175	775	325	110	805	75
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	1205	184	279	1126	53	184	816	342	116	847	79
RTOR Reduction (vph)	0	0	7	0	0	23	0	0	26	0	0	40
Lane Group Flow (vph)	58	1205	177	279	1126	31	184	816	316	116	847	39
Heavy Vehicles (%)	0%	3%	3%	2%	3%	0%	3%	3%	3%	0%	2%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	4.0	37.0	49.0	9.0	42.0	50.0	12.0	30.0	39.0	8.0	26.0	30.0
Effective Green, g (s)	4.0	37.0	49.0	9.0	42.0	50.0	12.0	30.0	39.0	8.0	26.0	30.0
Actuated g/C Ratio	0.04	0.37	0.49	0.09	0.42	0.50	0.12	0.30	0.39	0.08	0.26	0.30
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	61	1092	700	260	1239	734	177	885	515	122	775	408
v/s Ratio Prot	0.04	c0.41	0.03	c0.10	0.38	0.00	c0.12	0.28	0.06	0.08	c0.28	0.00
v/s Ratio Perm			0.10			0.02			0.18			0.02
v/c Ratio	0.95	1.10	0.25	1.07	0.91	0.04	1.04	0.92	0.61	0.95	1.09	0.10
Uniform Delay, d1	47.9	31.5	14.8	45.5	27.2	12.8	44.0	33.9	24.5	45.8	37.0	25.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.87	0.54	0.73	0.62	0.53	0.18
Incremental Delay, d2	97.3	60.2	0.2	76.6	11.3	0.0	64.8	11.6	1.4	50.1	54.8	0.1
Delay (s)	145.2	91.7	15.0	122.1	38.5	12.8	103.2	29.9	19.4	78.4	74.5	4.7
Level of Service	F	F	B	F	D	B	F	C	B	E	E	A
Approach Delay (s)		84.1			53.6			37.3			69.6	
Approach LOS		F			D			D			E	

Intersection Summary			
HCM Average Control Delay	61.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	97.8%	ICU Level of Service	F
Analysis Period (min)	15		

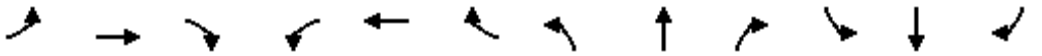
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1476	2923	1360	1520	2980	1360	2949	2951	1360	2891	2980	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1476	2923	1360	1520	2980	1360	2949	2951	1360	2891	2980	1360
Volume (vph)	155	1075	125	180	1115	190	150	495	130	220	760	85
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	163	1132	132	189	1174	200	158	521	137	232	800	89
RTOR Reduction (vph)	0	0	34	0	0	46	0	0	15	0	0	12
Lane Group Flow (vph)	163	1132	98	189	1174	154	158	521	122	232	800	77
Heavy Vehicles (%)	3%	4%	0%	0%	2%	0%	0%	3%	0%	2%	2%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	11.0	38.0	44.0	12.0	39.0	49.0	6.0	24.0	36.0	10.0	28.0	39.0
Effective Green, g (s)	11.0	38.0	44.0	12.0	39.0	49.0	6.0	24.0	36.0	10.0	28.0	39.0
Actuated g/C Ratio	0.11	0.38	0.44	0.12	0.39	0.49	0.06	0.24	0.36	0.10	0.28	0.39
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	162	1111	598	182	1162	721	177	708	490	289	834	585
v/s Ratio Prot	0.11	c0.39	0.01	0.12	c0.39	0.02	0.05	0.18	0.03	c0.08	c0.27	0.01
v/s Ratio Perm			0.06			0.09			0.06			0.04
v/c Ratio	1.01	1.02	0.16	1.04	1.01	0.21	0.89	0.74	0.25	0.80	0.96	0.13
Uniform Delay, d1	44.5	31.0	16.9	44.0	30.5	14.5	46.7	35.1	22.5	44.0	35.4	19.6
Progression Factor	0.71	1.09	2.15	0.91	0.88	1.13	0.98	0.53	0.44	0.73	0.77	0.72
Incremental Delay, d2	60.2	27.2	0.1	61.7	22.9	0.1	5.6	0.6	0.0	8.3	14.7	0.1
Delay (s)	91.7	60.9	36.5	101.9	49.8	16.4	51.1	19.1	9.9	40.3	42.1	14.1
Level of Service	F	E	D	F	D	B	D	B	A	D	D	B
Approach Delay (s)		62.2			51.8			23.8			39.5	
Approach LOS		E			D			C			D	

Intersection Summary			
HCM Average Control Delay	47.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.5%	ICU Level of Service	E
Analysis Period (min)	15		

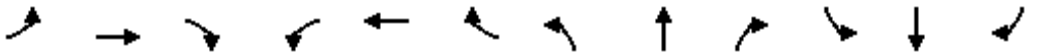
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91		0.97	0.95		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	2891	4241	1320	1520	4152		2891	2814		2891	4282	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	2891	4241	1320	1520	4152		2891	2814		2891	4282	1360
Volume (vph)	270	1160	400	125	1000	115	220	425	105	260	650	375
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	1221	421	132	1053	121	232	447	111	274	684	395
RTOR Reduction (vph)	0	0	257	0	18	0	0	27	0	0	0	219
Lane Group Flow (vph)	284	1221	165	132	1156	0	232	531	0	274	684	176
Heavy Vehicles (%)	2%	3%	3%	0%	4%	0%	2%	6%	0%	2%	2%	0%
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	9.9	26.0	26.0	10.0	26.1		8.9	18.0		10.0	19.1	19.1
Effective Green, g (s)	9.9	26.0	26.0	10.0	26.1		8.9	18.0		10.0	19.1	19.1
Actuated g/C Ratio	0.12	0.32	0.32	0.12	0.33		0.11	0.22		0.12	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	358	1378	429	190	1355		322	633		361	1022	325
v/s Ratio Prot	0.10	c0.29		0.09	c0.28		0.08	c0.19		0.09	c0.16	
v/s Ratio Perm			0.12									0.13
v/c Ratio	0.79	0.89	0.38	0.69	0.85		0.72	0.84		0.76	0.67	0.54
Uniform Delay, d1	34.1	25.6	20.8	33.5	25.2		34.3	29.6		33.8	27.6	26.6
Progression Factor	1.01	0.74	0.54	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.9	5.3	1.5	10.5	7.0		7.7	12.6		8.9	3.5	6.3
Delay (s)	41.2	24.3	12.8	44.0	32.2		42.1	42.2		42.7	31.1	32.9
Level of Service	D	C	B	D	C		D	D		D	C	C
Approach Delay (s)		24.3			33.4			42.2			34.0	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	31.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

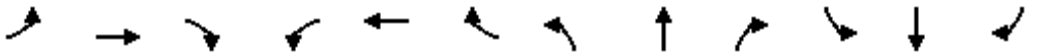
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.98		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)	1520	4213		1434	4230		1462	2789	1271	1490	2923	1360
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1520	4213		1434	4230		1462	2789	1271	1490	2923	1360
Volume (vph)	55	1110	65	90	1075	160	130	580	75	205	655	45
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	1168	68	95	1132	168	137	611	79	216	689	47
RTOR Reduction (vph)	0	6	0	0	19	0	0	0	50	0	0	31
Lane Group Flow (vph)	58	1230	0	95	1281	0	137	611	29	216	689	16
Heavy Vehicles (%)	0%	3%	0%	6%	1%	3%	4%	9%	7%	2%	4%	0%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases									2			6
Actuated Green, G (s)	4.8	31.3		9.6	36.1		13.0	26.9	36.5	16.2	30.1	34.9
Effective Green, g (s)	4.8	31.3		9.6	36.1		13.0	26.9	36.5	16.2	30.1	34.9
Actuated g/C Ratio	0.05	0.31		0.10	0.36		0.13	0.27	0.36	0.16	0.30	0.35
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	73	1319		138	1527		190	750	464	241	880	475
v/s Ratio Prot	0.04	c0.29		0.07	c0.30		0.09	c0.22	0.01	c0.14	c0.24	0.00
v/s Ratio Perm									0.02			0.01
v/c Ratio	0.79	0.93		0.69	0.84		0.72	0.81	0.06	0.90	0.78	0.03
Uniform Delay, d1	47.1	33.3		43.8	29.3		41.8	34.2	20.6	41.1	32.0	21.4
Progression Factor	0.86	0.69		1.00	1.00		1.00	1.00	1.00	0.94	0.42	0.24
Incremental Delay, d2	25.6	7.0		13.4	4.2		12.6	9.5	0.1	4.4	0.7	0.0
Delay (s)	66.1	30.0		57.1	33.5		54.4	43.7	20.7	43.1	14.0	5.1
Level of Service	E	C		E	C		D	D	C	D	B	A
Approach Delay (s)		31.7			35.1			43.3			20.2	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	32.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		

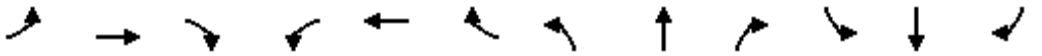
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.99		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)	1520	2905		1520	2927		1520	2922		1448	2980	1295
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1520	2905		1520	2927		1520	2922		1448	2980	1295
Volume (vph)	75	1225	70	100	1290	95	65	495	45	95	485	105
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	1289	74	105	1358	100	68	521	47	100	511	111
RTOR Reduction (vph)	0	4	0	0	5	0	0	6	0	0	0	47
Lane Group Flow (vph)	79	1359	0	105	1453	0	68	562	0	100	511	64
Heavy Vehicles (%)	0%	4%	0%	0%	3%	0%	0%	3%	0%	5%	2%	5%
Turn Type	Prot			Prot			Prot			Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	6.0	49.2		7.0	50.2		5.6	20.0		7.8	22.2	28.2
Effective Green, g (s)	6.0	49.2		7.0	50.2		5.6	20.0		7.8	22.2	28.2
Actuated g/C Ratio	0.06	0.49		0.07	0.50		0.06	0.20		0.08	0.22	0.28
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	91	1429		106	1469		85	584		113	662	365
v/s Ratio Prot	0.05	c0.47		0.07	c0.50		0.04	c0.19		c0.07	0.17	0.01
v/s Ratio Perm												0.04
v/c Ratio	0.87	0.95		0.99	0.99		0.80	0.96		0.88	0.77	0.17
Uniform Delay, d1	46.6	24.2		46.5	24.6		46.6	39.6		45.7	36.5	27.1
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.30		1.00	1.00	1.00
Incremental Delay, d2	53.3	14.7		84.2	21.0		30.7	23.4		50.2	8.5	0.2
Delay (s)	99.9	38.9		130.7	45.6		59.7	35.2		95.9	45.0	27.3
Level of Service	F	D		F	D		E	D		F	D	C
Approach Delay (s)		42.3			51.3			37.8			49.3	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	46.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.4%	ICU Level of Service	E
Analysis Period (min)	15		

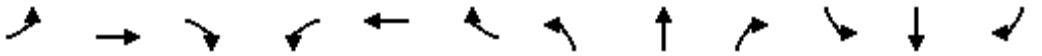
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1448	2951	1360	1520	2980	1360	1520	2923	1360	1520	2980	1295
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1448	2951	1360	1520	2980	1360	1520	2923	1360	1520	2980	1295
Volume (vph)	195	1075	90	130	1235	85	50	275	155	150	745	205
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	205	1132	95	137	1300	89	53	289	163	158	784	216
RTOR Reduction (vph)	0	0	36	0	0	43	0	0	44	0	0	18
Lane Group Flow (vph)	205	1132	59	137	1300	46	53	289	119	158	784	198
Heavy Vehicles (%)	5%	3%	0%	0%	2%	0%	0%	4%	0%	0%	2%	5%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	13.0	43.3	47.3	10.7	41.0	52.0	4.0	19.0	29.7	11.0	26.0	39.0
Effective Green, g (s)	13.0	43.3	47.3	10.7	41.0	52.0	4.0	19.0	29.7	11.0	26.0	39.0
Actuated g/C Ratio	0.13	0.43	0.47	0.11	0.41	0.52	0.04	0.19	0.30	0.11	0.26	0.39
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	188	1278	643	163	1222	762	61	555	458	167	775	505
v/s Ratio Prot	c0.14	0.38	0.00	0.09	c0.44	0.01	c0.03	0.10	0.03	0.10	c0.26	0.05
v/s Ratio Perm			0.04			0.03			0.06			0.10
v/c Ratio	1.09	0.89	0.09	0.84	1.06	0.06	0.87	0.52	0.26	0.95	1.01	0.39
Uniform Delay, d1	43.5	26.1	14.5	43.8	29.5	11.9	47.7	36.4	26.8	44.2	37.0	22.0
Progression Factor	0.76	0.22	0.02	0.77	0.59	0.60	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	80.8	5.5	0.0	23.5	41.1	0.0	69.6	3.5	0.3	53.4	35.2	0.5
Delay (s)	113.9	11.3	0.3	57.1	58.3	7.2	117.3	39.9	27.1	97.6	72.2	22.5
Level of Service	F	B	A	E	E	A	F	D	C	F	E	C
Approach Delay (s)		25.3			55.3			43.9			66.4	
Approach LOS		C			E			D			E	

Intersection Summary			
HCM Average Control Delay	47.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.5%	ICU Level of Service	F
Analysis Period (min)	15		

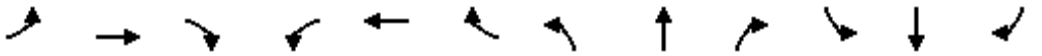
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1476	2980	1347	1520	2980	1360	1490	2923	1360	1520	2980	1333
Flt Permitted	0.32	1.00	1.00	0.48	1.00	1.00	0.20	1.00	1.00	0.49	1.00	1.00
Satd. Flow (perm)	493	2980	1347	769	2980	1360	314	2923	1360	779	2980	1333
Volume (vph)	515	245	415	55	660	20	290	280	110	230	725	240
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	542	258	437	58	695	21	305	295	116	242	763	253
RTOR Reduction (vph)	0	0	133	0	0	13	0	0	53	0	0	20
Lane Group Flow (vph)	542	258	304	58	695	8	305	295	63	242	763	233
Heavy Vehicles (%)	3%	2%	1%	0%	2%	0%	2%	4%	0%	0%	2%	2%
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	38.6	12.6	24.6	51.0	21.0	38.0	32.0	20.0	54.4	41.0	25.0	51.0
Effective Green, g (s)	38.6	12.6	24.6	51.0	21.0	38.0	32.0	20.0	54.4	41.0	25.0	51.0
Actuated g/C Ratio	0.39	0.13	0.25	0.51	0.21	0.38	0.32	0.20	0.54	0.41	0.25	0.51
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	446	375	385	651	626	571	242	585	794	445	745	733
v/s Ratio Prot	c0.32	0.09	0.09	0.03	c0.23	0.00	c0.15	0.10	0.03	0.09	c0.26	0.08
v/s Ratio Perm	0.15		0.13	0.01		0.00	c0.25		0.02	0.13		0.09
v/c Ratio	1.22	0.69	0.79	0.09	1.11	0.01	1.26	0.50	0.08	0.54	1.02	0.32
Uniform Delay, d1	35.2	41.8	35.3	14.5	39.5	19.3	41.4	35.6	10.9	26.1	37.5	14.3
Progression Factor	1.13	0.65	0.34	0.45	0.60	0.40	1.10	0.64	0.02	1.00	1.00	1.00
Incremental Delay, d2	107.7	2.8	5.9	0.1	68.8	0.0	139.2	2.3	0.0	1.4	39.2	0.3
Delay (s)	147.5	29.8	17.9	6.5	92.5	7.7	184.5	24.9	0.2	27.5	76.7	14.6
Level of Service	F	C	B	A	F	A	F	C	A	C	E	B
Approach Delay (s)		77.2			83.8			88.9			54.8	
Approach LOS		E			F			F			D	

Intersection Summary			
HCM Average Control Delay	73.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	111.8%	ICU Level of Service	H
Analysis Period (min)	15		

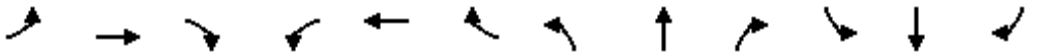
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.95	1.00	0.97	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)	1490	4020		1520	4188		2863	2951	1204	2863	2980	1320
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1490	4020		1520	4188		2863	2951	1204	2863	2980	1320
Volume (vph)	285	1405	595	70	835	50	565	760	75	175	660	165
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	300	1479	626	74	879	53	595	800	79	184	695	174
RTOR Reduction (vph)	0	69	0	0	6	0	0	0	55	0	0	138
Lane Group Flow (vph)	300	2036	0	74	926	0	595	800	24	184	695	36
Heavy Vehicles (%)	2%	5%	1%	0%	3%	10%	3%	3%	13%	3%	2%	3%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	23.0	48.0		4.0	29.0		19.0	34.0	34.0	8.0	23.0	23.0
Effective Green, g (s)	23.0	48.0		4.0	29.0		19.0	34.0	34.0	8.0	23.0	23.0
Actuated g/C Ratio	0.21	0.44		0.04	0.26		0.17	0.31	0.31	0.07	0.21	0.21
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	312	1754		55	1104		495	912	372	208	623	276
v/s Ratio Prot	0.20	c0.51		0.05	c0.22		c0.21	0.27		0.06	c0.23	
v/s Ratio Perm									0.02			0.03
v/c Ratio	0.96	1.16		1.35	0.84		1.20	0.88	0.07	0.88	1.12	0.13
Uniform Delay, d1	43.1	31.0		53.0	38.3		45.5	36.0	26.8	50.5	43.5	35.4
Progression Factor	0.98	0.37		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	35.6	77.8		238.5	7.7		109.0	11.6	0.3	32.8	72.1	1.0
Delay (s)	77.9	89.4		291.5	46.0		154.5	47.7	27.1	83.4	115.6	36.4
Level of Service	E	F		F	D		F	D	C	F	F	D
Approach Delay (s)		87.9			64.0			89.7			96.9	
Approach LOS		F			E			F			F	

Intersection Summary			
HCM Average Control Delay	85.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.8%	ICU Level of Service	G
Analysis Period (min)	15		

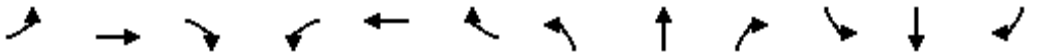
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1476	2895	1360	1490	2895	1333	1520	2951	1360	1462	2980	1308
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1476	2895	1360	1490	2895	1333	1520	2951	1360	1462	2980	1308
Volume (vph)	195	1210	100	235	510	240	30	730	60	125	825	115
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	205	1274	105	247	537	253	32	768	63	132	868	121
RTOR Reduction (vph)	0	0	28	0	0	99	0	0	14	0	0	65
Lane Group Flow (vph)	205	1274	77	247	537	154	32	768	49	132	868	56
Heavy Vehicles (%)	3%	5%	0%	2%	5%	2%	0%	3%	0%	4%	2%	4%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	18.0	38.0	42.0	14.0	34.0	42.0	4.0	24.0	38.0	8.0	28.0	46.0
Effective Green, g (s)	18.0	38.0	42.0	14.0	34.0	42.0	4.0	24.0	38.0	8.0	28.0	46.0
Actuated g/C Ratio	0.18	0.38	0.42	0.14	0.34	0.42	0.04	0.24	0.38	0.08	0.28	0.46
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	266	1100	626	209	984	613	61	708	571	117	834	654
v/s Ratio Prot	0.14	c0.44	0.00	c0.17	0.19	0.02	0.02	0.26	0.01	c0.09	c0.29	0.02
v/s Ratio Perm			0.05			0.10			0.02			0.03
v/c Ratio	0.77	1.16	0.12	1.18	0.55	0.25	0.52	1.08	0.09	1.13	1.04	0.09
Uniform Delay, d1	39.0	31.0	17.7	43.0	26.7	18.8	47.1	38.0	19.9	46.0	36.0	15.2
Progression Factor	1.05	0.94	0.89	1.00	1.00	1.00	1.20	1.27	0.41	1.33	0.65	0.05
Incremental Delay, d2	12.8	81.5	0.1	120.0	0.6	0.2	2.2	45.7	0.0	116.9	40.5	0.0
Delay (s)	53.8	110.5	15.9	163.0	27.4	19.0	58.8	93.8	8.1	178.3	64.0	0.9
Level of Service	D	F	B	F	C	B	E	F	A	F	E	A
Approach Delay (s)		96.9			57.6			86.3			70.7	
Approach LOS		F			E			F			E	

Intersection Summary			
HCM Average Control Delay	79.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		

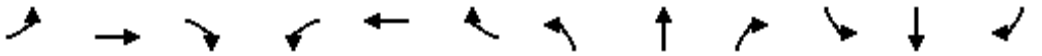
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		0.97	0.91	1.00	1.00	0.91	0.88	0.97	0.91	0.88
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1538	4378		2928	4337	1350	1538	4420	2422	2984	4420	2422
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1538	4378		2928	4337	1350	1538	4420	2422	2984	4420	2422
Volume (vph)	100	740	50	410	320	335	100	800	710	215	1320	270
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	779	53	432	337	353	105	842	747	226	1389	284
RTOR Reduction (vph)	0	8	0	0	0	109	0	0	72	0	0	142
Lane Group Flow (vph)	105	825	0	432	337	244	105	842	675	226	1389	142
Heavy Vehicles (%)	5%	5%	5%	7%	7%	7%	5%	5%	5%	5%	5%	5%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	16.0	25.0		16.2	25.2	41.0	8.8	27.0	43.2	15.8	34.0	50.0
Effective Green, g (s)	16.0	25.0		16.2	25.2	41.0	8.8	27.0	43.2	15.8	34.0	50.0
Actuated g/C Ratio	0.16	0.25		0.16	0.25	0.41	0.09	0.27	0.43	0.16	0.34	0.50
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	246	1095		474	1093	608	135	1193	1046	471	1503	1308
v/s Ratio Prot	0.07	c0.19		c0.15	0.08	0.06	c0.07	0.19	0.10	0.08	c0.31	0.02
v/s Ratio Perm						0.12			0.17			0.04
v/c Ratio	0.43	0.75		0.91	0.31	0.40	0.78	0.71	0.65	0.48	0.92	0.11
Uniform Delay, d1	37.9	34.6		41.2	30.3	20.8	44.6	32.9	22.4	38.4	31.8	13.2
Progression Factor	0.77	0.76		0.79	0.64	0.79	0.61	0.51	0.55	0.75	0.71	6.36
Incremental Delay, d2	1.2	4.7		19.4	0.6	0.4	20.3	2.9	1.1	0.7	9.8	0.0
Delay (s)	30.2	31.1		52.2	20.2	16.8	47.7	19.8	13.3	29.4	32.5	84.0
Level of Service	C	C		D	C	B	D	B	B	C	C	F
Approach Delay (s)		31.0			31.4			18.7			39.8	
Approach LOS		C			C			B			D	

Intersection Summary			
HCM Average Control Delay	30.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.0%	ICU Level of Service	D
Analysis Period (min)	15		

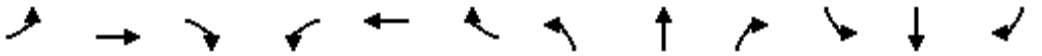
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1524	2910	1184	3042	4595	1350	1615	4420	1376	1272	4297	1417
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1524	2910	1184	3042	4595	1350	1615	4420	1376	1272	4297	1417
Volume (vph)	70	235	295	525	165	245	30	750	775	45	1210	610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	247	311	553	174	258	32	789	816	47	1274	642
RTOR Reduction (vph)	0	0	12	0	0	171	0	0	0	0	0	314
Lane Group Flow (vph)	74	247	299	553	174	87	32	789	816	47	1274	328
Heavy Vehicles (%)	6%	11%	22%	3%	1%	7%	0%	5%	5%	27%	8%	2%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		Free	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2		1	6	7
Permitted Phases			4			8			Free			6
Actuated Green, G (s)	12.0	17.0	37.0	26.0	31.0	40.6	20.0	51.4	120.0	9.6	41.0	53.0
Effective Green, g (s)	12.0	17.0	37.0	26.0	31.0	40.6	20.0	51.4	120.0	9.6	41.0	53.0
Actuated g/C Ratio	0.10	0.14	0.31	0.22	0.26	0.34	0.17	0.43	1.00	0.08	0.34	0.44
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	152	412	405	659	1187	502	269	1893	1376	102	1468	626
v/s Ratio Prot	0.05	0.08	c0.12	c0.18	0.04	0.01	0.02	0.18		0.04	c0.30	0.05
v/s Ratio Perm			0.13			0.05			c0.59			0.18
v/c Ratio	0.49	0.60	0.74	0.84	0.15	0.17	0.12	0.42	0.59	0.46	0.87	0.52
Uniform Delay, d1	51.1	48.3	37.2	45.0	34.3	27.9	42.5	23.9	0.0	52.7	37.0	24.3
Progression Factor	0.41	0.45	0.30	0.48	0.36	1.40	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	5.1	5.7	7.9	0.2	0.1	0.2	0.7	1.9	3.3	7.2	0.8
Delay (s)	23.0	27.1	16.8	29.6	12.7	39.3	42.7	24.5	1.9	56.0	44.1	25.1
Level of Service	C	C	B	C	B	D	D	C	A	E	D	C
Approach Delay (s)		21.5			29.1			13.6			38.2	
Approach LOS		C			C			B			D	

Intersection Summary			
HCM Average Control Delay	26.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

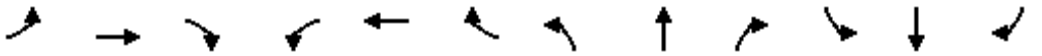
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1407	4160	1360	1369	4160	1271	2782	2942		1407	2951	1271
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1407	4160	1360	1369	4160	1271	2782	2942		1407	2951	1271
Volume (vph)	185	520	75	90	220	270	155	1125	30	240	880	70
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	195	547	79	95	232	284	163	1184	32	253	926	74
RTOR Reduction (vph)	0	0	57	0	0	37	0	2	0	0	0	30
Lane Group Flow (vph)	195	547	22	95	232	247	163	1214	0	253	926	44
Heavy Vehicles (%)	8%	5%	0%	11%	5%	7%	6%	3%	0%	8%	3%	7%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2		1	6	7
Permitted Phases			4			8						6
Actuated Green, G (s)	13.0	17.2	27.3	9.8	14.0	31.0	10.1	40.0		17.0	46.9	59.9
Effective Green, g (s)	13.0	17.2	27.3	9.8	14.0	31.0	10.1	40.0		17.0	46.9	59.9
Actuated g/C Ratio	0.13	0.17	0.27	0.10	0.14	0.31	0.10	0.40		0.17	0.47	0.60
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	183	716	371	134	582	394	281	1177		239	1384	812
v/s Ratio Prot	c0.14	c0.13	0.01	0.07	0.06	c0.11	0.06	c0.41		c0.18	0.31	0.01
v/s Ratio Perm			0.01			0.09						0.03
v/c Ratio	1.07	0.76	0.06	0.71	0.40	0.63	0.58	1.03		1.06	0.67	0.05
Uniform Delay, d1	43.5	39.5	26.9	43.7	39.2	29.6	42.9	30.0		41.5	20.5	8.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		0.72	0.50	0.12
Incremental Delay, d2	85.0	4.9	0.1	15.8	0.5	3.1	3.0	34.7		73.0	2.5	0.0
Delay (s)	128.5	44.3	26.9	59.5	39.6	32.7	46.0	64.7		102.8	12.8	1.0
Level of Service	F	D	C	E	D	C	D	E		F	B	A
Approach Delay (s)		62.6			39.5			62.5			30.3	
Approach LOS		E			D			E			C	

Intersection Summary			
HCM Average Control Delay	49.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

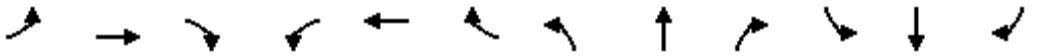
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1369	4044	907	1520	3832	1360	1013	2951	1360	1520	3010	1204
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1369	4044	907	1520	3832	1360	1013	2951	1360	1520	3010	1204
Volume (vph)	220	1195	20	70	390	70	10	500	80	155	860	315
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	1258	21	74	411	74	11	526	84	163	905	332
RTOR Reduction (vph)	0	0	13	0	0	46	0	0	57	0	0	77
Lane Group Flow (vph)	232	1258	8	74	411	28	11	526	27	163	905	255
Heavy Vehicles (%)	11%	8%	50%	0%	14%	0%	50%	3%	0%	0%	1%	13%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	20.9	34.8	37.2	7.0	20.9	37.5	2.4	25.6	32.6	16.6	39.8	60.7
Effective Green, g (s)	20.9	34.8	37.2	7.0	20.9	37.5	2.4	25.6	32.6	16.6	39.8	60.7
Actuated g/C Ratio	0.21	0.35	0.37	0.07	0.21	0.38	0.02	0.26	0.33	0.17	0.40	0.61
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	286	1407	337	106	801	564	24	755	498	252	1198	731
v/s Ratio Prot	c0.17	c0.31	0.00	0.05	0.11	0.01	0.01	c0.18	0.00	0.11	c0.30	0.07
v/s Ratio Perm			0.01			0.01			0.02			0.14
v/c Ratio	0.81	0.89	0.02	0.70	0.51	0.05	0.46	0.70	0.05	0.65	0.76	0.35
Uniform Delay, d1	37.7	30.9	19.9	45.5	35.0	19.9	48.2	33.7	23.1	39.0	25.9	9.8
Progression Factor	1.00	1.00	1.00	0.77	0.06	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.9	7.7	0.0	13.1	0.4	0.0	13.2	5.3	0.0	5.6	4.5	0.3
Delay (s)	53.5	38.5	19.9	48.2	2.7	0.0	61.4	39.0	23.2	44.6	30.4	10.1
Level of Service	D	D	B	D	A	A	E	D	C	D	C	B
Approach Delay (s)		40.6			8.3			37.2			27.2	
Approach LOS		D			A			D			C	

Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	76.9%	ICU Level of Service	D
Analysis Period (min)	15		

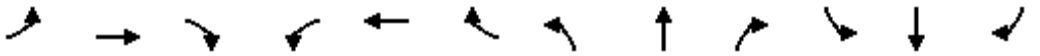
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1524	3933	1417	1553	3933	1363	1524	3019	1376	1495	3076	1225
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1524	3933	1417	1553	3933	1363	1524	3019	1376	1495	3076	1225
Volume (vph)	200	1410	50	125	910	75	40	525	100	130	835	365
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	217	1533	54	136	989	82	43	571	109	141	908	397
RTOR Reduction (vph)	0	0	32	0	0	55	0	0	19	0	0	23
Lane Group Flow (vph)	217	1533	22	136	989	27	43	571	90	141	908	374
Heavy Vehicles (%)	6%	18%	2%	4%	18%	6%	6%	7%	5%	8%	5%	18%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	16.9	40.2	40.2	9.8	33.1	33.1	3.2	24.0	33.8	10.0	30.8	47.7
Effective Green, g (s)	16.9	40.2	40.2	9.8	33.1	33.1	3.2	24.0	33.8	10.0	30.8	47.7
Actuated g/C Ratio	0.17	0.40	0.40	0.10	0.33	0.33	0.03	0.24	0.34	0.10	0.31	0.48
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	258	1581	570	152	1302	451	49	725	520	150	947	633
v/s Ratio Prot	c0.14	c0.39		0.09	0.25		0.03	0.19	0.02	c0.09	c0.30	0.10
v/s Ratio Perm			0.02			0.02			0.05			0.21
v/c Ratio	0.84	0.97	0.04	0.89	0.76	0.06	0.88	0.79	0.17	0.94	0.96	0.59
Uniform Delay, d1	40.2	29.3	18.2	44.6	29.9	22.8	48.2	35.6	23.3	44.7	34.0	19.0
Progression Factor	0.91	0.78	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	18.7	14.9	0.1	43.3	4.2	0.3	83.1	5.7	0.2	55.0	19.7	1.5
Delay (s)	55.3	37.8	17.4	87.9	34.1	23.1	131.3	41.3	23.4	99.7	53.7	20.5
Level of Service	E	D	B	F	C	C	F	D	C	F	D	C
Approach Delay (s)		39.3			39.4			43.9			49.1	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	42.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.7%	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												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1524	3933	1257	1553	4181	1363	1524	3019	1376	1495	3076	1225
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1524	3933	1257	1553	4181	1363	1524	3019	1376	1495	3076	1225
Volume (vph)	200	1410	125	125	910	75	40	525	100	130	835	365
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	217	1533	136	136	989	82	43	571	109	141	908	397
RTOR Reduction (vph)	0	0	81	0	0	55	0	0	19	0	0	23
Lane Group Flow (vph)	217	1533	55	136	989	27	43	571	90	141	908	374
Heavy Vehicles (%)	6%	18%	15%	4%	11%	6%	6%	7%	5%	8%	5%	18%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	16.6	40.2	40.2	9.8	33.4	33.4	3.2	24.0	33.8	10.0	30.8	47.4
Effective Green, g (s)	16.6	40.2	40.2	9.8	33.4	33.4	3.2	24.0	33.8	10.0	30.8	47.4
Actuated g/C Ratio	0.17	0.40	0.40	0.10	0.33	0.33	0.03	0.24	0.34	0.10	0.31	0.47
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	253	1581	505	152	1396	455	49	725	520	150	947	630
v/s Ratio Prot	c0.14	c0.39		0.09	0.24		0.03	0.19	0.02	c0.09	c0.30	0.10
v/s Ratio Perm			0.04			0.02			0.05			0.21
v/c Ratio	0.86	0.97	0.11	0.89	0.71	0.06	0.88	0.79	0.17	0.94	0.96	0.59
Uniform Delay, d1	40.6	29.3	18.7	44.6	29.1	22.6	48.2	35.6	23.3	44.7	34.0	19.2
Progression Factor	1.09	0.49	0.22	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	17.6	12.9	0.3	43.3	3.1	0.3	83.1	5.7	0.2	55.0	19.7	1.5
Delay (s)	62.0	27.2	4.5	87.9	32.1	22.9	131.3	41.3	23.4	99.7	53.7	20.8
Level of Service	E	C	A	F	C	C	F	D	C	F	D	C
Approach Delay (s)		29.6			37.8			43.9			49.1	
Approach LOS		C			D			D			D	

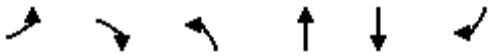
Intersection Summary			
HCM Average Control Delay	38.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1333	4082	1193	1333	4007	1214	1520	2841	1360	1448	2868	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1333	4082	1193	1333	4007	1214	1520	2841	1360	1448	2868	1360
Volume (vph)	175	1290	140	110	520	205	30	750	25	110	515	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	184	1358	147	116	547	216	32	789	26	116	542	26
RTOR Reduction (vph)	0	0	85	0	0	132	0	0	16	0	0	11
Lane Group Flow (vph)	184	1358	62	116	547	84	32	789	10	116	542	15
Heavy Vehicles (%)	14%	7%	14%	14%	9%	12%	0%	7%	0%	5%	6%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	27.0	35.0	42.0	10.0	18.0	27.0	7.0	30.0	40.0	9.0	32.0	59.0
Effective Green, g (s)	27.0	35.0	42.0	10.0	18.0	27.0	7.0	30.0	40.0	9.0	32.0	59.0
Actuated g/C Ratio	0.27	0.35	0.42	0.10	0.18	0.27	0.07	0.30	0.40	0.09	0.32	0.59
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	360	1429	549	133	721	376	106	852	598	130	918	857
v/s Ratio Prot	0.14	c0.33	0.01	c0.09	0.14	0.02	0.02	c0.28	0.00	c0.08	0.19	0.00
v/s Ratio Perm			0.04			0.05			0.01			0.01
v/c Ratio	0.51	0.95	0.11	0.87	0.76	0.22	0.30	0.93	0.02	0.89	0.59	0.02
Uniform Delay, d1	30.9	31.7	17.7	44.4	38.9	28.4	44.2	33.9	18.1	45.0	28.5	8.5
Progression Factor	0.64	0.30	0.01	1.20	0.93	1.19	0.80	0.56	0.17	1.00	1.00	1.00
Incremental Delay, d2	0.8	10.0	0.1	17.6	1.5	0.1	0.5	6.2	0.0	47.7	2.8	0.0
Delay (s)	20.7	19.5	0.3	71.0	37.5	33.7	35.8	25.4	3.1	92.7	31.3	8.5
Level of Service	C	B	A	E	D	C	D	C	A	F	C	A
Approach Delay (s)		18.0			41.0			25.1			40.8	
Approach LOS		B			D			C			D	

Intersection Summary			
HCM Average Control Delay	28.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		

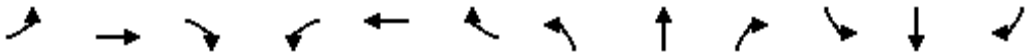
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	105	155	0	470	220	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	111	163	0	495	232	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					843	
pX, platoon unblocked						
vC, conflicting volume	479	232	232			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	479	232	232			
tC, single (s)	6.8	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	79	79	100			
cM capacity (veh/h)	516	764	1348			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	111	163	247	247	232
Volume Left	111	0	0	0	0
Volume Right	0	163	0	0	0
cSH	516	764	1700	1700	1700
Volume to Capacity	0.21	0.21	0.15	0.15	0.14
Queue Length 95th (ft)	20	20	0	0	0
Control Delay (s)	13.9	11.0	0.0	0.0	0.0
Lane LOS	B	B			
Approach Delay (s)	12.2		0.0		0.0
Approach LOS	B				

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	27.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)				4.0	4.0			4.0			4.0	
Lane Util. Factor				1.00	0.95			1.00			1.00	
Frt				1.00	1.00			1.00			0.91	
Flt Protected				0.95	1.00			0.98			1.00	
Satd. Flow (prot)				1490	2887			1516			1420	
Flt Permitted				0.95	1.00			0.94			1.00	
Satd. Flow (perm)				1490	2887			1467			1420	
Volume (vph)	0	0	0	5	420	10	5	5	0	0	10	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	5	442	11	5	5	0	0	11	26
RTOR Reduction (vph)	0	0	0	0	3	0	0	0	0	0	14	0
Lane Group Flow (vph)	0	0	0	5	450	0	0	10	0	0	23	0
Heavy Vehicles (%)	2%	2%	2%	2%	5%	2%	2%	4%	2%	2%	2%	2%
Turn Type				Split			Perm					
Protected Phases				6	6			8			4	
Permitted Phases							8					
Actuated Green, G (s)				25.0	25.0			27.0			27.0	
Effective Green, g (s)				25.0	25.0			27.0			27.0	
Actuated g/C Ratio				0.42	0.42			0.45			0.45	
Clearance Time (s)				4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)				621	1203			660			639	
v/s Ratio Prot				0.00	c0.16						c0.02	
v/s Ratio Perm								0.01				
v/c Ratio				0.01	0.37			0.02			0.04	
Uniform Delay, d1				10.2	12.1			9.1			9.2	
Progression Factor				1.00	1.00			1.00			1.00	
Incremental Delay, d2				0.0	0.9			0.0			0.1	
Delay (s)				10.3	13.0			9.2			9.3	
Level of Service				B	B			A			A	
Approach Delay (s)		0.0			13.0			9.2			9.3	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	26.4%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2980	1320	1476	2980	1520	1360
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2980	1320	1476	2980	1520	1360
Volume (vph)	1395	350	370	750	110	120
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1468	368	389	789	116	126
RTOR Reduction (vph)	0	64	0	0	0	94
Lane Group Flow (vph)	1468	304	389	789	116	32
Heavy Vehicles (%)	2%	3%	3%	2%	0%	0%
Turn Type		pm+ov	Prot			Over
Protected Phases	4	5	3	8	5	3
Permitted Phases		4				
Actuated Green, G (s)	34.0	40.0	18.0	56.0	6.0	18.0
Effective Green, g (s)	34.0	40.0	18.0	56.0	6.0	18.0
Actuated g/C Ratio	0.49	0.57	0.26	0.80	0.09	0.26
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1447	830	380	2384	130	350
v/s Ratio Prot	c0.49	0.03	c0.26	0.26	c0.08	0.02
v/s Ratio Perm		0.20				
v/c Ratio	1.01	0.37	1.02	0.33	0.89	0.09
Uniform Delay, d1	18.0	8.1	26.0	1.9	31.7	19.8
Progression Factor	0.51	0.07	1.00	1.00	1.00	1.00
Incremental Delay, d2	24.4	0.2	52.3	0.4	47.7	0.1
Delay (s)	33.6	0.7	78.3	2.3	79.3	19.9
Level of Service	C	A	E	A	E	B
Approach Delay (s)	27.0			27.4	48.4	
Approach LOS	C			C	D	

Intersection Summary			
HCM Average Control Delay	28.8	HCM Level of Service	C
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2980	1308	1462	2980	2863	1333
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2980	1308	1462	2980	2863	1333
Volume (vph)	1155	370	120	740	280	590
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1216	389	126	779	295	621
RTOR Reduction (vph)	0	174	0	0	0	0
Lane Group Flow (vph)	1216	215	126	779	295	621
Heavy Vehicles (%)	2%	4%	4%	2%	3%	2%
Turn Type		Perm	Prot			Free
Protected Phases	4		3	8		
Permitted Phases		4			2	Free
Actuated Green, G (s)	38.6	38.6	7.2	49.8	12.2	70.0
Effective Green, g (s)	38.6	38.6	7.2	49.8	12.2	70.0
Actuated g/C Ratio	0.55	0.55	0.10	0.71	0.17	1.00
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	1643	721	150	2120	499	1333
v/s Ratio Prot	c0.41		c0.09	0.26		
v/s Ratio Perm		0.16			0.10	c0.47
v/c Ratio	0.74	0.30	0.84	0.37	0.59	0.47
Uniform Delay, d1	11.9	8.4	30.8	3.9	26.6	0.0
Progression Factor	1.00	1.00	1.01	0.81	1.00	1.00
Incremental Delay, d2	3.0	1.1	30.5	0.5	1.9	1.2
Delay (s)	14.9	9.5	61.5	3.7	28.5	1.2
Level of Service	B	A	E	A	C	A
Approach Delay (s)	13.6			11.7	10.0	
Approach LOS	B			B	A	

Intersection Summary			
HCM Average Control Delay	12.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3010			2980	1520	1360
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3010			2980	1520	1360
Volume (vph)	1485	0	0	985	40	250
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1563	0	0	1037	42	263
RTOR Reduction (vph)	0	0	0	0	0	25
Lane Group Flow (vph)	1563	0	0	1037	42	238
Heavy Vehicles (%)	1%	0%	0%	2%	0%	0%
Turn Type						custom
Protected Phases	4			8	5	2
Permitted Phases						
Actuated Green, G (s)	38.2			38.2	13.8	13.8
Effective Green, g (s)	38.2			38.2	13.8	13.8
Actuated g/C Ratio	0.64			0.64	0.23	0.23
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	1916			1897	350	313
v/s Ratio Prot	c0.52			0.35	0.03	c0.18
v/s Ratio Perm						
v/c Ratio	0.82			0.55	0.12	0.76
Uniform Delay, d1	8.2			6.1	18.3	21.6
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	4.0			1.1	0.2	10.4
Delay (s)	12.2			7.2	18.4	32.0
Level of Service	B			A	B	C
Approach Delay (s)	12.2			7.2	30.1	
Approach LOS	B			A	C	

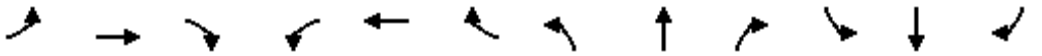
Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.95	1.00		0.91		0.97		1.00			
Frt		1.00	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		2895	1333		4085		2891		1248			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		2895	1333		4085		2891		1248			
Volume (vph)	0	930	290	0	795	210	760	0	350	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	979	305	0	837	221	800	0	368	0	0	0
RTOR Reduction (vph)	0	0	157	0	103	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	979	148	0	955	0	800	0	368	0	0	0
Heavy Vehicles (%)	0%	5%	2%	0%	4%	2%	2%	0%	9%	0%	0%	0%
Turn Type			Perm				Prot		Free			
Protected Phases		4			8		5					
Permitted Phases			4						Free			
Actuated Green, G (s)		21.8	21.8		21.8		15.2		45.0			
Effective Green, g (s)		21.8	21.8		21.8		15.2		45.0			
Actuated g/C Ratio		0.48	0.48		0.48		0.34		1.00			
Clearance Time (s)		4.0	4.0		4.0		4.0					
Vehicle Extension (s)		3.0	3.0		3.0		3.0					
Lane Grp Cap (vph)		1402	646		1979		977		1248			
v/s Ratio Prot		c0.34			0.23		c0.28					
v/s Ratio Perm			0.11						0.29			
v/c Ratio		0.70	0.23		0.48		0.82		0.29			
Uniform Delay, d1		9.0	6.7		7.8		13.6		0.0			
Progression Factor		0.83	3.48		1.00		1.00		1.00			
Incremental Delay, d2		2.5	0.7		0.8		5.4		0.6			
Delay (s)		10.0	24.1		8.7		19.1		0.6			
Level of Service		B	C		A		B		A			
Approach Delay (s)		13.4			8.7			13.3			0.0	
Approach LOS		B			A			B			A	

Intersection Summary			
HCM Average Control Delay	11.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		

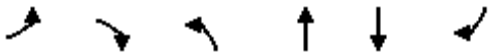
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1900	1900	1600	1600	1900	1900	1900	1600	1900	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.91	0.91		0.95	1.00				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		2747	1470		2951	1360				2949		2324
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		2747	1470		2951	1360				2949		2324
Volume (vph)	0	910	400	0	1475	80	0	0	0	310	0	730
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	958	421	0	1553	84	0	0	0	326	0	768
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	34
Lane Group Flow (vph)	0	958	421	0	1553	84	0	0	0	326	0	734
Heavy Vehicles (%)	0%	6%	0%	0%	3%	0%	0%	0%	0%	0%	0%	3%
Turn Type			custom			custom				Prot		custom
Protected Phases		4			8					1		6
Permitted Phases			1 4			1 8						
Actuated Green, G (s)		52.5	90.0		52.5	90.0				29.5		29.5
Effective Green, g (s)		52.5	90.0		52.5	90.0				29.5		29.5
Actuated g/C Ratio		0.58	1.00		0.58	1.00				0.33		0.33
Clearance Time (s)		4.0			4.0					4.0		4.0
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Lane Grp Cap (vph)		1602	1470		1721	1360				967		762
v/s Ratio Prot		0.35			c0.53					0.11		c0.32
v/s Ratio Perm			0.29			0.06						
v/c Ratio		0.60	0.29		0.90	0.06				0.34		0.96
Uniform Delay, d1		12.0	0.0		16.5	0.0				22.9		29.7
Progression Factor		1.00	1.00		0.93	1.00				1.00		1.00
Incremental Delay, d2		1.7	0.1		6.2	0.0				0.2		23.9
Delay (s)		13.7	0.1		21.6	0.0				23.1		53.6
Level of Service		B	A		C	A				C		D
Approach Delay (s)		9.5			20.5			0.0			44.5	
Approach LOS		A			C			A			D	

Intersection Summary			
HCM Average Control Delay	23.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1520	1259	1394	2980	1569	1360
Flt Permitted	0.95	1.00	0.57	1.00	1.00	1.00
Satd. Flow (perm)	1520	1259	839	2980	1569	1360
Volume (vph)	10	200	215	240	295	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	211	226	253	311	5
RTOR Reduction (vph)	0	182	0	0	0	2
Lane Group Flow (vph)	11	29	226	253	311	3
Heavy Vehicles (%)	0%	8%	9%	2%	2%	0%
Turn Type		Perm	Perm			Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	6.2	6.2	30.8	30.8	30.8	30.8
Effective Green, g (s)	6.2	6.2	30.8	30.8	30.8	30.8
Actuated g/C Ratio	0.14	0.14	0.68	0.68	0.68	0.68
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	209	173	574	2040	1074	931
v/s Ratio Prot	0.01			0.08	0.20	
v/s Ratio Perm		c0.02	c0.27			0.00
v/c Ratio	0.05	0.17	0.39	0.12	0.29	0.00
Uniform Delay, d1	16.8	17.1	3.1	2.4	2.8	2.2
Progression Factor	1.00	1.00	1.76	1.33	1.00	1.00
Incremental Delay, d2	0.1	0.5	0.8	0.1	0.7	0.0
Delay (s)	17.0	17.6	6.2	3.3	3.5	2.3
Level of Service	B	B	A	A	A	A
Approach Delay (s)	17.6			4.7	3.5	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	7.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		

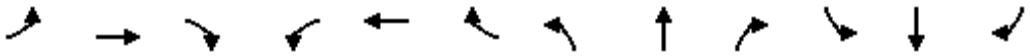
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1485	10	170	855	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1563	11	179	900	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				630		
pX, platoon unblocked					0.91	
vC, conflicting volume			1563		2376	787
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1563		2412	787
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			58		100	100
cM capacity (veh/h)			428		15	339

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	1042	532	179	450	450
Volume Left	0	0	179	0	0
Volume Right	0	11	0	0	0
cSH	1700	1700	428	1700	1700
Volume to Capacity	0.61	0.31	0.42	0.26	0.26
Queue Length 95th (ft)	0	0	51	0	0
Control Delay (s)	0.0	0.0	19.3	0.0	0.0
Lane LOS			C		
Approach Delay (s)	0.0		3.2		
Approach LOS					

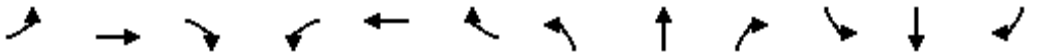
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0		4.0			
Lane Util. Factor		0.86	0.86		0.86	0.86	0.97		0.88			
Frt		1.00	0.85		0.97	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4047	1073		3901	1147	2808		2370			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4047	1073		3901	1147	2808		2370			
Volume (vph)	0	1745	360	0	1170	1100	800	0	920	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1837	379	0	1232	1158	842	0	968	0	0	0
RTOR Reduction (vph)	0	0	0	0	30	0	0	0	6	0	0	0
Lane Group Flow (vph)	0	1837	379	0	1489	871	842	0	962	0	0	0
Heavy Vehicles (%)	0%	2%	9%	0%	3%	2%	5%	0%	1%	0%	0%	0%
Turn Type			custom			custom	Prot		custom			
Protected Phases		4			8		5		2			
Permitted Phases			4 5			5 8						
Actuated Green, G (s)		55.4	110.0		55.4	110.0	46.6		46.6			
Effective Green, g (s)		55.4	110.0		55.4	110.0	46.6		46.6			
Actuated g/C Ratio		0.50	1.00		0.50	1.00	0.42		0.42			
Clearance Time (s)		4.0			4.0		4.0		4.0			
Vehicle Extension (s)		3.0			3.0		3.0		3.0			
Lane Grp Cap (vph)		2038	1073		1965	1147	1190		1004			
v/s Ratio Prot		c0.45			0.38		0.30		c0.41			
v/s Ratio Perm			0.35			0.76						
v/c Ratio		0.90	0.35		0.76	0.76	0.71		0.96			
Uniform Delay, d1		24.8	0.0		21.9	0.0	26.1		30.7			
Progression Factor		0.87	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		4.7	0.1		2.8	2.9	1.9		18.8			
Delay (s)		26.4	0.1		24.7	2.9	28.0		49.6			
Level of Service		C	A		C	A	C		D			
Approach Delay (s)		21.9			16.8			39.5			0.0	
Approach LOS		C			B			D			A	

Intersection Summary			
HCM Average Control Delay	25.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		

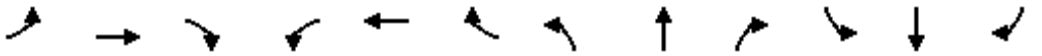
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.86	0.86		0.86	0.86				0.97		0.88
Frt		0.99	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3952	1136		3969	1114				2835		2347
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3952	1136		3969	1114				2835		2347
Volume (vph)	0	1285	720	0	1370	600	0	0	0	820	0	660
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1353	758	0	1442	632	0	0	0	863	0	695
RTOR Reduction (vph)	0	10	277	0	0	0	0	0	0	0	0	31
Lane Group Flow (vph)	0	1482	342	0	1442	632	0	0	0	863	0	664
Heavy Vehicles (%)	0%	3%	3%	0%	4%	5%	0%	0%	0%	4%	0%	2%
Turn Type			Perm			custom				Prot		custom
Protected Phases		4			8					1		
Permitted Phases			4			1 8						6
Actuated Green, G (s)		60.8	60.8		60.8	110.0				41.2		41.2
Effective Green, g (s)		60.8	60.8		60.8	110.0				41.2		41.2
Actuated g/C Ratio		0.55	0.55		0.55	1.00				0.37		0.37
Clearance Time (s)		4.0	4.0		4.0					4.0		4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		2184	628		2194	1114				1062		879
v/s Ratio Prot		c0.38			0.36					c0.30		
v/s Ratio Perm			0.30			0.57						0.28
v/c Ratio		0.68	0.54		0.66	0.57				0.81		0.76
Uniform Delay, d1		17.6	15.7		17.3	0.0				30.9		30.0
Progression Factor		1.00	1.00		0.68	1.00				1.00		1.00
Incremental Delay, d2		1.7	3.4		1.0	0.4				4.8		3.7
Delay (s)		19.3	19.1		12.8	0.4				35.8		33.7
Level of Service		B	B		B	A				D		C
Approach Delay (s)		19.3			9.0			0.0			34.9	
Approach LOS		B			A			A			C	

Intersection Summary			
HCM Average Control Delay	19.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	71.2%	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												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.91					0.97	1.00	0.88
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (prot)		4420	1302		4378					2928	1589	2377
Flt Permitted		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (perm)		4420	1302		4378					2928	1589	2377
Volume (vph)	0	765	745	0	690	0	0	0	0	125	485	80
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	805	784	0	726	0	0	0	0	132	511	84
RTOR Reduction (vph)	0	0	75	0	0	0	0	0	0	0	0	55
Lane Group Flow (vph)	0	805	709	0	726	0	0	0	0	132	511	29
Heavy Vehicles (%)	0%	5%	11%	7%	6%	0%	0%	0%	0%	7%	7%	7%
Turn Type			Perm							Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		57.7	57.7		57.7					34.3	34.3	34.3
Effective Green, g (s)		57.7	57.7		57.7					34.3	34.3	34.3
Actuated g/C Ratio		0.58	0.58		0.58					0.34	0.34	0.34
Clearance Time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2550	751		2526					1004	545	815
v/s Ratio Prot		0.18			0.17					0.05	c0.32	
v/s Ratio Perm			c0.54									0.01
v/c Ratio		0.32	0.94		0.29					0.13	0.94	0.04
Uniform Delay, d1		10.9	19.6		10.7					22.6	31.8	21.8
Progression Factor		1.00	1.00		0.11					1.00	1.00	1.00
Incremental Delay, d2		0.3	21.7		0.3					0.1	23.8	0.0
Delay (s)		11.3	41.3		1.4					22.7	55.7	21.9
Level of Service		B	D		A					C	E	C
Approach Delay (s)		26.1			1.4			0.0			45.8	
Approach LOS		C			A			A			D	

Intersection Summary			
HCM Average Control Delay	24.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		

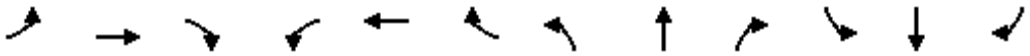
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3933	1350	1583	4550	2956	1326
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3933	1350	1583	4550	2956	1326
Volume (vph)	440	785	655	150	250	160
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	463	826	689	158	263	168
RTOR Reduction (vph)	0	0	0	0	0	147
Lane Group Flow (vph)	463	826	689	158	263	21
Heavy Vehicles (%)	18%	7%	2%	2%	6%	9%
Turn Type		Free	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	23.0	120.0	70.0	97.0	15.0	15.0
Effective Green, g (s)	23.0	120.0	70.0	97.0	15.0	15.0
Actuated g/C Ratio	0.19	1.00	0.58	0.81	0.12	0.12
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	754	1350	923	3678	370	166
v/s Ratio Prot	0.12		c0.44	0.03	0.09	
v/s Ratio Perm		c0.61				0.02
v/c Ratio	0.61	0.61	0.75	0.04	0.71	0.13
Uniform Delay, d1	44.4	0.0	18.5	2.3	50.4	46.7
Progression Factor	1.00	1.00	0.78	0.92	1.00	1.00
Incremental Delay, d2	3.7	2.1	2.8	0.0	6.3	0.3
Delay (s)	48.2	2.1	17.3	2.1	56.7	47.0
Level of Service	D	A	B	A	E	D
Approach Delay (s)	18.6			14.4	52.9	
Approach LOS	B			B	D	

Intersection Summary			
HCM Average Control Delay	23.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		

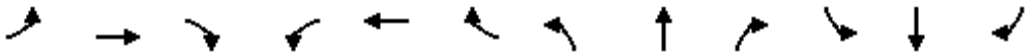
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1900	1700	1700	1900	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0		4.0		4.0			
Lane Util. Factor	0.97	0.91			0.91		0.97		1.00			
Frt	1.00	1.00			0.98		1.00		0.85			
Flt Protected	0.95	1.00			1.00		0.95		1.00			
Satd. Flow (prot)	2161	4510			4263		2487		1147			
Flt Permitted	0.95	1.00			1.00		0.95		1.00			
Satd. Flow (perm)	2161	4510			4263		2487		1147			
Volume (vph)	230	1600	0	0	1100	150	80	0	150	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	250	1739	0	0	1196	163	87	0	163	0	0	0
RTOR Reduction (vph)	0	0	0	0	13	0	0	0	26	0	0	0
Lane Group Flow (vph)	250	1739	0	0	1346	0	87	0	137	0	0	0
Heavy Vehicles (%)	45%	15%	0%	0%	16%	45%	26%	0%	26%	0%	0%	0%
Turn Type	Prot						custom		custom			
Protected Phases	7	4			8							
Permitted Phases							2		2			
Actuated Green, G (s)	15.7	75.5			55.8		16.5		16.5			
Effective Green, g (s)	15.7	75.5			55.8		16.5		16.5			
Actuated g/C Ratio	0.16	0.76			0.56		0.16		0.16			
Clearance Time (s)	4.0	4.0			4.0		4.0		4.0			
Vehicle Extension (s)	3.0	3.0			3.0		3.0		3.0			
Lane Grp Cap (vph)	339	3405			2379		410		189			
v/s Ratio Prot	c0.12	0.39			c0.32							
v/s Ratio Perm							0.03		c0.12			
v/c Ratio	0.74	0.51			0.57		0.21		0.73			
Uniform Delay, d1	40.2	4.9			14.3		36.1		39.6			
Progression Factor	0.87	1.01			0.63		1.00		1.00			
Incremental Delay, d2	7.2	0.5			0.7		0.3		12.9			
Delay (s)	42.3	5.4			9.7		36.4		52.5			
Level of Service	D	A			A		D		D			
Approach Delay (s)		10.1			9.7			46.9			0.0	
Approach LOS		B			A			D			A	

Intersection Summary			
HCM Average Control Delay	12.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		

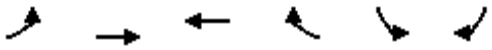
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0		4.0		4.0			
Lane Util. Factor	0.97	0.91			0.81		0.97		1.00			
Frt	1.00	1.00			0.98		1.00		0.85			
Flt Protected	0.95	1.00			1.00		0.95		1.00			
Satd. Flow (prot)	2415	4715			6566		1913		1035			
Flt Permitted	0.95	1.00			1.00		0.95		1.00			
Satd. Flow (perm)	2415	4715			6566		1913		1035			
Volume (vph)	230	1570	0	0	1100	150	350	0	250	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	250	1707	0	0	1196	163	380	0	272	0	0	0
RTOR Reduction (vph)	0	0	0	0	23	0	0	0	6	0	0	0
Lane Group Flow (vph)	250	1707	0	0	1336	0	380	0	266	0	0	0
Heavy Vehicles (%)	45%	10%	2%	2%	11%	45%	83%	2%	56%	2%	2%	2%
Turn Type	Prot						custom		custom			
Protected Phases	7	4			8							
Permitted Phases							2		2			
Actuated Green, G (s)	14.8	50.0			31.2		42.0		42.0			
Effective Green, g (s)	14.8	50.0			31.2		42.0		42.0			
Actuated g/C Ratio	0.15	0.50			0.31		0.42		0.42			
Clearance Time (s)	4.0	4.0			4.0		4.0		4.0			
Vehicle Extension (s)	3.0	3.0			3.0		3.0		3.0			
Lane Grp Cap (vph)	357	2358			2049		803		435			
v/s Ratio Prot	0.10	c0.36			0.20							
v/s Ratio Perm							0.20		c0.26			
v/c Ratio	0.70	0.72			0.65		0.47		0.61			
Uniform Delay, d1	40.5	19.6			29.7		21.0		22.6			
Progression Factor	0.96	0.61			1.03		1.00		1.00			
Incremental Delay, d2	5.4	1.7			1.2		2.0		6.3			
Delay (s)	44.1	13.7			31.9		23.0		28.9			
Level of Service	D	B			C		C		C			
Approach Delay (s)		17.6			31.9			25.5			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	23.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

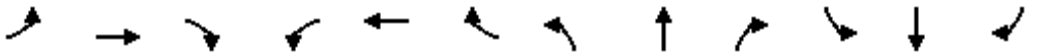
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.81	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6466	4472		3019	2450
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6466	4472		3019	2450
Volume (vph)	0	960	1180	0	870	800
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1043	1283	0	946	870
RTOR Reduction (vph)	0	0	0	0	0	12
Lane Group Flow (vph)	0	1043	1283	0	946	858
Heavy Vehicles (%)	0%	19%	16%	0%	16%	16%
Turn Type						custom
Protected Phases		4	8			
Permitted Phases					6	6
Actuated Green, G (s)		40.0	40.0		52.0	52.0
Effective Green, g (s)		40.0	40.0		52.0	52.0
Actuated g/C Ratio		0.40	0.40		0.52	0.52
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		2586	1789		1570	1274
v/s Ratio Prot		0.16	c0.29			
v/s Ratio Perm					0.31	c0.35
v/c Ratio		0.40	0.72		0.60	0.67
Uniform Delay, d1		21.5	25.2		16.8	17.7
Progression Factor		0.43	0.52		1.00	1.00
Incremental Delay, d2		0.4	2.1		1.7	2.9
Delay (s)		9.6	15.3		18.5	20.6
Level of Service		A	B		B	C
Approach Delay (s)		9.6	15.3		19.5	
Approach LOS		A	B		B	

Intersection Summary			
HCM Average Control Delay	15.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.5%	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												
Ideal Flow (vphpl)	1900	1900	1700	1700	1900	1900	1700	1700	1700	1900	1700	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0		4.0
Lane Util. Factor		0.81	0.88	0.97	0.91					0.97		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		6871	2068	2724	3990					3019		2450
Flt Permitted		1.00	1.00	0.22	1.00					0.95		1.00
Satd. Flow (perm)		6871	2068	621	3990					3019		2450
Volume (vph)	0	930	530	180	1270	0	0	0	0	870	0	800
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	1011	576	196	1380	0	0	0	0	946	0	870
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	22
Lane Group Flow (vph)	0	1011	576	196	1380	0	0	0	0	946	0	848
Heavy Vehicles (%)	0%	12%	23%	15%	30%	0%	0%	0%	0%	16%	0%	16%
Turn Type			Free	Perm						custom		custom
Protected Phases		4			8							
Permitted Phases			Free	8						6		6
Actuated Green, G (s)		48.0	100.0	48.0	48.0					44.0		44.0
Effective Green, g (s)		48.0	100.0	48.0	48.0					44.0		44.0
Actuated g/C Ratio		0.48	1.00	0.48	0.48					0.44		0.44
Clearance Time (s)		4.0		4.0	4.0					4.0		4.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0		3.0
Lane Grp Cap (vph)		3298	2068	298	1915					1328		1078
v/s Ratio Prot		0.15			c0.35							
v/s Ratio Perm			0.28	0.32						0.31		c0.35
v/c Ratio		0.31	0.28	0.66	0.72					0.71		0.79
Uniform Delay, d1		15.9	0.0	19.8	20.7					22.8		24.0
Progression Factor		1.00	1.00	0.40	0.40					1.00		1.00
Incremental Delay, d2		0.2	0.3	8.7	1.9					3.3		5.8
Delay (s)		16.1	0.3	16.7	10.2					26.1		29.8
Level of Service		B	A	B	B					C		C
Approach Delay (s)		10.4			11.0			0.0			27.9	
Approach LOS		B			B			A			C	

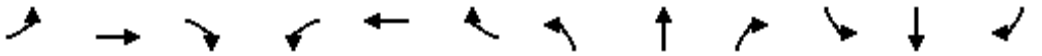
Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	5	0	0	0	0	5	415	95	115	215	45
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	11	5	0	0	0	0	5	437	100	121	226	47
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)											1108	
pX, platoon unblocked												
vC, conflicting volume	916	1016	226	918	963	437	274			537		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	916	1016	226	918	963	437	274			537		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	95	97	100	100	100	100	100			88		
cM capacity (veh/h)	231	210	818	226	226	624	1301			1016		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	16	442	100	121	226	47
Volume Left	11	5	0	121	0	0
Volume Right	0	0	100	0	0	47
cSH	224	1301	1700	1016	1700	1700
Volume to Capacity	0.07	0.00	0.06	0.12	0.13	0.03
Queue Length 95th (ft)	6	0	0	10	0	0
Control Delay (s)	22.3	0.1	0.0	9.0	0.0	0.0
Lane LOS	C	A		A		
Approach Delay (s)	22.3	0.1		2.8		
Approach LOS	C					

Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	46.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1520	3935	777	1448	4121	1360	1369	1600	1347	1520	1600	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.72	1.00	1.00	0.70	1.00	1.00
Satd. Flow (perm)	1520	3935	777	1448	4121	1360	1037	1600	1347	1124	1600	1360
Volume (vph)	75	1820	20	130	1710	40	430	80	400	50	55	65
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	1916	21	137	1800	42	453	84	421	53	58	68
RTOR Reduction (vph)	0	0	12	0	0	13	0	0	2	0	0	3
Lane Group Flow (vph)	79	1916	9	137	1800	29	453	84	419	53	58	65
Heavy Vehicles (%)	0%	11%	75%	5%	6%	0%	11%	0%	1%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm	Perm		pm+ov	Perm		pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases			2			6	8		8	4		4
Actuated Green, G (s)	5.0	45.0	45.0	6.0	46.0	46.0	37.0	37.0	43.0	37.0	37.0	42.0
Effective Green, g (s)	5.0	45.0	45.0	6.0	46.0	46.0	37.0	37.0	43.0	37.0	37.0	42.0
Actuated g/C Ratio	0.05	0.45	0.45	0.06	0.46	0.46	0.37	0.37	0.43	0.37	0.37	0.42
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	76	1771	350	87	1896	626	384	592	633	416	592	626
v/s Ratio Prot	0.05	c0.49		c0.09	0.44			0.05	0.04		0.04	0.01
v/s Ratio Perm			0.01			0.02	c0.44		0.27	0.05		0.04
v/c Ratio	1.04	1.08	0.03	1.57	0.95	0.05	1.18	0.14	0.66	0.13	0.10	0.10
Uniform Delay, d1	47.5	27.5	15.3	47.0	25.9	14.9	31.5	20.9	22.7	20.8	20.6	17.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	114.5	47.3	0.1	306.5	11.7	0.1	104.6	0.1	2.6	0.6	0.3	0.1
Delay (s)	162.0	74.8	15.5	353.5	37.6	15.0	136.1	21.1	25.3	21.5	20.9	17.7
Level of Service	F	E	B	F	D	B	F	C	C	C	C	B
Approach Delay (s)		77.6			59.0			77.4			19.8	
Approach LOS		E			E			E			B	

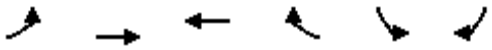
Intersection Summary			
HCM Average Control Delay	68.4	HCM Level of Service	E
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.91		1.00	1.00			0.95	
Frt					0.96		1.00	1.00			0.99	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					4000		1520	1569			2831	
Flt Permitted					0.99		0.52	1.00			1.00	
Satd. Flow (perm)					4000		835	1569			2831	
Volume (vph)	0	0	0	110	350	150	70	570	0	0	335	15
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	116	368	158	74	600	0	0	353	16
RTOR Reduction (vph)	0	0	0	0	47	0	0	0	0	0	5	0
Lane Group Flow (vph)	0	0	0	0	595	0	74	600	0	0	364	0
Heavy Vehicles (%)	0%	0%	0%	17%	2%	0%	0%	2%	0%	0%	7%	0%
Turn Type				Split			Perm					
Protected Phases				6	6			8			4	
Permitted Phases							8					
Actuated Green, G (s)					29.8		30.6	30.6			30.6	
Effective Green, g (s)					29.8		30.6	30.6			30.6	
Actuated g/C Ratio					0.44		0.45	0.45			0.45	
Clearance Time (s)					4.0		4.0	4.0			4.0	
Vehicle Extension (s)					3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)					1743		374	702			1267	
v/s Ratio Prot					c0.15			c0.38			0.13	
v/s Ratio Perm							0.09					
v/c Ratio					0.34		0.20	0.85			0.29	
Uniform Delay, d1					12.8		11.5	16.9			12.0	
Progression Factor					1.00		1.00	1.00			1.00	
Incremental Delay, d2					0.5		0.3	9.9			0.1	
Delay (s)					13.3		11.7	26.9			12.1	
Level of Service					B		B	C			B	
Approach Delay (s)		0.0			13.3			25.2			12.1	
Approach LOS		A			B			C			B	

Intersection Summary			
HCM Average Control Delay	17.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	68.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		

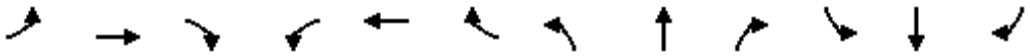
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	0	895	0	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	942	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)			342			
pX, platoon unblocked	0.91				0.91	0.91
vC, conflicting volume	942				942	471
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	834				834	315
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	733				282	623

Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	628	314	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.37	0.18	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0		0.0
Approach LOS			A

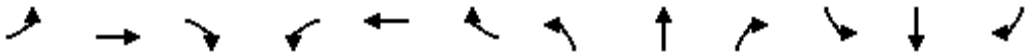
Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	28.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.97			1.00		1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1494			1543		1520	2887		1520	2897	
Flt Permitted		0.93			0.88		0.31	1.00		0.21	1.00	
Satd. Flow (perm)		1392			1377		493	2887		335	2897	
Volume (vph)	50	215	75	55	190	5	25	925	65	60	695	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	226	79	58	200	5	26	974	68	63	732	63
RTOR Reduction (vph)	0	28	0	0	2	0	0	11	0	0	14	0
Lane Group Flow (vph)	0	330	0	0	261	0	26	1031	0	63	781	0
Heavy Vehicles (%)	0%	5%	0%	0%	3%	0%	0%	4%	8%	0%	4%	0%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		12.9			12.9		19.1	19.1		19.1	19.1	
Effective Green, g (s)		12.9			12.9		19.1	19.1		19.1	19.1	
Actuated g/C Ratio		0.32			0.32		0.48	0.48		0.48	0.48	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		449			444		235	1379		160	1383	
v/s Ratio Prot								c0.36			0.27	
v/s Ratio Perm		c0.24			0.19		0.05			0.19		
v/c Ratio		0.73			0.59		0.11	0.75		0.39	0.56	
Uniform Delay, d1		12.0			11.3		5.8	8.5		6.7	7.5	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		6.1			2.0		1.0	3.7		7.1	1.7	
Delay (s)		18.2			13.3		6.7	12.2		13.8	9.1	
Level of Service		B			B		A	B		B	A	
Approach Delay (s)		18.2			13.3			12.1			9.5	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM Average Control Delay	12.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

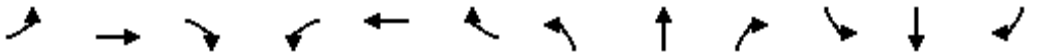
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	2942		1476	2995		1520	2914		1520	2952	
Flt Permitted	0.31	1.00		0.21	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	492	2942		329	2995		1520	2914		1520	2952	
Volume (vph)	40	830	90	145	675	25	85	610	70	20	640	50
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	874	95	153	711	26	89	642	74	21	674	53
RTOR Reduction (vph)	0	9	0	0	3	0	0	9	0	0	6	0
Lane Group Flow (vph)	42	960	0	153	734	0	89	707	0	21	721	0
Heavy Vehicles (%)	0%	2%	0%	3%	1%	0%	0%	3%	0%	0%	2%	0%
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	52.4	52.4		52.4	52.4		7.0	33.2		2.4	28.6	
Effective Green, g (s)	52.4	52.4		52.4	52.4		7.0	33.2		2.4	28.6	
Actuated g/C Ratio	0.52	0.52		0.52	0.52		0.07	0.33		0.02	0.29	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	258	1542		172	1569		106	967		36	844	
v/s Ratio Prot		0.33			0.25		0.06	c0.24		0.01	c0.24	
v/s Ratio Perm	0.09			c0.46								
v/c Ratio	0.16	0.62		0.89	0.47		0.84	0.73		0.58	0.85	
Uniform Delay, d1	12.4	16.8		21.2	15.0		45.9	29.5		48.3	33.7	
Progression Factor	1.00	1.00		0.46	0.27		0.85	0.33		0.39	0.22	
Incremental Delay, d2	1.4	1.9		31.5	0.6		22.5	2.3		14.2	7.1	
Delay (s)	13.7	18.7		41.2	4.7		61.7	11.9		33.1	14.4	
Level of Service	B	B		D	A		E	B		C	B	
Approach Delay (s)		18.5			11.0			17.4			14.9	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	15.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		

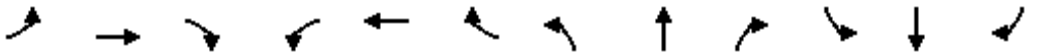
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1520	2951	1333	2949	2980	1360	2863	2923	1333	2891	2980	2347
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1520	2951	1333	2949	2980	1360	2863	2923	1333	2891	2980	2347
Volume (vph)	65	1080	275	195	220	130	450	365	285	645	770	905
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	68	1137	289	205	232	137	474	384	300	679	811	953
RTOR Reduction (vph)	0	0	7	0	0	0	0	0	15	0	0	431
Lane Group Flow (vph)	68	1137	282	205	232	137	474	384	285	679	811	522
Heavy Vehicles (%)	0%	3%	2%	0%	2%	0%	3%	4%	2%	2%	2%	2%
Turn Type	Prot		pm+ov	Prot		Free	Prot		pm+ov	Prot		Over
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases			2			Free			8			
Actuated Green, G (s)	31.0	37.0	52.0	7.0	13.0	100.0	15.0	15.6	22.6	24.4	25.0	31.0
Effective Green, g (s)	31.0	37.0	52.0	7.0	13.0	100.0	15.0	15.6	22.6	24.4	25.0	31.0
Actuated g/C Ratio	0.31	0.37	0.52	0.07	0.13	1.00	0.15	0.16	0.23	0.24	0.25	0.31
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	471	1092	693	206	387	1360	429	456	355	705	745	728
v/s Ratio Prot	0.04	c0.39	0.06	c0.07	0.08		c0.17	0.13	0.06	0.23	c0.27	0.22
v/s Ratio Perm			0.15			c0.10			0.16			
v/c Ratio	0.14	1.04	0.41	1.00	0.60	0.10	1.10	0.84	0.80	0.96	1.09	0.72
Uniform Delay, d1	24.9	31.5	14.6	46.5	41.0	0.0	42.5	41.0	36.6	37.4	37.5	30.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	38.6	0.4	61.0	2.5	0.1	75.0	13.2	12.4	24.9	59.7	3.4
Delay (s)	25.1	70.1	15.0	107.5	43.5	0.1	117.5	54.2	49.0	62.3	97.2	34.0
Level of Service	C	E	B	F	D	A	F	D	D	E	F	C
Approach Delay (s)		57.4			56.0			78.8			62.8	
Approach LOS		E			E			E			E	

Intersection Summary			
HCM Average Control Delay	64.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.9%	ICU Level of Service	F
Analysis Period (min)	15		

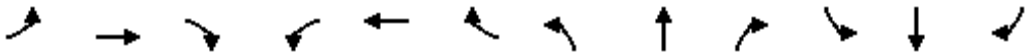
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.95		1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.96		1.00	0.98		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.97	1.00
Satd. Flow (prot)	1520	4148		1520	2943		1520	1600	1360		1557	1360
Flt Permitted	0.47	1.00		0.11	1.00		0.73	1.00	1.00		0.84	1.00
Satd. Flow (perm)	750	4148		178	2943		1162	1600	1360		1350	1360
Volume (vph)	30	1140	360	90	400	75	115	40	160	25	20	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	1200	379	95	421	79	121	42	168	26	21	11
RTOR Reduction (vph)	0	42	0	0	12	0	0	0	33	0	0	9
Lane Group Flow (vph)	32	1537	0	95	488	0	121	42	135	0	47	2
Heavy Vehicles (%)	0%	2%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%
Turn Type	pm+pt			pm+pt			Perm		pm+ov	Perm		pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	59.0	55.3		66.8	59.2		12.3	12.3	19.9		12.3	16.0
Effective Green, g (s)	59.0	55.3		66.8	59.2		12.3	12.3	19.9		12.3	16.0
Actuated g/C Ratio	0.68	0.63		0.77	0.68		0.14	0.14	0.23		0.14	0.18
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	540	2631		253	1998		164	226	373		190	312
v/s Ratio Prot	0.00	c0.37		c0.03	0.17			0.03	c0.03			0.00
v/s Ratio Perm	0.04			0.25			c0.10		0.07		0.03	0.00
v/c Ratio	0.06	0.58		0.38	0.24		0.74	0.19	0.36		0.25	0.01
Uniform Delay, d1	4.7	9.3		4.7	5.4		35.9	33.0	28.3		33.3	29.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.0	1.0		0.9	0.1		15.8	0.4	0.6		0.7	0.0
Delay (s)	4.7	10.2		5.6	5.5		51.8	33.4	28.9		34.0	29.1
Level of Service	A	B		A	A		D	C	C		C	C
Approach Delay (s)		10.1			5.5			37.8			33.1	
Approach LOS		B			A			D			C	

Intersection Summary			
HCM Average Control Delay	13.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	87.2	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

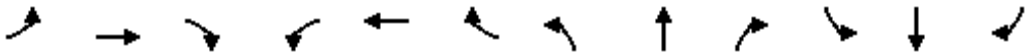


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.91	0.91		0.91	0.91		1.00	0.95	1.00	1.00	0.91	
Frt	1.00	0.95		1.00	0.98		1.00	1.00	0.85	1.00	0.96	
Flt Protected	0.95	0.97		0.95	0.97		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1356	2639		1356	2714		1476	2951	1360	1520	4093	
Flt Permitted	0.95	0.97		0.95	0.97		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1356	2639		1356	2714		1476	2951	1360	1520	4093	
Volume (vph)	675	50	175	535	150	80	380	1440	90	35	1325	555
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	711	53	184	563	158	84	400	1516	95	37	1395	584
RTOR Reduction (vph)	0	36	0	0	12	0	0	0	19	0	58	0
Lane Group Flow (vph)	356	556	0	282	511	0	400	1516	76	37	1921	0
Heavy Vehicles (%)	2%	0%	3%	2%	3%	0%	3%	3%	0%	0%	2%	2%
Turn Type	Split			Split			Prot		pm+ov	Prot		
Protected Phases	4	4		8	8		5	2	8	1	6	
Permitted Phases									2			
Actuated Green, G (s)	26.0	26.0		22.0	22.0		23.8	63.6	85.6	3.2	43.0	
Effective Green, g (s)	26.0	26.0		22.0	22.0		23.8	63.6	85.6	3.2	43.0	
Actuated g/C Ratio	0.20	0.20		0.17	0.17		0.18	0.49	0.65	0.02	0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	270	525		228	456		269	1435	890	37	1346	
v/s Ratio Prot	c0.26	0.21		c0.21	0.19		c0.27	0.51	0.01	0.02	c0.47	
v/s Ratio Perm									0.04			
v/c Ratio	1.32	1.11dl		1.24	1.12		1.49	1.06	0.08	1.00	1.43	
Uniform Delay, d1	52.4	52.4		54.4	54.4		53.5	33.6	8.3	63.8	43.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	167.0	55.8		138.3	79.6		238.0	40.2	0.0	148.0	196.5	
Delay (s)	219.4	108.2		192.7	134.0		291.5	73.8	8.3	211.8	240.4	
Level of Service	F	F		F	F		F	E	A	F	F	
Approach Delay (s)		150.0			154.6			114.0			239.8	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	169.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	130.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	123.3%	ICU Level of Service	H
Analysis Period (min)	15		

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

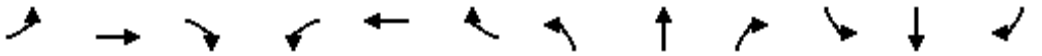
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.98		1.00	0.98		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	2894		1520	2925		1476	2908		1520	2824	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1520	2894		1520	2925		1476	2908		1520	2824	
Volume (vph)	125	860	190	170	950	110	160	400	55	105	365	200
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	132	905	200	179	1000	116	168	421	58	111	384	211
RTOR Reduction (vph)	0	19	0	0	9	0	0	11	0	0	74	0
Lane Group Flow (vph)	132	1086	0	179	1107	0	168	468	0	111	521	0
Heavy Vehicles (%)	0%	2%	3%	0%	2%	5%	3%	3%	0%	0%	3%	0%
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	9.0	38.0		12.0	41.0		12.0	24.4		9.6	22.0	
Effective Green, g (s)	9.0	38.0		12.0	41.0		12.0	24.4		9.6	22.0	
Actuated g/C Ratio	0.09	0.38		0.12	0.41		0.12	0.24		0.10	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	137	1100		182	1199		177	710		146	621	
v/s Ratio Prot	0.09	c0.38		c0.12	c0.38		c0.11	0.16		0.07	c0.18	
v/s Ratio Perm												
v/c Ratio	0.96	0.99		0.98	0.92		0.95	0.66		0.76	0.84	
Uniform Delay, d1	45.3	30.8		43.9	28.0		43.7	34.1		44.1	37.3	
Progression Factor	1.00	1.00		1.32	0.38		0.63	0.66		1.49	0.41	
Incremental Delay, d2	65.3	23.9		34.2	4.7		37.0	2.7		11.5	7.2	
Delay (s)	110.6	54.7		92.2	15.3		64.7	25.3		77.3	22.5	
Level of Service	F	D		F	B		E	C		E	C	
Approach Delay (s)		60.6			26.0			35.5			31.1	
Approach LOS		E			C			D			C	

Intersection Summary			
HCM Average Control Delay	39.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		

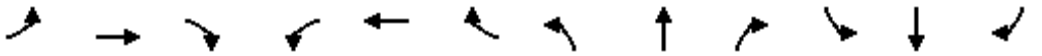
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		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)	1520	4245		1520	4200		1520	2931		1520	2980	1320
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1520	4245		1520	4200		1520	2931		1520	2980	1320
Volume (vph)	140	1380	100	70	865	150	80	275	40	150	305	175
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	1453	105	74	911	158	84	289	42	158	321	184
RTOR Reduction (vph)	0	8	0	0	24	0	0	11	0	0	0	71
Lane Group Flow (vph)	147	1550	0	74	1045	0	84	320	0	158	321	113
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	2%	0%	0%	2%	3%
Turn Type	Prot			Prot			Prot			Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	14.6	42.3		6.5	34.2		8.3	18.4		16.8	26.9	41.5
Effective Green, g (s)	14.6	42.3		6.5	34.2		8.3	18.4		16.8	26.9	41.5
Actuated g/C Ratio	0.15	0.42		0.06	0.34		0.08	0.18		0.17	0.27	0.42
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	222	1796		99	1436		126	539		255	802	548
v/s Ratio Prot	c0.10	c0.37		0.05	0.25		0.06	c0.11		c0.10	0.11	0.03
v/s Ratio Perm												0.06
v/c Ratio	0.66	0.86		0.75	0.73		0.67	0.59		0.62	0.40	0.21
Uniform Delay, d1	40.4	26.2		45.9	28.8		44.5	37.4		38.6	29.9	18.7
Progression Factor	1.00	1.00		0.90	0.34		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.2	4.6		2.8	0.2		12.5	4.7		4.4	1.5	0.2
Delay (s)	47.6	30.8		44.3	9.9		57.1	42.1		43.1	31.4	18.9
Level of Service	D	C		D	A		E	D		D	C	B
Approach Delay (s)		32.2			12.1			45.1			30.7	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	27.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

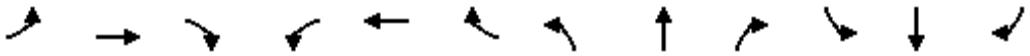
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2705	2951	1360	2863	2980	1360	1520	2895	1360	1520	2951	1320
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2705	2951	1360	2863	2980	1360	1520	2895	1360	1520	2951	1320
Volume (vph)	170	985	200	155	1035	25	125	505	75	50	865	305
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	179	1037	211	163	1089	26	132	532	79	53	911	321
RTOR Reduction (vph)	0	0	11	0	0	15	0	0	47	0	0	30
Lane Group Flow (vph)	179	1037	200	163	1089	11	132	532	32	53	911	291
Heavy Vehicles (%)	9%	3%	0%	3%	2%	0%	0%	5%	0%	0%	3%	3%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.0	37.1	46.9	6.9	37.0	43.4	9.8	33.6	40.5	6.4	30.2	37.2
Effective Green, g (s)	7.0	37.1	46.9	6.9	37.0	43.4	9.8	33.6	40.5	6.4	30.2	37.2
Actuated g/C Ratio	0.07	0.37	0.47	0.07	0.37	0.43	0.10	0.34	0.40	0.06	0.30	0.37
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	189	1095	692	198	1103	590	149	973	605	97	891	491
v/s Ratio Prot	0.07	c0.35	0.03	0.06	c0.37	0.00	c0.09	0.18	0.00	0.03	c0.31	0.04
v/s Ratio Perm			0.12			0.01			0.02			0.18
v/c Ratio	0.95	0.95	0.29	0.82	0.99	0.02	0.89	0.55	0.05	0.55	1.02	0.59
Uniform Delay, d1	46.3	30.5	16.3	45.9	31.3	16.2	44.5	27.0	18.1	45.4	34.9	25.3
Progression Factor	1.00	1.00	1.00	0.77	0.64	1.04	0.67	0.42	0.04	0.93	1.09	1.16
Incremental Delay, d2	49.8	15.9	0.2	7.9	11.7	0.0	38.3	1.9	0.0	0.6	15.5	0.2
Delay (s)	96.1	46.4	16.5	43.1	31.7	16.8	68.2	13.4	0.8	42.9	53.6	29.7
Level of Service	F	D	B	D	C	B	E	B	A	D	D	C
Approach Delay (s)		48.2			32.9			21.8			47.1	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	39.6	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	89.7%	ICU Level of Service	E
Analysis Period (min)	15		

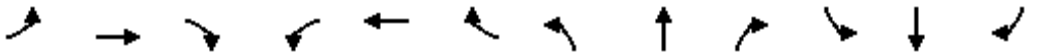
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	
Frt		0.98			0.98		1.00	1.00	0.85	1.00	0.98	
Flt Protected		1.00			1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		2884			2877		1520	2923	1360	1448	2878	
Flt Permitted		1.00			1.00		0.21	1.00	1.00	0.30	1.00	
Satd. Flow (perm)		2884			2877		334	2923	1360	452	2878	
Volume (vph)	20	805	110	50	505	85	75	535	115	95	570	90
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	847	116	53	532	89	79	563	121	100	600	95
RTOR Reduction (vph)	0	11	0	0	12	0	0	0	17	0	13	0
Lane Group Flow (vph)	0	973	0	0	662	0	79	563	104	100	682	0
Heavy Vehicles (%)	0%	4%	0%	0%	3%	6%	0%	4%	0%	5%	4%	0%
Turn Type	Split			Split			Perm		pm+ov	Perm		
Protected Phases	4	4		8	8			2	8		6	
Permitted Phases							2		2	6		
Actuated Green, G (s)		34.0			24.0		30.0	30.0	54.0	30.0	30.0	
Effective Green, g (s)		34.0			24.0		30.0	30.0	54.0	30.0	30.0	
Actuated g/C Ratio		0.34			0.24		0.30	0.30	0.54	0.30	0.30	
Clearance Time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		981			690		100	877	789	136	863	
v/s Ratio Prot		c0.34			c0.23			0.19	0.03		c0.24	
v/s Ratio Perm							0.24		0.04	0.22		
v/c Ratio		0.99			0.96		0.79	0.64	0.13	0.74	0.79	
Uniform Delay, d1		32.9			37.5		32.1	30.3	11.4	31.4	32.1	
Progression Factor		0.09			1.44		0.71	0.71	0.92	1.00	1.00	
Incremental Delay, d2		15.7			4.1		35.8	2.6	0.1	29.5	7.3	
Delay (s)		18.6			58.3		58.6	24.2	10.5	60.9	39.4	
Level of Service		B			E		E	C	B	E	D	
Approach Delay (s)		18.6			58.3			25.6			42.1	
Approach LOS		B			E			C			D	

Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.2%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1476	2923	1360	1520	2951	1360	2863	2923	1360	2949	2923	1295
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1476	2923	1360	1520	2951	1360	2863	2923	1360	2949	2923	1295
Volume (vph)	160	920	145	60	555	45	195	515	45	80	1055	190
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	168	968	153	63	584	47	205	542	47	84	1111	200
RTOR Reduction (vph)	0	0	21	0	0	34	0	0	25	0	0	20
Lane Group Flow (vph)	168	968	132	63	584	13	205	542	22	84	1111	180
Heavy Vehicles (%)	3%	4%	0%	0%	3%	0%	3%	4%	0%	0%	4%	5%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	14.1	33.0	40.8	4.0	22.9	27.7	7.8	42.2	46.2	4.8	39.2	53.3
Effective Green, g (s)	14.1	33.0	40.8	4.0	22.9	27.7	7.8	42.2	46.2	4.8	39.2	53.3
Actuated g/C Ratio	0.14	0.33	0.41	0.04	0.23	0.28	0.08	0.42	0.46	0.05	0.39	0.53
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	208	965	609	61	676	431	223	1234	683	142	1146	742
v/s Ratio Prot	c0.11	c0.33	0.02	0.04	0.20	0.00	c0.07	0.19	0.00	0.03	c0.38	0.03
v/s Ratio Perm			0.08			0.01			0.01			0.10
v/c Ratio	0.81	1.00	0.22	1.03	0.86	0.03	0.92	0.44	0.03	0.59	0.97	0.24
Uniform Delay, d1	41.6	33.5	19.2	48.0	37.1	26.4	45.8	20.5	14.7	46.6	29.8	12.5
Progression Factor	1.32	1.26	1.38	0.76	0.58	0.13	1.00	1.00	1.00	0.80	0.46	0.14
Incremental Delay, d2	18.5	28.3	0.2	80.1	4.6	0.0	38.3	1.1	0.0	3.8	14.3	0.1
Delay (s)	73.3	70.7	26.7	116.6	26.3	3.5	84.1	21.6	14.7	41.3	28.0	1.9
Level of Service	E	E	C	F	C	A	F	C	B	D	C	A
Approach Delay (s)		65.8			32.9			37.4			25.1	
Approach LOS		E			C			D			C	

Intersection Summary			
HCM Average Control Delay	41.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	88.7%	ICU Level of Service	E
Analysis Period (min)	15		

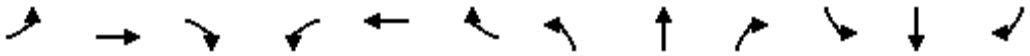
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1246	1153	2492	1204	1357	2739
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1246	1153	2492	1204	1357	2739
Volume (vph)	225	220	1105	535	165	1135
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	237	232	1163	563	174	1195
RTOR Reduction (vph)	0	18	0	319	0	0
Lane Group Flow (vph)	237	214	1163	244	174	1195
Heavy Vehicles (%)	22%	18%	22%	13%	12%	11%
Turn Type		pm+ov		Perm	Prot	
Protected Phases	8	1	2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)	14.3	22.0	26.0	26.0	7.7	37.7
Effective Green, g (s)	14.3	22.0	26.0	26.0	7.7	37.7
Actuated g/C Ratio	0.24	0.37	0.43	0.43	0.13	0.63
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	297	500	1080	522	174	1721
v/s Ratio Prot	c0.19	0.05	c0.47		c0.13	0.44
v/s Ratio Perm		0.13		0.20		
v/c Ratio	0.80	0.43	1.08	0.47	1.00	0.69
Uniform Delay, d1	21.5	14.3	17.0	12.1	26.1	7.4
Progression Factor	1.00	1.00	1.00	1.00	0.96	1.04
Incremental Delay, d2	13.8	0.6	50.6	3.0	68.0	2.3
Delay (s)	35.3	14.9	67.6	15.1	93.0	10.0
Level of Service	D	B	E	B	F	A
Approach Delay (s)	25.2		50.4			20.5
Approach LOS	C		D			C

Intersection Summary			
HCM Average Control Delay	35.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	71.9%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		0.97	0.95	1.00	1.00	0.91	1.00	0.97	0.91	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94	
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)	2863	2890		2891	2951	1133	1394	4082	1308	2437	4004	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	2863	2890		2891	2951	1133	1394	4082	1308	2437	4004	
Volume (vph)	760	1175	20	205	340	125	55	2070	520	335	655	430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	800	1237	21	216	358	132	58	2179	547	353	689	453
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	3	0	113	0
Lane Group Flow (vph)	800	1257	0	216	358	132	58	2179	544	353	1029	0
Heavy Vehicles (%)	3%	5%	0%	2%	3%	20%	9%	7%	4%	21%	3%	2%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	20.2	31.0		5.0	15.8	25.8	7.8	38.0	43.0	10.0	40.2	
Effective Green, g (s)	20.2	31.0		5.0	15.8	25.8	7.8	38.0	43.0	10.0	40.2	
Actuated g/C Ratio	0.20	0.31		0.05	0.16	0.26	0.08	0.38	0.43	0.10	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	578	896		145	466	292	109	1551	615	244	1610	
v/s Ratio Prot	0.28	c0.43		c0.07	0.12	0.05	0.04	c0.53	0.04	c0.14	0.26	
v/s Ratio Perm						0.07			0.37			
v/c Ratio	1.38	1.40		1.49	0.77	0.45	0.53	1.40	0.88	1.45	0.64	
Uniform Delay, d1	39.9	34.5		47.5	40.3	31.2	44.3	31.0	26.2	45.0	24.1	
Progression Factor	1.00	1.00		0.87	0.90	1.03	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	183.4	187.9		252.8	7.4	1.1	4.9	186.1	14.2	222.6	2.0	
Delay (s)	223.3	222.4		293.9	43.6	33.3	49.3	217.1	40.5	267.6	26.0	
Level of Service	F	F		F	D	C	D	F	D	F	C	
Approach Delay (s)		222.7			118.3			178.9			83.1	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM Average Control Delay	165.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	118.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.91	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2923	1046	2782	4200	1178	1248
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2923	1046	2782	4200	1178	1248
Volume (vph)	1450	270	175	365	140	560
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1526	284	184	384	147	589
RTOR Reduction (vph)	0	140	0	0	0	9
Lane Group Flow (vph)	1526	144	184	384	147	580
Heavy Vehicles (%)	4%	30%	6%	4%	29%	9%
Turn Type		Perm	Prot			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4				2
Actuated Green, G (s)	49.0	49.0	23.0	76.0	16.0	39.0
Effective Green, g (s)	49.0	49.0	23.0	76.0	16.0	39.0
Actuated g/C Ratio	0.49	0.49	0.23	0.76	0.16	0.39
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1432	513	640	3192	188	537
v/s Ratio Prot	c0.52		0.07	0.09	0.12	c0.25
v/s Ratio Perm		0.14				0.22
v/c Ratio	1.07	0.28	0.29	0.12	0.78	1.08
Uniform Delay, d1	25.5	15.1	31.7	3.2	40.3	30.5
Progression Factor	0.49	0.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	31.3	0.1	0.2	0.1	26.9	62.1
Delay (s)	43.8	0.1	32.0	3.2	67.3	92.6
Level of Service	D	A	C	A	E	F
Approach Delay (s)	37.0			12.6	87.6	
Approach LOS	D			B	F	

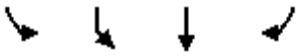
Intersection Summary			
HCM Average Control Delay	44.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0				4.0	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95				1.00	0.95		1.00	0.95	1.00	
Frt	1.00	0.94				1.00	0.98		1.00	1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00		0.95	1.00	1.00	
Satd. Flow (prot)	1490	2808				1464	2924		1476	2815	1323	
Flt Permitted	0.95	1.00				0.95	1.00		0.95	1.00	1.00	
Satd. Flow (perm)	1490	2808				1464	2924		1476	2815	1323	
Volume (vph)	135	530	190	120	25	225	745	115	240	755	175	20
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	558	200	126	26	237	784	121	253	795	184	21
RTOR Reduction (vph)	0	14	0	0	0	0	12	0	0	0	4	0
Lane Group Flow (vph)	142	870	0	0	0	263	893	0	253	795	201	0
Heavy Vehicles (%)	2%	3%	1%	1%	2%	4%	2%	1%	3%	8%	3%	1%
Turn Type	Prot				Prot	Prot			Prot		Perm	
Protected Phases	7	4			3	3	8		5	2		
Permitted Phases											2	
Actuated Green, G (s)	9.0	24.0				13.0	28.0		12.0	30.0	30.0	
Effective Green, g (s)	9.0	24.0				13.0	28.0		12.0	30.0	30.0	
Actuated g/C Ratio	0.09	0.24				0.13	0.28		0.12	0.30	0.30	
Clearance Time (s)	4.0	4.0				4.0	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0				3.0	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	134	674				190	819		177	845	397	
v/s Ratio Prot	0.10	c0.31				c0.18	0.31		c0.17	0.28		
v/s Ratio Perm											0.15	
v/c Ratio	1.06	1.29				1.38	1.09		1.43	0.94	0.51	
Uniform Delay, d1	45.5	38.0				43.5	36.0		44.0	34.1	28.9	
Progression Factor	1.21	0.99				1.00	1.00		0.81	0.90	0.86	
Incremental Delay, d2	69.3	136.3				202.1	58.8		218.9	17.5	3.9	
Delay (s)	124.3	174.0				245.6	94.8		254.5	48.2	28.9	
Level of Service	F	F				F	F		F	D	C	
Approach Delay (s)		167.1					128.8			86.7		
Approach LOS		F					F			F		

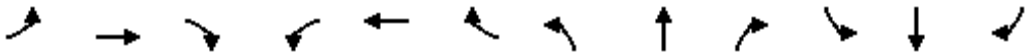
Intersection Summary			
HCM Average Control Delay	136.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.38		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	114.8%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL2	SBL	SBT	SBR
Lane Configurations				
Ideal Flow (vphpl)	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0	4.0
Lane Util. Factor		1.00	0.95	1.00
Frt		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00
Satd. Flow (prot)		1505	2923	1333
Flt Permitted		0.95	1.00	1.00
Satd. Flow (perm)		1505	2923	1333
Volume (vph)	200	150	1220	205
Peak-hour factor, PHF	0.95	0.95	0.95	0.95
Adj. Flow (vph)	211	158	1284	216
RTOR Reduction (vph)	0	0	0	21
Lane Group Flow (vph)	0	369	1284	195
Heavy Vehicles (%)	1%	1%	4%	2%
Turn Type	Prot	Prot		pm+ov
Protected Phases	1	1	6	7
Permitted Phases				6
Actuated Green, G (s)		17.0	35.0	44.0
Effective Green, g (s)		17.0	35.0	44.0
Actuated g/C Ratio		0.17	0.35	0.44
Clearance Time (s)		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0
Lane Grp Cap (vph)		256	1023	587
v/s Ratio Prot		c0.25	c0.44	0.03
v/s Ratio Perm				0.12
v/c Ratio		1.44	1.26	0.33
Uniform Delay, d1		41.5	32.5	18.4
Progression Factor		0.96	0.95	0.77
Incremental Delay, d2		214.7	121.0	0.3
Delay (s)		254.6	152.0	14.5
Level of Service		F	F	B
Approach Delay (s)			156.4	
Approach LOS			F	

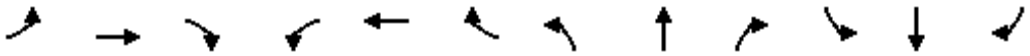
Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0		4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00		1.00	0.97	1.00		1.00	0.95			0.95	
Frt	1.00		0.85	1.00	0.95		1.00	1.00			1.00	
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1520		1308	2835	1446		1520	2895			2891	
Flt Permitted	0.53		1.00	0.95	1.00		0.07	1.00			1.00	
Satd. Flow (perm)	846		1308	2835	1446		114	2895			2891	
Volume (vph)	35	0	120	895	135	65	85	1345	0	0	1465	20
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	37	0	126	942	142	68	89	1416	0	0	1542	21
RTOR Reduction (vph)	0	0	65	0	17	0	0	0	0	0	1	0
Lane Group Flow (vph)	37	0	61	942	193	0	89	1416	0	0	1562	0
Heavy Vehicles (%)	0%	0%	4%	4%	4%	8%	0%	5%	0%	0%	5%	0%
Turn Type	custom		custom	Perm			pm+pt					
Protected Phases					8		5	2			6	
Permitted Phases	4		4	8			2					
Actuated Green, G (s)	32.0		32.0	32.0	32.0		60.0	60.0			52.0	
Effective Green, g (s)	32.0		32.0	32.0	32.0		60.0	60.0			52.0	
Actuated g/C Ratio	0.32		0.32	0.32	0.32		0.60	0.60			0.52	
Clearance Time (s)	4.0		4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	271		419	907	463		125	1737			1503	
v/s Ratio Prot					0.13		0.03	c0.49			c0.54	
v/s Ratio Perm	0.04		0.05	c0.33			0.40					
v/c Ratio	0.14		0.14	1.04	0.42		0.71	0.82			1.04	
Uniform Delay, d1	24.2		24.2	34.0	26.7		18.9	15.7			24.0	
Progression Factor	1.00		1.00	1.00	1.00		2.72	0.23			1.00	
Incremental Delay, d2	0.2		0.2	40.4	0.6		1.8	0.4			34.1	
Delay (s)	24.4		24.4	74.4	27.3		53.1	4.0			58.1	
Level of Service	C		C	E	C		D	A			E	
Approach Delay (s)		24.4			65.8			6.9			58.1	
Approach LOS		C			E			A			E	

Intersection Summary			
HCM Average Control Delay	41.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.0%	ICU Level of Service	F
Analysis Period (min)	15		

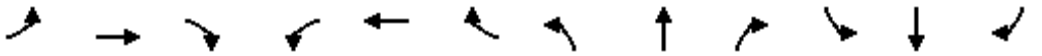
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0					4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00					1.00	0.95		1.00	0.95	
Frt		0.98					1.00	0.99		1.00	0.99	
Flt Protected		0.99					0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1496					1520	2865		1448	2891	
Flt Permitted		0.99					0.10	1.00		0.09	1.00	
Satd. Flow (perm)		1496					152	2865		133	2891	
Volume (vph)	100	235	50	0	0	0	25	1330	100	490	1800	155
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	247	53	0	0	0	26	1400	105	516	1895	163
RTOR Reduction (vph)	0	5	0	0	0	0	0	5	0	0	6	0
Lane Group Flow (vph)	0	400	0	0	0	0	26	1500	0	516	2052	0
Heavy Vehicles (%)	5%	4%	0%	0%	0%	0%	0%	5%	5%	5%	4%	3%
Turn Type	Perm						pm+pt			pm+pt		
Protected Phases		4					5	2		1	6	
Permitted Phases	4						2			6		
Actuated Green, G (s)		23.0					44.4	42.0		69.0	62.6	
Effective Green, g (s)		23.0					44.4	42.0		69.0	62.6	
Actuated g/C Ratio		0.23					0.44	0.42		0.69	0.63	
Clearance Time (s)		4.0					4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0					3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		344					100	1203		394	1810	
v/s Ratio Prot							0.01	0.52		c0.30	0.71	
v/s Ratio Perm		0.27					0.11			c0.60		
v/c Ratio		1.16					0.26	1.25		1.31	1.13	
Uniform Delay, d1		38.5					21.0	29.0		31.9	18.7	
Progression Factor		1.00					1.32	1.17		0.90	1.20	
Incremental Delay, d2		100.1					1.3	117.9		141.1	60.9	
Delay (s)		138.6					29.0	151.8		169.8	83.4	
Level of Service		F					C	F		F	F	
Approach Delay (s)		138.6			0.0			149.8			100.7	
Approach LOS		F			A			F			F	

Intersection Summary			
HCM Average Control Delay	120.8	HCM Level of Service	F
HCM Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	114.5%	ICU Level of Service	H
Analysis Period (min)	15		

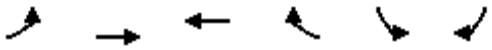
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		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)	1490	4180		1520	4062		1448	2970		1462	2980	1320
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1490	4180		1520	4062		1448	2970		1462	2980	1320
Volume (vph)	235	1265	55	45	860	205	100	880	25	225	660	545
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	247	1332	58	47	905	216	105	926	26	237	695	574
RTOR Reduction (vph)	0	4	0	0	39	0	0	2	0	0	0	49
Lane Group Flow (vph)	247	1386	0	47	1082	0	105	950	0	237	695	525
Heavy Vehicles (%)	2%	4%	0%	0%	5%	2%	5%	2%	0%	4%	2%	3%
Turn Type	Prot			Prot			Prot			Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	15.0	36.6		3.2	24.8		9.5	29.2		15.0	34.7	49.7
Effective Green, g (s)	15.0	36.6		3.2	24.8		9.5	29.2		15.0	34.7	49.7
Actuated g/C Ratio	0.15	0.37		0.03	0.25		0.10	0.29		0.15	0.35	0.50
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	224	1530		49	1007		138	867		219	1034	709
v/s Ratio Prot	c0.17	0.33		0.03	c0.27		0.07	c0.32		c0.16	0.23	0.11
v/s Ratio Perm												0.29
v/c Ratio	1.10	0.91		0.96	1.07		0.76	1.10		1.08	0.67	0.74
Uniform Delay, d1	42.5	30.1		48.3	37.6		44.1	35.4		42.5	27.8	20.0
Progression Factor	1.02	0.16		1.00	1.00		0.88	0.52		1.00	1.00	1.00
Incremental Delay, d2	73.1	4.3		111.9	50.6		10.5	51.8		84.4	3.5	4.2
Delay (s)	116.6	9.2		160.3	88.2		49.4	70.1		126.9	31.3	24.2
Level of Service	F	A		F	F		D	E		F	C	C
Approach Delay (s)		25.4			91.1			68.1			43.6	
Approach LOS		C			F			E			D	

Intersection Summary			
HCM Average Control Delay	53.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	98.6%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1382	4200	4082	1333	2920	1347
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1382	4200	4082	1333	2920	1347
Volume (vph)	105	2280	1635	135	570	245
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	2400	1721	142	600	258
RTOR Reduction (vph)	0	0	0	73	0	146
Lane Group Flow (vph)	111	2400	1721	69	600	112
Heavy Vehicles (%)	10%	4%	7%	2%	1%	1%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	7.0	45.0	34.0	34.0	17.0	17.0
Effective Green, g (s)	7.0	45.0	34.0	34.0	17.0	17.0
Actuated g/C Ratio	0.10	0.64	0.49	0.49	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	138	2700	1983	647	709	327
v/s Ratio Prot	0.08	c0.57	0.42		c0.21	
v/s Ratio Perm				0.05		0.08
v/c Ratio	0.80	0.89	0.87	0.11	0.85	0.34
Uniform Delay, d1	30.8	10.4	16.0	9.8	25.3	21.9
Progression Factor	1.00	1.00	0.41	0.01	1.00	1.00
Incremental Delay, d2	27.7	4.9	5.0	0.3	11.9	2.8
Delay (s)	58.6	15.3	11.5	0.4	37.2	24.7
Level of Service	E	B	B	A	D	C
Approach Delay (s)		17.2	10.7		33.4	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	17.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	0.97	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.99		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	2234	938	2397		1345	2690
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	2234	938	2397		1345	2690
Volume (vph)	140	100	745	80	75	560
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	105	784	84	79	589
RTOR Reduction (vph)	0	76	10	0	0	0
Lane Group Flow (vph)	147	29	858	0	79	589
Heavy Vehicles (%)	32%	45%	27%	6%	13%	13%
Turn Type		pm+ov			Prot	
Protected Phases	8	1	2		1	6
Permitted Phases		8				
Actuated Green, G (s)	8.6	13.7	34.3		5.1	43.4
Effective Green, g (s)	8.6	13.7	34.3		5.1	43.4
Actuated g/C Ratio	0.14	0.23	0.57		0.08	0.72
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	320	277	1370		114	1946
v/s Ratio Prot	c0.07	0.01	c0.36		c0.06	0.22
v/s Ratio Perm		0.02				
v/c Ratio	0.46	0.10	0.63		0.69	0.30
Uniform Delay, d1	23.6	18.3	8.6		26.7	2.9
Progression Factor	1.00	1.00	0.29		1.00	1.00
Incremental Delay, d2	1.0	0.2	0.6		16.7	0.4
Delay (s)	24.6	18.5	3.1		43.4	3.3
Level of Service	C	B	A		D	A
Approach Delay (s)	22.1		3.1			8.1
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	7.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0		4.0	4.0	4.0	4.0
Lane Util. Factor	0.95		1.00	0.95	1.00	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)	2497		1476	2789	1086	1308
Flt Permitted	1.00		0.95	1.00	0.95	1.00
Satd. Flow (perm)	2497		1476	2789	1086	1308
Volume (vph)	760	85	155	400	25	130
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	800	89	163	421	26	137
RTOR Reduction (vph)	11	0	0	0	0	55
Lane Group Flow (vph)	878	0	163	421	26	82
Heavy Vehicles (%)	11%	100%	3%	9%	40%	4%
Turn Type			Prot			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases						2
Actuated Green, G (s)	31.7		8.0	43.7	8.3	16.3
Effective Green, g (s)	31.7		8.0	43.7	8.3	16.3
Actuated g/C Ratio	0.53		0.13	0.73	0.14	0.27
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1319		197	2031	150	443
v/s Ratio Prot	c0.35		c0.11	0.15	0.02	c0.02
v/s Ratio Perm						0.04
v/c Ratio	0.67		0.83	0.21	0.17	0.18
Uniform Delay, d1	10.3		25.3	2.6	22.8	16.8
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	2.7		23.9	0.2	0.6	0.2
Delay (s)	13.0		49.2	2.8	23.4	17.0
Level of Service	B		D	A	C	B
Approach Delay (s)	13.0			15.8	18.0	
Approach LOS	B			B	B	

Intersection Summary			
HCM Average Control Delay	14.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	51.7%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Lane Util. Factor		0.91	1.00	1.00	0.91		0.97	1.00				
Frt		1.00	0.85	1.00	1.00		1.00	0.85				
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (prot)		4282	680	760	4282		1474	680				
Flt Permitted		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (perm)		4282	680	760	4282		1474	680				
Volume (vph)	0	1645	410	40	2000	0	450	0	20	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1732	432	42	2105	0	474	0	21	0	0	0
RTOR Reduction (vph)	0	0	173	0	0	0	0	17	0	0	0	0
Lane Group Flow (vph)	0	1732	259	42	2105	0	474	4	0	0	0	0
Heavy Vehicles (%)	0%	2%	100%	100%	2%	0%	100%	0%	100%	0%	0%	0%
Turn Type	Prot		Perm	Prot		Perm	Prot			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8				6		
Actuated Green, G (s)		48.0	48.0	4.0	56.0		16.0	16.0				
Effective Green, g (s)		48.0	48.0	4.0	56.0		16.0	16.0				
Actuated g/C Ratio		0.60	0.60	0.05	0.70		0.20	0.20				
Clearance Time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Vehicle Extension (s)		3.0	3.0	3.0	3.0		3.0	3.0				
Lane Grp Cap (vph)		2569	408	38	2997		295	136				
v/s Ratio Prot		0.40		0.06	c0.49		c0.32	0.01				
v/s Ratio Perm			0.38									
v/c Ratio		0.67	0.64	1.11	0.70		1.61	0.03				
Uniform Delay, d1		10.7	10.3	38.0	7.1		32.0	25.8				
Progression Factor		1.00	1.00	0.72	0.40		1.00	1.00				
Incremental Delay, d2		1.4	7.4	168.2	1.2		288.4	0.1				
Delay (s)		12.2	17.7	195.6	4.1		320.4	25.9				
Level of Service		B	B	F	A		F	C				
Approach Delay (s)		13.3			7.8			307.9			0.0	
Approach LOS		B			A			F			A	

Intersection Summary			
HCM Average Control Delay	41.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2920	4200	2020	4368	2920	2610
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2920	4200	2020	4368	2920	2610
Volume (vph)	740	625	130	1170	470	200
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	779	658	137	1232	495	211
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	779	658	137	1232	495	211
Heavy Vehicles (%)	1%	4%	46%	0%	1%	13%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	25.0	42.0	9.7	26.7	16.3	16.3
Effective Green, g (s)	25.0	42.0	9.7	26.7	16.3	16.3
Actuated g/C Ratio	0.31	0.52	0.12	0.33	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	913	2205	245	1458	595	532
v/s Ratio Prot	c0.27	0.16	0.07	c0.28	c0.17	0.08
v/s Ratio Perm						
v/c Ratio	0.85	0.30	0.56	0.84	0.83	0.40
Uniform Delay, d1	25.8	10.7	33.1	24.7	30.5	27.6
Progression Factor	0.58	0.28	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.9	0.3	2.8	6.2	9.7	0.5
Delay (s)	20.8	3.3	35.9	30.9	40.2	28.1
Level of Service	C	A	D	C	D	C
Approach Delay (s)		12.8		31.4		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2633	4160	1843	4200	2705	2184
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2633	4160	1843	4200	2705	2184
Volume (vph)	630	1085	10	820	500	80
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	663	1142	11	863	526	84
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	663	1142	11	863	526	84
Heavy Vehicles (%)	12%	5%	60%	4%	9%	35%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	16.7	33.5	0.8	17.6	13.7	13.7
Effective Green, g (s)	16.7	33.5	0.8	17.6	13.7	13.7
Actuated g/C Ratio	0.28	0.56	0.01	0.29	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	733	2323	25	1232	618	499
v/s Ratio Prot	c0.25	0.27	0.01	c0.21	c0.19	0.04
v/s Ratio Perm						
v/c Ratio	0.90	0.49	0.44	0.70	0.85	0.17
Uniform Delay, d1	20.9	8.1	29.4	18.9	22.2	18.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.6	0.7	11.9	3.3	10.9	0.2
Delay (s)	35.5	8.8	41.3	22.2	33.1	18.7
Level of Service	D	A	D	C	C	B
Approach Delay (s)		18.6		22.4		
Approach LOS		B		C		

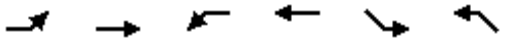
Intersection Summary			
HCM Average Control Delay	21.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	2980	2730	4325	2920	2949
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	2980	2730	4325	2920	2949
Volume (vph)	710	670	230	1620	800	180
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	747	705	242	1705	842	189
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	747	705	242	1705	842	189
Heavy Vehicles (%)	2%	2%	8%	1%	1%	0%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	27.0	54.0	14.0	41.0	30.0	30.0
Effective Green, g (s)	27.0	54.0	14.0	41.0	30.0	30.0
Actuated g/C Ratio	0.25	0.49	0.13	0.37	0.27	0.27
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	710	1463	347	1612	796	804
v/s Ratio Prot	c0.26	0.24	0.09	c0.39	c0.29	0.06
v/s Ratio Perm						
v/c Ratio	1.05	0.48	0.70	1.06	1.06	0.24
Uniform Delay, d1	41.5	18.7	46.0	34.5	40.0	31.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	48.3	1.1	6.0	39.4	48.3	0.2
Delay (s)	89.8	19.8	52.0	73.9	88.3	31.2
Level of Service	F	B	D	E	F	C
Approach Delay (s)		55.8		71.2		
Approach LOS		E		E		

Intersection Summary			
HCM Average Control Delay	67.7	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	98.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2808	4282	2808	4241	2863	2499
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2808	4282	2808	4241	2863	2499
Volume (vph)	780	1400	150	650	410	430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	821	1474	158	684	432	453
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	821	1474	158	684	432	453
Heavy Vehicles (%)	5%	2%	5%	3%	3%	18%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	25.0	35.0	7.7	17.7	15.3	15.3
Effective Green, g (s)	25.0	35.0	7.7	17.7	15.3	15.3
Actuated g/C Ratio	0.36	0.50	0.11	0.25	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1003	2141	309	1072	626	546
v/s Ratio Prot	c0.29	0.34	0.06	c0.16	0.15	c0.18
v/s Ratio Perm						
v/c Ratio	0.82	0.69	0.51	0.64	0.69	0.83
Uniform Delay, d1	20.4	13.3	29.4	23.3	25.2	26.1
Progression Factor	0.81	0.71	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5	0.8	1.4	2.9	3.3	10.1
Delay (s)	19.0	10.2	30.8	26.2	28.4	36.2
Level of Service	B	B	C	C	C	D
Approach Delay (s)		13.4		27.1		
Approach LOS		B		C		

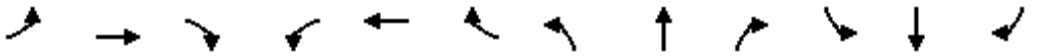
Intersection Summary			
HCM Average Control Delay	20.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	65.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2808	4241	2891	4241	2863	2756
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2808	4241	2891	4241	2863	2756
Volume (vph)	270	1395	280	985	510	230
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	1468	295	1037	537	242
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	284	1468	295	1037	537	242
Heavy Vehicles (%)	5%	3%	2%	3%	3%	7%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	11.3	21.6	7.9	18.2	12.5	12.5
Effective Green, g (s)	11.3	21.6	7.9	18.2	12.5	12.5
Actuated g/C Ratio	0.21	0.40	0.15	0.34	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	588	1696	423	1429	663	638
v/s Ratio Prot	0.10	c0.35	0.10	c0.24	c0.19	0.09
v/s Ratio Perm						
v/c Ratio	0.48	0.87	0.70	0.73	0.81	0.38
Uniform Delay, d1	18.8	14.9	21.9	15.7	19.6	17.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	4.9	5.0	1.9	7.3	0.4
Delay (s)	19.4	19.8	26.9	17.6	26.9	17.9
Level of Service	B	B	C	B	C	B
Approach Delay (s)		19.7		19.6		
Approach LOS		B		B		

Intersection Summary			
HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	54.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Lane Util. Factor	1.00	0.91			0.91	1.00			0.88	0.97		1.00
Frt	1.00	0.99			1.00	0.85			0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (prot)	1520	4206			4282	1333			2370	2891		1214
Flt Permitted	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (perm)	1520	4206			4282	1333			2370	2891		1214
Volume (vph)	225	1715	115	0	1855	230	0	0	185	475	0	20
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	237	1805	121	0	1953	242	0	0	195	500	0	21
RTOR Reduction (vph)	0	8	0	0	0	149	0	0	32	0	0	17
Lane Group Flow (vph)	237	1918	0	0	1953	93	0	0	163	500	0	4
Heavy Vehicles (%)	0%	3%	1%	0%	2%	2%	0%	0%	1%	2%	0%	12%
Turn Type	Prot					Perm			custom	Prot		custom
Protected Phases	7	4			8					6		
Permitted Phases						8			2			6
Actuated Green, G (s)	13.2	49.2			32.0	32.0			10.4	18.4		18.4
Effective Green, g (s)	13.2	49.2			32.0	32.0			10.4	18.4		18.4
Actuated g/C Ratio	0.15	0.55			0.36	0.36			0.12	0.20		0.20
Clearance Time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0			3.0	3.0		3.0
Lane Grp Cap (vph)	223	2299			1522	474			274	591		248
v/s Ratio Prot	c0.16	0.46			c0.46					c0.17		
v/s Ratio Perm						0.07			c0.07			0.00
v/c Ratio	1.06	0.83			1.28	0.20			0.60	0.85		0.02
Uniform Delay, d1	38.4	17.0			29.0	20.1			37.8	34.4		28.6
Progression Factor	1.00	1.00			0.66	0.44			1.00	1.11		1.28
Incremental Delay, d2	77.8	3.8			132.0	0.8			3.5	10.2		0.0
Delay (s)	116.2	20.8			151.3	9.7			41.3	48.3		36.7
Level of Service	F	C			F	A			D	D		D
Approach Delay (s)		31.2			135.7			41.3			47.8	
Approach LOS		C			F			D			D	

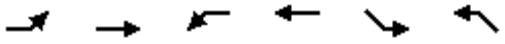
Intersection Summary			
HCM Average Control Delay	78.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	4241	2891	4160	2808	2891
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	4241	2891	4160	2808	2891
Volume (vph)	330	1075	480	775	150	720
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	347	1132	505	816	158	758
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	347	1132	505	816	158	758
Heavy Vehicles (%)	2%	3%	2%	5%	5%	2%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	17.1	32.3	18.8	34.0	26.9	26.9
Effective Green, g (s)	17.1	32.3	18.8	34.0	26.9	26.9
Actuated g/C Ratio	0.19	0.36	0.21	0.38	0.30	0.30
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	549	1522	604	1572	839	864
v/s Ratio Prot	0.12	c0.27	c0.17	0.20	0.06	c0.26
v/s Ratio Perm						
v/c Ratio	0.63	0.74	0.84	0.52	0.19	0.88
Uniform Delay, d1	33.6	25.2	34.1	21.7	23.4	30.0
Progression Factor	1.04	1.06	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.2	1.7	9.8	1.2	0.1	10.0
Delay (s)	36.2	28.6	43.9	22.9	23.5	40.0
Level of Service	D	C	D	C	C	D
Approach Delay (s)		30.3		30.9		
Approach LOS		C		C		

Intersection Summary			
HCM Average Control Delay	32.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.95	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2808	2951	2863	2980	2863	2920
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2808	2951	2863	2980	2863	2920
Volume (vph)	220	1370	370	905	300	370
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	232	1442	389	953	316	389
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	232	1442	389	953	316	389
Heavy Vehicles (%)	5%	3%	3%	2%	3%	1%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	12.0	43.1	12.9	44.0	12.0	12.0
Effective Green, g (s)	12.0	43.1	12.9	44.0	12.0	12.0
Actuated g/C Ratio	0.15	0.54	0.16	0.55	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	421	1590	462	1639	429	438
v/s Ratio Prot	0.08	c0.49	c0.14	0.32	0.11	c0.13
v/s Ratio Perm						
v/c Ratio	0.55	0.91	0.84	0.58	0.74	0.89
Uniform Delay, d1	31.5	16.6	32.6	11.9	32.5	33.3
Progression Factor	1.00	1.00	0.87	0.46	1.00	1.00
Incremental Delay, d2	1.6	9.1	7.8	0.9	6.5	19.1
Delay (s)	33.1	25.7	36.1	6.4	39.0	52.5
Level of Service	C	C	D	A	D	D
Approach Delay (s)		26.7		15.0		
Approach LOS		C		B		

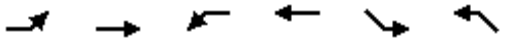
Intersection Summary			
HCM Average Control Delay	26.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	4241	2891	4241	2808	2891
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	4241	2891	4241	2808	2891
Volume (vph)	320	1485	610	660	170	620
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	337	1563	642	695	179	653
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	337	1563	642	695	179	653
Heavy Vehicles (%)	2%	3%	2%	3%	5%	2%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	19.8	45.8	25.8	51.8	26.4	26.4
Effective Green, g (s)	19.8	45.8	25.8	51.8	26.4	26.4
Actuated g/C Ratio	0.18	0.42	0.23	0.47	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	520	1766	678	1997	674	694
v/s Ratio Prot	0.12	c0.37	c0.22	0.16	0.06	c0.23
v/s Ratio Perm						
v/c Ratio	0.65	0.89	0.95	0.35	0.27	0.94
Uniform Delay, d1	41.9	29.7	41.4	18.4	33.9	41.0
Progression Factor	1.00	1.00	0.99	0.87	1.00	1.00
Incremental Delay, d2	2.8	6.9	12.2	0.2	0.2	20.9
Delay (s)	44.6	36.6	53.2	16.2	34.1	61.9
Level of Service	D	D	D	B	C	E
Approach Delay (s)		38.0		34.0		
Approach LOS		D		C		

Intersection Summary			
HCM Average Control Delay	40.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		

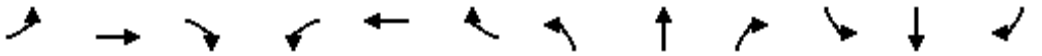
c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	4241	2835	4241	2863	2920
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	4241	2835	4241	2863	2920
Volume (vph)	370	1470	670	585	240	610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	389	1547	705	616	253	642
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	389	1547	705	616	253	642
Heavy Vehicles (%)	2%	3%	4%	3%	3%	1%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	21.2	44.2	28.2	51.2	25.6	25.6
Effective Green, g (s)	21.2	44.2	28.2	51.2	25.6	25.6
Actuated g/C Ratio	0.19	0.40	0.26	0.47	0.23	0.23
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	557	1704	727	1974	666	680
v/s Ratio Prot	0.13	c0.36	c0.25	0.15	0.09	c0.22
v/s Ratio Perm						
v/c Ratio	0.70	0.91	0.97	0.31	0.38	0.94
Uniform Delay, d1	41.4	31.0	40.5	18.4	35.5	41.5
Progression Factor	1.00	1.00	1.06	0.83	1.00	1.00
Incremental Delay, d2	3.8	8.6	10.7	0.1	0.4	21.7
Delay (s)	45.2	39.6	53.6	15.4	35.9	63.2
Level of Service	D	D	D	B	D	E
Approach Delay (s)		40.7		35.8		
Approach LOS		D		D		

Intersection Summary			
HCM Average Control Delay	42.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
Analysis Period (min)	15		

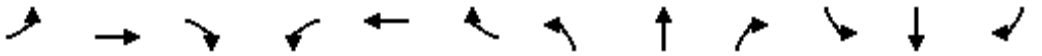
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.88	0.97	0.95	1.00	0.97	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3438	2707	3335	3374	1583	3273	1643		1770	1810	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	3438	2707	3335	3374	1583	3273	1643		1770	1810	1583
Volume (vph)	25	905	735	245	640	25	400	100	100	25	190	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	953	774	258	674	26	421	105	105	26	200	26
RTOR Reduction (vph)	0	0	141	0	0	12	0	33	0	0	0	22
Lane Group Flow (vph)	26	953	633	258	674	14	421	177	0	26	200	4
Heavy Vehicles (%)	2%	5%	5%	5%	7%	2%	7%	7%	7%	2%	5%	2%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	3.4	37.7	55.2	13.6	47.9	54.9	17.5	25.7		7.0	15.2	15.2
Effective Green, g (s)	3.4	37.7	55.2	13.6	47.9	54.9	17.5	25.7		7.0	15.2	15.2
Actuated g/C Ratio	0.03	0.38	0.55	0.14	0.48	0.55	0.18	0.26		0.07	0.15	0.15
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	60	1296	1494	454	1616	932	573	422		124	275	241
v/s Ratio Prot	0.01	c0.28	0.07	c0.08	0.20	0.00	c0.13	0.11		0.01	c0.11	
v/s Ratio Perm			0.16			0.01						0.00
v/c Ratio	0.43	0.74	0.42	0.57	0.42	0.02	0.73	0.42		0.21	0.73	0.02
Uniform Delay, d1	47.4	26.8	13.1	40.5	17.0	10.3	39.1	30.9		43.9	40.4	36.0
Progression Factor	1.22	0.90	0.73	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.6	2.7	0.1	1.6	0.8	0.0	4.9	0.7		0.8	9.2	0.0
Delay (s)	61.1	26.8	9.7	42.1	17.8	10.3	43.9	31.6		44.7	49.6	36.1
Level of Service	E	C	A	D	B	B	D	C		D	D	D
Approach Delay (s)		19.7			24.1			39.8			47.7	
Approach LOS		B			C			D			D	

Intersection Summary					
HCM Average Control Delay	26.4	HCM Level of Service	C		
HCM Volume to Capacity ratio	0.71				
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0		
Intersection Capacity Utilization	69.4%	ICU Level of Service	C		
Analysis Period (min)	15				

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3343	1583	3502	3505	1615	3303	3008		1805	1758	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1805	3343	1583	3502	3505	1615	3303	3008		1805	1758	
Volume (vph)	5	930	120	410	670	10	260	565	195	5	700	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	979	126	432	705	11	274	595	205	5	737	5
RTOR Reduction (vph)	0	0	0	0	0	6	0	25	0	0	0	0
Lane Group Flow (vph)	5	979	126	432	705	5	274	775	0	5	742	0
Heavy Vehicles (%)	0%	8%	2%	0%	3%	0%	6%	9%	34%	0%	8%	0%
Turn Type	Prot		Free	Prot		pm+ov	Prot			Prot		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			Free			8						
Actuated Green, G (s)	0.8	32.0	120.0	14.7	45.9	51.8	14.3	51.4		5.9	43.0	
Effective Green, g (s)	0.8	32.0	120.0	14.7	45.9	51.8	14.3	51.4		5.9	43.0	
Actuated g/C Ratio	0.01	0.27	1.00	0.12	0.38	0.43	0.12	0.43		0.05	0.36	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	12	891	1583	429	1341	697	394	1288		89	630	
v/s Ratio Prot	0.00	c0.29		c0.12	0.20	0.00	0.08	c0.26		0.00	c0.42	
v/s Ratio Perm			0.08			0.00						
v/c Ratio	0.42	1.10	0.08	1.01	0.53	0.01	0.70	0.60		0.06	1.18	
Uniform Delay, d1	59.4	44.0	0.0	52.6	28.6	19.4	50.8	26.4		54.4	38.5	
Progression Factor	0.95	0.94	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	17.9	58.3	0.1	45.2	1.5	0.0	5.3	0.8		0.3	95.8	
Delay (s)	74.0	99.6	0.1	97.9	30.1	19.4	56.0	27.2		54.7	134.3	
Level of Service	E	F	A	F	C	B	E	C		D	F	
Approach Delay (s)		88.2			55.5			34.6			133.8	
Approach LOS		F			E			C			F	

Intersection Summary					
HCM Average Control Delay	73.2	HCM Level of Service	E		
HCM Volume to Capacity ratio	1.02				
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0		
Intersection Capacity Utilization	95.3%	ICU Level of Service	F		
Analysis Period (min)	15				

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.88	0.91		0.97	0.95
Frt		0.85	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2347	4275		2920	3010
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2347	4275		2920	3010
Volume (vph)	0	450	925	10	1395	930
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	474	974	11	1468	979
RTOR Reduction (vph)	0	7	2	0	0	0
Lane Group Flow (vph)	0	467	983	0	1468	979
Heavy Vehicles (%)	2%	2%	2%	2%	1%	1%
Turn Type		Over			Prot	
Protected Phases		1	2		1	6
Permitted Phases						
Actuated Green, G (s)		34.0	18.0		34.0	60.0
Effective Green, g (s)		34.0	18.0		34.0	60.0
Actuated g/C Ratio		0.57	0.30		0.57	1.00
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1330	1283		1655	3010
v/s Ratio Prot		0.20	c0.23		c0.50	0.33
v/s Ratio Perm						
v/c Ratio		0.35	0.77		0.89	0.33
Uniform Delay, d1		7.0	19.1		11.3	0.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.2	4.4		6.2	0.3
Delay (s)		7.2	23.5		17.5	0.3
Level of Service		A	C		B	A
Approach Delay (s)	7.2		23.5			10.6
Approach LOS	A		C			B

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)				4.0	4.0	
Lane Util. Factor				0.95	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				3010	2891	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				3010	2891	
Volume (vph)	0	0	0	885	1375	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	932	1447	0
RTOR Reduction (vph)	0	0	0	0	28	0
Lane Group Flow (vph)	0	0	0	932	1419	0
Heavy Vehicles (%)	2%	2%	1%	1%	2%	2%
Turn Type						
Protected Phases				8	2	
Permitted Phases						
Actuated Green, G (s)				20.6	31.0	
Effective Green, g (s)				20.6	31.0	
Actuated g/C Ratio				0.35	0.52	
Clearance Time (s)				4.0	4.0	
Vehicle Extension (s)				3.0	3.0	
Lane Grp Cap (vph)				1040	1504	
v/s Ratio Prot				c0.31	c0.49	
v/s Ratio Perm						
v/c Ratio				0.90	0.94	
Uniform Delay, d1				18.5	13.5	
Progression Factor				1.00	1.00	
Incremental Delay, d2				10.1	13.2	
Delay (s)				28.6	26.7	
Level of Service				C	C	
Approach Delay (s)	0.0			28.6	26.7	
Approach LOS	A			C	C	

Intersection Summary			
HCM Average Control Delay	27.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	59.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1230	165	0	0	0	195
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	1295	174	0	0	0	205
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	1309			432		
pX, platoon unblocked						
vC, conflicting volume			1468		1295	647
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1468		1295	647
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	50
cM capacity (veh/h)			455		154	413

Direction, Lane #	EB 1	EB 2	EB 3	NB 1
Volume Total	647	647	174	205
Volume Left	0	0	0	0
Volume Right	0	0	174	205
cSH	1700	1700	1700	413
Volume to Capacity	0.38	0.38	0.10	0.50
Queue Length 95th (ft)	0	0	0	67
Control Delay (s)	0.0	0.0	0.0	22.0
Lane LOS				C
Approach Delay (s)	0.0			22.0
Approach LOS				C

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	2598			2432	760	680
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	2598			2432	760	680
Volume (vph)	310	0	0	290	135	165
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	326	0	0	305	142	174
RTOR Reduction (vph)	0	0	0	0	0	80
Lane Group Flow (vph)	326	0	0	305	142	94
Heavy Vehicles (%)	17%	0%	0%	25%	100%	100%
Turn Type						Perm
Protected Phases	4			8	2	
Permitted Phases						2
Actuated Green, G (s)	10.4			10.4	21.6	21.6
Effective Green, g (s)	10.4			10.4	21.6	21.6
Actuated g/C Ratio	0.26			0.26	0.54	0.54
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	675			632	410	367
v/s Ratio Prot	c0.13			0.13	c0.19	
v/s Ratio Perm						0.14
v/c Ratio	0.48			0.48	0.35	0.26
Uniform Delay, d1	12.5			12.5	5.2	4.9
Progression Factor	0.55			1.00	1.00	1.00
Incremental Delay, d2	0.5			0.6	2.3	1.7
Delay (s)	7.5			13.1	7.5	6.6
Level of Service	A			B	A	A
Approach Delay (s)	7.5			13.1	7.0	
Approach LOS	A			B	A	

Intersection Summary			
HCM Average Control Delay	9.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	29.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	0.95	1.00	1.00	0.95		
Frt	1.00	0.85	1.00	1.00		
Flt Protected	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	2598	680	760	2187		
Flt Permitted	1.00	1.00	0.95	1.00		
Satd. Flow (perm)	2598	680	760	2187		
Volume (vph)	310	60	70	355	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	326	63	74	374	0	0
RTOR Reduction (vph)	0	25	0	0	0	0
Lane Group Flow (vph)	326	38	74	374	0	0
Heavy Vehicles (%)	17%	100%	100%	39%	0%	0%
Turn Type		Perm	Prot			
Protected Phases	4		3	8		
Permitted Phases		4				
Actuated Green, G (s)	24.4	24.4	7.6	40.0		
Effective Green, g (s)	24.4	24.4	7.6	40.0		
Actuated g/C Ratio	0.61	0.61	0.19	1.00		
Clearance Time (s)	4.0	4.0	4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	1585	415	144	2187		
v/s Ratio Prot	c0.13		c0.10	0.17		
v/s Ratio Perm		0.06				
v/c Ratio	0.21	0.09	0.51	0.17		
Uniform Delay, d1	3.5	3.2	14.5	0.0		
Progression Factor	1.00	1.00	0.86	1.00		
Incremental Delay, d2	0.1	0.1	2.8	0.0		
Delay (s)	3.5	3.3	15.3	0.0		
Level of Service	A	A	B	A		
Approach Delay (s)	3.5			2.6	0.0	
Approach LOS	A			A	A	

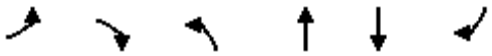
Intersection Summary			
HCM Average Control Delay	3.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	29.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.92		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1448	1221	1295	1246	1014		1448	2681		1152	2893	
Flt Permitted	0.59	1.00	1.00	0.38	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	905	1221	1295	499	1014		1448	2681		1152	2893	
Volume (vph)	8	140	600	100	120	135	250	600	160	70	1050	7
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	147	632	105	126	142	263	632	168	74	1105	7
RTOR Reduction (vph)	0	0	48	0	38	0	0	23	0	0	1	0
Lane Group Flow (vph)	8	147	584	105	230	0	263	777	0	74	1111	0
Heavy Vehicles (%)	5%	31%	5%	22%	40%	50%	5%	5%	28%	32%	5%	5%
Turn Type	pm+pt		pm+ov	pm+pt			Prot			Prot		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	17.9	17.9	43.8	25.1	25.1		25.9	48.3		9.8	32.2	
Effective Green, g (s)	17.9	17.9	43.8	25.1	25.1		25.9	48.3		9.8	32.2	
Actuated g/C Ratio	0.18	0.18	0.44	0.25	0.25		0.26	0.48		0.10	0.32	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	166	219	567	185	255		375	1295		113	932	
v/s Ratio Prot	0.00	0.12	c0.27	0.05	c0.23		0.18	0.29		0.06	c0.38	
v/s Ratio Perm	0.01		0.18	0.10								
v/c Ratio	0.05	0.67	1.03	0.57	0.90		0.70	0.60		0.65	1.19	
Uniform Delay, d1	34.0	38.3	28.1	30.9	36.2		33.5	18.8		43.5	33.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.1	7.8	45.8	4.0	31.6		5.8	2.1		12.8	97.2	
Delay (s)	34.1	46.1	73.9	34.9	67.9		39.4	20.9		56.3	131.1	
Level of Service	C	D	E	C	E		D	C		E	F	
Approach Delay (s)		68.3			58.6			25.5			126.5	
Approach LOS		E			E			C			F	

Intersection Summary			
HCM Average Control Delay	74.1	HCM Level of Service	E
HCM Volume to Capacity ratio	1.10		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	95.4%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	0.86	0.95	
Frt	1.00	0.85	1.00	1.00	0.99	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1966	1007	1216	5242	2815	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1966	1007	1216	5242	2815	
Volume (vph)	340	135	190	1350	1100	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	358	142	200	1421	1158	105
RTOR Reduction (vph)	0	115	0	0	7	0
Lane Group Flow (vph)	358	27	200	1421	1256	0
Heavy Vehicles (%)	50%	35%	25%	5%	5%	25%
Turn Type		Perm	Prot			
Protected Phases	4		5	2	3 6	
Permitted Phases		4				
Actuated Green, G (s)	18.9	18.9	16.8	51.0	48.3	
Effective Green, g (s)	18.9	18.9	16.8	51.0	48.3	
Actuated g/C Ratio	0.19	0.19	0.17	0.51	0.48	
Clearance Time (s)	4.0	4.0	4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	372	190	204	2673	1360	
v/s Ratio Prot	c0.18		c0.16	0.27	c0.45	
v/s Ratio Perm		0.03				
v/c Ratio	0.96	0.14	0.98	0.53	0.92	
Uniform Delay, d1	40.2	33.8	41.4	16.5	24.1	
Progression Factor	1.00	1.00	1.00	1.00	0.34	
Incremental Delay, d2	36.6	0.3	57.1	0.8	4.2	
Delay (s)	76.8	34.1	98.6	17.2	12.4	
Level of Service	E	C	F	B	B	
Approach Delay (s)	64.7			27.3	12.4	
Approach LOS	E			C	B	

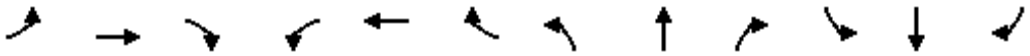
Intersection Summary			
HCM Average Control Delay	27.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		0.97	1.00			0.95	0.88	1.00	0.95	
Frt		0.93		1.00	0.86			1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1427		2808	1318			2643	2137	1490	2840	
Flt Permitted		0.92		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1344		2808	1318			2643	2137	1490	2840	
Volume (vph)	5	0	5	150	5	50	0	1060	630	40	1050	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	0	5	158	5	53	0	1116	663	42	1105	5
RTOR Reduction (vph)	0	4	0	0	36	0	0	0	325	0	1	0
Lane Group Flow (vph)	0	6	0	158	22	0	0	1116	338	42	1109	0
Heavy Vehicles (%)	2%	2%	2%	5%	2%	5%	2%	15%	12%	2%	7%	2%
Turn Type	Perm			Prot					Prot	Prot		
Protected Phases		4		3	8			2	2	1	6	
Permitted Phases	4											
Actuated Green, G (s)		18.9		10.1	33.0			51.0	51.0	4.0	38.2	
Effective Green, g (s)		18.9		10.1	33.0			51.0	51.0	4.0	38.2	
Actuated g/C Ratio		0.19		0.10	0.33			0.51	0.51	0.04	0.38	
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		254		284	435			1348	1090	60	1085	
v/s Ratio Prot				c0.06	c0.02			c0.42	0.16	c0.03	c0.39	
v/s Ratio Perm		0.00										
v/c Ratio		0.02		0.56	0.05			0.83	0.31	0.70	1.02	
Uniform Delay, d1		33.0		42.8	22.8			20.8	14.3	47.4	30.9	
Progression Factor		1.00		1.00	1.00			0.46	0.29	1.00	1.00	
Incremental Delay, d2		0.0		2.4	0.0			4.8	0.6	30.0	33.1	
Delay (s)		33.1		45.2	22.9			14.3	4.7	77.4	64.0	
Level of Service		C		D	C			B	A	E	E	
Approach Delay (s)		33.1			39.2			10.7			64.5	
Approach LOS		C			D			B			E	

Intersection Summary			
HCM Average Control Delay	32.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		

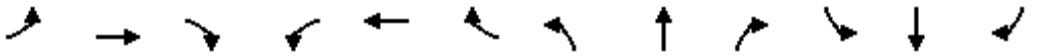
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	1.00					0.86	1.00	0.97	0.91	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		2963	1350					5570	1326	2874	4420	
Flt Permitted		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		2963	1350					5570	1326	2874	4420	
Volume (vph)	0	480	750	0	0	0	0	1610	580	380	1400	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	505	789	0	0	0	0	1695	611	400	1474	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	20	0	0	0
Lane Group Flow (vph)	0	505	789	0	0	0	0	1695	591	400	1474	0
Heavy Vehicles (%)	0%	9%	7%	0%	0%	0%	0%	5%	9%	9%	5%	0%
Turn Type			Free						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases			Free						2			
Actuated Green, G (s)		19.4	100.0					52.3	52.3	16.3	72.6	
Effective Green, g (s)		19.4	100.0					52.3	52.3	16.3	72.6	
Actuated g/C Ratio		0.19	1.00					0.52	0.52	0.16	0.73	
Clearance Time (s)		4.0						4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0						3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		575	1350					2913	693	468	3209	
v/s Ratio Prot		c0.17						0.30		c0.14	0.33	
v/s Ratio Perm			0.58						c0.45			
v/c Ratio		0.88	0.58					0.58	0.85	0.85	0.46	
Uniform Delay, d1		39.2	0.0					16.4	20.5	40.7	5.6	
Progression Factor		0.90	1.00					1.00	1.00	0.88	0.89	
Incremental Delay, d2		5.4	0.6					0.9	12.7	6.1	0.2	
Delay (s)		40.8	0.6					17.2	33.2	41.8	5.2	
Level of Service		D	A					B	C	D	A	
Approach Delay (s)		16.3			0.0			21.5			13.0	
Approach LOS		B			A			C			B	

Intersection Summary			
HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		

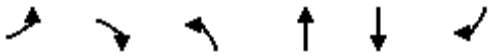
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.81	0.81	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1843	4181	1175	1346	4962	836	1292	1133	1257	808	1615	722
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.55	1.00	1.00	0.58	1.00	1.00
Satd. Flow (perm)	1843	4181	1175	1346	4962	836	754	1133	1257	492	1615	722
Volume (vph)	390	830	75	175	1525	280	50	40	30	100	300	270
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	424	902	82	190	1658	304	54	43	33	109	326	293
RTOR Reduction (vph)	0	0	48	0	0	168	0	0	22	0	0	37
Lane Group Flow (vph)	424	902	34	190	1658	136	54	43	11	109	326	256
Heavy Vehicles (%)	70%	11%	23%	20%	11%	40%	25%	50%	15%	100%	100%	100%
Turn Type	Prot		Perm	Prot		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	24.0	41.1	41.1	18.5	35.6	44.6	18.6	15.4	33.9	28.4	21.2	45.2
Effective Green, g (s)	24.0	41.1	41.1	18.5	35.6	44.6	18.6	15.4	33.9	28.4	21.2	45.2
Actuated g/C Ratio	0.24	0.41	0.41	0.18	0.36	0.45	0.19	0.15	0.34	0.28	0.21	0.45
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	442	1718	483	249	1766	406	157	174	476	168	342	355
v/s Ratio Prot	c0.23	0.22		0.14	c0.33	0.03	0.01	0.04	0.00	c0.06	c0.20	0.17
v/s Ratio Perm			0.03			0.13	0.05		0.00	0.13		0.18
v/c Ratio	0.96	0.53	0.07	0.76	0.94	0.33	0.34	0.25	0.02	0.65	0.95	0.72
Uniform Delay, d1	37.5	22.1	17.9	38.7	31.1	18.0	34.6	37.2	22.0	30.5	38.9	22.3
Progression Factor	1.00	1.00	1.00	0.96	0.81	2.84	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	32.1	1.2	0.3	9.4	8.4	0.3	1.3	0.7	0.0	8.3	36.2	7.0
Delay (s)	69.6	23.3	18.1	46.5	33.6	51.6	35.9	37.9	22.0	38.8	75.2	29.3
Level of Service	E	C	B	D	C	D	D	D	C	D	E	C
Approach Delay (s)		36.9			37.3			33.1			51.3	
Approach LOS		D			D			C			D	

Intersection Summary			
HCM Average Control Delay	39.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.8%	ICU Level of Service	C
Analysis Period (min)	15		

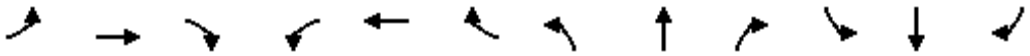
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0	
Lane Util. Factor		1.00		0.91	0.91	
Frt		0.86		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		1374		4420	4420	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		1374		4420	4420	
Volume (vph)	0	270	0	1235	1535	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	284	0	1300	1616	0
RTOR Reduction (vph)	0	12	0	0	0	0
Lane Group Flow (vph)	0	272	0	1300	1616	0
Heavy Vehicles (%)	0%	7%	0%	5%	5%	0%
Turn Type		custom				
Protected Phases				2	6	
Permitted Phases		4				
Actuated Green, G (s)		23.4		68.6	68.6	
Effective Green, g (s)		23.4		68.6	68.6	
Actuated g/C Ratio		0.23		0.69	0.69	
Clearance Time (s)		4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0	
Lane Grp Cap (vph)		322		3032	3032	
v/s Ratio Prot				0.29	c0.37	
v/s Ratio Perm		c0.20				
v/c Ratio		0.84		0.43	0.53	
Uniform Delay, d1		36.6		7.0	7.8	
Progression Factor		1.00		0.41	1.00	
Incremental Delay, d2		17.9		0.3	0.7	
Delay (s)		54.5		3.2	8.4	
Level of Service		D		A	A	
Approach Delay (s)	54.5			3.2	8.4	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

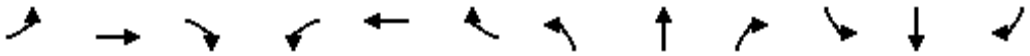
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00		1.00	1.00	
Frt	1.00	1.00			0.99		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	2923			2937		1520	1520		1448	1457	
Flt Permitted	0.95	1.00			1.00		0.58	1.00		0.61	1.00	
Satd. Flow (perm)	1520	2923			2937		923	1520		927	1457	
Volume (vph)	30	960	0	0	605	25	10	130	15	105	130	35
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	1011	0	0	637	26	11	137	16	111	137	37
RTOR Reduction (vph)	0	0	0	0	3	0	0	4	0	0	10	0
Lane Group Flow (vph)	32	1011	0	0	660	0	11	149	0	111	164	0
Heavy Vehicles (%)	0%	4%	0%	0%	3%	0%	0%	4%	0%	5%	8%	0%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	8.4	61.0			48.6		31.0	31.0		31.0	31.0	
Effective Green, g (s)	8.4	61.0			48.6		31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.08	0.61			0.49		0.31	0.31		0.31	0.31	
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	128	1783			1427		286	471		287	452	
v/s Ratio Prot	0.02	c0.35			0.22			0.10			0.11	
v/s Ratio Perm							0.01			c0.12		
v/c Ratio	0.25	0.57			0.46		0.04	0.32		0.39	0.36	
Uniform Delay, d1	42.9	11.6			17.0		24.1	26.4		27.0	26.8	
Progression Factor	0.75	0.15			0.18		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.8			0.9		0.3	1.8		3.9	2.3	
Delay (s)	32.9	2.6			4.0		24.3	28.1		30.9	29.1	
Level of Service	C	A			A		C	C		C	C	
Approach Delay (s)		3.5			4.0			27.9			29.8	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	9.0	HCM Level of Service	A
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	0.98		1.00	0.97		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	2869		1520	2875		1520	1510		1520	1480	
Flt Permitted	0.95	1.00		0.95	1.00		0.59	1.00		0.45	1.00	
Satd. Flow (perm)	1520	2869		1520	2875		939	1510		720	1480	
Volume (vph)	45	1110	105	45	995	170	90	170	50	85	105	40
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	1168	111	47	1047	179	95	179	53	89	111	42
RTOR Reduction (vph)	0	7	0	0	14	0	0	10	0	0	13	0
Lane Group Flow (vph)	47	1272	0	47	1212	0	95	222	0	89	140	0
Heavy Vehicles (%)	0%	5%	0%	0%	4%	0%	0%	3%	0%	0%	5%	0%
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	4.2	56.4		5.6	57.8		26.0	26.0		26.0	26.0	
Effective Green, g (s)	4.2	56.4		5.6	57.8		26.0	26.0		26.0	26.0	
Actuated g/C Ratio	0.04	0.56		0.06	0.58		0.26	0.26		0.26	0.26	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	64	1618		85	1662		244	393		187	385	
v/s Ratio Prot	c0.03	c0.44		0.03	0.42			c0.15			0.09	
v/s Ratio Perm							0.10			0.12		
v/c Ratio	0.73	0.79		0.55	0.73		0.39	0.56		0.48	0.36	
Uniform Delay, d1	47.3	17.1		46.0	15.4		30.5	32.1		31.2	30.2	
Progression Factor	0.80	0.28		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	26.0	2.8		7.6	2.9		4.6	5.8		8.4	2.6	
Delay (s)	64.0	7.5		53.6	18.3		35.1	37.8		39.7	32.9	
Level of Service	E	A		D	B		D	D		D	C	
Approach Delay (s)		9.5			19.6			37.0			35.4	
Approach LOS		A			B			D			D	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

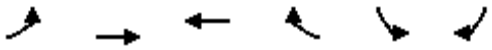
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1520	1295	1441	1360	1345	1429
Flt Permitted	0.95	1.00	1.00	1.00	0.66	1.00
Satd. Flow (perm)	1520	1295	1441	1360	939	1429
Volume (vph)	60	105	140	20	75	125
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	111	147	21	79	132
RTOR Reduction (vph)	0	97	0	5	0	0
Lane Group Flow (vph)	63	14	147	16	79	132
Heavy Vehicles (%)	0%	5%	11%	0%	13%	12%
Turn Type		custom		Perm	Perm	
Protected Phases			2			6
Permitted Phases	8	8		2	6	
Actuated Green, G (s)	7.7	7.7	44.3	44.3	44.3	44.3
Effective Green, g (s)	7.7	7.7	44.3	44.3	44.3	44.3
Actuated g/C Ratio	0.13	0.13	0.74	0.74	0.74	0.74
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	195	166	1064	1004	693	1055
v/s Ratio Prot			c0.10			0.09
v/s Ratio Perm	c0.04	0.01		0.01	0.08	
v/c Ratio	0.32	0.09	0.14	0.02	0.11	0.13
Uniform Delay, d1	23.8	23.0	2.3	2.1	2.2	2.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.2	0.3	0.0	0.3	0.2
Delay (s)	24.7	23.3	2.6	2.1	2.6	2.5
Level of Service	C	C	A	A	A	A
Approach Delay (s)	23.8		2.5			2.5
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	9.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.17		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	27.6%	ICU Level of Service	A
Analysis Period (min)	15		

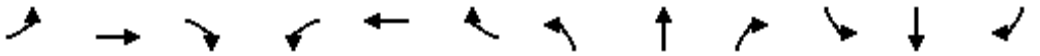
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0			4.0
Lane Util. Factor		0.95	0.95			1.00
Frt		1.00	1.00			0.86
Flt Protected		1.00	1.00			1.00
Satd. Flow (prot)		2951	2949			1384
Flt Permitted		1.00	1.00			1.00
Satd. Flow (perm)		2951	2949			1384
Volume (vph)	0	1580	1345	10	0	40
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1663	1416	11	0	42
RTOR Reduction (vph)	0	0	1	0	0	6
Lane Group Flow (vph)	0	1663	1426	0	0	36
Heavy Vehicles (%)	0%	3%	3%	0%	0%	0%
Turn Type						custom
Protected Phases		4	8			
Permitted Phases						6
Actuated Green, G (s)		24.0	24.0			8.0
Effective Green, g (s)		24.0	24.0			8.0
Actuated g/C Ratio		0.60	0.60			0.20
Clearance Time (s)		4.0	4.0			4.0
Vehicle Extension (s)		3.0	3.0			3.0
Lane Grp Cap (vph)		1771	1769			277
v/s Ratio Prot		c0.56	0.48			
v/s Ratio Perm						c0.03
v/c Ratio		0.94	0.81			0.13
Uniform Delay, d1		7.3	6.2			13.1
Progression Factor		1.00	1.00			1.00
Incremental Delay, d2		11.1	4.0			0.2
Delay (s)		18.5	10.2			13.3
Level of Service		B	B			B
Approach Delay (s)		18.5	10.2		13.3	
Approach LOS		B	B		B	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	55.2%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0				4.0			4.0
Lane Util. Factor		0.95			0.95				1.00			1.00
Frt		1.00			1.00				0.86			0.86
Flt Protected		1.00			1.00				1.00			1.00
Satd. Flow (prot)		2919			2947				1384			1384
Flt Permitted		1.00			1.00				1.00			1.00
Satd. Flow (perm)		2919			2947				1384			1384
Volume (vph)	0	1350	15	0	1465	20	0	0	20	0	0	20
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1421	16	0	1542	21	0	0	21	0	0	21
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	6	0	0	4
Lane Group Flow (vph)	0	1436	0	0	1561	0	0	0	15	0	0	17
Heavy Vehicles (%)	0%	4%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%
Turn Type									custom			custom
Protected Phases		4			8							
Permitted Phases									2			6
Actuated Green, G (s)		24.2			24.2				7.8			7.8
Effective Green, g (s)		24.2			24.2				7.8			7.8
Actuated g/C Ratio		0.60			0.60				0.19			0.19
Clearance Time (s)		4.0			4.0				4.0			4.0
Vehicle Extension (s)		3.0			3.0				3.0			3.0
Lane Grp Cap (vph)		1766			1783				270			270
v/s Ratio Prot		0.49			c0.53							
v/s Ratio Perm									0.01			c0.01
v/c Ratio		0.81			0.88				0.05			0.06
Uniform Delay, d1		6.1			6.6				13.1			13.1
Progression Factor		1.00			1.00				1.00			1.00
Incremental Delay, d2		4.2			6.4				0.1			0.1
Delay (s)		10.4			13.0				13.2			13.2
Level of Service		B			B				B			B
Approach Delay (s)		10.4			13.0			13.2			13.2	
Approach LOS		B			B			B			B	

Intersection Summary			
HCM Average Control Delay	11.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	10	120	25	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	11	126	26	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			0		84	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		84	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		97	100
cM capacity (veh/h)			1636		908	1091

Direction, Lane #	WB 1	WB 2	NB 1
Volume Total	53	84	26
Volume Left	11	0	26
Volume Right	0	0	0
cSH	1636	1700	908
Volume to Capacity	0.01	0.05	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	1.5	0.0	9.1
Lane LOS	A		A
Approach Delay (s)	0.6		9.1
Approach LOS			A

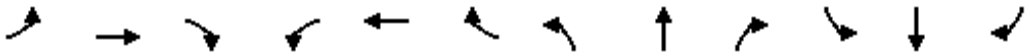
Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	13.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	910	10	0	845	0	50
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	958	11	0	889	0	53
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	619			1280		
pX, platoon unblocked			0.81		0.85	0.81
vC, conflicting volume			968		1408	484
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			725		1004	127
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	93
cM capacity (veh/h)			718		206	733

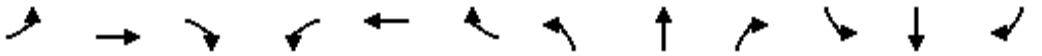
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	639	330	445	445	53
Volume Left	0	0	0	0	0
Volume Right	0	11	0	0	53
cSH	1700	1700	1700	1700	733
Volume to Capacity	0.38	0.19	0.26	0.26	0.07
Queue Length 95th (ft)	0	0	0	0	6
Control Delay (s)	0.0	0.0	0.0	0.0	10.3
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.3
Approach LOS					B

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	40.6%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	163	829	196	77	729	169	112	1187	113	86	777	271
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.97		1.00	0.97		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1598	4460		1598	4462		1598	3154		1598	3072	
Flt Permitted	0.20	1.00		0.26	1.00		0.17	1.00		0.13	1.00	
Satd. Flow (perm)	343	4460		431	4462		282	3154		214	3072	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	172	873	206	81	767	178	118	1249	119	91	818	285
RTOR Reduction (vph)	0	60	0	0	42	0	0	11	0	0	54	0
Lane Group Flow (vph)	172	1019	0	81	903	0	118	1357	0	91	1049	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	23.6	23.6		15.6	15.6		31.5	31.5		31.5	31.5	
Effective Green, g (s)	23.6	23.6		15.6	15.6		31.5	31.5		31.5	31.5	
Actuated g/C Ratio	0.37	0.37		0.25	0.25		0.50	0.50		0.50	0.50	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	208	1668		107	1103		141	1575		107	1534	
v/s Ratio Prot	c0.05	0.23			0.20			c0.43			0.34	
v/s Ratio Perm	c0.26			0.19			0.42			0.43		
v/c Ratio	0.83	0.61		0.76	0.82		0.84	0.86		0.85	0.68	
Uniform Delay, d1	16.6	16.0		22.0	22.4		13.6	13.9		13.8	12.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	22.8	0.7		25.9	4.8		32.9	5.1		44.0	1.3	
Delay (s)	39.4	16.7		47.9	27.3		46.5	19.0		57.7	13.3	
Level of Service	D	B		D	C		D	B		E	B	
Approach Delay (s)		19.8			28.9			21.2			16.7	
Approach LOS		B			C			C			B	

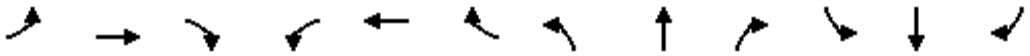
Intersection Summary			
HCM Average Control Delay	21.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	63.1	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	839	0	0	513	0	0	0	0	0	0	90
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	883	0	0	540	0	0	0	0	0	0	95
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	540			883			1063	1423	294	834	1423	180
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	540			883			1063	1423	294	834	1423	180
tC, single (s)	4.3			4.3			7.7	6.7	7.1	7.7	6.7	7.1
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	100			100			100	100	100	100	100	88
cM capacity (veh/h)	971			713			148	125	679	248	125	807

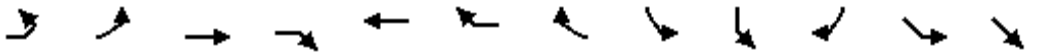
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	353	353	177	0	180	180	180	0	95
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0	0	95
cSH	1700	1700	1700	1700	1700	1700	1700	1700	807
Volume to Capacity	0.21	0.21	0.10	0.00	0.11	0.11	0.11	0.00	0.12
Queue Length 95th (ft)	0	0	0	0	0	0	0	0	10
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.1
Lane LOS								A	B
Approach Delay (s)	0.0			0.0				0.0	10.1
Approach LOS								A	B

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	22.6%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	212	1312	30	18	550	151	17	147	22	207	84	145
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	1.00		1.00	0.97			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.97	1.00
Satd. Flow (prot)	1598	3185		1598	3092			1673	1430		1624	1430
Flt Permitted	0.33	1.00		0.14	1.00			0.95	1.00		0.68	1.00
Satd. Flow (perm)	563	3185		240	3092			1603	1430		1149	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	223	1381	32	19	579	159	18	155	23	218	88	153
RTOR Reduction (vph)	0	3	0	0	45	0	0	0	16	0	0	105
Lane Group Flow (vph)	223	1410	0	19	693	0	0	173	7	0	306	48
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	28.0	28.0		28.0	28.0			16.6	16.6		16.6	16.6
Effective Green, g (s)	28.0	28.0		28.0	28.0			16.6	16.6		16.6	16.6
Actuated g/C Ratio	0.53	0.53		0.53	0.53			0.32	0.32		0.32	0.32
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	300	1695		128	1646			506	451		363	451
v/s Ratio Prot		c0.44			0.22							
v/s Ratio Perm	0.40			0.08				0.11	0.01		c0.27	0.03
v/c Ratio	0.74	0.83		0.15	0.42			0.34	0.02		0.84	0.11
Uniform Delay, d1	9.5	10.3		6.2	7.4			13.8	12.4		16.8	12.8
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	9.6	3.7		0.5	0.2			0.4	0.0		16.1	0.1
Delay (s)	19.1	14.0		6.8	7.6			14.2	12.4		32.9	12.9
Level of Service	B	B		A	A			B	B		C	B
Approach Delay (s)		14.7			7.6			14.0			26.2	
Approach LOS		B			A			B			C	

Intersection Summary			
HCM Average Control Delay	14.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	52.6	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



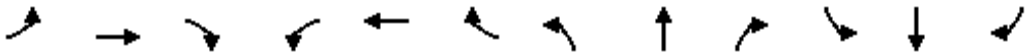
Movement	EBL2	EBL	EBT	EBR	WBT	WBR	WBR2	SBL2	SBL	SBR	SEL	SET
Lane Configurations												
Volume (vph)	11	9	774	483	568	164	7	7	0	16	94	309
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)			4.0	4.0	4.0		4.0		4.0		4.0	4.0
Lane Util. Factor			0.95	1.00	0.91		0.91		1.00		1.00	1.00
Frt			1.00	0.85	0.97		0.85		0.90		1.00	1.00
Flt Protected			1.00	1.00	1.00		1.00		0.99		0.95	1.00
Satd. Flow (prot)			3191	1430	2957		1301		1499		1598	1682
Flt Permitted			0.92	1.00	1.00		1.00		0.99		0.59	1.00
Satd. Flow (perm)			2951	1430	2957		1301		1499		996	1682
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	12	9	815	508	598	173	7	7	0	17	99	325
RTOR Reduction (vph)	0	0	0	321	0	0	2	0	0	0	0	0
Lane Group Flow (vph)	0	0	836	187	772	0	4	0	24	0	99	325
Turn Type	Perm	Perm		Perm			Perm	Perm			Perm	
Protected Phases			4		4				7			6
Permitted Phases	4	4		4			4	7			6	
Actuated Green, G (s)			33.2	33.2	33.2		33.2		3.4		41.4	41.4
Effective Green, g (s)			33.2	33.2	33.2		33.2		3.4		41.4	41.4
Actuated g/C Ratio			0.37	0.37	0.37		0.37		0.04		0.46	0.46
Clearance Time (s)			4.0	4.0	4.0		4.0		4.0		4.0	4.0
Vehicle Extension (s)			3.0	3.0	3.0		3.0		3.0		3.0	3.0
Lane Grp Cap (vph)			1089	528	1091		480		57		458	774
v/s Ratio Prot					0.26							0.19
v/s Ratio Perm			c0.28	0.13			0.00		0.02		0.10	
v/c Ratio			0.77	0.35	0.71		0.01		0.42		0.22	0.42
Uniform Delay, d1			25.0	20.6	24.3		18.0		42.3		14.6	16.3
Progression Factor			1.00	1.00	1.11		1.20		1.00		1.00	1.00
Incremental Delay, d2			3.3	0.4	1.8		0.0		5.0		0.2	0.4
Delay (s)			28.3	21.0	28.8		21.7		47.3		14.8	16.6
Level of Service			C	C	C		C		D		B	B
Approach Delay (s)			25.6		28.7				47.3			16.2
Approach LOS			C		C				D			B

Intersection Summary			
HCM Average Control Delay	23.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



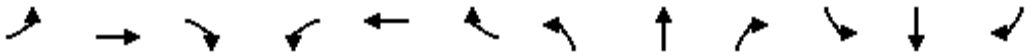
Movement	SER	NWL	NWT	NWR2
Lane Configurations				
Volume (vph)	8	156	198	5
Ideal Flow (vphpl)	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00
Frt	0.85	1.00	1.00	0.85
Flt Protected	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1430	1598	1682	1430
Flt Permitted	1.00	0.47	1.00	1.00
Satd. Flow (perm)	1430	795	1682	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95
Adj. Flow (vph)	8	164	208	5
RTOR Reduction (vph)	4	0	0	3
Lane Group Flow (vph)	4	164	208	2
Turn Type	Perm	Perm		Perm
Protected Phases			2	
Permitted Phases	6	2		2
Actuated Green, G (s)	41.4	41.4	41.4	41.4
Effective Green, g (s)	41.4	41.4	41.4	41.4
Actuated g/C Ratio	0.46	0.46	0.46	0.46
Clearance Time (s)	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	658	366	774	658
v/s Ratio Prot			0.12	
v/s Ratio Perm	0.00	c0.21		0.00
v/c Ratio	0.01	0.45	0.27	0.00
Uniform Delay, d1	13.2	16.5	15.0	13.1
Progression Factor	1.00	0.44	0.38	0.09
Incremental Delay, d2	0.0	3.0	0.7	0.0
Delay (s)	13.2	10.3	6.4	1.2
Level of Service	B	B	A	A
Approach Delay (s)			8.0	
Approach LOS			A	

Intersection Summary



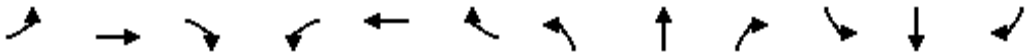
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	864	0	0	791	1	273	212	434	55	0	62
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95			1.00	
Frt	1.00	1.00			1.00		1.00	0.90			0.93	
Flt Protected	0.95	1.00			1.00		0.95	1.00			0.98	
Satd. Flow (prot)	1598	3195			3195		1518	1440			1526	
Flt Permitted	0.19	1.00			1.00		0.95	1.00			0.98	
Satd. Flow (perm)	323	3195			3195		1518	1440			1526	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	81	909	0	0	833	1	287	223	457	58	0	65
RTOR Reduction (vph)	0	0	0	0	0	0	0	73	0	0	49	0
Lane Group Flow (vph)	81	909	0	0	834	0	258	636	0	0	74	0
Turn Type	Perm						Split			Split		
Protected Phases		4			8		2	2		6	6	
Permitted Phases	4											
Actuated Green, G (s)	33.2	33.2			33.2		35.0	35.0			9.8	
Effective Green, g (s)	33.2	33.2			33.2		35.0	35.0			9.8	
Actuated g/C Ratio	0.37	0.37			0.37		0.39	0.39			0.11	
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	119	1179			1179		590	560			166	
v/s Ratio Prot		c0.28			0.26		0.17	c0.44			c0.05	
v/s Ratio Perm	0.25											
v/c Ratio	0.68	0.77			0.71		0.44	1.14			0.45	
Uniform Delay, d1	23.9	25.0			24.3		20.2	27.5			37.6	
Progression Factor	0.60	0.61			0.64		1.00	1.00			1.44	
Incremental Delay, d2	14.3	3.1			1.8		2.3	81.5			1.8	
Delay (s)	28.8	18.4			17.3		22.6	109.0			55.8	
Level of Service	C	B			B		C	F			E	
Approach Delay (s)		19.3			17.3			85.9			55.8	
Approach LOS		B			B			F			E	

Intersection Summary			
HCM Average Control Delay	42.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



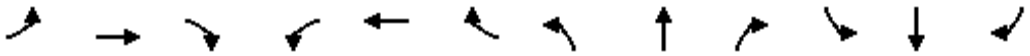
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	73	1100	97	57	744	87	47	277	92	108	206	52
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	1.00	0.85	1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1598	3157		1598	3145		1598	3195	1430	1598	3099	
Flt Permitted	0.26	1.00		0.13	1.00		0.57	1.00	1.00	0.55	1.00	
Satd. Flow (perm)	429	3157		216	3145		957	3195	1430	928	3099	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	77	1158	102	60	783	92	49	292	97	114	217	55
RTOR Reduction (vph)	0	9	0	0	12	0	0	0	58	0	22	0
Lane Group Flow (vph)	77	1251	0	60	863	0	49	292	39	114	250	0
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	48.4	48.4		48.4	48.4		33.6	33.6	33.6	33.6	33.6	
Effective Green, g (s)	48.4	48.4		48.4	48.4		33.6	33.6	33.6	33.6	33.6	
Actuated g/C Ratio	0.54	0.54		0.54	0.54		0.37	0.37	0.37	0.37	0.37	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	231	1698		116	1691		357	1193	534	346	1157	
v/s Ratio Prot		c0.40			0.27			0.09			0.08	
v/s Ratio Perm	0.18			0.28			0.05		0.03	c0.12		
v/c Ratio	0.33	0.74		0.52	0.51		0.14	0.24	0.07	0.33	0.22	
Uniform Delay, d1	11.7	15.9		13.3	13.3		18.6	19.4	18.2	20.2	19.2	
Progression Factor	1.47	1.29		0.50	0.48		0.73	0.69	0.55	0.79	0.72	
Incremental Delay, d2	0.6	1.3		3.2	0.2		0.8	0.5	0.3	2.2	0.4	
Delay (s)	17.8	21.9		9.8	6.6		14.3	13.9	10.3	18.0	14.3	
Level of Service	B	C		A	A		B	B	B	B	B	
Approach Delay (s)		21.6			6.8			13.2			15.4	
Approach LOS		C			A			B			B	

Intersection Summary			
HCM Average Control Delay	15.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
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												
Volume (vph)	62	759	17	5	787	27	37	110	37	77	156	72
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			1.00			0.97			0.97	
Flt Protected		1.00			1.00			0.99			0.99	
Satd. Flow (prot)		3174			3179			1620			1608	
Flt Permitted		0.76			0.95			0.90			0.88	
Satd. Flow (perm)		2425			3024			1466			1428	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	799	18	5	828	28	39	116	39	81	164	76
RTOR Reduction (vph)	0	2	0	0	3	0	0	9	0	0	11	0
Lane Group Flow (vph)	0	880	0	0	858	0	0	185	0	0	310	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		38.9			38.9			43.1			43.1	
Effective Green, g (s)		38.9			38.9			43.1			43.1	
Actuated g/C Ratio		0.43			0.43			0.48			0.48	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1048			1307			702			684	
v/s Ratio Prot												
v/s Ratio Perm		c0.36			0.28			0.13			c0.22	
v/c Ratio		0.84			0.66			0.26			0.45	
Uniform Delay, d1		22.8			20.3			14.0			15.6	
Progression Factor		1.00			0.93			1.13			1.00	
Incremental Delay, d2		6.1			1.1			0.7			2.2	
Delay (s)		28.8			19.9			16.5			17.8	
Level of Service		C			B			B			B	
Approach Delay (s)		28.8			19.9			16.5			17.8	
Approach LOS		C			B			B			B	

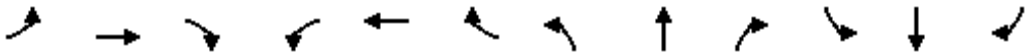
Intersection Summary			
HCM Average Control Delay	22.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	82.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	106	893	71	11	769	92	58	405	20	85	268	162
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.99			0.98		1.00	0.99		1.00	0.94	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3148			3143		1598	3173		1598	3015	
Flt Permitted		0.72			0.94		0.37	1.00		0.38	1.00	
Satd. Flow (perm)		2289			2947		629	3173		638	3015	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	112	940	75	12	809	97	61	426	21	89	282	171
RTOR Reduction (vph)	0	6	0	0	10	0	0	4	0	0	102	0
Lane Group Flow (vph)	0	1121	0	0	908	0	61	443	0	89	351	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		57.0			57.0		25.0	25.0		25.0	25.0	
Effective Green, g (s)		57.0			57.0		25.0	25.0		25.0	25.0	
Actuated g/C Ratio		0.63			0.63		0.28	0.28		0.28	0.28	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		1450			1866		175	881		177	838	
v/s Ratio Prot								c0.14			0.12	
v/s Ratio Perm		c0.49			0.31		0.10			0.14		
v/c Ratio		0.77			0.49		0.35	0.50		0.50	0.42	
Uniform Delay, d1		11.9			8.7		26.0	27.3		27.3	26.6	
Progression Factor		0.52			0.90		0.89	0.96		1.00	1.00	
Incremental Delay, d2		3.5			0.8		5.3	2.0		9.9	1.5	
Delay (s)		9.6			8.7		28.4	28.2		37.1	28.1	
Level of Service		A			A		C	C		D	C	
Approach Delay (s)		9.6			8.7			28.2			29.6	
Approach LOS		A			A			C			C	

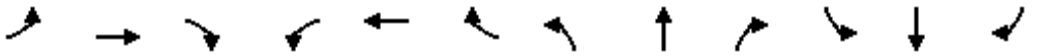
Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	150	118	9	47	116	97	18	361	42	99	375	56
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0			5.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99			0.94		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00			0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1598	3163			2990		1598	1682	1430	1598	1649	
Flt Permitted	0.95	1.00			0.99		0.30	1.00	1.00	0.38	1.00	
Satd. Flow (perm)	1598	3163			2990		507	1682	1430	633	1649	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	158	124	9	49	122	102	19	380	44	104	395	59
RTOR Reduction (vph)	0	6	0	0	84	0	0	0	14	0	6	0
Lane Group Flow (vph)	158	127	0	0	189	0	19	380	30	104	448	0
Turn Type	Split			Split			custom		custom	custom		
Protected Phases	3	3		6	6			4			4	
Permitted Phases							8 4		8 4	8 4		
Actuated Green, G (s)	16.0	16.0			16.0		45.0	25.0	45.0	45.0	25.0	
Effective Green, g (s)	16.0	16.0			16.0		45.0	25.0	45.0	45.0	25.0	
Actuated g/C Ratio	0.18	0.18			0.18		0.50	0.28	0.50	0.50	0.28	
Clearance Time (s)	4.0	4.0			5.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	284	562			532		254	467	715	317	458	
v/s Ratio Prot	c0.10	0.04			c0.06			0.23			c0.27	
v/s Ratio Perm							0.04		0.02	c0.16		
v/c Ratio	0.56	0.23			0.36		0.07	0.81	0.04	0.33	0.98	
Uniform Delay, d1	33.8	31.7			32.5		11.7	30.3	11.5	13.5	32.2	
Progression Factor	1.00	1.00			1.00		1.08	1.10	1.18	1.00	1.00	
Incremental Delay, d2	7.7	0.9			1.9		0.4	9.8	0.1	2.7	37.1	
Delay (s)	41.4	32.6			34.3		13.0	43.1	13.7	16.2	69.3	
Level of Service	D	C			C		B	D	B	B	E	
Approach Delay (s)		37.4			34.3			38.9			59.4	
Approach LOS		D			C			D			E	

Intersection Summary			
HCM Average Control Delay	45.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	14	250	25	63	555	73	73	104	120	152	88	51
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	5.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.92		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1598	1659		1598	1652		1598	1547		1598	3019	
Flt Permitted	0.95	1.00		0.95	1.00		0.66	1.00		0.47	1.00	
Satd. Flow (perm)	1598	1659		1598	1652		1108	1547		794	3019	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	15	263	26	66	584	77	77	109	126	160	93	54
RTOR Reduction (vph)	0	4	0	0	4	0	0	52	0	0	43	0
Lane Group Flow (vph)	15	285	0	66	657	0	77	183	0	160	104	0
Turn Type	Prot			Prot			custom			custom		
Protected Phases	1	6		7	2			8			8	
Permitted Phases							4			4		
Actuated Green, G (s)	1.2	42.9		14.5	55.2		20.6	18.6		20.6	18.6	
Effective Green, g (s)	1.2	42.9		14.5	55.2		20.6	18.6		20.6	18.6	
Actuated g/C Ratio	0.01	0.48		0.16	0.61		0.23	0.21		0.23	0.21	
Clearance Time (s)	4.0	4.0		4.0	5.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)	21	791		257	1013		254	320		182	624	
v/s Ratio Prot	0.01	c0.17		0.04	c0.40			0.12			0.03	
v/s Ratio Perm							0.07			c0.20		
v/c Ratio	0.71	0.36		0.26	0.65		0.30	0.57		0.88	0.17	
Uniform Delay, d1	44.2	14.9		33.0	11.2		28.8	32.1		33.5	29.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	65.4	0.1		0.2	3.2		0.7	3.0		34.8	0.2	
Delay (s)	109.6	15.0		33.2	14.4		29.4	35.1		68.3	29.5	
Level of Service	F	B		C	B		C	D		E	C	
Approach Delay (s)		19.7			16.1			33.7			49.7	
Approach LOS		B			B			C			D	

Intersection Summary			
HCM Average Control Delay	26.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	EBR2	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2	SBL	SBT
Lane Configurations												
Volume (vph)	276	241	40	247	68	33	119	21	8	58	129	71
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	5.0	5.5		5.0		5.0	5.0				5.0	5.0
Lane Util. Factor	1.00	1.00		1.00		1.00	1.00				1.00	1.00
Frt	1.00	0.85		0.97		1.00	0.97				1.00	0.97
Flt Protected	1.00	1.00		1.00		0.95	1.00				0.95	1.00
Satd. Flow (prot)	1682	1430		1633		1598	1633				1598	1635
Flt Permitted	1.00	1.00		1.00		0.70	1.00				0.64	1.00
Satd. Flow (perm)	1682	1430		1633		1173	1633				1069	1635
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	291	254	42	260	72	35	125	22	8	61	136	75
RTOR Reduction (vph)	0	5	0	9	0	0	1	0	0	0	0	5
Lane Group Flow (vph)	291	291	0	323	0	35	154	0	0	0	197	87
Turn Type		pm+ov				Perm				Perm	Perm	
Protected Phases	3	2		4			1					1
Permitted Phases		3		8 3		1				1	1	
Actuated Green, G (s)	17.0	32.7		21.0		49.0	49.0				49.0	49.0
Effective Green, g (s)	17.0	32.7		21.0		49.0	49.0				49.0	49.0
Actuated g/C Ratio	0.14	0.27		0.18		0.41	0.41				0.41	0.41
Clearance Time (s)	5.0	5.5		5.0		5.0	5.0				5.0	5.0
Vehicle Extension (s)	4.0	4.0		3.0		3.0	3.0				3.0	3.0
Lane Grp Cap (vph)	238	455		354		479	667				437	668
v/s Ratio Prot	c0.17	0.08		c0.03			0.09					0.05
v/s Ratio Perm		0.12		0.17		0.03					c0.18	
v/c Ratio	1.22	0.64		0.91		0.07	0.23				0.45	0.13
Uniform Delay, d1	51.5	38.5		48.6		21.7	23.2				25.7	22.2
Progression Factor	1.00	1.00		1.00		1.00	1.00				1.00	1.00
Incremental Delay, d2	131.8	3.3		26.9		0.3	0.8				3.3	0.4
Delay (s)	183.3	41.8		75.5		21.9	24.0				29.1	22.6
Level of Service	F	D		E		C	C				C	C
Approach Delay (s)	111.9			75.5			23.6					27.0
Approach LOS	F			E			C					C

Intersection Summary			
HCM Average Control Delay	87.2	HCM Level of Service	F
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	29.3
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

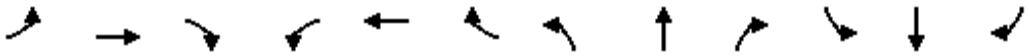


Movement	SBR	NWL	NWR	NWR2
Lane Configurations				
Volume (vph)	16	255	110	55
Ideal Flow (vphpl)	1850	1850	1850	1850
Total Lost time (s)		5.5		
Lane Util. Factor		0.97		
Frt		0.94		
Flt Protected		0.97		
Satd. Flow (prot)		2980		
Flt Permitted		0.97		
Satd. Flow (perm)		2980		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95
Adj. Flow (vph)	17	268	116	58
RTOR Reduction (vph)	0	10	0	0
Lane Group Flow (vph)	0	432	0	0
Turn Type				
Protected Phases		2		
Permitted Phases				
Actuated Green, G (s)		15.7		
Effective Green, g (s)		15.7		
Actuated g/C Ratio		0.13		
Clearance Time (s)		5.5		
Vehicle Extension (s)		4.0		
Lane Grp Cap (vph)		390		
v/s Ratio Prot		c0.14		
v/s Ratio Perm				
v/c Ratio		1.11		
Uniform Delay, d1		52.1		
Progression Factor		1.00		
Incremental Delay, d2		77.6		
Delay (s)		129.7		
Level of Service		F		
Approach Delay (s)		129.7		
Approach LOS		F		

Intersection Summary

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	67	1656	97	278	941	34	31	409	41	69	200	223
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1598	4553		1598	3195	1430	1598	3152		1598	3195	1430
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1598	4553		1598	3195	1430	1598	3152		1598	3195	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	71	1743	102	293	991	36	33	431	43	73	211	235
RTOR Reduction (vph)	0	7	0	0	0	8	0	8	0	0	0	186
Lane Group Flow (vph)	71	1838	0	293	991	28	33	466	0	73	211	49
Turn Type	Prot			Prot		Perm	Prot			Prot		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases						6						8
Actuated Green, G (s)	8.0	35.0		17.8	44.8	44.8	2.4	17.2		4.0	18.8	18.8
Effective Green, g (s)	8.0	35.0		17.8	44.8	44.8	2.4	17.2		4.0	18.8	18.8
Actuated g/C Ratio	0.09	0.39		0.20	0.50	0.50	0.03	0.19		0.04	0.21	0.21
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	142	1771		316	1590	712	43	602		71	667	299
v/s Ratio Prot	0.04	c0.40		c0.18	0.31		0.02	c0.15		c0.05	0.07	
v/s Ratio Perm						0.02						0.03
v/c Ratio	0.50	1.04		0.93	0.62	0.04	0.77	0.77		1.03	0.32	0.16
Uniform Delay, d1	39.1	27.5		35.5	16.5	11.6	43.5	34.6		43.0	30.2	29.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.8	31.8		32.0	1.9	0.1	56.1	6.2		114.8	0.3	0.3
Delay (s)	41.8	59.3		67.5	18.3	11.7	99.6	40.7		157.8	30.4	29.4
Level of Service	D	E		E	B	B	F	D		F	C	C
Approach Delay (s)		58.7			29.0			44.5			47.9	
Approach LOS		E			C			D			D	

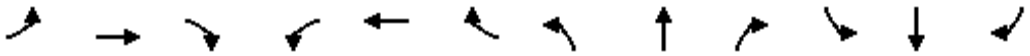
Intersection Summary			
HCM Average Control Delay	46.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	147	721	74	41	663	231	118	615	65	369	651	138
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		0.97	0.95	
Frt	1.00	0.99		1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1598	3151		1598	3072		3100	3150		3100	3112	
Flt Permitted	0.25	1.00		0.26	1.00		0.26	1.00		0.32	1.00	
Satd. Flow (perm)	420	3151		433	3072		851	3150		1058	3112	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	155	759	78	43	698	243	124	647	68	388	685	145
RTOR Reduction (vph)	0	19	0	0	77	0	0	20	0	0	44	0
Lane Group Flow (vph)	155	818	0	43	864	0	124	695	0	388	786	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Effective Green, g (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40		0.40	0.40		0.40	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	168	1260		173	1229		340	1260		423	1245	
v/s Ratio Prot		0.26			0.28			0.22			0.25	
v/s Ratio Perm	c0.37			0.10			0.15			c0.37		
v/c Ratio	0.92	0.65		0.25	0.70		0.36	0.55		0.92	0.63	
Uniform Delay, d1	11.4	9.7		8.0	10.0		8.4	9.2		11.4	9.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	51.5	2.6		3.4	3.4		3.0	1.7		27.2	2.4	
Delay (s)	62.9	12.3		11.4	13.4		11.4	11.0		38.6	12.1	
Level of Service	E	B		B	B		B	B		D	B	
Approach Delay (s)		20.2			13.3			11.0			20.5	
Approach LOS		C			B			B			C	

Intersection Summary			
HCM Average Control Delay	16.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		

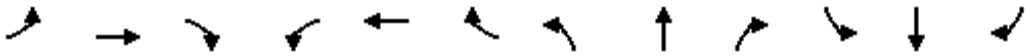
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	1084	5	28	849	68	5	4	37	46	4	22
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	38	1141	5	29	894	72	5	4	39	48	4	23
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		663										
pX, platoon unblocked				0.89			0.89	0.89	0.89	0.89	0.89	
vC, conflicting volume	965			1146			1751	2244	573	1676	2211	483
vC1, stage 1 conf vol							1219	1219		988	988	
vC2, stage 2 conf vol							531	1024		687	1222	
vCu, unblocked vol	965			922			1599	2152	279	1516	2115	483
tC, single (s)	4.3			4.3			7.7	6.7	7.1	7.7	6.7	7.1
tC, 2 stage (s)							6.7	5.7		6.7	5.7	
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	94			95			97	98	94	77	98	95
cM capacity (veh/h)	662			614			182	172	619	207	174	509

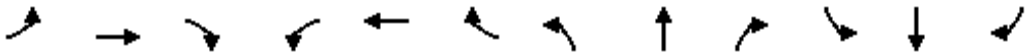
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	608	576	476	518	48	76
Volume Left	38	0	29	0	5	48
Volume Right	0	5	0	72	39	23
cSH	662	1700	614	1700	416	249
Volume to Capacity	0.06	0.34	0.05	0.30	0.12	0.30
Queue Length 95th (ft)	5	0	4	0	10	31
Control Delay (s)	1.5	0.0	1.4	0.0	14.8	25.6
Lane LOS	A		A		B	D
Approach Delay (s)	0.8		0.7		14.8	25.6
Approach LOS					B	D

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		



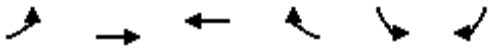
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	93	775	53	21	622	60	243	242	92	91	268	400
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.96		1.00	0.91	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1598	3165		1598	3195	1430	1598	1612		1598	1531	
Flt Permitted	0.27	1.00		0.25	1.00	1.00	0.25	1.00		0.52	1.00	
Satd. Flow (perm)	456	3165		420	3195	1430	423	1612		871	1531	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	98	816	56	22	655	63	256	255	97	96	282	421
RTOR Reduction (vph)	0	9	0	0	0	45	0	10	0	0	23	0
Lane Group Flow (vph)	98	863	0	22	655	18	256	342	0	96	680	0
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	16.0	16.0		16.0	16.0	16.0	31.0	31.0		31.0	31.0	
Effective Green, g (s)	16.0	16.0		16.0	16.0	16.0	31.0	31.0		31.0	31.0	
Actuated g/C Ratio	0.29	0.29		0.29	0.29	0.29	0.56	0.56		0.56	0.56	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	133	921		122	929	416	238	909		491	863	
v/s Ratio Prot		c0.27			0.20			0.21			0.44	
v/s Ratio Perm	0.22			0.05		0.01	c0.60			0.11		
v/c Ratio	0.74	0.94		0.18	0.71	0.04	1.08	0.38		0.20	0.79	
Uniform Delay, d1	17.6	19.0		14.6	17.4	14.0	12.0	6.6		5.9	9.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	19.0	16.3		0.7	2.5	0.0	79.9	0.3		0.2	4.8	
Delay (s)	36.6	35.3		15.3	19.9	14.1	91.9	6.9		6.1	14.2	
Level of Service	D	D		B	B	B	F	A		A	B	
Approach Delay (s)		35.5			19.2			42.7			13.2	
Approach LOS		D			B			D			B	

Intersection Summary			
HCM Average Control Delay	27.3	HCM Level of Service	C
HCM Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	93.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



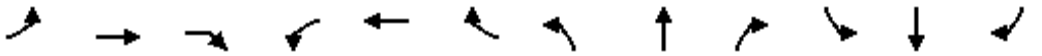
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	637	12	31	513	0	2	0	51	90	19	22
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frt		1.00			1.00			0.87		1.00	0.92	
Flt Protected		1.00			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1678			1677			1460		1598	1547	
Flt Permitted		1.00			0.73			1.00		0.95	1.00	
Satd. Flow (perm)		1678			1233			1460		1598	1547	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	671	13	33	540	0	2	0	54	95	20	23
RTOR Reduction (vph)	0	1	0	0	0	0	0	38	0	0	21	0
Lane Group Flow (vph)	0	683	0	0	573	0	0	18	0	95	22	0
Turn Type				Perm			Split			Split		
Protected Phases		4			8		2	2		6	6	
Permitted Phases				8								
Actuated Green, G (s)		42.1			42.1			26.5		9.4	9.4	
Effective Green, g (s)		42.1			42.1			26.5		9.4	9.4	
Actuated g/C Ratio		0.47			0.47			0.29		0.10	0.10	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		785			577			430		167	162	
v/s Ratio Prot		0.41						c0.01		c0.06	0.01	
v/s Ratio Perm					c0.46							
v/c Ratio		0.87			0.99			0.04		0.57	0.14	
Uniform Delay, d1		21.5			23.8			22.7		38.4	36.6	
Progression Factor		1.00			0.72			1.00		1.00	1.00	
Incremental Delay, d2		10.1			32.5			0.2		4.4	0.4	
Delay (s)		31.6			49.7			22.9		42.8	37.0	
Level of Service		C			D			C		D	D	
Approach Delay (s)		31.6			49.7			22.9			41.0	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	39.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



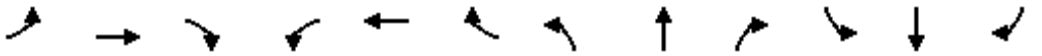
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	447	386	787	143	0	0
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95	0.95			
Frt	1.00	1.00	0.98			
Flt Protected	0.95	1.00	1.00			
Satd. Flow (prot)	1598	3195	3122			
Flt Permitted	0.95	1.00	1.00			
Satd. Flow (perm)	1598	3195	3122			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	471	406	828	151	0	0
RTOR Reduction (vph)	0	0	38	0	0	0
Lane Group Flow (vph)	471	406	941	0	0	0
Turn Type	Prot					
Protected Phases	7	4	8			
Permitted Phases						
Actuated Green, G (s)	13.8	37.4	15.6			
Effective Green, g (s)	13.8	37.4	15.6			
Actuated g/C Ratio	0.37	1.00	0.42			
Clearance Time (s)	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0			
Lane Grp Cap (vph)	590	3195	1302			
v/s Ratio Prot	c0.29	0.13	c0.30			
v/s Ratio Perm						
v/c Ratio	0.80	0.13	0.72			
Uniform Delay, d1	10.6	0.0	9.1			
Progression Factor	1.00	1.00	1.00			
Incremental Delay, d2	7.4	0.0	2.0			
Delay (s)	18.0	0.0	11.1			
Level of Service	B	A	B			
Approach Delay (s)		9.7	11.1		0.0	
Approach LOS		A	B		A	

Intersection Summary			
HCM Average Control Delay	10.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	37.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	415	82	15	163	4	388	11	781	258	247	557	236
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1598	3120		1598	1682	1430	1598	4591	1430	1598	3195	1430
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1598	3120		1598	1682	1430	1598	4591	1430	1598	3195	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	437	86	16	172	4	408	12	822	272	260	586	248
RTOR Reduction (vph)	0	0	0	0	0	248	0	0	0	0	0	143
Lane Group Flow (vph)	437	102	0	172	4	160	12	822	272	260	586	105
Turn Type	Split			Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	16.1	16.1		12.8	12.8	12.8	0.8	19.9	19.9	14.5	33.6	33.6
Effective Green, g (s)	16.1	16.1		12.8	12.8	12.8	0.8	19.9	19.9	14.5	33.6	33.6
Actuated g/C Ratio	0.20	0.20		0.16	0.16	0.16	0.01	0.25	0.25	0.18	0.42	0.42
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	324	633		258	271	231	16	1152	359	292	1354	606
v/s Ratio Prot	c0.27	0.03		0.11	0.00		0.01	0.18		c0.16	0.18	
v/s Ratio Perm						c0.11			c0.19			0.07
v/c Ratio	1.35	0.16		0.67	0.01	0.69	0.75	0.71	0.76	0.89	0.43	0.17
Uniform Delay, d1	31.6	26.0		31.2	27.9	31.4	39.2	27.1	27.5	31.6	16.1	14.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	176.1	0.1		6.4	0.0	8.6	106.0	2.1	8.8	26.8	0.2	0.1
Delay (s)	207.7	26.2		37.6	28.0	40.0	145.2	29.2	36.3	58.4	16.3	14.3
Level of Service	F	C		D	C	D	F	C	D	E	B	B
Approach Delay (s)		173.3			39.2			32.2			25.9	
Approach LOS		F			D			C			C	

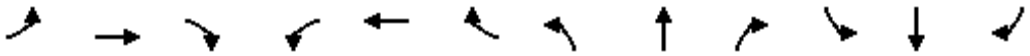
Intersection Summary			
HCM Average Control Delay	54.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	79.3	Sum of lost time (s)	16.0
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.94	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	4202	4200	1360	2564	4121	1283	2863	2764	1000	2730	2815	1320
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	4202	4200	1360	2564	4121	1283	2863	2764	1000	2730	2815	1320
Volume (vph)	570	980	165	65	1010	160	560	290	55	180	300	445
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	600	1032	174	68	1063	168	589	305	58	189	316	468
RTOR Reduction (vph)	0	0	46	0	0	82	0	0	40	0	0	10
Lane Group Flow (vph)	600	1032	128	68	1063	86	589	305	18	189	316	458
Heavy Vehicles (%)	2%	4%	0%	15%	6%	6%	3%	10%	36%	8%	8%	3%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	19.1	41.3	63.2	4.8	27.0	38.9	21.9	26.0	30.8	11.9	16.0	35.1
Effective Green, g (s)	19.1	41.3	63.2	4.8	27.0	38.9	21.9	26.0	30.8	11.9	16.0	35.1
Actuated g/C Ratio	0.19	0.41	0.63	0.05	0.27	0.39	0.22	0.26	0.31	0.12	0.16	0.35
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	803	1735	914	123	1113	499	627	719	348	325	450	463
v/s Ratio Prot	0.14	0.25	0.03	0.03	c0.26	0.02	c0.21	0.11	0.00	0.07	0.11	c0.19
v/s Ratio Perm			0.06			0.05			0.02			0.16
v/c Ratio	0.75	0.59	0.14	0.55	0.96	0.17	0.94	0.42	0.05	0.58	0.70	0.99
Uniform Delay, d1	38.2	22.8	7.4	46.6	35.9	20.0	38.4	30.8	24.3	41.7	39.7	32.3
Progression Factor	1.06	0.98	0.64	0.78	0.70	0.64	1.03	0.86	0.75	0.99	0.85	0.87
Incremental Delay, d2	1.9	0.8	0.0	4.0	14.8	0.1	12.4	0.8	0.0	2.1	7.2	34.4
Delay (s)	42.5	23.2	4.8	40.0	40.1	13.0	51.9	27.3	18.2	43.4	40.8	62.4
Level of Service	D	C	A	D	D	B	D	C	B	D	D	E
Approach Delay (s)		27.8			36.6			41.9			51.7	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	37.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		

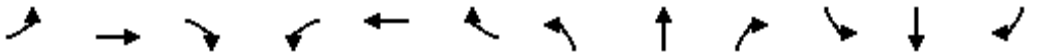
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0		4.0	4.0		4.0	
Lane Util. Factor	1.00	0.95		0.97	1.00	1.00		0.95	1.00		0.95	
Frt	1.00	0.91		1.00	1.00	0.85		1.00	0.85		0.96	
Flt Protected	0.95	1.00		0.95	1.00	1.00		0.99	1.00		0.98	
Satd. Flow (prot)	1520	2060		1705	1600	1360		2179	716		2328	
Flt Permitted	0.95	1.00		0.95	1.00	1.00		0.99	1.00		0.98	
Satd. Flow (perm)	1520	2060		1705	1600	1360		2179	716		2328	
Volume (vph)	5	55	95	555	30	250	120	340	300	105	90	65
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	58	100	584	32	263	126	358	316	111	95	68
RTOR Reduction (vph)	0	87	0	0	0	141	0	0	0	0	33	0
Lane Group Flow (vph)	5	71	0	584	32	122	0	484	316	0	241	0
Heavy Vehicles (%)	0%	0%	53%	73%	0%	0%	54%	32%	90%	0%	67%	0%
Turn Type	Prot			Prot		Perm	Split		Free	Split		
Protected Phases	5	2		1	6		8	8		4	4	
Permitted Phases						6			Free			
Actuated Green, G (s)	0.8	12.8		34.2	46.2	46.2		22.9	100.0		14.1	
Effective Green, g (s)	0.8	12.8		34.2	46.2	46.2		22.9	100.0		14.1	
Actuated g/C Ratio	0.01	0.13		0.34	0.46	0.46		0.23	1.00		0.14	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0		4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0		3.0			3.0	
Lane Grp Cap (vph)	12	264		583	739	628		499	716		328	
v/s Ratio Prot	0.00	0.03		c0.34	0.02			c0.22			c0.10	
v/s Ratio Perm						0.09			c0.44			
v/c Ratio	0.42	0.27		1.00	0.04	0.19		0.97	0.44		0.74	
Uniform Delay, d1	49.4	39.4		32.9	14.8	15.9		38.2	0.0		41.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	
Incremental Delay, d2	21.8	2.5		37.7	0.1	0.7		32.2	2.0		8.3	
Delay (s)	71.1	41.9		70.6	14.9	16.6		70.4	2.0		49.5	
Level of Service	E	D		E	B	B		E	A		D	
Approach Delay (s)		42.7			52.4			43.4			49.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	47.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

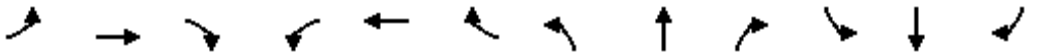
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.91	0.91	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.90	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1448	2576	1360	2234	2598	1360	1520	1836	848	1520	2269	1193
Flt Permitted	0.33	1.00	1.00	0.95	1.00	1.00	0.63	1.00	1.00	0.61	1.00	1.00
Satd. Flow (perm)	504	2576	1360	2234	2598	1360	1002	1836	848	970	2269	1193
Volume (vph)	100	750	35	185	755	10	5	70	285	5	190	35
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	789	37	195	795	11	5	74	300	5	200	37
RTOR Reduction (vph)	0	0	20	0	0	4	0	122	129	0	0	30
Lane Group Flow (vph)	105	789	17	195	795	7	5	102	21	5	200	7
Heavy Vehicles (%)	5%	18%	0%	32%	17%	0%	0%	36%	46%	0%	34%	14%
Turn Type	Perm		Perm	Prot		Perm	Perm		Over	Perm		Perm
Protected Phases		2		1	6			8	1		4	
Permitted Phases	2		2			6	8			4		4
Actuated Green, G (s)	24.3	24.3	24.3	7.7	36.0	36.0	9.9	9.9	7.7	9.9	9.9	9.9
Effective Green, g (s)	24.3	24.3	24.3	7.7	36.0	36.0	9.9	9.9	7.7	9.9	9.9	9.9
Actuated g/C Ratio	0.45	0.45	0.45	0.14	0.67	0.67	0.18	0.18	0.14	0.18	0.18	0.18
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	227	1161	613	319	1735	908	184	337	121	178	417	219
v/s Ratio Prot		c0.31		c0.09	0.31			0.06	0.03		c0.09	
v/s Ratio Perm	0.21		0.01			0.01	0.00			0.01		0.01
v/c Ratio	0.46	0.68	0.03	0.61	0.46	0.01	0.03	0.30	0.18	0.03	0.48	0.03
Uniform Delay, d1	10.3	11.7	8.2	21.7	4.3	3.0	18.0	19.0	20.3	18.1	19.7	18.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.6	3.2	0.1	3.4	0.2	0.0	0.1	0.5	0.7	0.1	0.9	0.1
Delay (s)	16.9	14.9	8.3	25.1	4.5	3.0	18.1	19.5	21.0	18.1	20.6	18.1
Level of Service	B	B	A	C	A	A	B	B	C	B	C	B
Approach Delay (s)		14.9			8.5			20.1			20.1	
Approach LOS		B			A			C			C	

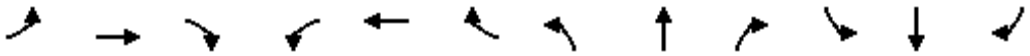
Intersection Summary					
HCM Average Control Delay	13.7	HCM Level of Service	B		
HCM Volume to Capacity ratio	0.62				
Actuated Cycle Length (s)	53.9	Sum of lost time (s)	12.0		
Intersection Capacity Utilization	51.9%	ICU Level of Service	A		
Analysis Period (min)	15				

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Util. Factor		0.91		1.00	0.91	1.00	1.00	0.95			0.95	
Frt		0.93		1.00	1.00	0.85	1.00	1.00			1.00	
Flt Protected		1.00		0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (prot)		4040		1520	4368	1360	1520	3040			3040	
Flt Permitted		1.00		0.95	1.00	1.00	0.95	1.00			1.00	
Satd. Flow (perm)		4040		1520	4368	1360	1520	3040			3040	
Volume (vph)	0	5	5	5	5	5	5	5	0	0	5	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	5	5	5	5	5	5	5	0	0	5	0
RTOR Reduction (vph)	0	4	0	0	0	3	0	0	0	0	0	0
Lane Group Flow (vph)	0	6	0	5	5	2	5	5	0	0	5	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot			Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	5	2		1	6	7	3	8		7	4	5
Permitted Phases						6						4
Actuated Green, G (s)		17.0		5.0	17.0	22.0	5.0	17.0			17.0	
Effective Green, g (s)		17.0		5.0	17.0	22.0	5.0	17.0			17.0	
Actuated g/C Ratio		0.28		0.08	0.28	0.37	0.08	0.28			0.28	
Clearance Time (s)		4.0		4.0	4.0	4.0	4.0	4.0			4.0	
Lane Grp Cap (vph)		1145		127	1238	499	127	861			861	
v/s Ratio Prot		c0.00		c0.00	0.00	0.00	c0.00	0.00			c0.00	
v/s Ratio Perm						0.00						
v/c Ratio		0.01		0.04	0.00	0.00	0.04	0.01			0.01	
Uniform Delay, d1		15.4		25.3	15.4	12.0	25.3	15.4			15.4	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00			0.58	
Incremental Delay, d2		0.0		0.6	0.0	0.0	0.6	0.0			0.0	
Delay (s)		15.4		25.9	15.4	12.1	25.9	15.4			8.9	
Level of Service		B		C	B	B	C	B			A	
Approach Delay (s)		15.4			17.8			20.7			8.9	
Approach LOS		B			B			C			A	

Intersection Summary			
HCM Average Control Delay	16.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.01		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	16.5%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	0.96		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	2719		1520	2753		2808	2856		1520	2800	
Flt Permitted	0.15	1.00		0.15	1.00		0.42	1.00		0.37	1.00	
Satd. Flow (perm)	241	2719		239	2753		1228	2856		584	2800	
Volume (vph)	75	1205	100	115	1215	85	205	290	105	110	285	65
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	1268	105	121	1279	89	216	305	111	116	300	68
RTOR Reduction (vph)	0	5	0	0	4	0	0	41	0	0	22	0
Lane Group Flow (vph)	79	1368	0	121	1364	0	216	375	0	116	346	0
Heavy Vehicles (%)	0%	11%	5%	0%	10%	0%	5%	3%	0%	0%	5%	8%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	62.4	62.4		62.4	62.4		20.4	20.4		20.4	20.4	
Effective Green, g (s)	62.4	62.4		62.4	62.4		20.4	20.4		20.4	20.4	
Actuated g/C Ratio	0.69	0.69		0.69	0.69		0.22	0.22		0.22	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	166	1869		164	1892		276	642		131	629	
v/s Ratio Prot		0.50			0.50			0.13			0.12	
v/s Ratio Perm	0.33			c0.51			0.18			c0.20		
v/c Ratio	0.48	0.73		0.74	0.72		0.78	0.58		0.89	0.55	
Uniform Delay, d1	6.6	8.9		9.0	8.8		33.1	31.4		34.1	31.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	9.5	2.6		15.8	1.4		13.5	1.4		45.6	1.0	
Delay (s)	16.1	11.5		24.9	10.2		46.6	32.8		79.6	32.2	
Level of Service	B	B		C	B		D	C		E	C	
Approach Delay (s)		11.8			11.4			37.5			43.6	
Approach LOS		B			B			D			D	

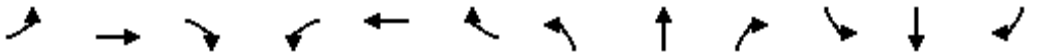
Intersection Summary			
HCM Average Control Delay	19.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	90.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1310	2764	1295	1520	2739	1236	2891	2854		2949	2796	
Flt Permitted	0.14	1.00	1.00	0.19	1.00	1.00	0.38	1.00		0.28	1.00	
Satd. Flow (perm)	192	2764	1295	305	2739	1236	1148	2854		882	2796	
Volume (vph)	160	1105	95	50	1070	50	215	400	65	65	270	40
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	168	1163	100	53	1126	53	226	421	68	68	284	42
RTOR Reduction (vph)	0	0	38	0	0	25	0	13	0	0	11	0
Lane Group Flow (vph)	168	1163	62	53	1126	28	226	476	0	68	315	0
Heavy Vehicles (%)	16%	10%	5%	0%	11%	10%	2%	5%	0%	0%	2%	38%
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt			pm+pt		
Protected Phases	5	2	3	1	6	7	3	8		7	4	
Permitted Phases	2		2	6		6	8			4		
Actuated Green, G (s)	63.4	56.3	61.3	52.5	49.4	52.5	24.9	19.9		21.1	18.0	
Effective Green, g (s)	63.4	56.3	61.3	52.5	49.4	52.5	24.9	19.9		21.1	18.0	
Actuated g/C Ratio	0.64	0.57	0.62	0.53	0.50	0.53	0.25	0.20		0.21	0.18	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	237	1581	859	201	1375	710	379	577		254	511	
v/s Ratio Prot	c0.07	0.42	0.00	0.01	c0.41	0.00	c0.03	c0.17		0.01	0.11	
v/s Ratio Perm	0.38		0.04	0.13		0.02	0.12			0.05		
v/c Ratio	0.71	0.74	0.07	0.26	0.82	0.04	0.60	0.83		0.27	0.62	
Uniform Delay, d1	12.8	15.6	7.3	11.8	20.7	10.9	31.2	37.6		31.4	37.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	9.3	3.1	0.0	0.7	3.9	0.0	2.5	9.4		0.6	2.2	
Delay (s)	22.1	18.6	7.4	12.5	24.6	11.0	33.7	47.0		31.9	39.2	
Level of Service	C	B	A	B	C	B	C	D		C	D	
Approach Delay (s)		18.3			23.5			42.8			38.0	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	26.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	98.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		

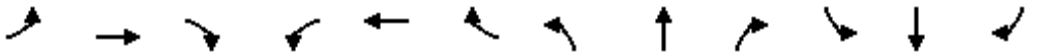
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor		0.91			0.91		1.00	0.95		1.00	0.95	1.00
Frt		0.97			0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)		3846			3842		1476	2901		1520	2951	1360
Flt Permitted		0.89			0.84		0.37	1.00		0.27	1.00	1.00
Satd. Flow (perm)		3443			3231		573	2901		428	2951	1360
Volume (vph)	25	1125	265	25	1000	105	300	665	110	80	575	90
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	1184	279	26	1053	111	316	700	116	84	605	95
RTOR Reduction (vph)	0	38	0	0	12	0	0	10	0	0	0	17
Lane Group Flow (vph)	0	1451	0	0	1178	0	316	806	0	84	605	78
Heavy Vehicles (%)	0%	12%	4%	0%	13%	5%	3%	3%	0%	0%	3%	0%
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		4
Actuated Green, G (s)		41.0			41.0		51.0	51.0		51.0	51.0	51.0
Effective Green, g (s)		41.0			41.0		51.0	51.0		51.0	51.0	51.0
Actuated g/C Ratio		0.41			0.41		0.51	0.51		0.51	0.51	0.51
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1412			1325		292	1480		218	1505	694
v/s Ratio Prot								0.28			0.20	
v/s Ratio Perm		c0.42			0.36		c0.55			0.20		0.06
v/c Ratio		1.03			0.89		1.08	0.54		0.39	0.40	0.11
Uniform Delay, d1		29.5			27.4		24.5	16.6		14.9	15.1	12.7
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2		31.3			7.6		76.3	0.4		1.1	0.2	0.1
Delay (s)		60.8			35.0		100.8	17.0		16.1	15.3	12.8
Level of Service		E			C		F	B		B	B	B
Approach Delay (s)		60.8			35.0			40.4			15.1	
Approach LOS		E			C			D			B	

Intersection Summary			
HCM Average Control Delay	41.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	103.0%	ICU Level of Service	G
Analysis Period (min)	15		

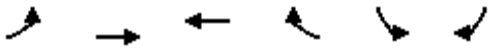
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	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)	1520	2739	1360	1520	2710		1520	1553	1360	1462	1569	1360
Flt Permitted	0.19	1.00	1.00	0.11	1.00		0.24	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)	300	2739	1360	179	2710		382	1553	1360	439	1569	1360
Volume (vph)	135	1125	65	90	870	105	70	375	60	135	410	110
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	1184	68	95	916	111	74	395	63	142	432	116
RTOR Reduction (vph)	0	0	33	0	10	0	0	0	25	0	0	39
Lane Group Flow (vph)	142	1184	35	95	1017	0	74	395	38	142	432	77
Heavy Vehicles (%)	0%	11%	0%	0%	11%	5%	0%	3%	0%	4%	2%	0%
Turn Type	pm+pt		Perm	pm+pt			Perm		pm+ov	Perm		pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases	2		2	6			8		8	4		4
Actuated Green, G (s)	48.3	48.3	48.3	39.7	39.7		30.6	30.6	34.6	30.6	30.6	43.2
Effective Green, g (s)	48.3	48.3	48.3	39.7	39.7		30.6	30.6	34.6	30.6	30.6	43.2
Actuated g/C Ratio	0.51	0.51	0.51	0.42	0.42		0.32	0.32	0.36	0.32	0.32	0.46
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	315	1394	692	131	1134		123	501	553	142	506	676
v/s Ratio Prot	0.06	c0.43		0.03	c0.38			0.25	0.00		0.28	0.02
v/s Ratio Perm	0.17		0.03	0.27			0.19		0.03	c0.32		0.04
v/c Ratio	0.45	0.85	0.05	0.73	0.90		0.60	0.79	0.07	1.00	0.85	0.11
Uniform Delay, d1	25.4	20.2	11.7	21.0	25.7		27.0	29.2	19.7	32.2	30.1	14.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	6.6	0.1	18.0	9.5		8.0	8.0	0.1	75.5	13.2	0.1
Delay (s)	26.5	26.8	11.9	38.9	35.1		35.1	37.3	19.7	107.7	43.2	14.9
Level of Service	C	C	B	D	D		D	D	B	F	D	B
Approach Delay (s)		26.0			35.5			34.9			51.7	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	94.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	88.5%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95	0.91		0.97	1.00
Frt	1.00	1.00	0.97		1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1382	2492	3736		2359	1236
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1382	2492	3736		2359	1236
Volume (vph)	240	945	925	215	240	290
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	253	995	974	226	253	305
RTOR Reduction (vph)	0	0	37	0	0	194
Lane Group Flow (vph)	253	995	1163	0	253	111
Heavy Vehicles (%)	10%	22%	14%	12%	25%	10%
Turn Type	Prot					Over
Protected Phases	5	2	6		4	5
Permitted Phases						
Actuated Green, G (s)	38.8	82.1	39.3		16.1	38.8
Effective Green, g (s)	38.8	82.1	39.3		16.1	38.8
Actuated g/C Ratio	0.37	0.77	0.37		0.15	0.37
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	505	1926	1383		358	452
v/s Ratio Prot	0.18	c0.40	c0.31		c0.11	0.09
v/s Ratio Perm						
v/c Ratio	0.50	0.52	0.84		0.71	0.25
Uniform Delay, d1	26.2	4.6	30.6		42.8	23.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.8	1.0	4.8		6.2	0.3
Delay (s)	27.0	5.5	35.4		49.1	23.8
Level of Service	C	A	D		D	C
Approach Delay (s)		9.9	35.4		35.2	
Approach LOS		A	D		D	

Intersection Summary			
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	106.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

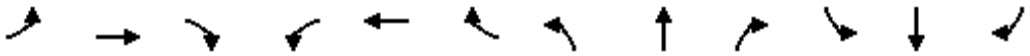
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.88	0.91		1.00	0.91
Frt	1.00	0.85	0.93		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1394	2137	3042		1236	2912
Flt Permitted	0.95	1.00	1.00		0.95	1.00
Satd. Flow (perm)	1394	2137	3042		1236	2912
Volume (vph)	165	290	320	250	280	250
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	174	305	337	263	295	263
RTOR Reduction (vph)	0	252	125	0	0	0
Lane Group Flow (vph)	174	53	475	0	295	263
Heavy Vehicles (%)	9%	12%	53%	10%	23%	50%
Turn Type		Prot			Prot	
Protected Phases	4	4	2		1	6
Permitted Phases						
Actuated Green, G (s)	17.7	17.7	28.1		44.1	76.2
Effective Green, g (s)	17.7	17.7	28.1		44.1	76.2
Actuated g/C Ratio	0.17	0.17	0.28		0.43	0.75
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	242	371	839		535	2178
v/s Ratio Prot	c0.12	0.02	c0.16		c0.24	0.09
v/s Ratio Perm						
v/c Ratio	0.72	0.14	0.57		0.55	0.12
Uniform Delay, d1	39.8	35.7	31.7		21.5	3.6
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	9.8	0.2	2.8		1.2	0.1
Delay (s)	49.5	35.8	34.4		22.8	3.7
Level of Service	D	D	C		C	A
Approach Delay (s)	40.8		34.4			13.8
Approach LOS	D		C			B

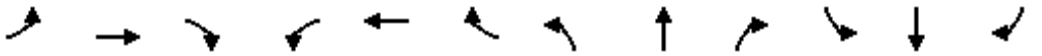
Intersection Summary			
HCM Average Control Delay	29.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	101.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	53.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			0.95			0.95	
Frt		1.00			1.00			1.00			1.00	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		3040			3040			3040			3040	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		3040			3040			3040			3040	
Volume (vph)	0	5	0	0	5	0	0	5	0	0	5	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	5	0	0	5	0	0	5	0	0	5	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	5	0	0	5	0	0	5	0	0	5	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot			Prot			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases							8			4		
Actuated Green, G (s)		17.0			17.0			17.0			17.0	
Effective Green, g (s)		17.0			17.0			17.0			17.0	
Actuated g/C Ratio		0.28			0.28			0.28			0.28	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		861			861			861			861	
v/s Ratio Prot		c0.00			c0.00			c0.00			c0.00	
v/s Ratio Perm												
v/c Ratio		0.01			0.01			0.01			0.01	
Uniform Delay, d1		15.4			15.4			15.4			15.4	
Progression Factor		1.00			1.00			0.64			1.00	
Incremental Delay, d2		0.0			0.0			0.0			0.0	
Delay (s)		15.4			15.4			10.0			15.4	
Level of Service		B			B			A			B	
Approach Delay (s)		15.4			15.4			10.0			15.4	
Approach LOS		B			B			A			B	

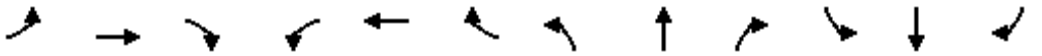
Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.01		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	13.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1277	4007	1308	1434	4007	1360	1394	2868	1259	1520	2868	1283
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.46	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)	1277	4007	1308	1434	4007	1360	680	2868	1259	457	2868	1283
Volume (vph)	185	1285	130	90	1145	70	175	555	120	40	345	80
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	195	1353	137	95	1205	74	184	584	126	42	363	84
RTOR Reduction (vph)	0	0	72	0	0	45	0	0	10	0	0	4
Lane Group Flow (vph)	195	1353	65	95	1205	29	184	584	116	42	363	80
Heavy Vehicles (%)	19%	9%	4%	6%	9%	0%	9%	6%	8%	0%	6%	6%
Turn Type	Prot		Perm	Prot		Perm	Perm		pm+ov	Perm		pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases			2			6	8		8	4		4
Actuated Green, G (s)	17.2	44.4	44.4	9.2	36.4	36.4	28.1	28.1	37.3	28.1	28.1	45.3
Effective Green, g (s)	17.2	44.4	44.4	9.2	36.4	36.4	28.1	28.1	37.3	28.1	28.1	45.3
Actuated g/C Ratio	0.18	0.47	0.47	0.10	0.39	0.39	0.30	0.30	0.40	0.30	0.30	0.48
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	234	1899	620	141	1557	528	204	860	555	137	860	675
v/s Ratio Prot	c0.15	0.34		0.07	c0.30			0.20	0.02		0.13	0.02
v/s Ratio Perm			0.05			0.02	c0.27		0.07	0.09		0.04
v/c Ratio	0.83	0.71	0.10	0.67	0.77	0.05	0.90	0.68	0.21	0.31	0.42	0.12
Uniform Delay, d1	36.9	19.6	13.6	40.8	25.1	17.9	31.5	28.8	18.5	25.3	26.3	13.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	21.7	2.3	0.3	12.0	2.5	0.0	37.1	2.1	0.2	1.3	0.3	0.1
Delay (s)	58.6	21.9	14.0	52.8	27.5	17.9	68.5	31.0	18.7	26.6	26.6	13.3
Level of Service	E	C	B	D	C	B	E	C	B	C	C	B
Approach Delay (s)		25.5			28.7			37.0			24.3	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	28.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	93.7	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		

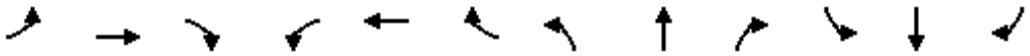
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.98		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)	2863	3990		2835	3969		1462	2980	1360	1520	2923	1308
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2863	3990		2835	3969		1462	2980	1360	1520	2923	1308
Volume (vph)	175	875	60	135	845	140	140	650	60	130	665	120
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	184	921	63	142	889	147	147	684	63	137	700	126
RTOR Reduction (vph)	0	7	0	0	22	0	0	0	31	0	0	78
Lane Group Flow (vph)	184	977	0	142	1014	0	147	684	32	137	700	48
Heavy Vehicles (%)	3%	9%	0%	4%	9%	0%	4%	2%	0%	0%	4%	4%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Actuated Green, G (s)	8.7	33.2		7.0	31.5		13.1	27.7	34.7	11.7	26.3	35.0
Effective Green, g (s)	8.7	33.2		7.0	31.5		13.1	27.7	34.7	11.7	26.3	35.0
Actuated g/C Ratio	0.09	0.35		0.07	0.33		0.14	0.29	0.36	0.12	0.28	0.37
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	261	1386		208	1308		200	863	494	186	804	479
v/s Ratio Prot	0.06	c0.24		0.05	c0.26		0.10	c0.23	0.00	0.09	c0.24	0.01
v/s Ratio Perm									0.02			0.03
v/c Ratio	0.70	0.70		0.68	0.78		0.73	0.79	0.06	0.74	0.87	0.10
Uniform Delay, d1	42.2	27.0		43.2	28.9		39.6	31.3	19.9	40.5	33.0	19.9
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.4	3.0		8.9	2.9		13.1	5.0	0.1	14.1	10.2	0.1
Delay (s)	50.6	30.0		52.1	31.8		52.7	36.3	19.9	54.5	43.2	20.0
Level of Service	D	C		D	C		D	D	B	D	D	C
Approach Delay (s)		33.2			34.3			37.9			41.8	
Approach LOS		C			C			D			D	

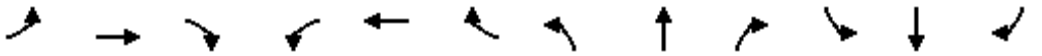
Intersection Summary			
HCM Average Control Delay	36.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	95.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0			4.0			4.0	
Lane Util. Factor	1.00	0.91			0.91			0.95			0.95	
Frt	1.00	0.93			1.00			1.00			1.00	
Flt Protected	0.95	1.00			1.00			1.00			1.00	
Satd. Flow (prot)	1520	4040			4368			3040			3040	
Flt Permitted	0.95	1.00			1.00			1.00			1.00	
Satd. Flow (perm)	1520	4040			4368			3040			3040	
Volume (vph)	5	5	5	0	5	0	0	5	0	0	5	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	5	5	0	5	0	0	5	0	0	5	0
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	5	7	0	0	5	0	0	5	0	0	5	0
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	5	2		1	6			8			4	
Permitted Phases							8			4		
Actuated Green, G (s)	4.0	18.0			18.0			16.0			16.0	
Effective Green, g (s)	4.0	18.0			18.0			16.0			16.0	
Actuated g/C Ratio	0.08	0.36			0.36			0.32			0.32	
Clearance Time (s)	4.0	4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)	122	1454			1572			973			973	
v/s Ratio Prot	c0.00	c0.00			c0.00			c0.00			0.00	
v/s Ratio Perm												
v/c Ratio	0.04	0.00			0.00			0.01			0.01	
Uniform Delay, d1	21.2	10.3			10.3			11.6			11.6	
Progression Factor	1.00	1.00			0.78			1.00			1.00	
Incremental Delay, d2	0.6	0.0			0.0			0.0			0.0	
Delay (s)	21.9	10.3			8.0			11.6			11.6	
Level of Service	C	B			A			B			B	
Approach Delay (s)		14.1			8.0			11.6			11.6	
Approach LOS		B			A			B			B	

Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.01		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	14.9%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00		1.00	1.00		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)	1520	4368		1520	4368		1520	1600	1360	1520	1600	1360
Flt Permitted	0.75	1.00		0.75	1.00		0.50	1.00	1.00	0.75	1.00	1.00
Satd. Flow (perm)	1207	4368		1207	4368		805	1600	1360	1207	1600	1360
Volume (vph)	5	5	0	5	5	0	5	5	5	5	5	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	5	0	5	5	0	5	5	5	5	5	5
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	3	0	0	3
Lane Group Flow (vph)	5	5	0	5	5	0	5	5	2	5	5	2
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Perm			Perm			pm+pt		Perm	pm+pt		Perm
Protected Phases		2			6		3	8		7	4	
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	18.0	18.0		18.0	18.0		16.0	16.0	16.0	16.0	16.0	16.0
Effective Green, g (s)	18.0	18.0		18.0	18.0		16.0	16.0	16.0	16.0	16.0	16.0
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.32	0.32	0.32	0.32	0.32	0.32
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Grp Cap (vph)	435	1572		435	1572		315	512	435	411	512	435
v/s Ratio Prot		0.00			0.00		c0.00	0.00		c0.00	0.00	
v/s Ratio Perm	c0.00			0.00			c0.00		0.00	0.00		0.00
v/c Ratio	0.01	0.00		0.01	0.00		0.02	0.01	0.00	0.01	0.01	0.00
Uniform Delay, d1	10.3	10.3		10.3	10.3		11.8	11.6	11.6	11.6	11.6	11.6
Progression Factor	1.56	1.56		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.0	0.0		0.0	0.0		0.1	0.0	0.0	0.1	0.0	0.0
Delay (s)	16.1	16.0		10.3	10.3		11.9	11.6	11.6	11.7	11.6	11.6
Level of Service	B	B		B	B		B	B	B	B	B	B
Approach Delay (s)		16.0			10.3			11.7			11.6	
Approach LOS		B			B			B			B	

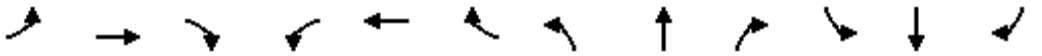
Intersection Summary			
HCM Average Control Delay	12.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.01		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	20.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.95	1.00	1.00	0.95
Frt	0.99	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	2752	1157	2040	1236	1382	2156
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	2752	1157	2040	1236	1382	2156
Volume (vph)	305	280	740	210	255	570
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	321	295	779	221	268	600
RTOR Reduction (vph)	6	30	0	71	0	0
Lane Group Flow (vph)	328	252	779	150	268	600
Heavy Vehicles (%)	7%	7%	49%	10%	10%	41%
Turn Type		pm+ov		pm+ov	Prot	
Protected Phases	8	1	2	8	1	6
Permitted Phases		8		2		
Actuated Green, G (s)	12.2	27.0	21.0	33.2	14.8	39.8
Effective Green, g (s)	12.2	27.0	21.0	33.2	14.8	39.8
Actuated g/C Ratio	0.20	0.45	0.35	0.55	0.25	0.66
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	560	598	714	766	341	1430
v/s Ratio Prot	c0.12	0.10	c0.38	0.04	c0.19	0.28
v/s Ratio Perm		0.11		0.08		
v/c Ratio	0.59	0.42	1.09	0.20	0.79	0.42
Uniform Delay, d1	21.6	11.2	19.5	6.7	21.1	4.7
Progression Factor	1.00	1.00	1.00	1.00	1.30	0.70
Incremental Delay, d2	1.6	0.5	61.2	0.1	10.6	0.8
Delay (s)	23.2	11.7	80.7	6.8	38.1	4.1
Level of Service	C	B	F	A	D	A
Approach Delay (s)	17.9		64.4			14.6
Approach LOS	B		E			B

Intersection Summary			
HCM Average Control Delay	35.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		

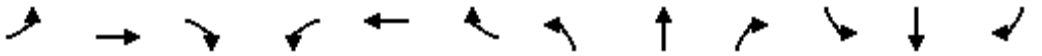
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1434	2555		1013	2303	1259	1520	1571		2681	1600	1225
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.74	1.00		0.57	1.00	1.00
Satd. Flow (perm)	1434	2555		1013	2303	1259	1184	1571		1596	1600	1225
Volume (vph)	170	260	5	10	220	380	5	35	5	255	25	185
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	179	274	5	11	232	400	5	37	5	268	26	195
RTOR Reduction (vph)	0	1	0	0	0	188	0	4	0	0	0	69
Lane Group Flow (vph)	179	278	0	11	232	212	5	38	0	268	26	126
Heavy Vehicles (%)	6%	19%	0%	50%	32%	8%	0%	0%	0%	10%	0%	11%
Turn Type	Prot			Prot		pm+ov	pm+pt			pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2		1	6	7
Permitted Phases						8	2			6		6
Actuated Green, G (s)	17.2	34.0		1.2	18.0	53.0	15.0	13.8		52.8	47.6	64.8
Effective Green, g (s)	17.2	34.0		1.2	18.0	53.0	15.0	13.8		52.8	47.6	64.8
Actuated g/C Ratio	0.17	0.34		0.01	0.18	0.53	0.15	0.14		0.53	0.48	0.65
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	247	869		12	415	718	182	217		1222	762	843
v/s Ratio Prot	c0.12	0.11		0.01	c0.10	c0.10	0.00	0.02		0.08	0.02	0.03
v/s Ratio Perm						0.06	0.00			c0.04		0.08
v/c Ratio	0.72	0.32		0.92	0.56	0.30	0.03	0.17		0.22	0.03	0.15
Uniform Delay, d1	39.2	24.4		49.4	37.4	13.1	36.2	38.1		12.5	14.0	6.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	10.1	0.2		212.2	1.6	0.2	0.1	1.7		0.4	0.1	0.1
Delay (s)	49.2	24.6		261.5	39.0	13.3	36.3	39.8		12.9	14.0	6.9
Level of Service	D	C		F	D	B	D	D		B	B	A
Approach Delay (s)		34.3			26.8			39.4			10.6	
Approach LOS		C			C			D			B	

Intersection Summary			
HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.5%	ICU Level of Service	A
Analysis Period (min)	15		

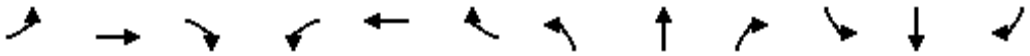
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		0.97	0.95		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.96		1.00	0.97		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1520	2885		2949	2936		1520	2789	1347	2949	2667	1360
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1520	2885		2949	2936		1520	2789	1347	2949	2667	1360
Volume (vph)	65	610	255	105	595	125	305	225	395	230	175	80
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	68	642	268	111	626	132	321	237	416	242	184	84
RTOR Reduction (vph)	0	44	0	0	18	0	0	0	62	0	0	65
Lane Group Flow (vph)	68	866	0	111	740	0	321	237	354	242	184	19
Heavy Vehicles (%)	0%	1%	0%	0%	1%	0%	0%	9%	1%	0%	14%	0%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6		3	8	1	7	4	5
Permitted Phases									8			4
Actuated Green, G (s)	9.6	34.1		11.0	35.5		22.4	22.0	33.0	12.1	11.7	21.3
Effective Green, g (s)	9.6	34.1		11.0	35.5		22.4	22.0	33.0	12.1	11.7	21.3
Actuated g/C Ratio	0.10	0.36		0.12	0.37		0.24	0.23	0.35	0.13	0.12	0.22
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	153	1033		341	1095		358	645	467	375	328	361
v/s Ratio Prot	0.04	c0.30		0.04	0.25		c0.21	0.08	c0.09	c0.08	0.07	0.01
v/s Ratio Perm									0.18			0.01
v/c Ratio	0.44	0.84		0.33	0.68		0.90	0.37	0.76	0.65	0.56	0.05
Uniform Delay, d1	40.3	28.0		38.7	25.0		35.3	30.8	27.6	39.5	39.3	29.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.1	8.1		0.6	1.7		23.8	0.4	6.9	3.8	2.2	0.1
Delay (s)	42.3	36.1		39.3	26.7		59.1	31.1	34.5	43.3	41.5	29.1
Level of Service	D	D		D	C		E	C	C	D	D	C
Approach Delay (s)		36.6			28.3			41.8			40.3	
Approach LOS		D			C			D			D	

Intersection Summary			
HCM Average Control Delay	36.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	95.2	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.5%	ICU Level of Service	D
Analysis Period (min)	15		

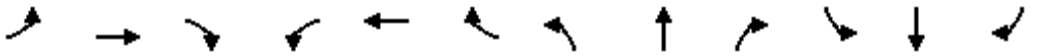
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.99		1.00	0.98		1.00	0.95		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	4276		1421	4183		1462	2768		1520	2848	
Flt Permitted	0.26	1.00		0.23	1.00		0.36	1.00		0.34	1.00	
Satd. Flow (perm)	409	4276		342	4183		555	2768		541	2848	
Volume (vph)	115	740	65	150	875	140	130	315	170	85	225	115
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	121	779	68	158	921	147	137	332	179	89	237	121
RTOR Reduction (vph)	0	12	0	0	25	0	0	94	0	0	84	0
Lane Group Flow (vph)	121	835	0	158	1043	0	137	417	0	89	274	0
Heavy Vehicles (%)	0%	1%	0%	7%	2%	4%	4%	3%	6%	0%	2%	0%
Turn Type	pm+pt			pm+pt			pm+pt			pm+pt		
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)	24.8	24.8		26.2	26.2		22.0	14.7		17.6	12.5	
Effective Green, g (s)	24.8	24.8		26.2	26.2		22.0	14.7		17.6	12.5	
Actuated g/C Ratio	0.36	0.36		0.38	0.38		0.32	0.21		0.25	0.18	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	263	1530		265	1581		272	587		209	514	
v/s Ratio Prot	0.05	c0.20		0.07	c0.25		c0.05	c0.15		0.03	0.10	
v/s Ratio Perm	0.12			0.15			0.11			0.08		
v/c Ratio	0.46	0.55		0.60	0.66		0.50	0.71		0.43	0.53	
Uniform Delay, d1	20.0	17.8		15.9	17.9		18.0	25.3		20.6	25.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.3	1.4		3.6	1.0		1.5	4.0		1.4	1.1	
Delay (s)	21.3	19.2		19.5	18.9		19.5	29.4		22.0	26.8	
Level of Service	C	B		B	B		B	C		C	C	
Approach Delay (s)		19.4			18.9			27.3			25.9	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	21.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	69.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

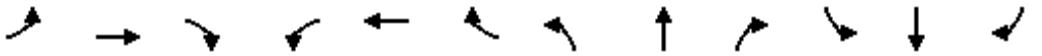
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	1.00	0.91		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	2949	4325	1360	2835	4282	1360	1462	4042		1520	2951	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	2949	4325	1360	2835	4282	1360	1462	4042		1520	2951	1360
Volume (vph)	240	710	175	225	870	105	275	450	225	185	590	145
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	253	747	184	237	916	111	289	474	237	195	621	153
RTOR Reduction (vph)	0	0	22	0	0	53	0	80	0	0	0	71
Lane Group Flow (vph)	253	747	162	237	916	58	289	631	0	195	621	82
Heavy Vehicles (%)	0%	1%	0%	4%	2%	0%	4%	3%	2%	0%	3%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8		7	4	5
Permitted Phases			2			6						4
Actuated Green, G (s)	13.9	28.3	51.8	11.4	25.8	43.7	23.5	30.2		17.9	24.6	38.5
Effective Green, g (s)	13.9	28.3	51.8	11.4	25.8	43.7	23.5	30.2		17.9	24.6	38.5
Actuated g/C Ratio	0.13	0.27	0.50	0.11	0.25	0.42	0.23	0.29		0.17	0.24	0.37
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	395	1179	679	311	1064	573	331	1176		262	699	504
v/s Ratio Prot	c0.09	0.17	0.05	0.08	c0.21	0.02	c0.20	0.16		0.13	c0.21	0.02
v/s Ratio Perm			0.07			0.03						0.04
v/c Ratio	0.64	0.63	0.24	0.76	0.86	0.10	0.87	0.54		0.74	0.89	0.16
Uniform Delay, d1	42.6	33.2	14.8	44.9	37.3	18.2	38.7	30.9		40.8	38.3	21.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.5	2.6	0.2	10.5	7.3	0.1	21.5	0.5		10.9	13.1	0.2
Delay (s)	46.1	35.8	15.0	55.4	44.6	18.3	60.2	31.4		51.7	51.4	22.0
Level of Service	D	D	B	E	D	B	E	C		D	D	C
Approach Delay (s)		34.8			44.3			39.7			46.8	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	41.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	103.8	Sum of lost time (s)	12.0
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		1.00	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.99		1.00	0.98		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)	2808	4279		1476	4140		2949	2951	1333	2891	2923	1360
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2808	4279		1476	4140		2949	2951	1333	2891	2923	1360
Volume (vph)	95	870	70	160	795	140	85	585	205	255	530	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	916	74	168	837	147	89	616	216	268	558	105
RTOR Reduction (vph)	0	10	0	0	27	0	0	0	166	0	0	72
Lane Group Flow (vph)	100	980	0	168	957	0	89	616	50	268	558	33
Heavy Vehicles (%)	5%	1%	0%	3%	3%	4%	0%	3%	2%	2%	4%	0%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	5	2		1	6		3	8		7	4	
Permitted Phases									8			4
Actuated Green, G (s)	5.4	27.9		12.8	35.3		4.7	20.8	20.8	11.5	27.6	27.6
Effective Green, g (s)	5.4	27.9		12.8	35.3		4.7	20.8	20.8	11.5	27.6	27.6
Actuated g/C Ratio	0.06	0.31		0.14	0.40		0.05	0.23	0.23	0.13	0.31	0.31
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	170	1341		212	1642		156	690	312	374	906	422
v/s Ratio Prot	0.04	c0.23		c0.11	0.23		0.03	c0.21		0.09	c0.19	
v/s Ratio Perm									0.04			0.02
v/c Ratio	0.59	0.73		0.79	0.58		0.57	0.89	0.16	0.72	0.62	0.08
Uniform Delay, d1	40.7	27.2		36.8	21.1		41.2	33.0	27.2	37.2	26.2	21.7
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.1	3.5		18.1	0.5		5.0	13.9	0.2	6.4	1.3	0.1
Delay (s)	45.8	30.7		54.9	21.6		46.1	46.9	27.4	43.6	27.4	21.8
Level of Service	D	C		D	C		D	D	C	D	C	C
Approach Delay (s)		32.1			26.5			42.3			31.4	
Approach LOS		C			C			D			C	

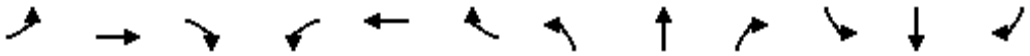
Intersection Summary			
HCM Average Control Delay	32.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	89.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.91	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.96	
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)	2782	4241	1320	2808	4200	1320	2949	4200	1295	2782	4060	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	2782	4241	1320	2808	4200	1320	2949	4200	1295	2782	4060	
Volume (vph)	165	1075	580	185	865	470	120	955	105	345	605	205
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	174	1132	611	195	911	495	126	1005	111	363	637	216
RTOR Reduction (vph)	0	0	13	0	0	15	0	0	63	0	68	0
Lane Group Flow (vph)	174	1132	598	195	911	480	126	1005	48	363	785	0
Heavy Vehicles (%)	6%	3%	3%	5%	4%	3%	0%	4%	5%	6%	3%	5%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		Over	Prot		
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	
Permitted Phases			2			6						
Actuated Green, G (s)	8.0	28.0	47.0	7.0	27.0	40.7	19.0	25.0	7.0	13.7	19.7	
Effective Green, g (s)	8.0	28.0	47.0	7.0	27.0	40.7	19.0	25.0	7.0	13.7	19.7	
Actuated g/C Ratio	0.09	0.31	0.52	0.08	0.30	0.45	0.21	0.28	0.08	0.15	0.22	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	248	1324	751	219	1264	658	625	1171	101	425	892	
v/s Ratio Prot	0.06	c0.27	c0.17	0.07	0.22	c0.11	0.04	c0.24	0.04	0.13	c0.19	
v/s Ratio Perm			0.28			0.25						
v/c Ratio	0.70	0.85	0.80	0.89	0.72	0.73	0.20	0.86	0.48	0.85	0.88	
Uniform Delay, d1	39.7	28.9	17.4	41.0	28.0	20.0	29.1	30.7	39.6	37.0	33.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	8.7	7.2	5.9	33.0	2.1	4.0	0.2	6.4	3.5	15.3	10.1	
Delay (s)	48.3	36.2	23.3	73.9	30.0	24.0	29.3	37.1	43.1	52.3	43.9	
Level of Service	D	D	C	E	C	C	C	D	D	D	D	
Approach Delay (s)		33.2			33.5			36.8			46.4	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	36.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	89.7	Sum of lost time (s)	4.0
Intersection Capacity Utilization	78.2%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1476	4029		1462	2868	1333	1421	3920		2863	3854	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1476	4029		1462	2868	1333	1421	3920		2863	3854	
Volume (vph)	175	415	120	120	435	215	75	335	90	150	380	170
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	184	437	126	126	458	226	79	353	95	158	400	179
RTOR Reduction (vph)	0	47	0	0	0	191	0	49	0	0	82	0
Lane Group Flow (vph)	184	516	0	126	458	35	79	399	0	158	497	0
Heavy Vehicles (%)	3%	5%	4%	4%	6%	2%	7%	10%	0%	3%	9%	6%
Turn Type	Prot			Prot		Over	Prot			Prot		
Protected Phases	5	2		1	6	7	3	8		7	4	
Permitted Phases												
Actuated Green, G (s)	18.7	33.2		10.2	24.7	13.3	7.8	13.0		13.3	18.5	
Effective Green, g (s)	18.7	33.2		10.2	24.7	13.3	7.8	13.0		13.3	18.5	
Actuated g/C Ratio	0.22	0.39		0.12	0.29	0.16	0.09	0.15		0.16	0.22	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	322	1561		174	827	207	129	595		444	832	
v/s Ratio Prot	c0.12	0.13		c0.09	c0.16	0.03	0.06	c0.10		0.06	c0.13	
v/s Ratio Perm												
v/c Ratio	0.57	0.33		0.72	0.55	0.17	0.61	0.67		0.36	0.60	
Uniform Delay, d1	29.9	18.4		36.4	25.8	31.4	37.5	34.3		32.4	30.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.4	0.6		13.9	0.8	0.4	8.3	3.0		0.5	1.2	
Delay (s)	32.4	19.0		50.3	26.6	31.8	45.8	37.3		32.9	31.4	
Level of Service	C	B		D	C	C	D	D		C	C	
Approach Delay (s)		22.3			31.8			38.6			31.7	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	30.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	85.7	Sum of lost time (s)	16.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	1.00	0.95	1.00	0.97	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	2437	1153	2219	1000	2304	2321
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	2437	1153	2219	1000	2304	2321
Volume (vph)	170	85	390	140	90	320
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	179	89	411	147	95	337
RTOR Reduction (vph)	0	55	0	50	0	0
Lane Group Flow (vph)	179	34	411	97	95	337
Heavy Vehicles (%)	21%	18%	37%	36%	28%	31%
Turn Type		pt+ov		pm+ov	Prot	
Protected Phases	7	7 5	6	7	5	2
Permitted Phases				6		
Actuated Green, G (s)	11.6	32.4	45.1	56.7	16.8	65.9
Effective Green, g (s)	11.6	32.4	45.1	56.7	16.8	65.9
Actuated g/C Ratio	0.14	0.38	0.53	0.66	0.20	0.77
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	331	437	1170	710	453	1789
v/s Ratio Prot	c0.07	0.03	c0.19	0.02	0.04	c0.15
v/s Ratio Perm				0.08		
v/c Ratio	0.54	0.08	0.35	0.14	0.21	0.19
Uniform Delay, d1	34.5	17.0	11.7	5.3	28.8	2.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.8	0.1	0.8	0.1	0.2	0.2
Delay (s)	36.3	17.1	12.5	5.4	29.0	2.9
Level of Service	D	B	B	A	C	A
Approach Delay (s)	29.9		10.7			8.6
Approach LOS	C		B			A

Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	85.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	31.9%	ICU Level of Service	A
Analysis Period (min)	15		

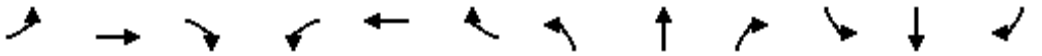
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	4007	1153	1246	3766	2106	1097
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	4007	1153	1246	3766	2106	1097
Volume (vph)	640	140	115	730	125	105
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	674	147	121	768	132	111
RTOR Reduction (vph)	0	129	0	0	0	47
Lane Group Flow (vph)	674	18	121	768	132	64
Heavy Vehicles (%)	9%	18%	22%	16%	40%	24%
Turn Type		Over	Prot			pm+ov
Protected Phases	2	8	1	6	8	1
Permitted Phases						8
Actuated Green, G (s)	39.1	8.4	10.6	53.7	8.4	19.0
Effective Green, g (s)	39.1	8.4	10.6	53.7	8.4	19.0
Actuated g/C Ratio	0.56	0.12	0.15	0.77	0.12	0.27
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2235	138	188	2885	252	360
v/s Ratio Prot	c0.17	0.02	c0.10	0.20	c0.06	0.03
v/s Ratio Perm						0.03
v/c Ratio	0.30	0.13	0.64	0.27	0.52	0.18
Uniform Delay, d1	8.2	27.6	28.0	2.4	29.0	19.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.4	7.3	0.0	2.0	0.2
Delay (s)	8.6	28.0	35.3	2.5	30.9	19.8
Level of Service	A	C	D	A	C	B
Approach Delay (s)	12.1			6.9	25.8	
Approach LOS	B			A	C	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	70.1	Sum of lost time (s)	12.0
Intersection Capacity Utilization	36.5%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		0.97	0.95	1.00	1.00	0.91	0.91	1.00	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.91	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1407	3916		2756	2764	1283	1462	2496	1135	1407	2951	1360
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1407	3916		2756	2764	1283	1462	2496	1135	1407	2951	1360
Volume (vph)	60	595	75	565	735	90	130	165	560	125	180	55
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	626	79	595	774	95	137	174	589	132	189	58
RTOR Reduction (vph)	0	15	0	0	0	40	0	202	253	0	0	46
Lane Group Flow (vph)	63	690	0	595	774	55	137	214	94	132	189	12
Heavy Vehicles (%)	8%	10%	7%	7%	10%	6%	4%	3%	9%	8%	3%	0%
Turn Type	Prot			Prot		pm+ov	Prot		Over	Prot		pm+ov
Protected Phases	5	2		1	6	7	3	8	1	7	4	5
Permitted Phases						6						4
Actuated Green, G (s)	7.3	24.5		24.3	41.5	52.0	14.4	14.8	24.3	10.5	10.9	18.2
Effective Green, g (s)	7.3	24.5		24.3	41.5	52.0	14.4	14.8	24.3	10.5	10.9	18.2
Actuated g/C Ratio	0.08	0.27		0.27	0.46	0.58	0.16	0.16	0.27	0.12	0.12	0.20
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	114	1065		743	1273	740	234	410	306	164	357	275
v/s Ratio Prot	0.04	c0.18		c0.22	0.28	0.01	c0.09	c0.09	0.08	c0.09	0.06	0.00
v/s Ratio Perm						0.03						0.01
v/c Ratio	0.55	0.65		0.80	0.61	0.07	0.59	0.52	0.31	0.80	0.53	0.04
Uniform Delay, d1	39.8	29.0		30.6	18.2	8.4	35.1	34.4	26.2	38.8	37.2	28.9
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.7	3.0		6.2	0.8	0.0	3.7	1.2	0.6	24.1	1.4	0.1
Delay (s)	45.5	32.0		36.8	19.0	8.5	38.8	35.6	26.8	62.9	38.6	29.0
Level of Service	D	C		D	B	A	D	D	C	E	D	C
Approach Delay (s)		33.1			25.6			32.7			45.6	
Approach LOS		C			C			C			D	

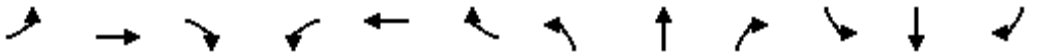
Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	90.1	Sum of lost time (s)	20.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2808	4200	1308	2949	4160	1308	2891	2980	1360	2949	2980	1308
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2808	4200	1308	2949	4160	1308	2891	2980	1360	2949	2980	1308
Volume (vph)	395	1025	285	70	880	115	225	475	75	90	740	245
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	416	1079	300	74	926	121	237	500	79	95	779	258
RTOR Reduction (vph)	0	0	40	0	0	62	0	0	38	0	0	11
Lane Group Flow (vph)	416	1079	260	74	926	59	237	500	41	95	779	247
Heavy Vehicles (%)	5%	4%	4%	0%	5%	4%	2%	2%	0%	0%	2%	4%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	5
Permitted Phases			2			6			8			4
Actuated Green, G (s)	14.6	33.7	42.7	4.7	23.8	30.5	9.0	27.1	31.8	6.7	24.8	39.4
Effective Green, g (s)	14.6	33.7	42.7	4.7	23.8	30.5	9.0	27.1	31.8	6.7	24.8	39.4
Actuated g/C Ratio	0.17	0.38	0.48	0.05	0.27	0.35	0.10	0.31	0.36	0.08	0.28	0.45
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	465	1605	693	157	1123	512	295	916	490	224	838	584
v/s Ratio Prot	c0.15	0.26	0.04	0.03	c0.22	0.01	c0.08	0.17	0.00	0.03	c0.26	0.07
v/s Ratio Perm			0.16			0.04			0.03			0.12
v/c Ratio	0.89	0.67	0.38	0.47	0.82	0.11	0.80	0.55	0.08	0.42	0.93	0.42
Uniform Delay, d1	36.0	22.7	14.3	40.5	30.2	19.7	38.7	25.4	18.6	38.9	30.9	16.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	19.3	2.3	0.3	2.2	5.0	0.1	14.6	0.7	0.1	1.3	16.3	0.5
Delay (s)	55.3	24.9	14.7	42.8	35.3	19.8	53.3	26.1	18.7	40.2	47.2	17.1
Level of Service	E	C	B	D	D	B	D	C	B	D	D	B
Approach Delay (s)		30.3			34.1			33.3			39.7	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	33.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	88.2	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.8%	ICU Level of Service	D
Analysis Period (min)	15		

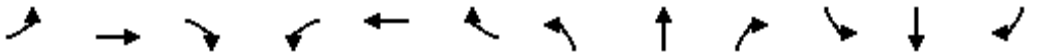
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1462	4160	1333	1520	4109		2863	2980	1360	2949	2980	1320
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1462	4160	1333	1520	4109		2863	2980	1360	2949	2980	1320
Volume (vph)	135	790	295	105	665	90	310	515	110	115	420	150
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	832	311	111	700	95	326	542	116	121	442	158
RTOR Reduction (vph)	0	0	105	0	18	0	0	0	32	0	0	34
Lane Group Flow (vph)	142	832	206	111	777	0	326	542	84	121	442	124
Heavy Vehicles (%)	4%	5%	2%	0%	5%	0%	3%	2%	0%	0%	2%	3%
Turn Type	Prot		pm+ov	Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases			2						8			4
Actuated Green, G (s)	19.7	30.4	46.2	11.0	21.7		15.8	27.5	38.5	6.1	17.8	37.5
Effective Green, g (s)	19.7	30.4	46.2	11.0	21.7		15.8	27.5	38.5	6.1	17.8	37.5
Actuated g/C Ratio	0.22	0.33	0.51	0.12	0.24		0.17	0.30	0.42	0.07	0.20	0.41
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	316	1390	735	184	980		497	901	575	198	583	602
v/s Ratio Prot	0.10	c0.20	0.05	c0.07	c0.19		0.11	c0.18	0.02	0.04	c0.15	0.04
v/s Ratio Perm			0.11						0.04			0.05
v/c Ratio	0.45	0.60	0.28	0.60	0.79		0.66	0.60	0.15	0.61	0.76	0.21
Uniform Delay, d1	30.9	25.2	12.9	37.9	32.5		35.1	27.1	16.1	41.3	34.6	17.2
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	1.9	0.2	5.5	4.5		3.1	1.1	0.1	5.5	5.6	0.2
Delay (s)	32.0	27.1	13.1	43.4	37.0		38.2	28.2	16.3	46.8	40.2	17.4
Level of Service	C	C	B	D	D		D	C	B	D	D	B
Approach Delay (s)		24.3			37.8			30.1			36.3	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	91.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.1%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91		1.00	0.91	1.00	0.97	0.91	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)	2835	4200	1308	2891	4134		1462	4200	1333	2949	4200	1295
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2835	4200	1308	2891	4134		1462	4200	1333	2949	4200	1295
Volume (vph)	125	665	130	235	710	115	140	675	330	170	760	105
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	132	700	137	247	747	121	147	711	347	179	800	111
RTOR Reduction (vph)	0	0	31	0	24	0	0	0	35	0	0	65
Lane Group Flow (vph)	132	700	106	247	844	0	147	711	312	179	800	46
Heavy Vehicles (%)	4%	4%	4%	2%	4%	0%	4%	4%	2%	0%	4%	5%
Turn Type	Prot		pm+ov	Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases			2						8			4
Actuated Green, G (s)	14.9	25.5	38.8	12.2	22.8		13.3	25.2	37.4	9.7	21.6	36.5
Effective Green, g (s)	14.9	25.5	38.8	12.2	22.8		13.3	25.2	37.4	9.7	21.6	36.5
Actuated g/C Ratio	0.17	0.29	0.44	0.14	0.26		0.15	0.28	0.42	0.11	0.24	0.41
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	477	1209	632	398	1064		219	1195	623	323	1024	533
v/s Ratio Prot	0.05	c0.17	0.03	0.09	c0.20		c0.10	c0.17	0.07	0.06	c0.19	0.01
v/s Ratio Perm			0.06						0.17			0.02
v/c Ratio	0.28	0.58	0.17	0.62	0.79		0.67	0.59	0.50	0.55	0.78	0.09
Uniform Delay, d1	32.1	27.0	15.1	36.0	30.7		35.6	27.3	18.8	37.4	31.3	15.9
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	2.0	0.1	3.0	4.1		7.8	0.8	0.6	2.1	3.9	0.1
Delay (s)	32.5	29.0	15.2	39.0	34.8		43.4	28.1	19.4	39.5	35.2	15.9
Level of Service	C	C	B	D	C		D	C	B	D	D	B
Approach Delay (s)		27.5			35.8			27.5			34.0	
Approach LOS		C			D			C			C	

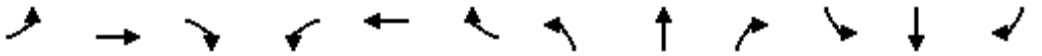
Intersection Summary			
HCM Average Control Delay	31.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	88.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2891	4144		2863	2951	1333	2863	4200	1320	2891	2923	1347
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2891	4144		2863	2951	1333	2863	4200	1320	2891	2923	1347
Volume (vph)	205	815	110	185	815	310	150	810	145	315	855	355
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	216	858	116	195	858	326	158	853	153	332	900	374
RTOR Reduction (vph)	0	17	0	0	0	12	0	0	25	0	0	22
Lane Group Flow (vph)	216	957	0	195	858	314	158	853	128	332	900	352
Heavy Vehicles (%)	2%	4%	0%	3%	3%	2%	3%	4%	3%	2%	4%	1%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2		1	6	7	3	8	1	7	4	5
Permitted Phases						6			8			4
Actuated Green, G (s)	10.8	34.0		8.9	32.1	45.7	7.0	26.3	35.2	13.6	32.9	43.7
Effective Green, g (s)	10.8	34.0		8.9	32.1	45.7	7.0	26.3	35.2	13.6	32.9	43.7
Actuated g/C Ratio	0.11	0.34		0.09	0.32	0.46	0.07	0.27	0.36	0.14	0.33	0.44
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	316	1426		258	959	617	203	1118	470	398	973	650
v/s Ratio Prot	c0.07	0.23		0.07	c0.29	0.07	0.06	c0.20	0.02	0.11	c0.31	0.06
v/s Ratio Perm						0.17			0.07			0.20
v/c Ratio	0.68	0.67		0.76	0.89	0.51	0.78	0.76	0.27	0.83	0.92	0.54
Uniform Delay, d1	42.4	27.6		43.9	31.7	18.7	45.1	33.4	22.7	41.5	31.8	20.2
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	6.0	2.5		11.9	10.7	0.7	17.0	3.1	0.3	14.0	14.0	0.9
Delay (s)	48.4	30.2		55.8	42.5	19.3	62.1	36.5	23.0	55.5	45.8	21.1
Level of Service	D	C		E	D	B	E	D	C	E	D	C
Approach Delay (s)		33.5			38.9			38.2			42.1	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	38.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	98.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	80.2%	ICU Level of Service	D
Analysis Period (min)	15		

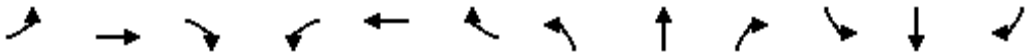
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1520	2951	1360	2863	3040	1283	2808	2923	1320	1421	2789	1360
Flt Permitted	0.65	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1033	2951	1360	2863	3040	1283	2808	2923	1320	1421	2789	1360
Volume (vph)	95	315	130	380	160	90	95	685	375	70	795	35
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	332	137	400	168	95	100	721	395	74	837	37
RTOR Reduction (vph)	0	0	45	0	0	53	0	0	115	0	0	22
Lane Group Flow (vph)	100	332	92	400	168	42	100	721	280	74	837	15
Heavy Vehicles (%)	0%	3%	0%	3%	0%	6%	5%	4%	3%	7%	9%	0%
Turn Type	pm+pt		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	5	2	3	1	6	7	3	8	1	7	4	5
Permitted Phases	2		2			6			8			4
Actuated Green, G (s)	25.6	20.3	27.1	17.0	32.0	40.8	6.8	30.3	47.3	8.8	32.3	37.6
Effective Green, g (s)	25.6	20.3	27.1	17.0	32.0	40.8	6.8	30.3	47.3	8.8	32.3	37.6
Actuated g/C Ratio	0.28	0.22	0.29	0.18	0.35	0.44	0.07	0.33	0.51	0.10	0.35	0.41
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	314	648	458	527	1053	567	207	959	676	135	975	612
v/s Ratio Prot	0.02	c0.11	0.01	c0.14	0.06	0.01	0.04	c0.25	0.08	0.05	c0.30	0.00
v/s Ratio Perm	0.07		0.05			0.03			0.14			0.01
v/c Ratio	0.32	0.51	0.20	0.76	0.16	0.07	0.48	0.75	0.41	0.55	0.86	0.02
Uniform Delay, d1	25.8	31.7	24.5	35.8	20.9	14.9	41.1	27.7	14.0	39.9	27.9	16.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	2.9	0.2	6.2	0.1	0.1	1.8	3.4	0.4	4.5	7.6	0.0
Delay (s)	26.4	34.6	24.7	42.0	21.0	15.0	42.9	31.1	14.4	44.4	35.5	16.4
Level of Service	C	C	C	D	C	B	D	C	B	D	D	B
Approach Delay (s)		30.8			32.8			26.6			35.5	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	92.4	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

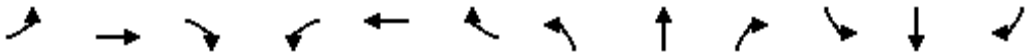
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	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	0.91	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1407	2794		1520	2841	1360	1382	2677		1345	2457	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1407	2794		1520	2841	1360	1382	2677		1345	2457	
Volume (vph)	130	605	75	5	620	15	205	365	20	40	240	360
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	137	637	79	5	653	16	216	384	21	42	253	379
RTOR Reduction (vph)	0	10	0	0	0	11	0	4	0	0	218	0
Lane Group Flow (vph)	137	706	0	5	653	5	216	401	0	42	414	0
Heavy Vehicles (%)	8%	7%	7%	0%	7%	0%	10%	12%	25%	13%	15%	11%
Turn Type	Prot			Prot		pm+ov	Prot			Prot		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	12.3	40.6		0.8	29.1	33.9	18.3	37.8		4.8	24.3	
Effective Green, g (s)	12.3	40.6		0.8	29.1	33.9	18.3	37.8		4.8	24.3	
Actuated g/C Ratio	0.12	0.41		0.01	0.29	0.34	0.18	0.38		0.05	0.24	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	173	1134		12	827	515	253	1012		65	597	
v/s Ratio Prot	c0.10	0.25		0.00	c0.23	0.00	c0.16	0.15		0.03	c0.17	
v/s Ratio Perm						0.00						
v/c Ratio	0.79	0.62		0.42	0.79	0.01	0.85	0.40		0.65	0.69	
Uniform Delay, d1	42.6	23.6		49.4	32.6	21.9	39.6	22.8		46.8	34.5	
Progression Factor	1.00	1.00		1.33	0.30	0.10	1.00	1.00		1.00	1.00	
Incremental Delay, d2	21.5	2.6		20.9	7.3	0.0	23.3	1.2		20.0	6.5	
Delay (s)	64.1	26.2		86.6	17.1	2.3	62.9	23.9		66.7	41.0	
Level of Service	E	C		F	B	A	E	C		E	D	
Approach Delay (s)		32.3			17.3			37.5			42.6	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM Average Control Delay	32.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		

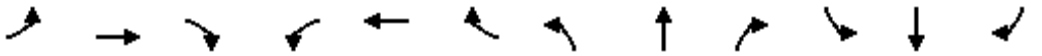
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	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	0.96	
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)	1520	2841	1360	1448	2923	1308	1434	2598	1259	1476	2698	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1520	2841	1360	1448	2923	1308	1434	2598	1259	1476	2698	
Volume (vph)	40	470	35	195	425	250	90	330	245	185	180	75
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	495	37	205	447	263	95	347	258	195	189	79
RTOR Reduction (vph)	0	0	23	0	0	88	0	0	93	0	43	0
Lane Group Flow (vph)	42	495	14	205	447	175	95	347	165	195	225	0
Heavy Vehicles (%)	0%	7%	0%	5%	4%	4%	6%	17%	8%	3%	8%	7%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	4.2	27.3	37.2	17.9	41.0	57.2	9.9	22.6	40.5	16.2	28.9	
Effective Green, g (s)	4.2	27.3	37.2	17.9	41.0	57.2	9.9	22.6	40.5	16.2	28.9	
Actuated g/C Ratio	0.04	0.27	0.37	0.18	0.41	0.57	0.10	0.23	0.40	0.16	0.29	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	64	776	560	259	1198	800	142	587	560	239	780	
v/s Ratio Prot	0.03	c0.17	0.00	c0.14	0.15	0.04	0.07	c0.13	0.05	c0.13	0.08	
v/s Ratio Perm			0.01			0.10			0.08			
v/c Ratio	0.66	0.64	0.02	0.79	0.37	0.22	0.67	0.59	0.29	0.82	0.29	
Uniform Delay, d1	47.2	32.0	19.9	39.3	20.5	10.5	43.5	34.6	20.1	40.5	27.6	
Progression Factor	1.24	0.65	0.04	0.48	0.77	4.20	1.00	1.00	1.00	0.58	0.94	
Incremental Delay, d2	20.6	3.8	0.0	10.6	0.6	0.1	11.3	4.3	0.3	18.6	0.9	
Delay (s)	79.4	24.5	0.9	29.6	16.5	44.1	54.8	38.9	20.4	42.1	26.8	
Level of Service	E	C	A	C	B	D	D	D	C	D	C	
Approach Delay (s)		27.0			27.4			34.2			33.2	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	30.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		

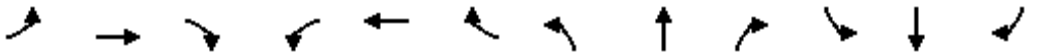
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1382	2923	1214	1476	2895	1295	1520	2923	1295	1462	2815	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1382	2923	1214	1476	2895	1295	1520	2923	1295	1462	2815	1360
Volume (vph)	155	605	85	175	660	330	55	505	100	140	535	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	163	637	89	184	695	347	58	532	105	147	563	105
RTOR Reduction (vph)	0	0	61	0	0	97	0	0	58	0	0	46
Lane Group Flow (vph)	163	637	28	184	695	250	58	532	47	147	563	59
Heavy Vehicles (%)	10%	4%	12%	3%	5%	5%	0%	4%	5%	4%	8%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	15.2	26.0	31.2	16.5	27.3	40.3	5.2	28.5	45.0	13.0	36.3	51.5
Effective Green, g (s)	15.2	26.0	31.2	16.5	27.3	40.3	5.2	28.5	45.0	13.0	36.3	51.5
Actuated g/C Ratio	0.15	0.26	0.31	0.16	0.27	0.40	0.05	0.28	0.45	0.13	0.36	0.52
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	210	760	379	244	790	574	79	833	583	190	1022	755
v/s Ratio Prot	0.12	c0.22	0.00	0.12	c0.24	0.06	0.04	c0.18	0.01	c0.10	0.20	0.01
v/s Ratio Perm			0.02			0.14			0.02			0.03
v/c Ratio	0.78	0.84	0.07	0.75	0.88	0.43	0.73	0.64	0.08	0.77	0.55	0.08
Uniform Delay, d1	40.8	35.0	24.2	39.8	34.8	21.6	46.7	31.2	15.7	42.1	25.4	12.3
Progression Factor	0.81	0.86	3.46	0.73	0.67	1.28	1.00	1.00	1.00	1.37	0.63	0.04
Incremental Delay, d2	13.4	6.6	0.1	9.2	8.3	0.4	29.4	3.7	0.1	13.8	1.6	0.0
Delay (s)	46.5	36.7	84.0	38.2	31.7	28.1	76.1	35.0	15.8	71.4	17.5	0.6
Level of Service	D	D	F	D	C	C	E	C	B	E	B	A
Approach Delay (s)		43.2			31.7			35.5			25.1	
Approach LOS		D			C			D			C	

Intersection Summary			
HCM Average Control Delay	33.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1520	2868	1360	1462	2895	1236	1462	2980	1308	1288	2980	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1520	2868	1360	1462	2895	1236	1462	2980	1308	1288	2980	1360
Volume (vph)	80	690	90	115	765	305	135	225	125	250	220	80
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	726	95	121	805	321	142	237	132	263	232	84
RTOR Reduction (vph)	0	0	55	0	0	99	0	0	90	0	0	51
Lane Group Flow (vph)	84	726	40	121	805	222	142	237	42	263	232	33
Heavy Vehicles (%)	0%	6%	0%	4%	5%	10%	4%	2%	4%	18%	2%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.8	28.3	42.3	10.5	31.0	54.9	14.0	21.3	31.8	23.9	31.2	39.0
Effective Green, g (s)	7.8	28.3	42.3	10.5	31.0	54.9	14.0	21.3	31.8	23.9	31.2	39.0
Actuated g/C Ratio	0.08	0.28	0.42	0.10	0.31	0.55	0.14	0.21	0.32	0.24	0.31	0.39
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	119	812	630	154	897	728	205	635	468	308	930	585
v/s Ratio Prot	0.06	0.25	0.01	c0.08	c0.28	0.07	0.10	c0.08	0.01	c0.20	0.08	0.00
v/s Ratio Perm			0.02			0.11			0.02			0.02
v/c Ratio	0.71	0.89	0.06	0.79	0.90	0.30	0.69	0.37	0.09	0.85	0.25	0.06
Uniform Delay, d1	45.0	34.4	17.1	43.7	33.0	12.2	41.0	33.6	23.9	36.4	25.7	19.0
Progression Factor	0.56	0.89	4.23	1.38	0.55	0.12	1.00	1.00	1.00	0.47	0.81	1.17
Incremental Delay, d2	11.9	8.6	0.0	10.8	5.5	0.1	9.7	1.7	0.1	19.6	0.6	0.0
Delay (s)	36.9	39.4	72.3	70.9	23.6	1.6	50.6	35.3	24.0	36.6	21.4	22.2
Level of Service	D	D	E	E	C	A	D	D	C	D	C	C
Approach Delay (s)		42.6			22.5			36.7			28.4	
Approach LOS		D			C			D			C	

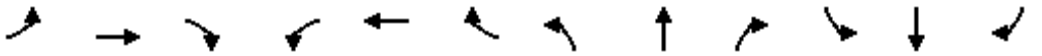
Intersection Summary			
HCM Average Control Delay	31.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		0.97	0.95	1.00	0.97	0.95	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1462	2923	1283	1490	2859		2808	2895	1333	2863	2830	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1462	2923	1283	1490	2859		2808	2895	1333	2863	2830	
Volume (vph)	115	910	80	215	970	220	100	275	215	355	390	65
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	121	958	84	226	1021	232	105	289	226	374	411	68
RTOR Reduction (vph)	0	0	49	0	20	0	0	0	21	0	14	0
Lane Group Flow (vph)	121	958	35	226	1233	0	105	289	205	374	466	0
Heavy Vehicles (%)	4%	4%	6%	2%	3%	5%	5%	5%	2%	3%	6%	0%
Turn Type	Prot		pm+ov	Prot			Prot		pm+ov	Prot		
Protected Phases	7	4	5	3	8		5	2	3	1	6	
Permitted Phases			4						2			
Actuated Green, G (s)	9.0	35.9	41.9	17.1	44.0		6.0	17.0	34.1	14.0	25.0	
Effective Green, g (s)	9.0	35.9	41.9	17.1	44.0		6.0	17.0	34.1	14.0	25.0	
Actuated g/C Ratio	0.09	0.36	0.42	0.17	0.44		0.06	0.17	0.34	0.14	0.25	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	132	1049	538	255	1258		168	492	508	401	708	
v/s Ratio Prot	0.08	0.33	0.00	c0.15	c0.43		0.04	c0.10	0.07	c0.13	c0.16	
v/s Ratio Perm			0.02						0.08			
v/c Ratio	0.92	0.91	0.07	0.89	0.98		0.62	0.59	0.40	0.93	0.66	
Uniform Delay, d1	45.1	30.6	17.4	40.5	27.6		45.9	38.3	25.2	42.5	33.7	
Progression Factor	0.89	0.57	0.52	0.69	0.54		1.00	1.00	1.00	0.92	0.89	
Incremental Delay, d2	38.2	7.8	0.0	18.2	14.5		7.1	5.1	0.5	28.1	4.7	
Delay (s)	78.4	25.2	9.0	46.1	29.3		53.0	43.3	25.7	67.2	34.6	
Level of Service	E	C	A	D	C		D	D	C	E	C	
Approach Delay (s)		29.5			31.9			38.5			48.9	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	35.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		

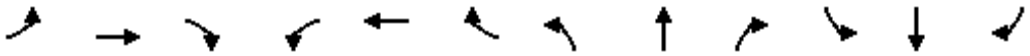
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1476	2923	1283	2863	2951	1295	1448	2895	1360	1462	2923	1295
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1476	2923	1283	2863	2951	1295	1448	2895	1360	1462	2923	1295
Volume (vph)	185	1040	165	145	965	195	205	480	135	130	380	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	195	1095	174	153	1016	205	216	505	142	137	400	105
RTOR Reduction (vph)	0	0	20	0	0	57	0	0	54	0	0	43
Lane Group Flow (vph)	195	1095	154	153	1016	148	216	505	88	137	400	62
Heavy Vehicles (%)	3%	4%	6%	3%	3%	5%	5%	5%	0%	4%	4%	5%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	14.8	43.5	59.5	7.0	35.7	46.6	16.0	22.6	29.6	10.9	17.5	32.3
Effective Green, g (s)	14.8	43.5	59.5	7.0	35.7	46.6	16.0	22.6	29.6	10.9	17.5	32.3
Actuated g/C Ratio	0.15	0.44	0.60	0.07	0.36	0.47	0.16	0.23	0.30	0.11	0.18	0.32
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	218	1272	815	200	1054	655	232	654	457	159	512	470
v/s Ratio Prot	c0.13	0.37	0.03	0.05	c0.34	0.02	c0.15	c0.17	0.01	0.09	0.14	0.02
v/s Ratio Perm			0.09			0.09			0.05			0.03
v/c Ratio	0.89	0.86	0.19	0.77	0.96	0.23	0.93	0.77	0.19	0.86	0.78	0.13
Uniform Delay, d1	41.8	25.5	9.2	45.7	31.5	15.9	41.5	36.3	26.3	43.8	39.4	23.9
Progression Factor	1.18	0.43	0.25	1.00	1.00	1.00	1.00	1.00	1.00	1.36	0.73	0.35
Incremental Delay, d2	20.3	3.2	0.1	15.9	19.4	0.2	40.4	8.6	0.2	30.7	9.6	0.1
Delay (s)	69.7	14.3	2.3	61.6	51.0	16.1	81.9	44.9	26.5	90.4	38.4	8.4
Level of Service	E	B	A	E	D	B	F	D	C	F	D	A
Approach Delay (s)		20.2			46.9			51.1			44.6	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	38.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		

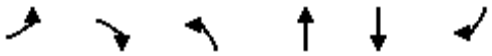
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00			1.00	
Frt	1.00	0.99		1.00	0.99			0.99			0.97	
Flt Protected	0.95	1.00		0.95	1.00			0.98			0.98	
Satd. Flow (prot)	1520	2854		1520	2901			1551			1528	
Flt Permitted	0.95	1.00		0.95	1.00			0.85			0.84	
Satd. Flow (perm)	1520	2854		1520	2901			1347			1314	
Volume (vph)	20	715	40	20	700	50	40	60	10	75	75	35
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	753	42	21	737	53	42	63	11	79	79	37
RTOR Reduction (vph)	0	3	0	0	4	0	0	4	0	0	8	0
Lane Group Flow (vph)	21	792	0	21	786	0	0	112	0	0	187	0
Heavy Vehicles (%)	0%	6%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	3.3	52.6		3.4	52.7			32.0			32.0	
Effective Green, g (s)	3.3	52.6		3.4	52.7			32.0			32.0	
Actuated g/C Ratio	0.03	0.53		0.03	0.53			0.32			0.32	
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	50	1501		52	1529			431			420	
v/s Ratio Prot	c0.01	c0.28		0.01	0.27							
v/s Ratio Perm								0.08			c0.14	
v/c Ratio	0.42	0.53		0.40	0.51			0.26			0.44	
Uniform Delay, d1	47.4	15.5		47.3	15.3			25.2			27.0	
Progression Factor	1.00	1.00		1.39	0.42			1.00			1.00	
Incremental Delay, d2	5.6	1.3		4.4	1.1			1.5			3.4	
Delay (s)	53.0	16.9		70.1	7.5			26.7			30.3	
Level of Service	D	B		E	A			C			C	
Approach Delay (s)		17.8			9.1			26.7			30.3	
Approach LOS		B			A			C			C	

Intersection Summary			
HCM Average Control Delay	15.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	48.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1421	1283	1345	2739	2614	
Flt Permitted	0.95	1.00	0.44	1.00	1.00	
Satd. Flow (perm)	1421	1283	627	2739	2614	
Volume (vph)	70	85	80	395	470	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	89	84	416	495	63
RTOR Reduction (vph)	0	77	0	0	8	0
Lane Group Flow (vph)	74	12	84	416	550	0
Heavy Vehicles (%)	7%	6%	13%	11%	14%	17%
Turn Type		custom	Perm			
Protected Phases				2	6	
Permitted Phases	4	4	2			
Actuated Green, G (s)	8.0	8.0	44.0	44.0	44.0	
Effective Green, g (s)	8.0	8.0	44.0	44.0	44.0	
Actuated g/C Ratio	0.13	0.13	0.73	0.73	0.73	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	189	171	460	2009	1917	
v/s Ratio Prot				0.15	c0.21	
v/s Ratio Perm	c0.05	0.01	0.13			
v/c Ratio	0.39	0.07	0.18	0.21	0.29	
Uniform Delay, d1	23.8	22.7	2.5	2.5	2.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.3	0.2	0.9	0.2	0.4	
Delay (s)	25.1	22.9	3.3	2.7	3.1	
Level of Service	C	C	A	A	A	
Approach Delay (s)	23.9			2.8	3.1	
Approach LOS	C			A	A	

Intersection Summary			
HCM Average Control Delay	5.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.6%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1520	2923	1360	2949	2923	1360	1520	2621	1225	1448	2764	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1520	2923	1360	2949	2923	1360	1520	2621	1225	1448	2764	1360
Volume (vph)	95	550	55	95	585	80	95	305	45	95	245	65
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	579	58	100	616	84	100	321	47	100	258	68
RTOR Reduction (vph)	0	0	34	0	0	50	0	0	28	0	0	37
Lane Group Flow (vph)	100	579	24	100	616	34	100	321	19	100	258	31
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	0%	16%	11%	5%	10%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	10.2	31.6	41.5	6.9	28.3	40.0	9.9	33.8	40.7	11.7	35.6	45.8
Effective Green, g (s)	10.2	31.6	41.5	6.9	28.3	40.0	9.9	33.8	40.7	11.7	35.6	45.8
Actuated g/C Ratio	0.10	0.32	0.42	0.07	0.28	0.40	0.10	0.34	0.41	0.12	0.36	0.46
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	155	924	619	203	827	598	150	886	548	169	984	677
v/s Ratio Prot	c0.07	c0.20	0.00	0.03	c0.21	0.01	0.07	c0.12	0.00	c0.07	0.09	0.00
v/s Ratio Perm			0.01			0.02			0.01			0.02
v/c Ratio	0.65	0.63	0.04	0.49	0.74	0.06	0.67	0.36	0.03	0.59	0.26	0.05
Uniform Delay, d1	43.2	29.2	17.4	44.9	32.6	18.4	43.5	25.0	17.8	41.9	22.9	15.0
Progression Factor	1.00	1.00	1.00	1.44	0.66	0.00	0.71	1.07	2.75	1.00	1.00	1.00
Incremental Delay, d2	8.9	1.3	0.0	1.1	2.1	0.0	9.6	1.0	0.0	5.5	0.6	0.0
Delay (s)	52.0	30.5	17.4	65.6	23.6	0.0	40.5	27.9	49.1	47.3	23.5	15.0
Level of Service	D	C	B	E	C	A	D	C	D	D	C	B
Approach Delay (s)		32.4			26.4			32.7			27.8	
Approach LOS		C			C			C			C	

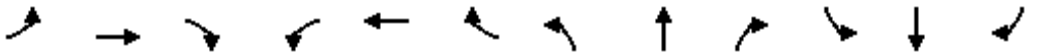
Intersection Summary			
HCM Average Control Delay	29.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95		0.97	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1462	2895	1162	1448	2923	1295	2863	2864		2949	2885	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1462	2895	1162	1448	2923	1295	2863	2864		2949	2885	
Volume (vph)	130	480	115	105	560	190	145	770	145	85	690	90
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	137	505	121	111	589	200	153	811	153	89	726	95
RTOR Reduction (vph)	0	0	81	0	0	89	0	15	0	0	10	0
Lane Group Flow (vph)	137	505	40	111	589	111	153	949	0	89	811	0
Heavy Vehicles (%)	4%	5%	17%	5%	4%	5%	3%	3%	7%	0%	4%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	12.3	25.4	33.2	10.4	23.5	29.2	7.8	42.5		5.7	40.4	
Effective Green, g (s)	12.3	25.4	33.2	10.4	23.5	29.2	7.8	42.5		5.7	40.4	
Actuated g/C Ratio	0.12	0.25	0.33	0.10	0.24	0.29	0.08	0.42		0.06	0.40	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	180	735	432	151	687	430	223	1217		168	1166	
v/s Ratio Prot	c0.09	0.17	0.01	0.08	c0.20	0.01	c0.05	c0.33		0.03	0.28	
v/s Ratio Perm			0.03			0.07						
v/c Ratio	0.76	0.69	0.09	0.74	0.86	0.26	0.69	0.78		0.53	0.70	
Uniform Delay, d1	42.4	33.7	23.0	43.5	36.6	27.1	44.9	24.7		45.8	24.7	
Progression Factor	1.02	0.58	0.85	1.09	0.52	0.64	1.02	0.79		1.00	0.62	
Incremental Delay, d2	14.7	2.3	0.1	8.8	5.4	0.2	7.0	4.1		2.2	2.5	
Delay (s)	57.9	21.8	19.5	56.1	24.6	17.4	52.7	23.7		48.3	17.9	
Level of Service	E	C	B	E	C	B	D	C		D	B	
Approach Delay (s)		27.9			26.9			27.6			20.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.4%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2681	2789	1023	2949	2841	1320	2564	2951	1360	2949	2980	1271
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2681	2789	1023	2949	2841	1320	2564	2951	1360	2949	2980	1271
Volume (vph)	100	815	135	95	1075	185	130	570	100	125	250	75
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	858	142	100	1132	195	137	600	105	132	263	79
RTOR Reduction (vph)	0	0	76	0	0	31	0	0	50	0	0	46
Lane Group Flow (vph)	105	858	66	100	1132	164	137	600	55	132	263	33
Heavy Vehicles (%)	10%	9%	33%	0%	7%	3%	15%	3%	0%	0%	2%	7%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	6.0	36.2	46.3	12.3	42.5	50.1	10.1	27.9	40.2	7.6	25.4	31.4
Effective Green, g (s)	6.0	36.2	46.3	12.3	42.5	50.1	10.1	27.9	40.2	7.6	25.4	31.4
Actuated g/C Ratio	0.06	0.36	0.46	0.12	0.42	0.50	0.10	0.28	0.40	0.08	0.25	0.31
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	161	1010	515	363	1207	714	259	823	547	224	757	399
v/s Ratio Prot	0.04	c0.31	0.01	0.03	c0.40	0.02	0.05	c0.20	0.01	c0.04	0.09	0.00
v/s Ratio Perm			0.05			0.11			0.03			0.02
v/c Ratio	0.65	0.85	0.13	0.28	0.94	0.23	0.53	0.73	0.10	0.59	0.35	0.08
Uniform Delay, d1	46.0	29.4	15.3	39.8	27.5	14.1	42.7	32.6	18.6	44.7	30.5	24.2
Progression Factor	1.27	0.62	0.09	0.65	0.48	0.07	0.91	0.90	0.91	0.72	0.86	2.71
Incremental Delay, d2	8.2	6.2	0.1	0.3	11.7	0.1	1.9	5.4	0.1	3.1	1.0	0.1
Delay (s)	66.7	24.4	1.4	26.1	24.9	1.1	40.8	34.6	17.1	35.3	27.4	65.5
Level of Service	E	C	A	C	C	A	D	C	B	D	C	E
Approach Delay (s)		25.5			21.7			33.5			35.9	
Approach LOS		C			C			C			D	

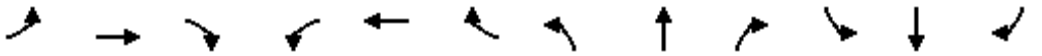
Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2808	3928		1434	2895	1295	2808	2895	1295	2863	2868	1360
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2808	3928		1434	2895	1295	2808	2895	1295	2863	2868	1360
Volume (vph)	105	880	100	80	875	215	95	595	110	190	255	75
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	926	105	84	921	226	100	626	116	200	268	79
RTOR Reduction (vph)	0	14	0	0	0	34	0	0	26	0	0	47
Lane Group Flow (vph)	111	1017	0	84	921	192	100	626	90	200	268	32
Heavy Vehicles (%)	5%	10%	5%	6%	5%	5%	5%	5%	5%	3%	6%	0%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	6.0	36.5		8.5	39.0	48.7	6.4	29.3	37.8	9.7	32.6	38.6
Effective Green, g (s)	6.0	36.5		8.5	39.0	48.7	6.4	29.3	37.8	9.7	32.6	38.6
Actuated g/C Ratio	0.06	0.36		0.08	0.39	0.49	0.06	0.29	0.38	0.10	0.33	0.39
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	168	1434		122	1129	682	180	848	541	278	935	579
v/s Ratio Prot	0.04	0.26		c0.06	c0.32	0.03	0.04	c0.22	0.01	c0.07	c0.09	0.00
v/s Ratio Perm						0.12			0.06			0.02
v/c Ratio	0.66	0.71		0.69	0.82	0.28	0.56	0.74	0.17	0.72	0.29	0.06
Uniform Delay, d1	46.0	27.2		44.5	27.3	15.3	45.4	31.9	20.6	43.8	25.1	19.3
Progression Factor	1.22	0.73		1.12	0.70	0.67	1.16	0.53	0.52	1.10	0.53	0.51
Incremental Delay, d2	6.4	1.1		7.6	2.3	0.1	3.0	4.6	0.1	8.0	0.7	0.0
Delay (s)	62.7	21.1		57.4	21.5	10.3	55.5	21.5	10.8	56.1	13.9	9.9
Level of Service	E	C		E	C	B	E	C	B	E	B	A
Approach Delay (s)		25.1			21.9			24.0			28.8	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	24.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		

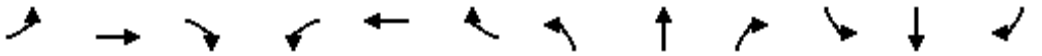
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1369	2895	1333	1520	2923	1360	1421	2895	1283	1407	2895	1308
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1369	2895	1333	1520	2923	1360	1421	2895	1283	1407	2895	1308
Volume (vph)	275	660	205	95	625	60	300	400	180	65	315	255
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	289	695	216	100	658	63	316	421	189	68	332	268
RTOR Reduction (vph)	0	0	65	0	0	43	0	0	111	0	0	58
Lane Group Flow (vph)	289	695	151	100	658	20	316	421	78	68	332	210
Heavy Vehicles (%)	11%	5%	2%	0%	4%	0%	7%	5%	6%	8%	5%	4%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	22.0	35.5	58.5	9.5	23.0	31.1	23.0	30.9	40.4	8.1	16.0	38.0
Effective Green, g (s)	22.0	35.5	58.5	9.5	23.0	31.1	23.0	30.9	40.4	8.1	16.0	38.0
Actuated g/C Ratio	0.22	0.36	0.58	0.10	0.23	0.31	0.23	0.31	0.40	0.08	0.16	0.38
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	301	1028	833	144	672	477	327	895	570	114	463	549
v/s Ratio Prot	c0.21	0.24	0.04	0.07	c0.23	0.00	c0.22	0.15	0.01	0.05	c0.11	0.08
v/s Ratio Perm			0.07			0.01			0.05			0.08
v/c Ratio	0.96	0.68	0.18	0.69	0.98	0.04	0.97	0.47	0.14	0.60	0.72	0.38
Uniform Delay, d1	38.6	27.4	9.6	43.8	38.3	24.0	38.1	27.9	18.8	44.4	39.9	22.5
Progression Factor	1.37	0.51	0.00	1.00	1.00	1.00	1.61	0.80	0.37	1.43	0.76	0.44
Incremental Delay, d2	34.2	1.3	0.1	13.6	29.2	0.0	33.6	1.3	0.1	6.7	7.6	0.4
Delay (s)	87.1	15.2	0.1	57.4	67.4	24.1	95.1	23.6	7.1	70.0	37.9	10.3
Level of Service	F	B	A	E	E	C	F	C	A	E	D	B
Approach Delay (s)		29.8			62.9			44.6			30.1	
Approach LOS		C			E			D			C	

Intersection Summary			
HCM Average Control Delay	41.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	82.0%	ICU Level of Service	E
Analysis Period (min)	15		

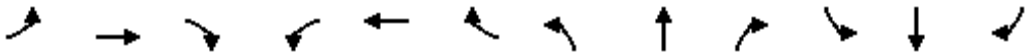
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		1.00	0.91		0.97	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.99		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)	2808	4208		1520	4154		2782	2761		1382	2895	1320
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	2808	4208		1520	4154		2782	2761		1382	2895	1320
Volume (vph)	325	590	40	35	590	65	85	380	65	145	195	460
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	342	621	42	37	621	68	89	400	68	153	205	484
RTOR Reduction (vph)	0	7	0	0	13	0	0	13	0	0	0	29
Lane Group Flow (vph)	342	656	0	37	676	0	89	455	0	153	205	455
Heavy Vehicles (%)	5%	3%	0%	0%	4%	0%	6%	9%	0%	10%	5%	3%
Turn Type	Prot			Prot			Prot			Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	16.3	33.7		4.2	21.6		6.0	32.3		13.8	40.1	56.4
Effective Green, g (s)	16.3	33.7		4.2	21.6		6.0	32.3		13.8	40.1	56.4
Actuated g/C Ratio	0.16	0.34		0.04	0.22		0.06	0.32		0.14	0.40	0.56
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	458	1418		64	897		167	892		191	1161	797
v/s Ratio Prot	c0.12	0.16		0.02	c0.16		0.03	0.16		c0.11	0.07	c0.09
v/s Ratio Perm												0.25
v/c Ratio	0.75	0.46		0.58	0.75		0.53	0.51		0.80	0.18	0.57
Uniform Delay, d1	39.9	26.0		47.0	36.7		45.6	27.4		41.8	19.3	14.0
Progression Factor	1.00	1.00		1.15	0.84		1.00	1.00		0.89	0.35	1.06
Incremental Delay, d2	6.5	0.2		9.1	2.7		3.2	2.1		16.4	0.3	0.8
Delay (s)	46.4	26.3		63.1	33.5		48.9	29.5		53.5	7.1	15.6
Level of Service	D	C		E	C		D	C		D	A	B
Approach Delay (s)		33.1			35.0			32.6			20.4	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM Average Control Delay	30.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	64.1%	ICU Level of Service	C
Analysis Period (min)	15		

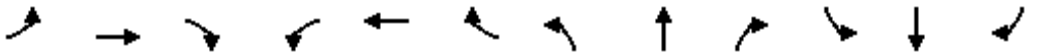
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.91	1.00	1.00	0.91	
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)	1434	2951	1259	2835	2951	1360	1434	4200	1308	1476	4128	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1434	2951	1259	2835	2951	1360	1434	4200	1308	1476	4128	
Volume (vph)	80	505	190	360	510	80	180	795	390	195	735	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	532	200	379	537	84	189	837	411	205	774	63
RTOR Reduction (vph)	0	0	20	0	0	44	0	0	80	0	9	0
Lane Group Flow (vph)	84	532	180	379	537	40	189	837	331	205	828	0
Heavy Vehicles (%)	6%	3%	8%	4%	3%	0%	6%	4%	4%	3%	5%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	
Permitted Phases			4			8			2			
Actuated Green, G (s)	8.8	21.8	38.7	16.4	29.4	47.3	16.9	27.9	44.3	17.9	28.9	
Effective Green, g (s)	8.8	21.8	38.7	16.4	29.4	47.3	16.9	27.9	44.3	17.9	28.9	
Actuated g/C Ratio	0.09	0.22	0.39	0.16	0.29	0.47	0.17	0.28	0.44	0.18	0.29	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	126	643	487	465	868	643	242	1172	579	264	1193	
v/s Ratio Prot	0.06	c0.18	0.06	c0.13	0.18	0.01	0.13	0.20	0.09	c0.14	c0.20	
v/s Ratio Perm			0.08			0.02			0.16			
v/c Ratio	0.67	0.83	0.37	0.82	0.62	0.06	0.78	0.71	0.57	0.78	0.69	
Uniform Delay, d1	44.2	37.3	21.9	40.3	30.5	14.3	39.8	32.5	20.8	39.1	31.6	
Progression Factor	0.66	0.76	1.06	0.63	0.66	1.49	0.96	0.78	1.60	0.79	0.78	
Incremental Delay, d2	10.9	7.5	0.4	8.5	1.0	0.0	12.7	3.1	1.1	12.9	3.2	
Delay (s)	40.1	35.8	23.7	34.0	21.2	21.3	51.1	28.6	34.3	43.9	27.7	
Level of Service	D	D	C	C	C	C	D	C	C	D	C	
Approach Delay (s)		33.3			26.1			33.2			30.9	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	31.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		

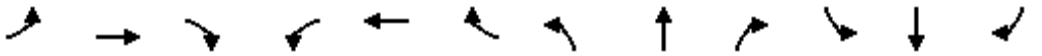
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.99		1.00	0.98		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)	1421	2895		1476	2863		1448	2923	1333	2863	2923	1271
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1421	2895		1476	2863		1448	2923	1333	2863	2923	1271
Volume (vph)	75	790	75	170	730	115	110	240	240	165	225	75
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	832	79	179	768	121	116	253	253	174	237	79
RTOR Reduction (vph)	0	7	0	0	12	0	0	0	49	0	0	57
Lane Group Flow (vph)	79	904	0	179	877	0	116	253	204	174	237	22
Heavy Vehicles (%)	7%	4%	0%	3%	4%	4%	5%	4%	2%	3%	4%	7%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases									2			6
Actuated Green, G (s)	8.8	38.8		15.5	45.5		11.0	19.7	35.2	10.0	18.7	27.5
Effective Green, g (s)	8.8	38.8		15.5	45.5		11.0	19.7	35.2	10.0	18.7	27.5
Actuated g/C Ratio	0.09	0.39		0.16	0.46		0.11	0.20	0.35	0.10	0.19	0.28
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	125	1123		229	1303		159	576	523	286	547	400
v/s Ratio Prot	0.06	c0.31		c0.12	0.31		c0.08	c0.09	0.06	0.06	0.08	0.00
v/s Ratio Perm									0.09			0.01
v/c Ratio	0.63	0.81		0.78	0.67		0.73	0.44	0.39	0.61	0.43	0.05
Uniform Delay, d1	44.0	27.2		40.6	21.4		43.1	35.3	24.3	43.1	36.0	26.7
Progression Factor	0.85	1.05		1.50	0.27		0.61	0.87	1.51	0.52	0.66	1.78
Incremental Delay, d2	6.4	2.8		9.5	0.8		12.4	1.9	0.4	3.1	2.1	0.0
Delay (s)	44.0	31.4		70.6	6.5		38.6	32.6	37.1	25.7	25.7	47.4
Level of Service	D	C		E	A		D	C	D	C	C	D
Approach Delay (s)		32.4			17.2			35.5			29.2	
Approach LOS		C			B			D			C	

Intersection Summary			
HCM Average Control Delay	27.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		

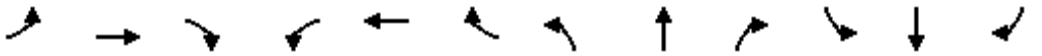
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		0.97	0.95	1.00
Frt	1.00	1.00		1.00	0.97		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)	1448	4232		1520	4107		1520	2884		2863	2923	1295
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1448	4232		1520	4107		1520	2884		2863	2923	1295
Volume (vph)	195	840	15	135	930	215	20	630	85	150	350	210
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	205	884	16	142	979	226	21	663	89	158	368	221
RTOR Reduction (vph)	0	2	0	0	38	0	0	10	0	0	0	61
Lane Group Flow (vph)	205	898	0	142	1167	0	21	742	0	158	368	160
Heavy Vehicles (%)	5%	3%	0%	0%	3%	5%	0%	4%	0%	3%	4%	5%
Turn Type	Prot			Prot			Prot			Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	16.2	33.4		13.2	30.4		2.4	30.2		7.2	35.0	51.2
Effective Green, g (s)	16.2	33.4		13.2	30.4		2.4	30.2		7.2	35.0	51.2
Actuated g/C Ratio	0.16	0.33		0.13	0.30		0.02	0.30		0.07	0.35	0.51
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	235	1413		201	1249		36	871		206	1023	715
v/s Ratio Prot	c0.14	c0.21		0.09	c0.28		0.01	c0.26		c0.06	0.13	0.04
v/s Ratio Perm												0.09
v/c Ratio	0.87	0.64		0.71	0.93		0.58	0.85		0.77	0.36	0.22
Uniform Delay, d1	40.9	28.2		41.5	33.8		48.3	32.8		45.6	24.2	13.4
Progression Factor	0.97	0.71		1.37	0.63		1.31	0.50		1.30	0.49	0.11
Incremental Delay, d2	20.8	0.6		8.2	10.2		17.3	8.2		14.8	0.9	0.2
Delay (s)	60.4	20.7		65.3	31.6		80.5	24.5		74.1	12.8	1.7
Level of Service	E	C		E	C		F	C		E	B	A
Approach Delay (s)		28.1			35.2			26.1			22.5	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM Average Control Delay	29.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	82.2%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.97		1.00	0.98		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)	2891	4130		2949	4145		2891	2923	1308	2808	2895	1333
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2891	4130		2949	4145		2891	2923	1308	2808	2895	1333
Volume (vph)	225	735	155	125	725	120	230	595	130	100	470	285
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	237	774	163	132	763	126	242	626	137	105	495	300
RTOR Reduction (vph)	0	33	0	0	23	0	0	0	44	0	0	27
Lane Group Flow (vph)	237	904	0	132	866	0	242	626	93	105	495	273
Heavy Vehicles (%)	2%	3%	3%	0%	3%	4%	2%	4%	4%	5%	5%	2%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases									2			6
Actuated Green, G (s)	13.0	31.9		8.5	27.4		12.6	37.3	45.8	6.3	31.0	44.0
Effective Green, g (s)	13.0	31.9		8.5	27.4		12.6	37.3	45.8	6.3	31.0	44.0
Actuated g/C Ratio	0.13	0.32		0.08	0.27		0.13	0.37	0.46	0.06	0.31	0.44
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	376	1317		251	1136		364	1090	651	177	897	640
v/s Ratio Prot	c0.08	0.22		0.04	c0.21		c0.08	c0.21	0.01	0.04	0.17	0.06
v/s Ratio Perm									0.06			0.15
v/c Ratio	0.63	0.69		0.53	0.76		0.66	0.57	0.14	0.59	0.55	0.43
Uniform Delay, d1	41.2	29.7		43.8	33.3		41.7	25.0	15.7	45.6	28.7	19.3
Progression Factor	1.25	1.06		1.00	1.00		0.99	1.27	1.41	1.40	0.52	0.55
Incremental Delay, d2	2.6	1.1		2.0	3.1		4.1	2.0	0.1	4.6	2.1	0.4
Delay (s)	54.1	32.5		45.8	36.4		45.4	33.7	22.3	68.6	17.2	11.1
Level of Service	D	C		D	D		D	C	C	E	B	B
Approach Delay (s)		36.9			37.6			35.0			21.2	
Approach LOS		D			D			C			C	

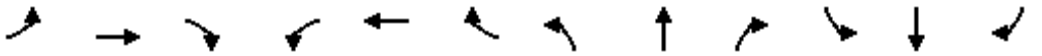
Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	2923	1283	1520	2951	1360	1462	2881		1476	2861	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1520	2923	1283	1520	2951	1360	1462	2881		1476	2861	
Volume (vph)	80	805	90	75	770	115	115	575	95	200	455	105
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	847	95	79	811	121	121	605	100	211	479	111
RTOR Reduction (vph)	0	0	54	0	0	49	0	13	0	0	20	0
Lane Group Flow (vph)	84	847	41	79	811	72	121	692	0	211	570	0
Heavy Vehicles (%)	0%	4%	6%	0%	3%	0%	4%	3%	5%	3%	4%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	7.0	33.0	43.5	5.6	31.6	47.9	10.5	29.1		16.3	34.9	
Effective Green, g (s)	7.0	33.0	43.5	5.6	31.6	47.9	10.5	29.1		16.3	34.9	
Actuated g/C Ratio	0.07	0.33	0.44	0.06	0.32	0.48	0.10	0.29		0.16	0.35	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	106	965	609	85	933	706	154	838		241	998	
v/s Ratio Prot	c0.06	c0.29	0.01	0.05	0.27	0.02	0.08	c0.24		c0.14	0.20	
v/s Ratio Perm			0.03			0.04						
v/c Ratio	0.79	0.88	0.07	0.93	0.87	0.10	0.79	0.83		0.88	0.57	
Uniform Delay, d1	45.8	31.6	16.4	47.0	32.3	14.3	43.7	33.1		40.9	26.5	
Progression Factor	1.02	0.70	0.99	0.94	0.67	1.87	0.41	1.00		1.08	0.68	
Incremental Delay, d2	28.0	7.8	0.0	46.7	4.4	0.0	18.1	7.2		15.8	1.2	
Delay (s)	74.7	29.9	16.3	90.9	26.0	26.8	35.8	40.2		59.7	19.1	
Level of Service	E	C	B	F	C	C	D	D		E	B	
Approach Delay (s)		32.3			31.2			39.5			29.8	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	33.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	80.3%	ICU Level of Service	D
Analysis Period (min)	15		

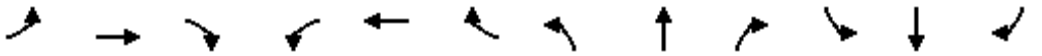
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1520	2923	1360	1520	2923	1360	2949	2980	1360	2808	2980	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1520	2923	1360	1520	2923	1360	2949	2980	1360	2808	2980	1360
Volume (vph)	25	1430	60	95	1480	70	55	430	65	95	450	30
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	1505	63	100	1558	74	58	453	68	100	474	32
RTOR Reduction (vph)	0	0	26	0	0	27	0	0	19	0	0	25
Lane Group Flow (vph)	26	1505	37	100	1558	47	58	453	49	100	474	7
Heavy Vehicles (%)	0%	4%	0%	0%	4%	0%	0%	2%	0%	5%	2%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	3.2	54.8	58.0	8.0	59.6	63.6	3.2	17.2	25.2	4.0	18.0	21.2
Effective Green, g (s)	3.2	54.8	58.0	8.0	59.6	63.6	3.2	17.2	25.2	4.0	18.0	21.2
Actuated g/C Ratio	0.03	0.55	0.58	0.08	0.60	0.64	0.03	0.17	0.25	0.04	0.18	0.21
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	49	1602	843	122	1742	919	94	513	397	112	536	343
v/s Ratio Prot	0.02	c0.51	0.00	c0.07	0.53	0.00	0.02	0.15	0.01	c0.04	c0.16	0.00
v/s Ratio Perm			0.03			0.03			0.03			0.00
v/c Ratio	0.53	0.94	0.04	0.82	0.89	0.05	0.62	0.88	0.12	0.89	0.88	0.02
Uniform Delay, d1	47.7	21.1	9.0	45.3	17.5	6.8	47.8	40.4	28.9	47.8	40.0	31.2
Progression Factor	1.25	0.61	0.00	1.24	0.45	0.21	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	8.3	9.0	0.0	4.0	0.6	0.0	11.5	19.4	0.1	52.7	18.8	0.0
Delay (s)	67.8	21.9	0.0	60.2	8.5	1.5	59.3	59.8	29.0	100.5	58.8	31.2
Level of Service	E	C	A	E	A	A	E	E	C	F	E	C
Approach Delay (s)		21.8			11.2			56.1			64.3	
Approach LOS		C			B			E			E	

Intersection Summary			
HCM Average Control Delay	27.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		

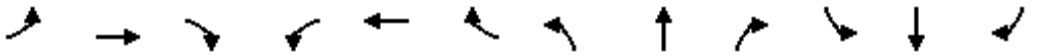
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2863	4241	1271	2949	2951	1308	2863	2951	1360	2782	2951	1308
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2863	4241	1271	2949	2951	1308	2863	2951	1360	2782	2951	1308
Volume (vph)	180	1340	140	40	1305	115	170	335	75	540	520	265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	189	1411	147	42	1374	121	179	353	79	568	547	279
RTOR Reduction (vph)	0	0	55	0	0	19	0	0	12	0	0	13
Lane Group Flow (vph)	189	1411	93	42	1374	102	179	353	67	568	547	266
Heavy Vehicles (%)	3%	3%	7%	0%	3%	4%	3%	3%	0%	6%	3%	4%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	6.0	42.0	50.0	6.8	42.8	61.8	8.0	16.2	23.0	19.0	27.2	33.2
Effective Green, g (s)	6.0	42.0	50.0	6.8	42.8	61.8	8.0	16.2	23.0	19.0	27.2	33.2
Actuated g/C Ratio	0.06	0.42	0.50	0.07	0.43	0.62	0.08	0.16	0.23	0.19	0.27	0.33
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	172	1781	686	201	1263	861	229	478	313	529	803	434
v/s Ratio Prot	c0.07	0.33	0.01	0.01	c0.47	0.02	0.06	c0.12	0.01	c0.20	c0.19	0.04
v/s Ratio Perm			0.06			0.06			0.03			0.17
v/c Ratio	1.10	0.79	0.13	0.21	1.09	0.12	0.78	0.74	0.22	1.07	0.68	0.61
Uniform Delay, d1	47.0	25.2	13.4	44.1	28.6	7.9	45.1	39.9	31.2	40.5	32.5	28.0
Progression Factor	0.92	0.65	0.29	0.99	1.03	2.29	0.83	0.82	0.65	0.57	0.54	0.61
Incremental Delay, d2	75.4	1.1	0.0	0.2	44.4	0.0	15.0	9.3	0.3	57.0	3.9	2.1
Delay (s)	118.4	17.5	3.9	43.9	73.8	18.0	52.7	41.8	20.7	80.3	21.6	19.2
Level of Service	F	B	A	D	E	B	D	D	C	F	C	B
Approach Delay (s)		27.3			68.6			42.3			45.0	
Approach LOS		C			E			D			D	

Intersection Summary			
HCM Average Control Delay	45.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	91.6%	ICU Level of Service	F
Analysis Period (min)	15		

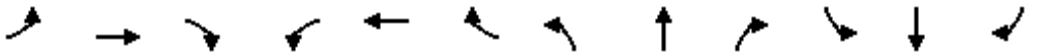
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.94	0.91	1.00	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	4202	4200	1360	2564	4121	1283	2863	2764	1000	2730	2815	1320
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	4202	4200	1360	2564	4121	1283	2863	2764	1000	2730	2815	1320
Volume (vph)	570	980	165	65	1010	160	560	290	55	180	300	445
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	600	1032	174	68	1063	168	589	305	58	189	316	468
RTOR Reduction (vph)	0	0	46	0	0	82	0	0	40	0	0	10
Lane Group Flow (vph)	600	1032	128	68	1063	86	589	305	18	189	316	458
Heavy Vehicles (%)	2%	4%	0%	15%	6%	6%	3%	10%	36%	8%	8%	3%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	19.1	41.3	63.2	4.8	27.0	38.9	21.9	26.0	30.8	11.9	16.0	35.1
Effective Green, g (s)	19.1	41.3	63.2	4.8	27.0	38.9	21.9	26.0	30.8	11.9	16.0	35.1
Actuated g/C Ratio	0.19	0.41	0.63	0.05	0.27	0.39	0.22	0.26	0.31	0.12	0.16	0.35
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	803	1735	914	123	1113	499	627	719	348	325	450	463
v/s Ratio Prot	0.14	0.25	0.03	0.03	c0.26	0.02	c0.21	0.11	0.00	0.07	0.11	c0.19
v/s Ratio Perm			0.06			0.05			0.02			0.16
v/c Ratio	0.75	0.59	0.14	0.55	0.96	0.17	0.94	0.42	0.05	0.58	0.70	0.99
Uniform Delay, d1	38.2	22.8	7.4	46.6	35.9	20.0	38.4	30.8	24.3	41.7	39.7	32.3
Progression Factor	1.06	0.98	0.64	0.78	0.70	0.64	1.03	0.86	0.75	0.99	0.85	0.87
Incremental Delay, d2	1.9	0.8	0.0	4.0	14.8	0.1	12.4	0.8	0.0	2.1	7.2	34.4
Delay (s)	42.5	23.2	4.8	40.0	40.1	13.0	51.9	27.3	18.2	43.4	40.8	62.4
Level of Service	D	C	A	D	D	B	D	C	B	D	D	E
Approach Delay (s)		27.8			36.6			41.9			51.7	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	37.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	84.9%	ICU Level of Service	E
Analysis Period (min)	15		

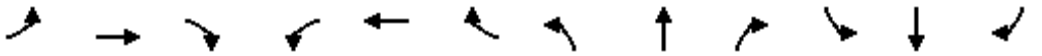
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	0.98		1.00	0.98		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)	2782	4116		2863	4113		2949	2895	1308	2949	2895	1248
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2782	4116		2863	4113		2949	2895	1308	2949	2895	1248
Volume (vph)	175	875	100	190	925	115	150	550	120	115	425	285
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	184	921	105	200	974	121	158	579	126	121	447	300
RTOR Reduction (vph)	0	14	0	0	15	0	0	0	30	0	0	26
Lane Group Flow (vph)	184	1012	0	200	1080	0	158	579	96	121	447	274
Heavy Vehicles (%)	6%	5%	0%	3%	5%	0%	0%	5%	4%	0%	5%	9%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases									2			6
Actuated Green, G (s)	11.4	37.6		11.0	37.2		9.3	28.5	39.5	6.9	26.1	37.5
Effective Green, g (s)	11.4	37.6		11.0	37.2		9.3	28.5	39.5	6.9	26.1	37.5
Actuated g/C Ratio	0.11	0.38		0.11	0.37		0.09	0.28	0.40	0.07	0.26	0.38
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	317	1548		315	1530		274	825	569	203	756	518
v/s Ratio Prot	0.07	0.25		0.07	c0.26		c0.05	c0.20	0.02	0.04	0.15	c0.06
v/s Ratio Perm									0.05			0.16
v/c Ratio	0.58	0.65		0.63	0.71		0.58	0.70	0.17	0.60	0.59	0.53
Uniform Delay, d1	42.0	25.8		42.6	26.7		43.5	32.0	19.6	45.2	32.3	24.4
Progression Factor	1.45	0.25		1.00	1.00		1.19	0.94	0.88	1.00	1.00	1.00
Incremental Delay, d2	2.3	0.8		4.1	1.5		2.3	4.0	0.1	4.6	3.4	1.0
Delay (s)	63.3	7.2		46.7	28.2		53.9	33.9	17.4	49.8	35.7	25.3
Level of Service	E	A		D	C		D	C	B	D	D	C
Approach Delay (s)		15.8			31.1			35.1			34.1	
Approach LOS		B			C			D			C	

Intersection Summary			
HCM Average Control Delay	28.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

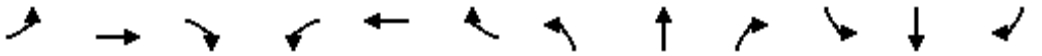
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1520	2923	1320	2782	2923	1360	1476	2868	1283	1520	2868	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1520	2923	1320	2782	2923	1360	1476	2868	1283	1520	2868	1360
Volume (vph)	75	785	165	175	890	85	150	715	245	105	545	65
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	826	174	184	937	89	158	753	258	111	574	68
RTOR Reduction (vph)	0	0	31	0	0	47	0	0	56	0	0	45
Lane Group Flow (vph)	79	826	143	184	937	42	158	753	202	111	574	23
Heavy Vehicles (%)	0%	4%	3%	6%	4%	0%	3%	6%	6%	0%	6%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	6.4	35.1	48.3	8.9	37.6	47.2	13.2	30.4	39.3	9.6	26.8	33.2
Effective Green, g (s)	6.4	35.1	48.3	8.9	37.6	47.2	13.2	30.4	39.3	9.6	26.8	33.2
Actuated g/C Ratio	0.06	0.35	0.48	0.09	0.38	0.47	0.13	0.30	0.39	0.10	0.27	0.33
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	97	1026	690	248	1099	696	195	872	556	146	769	506
v/s Ratio Prot	0.05	0.28	0.03	c0.07	c0.32	0.01	c0.11	c0.26	0.03	0.07	0.20	0.00
v/s Ratio Perm			0.08			0.03			0.12			0.01
v/c Ratio	0.81	0.81	0.21	0.74	0.85	0.06	0.81	0.86	0.36	0.76	0.75	0.04
Uniform Delay, d1	46.2	29.4	14.9	44.4	28.7	14.3	42.2	32.8	21.5	44.1	33.5	22.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.86	1.03	1.28	0.68	0.36
Incremental Delay, d2	38.7	6.7	0.1	11.3	8.4	0.0	20.3	10.3	0.4	16.3	5.1	0.0
Delay (s)	84.9	36.1	15.0	55.8	37.1	14.4	62.0	38.7	22.5	72.6	28.0	8.3
Level of Service	F	D	B	E	D	B	E	D	C	E	C	A
Approach Delay (s)		36.3			38.2			38.3			32.8	
Approach LOS		D			D			D			C	

Intersection Summary			
HCM Average Control Delay	36.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		

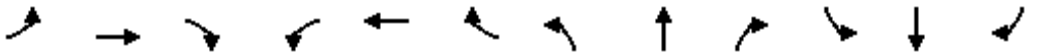
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1448	2895	1360	1476	2951	1320	2835	2895	1320	2863	2923	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1448	2895	1360	1476	2951	1320	2835	2895	1320	2863	2923	1360
Volume (vph)	95	1175	110	160	1295	170	140	540	165	290	630	80
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	1237	116	168	1363	179	147	568	174	305	663	84
RTOR Reduction (vph)	0	0	31	0	0	29	0	0	14	0	0	15
Lane Group Flow (vph)	100	1237	85	168	1363	150	147	568	160	305	663	69
Heavy Vehicles (%)	5%	5%	0%	3%	3%	3%	4%	5%	3%	3%	4%	0%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.0	42.0	48.0	11.0	46.0	57.0	6.0	20.0	31.0	11.0	25.0	32.0
Effective Green, g (s)	7.0	42.0	48.0	11.0	46.0	57.0	6.0	20.0	31.0	11.0	25.0	32.0
Actuated g/C Ratio	0.07	0.42	0.48	0.11	0.46	0.57	0.06	0.20	0.31	0.11	0.25	0.32
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	101	1216	707	162	1357	752	170	579	409	315	731	490
v/s Ratio Prot	0.07	0.43	0.01	c0.11	c0.46	0.02	0.05	c0.20	0.04	0.11	c0.23	0.01
v/s Ratio Perm			0.06			0.09			0.08			0.04
v/c Ratio	0.99	1.02	0.12	1.04	1.00	0.20	0.86	0.98	0.39	0.97	0.91	0.14
Uniform Delay, d1	46.5	29.0	14.4	44.5	27.0	10.4	46.6	39.8	27.1	44.3	36.4	24.2
Progression Factor	1.04	0.81	0.38	0.91	0.58	0.24	0.74	0.70	0.60	0.74	0.78	0.52
Incremental Delay, d2	66.3	24.4	0.0	66.6	20.6	0.1	30.1	30.3	0.5	39.8	16.1	0.1
Delay (s)	114.9	48.1	5.5	107.1	36.3	2.5	64.6	58.0	16.9	72.5	44.6	12.6
Level of Service	F	D	A	F	D	A	E	E	B	E	D	B
Approach Delay (s)		49.3			39.8			51.1			50.2	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM Average Control Delay	46.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	90.0%	ICU Level of Service	E
Analysis Period (min)	15		

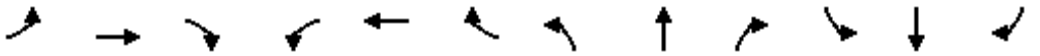
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.91		0.97	0.95		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	0.98		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	2891	4200	1308	1448	4122		2730	2607		2863	4082	1360
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	2891	4200	1308	1448	4122		2730	2607		2863	4082	1360
Volume (vph)	225	1145	555	105	1045	160	260	415	110	170	280	235
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	237	1205	584	111	1100	168	274	437	116	179	295	247
RTOR Reduction (vph)	0	0	313	0	22	0	0	26	0	0	0	190
Lane Group Flow (vph)	237	1205	271	111	1246	0	274	527	0	179	295	57
Heavy Vehicles (%)	2%	4%	4%	5%	4%	3%	8%	14%	9%	3%	7%	0%
Turn Type	Prot		Perm	Prot			Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									6
Actuated Green, G (s)	10.0	34.5	34.5	9.5	34.0		12.0	22.0		8.0	18.0	18.0
Effective Green, g (s)	10.0	34.5	34.5	9.5	34.0		12.0	22.0		8.0	18.0	18.0
Actuated g/C Ratio	0.11	0.38	0.38	0.11	0.38		0.13	0.24		0.09	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	321	1610	501	153	1557		364	637		254	816	272
v/s Ratio Prot	0.08	c0.29		0.08	c0.30		0.10	c0.20		c0.06	0.07	
v/s Ratio Perm			0.21									0.04
v/c Ratio	0.74	0.75	0.54	0.73	0.80		0.75	0.83		0.70	0.36	0.21
Uniform Delay, d1	38.7	24.0	21.6	39.0	25.0		37.6	32.2		39.9	31.0	30.1
Progression Factor	0.62	0.42	0.52	1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.2	2.3	3.0	15.7	4.4		8.5	11.7		8.6	1.2	1.7
Delay (s)	30.1	12.4	14.2	54.7	29.4		46.1	43.9		48.4	32.3	31.8
Level of Service	C	B	B	D	C		D	D		D	C	C
Approach Delay (s)		15.0			31.4			44.6			36.1	
Approach LOS		B			C			D			D	

Intersection Summary					
HCM Average Control Delay	27.6	HCM Level of Service	C		
HCM Volume to Capacity ratio	0.77				
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0		
Intersection Capacity Utilization	72.7%	ICU Level of Service	C		
Analysis Period (min)	15				

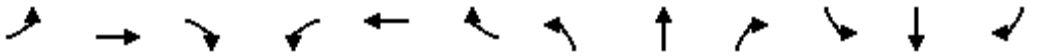
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.98		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)	1434	4149		1421	4123		1448	2690	1259	1476	2621	1360
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1434	4149		1421	4123		1448	2690	1259	1476	2621	1360
Volume (vph)	85	960	70	70	965	135	95	420	65	175	405	35
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	1011	74	74	1016	142	100	442	68	184	426	37
RTOR Reduction (vph)	0	8	0	0	18	0	0	0	44	0	0	21
Lane Group Flow (vph)	89	1077	0	74	1140	0	100	442	24	184	426	16
Heavy Vehicles (%)	6%	4%	7%	7%	4%	4%	5%	13%	8%	3%	16%	0%
Turn Type	Prot			Prot			Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases									2			6
Actuated Green, G (s)	7.9	32.4		7.2	31.7		10.0	28.5	35.7	15.9	34.4	42.3
Effective Green, g (s)	7.9	32.4		7.2	31.7		10.0	28.5	35.7	15.9	34.4	42.3
Actuated g/C Ratio	0.08	0.32		0.07	0.32		0.10	0.28	0.36	0.16	0.34	0.42
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	113	1344		102	1307		145	767	500	235	902	630
v/s Ratio Prot	c0.06	0.26		0.05	c0.28		0.07	c0.16	0.00	c0.12	0.16	0.00
v/s Ratio Perm									0.02			0.01
v/c Ratio	0.79	0.80		0.73	0.87		0.69	0.58	0.05	0.78	0.47	0.02
Uniform Delay, d1	45.2	30.9		45.4	32.2		43.5	30.6	21.0	40.4	25.7	16.8
Progression Factor	0.80	0.68		1.00	1.00		1.00	1.00	1.00	0.92	1.42	3.54
Incremental Delay, d2	17.9	2.0		22.4	6.7		12.8	3.1	0.0	12.5	1.4	0.0
Delay (s)	54.1	22.8		67.9	38.9		56.3	33.7	21.1	49.6	37.9	59.5
Level of Service	D	C		E	D		E	C	C	D	D	E
Approach Delay (s)		25.2			40.6			36.0			42.5	
Approach LOS		C			D			D			D	

Intersection Summary			
HCM Average Control Delay	35.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

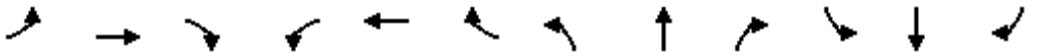
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		1.00	0.99		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)	1448	2849		1434	2854		1520	2866		1462	2895	1295
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1448	2849		1434	2854		1520	2866		1462	2895	1295
Volume (vph)	95	805	60	80	770	70	40	455	50	115	435	110
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	847	63	84	811	74	42	479	53	121	458	116
RTOR Reduction (vph)	0	5	0	0	7	0	0	8	0	0	0	67
Lane Group Flow (vph)	100	905	0	84	878	0	42	524	0	121	458	49
Heavy Vehicles (%)	5%	6%	0%	6%	5%	7%	0%	5%	0%	4%	5%	5%
Turn Type	Prot			Prot			Prot			Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	10.1	40.2		7.2	37.3		4.2	25.4		11.2	32.4	42.5
Effective Green, g (s)	10.1	40.2		7.2	37.3		4.2	25.4		11.2	32.4	42.5
Actuated g/C Ratio	0.10	0.40		0.07	0.37		0.04	0.25		0.11	0.32	0.42
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	146	1145		103	1065		64	728		164	938	602
v/s Ratio Prot	c0.07	c0.32		0.06	0.31		0.03	c0.18		c0.08	0.16	0.01
v/s Ratio Perm												0.03
v/c Ratio	0.68	0.79		0.82	0.82		0.66	0.72		0.74	0.49	0.08
Uniform Delay, d1	43.4	26.2		45.7	28.4		47.2	34.0		43.0	27.1	17.1
Progression Factor	1.00	1.00		1.00	1.00		1.59	0.41		1.00	1.00	1.00
Incremental Delay, d2	12.5	5.6		37.1	7.3		16.1	4.4		15.8	1.8	0.1
Delay (s)	55.9	31.8		82.9	35.7		91.1	18.2		58.8	29.0	17.2
Level of Service	E	C		F	D		F	B		E	C	B
Approach Delay (s)		34.2			39.8			23.6			32.2	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM Average Control Delay	33.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	71.9%	ICU Level of Service	C
Analysis Period (min)	15		

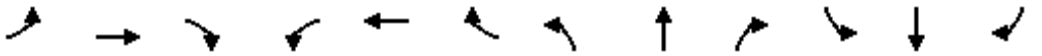
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1394	2895	1360	1520	2923	1320	1490	2923	1360	1476	2895	1248
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1394	2895	1360	1520	2923	1320	1490	2923	1360	1476	2895	1248
Volume (vph)	160	845	60	60	790	150	240	245	105	180	315	215
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	168	889	63	63	832	158	253	258	111	189	332	226
RTOR Reduction (vph)	0	0	26	0	0	82	0	0	80	0	0	64
Lane Group Flow (vph)	168	889	37	63	832	76	253	258	31	189	332	162
Heavy Vehicles (%)	9%	5%	0%	0%	4%	3%	2%	4%	0%	3%	5%	9%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	14.3	40.2	59.3	6.8	32.7	48.3	19.1	21.4	28.2	15.6	17.9	32.2
Effective Green, g (s)	14.3	40.2	59.3	6.8	32.7	48.3	19.1	21.4	28.2	15.6	17.9	32.2
Actuated g/C Ratio	0.14	0.40	0.59	0.07	0.33	0.48	0.19	0.21	0.28	0.16	0.18	0.32
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	199	1164	861	103	956	690	285	626	438	230	518	452
v/s Ratio Prot	c0.12	0.31	0.01	0.04	c0.28	0.02	c0.17	c0.09	0.00	0.13	c0.11	0.05
v/s Ratio Perm			0.02			0.04			0.02			0.08
v/c Ratio	0.84	0.76	0.04	0.61	0.87	0.11	0.89	0.41	0.07	0.82	0.64	0.36
Uniform Delay, d1	41.8	25.8	8.5	45.3	31.7	14.1	39.4	33.9	26.3	40.9	38.1	26.0
Progression Factor	1.38	0.61	0.05	1.14	0.67	0.13	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	20.3	2.2	0.0	8.6	7.4	0.1	26.5	2.0	0.1	20.5	6.0	0.5
Delay (s)	78.1	18.0	0.4	60.3	28.6	1.9	65.9	35.9	26.4	61.3	44.1	26.5
Level of Service	E	B	A	E	C	A	E	D	C	E	D	C
Approach Delay (s)		26.0			26.5			46.4			43.1	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	33.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

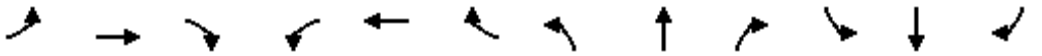
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1448	2923	1320	1520	2923	1360	1476	2895	1360	1520	2895	1295
Flt Permitted	0.20	1.00	1.00	0.52	1.00	1.00	0.19	1.00	1.00	0.49	1.00	1.00
Satd. Flow (perm)	305	2923	1320	830	2923	1360	294	2895	1360	781	2895	1295
Volume (vph)	310	375	185	85	535	70	190	435	40	55	545	200
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	326	395	195	89	563	74	200	458	42	58	574	211
RTOR Reduction (vph)	0	0	79	0	0	53	0	0	26	0	0	65
Lane Group Flow (vph)	326	395	116	89	563	21	200	458	16	58	574	146
Heavy Vehicles (%)	5%	4%	3%	0%	4%	0%	3%	5%	0%	0%	5%	5%
Turn Type	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	49.0	40.2	53.3	28.4	23.6	28.4	34.2	34.2	39.0	25.9	25.9	47.3
Effective Green, g (s)	49.0	40.2	53.3	28.4	23.6	28.4	34.2	34.2	39.0	25.9	25.9	47.3
Actuated g/C Ratio	0.49	0.40	0.53	0.28	0.24	0.28	0.34	0.34	0.39	0.26	0.26	0.47
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	394	1175	756	269	690	386	255	990	530	238	750	664
v/s Ratio Prot	c0.18	0.14	0.02	0.02	0.19	0.00	c0.10	0.16	0.00	0.01	c0.20	0.05
v/s Ratio Perm	c0.23		0.07	0.08		0.01	c0.16		0.01	0.05		0.07
v/c Ratio	0.83	0.34	0.15	0.33	0.82	0.05	0.78	0.46	0.03	0.24	0.77	0.22
Uniform Delay, d1	20.1	20.7	11.9	27.2	36.1	26.0	26.4	25.7	18.8	29.7	34.2	15.5
Progression Factor	1.25	0.55	0.11	0.89	0.68	1.28	0.48	0.49	0.41	1.00	1.00	1.00
Incremental Delay, d2	9.4	0.1	0.1	0.7	6.8	0.1	8.3	0.8	0.0	0.5	7.3	0.2
Delay (s)	34.6	11.6	1.4	24.8	31.3	33.4	20.9	13.3	7.8	30.2	41.6	15.7
Level of Service	C	B	A	C	C	C	C	B	A	C	D	B
Approach Delay (s)		17.6			30.7			15.2			34.3	
Approach LOS		B			C			B			C	

Intersection Summary			
HCM Average Control Delay	24.5	HCM Level of Service	C
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.7%	ICU Level of Service	D
Analysis Period (min)	15		

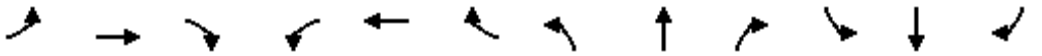
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	0.95	1.00	0.97	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)	1476	3839		1382	4040		2705	2841	1115	2286	2923	1308
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1476	3839		1382	4040		2705	2841	1115	2286	2923	1308
Volume (vph)	395	830	365	50	760	45	460	355	45	35	340	370
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	416	874	384	53	800	47	484	374	47	37	358	389
RTOR Reduction (vph)	0	65	0	0	5	0	0	0	32	0	0	337
Lane Group Flow (vph)	416	1193	0	53	842	0	484	374	15	37	358	52
Heavy Vehicles (%)	3%	11%	3%	10%	7%	11%	9%	7%	22%	29%	4%	4%
Turn Type	Prot			Prot			Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases									2			6
Actuated Green, G (s)	36.8	55.4		8.0	26.6		24.6	37.6	37.6	3.0	16.0	16.0
Effective Green, g (s)	36.8	55.4		8.0	26.6		24.6	37.6	37.6	3.0	16.0	16.0
Actuated g/C Ratio	0.31	0.46		0.07	0.22		0.21	0.31	0.31	0.02	0.13	0.13
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	453	1772		92	896		555	890	349	57	390	174
v/s Ratio Prot	c0.28	0.31		0.04	c0.21		c0.18	0.13		0.02	c0.12	
v/s Ratio Perm									0.01			0.04
v/c Ratio	0.92	0.67		0.58	0.94		0.87	0.42	0.04	0.65	0.92	0.30
Uniform Delay, d1	40.1	25.2		54.4	45.9		46.2	32.6	28.7	58.0	51.4	46.9
Progression Factor	0.61	0.40		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	22.4	2.0		8.5	18.5		14.1	1.5	0.2	22.7	28.9	4.3
Delay (s)	47.0	12.0		62.8	64.4		60.2	34.0	28.9	80.7	80.3	51.3
Level of Service	D	B		E	E		E	C	C	F	F	D
Approach Delay (s)		20.7			64.3			47.8			65.9	
Approach LOS		C			E			D			E	

Intersection Summary			
HCM Average Control Delay	44.0	HCM Level of Service	D
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	84.7%	ICU Level of Service	E
Analysis Period (min)	15		

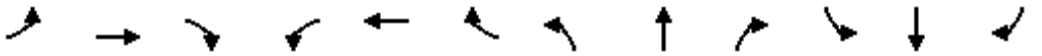
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1462	2667	1360	1434	2789	1360	1520	2841	1283	1462	2789	1295
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1462	2667	1360	1434	2789	1360	1520	2841	1283	1462	2789	1295
Volume (vph)	115	470	35	155	430	120	20	505	80	135	510	105
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	121	495	37	163	453	126	21	532	84	142	537	111
RTOR Reduction (vph)	0	0	28	0	0	78	0	0	43	0	0	50
Lane Group Flow (vph)	121	495	9	163	453	48	21	532	41	142	537	61
Heavy Vehicles (%)	4%	14%	0%	6%	9%	0%	0%	7%	6%	4%	9%	5%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	11.5	21.8	25.6	15.0	25.3	38.1	3.8	34.4	49.4	12.8	43.4	54.9
Effective Green, g (s)	11.5	21.8	25.6	15.0	25.3	38.1	3.8	34.4	49.4	12.8	43.4	54.9
Actuated g/C Ratio	0.12	0.22	0.26	0.15	0.25	0.38	0.04	0.34	0.49	0.13	0.43	0.55
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	168	581	403	215	706	573	58	977	685	187	1210	763
v/s Ratio Prot	0.08	c0.19	0.00	c0.11	c0.16	0.01	0.01	c0.19	0.01	c0.10	0.19	0.01
v/s Ratio Perm			0.01			0.02			0.02			0.04
v/c Ratio	0.72	0.85	0.02	0.76	0.64	0.08	0.36	0.54	0.06	0.76	0.44	0.08
Uniform Delay, d1	42.7	37.6	27.8	40.8	33.3	19.8	46.9	26.5	13.2	42.1	19.8	10.6
Progression Factor	1.05	0.68	0.54	1.00	1.00	1.00	0.67	0.90	4.21	0.80	0.57	0.84
Incremental Delay, d2	13.8	11.3	0.0	14.2	2.0	0.1	2.9	1.6	0.0	14.4	1.0	0.0
Delay (s)	58.5	36.8	15.0	54.9	35.3	19.9	34.2	25.5	55.6	48.2	12.4	9.0
Level of Service	E	D	B	D	D	B	C	C	E	D	B	A
Approach Delay (s)		39.5			37.0			29.7			18.4	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM Average Control Delay	30.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.0
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		

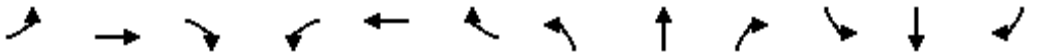
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		0.97	0.91	1.00	1.00	0.91	0.88	0.97	0.91	0.88
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1495	4153		2956	4107	1376	1538	4144	2377	2984	4107	2355
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1495	4153		2956	4107	1376	1538	4144	2377	2984	4107	2355
Volume (vph)	160	695	40	310	330	350	60	680	920	260	960	285
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	168	732	42	326	347	368	63	716	968	274	1011	300
RTOR Reduction (vph)	0	6	0	0	0	105	0	0	24	0	0	159
Lane Group Flow (vph)	168	768	0	326	347	263	63	716	944	274	1011	141
Heavy Vehicles (%)	8%	11%	8%	6%	13%	5%	5%	12%	7%	5%	13%	8%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases						8			2			6
Actuated Green, G (s)	18.9	23.2		27.0	31.3	43.0	5.6	22.1	49.1	11.7	28.2	47.1
Effective Green, g (s)	18.9	23.2		27.0	31.3	43.0	5.6	22.1	49.1	11.7	28.2	47.1
Actuated g/C Ratio	0.19	0.23		0.27	0.31	0.43	0.06	0.22	0.49	0.12	0.28	0.47
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	283	963		798	1285	647	86	916	1167	349	1158	1203
v/s Ratio Prot	0.11	c0.18		0.11	0.08	0.05	0.04	0.17	c0.22	c0.09	c0.25	0.02
v/s Ratio Perm						0.14			0.18			0.04
v/c Ratio	0.59	0.80		0.41	0.27	0.41	0.73	0.78	0.81	0.79	0.87	0.12
Uniform Delay, d1	37.0	36.2		29.9	25.8	19.7	46.5	36.7	21.5	42.9	34.2	14.8
Progression Factor	0.84	0.87		0.48	0.40	1.01	0.63	0.83	1.13	0.90	0.88	6.29
Incremental Delay, d2	3.3	6.7		0.3	0.5	0.4	21.1	5.0	3.2	10.5	8.8	0.0
Delay (s)	34.3	38.1		14.8	10.8	20.3	50.2	35.3	27.5	49.1	38.8	93.2
Level of Service	C	D		B	B	C	D	D	C	D	D	F
Approach Delay (s)		37.4			15.4			31.5			50.9	
Approach LOS		D			B			C			D	

Intersection Summary			
HCM Average Control Delay	35.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

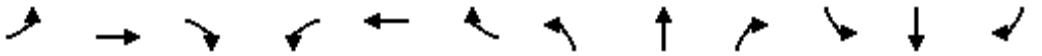
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.91	1.00	1.00	0.91	1.00	1.00	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1429	2784	1062	3042	4641	1326	1233	3900	1302	1615	4337	1376
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1429	2784	1062	3042	4641	1326	1233	3900	1302	1615	4337	1376
Volume (vph)	70	335	105	360	205	395	30	685	775	180	705	525
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	353	111	379	216	416	32	721	816	189	742	553
RTOR Reduction (vph)	0	0	56	0	0	250	0	0	0	0	0	121
Lane Group Flow (vph)	74	353	55	379	216	166	32	721	816	189	742	432
Heavy Vehicles (%)	13%	16%	36%	3%	0%	9%	31%	19%	11%	0%	7%	5%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		Free	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2		1	6	7
Permitted Phases			4			8			Free			6
Actuated Green, G (s)	27.1	26.0	34.2	19.1	18.0	36.4	8.2	40.5	120.0	18.4	50.7	77.8
Effective Green, g (s)	27.1	26.0	34.2	19.1	18.0	36.4	8.2	40.5	120.0	18.4	50.7	77.8
Actuated g/C Ratio	0.23	0.22	0.29	0.16	0.15	0.30	0.07	0.34	1.00	0.15	0.42	0.65
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	323	603	303	484	696	402	84	1316	1302	248	1832	892
v/s Ratio Prot	0.05	0.13	0.01	c0.12	0.05	0.06	0.03	0.18		c0.12	0.17	0.11
v/s Ratio Perm			0.04			0.06			c0.63			0.20
v/c Ratio	0.23	0.59	0.18	0.78	0.31	0.41	0.38	0.55	0.63	0.76	0.41	0.48
Uniform Delay, d1	37.9	42.2	32.4	48.5	45.5	33.3	53.5	32.3	0.0	48.7	24.1	10.8
Progression Factor	0.62	0.32	0.20	0.57	0.83	3.22	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	3.8	0.3	7.0	1.0	0.6	2.9	1.6	2.3	12.9	0.7	0.4
Delay (s)	23.9	17.4	6.9	34.5	38.9	107.6	56.3	34.0	2.3	61.6	24.8	11.2
Level of Service	C	B	A	C	D	F	E	C	A	E	C	B
Approach Delay (s)		16.1			65.5			17.9			24.4	
Approach LOS		B			E			B			C	

Intersection Summary			
HCM Average Control Delay	30.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

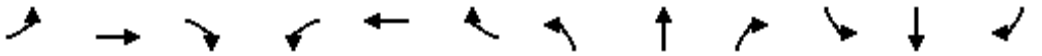
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	0.97	0.95		1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1267	3935	1259	1310	3798	1225	2730	2885		1369	2868	1183
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1267	3935	1259	1310	3798	1225	2730	2885		1369	2868	1183
Volume (vph)	75	220	200	95	170	140	255	680	40	180	700	100
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	232	211	100	179	147	268	716	42	189	737	105
RTOR Reduction (vph)	0	0	126	0	0	102	0	3	0	0	0	45
Lane Group Flow (vph)	79	232	85	100	179	45	268	755	0	189	737	60
Heavy Vehicles (%)	20%	11%	8%	16%	15%	11%	8%	4%	13%	11%	6%	15%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2		1	6	7
Permitted Phases			4			8						6
Actuated Green, G (s)	10.6	13.3	27.5	9.9	12.6	30.6	14.2	42.8		18.0	46.6	57.2
Effective Green, g (s)	10.6	13.3	27.5	9.9	12.6	30.6	14.2	42.8		18.0	46.6	57.2
Actuated g/C Ratio	0.11	0.13	0.28	0.10	0.13	0.31	0.14	0.43		0.18	0.47	0.57
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	134	523	397	130	479	424	388	1235		246	1336	724
v/s Ratio Prot	0.06	c0.06	0.03	c0.08	0.05	0.02	0.10	c0.26		c0.14	c0.26	0.01
v/s Ratio Perm			0.04			0.02						0.04
v/c Ratio	0.59	0.44	0.21	0.77	0.37	0.11	0.69	0.61		0.77	0.55	0.08
Uniform Delay, d1	42.6	39.9	27.9	43.9	40.1	24.9	40.8	22.2		39.0	19.2	9.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.03	0.89	0.86
Incremental Delay, d2	6.5	0.6	0.3	23.5	0.5	0.1	5.2	2.3		7.7	0.9	0.0
Delay (s)	49.1	40.5	28.2	67.4	40.6	25.0	46.0	24.4		47.8	17.9	8.3
Level of Service	D	D	C	E	D	C	D	C		D	B	A
Approach Delay (s)		36.8			41.5			30.1			22.4	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	30.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		

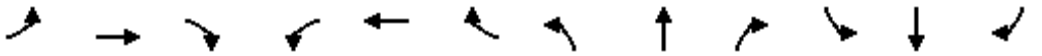
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1322	3935	1183	1520	3832	1360	1357	2895	1360	1520	2980	1193
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1322	3935	1183	1520	3832	1360	1357	2895	1360	1520	2980	1193
Volume (vph)	275	1010	100	35	560	30	85	400	85	125	570	320
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	289	1063	105	37	589	32	89	421	89	132	600	337
RTOR Reduction (vph)	0	0	54	0	0	22	0	0	59	0	0	58
Lane Group Flow (vph)	289	1063	51	37	589	10	89	421	30	132	600	279
Heavy Vehicles (%)	15%	11%	15%	0%	14%	0%	12%	5%	0%	0%	2%	14%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	25.2	38.9	48.3	5.5	19.2	31.1	9.4	27.7	33.2	11.9	30.2	55.4
Effective Green, g (s)	25.2	38.9	48.3	5.5	19.2	31.1	9.4	27.7	33.2	11.9	30.2	55.4
Actuated g/C Ratio	0.25	0.39	0.48	0.06	0.19	0.31	0.09	0.28	0.33	0.12	0.30	0.55
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	333	1531	619	84	736	477	128	802	506	181	900	709
v/s Ratio Prot	c0.22	0.27	0.01	0.02	c0.15	0.00	0.07	0.15	0.00	c0.09	c0.20	0.10
v/s Ratio Perm			0.04			0.00			0.02			0.13
v/c Ratio	0.87	0.69	0.08	0.44	0.80	0.02	0.70	0.52	0.06	0.73	0.67	0.39
Uniform Delay, d1	35.8	25.6	13.9	45.8	38.6	23.9	43.9	30.6	22.8	42.5	30.5	12.7
Progression Factor	1.00	1.00	1.00	1.23	0.52	0.21	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	20.5	1.4	0.1	3.6	6.1	0.0	15.1	2.5	0.0	13.7	3.9	0.4
Delay (s)	56.3	27.0	14.0	59.9	26.2	5.0	59.1	33.0	22.8	56.2	34.4	13.1
Level of Service	E	C	B	E	C	A	E	C	C	E	C	B
Approach Delay (s)		31.8			27.0			35.4			30.4	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM Average Control Delay	31.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		

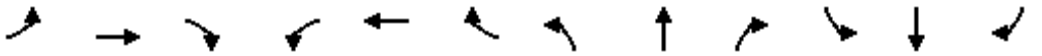
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1524	4001	1417	1553	3654	1363	1524	3019	1376	1495	3076	1225
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1524	4001	1417	1553	3654	1363	1524	3019	1376	1495	3076	1225
Volume (vph)	190	1345	125	95	895	50	115	490	140	90	545	160
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	207	1462	136	103	973	54	125	533	152	98	592	174
RTOR Reduction (vph)	0	0	76	0	0	34	0	0	49	0	0	40
Lane Group Flow (vph)	207	1462	60	103	973	20	125	533	103	98	592	134
Heavy Vehicles (%)	6%	16%	2%	4%	27%	6%	6%	7%	5%	8%	5%	18%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	16.5	43.9	43.9	8.8	36.2	36.2	9.9	21.9	30.7	9.4	21.4	37.9
Effective Green, g (s)	16.5	43.9	43.9	8.8	36.2	36.2	9.9	21.9	30.7	9.4	21.4	37.9
Actuated g/C Ratio	0.16	0.44	0.44	0.09	0.36	0.36	0.10	0.22	0.31	0.09	0.21	0.38
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	251	1756	622	137	1323	493	151	661	477	141	658	513
v/s Ratio Prot	c0.14	c0.37		0.07	0.27		c0.08	0.18	0.02	0.07	c0.19	0.04
v/s Ratio Perm			0.04			0.01			0.06			0.07
v/c Ratio	0.82	0.83	0.10	0.75	0.74	0.04	0.83	0.81	0.22	0.70	0.90	0.26
Uniform Delay, d1	40.4	24.8	16.4	44.5	27.7	20.6	44.2	37.0	25.7	43.9	38.3	21.4
Progression Factor	0.92	0.74	1.07	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.8	4.1	0.3	20.5	3.7	0.2	29.5	7.1	0.2	13.8	15.1	0.3
Delay (s)	54.1	22.6	17.8	65.0	31.4	20.8	73.8	44.2	25.9	57.8	53.4	21.7
Level of Service	D	C	B	E	C	C	E	D	C	E	D	C
Approach Delay (s)		25.8			34.0			45.3			47.5	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	35.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		

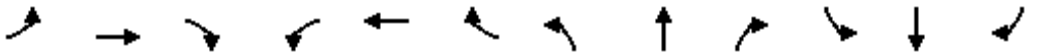
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1346	3804	1204	1442	4144	1290	1495	3019	1376	1495	3019	1338
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1346	3804	1204	1442	4144	1290	1495	3019	1376	1495	3019	1338
Volume (vph)	190	1425	125	95	895	50	115	490	140	90	545	160
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	207	1549	136	103	973	54	125	533	152	98	592	174
RTOR Reduction (vph)	0	0	76	0	0	35	0	0	47	0	0	40
Lane Group Flow (vph)	207	1549	60	103	973	19	125	533	105	98	592	134
Heavy Vehicles (%)	20%	22%	20%	12%	12%	12%	8%	7%	5%	8%	7%	8%
Turn Type	Prot		Perm	Prot		Perm	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	17.6	44.3	44.3	8.9	35.6	35.6	9.9	21.4	30.3	9.4	20.9	38.5
Effective Green, g (s)	17.6	44.3	44.3	8.9	35.6	35.6	9.9	21.4	30.3	9.4	20.9	38.5
Actuated g/C Ratio	0.18	0.44	0.44	0.09	0.36	0.36	0.10	0.21	0.30	0.09	0.21	0.38
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	237	1685	533	128	1475	459	148	646	472	141	631	569
v/s Ratio Prot	c0.15	c0.41		0.07	0.23		c0.08	0.18	0.02	0.07	c0.20	0.04
v/s Ratio Perm			0.05			0.01			0.06			0.06
v/c Ratio	0.87	0.92	0.11	0.80	0.66	0.04	0.84	0.83	0.22	0.70	0.94	0.24
Uniform Delay, d1	40.1	26.2	16.3	44.7	27.1	21.1	44.3	37.5	26.0	43.9	38.9	20.8
Progression Factor	0.93	0.52	0.46	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	21.1	7.1	0.3	29.5	2.3	0.2	33.3	8.5	0.2	13.8	21.6	0.2
Delay (s)	58.2	20.8	7.7	74.2	29.4	21.2	77.6	46.0	26.3	57.8	60.5	21.0
Level of Service	E	C	A	E	C	C	E	D	C	E	E	C
Approach Delay (s)		23.9			33.1			47.2			52.3	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	35.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		

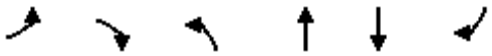
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1322	3935	1236	1333	3865	1133	1382	2764	1308	1434	2690	1133
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1322	3935	1236	1333	3865	1133	1382	2764	1308	1434	2690	1133
Volume (vph)	130	840	145	320	395	100	50	550	115	85	640	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	137	884	153	337	416	105	53	579	121	89	674	26
RTOR Reduction (vph)	0	0	90	0	0	60	0	0	17	0	0	15
Lane Group Flow (vph)	137	884	63	337	416	45	53	579	104	89	674	11
Heavy Vehicles (%)	15%	11%	10%	14%	13%	20%	10%	10%	4%	6%	13%	20%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	14.7	24.0	28.6	26.5	35.8	43.2	4.6	26.1	52.6	7.4	28.9	43.6
Effective Green, g (s)	14.7	24.0	28.6	26.5	35.8	43.2	4.6	26.1	52.6	7.4	28.9	43.6
Actuated g/C Ratio	0.15	0.24	0.29	0.26	0.36	0.43	0.05	0.26	0.53	0.07	0.29	0.44
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	194	944	403	353	1384	535	64	721	740	106	777	539
v/s Ratio Prot	0.10	c0.22	0.01	c0.25	0.11	0.01	0.04	0.21	0.04	c0.06	c0.25	0.00
v/s Ratio Perm			0.04			0.03			0.04			0.01
v/c Ratio	0.71	0.94	0.16	0.95	0.30	0.08	0.83	0.80	0.14	0.84	0.87	0.02
Uniform Delay, d1	40.6	37.3	26.7	36.2	23.1	16.7	47.3	34.5	12.1	45.7	33.7	16.1
Progression Factor	0.94	0.72	1.67	0.32	0.55	2.01	1.39	0.73	0.12	1.00	1.00	1.00
Incremental Delay, d2	8.4	12.8	0.1	22.2	0.1	0.0	49.5	7.9	0.1	41.2	12.5	0.0
Delay (s)	46.6	39.5	44.8	33.6	12.8	33.7	115.2	33.2	1.6	86.9	46.3	16.1
Level of Service	D	D	D	C	B	C	F	C	A	F	D	B
Approach Delay (s)		41.0			23.5			33.9			49.9	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	37.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

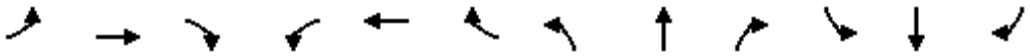
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	100	95	0	240	175	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	105	100	0	253	184	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)					843	
pX, platoon unblocked						
vC, conflicting volume	311	184	184			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	311	184	184			
tC, single (s)	6.8	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.4	2.2			
p0 queue free %	84	88	100			
cM capacity (veh/h)	657	811	1403			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1
Volume Total	105	100	126	126	184
Volume Left	105	0	0	0	0
Volume Right	0	100	0	0	0
cSH	657	811	1700	1700	1700
Volume to Capacity	0.16	0.12	0.07	0.07	0.11
Queue Length 95th (ft)	14	10	0	0	0
Control Delay (s)	11.5	10.1	0.0	0.0	0.0
Lane LOS	B	B			
Approach Delay (s)	10.8		0.0		0.0
Approach LOS	B				

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	21.8%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)				4.0	4.0			4.0			4.0	
Lane Util. Factor				1.00	0.95			1.00			1.00	
Frt				1.00	1.00			1.00			0.88	
Flt Protected				0.95	1.00			0.98			1.00	
Satd. Flow (prot)				1490	2890			1375			1379	
Flt Permitted				0.95	1.00			0.94			1.00	
Satd. Flow (perm)				1490	2890			1320			1379	
Volume (vph)	0	0	0	5	300	5	5	5	0	0	10	75
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	5	316	5	5	5	0	0	11	79
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	0	0	43	0
Lane Group Flow (vph)	0	0	0	5	319	0	0	10	0	0	47	0
Heavy Vehicles (%)	2%	2%	2%	2%	5%	2%	2%	25%	2%	2%	4%	2%
Turn Type				Split			Perm					
Protected Phases				6	6			8			4	
Permitted Phases							8					
Actuated Green, G (s)				25.0	25.0			27.0			27.0	
Effective Green, g (s)				25.0	25.0			27.0			27.0	
Actuated g/C Ratio				0.42	0.42			0.45			0.45	
Clearance Time (s)				4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)				621	1204			594			621	
v/s Ratio Prot				0.00	c0.11						c0.03	
v/s Ratio Perm								0.01				
v/c Ratio				0.01	0.27			0.02			0.07	
Uniform Delay, d1				10.2	11.5			9.1			9.4	
Progression Factor				1.00	1.00			1.00			1.00	
Incremental Delay, d2				0.0	0.5			0.1			0.2	
Delay (s)				10.3	12.0			9.2			9.6	
Level of Service				B	B			A			A	
Approach Delay (s)		0.0			12.0			9.2			9.6	
Approach LOS		A			B			A			A	

Intersection Summary			
HCM Average Control Delay	11.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.17		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	22.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2951	1236	1476	2951	1520	1360
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2951	1236	1476	2951	1520	1360
Volume (vph)	945	290	400	595	80	50
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	995	305	421	626	84	53
RTOR Reduction (vph)	0	115	0	0	0	36
Lane Group Flow (vph)	995	190	421	626	84	17
Heavy Vehicles (%)	3%	10%	3%	3%	0%	0%
Turn Type		pm+ov	Prot			Over
Protected Phases	4	5	3	8	5	3
Permitted Phases		4				
Actuated Green, G (s)	29.5	35.5	22.5	56.0	6.0	22.5
Effective Green, g (s)	29.5	35.5	22.5	56.0	6.0	22.5
Actuated g/C Ratio	0.42	0.51	0.32	0.80	0.09	0.32
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1244	697	474	2361	130	437
v/s Ratio Prot	c0.34	0.02	c0.29	0.21	c0.06	0.01
v/s Ratio Perm		0.13				
v/c Ratio	0.80	0.27	0.89	0.27	0.65	0.04
Uniform Delay, d1	17.7	9.9	22.6	1.8	31.0	16.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	5.5	0.2	18.0	0.3	10.5	0.0
Delay (s)	23.1	10.1	40.5	2.1	41.5	16.4
Level of Service	C	B	D	A	D	B
Approach Delay (s)	20.1			17.5	31.8	
Approach LOS	C			B	C	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	70.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2923	1143	1520	2923	2808	1283
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2923	1143	1520	2923	2808	1283
Volume (vph)	755	360	120	555	650	480
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	795	379	126	584	684	505
RTOR Reduction (vph)	0	224	0	0	0	0
Lane Group Flow (vph)	795	155	126	584	684	505
Heavy Vehicles (%)	4%	19%	0%	4%	5%	6%
Turn Type		Perm	Prot			Free
Protected Phases	4		3	8		
Permitted Phases		4			2	Free
Actuated Green, G (s)	24.5	24.5	6.4	34.9	17.1	60.0
Effective Green, g (s)	24.5	24.5	6.4	34.9	17.1	60.0
Actuated g/C Ratio	0.41	0.41	0.11	0.58	0.29	1.00
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	1194	467	162	1700	800	1283
v/s Ratio Prot	c0.27		c0.08	0.20		
v/s Ratio Perm		0.14			c0.24	0.39
v/c Ratio	0.67	0.33	0.78	0.34	0.85	0.39
Uniform Delay, d1	14.4	12.1	26.1	6.6	20.3	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.9	1.9	20.6	0.6	8.9	0.9
Delay (s)	17.4	14.0	46.7	7.1	29.2	0.9
Level of Service	B	B	D	A	C	A
Approach Delay (s)	16.3			14.1	17.2	
Approach LOS	B			B	B	

Intersection Summary			
HCM Average Control Delay	16.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3010			2980	1520	1360
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3010			2980	1520	1360
Volume (vph)	545	0	0	835	40	90
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	574	0	0	879	42	95
RTOR Reduction (vph)	0	0	0	0	0	84
Lane Group Flow (vph)	574	0	0	879	42	11
Heavy Vehicles (%)	1%	0%	0%	2%	0%	0%
Turn Type						custom
Protected Phases	4			8	5	2
Permitted Phases						
Actuated Green, G (s)	45.3			45.3	6.7	6.7
Effective Green, g (s)	45.3			45.3	6.7	6.7
Actuated g/C Ratio	0.75			0.75	0.11	0.11
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2273			2250	170	152
v/s Ratio Prot	0.19			c0.29	c0.03	0.01
v/s Ratio Perm						
v/c Ratio	0.25			0.39	0.25	0.07
Uniform Delay, d1	2.2			2.6	24.3	23.9
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.3			0.5	0.8	0.2
Delay (s)	2.5			3.1	25.1	24.1
Level of Service	A			A	C	C
Approach Delay (s)	2.5			3.1	24.4	
Approach LOS	A			A	C	

Intersection Summary			
HCM Average Control Delay	4.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	545	320	290	585	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	574	337	305	616	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)				630		
pX, platoon unblocked						
vC, conflicting volume			574		1661	455
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			574		1661	455
tC, single (s)			4.2		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			69		100	100
cM capacity (veh/h)			989		62	558

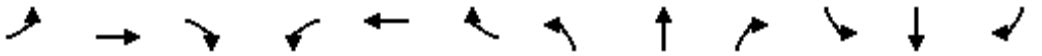
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3
Volume Total	382	528	305	308	308
Volume Left	0	0	305	0	0
Volume Right	0	337	0	0	0
cSH	1700	1700	989	1700	1700
Volume to Capacity	0.22	0.31	0.31	0.18	0.18
Queue Length 95th (ft)	0	0	33	0	0
Control Delay (s)	0.0	0.0	10.3	0.0	0.0
Lane LOS			B		
Approach Delay (s)	0.0		3.4		
Approach LOS					

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0		4.0		4.0			
Lane Util. Factor		0.95	1.00		0.91		0.97		1.00			
Frt		1.00	0.85		0.97		1.00		0.85			
Flt Protected		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (prot)		2895	1308		4069		2835		1115			
Flt Permitted		1.00	1.00		1.00		0.95		1.00			
Satd. Flow (perm)		2895	1308		4069		2835		1115			
Volume (vph)	0	630	250	0	485	130	490	0	270	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	663	263	0	511	137	516	0	284	0	0	0
RTOR Reduction (vph)	0	0	108	0	56	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	663	155	0	592	0	516	0	284	0	0	0
Heavy Vehicles (%)	0%	5%	4%	0%	5%	0%	4%	0%	22%	0%	0%	0%
Turn Type			Perm				Prot		Free			
Protected Phases		4			8		5					
Permitted Phases			4						Free			
Actuated Green, G (s)		32.5	32.5		32.5		14.5		55.0			
Effective Green, g (s)		32.5	32.5		32.5		14.5		55.0			
Actuated g/C Ratio		0.59	0.59		0.59		0.26		1.00			
Clearance Time (s)		4.0	4.0		4.0		4.0					
Vehicle Extension (s)		3.0	3.0		3.0		3.0					
Lane Grp Cap (vph)		1711	773		2404		747		1115			
v/s Ratio Prot		c0.23			0.15		c0.18					
v/s Ratio Perm			0.12						0.25			
v/c Ratio		0.39	0.20		0.25		0.69		0.25			
Uniform Delay, d1		6.0	5.2		5.4		18.2		0.0			
Progression Factor		0.83	0.08		1.00		1.00		1.00			
Incremental Delay, d2		0.6	0.5		0.2		2.8		0.6			
Delay (s)		5.6	1.0		5.6		21.0		0.6			
Level of Service		A	A		A		C		A			
Approach Delay (s)		4.3			5.6			13.7			0.0	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	7.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	43.9%	ICU Level of Service	A
Analysis Period (min)	15		

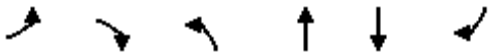
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1900	1900	1600	1600	1900	1900	1900	1600	1900	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.91	0.91		0.95	1.00				0.97		0.88
Frt		1.00	0.85		1.00	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		2827	1336		2923	1088				2681		2347
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		2827	1336		2923	1088				2681		2347
Volume (vph)	0	680	310	0	935	40	0	0	0	200	0	450
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	716	326	0	984	42	0	0	0	211	0	474
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	101
Lane Group Flow (vph)	0	716	326	0	984	42	0	0	0	211	0	373
Heavy Vehicles (%)	0%	3%	10%	0%	4%	25%	0%	0%	0%	10%	0%	2%
Turn Type			custom			custom				Prot		custom
Protected Phases		4			8					1		6
Permitted Phases			1 4			1 8						
Actuated Green, G (s)		33.8	55.0		33.8	55.0				13.2		13.2
Effective Green, g (s)		33.8	55.0		33.8	55.0				13.2		13.2
Actuated g/C Ratio		0.61	1.00		0.61	1.00				0.24		0.24
Clearance Time (s)		4.0			4.0					4.0		4.0
Vehicle Extension (s)		3.0			3.0					3.0		3.0
Lane Grp Cap (vph)		1737	1336		1796	1088				643		563
v/s Ratio Prot		0.25			c0.34					0.08		c0.16
v/s Ratio Perm			0.24			0.04						
v/c Ratio		0.41	0.24		0.55	0.04				0.33		0.66
Uniform Delay, d1		5.5	0.0		6.2	0.0				17.2		18.9
Progression Factor		1.00	1.00		0.50	1.00				1.00		1.00
Incremental Delay, d2		0.7	0.1		1.1	0.0				0.3		2.9
Delay (s)		6.2	0.1		4.1	0.0				17.5		21.8
Level of Service		A	A		A	A				B		C
Approach Delay (s)		4.3			4.0			0.0			20.5	
Approach LOS		A			A			A			C	

Intersection Summary			
HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	55.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		

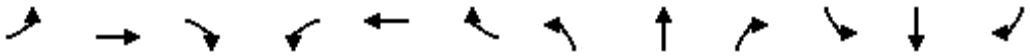
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1520	1193	1322	2868	1509	1360
Flt Permitted	0.95	1.00	0.59	1.00	1.00	1.00
Satd. Flow (perm)	1520	1193	827	2868	1509	1360
Volume (vph)	10	105	130	170	255	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	111	137	179	268	5
RTOR Reduction (vph)	0	100	0	0	0	1
Lane Group Flow (vph)	11	11	137	179	268	4
Heavy Vehicles (%)	0%	14%	15%	6%	6%	0%
Turn Type		Perm	Perm			Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Actuated Green, G (s)	4.5	4.5	32.5	32.5	32.5	32.5
Effective Green, g (s)	4.5	4.5	32.5	32.5	32.5	32.5
Actuated g/C Ratio	0.10	0.10	0.72	0.72	0.72	0.72
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	152	119	597	2071	1090	982
v/s Ratio Prot	0.01			0.06	c0.18	
v/s Ratio Perm		c0.01	0.17			0.00
v/c Ratio	0.07	0.09	0.23	0.09	0.25	0.00
Uniform Delay, d1	18.4	18.4	2.1	1.9	2.1	1.7
Progression Factor	1.00	1.00	1.51	0.94	1.00	1.00
Incremental Delay, d2	0.2	0.3	0.8	0.1	0.5	0.0
Delay (s)	18.6	18.7	3.9	1.8	2.6	1.7
Level of Service	B	B	A	A	A	A
Approach Delay (s)	18.7			2.7	2.6	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	5.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		

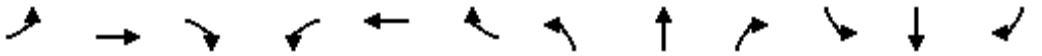
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0	4.0		4.0			
Lane Util. Factor		0.86	0.86		0.86	0.86	0.97		0.88			
Frt		1.00	0.85		0.99	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4047	1000		3909	1147	2633		2347			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4047	1000		3909	1147	2633		2347			
Volume (vph)	0	1335	470	0	1305	1150	410	0	830	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1405	495	0	1374	1211	432	0	874	0	0	0
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	4	0	0	0
Lane Group Flow (vph)	0	1405	495	0	1438	1143	432	0	870	0	0	0
Heavy Vehicles (%)	0%	2%	17%	0%	5%	2%	12%	0%	2%	0%	0%	0%
Turn Type			custom			custom	Prot		custom			
Protected Phases		4			8		5		2			
Permitted Phases			4 5			5 8						
Actuated Green, G (s)		44.0	120.0		44.0	120.0	68.0		68.0			
Effective Green, g (s)		44.0	120.0		44.0	120.0	68.0		68.0			
Actuated g/C Ratio		0.37	1.00		0.37	1.00	0.57		0.57			
Clearance Time (s)		4.0			4.0		4.0		4.0			
Vehicle Extension (s)		3.0			3.0		3.0		3.0			
Lane Grp Cap (vph)		1484	1000		1433	1147	1492		1330			
v/s Ratio Prot		0.35			0.37		0.16		0.37			
v/s Ratio Perm			0.50			c1.00						
v/c Ratio		0.95	0.49		1.00	1.00	0.29		0.65			
Uniform Delay, d1		36.9	0.0		38.0	0.0	13.5		17.9			
Progression Factor		0.91	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		11.8	0.3		24.5	25.5	0.1		1.2			
Delay (s)		45.4	0.3		62.5	25.5	13.6		19.1			
Level of Service		D	A		E	C	B		B			
Approach Delay (s)		33.7			46.2			17.3			0.0	
Approach LOS		C			D			B			A	

Intersection Summary			
HCM Average Control Delay	35.5	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	0.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

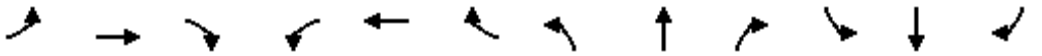
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0				4.0		4.0
Lane Util. Factor		0.86	0.86		0.86	0.86				0.97		0.88
Frt		1.00	0.85		0.96	0.85				1.00		0.85
Flt Protected		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (prot)		3894	1083		3719	1083				2782		2237
Flt Permitted		1.00	1.00		1.00	1.00				0.95		1.00
Satd. Flow (perm)		3894	1083		3719	1083				2782		2237
Volume (vph)	0	1275	520	0	815	900	0	0	0	530	0	750
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1342	547	0	858	947	0	0	0	558	0	789
RTOR Reduction (vph)	0	0	214	0	43	0	0	0	0	0	0	134
Lane Group Flow (vph)	0	1342	333	0	1128	634	0	0	0	558	0	655
Heavy Vehicles (%)	0%	6%	8%	0%	6%	8%	0%	0%	0%	6%	0%	7%
Turn Type			Perm			custom				Prot		custom
Protected Phases		4			8					1		
Permitted Phases			4			1 8						6
Actuated Green, G (s)		73.1	73.1		73.1	120.0				38.9		38.9
Effective Green, g (s)		73.1	73.1		73.1	120.0				38.9		38.9
Actuated g/C Ratio		0.61	0.61		0.61	1.00				0.32		0.32
Clearance Time (s)		4.0	4.0		4.0					4.0		4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0		3.0
Lane Grp Cap (vph)		2372	660		2265	1083				902		725
v/s Ratio Prot		0.34			0.30					0.20		
v/s Ratio Perm			0.31			c0.59						c0.29
v/c Ratio		0.57	0.50		0.50	0.59				0.62		0.90
Uniform Delay, d1		14.0	13.2		13.2	0.0				34.3		38.8
Progression Factor		1.00	1.00		0.48	1.00				1.00		1.00
Incremental Delay, d2		1.0	2.7		0.6	0.1				1.3		14.6
Delay (s)		15.0	16.0		6.9	0.1				35.6		53.4
Level of Service		B	B		A	A				D		D
Approach Delay (s)		15.3			4.5			0.0			46.0	
Approach LOS		B			A			A			D	

Intersection Summary			
HCM Average Control Delay	19.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	64.5%	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												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Lane Util. Factor		0.91	1.00		0.91					0.97	1.00	0.88
Frt		1.00	0.85		1.00					1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (prot)		4181	1363		4181					2901	1574	2355
Flt Permitted		1.00	1.00		1.00					0.95	1.00	1.00
Satd. Flow (perm)		4181	1363		4181					2901	1574	2355
Volume (vph)	0	735	410	0	675	0	0	0	0	160	240	390
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	774	432	0	711	0	0	0	0	168	253	411
RTOR Reduction (vph)	0	0	122	0	0	0	0	0	0	0	0	245
Lane Group Flow (vph)	0	774	310	0	711	0	0	0	0	168	253	166
Heavy Vehicles (%)	0%	11%	6%	8%	11%	0%	0%	0%	0%	8%	8%	8%
Turn Type			Perm							Prot		Perm
Protected Phases		4			8					1	6	
Permitted Phases			4									6
Actuated Green, G (s)		71.7	71.7		71.7					20.3	20.3	20.3
Effective Green, g (s)		71.7	71.7		71.7					20.3	20.3	20.3
Actuated g/C Ratio		0.72	0.72		0.72					0.20	0.20	0.20
Clearance Time (s)		4.0	4.0		4.0					4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		2998	977		2998					589	320	478
v/s Ratio Prot		0.19			0.17					0.06	c0.16	
v/s Ratio Perm			c0.23									0.07
v/c Ratio		0.26	0.32		0.24					0.29	0.79	0.35
Uniform Delay, d1		4.9	5.2		4.8					33.7	37.8	34.2
Progression Factor		1.00	1.00		0.85					1.00	1.00	1.00
Incremental Delay, d2		0.2	0.9		0.2					0.3	12.5	0.4
Delay (s)		5.1	6.0		4.3					34.0	50.3	34.6
Level of Service		A	A		A					C	D	C
Approach Delay (s)		5.4			4.3			0.0			39.3	
Approach LOS		A			A			A			D	

Intersection Summary			
HCM Average Control Delay	15.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	15		

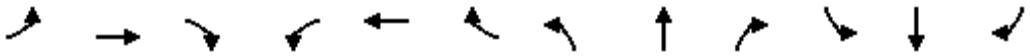
c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.91	1.00	1.00	0.91	0.97	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3900	1350	1495	4378	2823	1194
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3900	1350	1495	4378	2823	1194
Volume (vph)	405	610	480	280	165	105
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	426	642	505	295	174	111
RTOR Reduction (vph)	0	0	0	0	0	100
Lane Group Flow (vph)	426	642	505	295	174	11
Heavy Vehicles (%)	19%	7%	8%	6%	11%	21%
Turn Type		Free	Prot			Perm
Protected Phases	4		3	8	2	
Permitted Phases		Free				2
Actuated Green, G (s)	33.6	120.0	62.0	99.6	12.4	12.4
Effective Green, g (s)	33.6	120.0	62.0	99.6	12.4	12.4
Actuated g/C Ratio	0.28	1.00	0.52	0.83	0.10	0.10
Clearance Time (s)	4.0		4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1092	1350	772	3634	292	123
v/s Ratio Prot	0.11		c0.34	0.07	0.06	
v/s Ratio Perm		c0.48				0.01
v/c Ratio	0.39	0.48	0.65	0.08	0.60	0.09
Uniform Delay, d1	34.9	0.0	21.2	1.9	51.4	48.7
Progression Factor	1.00	1.00	0.87	0.81	1.00	1.00
Incremental Delay, d2	1.1	1.2	1.8	0.0	3.3	0.3
Delay (s)	36.0	1.2	20.2	1.5	54.7	49.0
Level of Service	D	A	C	A	D	D
Approach Delay (s)	15.1			13.3	52.5	
Approach LOS	B			B	D	

Intersection Summary			
HCM Average Control Delay	19.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	53.7%	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												
Ideal Flow (vphpl)	1700	1900	1700	1700	1900	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0			4.0		4.0		4.0			
Lane Util. Factor	0.97	0.91			0.91		0.97		1.00			
Frt	1.00	1.00			0.98		1.00		0.85			
Flt Protected	0.95	1.00			1.00		0.95		1.00			
Satd. Flow (prot)	2392	4217			4105		2429		1302			
Flt Permitted	0.95	1.00			1.00		0.95		1.00			
Satd. Flow (perm)	2392	4217			4105		2429		1302			
Volume (vph)	100	1640	0	0	1030	190	100	0	120	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	1783	0	0	1120	207	109	0	130	0	0	0
RTOR Reduction (vph)	0	0	0	0	17	0	0	0	28	0	0	0
Lane Group Flow (vph)	109	1783	0	0	1310	0	109	0	102	0	0	0
Heavy Vehicles (%)	31%	23%	0%	0%	22%	31%	29%	0%	11%	0%	0%	0%
Turn Type	Prot						custom		custom			
Protected Phases	7	4			8							
Permitted Phases							2		2			
Actuated Green, G (s)	8.3	79.3			67.0		12.7		12.7			
Effective Green, g (s)	8.3	79.3			67.0		12.7		12.7			
Actuated g/C Ratio	0.08	0.79			0.67		0.13		0.13			
Clearance Time (s)	4.0	4.0			4.0		4.0		4.0			
Vehicle Extension (s)	3.0	3.0			3.0		3.0		3.0			
Lane Grp Cap (vph)	199	3344			2750		308		165			
v/s Ratio Prot	0.05	c0.42			0.32							
v/s Ratio Perm							0.04		c0.08			
v/c Ratio	0.55	0.53			0.48		0.35		0.62			
Uniform Delay, d1	44.0	3.7			8.0		39.9		41.4			
Progression Factor	0.86	1.24			0.33		1.00		1.00			
Incremental Delay, d2	2.6	0.5			0.4		0.7		6.7			
Delay (s)	40.7	5.1			3.1		40.6		48.1			
Level of Service	D	A			A		D		D			
Approach Delay (s)		7.2			3.1			44.7			0.0	
Approach LOS		A			A			D			A	

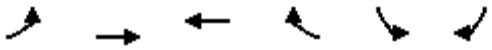
Intersection Summary			
HCM Average Control Delay	8.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Lane Util. Factor	0.97	0.91			0.81	1.00	0.97		1.00			
Frt	1.00	1.00			1.00	0.85	1.00		0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (prot)	2673	4252			6810	1233	2024		1122			
Flt Permitted	0.95	1.00			1.00	1.00	0.95		1.00			
Satd. Flow (perm)	2673	4252			6810	1233	2024		1122			
Volume (vph)	100	1645	0	0	1030	190	270	0	195	0	0	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	109	1788	0	0	1120	207	293	0	212	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	114	0	0	11	0	0	0
Lane Group Flow (vph)	109	1788	0	0	1120	93	293	0	201	0	0	0
Heavy Vehicles (%)	31%	22%	2%	2%	13%	31%	73%	2%	44%	2%	2%	2%
Turn Type	Prot					Perm	custom		custom			
Protected Phases	7	4			8							
Permitted Phases						8	2		2			
Actuated Green, G (s)	9.2	58.0			44.8	44.8	34.0		34.0			
Effective Green, g (s)	9.2	58.0			44.8	44.8	34.0		34.0			
Actuated g/C Ratio	0.09	0.58			0.45	0.45	0.34		0.34			
Clearance Time (s)	4.0	4.0			4.0	4.0	4.0		4.0			
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0		3.0			
Lane Grp Cap (vph)	246	2466			3051	552	688		381			
v/s Ratio Prot	0.04	c0.42			0.16							
v/s Ratio Perm						0.08	0.14		c0.18			
v/c Ratio	0.44	0.73			0.37	0.17	0.43		0.53			
Uniform Delay, d1	43.0	15.2			18.2	16.5	25.5		26.6			
Progression Factor	0.89	1.09			0.99	3.47	1.00		1.00			
Incremental Delay, d2	1.1	1.6			0.3	0.5	1.9		5.2			
Delay (s)	39.3	18.3			18.2	57.7	27.4		31.7			
Level of Service	D	B			B	E	C		C			
Approach Delay (s)		19.5			24.4			29.2			0.0	
Approach LOS		B			C			C			A	

Intersection Summary			
HCM Average Control Delay	22.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

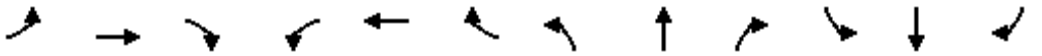
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.81	0.91		0.97	0.88
Frt		1.00	1.00		1.00	0.85
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		6156	4252		2870	2330
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		6156	4252		2870	2330
Volume (vph)	0	800	1130	0	940	870
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	870	1228	0	1022	946
RTOR Reduction (vph)	0	0	0	0	0	11
Lane Group Flow (vph)	0	870	1228	0	1022	935
Heavy Vehicles (%)	0%	25%	22%	0%	22%	22%
Turn Type						custom
Protected Phases		4	8			
Permitted Phases					6	6
Actuated Green, G (s)		38.0	38.0		54.0	54.0
Effective Green, g (s)		38.0	38.0		54.0	54.0
Actuated g/C Ratio		0.38	0.38		0.54	0.54
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		2339	1616		1550	1258
v/s Ratio Prot		0.14	c0.29			
v/s Ratio Perm					0.36	c0.40
v/c Ratio		0.37	0.76		0.66	0.74
Uniform Delay, d1		22.4	27.0		16.4	17.7
Progression Factor		0.52	0.54		1.00	1.00
Incremental Delay, d2		0.4	3.1		2.2	4.0
Delay (s)		12.0	17.7		18.6	21.7
Level of Service		B	B		B	C
Approach Delay (s)		12.0	17.7		20.1	
Approach LOS		B	B		C	

Intersection Summary			
HCM Average Control Delay	17.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	58.9%	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												
Ideal Flow (vphpl)	1900	1900	1700	1700	1900	1900	1700	1700	1700	1900	1700	1900
Total Lost time (s)		4.0	4.0	4.0	4.0					4.0		4.0
Lane Util. Factor		0.81	0.88	0.97	0.91					0.97		0.88
Frt		1.00	0.85	1.00	1.00					1.00		0.85
Flt Protected		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (prot)		6750	1817	2611	4217					3303		2493
Flt Permitted		1.00	1.00	0.95	1.00					0.95		1.00
Satd. Flow (perm)		6750	1817	2611	4217					3303		2493
Volume (vph)	0	805	525	125	1175	0	0	0	0	940	0	870
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	875	571	136	1277	0	0	0	0	1022	0	946
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	15
Lane Group Flow (vph)	0	875	571	136	1277	0	0	0	0	1022	0	931
Heavy Vehicles (%)	0%	14%	40%	20%	23%	0%	0%	0%	0%	6%	0%	14%
Turn Type			Free	Prot						custom		custom
Protected Phases		4		3	8							
Permitted Phases			Free							6		6
Actuated Green, G (s)		28.5	100.0	9.5	42.0					50.0		50.0
Effective Green, g (s)		28.5	100.0	9.5	42.0					50.0		50.0
Actuated g/C Ratio		0.28	1.00	0.10	0.42					0.50		0.50
Clearance Time (s)		4.0		4.0	4.0					4.0		4.0
Vehicle Extension (s)		3.0		3.0	3.0					3.0		3.0
Lane Grp Cap (vph)		1924	1817	248	1771					1652		1247
v/s Ratio Prot		0.13		0.05	c0.30							
v/s Ratio Perm			0.31							0.31		c0.37
v/c Ratio		0.45	0.31	0.55	0.72					0.62		0.75
Uniform Delay, d1		29.4	0.0	43.2	24.1					18.1		19.9
Progression Factor		1.00	1.00	1.46	0.47					1.00		1.00
Incremental Delay, d2		0.8	0.5	2.3	2.4					1.7		4.1
Delay (s)		30.1	0.5	65.6	13.7					19.8		24.1
Level of Service		C	A	E	B					B		C
Approach Delay (s)		18.4			18.7			0.0			21.9	
Approach LOS		B			B			A			C	

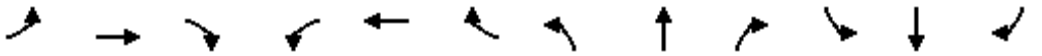
Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	10	0	0	0	0	0	0	230	30	25	225	20
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	11	0	0	0	0	0	0	242	32	26	237	21
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)											1108	
pX, platoon unblocked												
vC, conflicting volume	532	563	237	532	553	242	258			274		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	532	563	237	532	553	242	258			274		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	98	100	100	100	100	100	100			98		
cM capacity (veh/h)	455	429	807	455	435	802	1319			1301		

Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	11	242	32	26	237	21
Volume Left	11	0	0	26	0	0
Volume Right	0	0	32	0	0	21
cSH	455	1319	1700	1301	1700	1700
Volume to Capacity	0.02	0.00	0.02	0.02	0.14	0.01
Queue Length 95th (ft)	2	0	0	2	0	0
Control Delay (s)	13.1	0.0	0.0	7.8	0.0	0.0
Lane LOS	B			A		
Approach Delay (s)	13.1	0.0		0.7		
Approach LOS	B					

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	30.8%	ICU Level of Service	A	
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1448	3640	1295	1520	3900	1360	1357	1600	1360	1520	1600	1283
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.72	1.00	1.00	0.73	1.00	1.00
Satd. Flow (perm)	1448	3640	1295	1520	3900	1360	1023	1600	1360	1162	1600	1283
Volume (vph)	110	700	95	20	1160	20	405	45	125	70	60	175
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	116	737	100	21	1221	21	426	47	132	74	63	184
RTOR Reduction (vph)	0	0	59	0	0	10	0	0	73	0	0	3
Lane Group Flow (vph)	116	737	41	21	1221	11	426	47	59	74	63	181
Heavy Vehicles (%)	5%	20%	5%	0%	12%	0%	12%	0%	0%	0%	0%	6%
Turn Type	Prot		Perm	Prot		Perm	Perm		Perm	Perm		pm+ov
Protected Phases	5	2		1	6			8			4	5
Permitted Phases			2			6	8		8	4		4
Actuated Green, G (s)	11.4	40.6	40.6	2.4	31.6	31.6	45.0	45.0	45.0	45.0	45.0	56.4
Effective Green, g (s)	11.4	40.6	40.6	2.4	31.6	31.6	45.0	45.0	45.0	45.0	45.0	56.4
Actuated g/C Ratio	0.11	0.41	0.41	0.02	0.32	0.32	0.45	0.45	0.45	0.45	0.45	0.56
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	165	1478	526	36	1232	430	460	720	612	523	720	775
v/s Ratio Prot	c0.08	0.20		0.01	c0.31			0.03			0.04	0.03
v/s Ratio Perm			0.03			0.01	c0.42		0.04	0.06		0.11
v/c Ratio	0.70	0.50	0.08	0.58	0.99	0.03	0.93	0.07	0.10	0.14	0.09	0.23
Uniform Delay, d1	42.7	22.1	18.2	48.3	34.1	23.6	25.9	15.6	15.8	16.2	15.7	10.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	12.7	1.2	0.3	21.8	23.6	0.1	24.6	0.0	0.1	0.6	0.2	0.2
Delay (s)	55.4	23.3	18.5	70.1	57.7	23.7	50.5	15.6	15.9	16.7	16.0	11.1
Level of Service	E	C	B	E	E	C	D	B	B	B	B	B
Approach Delay (s)		26.7			57.3			40.2			13.4	
Approach LOS		C			E			D			B	

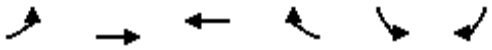
Intersection Summary			
HCM Average Control Delay	40.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)					4.0		4.0	4.0			4.0	
Lane Util. Factor					0.91		1.00	1.00			0.95	
Frt					0.99		1.00	1.00			0.95	
Flt Protected					0.99		0.95	1.00			1.00	
Satd. Flow (prot)					4151		1421	1538			2766	
Flt Permitted					0.99		0.62	1.00			1.00	
Satd. Flow (perm)					4151		932	1538			2766	
Volume (vph)	0	0	0	80	245	30	80	205	0	0	135	60
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	84	258	32	84	216	0	0	142	63
RTOR Reduction (vph)	0	0	0	0	6	0	0	0	0	0	49	0
Lane Group Flow (vph)	0	0	0	0	368	0	84	216	0	0	156	0
Heavy Vehicles (%)	0%	0%	0%	6%	2%	0%	7%	4%	0%	0%	7%	0%
Turn Type				Split			Perm					
Protected Phases				6	6			8			4	
Permitted Phases							8					
Actuated Green, G (s)					42.8		14.0	14.0			14.0	
Effective Green, g (s)					42.8		14.0	14.0			14.0	
Actuated g/C Ratio					0.66		0.22	0.22			0.22	
Clearance Time (s)					4.0		4.0	4.0			4.0	
Vehicle Extension (s)					3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)					2742		201	332			598	
v/s Ratio Prot					c0.09			c0.14			0.06	
v/s Ratio Perm							0.09					
v/c Ratio					0.13		0.42	0.65			0.26	
Uniform Delay, d1					4.1		21.9	23.2			21.1	
Progression Factor					1.00		1.00	1.00			1.00	
Incremental Delay, d2					0.1		1.4	4.5			0.2	
Delay (s)					4.2		23.3	27.7			21.3	
Level of Service					A		C	C			C	
Approach Delay (s)		0.0			4.2			26.5			21.3	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	15.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	64.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	30.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Volume (veh/h)	0	0	745	0	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	784	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)			342			
pX, platoon unblocked						
vC, conflicting volume	784				784	392
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	784				784	392
tC, single (s)	4.1				6.8	6.9
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
cM capacity (veh/h)	843				334	613

Direction, Lane #	WB 1	WB 2	SB 1
Volume Total	523	261	0
Volume Left	0	0	0
Volume Right	0	0	0
cSH	1700	1700	1700
Volume to Capacity	0.31	0.15	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	0.0	0.0	0.0
Lane LOS			A
Approach Delay (s)	0.0		0.0
Approach LOS			A

Intersection Summary			
Average Delay		0.0	
Intersection Capacity Utilization		23.9%	ICU Level of Service A
Analysis Period (min)		15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00		1.00	0.95		1.00	0.95	
Frt		0.95			0.99		1.00	0.99		1.00	0.98	
Flt Protected		0.99			0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1423			1506		1520	2808		1520	2792	
Flt Permitted		0.96			0.94		0.31	1.00		0.31	1.00	
Satd. Flow (perm)		1369			1428		503	2808		492	2792	
Volume (vph)	25	125	85	20	90	5	40	750	60	55	690	105
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	132	89	21	95	5	42	789	63	58	726	111
RTOR Reduction (vph)	0	65	0	0	4	0	0	11	0	0	21	0
Lane Group Flow (vph)	0	182	0	0	117	0	42	841	0	58	816	0
Heavy Vehicles (%)	0%	8%	6%	0%	6%	0%	0%	7%	8%	0%	7%	5%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		9.1			9.1		22.9	22.9		22.9	22.9	
Effective Green, g (s)		9.1			9.1		22.9	22.9		22.9	22.9	
Actuated g/C Ratio		0.23			0.23		0.57	0.57		0.57	0.57	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		311			325		288	1608		282	1598	
v/s Ratio Prot								c0.30			0.29	
v/s Ratio Perm		c0.13			0.08		0.08			0.12		
v/c Ratio		0.59			0.36		0.15	0.52		0.21	0.51	
Uniform Delay, d1		13.8			13.0		4.0	5.2		4.1	5.2	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.8			0.7		1.1	1.2		1.6	1.2	
Delay (s)		16.6			13.7		5.1	6.4		5.8	6.3	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		16.6			13.7			6.4			6.3	
Approach LOS		B			B			A			A	

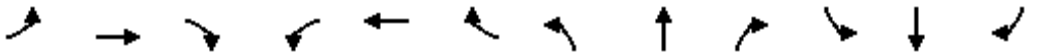
Intersection Summary			
HCM Average Control Delay	7.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	0.99		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	2808		1476	2795		1448	2806		1520	2846	
Flt Permitted	0.42	1.00		0.30	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	667	2808		468	2795		1448	2806		1520	2846	
Volume (vph)	55	600	105	170	450	45	95	585	115	30	445	40
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	58	632	111	179	474	47	100	616	121	32	468	42
RTOR Reduction (vph)	0	15	0	0	8	0	0	16	0	0	6	0
Lane Group Flow (vph)	58	728	0	179	513	0	100	721	0	32	504	0
Heavy Vehicles (%)	0%	6%	5%	3%	8%	0%	5%	6%	4%	0%	6%	0%
Turn Type	Perm			Perm			Prot			Prot		
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)	51.4	51.4		51.4	51.4		8.0	34.2		2.4	28.6	
Effective Green, g (s)	51.4	51.4		51.4	51.4		8.0	34.2		2.4	28.6	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.08	0.34		0.02	0.29	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	343	1443		241	1437		116	960		36	814	
v/s Ratio Prot		0.26			0.18		c0.07	c0.26		0.02	0.18	
v/s Ratio Perm	0.09			c0.38								
v/c Ratio	0.17	0.50		0.74	0.36		0.86	0.75		0.89	0.62	
Uniform Delay, d1	12.9	15.9		19.1	14.5		45.5	29.1		48.7	31.0	
Progression Factor	1.00	1.00		0.66	0.36		1.25	0.26		1.35	0.52	
Incremental Delay, d2	1.1	1.3		13.7	0.5		30.6	3.3		94.8	3.0	
Delay (s)	14.0	17.2		26.2	5.7		87.4	11.0		160.3	19.2	
Level of Service	B	B		C	A		F	B		F	B	
Approach Delay (s)		17.0			11.0			20.1			27.5	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		

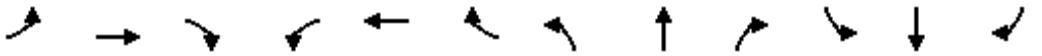
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00	0.97	0.95	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1448	2868	1333	2835	2951	1360	2891	2868	1308	2835	2868	2258
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1448	2868	1333	2835	2951	1360	2891	2868	1308	2835	2868	2258
Volume (vph)	105	405	205	140	195	185	255	245	265	340	330	430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	111	426	216	147	205	195	268	258	279	358	347	453
RTOR Reduction (vph)	0	0	118	0	0	0	0	0	79	0	0	304
Lane Group Flow (vph)	111	426	98	147	205	195	268	258	200	358	347	149
Heavy Vehicles (%)	5%	6%	2%	4%	3%	0%	2%	6%	4%	4%	6%	6%
Turn Type	Prot		pm+ov	Prot		Free	Prot		pm+ov	Prot		Over
Protected Phases	5	2	3	1	6		3	8	1	7	4	5
Permitted Phases			2			Free			8			
Actuated Green, G (s)	26.8	24.6	37.1	13.1	10.9	81.5	12.5	12.5	25.6	15.3	15.3	26.8
Effective Green, g (s)	26.8	24.6	37.1	13.1	10.9	81.5	12.5	12.5	25.6	15.3	15.3	26.8
Actuated g/C Ratio	0.33	0.30	0.46	0.16	0.13	1.00	0.15	0.15	0.31	0.19	0.19	0.33
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	476	866	607	456	395	1360	443	440	475	532	538	743
v/s Ratio Prot	0.08	c0.15	0.02	0.05	0.07		c0.09	0.09	c0.07	c0.13	0.12	0.07
v/s Ratio Perm			0.05			0.14			0.09			
v/c Ratio	0.23	0.49	0.16	0.32	0.52	0.14	0.60	0.59	0.42	0.67	0.64	0.20
Uniform Delay, d1	19.9	23.3	13.1	30.3	32.9	0.0	32.2	32.1	22.1	30.8	30.6	19.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	2.0	0.1	0.4	1.2	0.2	2.3	2.0	0.6	3.3	2.7	0.1
Delay (s)	20.1	25.3	13.2	30.7	34.0	0.2	34.5	34.1	22.7	34.1	33.2	19.8
Level of Service	C	C	B	C	C	A	C	C	C	C	C	B
Approach Delay (s)		21.1			21.1			30.3			28.3	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM Average Control Delay	25.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	81.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		

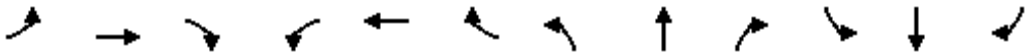
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.95		1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.94		1.00	0.97		1.00	1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00		0.96	1.00
Satd. Flow (prot)	1520	4005		1520	2905		1490	1600	1320		1541	1360
Flt Permitted	0.58	1.00		0.37	1.00		0.73	1.00	1.00		0.84	1.00
Satd. Flow (perm)	933	4005		590	2905		1138	1600	1320		1343	1360
Volume (vph)	30	315	205	115	210	50	310	20	145	35	10	10
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	332	216	121	221	53	326	21	153	37	11	11
RTOR Reduction (vph)	0	93	0	0	17	0	0	0	86	0	0	7
Lane Group Flow (vph)	32	455	0	121	257	0	326	21	67	0	48	4
Heavy Vehicles (%)	0%	3%	2%	0%	2%	0%	2%	0%	3%	0%	0%	0%
Turn Type	pm+pt			pm+pt			Perm		pm+ov	Perm		pm+ov
Protected Phases	5	2		1	6			8	1		4	5
Permitted Phases	2			6			8		8	4		4
Actuated Green, G (s)	30.9	27.2		37.7	30.6		23.6	23.6	30.7		23.6	27.3
Effective Green, g (s)	30.9	27.2		37.7	30.6		23.6	23.6	30.7		23.6	27.3
Actuated g/C Ratio	0.44	0.39		0.54	0.44		0.34	0.34	0.44		0.34	0.39
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	444	1558		413	1272		384	540	655		453	609
v/s Ratio Prot	0.00	0.11		c0.03	0.09			0.01	0.01			0.00
v/s Ratio Perm	0.03			c0.13			c0.29		0.04		0.04	0.00
v/c Ratio	0.07	0.29		0.29	0.20		0.85	0.04	0.10		0.11	0.01
Uniform Delay, d1	11.1	14.7		8.3	12.1		21.5	15.5	11.5		15.9	13.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.1	0.5		0.4	0.1		15.9	0.0	0.1		0.1	0.0
Delay (s)	11.2	15.2		8.7	12.2		37.4	15.6	11.6		16.0	13.0
Level of Service	B	B		A	B		D	B	B		B	B
Approach Delay (s)		15.0			11.1			28.6			15.4	
Approach LOS		B			B			C			B	

Intersection Summary			
HCM Average Control Delay	18.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	69.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.3%	ICU Level of Service	B
Analysis Period (min)	15		

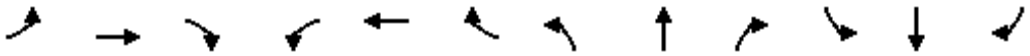
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.91	0.91		0.91	0.91		1.00	0.95	1.00	1.00	0.91	
Frt	1.00	0.95		1.00	0.96		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	0.98		0.95	0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1356	2709		1343	2694		1462	2923	1308	1421	4107	
Flt Permitted	0.95	0.98		0.95	0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	1356	2709		1343	2694		1462	2923	1308	1421	4107	
Volume (vph)	285	125	115	185	50	50	115	1285	230	70	1145	115
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	300	132	121	195	53	53	121	1353	242	74	1205	121
RTOR Reduction (vph)	0	39	0	0	25	0	0	0	54	0	9	0
Lane Group Flow (vph)	175	339	0	98	178	0	121	1353	188	74	1317	0
Heavy Vehicles (%)	2%	0%	0%	3%	0%	0%	4%	4%	4%	7%	5%	4%
Turn Type	Split			Split			Prot		pm+ov	Prot		
Protected Phases	4	4		8	8		5	2	8	1	6	
Permitted Phases									2			
Actuated Green, G (s)	18.8	18.8		13.1	13.1		14.6	68.3	81.4	7.7	61.4	
Effective Green, g (s)	18.8	18.8		13.1	13.1		14.6	68.3	81.4	7.7	61.4	
Actuated g/C Ratio	0.15	0.15		0.11	0.11		0.12	0.55	0.66	0.06	0.50	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	206	411		142	285		172	1611	859	88	2035	
v/s Ratio Prot	c0.13	0.13		c0.07	0.07		c0.08	c0.46	0.02	0.05	0.32	
v/s Ratio Perm									0.12			
v/c Ratio	0.85	0.82		0.69	0.62		0.70	0.84	0.22	0.84	0.65	
Uniform Delay, d1	51.2	51.0		53.4	53.0		52.6	23.2	8.5	57.5	23.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	26.4	12.6		13.5	4.2		12.3	5.4	0.1	48.1	1.6	
Delay (s)	77.6	63.6		66.9	57.3		64.8	28.7	8.6	105.6	24.8	
Level of Service	E	E		E	E		E	C	A	F	C	
Approach Delay (s)		68.0			60.4			28.4			29.1	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM Average Control Delay	36.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	123.9	Sum of lost time (s)	12.0
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		

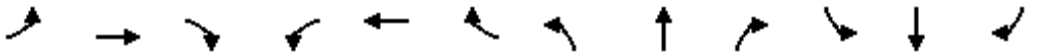
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.96		1.00	0.95		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	2809		1490	2840		1476	2804		1476	2859	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1520	2809		1490	2840		1476	2804		1476	2859	
Volume (vph)	35	665	215	265	640	235	190	380	215	195	285	40
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	37	700	226	279	674	247	200	400	226	205	300	42
RTOR Reduction (vph)	0	30	0	0	34	0	0	81	0	0	11	0
Lane Group Flow (vph)	37	896	0	279	887	0	200	545	0	205	331	0
Heavy Vehicles (%)	0%	4%	5%	2%	3%	2%	3%	4%	0%	3%	5%	0%
Turn Type	Prot			Prot			Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	4.2	32.6		18.0	46.4		14.0	19.4		14.0	19.4	
Effective Green, g (s)	4.2	32.6		18.0	46.4		14.0	19.4		14.0	19.4	
Actuated g/C Ratio	0.04	0.33		0.18	0.46		0.14	0.19		0.14	0.19	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	64	916		268	1318		207	544		207	555	
v/s Ratio Prot	0.02	c0.32		c0.19	0.31		0.14	c0.19		c0.14	0.12	
v/s Ratio Perm												
v/c Ratio	0.58	0.98		1.04	0.67		0.97	1.00		0.99	0.60	
Uniform Delay, d1	47.0	33.3		41.0	20.9		42.8	40.3		42.9	36.7	
Progression Factor	1.00	1.00		0.59	1.10		0.64	0.59		1.39	0.60	
Incremental Delay, d2	12.0	24.1		42.7	0.5		42.9	33.0		47.4	3.0	
Delay (s)	59.1	57.5		66.7	23.3		70.5	56.8		107.0	25.1	
Level of Service	E	E		E	C		E	E		F	C	
Approach Delay (s)		57.5			33.4			60.1			55.8	
Approach LOS		E			C			E			E	

Intersection Summary			
HCM Average Control Delay	49.7	HCM Level of Service	D
HCM Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		

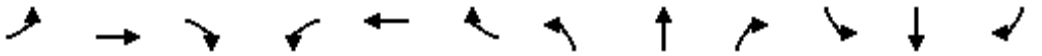
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.96		1.00	0.98		1.00	0.97		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)	1462	4067		1520	4037		1520	2890		1448	2951	1308
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1462	4067		1520	4037		1520	2890		1448	2951	1308
Volume (vph)	120	745	305	30	630	115	70	170	35	95	145	115
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	126	784	321	32	663	121	74	179	37	100	153	121
RTOR Reduction (vph)	0	73	0	0	25	0	0	15	0	0	0	69
Lane Group Flow (vph)	126	1032	0	32	759	0	74	201	0	100	153	52
Heavy Vehicles (%)	4%	3%	2%	0%	6%	4%	0%	3%	0%	5%	3%	4%
Turn Type	Prot			Prot			Prot			Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	13.6	40.8		5.1	32.3		8.8	27.5		10.6	29.3	42.9
Effective Green, g (s)	13.6	40.8		5.1	32.3		8.8	27.5		10.6	29.3	42.9
Actuated g/C Ratio	0.14	0.41		0.05	0.32		0.09	0.28		0.11	0.29	0.43
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	199	1659		78	1304		134	795		153	865	613
v/s Ratio Prot	c0.09	c0.25		0.02	0.19		0.05	c0.07		c0.07	0.05	0.01
v/s Ratio Perm												0.03
v/c Ratio	0.63	0.62		0.41	0.58		0.55	0.25		0.65	0.18	0.08
Uniform Delay, d1	40.8	23.5		46.0	28.2		43.7	28.2		42.9	26.4	16.9
Progression Factor	1.00	1.00		1.45	0.43		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.4	0.7		1.8	0.3		4.9	0.8		9.6	0.4	0.1
Delay (s)	47.3	24.2		68.4	12.3		48.6	29.0		52.6	26.8	17.0
Level of Service	D	C		E	B		D	C		D	C	B
Approach Delay (s)		26.6			14.5			34.0			30.5	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	24.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.0%	ICU Level of Service	B
Analysis Period (min)	15		

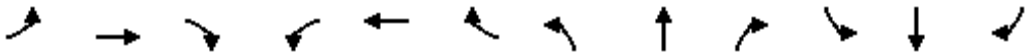
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	1.00	0.97	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	2756	2868	1360	2863	2868	1283	1520	2868	1308	1462	2841	1236
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	2756	2868	1360	2863	2868	1283	1520	2868	1308	1462	2841	1236
Volume (vph)	135	760	75	160	685	80	95	480	115	120	500	145
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	800	79	168	721	84	100	505	121	126	526	153
RTOR Reduction (vph)	0	0	45	0	0	44	0	0	76	0	0	91
Lane Group Flow (vph)	142	800	34	168	721	40	100	505	45	126	526	62
Heavy Vehicles (%)	7%	6%	0%	3%	6%	6%	0%	6%	4%	4%	7%	10%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	7.9	34.1	43.3	8.8	35.0	47.3	9.2	28.8	37.6	12.3	31.9	39.8
Effective Green, g (s)	7.9	34.1	43.3	8.8	35.0	47.3	9.2	28.8	37.6	12.3	31.9	39.8
Actuated g/C Ratio	0.08	0.34	0.43	0.09	0.35	0.47	0.09	0.29	0.38	0.12	0.32	0.40
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	218	978	643	252	1004	658	140	826	544	180	906	541
v/s Ratio Prot	0.05	c0.28	0.00	c0.06	0.25	0.01	0.07	0.18	0.01	c0.09	c0.19	0.01
v/s Ratio Perm			0.02			0.02			0.03			0.04
v/c Ratio	0.65	0.82	0.05	0.67	0.72	0.06	0.71	0.61	0.08	0.70	0.58	0.11
Uniform Delay, d1	44.7	30.1	16.5	44.2	28.2	14.3	44.1	30.8	20.1	42.1	28.5	19.0
Progression Factor	1.00	1.00	1.00	1.09	1.01	0.56	1.54	0.65	0.40	0.79	0.94	2.84
Incremental Delay, d2	6.8	5.4	0.0	3.8	1.4	0.0	13.5	2.8	0.1	7.2	1.7	0.1
Delay (s)	51.5	35.5	16.5	51.9	30.0	8.0	81.5	22.8	8.2	40.7	28.5	54.0
Level of Service	D	D	B	D	C	A	F	C	A	D	C	D
Approach Delay (s)		36.3			31.9			28.4			35.3	
Approach LOS		D			C			C			D	

Intersection Summary			
HCM Average Control Delay	33.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	67.4%	ICU Level of Service	C
Analysis Period (min)	15		

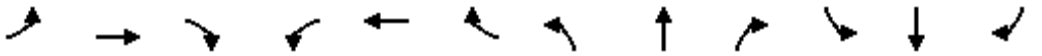
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95	1.00	1.00	0.95	
Frt		0.96			0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected		1.00			0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		2781			2825		1520	2923	1360	1369	2896	
Flt Permitted		1.00			0.99		0.26	1.00	1.00	0.24	1.00	
Satd. Flow (perm)		2781			2825		423	2923	1360	340	2896	
Volume (vph)	35	525	190	75	485	55	70	660	160	45	565	50
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	37	553	200	79	511	58	74	695	168	47	595	53
RTOR Reduction (vph)	0	34	0	0	7	0	0	0	42	0	7	0
Lane Group Flow (vph)	0	756	0	0	641	0	74	695	126	47	641	0
Heavy Vehicles (%)	0%	7%	0%	0%	6%	9%	0%	4%	0%	11%	4%	0%
Turn Type	Split			Split			Perm		pm+ov	Perm		
Protected Phases	4	4		8	8			2	8		6	
Permitted Phases							2		2	6		
Actuated Green, G (s)		29.6			25.1		33.3	33.3	58.4	33.3	33.3	
Effective Green, g (s)		29.6			25.1		33.3	33.3	58.4	33.3	33.3	
Actuated g/C Ratio		0.30			0.25		0.33	0.33	0.58	0.33	0.33	
Clearance Time (s)		4.0			4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		823			709		141	973	849	113	964	
v/s Ratio Prot		c0.27			c0.23			c0.24	0.04		0.22	
v/s Ratio Perm							0.17		0.06	0.14		
v/c Ratio		0.92			0.90		0.52	0.71	0.15	0.42	0.67	
Uniform Delay, d1		34.0			36.3		27.0	29.2	9.5	25.8	28.6	
Progression Factor		0.34			0.55		0.86	0.85	0.98	1.00	1.00	
Incremental Delay, d2		8.1			13.0		10.8	3.6	0.1	10.9	3.6	
Delay (s)		19.5			32.9		34.1	28.5	9.3	36.7	32.2	
Level of Service		B			C		C	C	A	D	C	
Approach Delay (s)		19.5			32.9			25.5			32.5	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	27.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1462	2841	1295	1520	2815	1360	2730	2895	1360	2835	2868	1204
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1462	2841	1295	1520	2815	1360	2730	2895	1360	2835	2868	1204
Volume (vph)	135	895	215	40	540	25	130	550	50	130	1000	190
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	942	226	42	568	26	137	579	53	137	1053	200
RTOR Reduction (vph)	0	0	31	0	0	17	0	0	28	0	0	27
Lane Group Flow (vph)	142	942	195	42	568	9	137	579	25	137	1053	173
Heavy Vehicles (%)	4%	7%	5%	0%	8%	0%	8%	5%	0%	4%	6%	13%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov	Prot		pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.3	34.6	41.0	3.2	25.5	34.1	6.4	37.6	40.8	8.6	39.8	52.1
Effective Green, g (s)	12.3	34.6	41.0	3.2	25.5	34.1	6.4	37.6	40.8	8.6	39.8	52.1
Actuated g/C Ratio	0.12	0.35	0.41	0.03	0.26	0.34	0.06	0.38	0.41	0.09	0.40	0.52
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	180	983	583	49	718	518	175	1089	609	244	1141	675
v/s Ratio Prot	c0.10	c0.33	0.02	0.03	0.20	0.00	c0.05	0.20	0.00	0.05	c0.37	0.03
v/s Ratio Perm			0.13			0.01			0.02			0.11
v/c Ratio	0.79	0.96	0.33	0.86	0.79	0.02	0.78	0.53	0.04	0.56	0.92	0.26
Uniform Delay, d1	42.6	32.0	20.2	48.2	34.8	21.8	46.1	24.3	17.8	43.9	28.6	13.2
Progression Factor	0.85	0.87	0.78	1.57	0.53	0.40	1.00	1.00	1.00	1.16	0.73	0.42
Incremental Delay, d2	19.5	18.7	0.3	48.5	3.1	0.0	20.1	1.9	0.0	2.9	13.2	0.2
Delay (s)	55.7	46.6	16.1	124.2	21.5	8.7	66.2	26.2	17.8	54.0	34.3	5.7
Level of Service	E	D	B	F	C	A	E	C	B	D	C	A
Approach Delay (s)		42.4			27.7			32.7			32.1	
Approach LOS		D			C			C			C	

Intersection Summary			
HCM Average Control Delay	34.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.3%	ICU Level of Service	E
Analysis Period (min)	15		

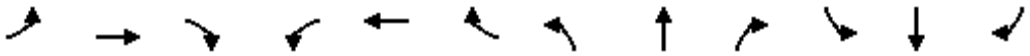
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	809	1124	2111	913	1246	2303
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	809	1124	2111	913	1246	2303
Volume (vph)	85	70	605	350	90	695
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	74	637	368	95	732
RTOR Reduction (vph)	0	55	0	171	0	0
Lane Group Flow (vph)	89	19	637	197	95	732
Heavy Vehicles (%)	88%	21%	44%	49%	22%	32%
Turn Type		pm+ov		Perm	Prot	
Protected Phases	8	1	2		1	6
Permitted Phases		8		2		
Actuated Green, G (s)	8.9	15.8	32.2	32.2	6.9	43.1
Effective Green, g (s)	8.9	15.8	32.2	32.2	6.9	43.1
Actuated g/C Ratio	0.15	0.26	0.54	0.54	0.12	0.72
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	120	371	1133	490	143	1654
v/s Ratio Prot	c0.11	0.01	c0.30		c0.08	0.32
v/s Ratio Perm		0.01		0.22		
v/c Ratio	0.74	0.05	0.56	0.40	0.66	0.44
Uniform Delay, d1	24.4	16.5	9.2	8.2	25.4	3.5
Progression Factor	0.76	0.39	0.42	0.85	1.00	1.00
Incremental Delay, d2	21.4	0.1	0.8	0.9	11.1	0.9
Delay (s)	39.9	6.4	4.6	7.9	36.5	4.4
Level of Service	D	A	A	A	D	A
Approach Delay (s)	24.7		5.8			8.0
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	8.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	41.4%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	0.95		0.97	0.95	1.00	1.00	0.91	1.00	0.97	0.91	
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
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)	2782	2760		2782	2895	1088	1333	3900	1259	2121	3833	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)	2782	2760		2782	2895	1088	1333	3900	1259	2121	3833	
Volume (vph)	615	480	10	155	290	275	35	1410	125	270	490	265
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	647	505	11	163	305	289	37	1484	132	284	516	279
RTOR Reduction (vph)	0	1	0	0	0	4	0	0	48	0	90	0
Lane Group Flow (vph)	647	515	0	163	305	285	37	1484	84	284	705	0
Heavy Vehicles (%)	6%	10%	0%	6%	5%	25%	14%	12%	8%	39%	9%	6%
Turn Type	Prot			Prot		pm+ov	Prot		pm+ov	Prot		
Protected Phases	7	4		3	8	1	5	2	3	1	6	
Permitted Phases						8			2			
Actuated Green, G (s)	20.0	26.4		8.0	14.4	28.0	4.8	36.0	44.0	13.6	44.8	
Effective Green, g (s)	20.0	26.4		8.0	14.4	28.0	4.8	36.0	44.0	13.6	44.8	
Actuated g/C Ratio	0.20	0.26		0.08	0.14	0.28	0.05	0.36	0.44	0.14	0.45	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	556	729		223	417	348	64	1404	604	288	1717	
v/s Ratio Prot	c0.23	0.19		0.06	0.11	c0.11	0.03	c0.38	0.01	c0.13	0.18	
v/s Ratio Perm						0.15			0.06			
v/c Ratio	1.16	0.71		0.73	0.73	0.82	0.58	1.06	0.14	0.99	0.41	
Uniform Delay, d1	40.0	33.3		44.9	40.9	33.6	46.6	32.0	16.7	43.1	18.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	92.1	3.1		11.6	6.5	13.8	12.0	40.6	0.1	48.8	0.7	
Delay (s)	132.1	36.4		56.6	47.4	47.5	58.6	72.6	16.8	91.9	19.4	
Level of Service	F	D		E	D	D	E	E	B	F	B	
Approach Delay (s)		89.6			49.4			67.9			38.5	
Approach LOS		F			D			E			D	

Intersection Summary			
HCM Average Control Delay	63.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.01		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	1.00	0.97	0.91	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	2764	829	2378	4121	993	965
Flt Permitted	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	2764	829	2378	4121	993	965
Volume (vph)	535	50	105	445	95	345
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	563	53	111	468	100	363
RTOR Reduction (vph)	0	35	0	0	0	41
Lane Group Flow (vph)	563	18	111	468	100	322
Heavy Vehicles (%)	10%	64%	24%	6%	53%	41%
Turn Type		Perm	Prot			pm+ov
Protected Phases	4		3	8	2	3
Permitted Phases		4				2
Actuated Green, G (s)	19.9	19.9	12.1	36.0	16.0	28.1
Effective Green, g (s)	19.9	19.9	12.1	36.0	16.0	28.1
Actuated g/C Ratio	0.33	0.33	0.20	0.60	0.27	0.47
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	917	275	480	2473	265	516
v/s Ratio Prot	c0.20		0.05	0.11	0.10	c0.13
v/s Ratio Perm		0.02				0.21
v/c Ratio	0.61	0.06	0.23	0.19	0.38	0.62
Uniform Delay, d1	16.8	13.7	20.1	5.4	17.9	12.0
Progression Factor	1.00	1.00	1.00	1.00	1.23	0.66
Incremental Delay, d2	3.1	0.4	0.2	0.2	3.5	2.0
Delay (s)	19.9	14.1	20.3	5.6	25.5	9.9
Level of Service	B	B	C	A	C	A
Approach Delay (s)	19.4			8.4	13.3	
Approach LOS	B			A	B	

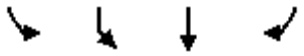
Intersection Summary			
HCM Average Control Delay	13.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0				4.0	4.0		4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95				1.00	0.95		1.00	0.95	1.00	
Frt	1.00	0.95				1.00	0.97		1.00	1.00	0.85	
Flt Protected	0.95	1.00				0.95	1.00		0.95	1.00	1.00	
Satd. Flow (prot)	1476	2776				1436	2851		1462	2764	1304	
Flt Permitted	0.95	1.00				0.95	1.00		0.95	1.00	1.00	
Satd. Flow (perm)	1476	2776				1436	2851		1462	2764	1304	
Volume (vph)	135	370	100	105	15	105	375	95	100	510	110	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	142	389	105	111	16	111	395	100	105	537	116	26
RTOR Reduction (vph)	0	19	0	0	0	0	22	0	0	0	8	0
Lane Group Flow (vph)	142	586	0	0	0	127	473	0	105	537	134	0
Heavy Vehicles (%)	3%	4%	3%	3%	5%	6%	4%	1%	4%	10%	5%	1%
Turn Type	Prot				Prot	Prot			Prot		Perm	
Protected Phases	7	4			3	3	8		5	2		
Permitted Phases											2	
Actuated Green, G (s)	13.3	26.1				12.4	25.2		8.8	30.9	30.9	
Effective Green, g (s)	13.3	26.1				12.4	25.2		8.8	30.9	30.9	
Actuated g/C Ratio	0.13	0.26				0.12	0.25		0.09	0.31	0.31	
Clearance Time (s)	4.0	4.0				4.0	4.0		4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0				3.0	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	196	725				178	718		129	854	403	
v/s Ratio Prot	c0.10	c0.21				0.09	0.17		0.07	c0.19		
v/s Ratio Perm											0.10	
v/c Ratio	0.72	0.81				0.71	0.66		0.81	0.63	0.33	
Uniform Delay, d1	41.6	34.6				42.1	33.5		44.8	29.6	26.6	
Progression Factor	1.31	1.13				1.00	1.00		1.45	0.66	0.58	
Incremental Delay, d2	8.5	4.5				12.7	2.2		27.1	3.0	1.9	
Delay (s)	62.9	43.5				54.8	35.7		92.0	22.4	17.4	
Level of Service	E	D				D	D		F	C	B	
Approach Delay (s)		47.2					39.6			30.8		
Approach LOS		D					D			C		

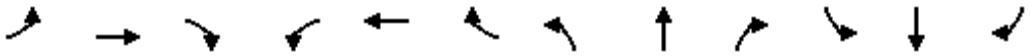
Intersection Summary			
HCM Average Control Delay	39.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	68.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	SBL2	SBL	SBT	SBR
Lane Configurations				
Ideal Flow (vphpl)	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0	4.0
Lane Util. Factor		1.00	0.95	1.00
Frt		1.00	1.00	0.85
Flt Protected		0.95	1.00	1.00
Satd. Flow (prot)		1490	2739	1320
Flt Permitted		0.95	1.00	1.00
Satd. Flow (perm)		1490	2739	1320
Volume (vph)	75	80	555	95
Peak-hour factor, PHF	0.95	0.95	0.95	0.95
Adj. Flow (vph)	79	84	584	100
RTOR Reduction (vph)	0	0	0	50
Lane Group Flow (vph)	0	163	584	50
Heavy Vehicles (%)	1%	3%	11%	3%
Turn Type	Prot	Prot		pm+ov
Protected Phases	1	1	6	7
Permitted Phases				6
Actuated Green, G (s)		14.6	36.7	50.0
Effective Green, g (s)		14.6	36.7	50.0
Actuated g/C Ratio		0.15	0.37	0.50
Clearance Time (s)		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0
Lane Grp Cap (vph)		218	1005	713
v/s Ratio Prot		c0.11	0.21	0.01
v/s Ratio Perm				0.03
v/c Ratio		0.75	0.58	0.07
Uniform Delay, d1		40.9	25.5	13.0
Progression Factor		0.84	1.40	3.28
Incremental Delay, d2		12.2	2.3	0.0
Delay (s)		46.7	38.0	42.5
Level of Service		D	D	D
Approach Delay (s)			40.2	
Approach LOS			D	

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0		4.0	4.0	4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00		1.00	0.97	1.00		1.00	0.95			0.95	
Frt	1.00		0.85	1.00	0.93		1.00	1.00			1.00	
Flt Protected	0.95		1.00	0.95	1.00		0.95	1.00			1.00	
Satd. Flow (prot)	1520		1204	2730	1389		1520	2764			2785	
Flt Permitted	0.52		1.00	0.95	1.00		0.17	1.00			1.00	
Satd. Flow (perm)	832		1204	2730	1389		273	2764			2785	
Volume (vph)	15	0	40	645	110	85	45	920	0	0	1020	20
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	16	0	42	679	116	89	47	968	0	0	1074	21
RTOR Reduction (vph)	0	0	30	0	30	0	0	0	0	0	1	0
Lane Group Flow (vph)	16	0	12	679	175	0	47	968	0	0	1094	0
Heavy Vehicles (%)	0%	0%	13%	8%	9%	6%	0%	10%	0%	0%	9%	0%
Turn Type	custom		custom	Perm			pm+pt					
Protected Phases					8		5	2			6	
Permitted Phases	4		4	8			2					
Actuated Green, G (s)	29.3		29.3	29.3	29.3		62.7	62.7			55.9	
Effective Green, g (s)	29.3		29.3	29.3	29.3		62.7	62.7			55.9	
Actuated g/C Ratio	0.29		0.29	0.29	0.29		0.63	0.63			0.56	
Clearance Time (s)	4.0		4.0	4.0	4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	244		353	800	407		206	1733			1557	
v/s Ratio Prot					0.13		0.01	c0.35			c0.39	
v/s Ratio Perm	0.02		0.01	c0.25			0.14					
v/c Ratio	0.07		0.03	0.85	0.43		0.23	0.56			0.70	
Uniform Delay, d1	25.5		25.3	33.3	28.6		9.6	10.7			16.0	
Progression Factor	1.00		1.00	1.00	1.00		0.19	0.14			1.00	
Incremental Delay, d2	0.1		0.0	8.4	0.7		0.3	0.7			2.7	
Delay (s)	25.6		25.3	41.6	29.3		2.2	2.2			18.7	
Level of Service	C		C	D	C		A	A			B	
Approach Delay (s)		25.4			38.8			2.2			18.7	
Approach LOS		C			D			A			B	

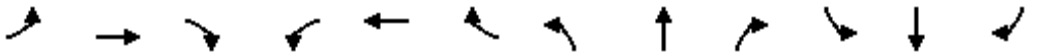
Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0					4.0	4.0		4.0	4.0	
Lane Util. Factor		1.00					1.00	0.95		1.00	0.95	
Frt		0.98					1.00	0.99		1.00	0.98	
Flt Protected		0.99					0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1471					1520	2760		1382	2733	
Flt Permitted		0.99					0.18	1.00		0.14	1.00	
Satd. Flow (perm)		1471					286	2760		198	2733	
Volume (vph)	60	165	30	0	0	0	40	960	95	310	1145	190
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	174	32	0	0	0	42	1011	100	326	1205	200
RTOR Reduction (vph)	0	5	0	0	0	0	0	7	0	0	12	0
Lane Group Flow (vph)	0	264	0	0	0	0	42	1104	0	326	1393	0
Heavy Vehicles (%)	8%	6%	0%	0%	0%	0%	0%	9%	5%	10%	9%	8%
Turn Type	Perm						pm+pt			pm+pt		
Protected Phases		4					5	2		1	6	
Permitted Phases	4						2			6		
Actuated Green, G (s)		20.1					51.0	48.6		71.9	65.5	
Effective Green, g (s)		20.1					51.0	48.6		71.9	65.5	
Actuated g/C Ratio		0.20					0.51	0.49		0.72	0.66	
Clearance Time (s)		4.0					4.0	4.0		4.0	4.0	
Vehicle Extension (s)		3.0					3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		296					175	1341		371	1790	
v/s Ratio Prot							0.01	0.40		c0.17	0.51	
v/s Ratio Perm		0.18					0.12			c0.46		
v/c Ratio		0.89					0.24	0.82		0.88	0.78	
Uniform Delay, d1		38.9					12.4	22.0		22.8	12.1	
Progression Factor		1.00					0.64	0.70		0.96	0.89	
Incremental Delay, d2		26.8					0.7	5.6		14.6	2.3	
Delay (s)		65.7					8.6	21.1		36.6	13.1	
Level of Service		E					A	C		D	B	
Approach Delay (s)		65.7			0.0			20.6			17.5	
Approach LOS		E			A			C			B	

Intersection Summary			
HCM Average Control Delay	22.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	81.9%	ICU Level of Service	D
Analysis Period (min)	15		

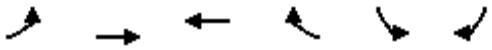
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	1.00
Frt	1.00	0.99		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)	1520	3907		1267	3975		1421	2862		1476	2895	1360
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1520	3907		1267	3975		1421	2862		1476	2895	1360
Volume (vph)	180	800	80	100	920	180	75	635	15	190	475	110
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	189	842	84	105	968	189	79	668	16	200	500	116
RTOR Reduction (vph)	0	12	0	0	29	0	0	1	0	0	0	62
Lane Group Flow (vph)	189	914	0	105	1128	0	79	683	0	200	500	54
Heavy Vehicles (%)	0%	10%	13%	20%	8%	3%	7%	6%	0%	3%	5%	0%
Turn Type	Prot			Prot			Prot			Prot		pm+ov
Protected Phases	7	4		3	8		5	2		1	6	7
Permitted Phases												6
Actuated Green, G (s)	13.0	30.9		11.1	29.0		8.8	27.1		14.9	33.2	46.2
Effective Green, g (s)	13.0	30.9		11.1	29.0		8.8	27.1		14.9	33.2	46.2
Actuated g/C Ratio	0.13	0.31		0.11	0.29		0.09	0.27		0.15	0.33	0.46
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	198	1207		141	1153		125	776		220	961	683
v/s Ratio Prot	c0.12	0.23		0.08	c0.28		0.06	c0.24		c0.14	0.17	0.01
v/s Ratio Perm												0.03
v/c Ratio	0.95	0.76		0.74	0.98		0.63	0.88		0.91	0.52	0.08
Uniform Delay, d1	43.2	31.2		43.1	35.2		44.0	34.9		41.9	27.0	15.0
Progression Factor	0.52	0.74		1.00	1.00		1.48	0.64		1.00	1.00	1.00
Incremental Delay, d2	34.7	1.5		19.0	21.1		8.7	12.0		36.4	2.0	0.0
Delay (s)	57.3	24.6		62.1	56.3		74.1	34.2		78.3	29.0	15.1
Level of Service	E	C		E	E		E	C		E	C	B
Approach Delay (s)		30.1			56.8			38.4			39.1	
Approach LOS		C			E			D			D	

Intersection Summary			
HCM Average Control Delay	42.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	85.0%	ICU Level of Service	E
Analysis Period (min)	15		

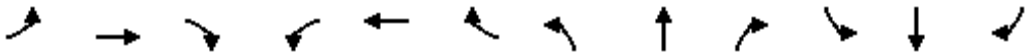
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.91	0.91	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1476	3865	3766	1347	2920	1333
Flt Permitted	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1476	3865	3766	1347	2920	1333
Volume (vph)	295	1270	1310	305	430	215
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	311	1337	1379	321	453	226
RTOR Reduction (vph)	0	0	0	189	0	181
Lane Group Flow (vph)	311	1337	1379	132	453	45
Heavy Vehicles (%)	3%	13%	16%	1%	1%	2%
Turn Type	Prot			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases				8		6
Actuated Green, G (s)	19.0	56.0	33.0	33.0	16.0	16.0
Effective Green, g (s)	19.0	56.0	33.0	33.0	16.0	16.0
Actuated g/C Ratio	0.24	0.70	0.41	0.41	0.20	0.20
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	351	2706	1553	556	584	267
v/s Ratio Prot	c0.21	0.35	c0.37		c0.16	
v/s Ratio Perm				0.10		0.03
v/c Ratio	0.89	0.49	0.89	0.24	0.78	0.17
Uniform Delay, d1	29.5	5.5	21.8	15.3	30.3	26.5
Progression Factor	1.00	1.00	0.56	0.11	1.00	1.00
Incremental Delay, d2	22.4	0.6	7.6	1.0	9.7	1.4
Delay (s)	51.9	6.2	19.8	2.6	40.0	27.9
Level of Service	D	A	B	A	D	C
Approach Delay (s)		14.8	16.5		36.0	
Approach LOS		B	B		D	

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0	4.0	4.0		4.0	4.0				
Lane Util. Factor		0.91	1.00	1.00	0.91		0.97	1.00				
Frt		1.00	0.85	1.00	1.00		1.00	0.85				
Flt Protected		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (prot)		3935	680	760	3935		1474	680				
Flt Permitted		1.00	1.00	0.95	1.00		0.95	1.00				
Satd. Flow (perm)		3935	680	760	3935		1474	680				
Volume (vph)	0	1935	590	30	2635	0	490	0	20	0	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	2037	621	32	2774	0	516	0	21	0	0	0
RTOR Reduction (vph)	0	0	82	0	0	0	0	14	0	0	0	0
Lane Group Flow (vph)	0	2037	539	32	2774	0	516	7	0	0	0	0
Heavy Vehicles (%)	0%	11%	100%	100%	11%	0%	100%	0%	100%	0%	0%	0%
Turn Type	Prot		custom	Prot		Perm	Prot			pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4 2			8				6		
Actuated Green, G (s)		57.0	100.0	12.0	73.0		39.0	39.0				
Effective Green, g (s)		57.0	100.0	12.0	73.0		39.0	39.0				
Actuated g/C Ratio		0.48	0.83	0.10	0.61		0.32	0.32				
Clearance Time (s)		4.0		4.0	4.0		4.0	4.0				
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0				
Lane Grp Cap (vph)		1869	567	76	2394		479	221				
v/s Ratio Prot		0.52		0.04	c0.70		c0.35	0.01				
v/s Ratio Perm			0.79									
v/c Ratio		1.09	0.95	0.42	1.16		1.08	0.03				
Uniform Delay, d1		31.5	8.0	50.7	23.5		40.5	27.6				
Progression Factor		1.00	1.00	1.23	0.31		1.00	1.00				
Incremental Delay, d2		49.9	25.8	2.3	74.7		63.5	0.1				
Delay (s)		81.4	33.8	64.5	82.1		104.0	27.7				
Level of Service		F	C	E	F		F	C				
Approach Delay (s)		70.3			81.9			101.0			0.0	
Approach LOS		E			F			F			A	

Intersection Summary			
HCM Average Control Delay	78.5	HCM Level of Service	E
HCM Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2681	4007	1966	4368	2808	2378
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2681	4007	1966	4368	2808	2378
Volume (vph)	1000	545	140	1395	430	540
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1053	574	147	1468	453	568
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1053	574	147	1468	453	568
Heavy Vehicles (%)	10%	9%	50%	0%	5%	24%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	43.0	68.6	13.4	39.0	26.0	26.0
Effective Green, g (s)	43.0	68.6	13.4	39.0	26.0	26.0
Actuated g/C Ratio	0.36	0.57	0.11	0.32	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	961	2291	220	1420	608	515
v/s Ratio Prot	c0.39	0.14	0.07	c0.34	0.16	c0.24
v/s Ratio Perm						
v/c Ratio	1.10	0.25	0.67	1.03	0.75	1.10
Uniform Delay, d1	38.5	12.8	51.2	40.5	43.9	47.0
Progression Factor	0.25	0.01	1.00	1.00	1.00	1.00
Incremental Delay, d2	44.9	0.0	7.5	33.1	4.9	70.8
Delay (s)	54.6	0.1	58.6	73.6	48.8	117.8
Level of Service	D	A	E	E	D	F
Approach Delay (s)		35.4		72.2		
Approach LOS		D		E		

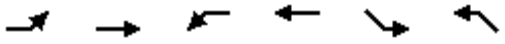
Intersection Summary			
HCM Average Control Delay	61.8	HCM Level of Service	E
HCM Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	94.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	1979	4368	1474	4325	2397	2587
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	1979	4368	1474	4325	2397	2587
Volume (vph)	1010	1065	20	695	520	210
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	1063	1121	21	732	547	221
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1063	1121	21	732	547	221
Heavy Vehicles (%)	49%	0%	100%	1%	23%	14%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	50.0	64.6	2.4	17.0	21.0	21.0
Effective Green, g (s)	50.0	64.6	2.4	17.0	21.0	21.0
Actuated g/C Ratio	0.50	0.65	0.02	0.17	0.21	0.21
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	990	2822	35	735	503	543
v/s Ratio Prot	c0.54	0.26	0.01	c0.17	c0.23	0.09
v/s Ratio Perm						
v/c Ratio	1.07	0.40	0.60	1.00	1.09	0.41
Uniform Delay, d1	25.0	8.4	48.3	41.5	39.5	34.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	50.6	0.4	24.7	32.2	65.9	0.5
Delay (s)	75.6	8.8	73.0	73.7	105.4	34.6
Level of Service	E	A	E	E	F	C
Approach Delay (s)		41.3		73.7		
Approach LOS		D		E		

Intersection Summary			
HCM Average Control Delay	57.0	HCM Level of Service	E
HCM Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.8%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	3010	2610	4007	2949	2756
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	3010	2610	4007	2949	2756
Volume (vph)	440	430	240	230	700	150
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	463	453	253	242	737	158
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	463	453	253	242	737	158
Heavy Vehicles (%)	2%	1%	13%	9%	0%	7%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	33.0	50.8	15.4	33.2	31.8	31.8
Effective Green, g (s)	33.0	50.8	15.4	33.2	31.8	31.8
Actuated g/C Ratio	0.30	0.46	0.14	0.30	0.29	0.29
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	867	1390	365	1209	853	797
v/s Ratio Prot	c0.16	c0.15	c0.10	0.06	c0.25	0.06
v/s Ratio Perm						
v/c Ratio	0.53	0.33	0.69	0.20	0.86	0.20
Uniform Delay, d1	32.1	18.8	45.0	28.5	37.1	29.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.6	0.6	5.6	0.4	9.1	0.1
Delay (s)	32.7	19.4	50.7	28.9	46.1	29.6
Level of Service	C	B	D	C	D	C
Approach Delay (s)		26.1		40.0		
Approach LOS		C		D		

Intersection Summary			
HCM Average Control Delay	35.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2610	4241	2782	4007	2808	2437
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2610	4241	2782	4007	2808	2437
Volume (vph)	640	430	340	370	630	530
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	674	453	358	389	663	558
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	674	453	358	389	663	558
Heavy Vehicles (%)	13%	3%	6%	9%	5%	21%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	27.0	31.4	14.6	19.0	22.0	22.0
Effective Green, g (s)	27.0	31.4	14.6	19.0	22.0	22.0
Actuated g/C Ratio	0.34	0.39	0.18	0.24	0.28	0.28
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	881	1665	508	952	772	670
v/s Ratio Prot	c0.26	0.11	c0.13	c0.10	c0.24	0.23
v/s Ratio Perm						
v/c Ratio	0.77	0.27	0.70	0.41	0.86	0.83
Uniform Delay, d1	23.7	16.5	30.7	25.8	27.5	27.3
Progression Factor	0.96	0.90	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.3	0.3	4.4	1.3	9.4	8.7
Delay (s)	26.0	15.2	35.1	27.1	36.9	36.0
Level of Service	C	B	D	C	D	D
Approach Delay (s)		21.6		30.9		
Approach LOS		C		C		

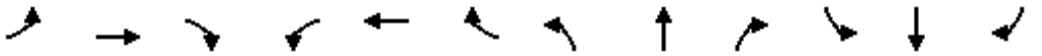
Intersection Summary			
HCM Average Control Delay	29.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2782	4282	2705	4082	2756	2657
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2782	4282	2705	4082	2756	2657
Volume (vph)	310	505	350	375	760	180
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	326	532	368	395	800	189
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	326	532	368	395	800	189
Heavy Vehicles (%)	6%	2%	9%	7%	7%	11%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	12.1	11.9	10.4	10.2	18.7	18.7
Effective Green, g (s)	12.1	11.9	10.4	10.2	18.7	18.7
Actuated g/C Ratio	0.23	0.22	0.20	0.19	0.35	0.35
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	635	961	531	786	972	937
v/s Ratio Prot	0.12	c0.12	c0.14	0.10	c0.29	0.07
v/s Ratio Perm						
v/c Ratio	0.51	0.55	0.69	0.50	0.82	0.20
Uniform Delay, d1	17.9	18.2	19.8	19.1	15.6	11.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7	0.7	3.9	0.5	5.7	0.1
Delay (s)	18.6	18.9	23.7	19.6	21.4	12.1
Level of Service	B	B	C	B	C	B
Approach Delay (s)		18.8		21.6		
Approach LOS		B		C		

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	53.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	59.2%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Lane Util. Factor	1.00	0.91			0.91	1.00			0.88	0.97		1.00
Frt	1.00	0.99			1.00	0.85			0.85	1.00		0.85
Flt Protected	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (prot)	1520	4194			4282	1320			2370	2891		1153
Flt Permitted	0.95	1.00			1.00	1.00			1.00	0.95		1.00
Satd. Flow (perm)	1520	4194			4282	1320			2370	2891		1153
Volume (vph)	200	1505	100	0	1435	455	0	0	100	480	0	15
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	211	1584	105	0	1511	479	0	0	105	505	0	16
RTOR Reduction (vph)	0	8	0	0	0	316	0	0	29	0	0	12
Lane Group Flow (vph)	211	1681	0	0	1511	163	0	0	76	505	0	4
Heavy Vehicles (%)	0%	3%	6%	0%	2%	3%	0%	0%	1%	2%	0%	18%
Turn Type	Prot					Perm			custom	Prot		custom
Protected Phases	7	4			8					6		
Permitted Phases						8			2			6
Actuated Green, G (s)	14.1	48.8			30.7	30.7			7.1	22.1		22.1
Effective Green, g (s)	14.1	48.8			30.7	30.7			7.1	22.1		22.1
Actuated g/C Ratio	0.16	0.54			0.34	0.34			0.08	0.25		0.25
Clearance Time (s)	4.0	4.0			4.0	4.0			4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0			3.0	3.0		3.0
Lane Grp Cap (vph)	238	2274			1461	450			187	710		283
v/s Ratio Prot	c0.14	0.40			c0.35					c0.17		
v/s Ratio Perm						0.12			c0.03			0.00
v/c Ratio	0.89	0.74			1.03	0.36			0.41	0.71		0.01
Uniform Delay, d1	37.2	15.7			29.6	22.3			39.5	31.0		25.7
Progression Factor	1.00	1.00			0.72	0.96			1.00	0.96		0.92
Incremental Delay, d2	30.1	2.2			31.8	2.1			1.5	3.3		0.0
Delay (s)	67.2	17.9			53.2	23.4			40.9	33.0		23.7
Level of Service	E	B			D	C			D	C		C
Approach Delay (s)		23.4			46.0			40.9			32.7	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2808	4241	2705	4368	2863	2782
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2808	4241	2705	4368	2863	2782
Volume (vph)	420	530	570	390	300	900
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	442	558	600	411	316	947
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	442	558	600	411	316	947
Heavy Vehicles (%)	5%	3%	9%	0%	3%	6%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	18.2	19.2	25.0	26.0	33.8	33.8
Effective Green, g (s)	18.2	19.2	25.0	26.0	33.8	33.8
Actuated g/C Ratio	0.20	0.21	0.28	0.29	0.38	0.38
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	568	905	751	1262	1075	1045
v/s Ratio Prot	c0.16	0.13	c0.22	0.09	0.11	c0.34
v/s Ratio Perm						
v/c Ratio	0.78	0.62	0.80	0.33	0.29	0.91
Uniform Delay, d1	34.0	32.1	30.2	25.1	19.7	26.6
Progression Factor	1.13	1.11	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.2	2.0	6.0	0.7	0.2	11.1
Delay (s)	42.5	37.7	36.1	25.8	19.9	37.7
Level of Service	D	D	D	C	B	D
Approach Delay (s)		39.8		31.9		
Approach LOS		D		C		

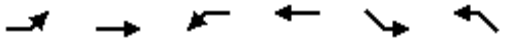
Intersection Summary			
HCM Average Control Delay	34.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.95	0.97	0.95	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2835	3040	2730	3040	2705	2808
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2835	3040	2730	3040	2705	2808
Volume (vph)	270	1105	750	370	320	610
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	284	1163	789	389	337	642
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	284	1163	789	389	337	642
Heavy Vehicles (%)	4%	0%	8%	0%	9%	5%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	13.2	33.0	25.0	44.8	20.0	20.0
Effective Green, g (s)	13.2	33.0	25.0	44.8	20.0	20.0
Actuated g/C Ratio	0.15	0.37	0.28	0.50	0.22	0.22
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	416	1115	758	1513	601	624
v/s Ratio Prot	0.10	c0.38	c0.29	0.13	0.12	c0.23
v/s Ratio Perm						
v/c Ratio	0.68	1.04	1.04	0.26	0.56	1.03
Uniform Delay, d1	36.4	28.5	32.5	13.0	31.1	35.0
Progression Factor	1.00	1.00	0.69	0.32	1.00	1.00
Incremental Delay, d2	4.6	38.9	37.3	0.3	1.2	43.6
Delay (s)	41.0	67.4	59.8	4.5	32.3	78.6
Level of Service	D	E	E	A	C	E
Approach Delay (s)		62.2		41.5		
Approach LOS		E		D		

Intersection Summary			
HCM Average Control Delay	55.6	HCM Level of Service	E
HCM Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2891	4082	2633	4325	2705	2835
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2891	4082	2633	4325	2705	2835
Volume (vph)	420	760	500	705	320	560
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	442	800	526	742	337	589
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	442	800	526	742	337	589
Heavy Vehicles (%)	2%	7%	12%	1%	9%	4%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	22.9	41.6	37.0	55.7	29.4	29.4
Effective Green, g (s)	22.9	41.6	37.0	55.7	29.4	29.4
Actuated g/C Ratio	0.19	0.35	0.31	0.46	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	552	1415	812	2008	663	695
v/s Ratio Prot	c0.15	c0.20	c0.20	0.17	0.12	c0.21
v/s Ratio Perm						
v/c Ratio	0.80	0.57	0.65	0.37	0.51	0.85
Uniform Delay, d1	46.4	31.9	35.9	20.8	39.1	43.2
Progression Factor	1.00	1.00	0.40	0.35	1.00	1.00
Incremental Delay, d2	8.2	1.6	0.9	0.3	0.6	9.4
Delay (s)	54.5	33.5	15.5	7.6	39.7	52.6
Level of Service	D	C	B	A	D	D
Approach Delay (s)		41.0		10.8		
Approach LOS		D		B		

Intersection Summary			
HCM Average Control Delay	31.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.3%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	WBL	WBT	SEL	NWL
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	0.97	0.91	0.97	0.97
Frt	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (prot)	2863	4007	2542	4282	2782	2835
Flt Permitted	0.95	1.00	0.95	1.00	0.95	0.95
Satd. Flow (perm)	2863	4007	2542	4282	2782	2835
Volume (vph)	440	755	520	690	370	540
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	463	795	547	726	389	568
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	463	795	547	726	389	568
Heavy Vehicles (%)	3%	9%	16%	2%	6%	4%
Turn Type	Prot		Prot		Prot	Prot
Protected Phases	7	4	3	8	1	5
Permitted Phases						
Actuated Green, G (s)	24.0	42.6	37.0	55.6	28.4	28.4
Effective Green, g (s)	24.0	42.6	37.0	55.6	28.4	28.4
Actuated g/C Ratio	0.20	0.36	0.31	0.46	0.24	0.24
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	573	1422	784	1984	658	671
v/s Ratio Prot	c0.16	c0.20	c0.22	0.17	0.14	c0.20
v/s Ratio Perm						
v/c Ratio	0.81	0.56	0.70	0.37	0.59	0.85
Uniform Delay, d1	45.8	31.1	36.6	20.8	40.6	43.7
Progression Factor	1.00	1.00	0.40	0.34	1.00	1.00
Incremental Delay, d2	8.2	1.6	1.3	0.3	1.4	9.7
Delay (s)	54.0	32.7	15.8	7.4	42.1	53.4
Level of Service	D	C	B	A	D	D
Approach Delay (s)		40.6		11.0		
Approach LOS		D		B		

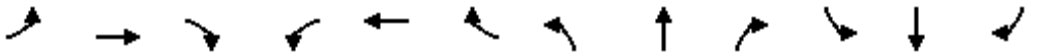
Intersection Summary			
HCM Average Control Delay	32.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	0.97	0.95		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	3223	1482	3400	3471	1615	3183	3175		1805	1726	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1805	3223	1482	3400	3471	1615	3183	3175		1805	1726	
Volume (vph)	10	845	435	460	825	15	125	530	135	5	575	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	889	458	484	868	16	132	558	142	5	605	5
RTOR Reduction (vph)	0	0	0	0	0	8	0	18	0	0	0	0
Lane Group Flow (vph)	11	889	458	484	868	8	132	682	0	5	610	0
Heavy Vehicles (%)	0%	12%	9%	3%	4%	0%	10%	8%	19%	0%	10%	0%
Turn Type	Prot		Free	Prot		pm+ov	Prot			Prot		
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases			Free			8						
Actuated Green, G (s)	1.6	35.4	120.0	18.4	52.2	58.1	10.2	44.3		5.9	40.0	
Effective Green, g (s)	1.6	35.4	120.0	18.4	52.2	58.1	10.2	44.3		5.9	40.0	
Actuated g/C Ratio	0.01	0.29	1.00	0.15	0.44	0.48	0.08	0.37		0.05	0.33	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	24	951	1482	521	1510	782	271	1172		89	575	
v/s Ratio Prot	0.01	c0.28		c0.14	0.25	0.00	0.04	c0.21		0.00	c0.35	
v/s Ratio Perm			0.31			0.00						
v/c Ratio	0.46	0.93	0.31	0.93	0.57	0.01	0.49	0.58		0.06	1.06	
Uniform Delay, d1	58.8	41.2	0.0	50.2	25.5	16.0	52.4	30.4		54.4	40.0	
Progression Factor	0.95	0.80	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.3	14.1	0.4	22.9	1.6	0.0	1.4	0.7		0.3	54.7	
Delay (s)	66.2	47.0	0.4	73.1	27.1	16.0	53.8	31.2		54.7	94.7	
Level of Service	E	D	A	E	C	B	D	C		D	F	
Approach Delay (s)		31.5			43.3			34.7			94.4	
Approach LOS		C			D			C			F	

Intersection Summary			
HCM Average Control Delay	45.3	HCM Level of Service	D
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.95	0.88	0.97	0.95	1.00	0.97	1.00		1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1656	3312	2656	3273	3343	1495	3273	1669		1671	1776	1495
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1656	3312	2656	3273	3343	1495	3273	1669		1671	1776	1495
Volume (vph)	30	825	1020	200	760	30	205	60	40	35	250	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	32	868	1074	211	800	32	216	63	42	37	263	26
RTOR Reduction (vph)	0	0	156	0	0	9	0	29	0	0	0	21
Lane Group Flow (vph)	32	868	918	211	800	23	216	76	0	37	263	5
Heavy Vehicles (%)	9%	9%	7%	7%	8%	8%	7%	7%	7%	8%	7%	8%
Turn Type	Prot		pm+ov	Prot		pm+ov	Prot			Prot		Perm
Protected Phases	7	4	5	3	8	1	5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	3.6	35.8	54.3	11.2	43.4	70.8	18.5	9.6		27.4	18.5	18.5
Effective Green, g (s)	3.6	35.8	54.3	11.2	43.4	70.8	18.5	9.6		27.4	18.5	18.5
Actuated g/C Ratio	0.04	0.36	0.54	0.11	0.43	0.71	0.18	0.10		0.27	0.18	0.18
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	60	1186	1548	367	1451	1118	606	160		458	329	277
v/s Ratio Prot	0.02	c0.26	c0.11	c0.06	c0.24	0.01	0.07	0.05		0.02	c0.15	
v/s Ratio Perm			0.24			0.01						0.00
v/c Ratio	0.53	0.73	0.59	0.57	0.55	0.02	0.36	0.48		0.08	0.80	0.02
Uniform Delay, d1	47.4	27.9	15.4	42.1	21.1	4.3	35.6	42.8		27.0	39.0	33.3
Progression Factor	1.00	0.81	0.71	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.1	2.3	0.4	2.2	1.5	0.0	0.4	2.2		0.1	12.7	0.0
Delay (s)	52.3	24.8	11.3	44.3	22.6	4.3	35.9	45.0		27.0	51.7	33.3
Level of Service	D	C	B	D	C	A	D	D		C	D	C
Approach Delay (s)		17.9			26.4			38.9			47.4	
Approach LOS		B			C			D			D	

Intersection Summary			
HCM Average Control Delay	24.8	HCM Level of Service	C
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0		4.0	4.0
Lane Util. Factor		0.88	0.91		0.97	0.95
Frt		0.85	1.00		1.00	1.00
Flt Protected		1.00	1.00		0.95	1.00
Satd. Flow (prot)		2347	4274		2756	2980
Flt Permitted		1.00	1.00		0.95	1.00
Satd. Flow (perm)		2347	4274		2756	2980
Volume (vph)	0	370	765	10	1080	875
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	389	805	11	1137	921
RTOR Reduction (vph)	0	26	2	0	0	0
Lane Group Flow (vph)	0	364	814	0	1137	921
Heavy Vehicles (%)	2%	2%	2%	2%	7%	2%
Turn Type		Over			Prot	
Protected Phases		1	2		1	6
Permitted Phases						
Actuated Green, G (s)		30.0	22.0		30.0	60.0
Effective Green, g (s)		30.0	22.0		30.0	60.0
Actuated g/C Ratio		0.50	0.37		0.50	1.00
Clearance Time (s)		4.0	4.0		4.0	4.0
Vehicle Extension (s)		3.0	3.0		3.0	3.0
Lane Grp Cap (vph)		1174	1567		1378	2980
v/s Ratio Prot		0.15	c0.19		c0.41	0.31
v/s Ratio Perm						
v/c Ratio		0.31	0.52		0.83	0.31
Uniform Delay, d1		8.9	14.9		12.8	0.0
Progression Factor		1.00	1.00		1.00	1.00
Incremental Delay, d2		0.2	1.2		4.2	0.3
Delay (s)		9.0	16.1		16.9	0.3
Level of Service		A	B		B	A
Approach Delay (s)	9.0		16.1			9.5
Approach LOS	A		B			A

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)				4.0	4.0	
Lane Util. Factor				0.95	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				2868	2891	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				2868	2891	
Volume (vph)	0	0	0	745	1115	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	0	0	784	1174	0
RTOR Reduction (vph)	0	0	0	0	67	0
Lane Group Flow (vph)	0	0	0	784	1107	0
Heavy Vehicles (%)	2%	2%	6%	6%	2%	2%
Turn Type						
Protected Phases				8	2	
Permitted Phases						
Actuated Green, G (s)				19.7	29.1	
Effective Green, g (s)				19.7	29.1	
Actuated g/C Ratio				0.35	0.51	
Clearance Time (s)				4.0	4.0	
Vehicle Extension (s)				3.0	3.0	
Lane Grp Cap (vph)				995	1481	
v/s Ratio Prot				c0.27	c0.38	
v/s Ratio Perm						
v/c Ratio				0.79	0.75	
Uniform Delay, d1				16.7	10.9	
Progression Factor				1.00	1.00	
Incremental Delay, d2				4.2	3.5	
Delay (s)				20.9	14.4	
Level of Service				C	B	
Approach Delay (s)	0.0			20.9	14.4	
Approach LOS	A			C	B	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	56.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	800	290	0	0	0	180
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	842	305	0	0	0	189
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	1309			432		
pX, platoon unblocked						
vC, conflicting volume			1147		842	421
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1147		842	421
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	67
cM capacity (veh/h)			605		303	581

Direction, Lane #	EB 1	EB 2	EB 3	NB 1
Volume Total	421	421	305	189
Volume Left	0	0	0	0
Volume Right	0	0	305	189
cSH	1700	1700	1700	581
Volume to Capacity	0.25	0.25	0.18	0.33
Queue Length 95th (ft)	0	0	0	35
Control Delay (s)	0.0	0.0	0.0	14.2
Lane LOS				B
Approach Delay (s)	0.0			14.2
Approach LOS				B

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	46.2%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	2739			2203	760	680
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	2739			2203	760	680
Volume (vph)	180	0	0	240	145	175
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	189	0	0	253	153	184
RTOR Reduction (vph)	0	0	0	0	0	60
Lane Group Flow (vph)	189	0	0	253	153	124
Heavy Vehicles (%)	11%	0%	0%	38%	100%	100%
Turn Type						Perm
Protected Phases	4			8	2	
Permitted Phases						2
Actuated Green, G (s)	11.6			11.6	40.4	40.4
Effective Green, g (s)	11.6			11.6	40.4	40.4
Actuated g/C Ratio	0.19			0.19	0.67	0.67
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	530			426	512	458
v/s Ratio Prot	0.07			c0.11	c0.20	
v/s Ratio Perm						0.18
v/c Ratio	0.36			0.59	0.30	0.27
Uniform Delay, d1	21.0			22.1	4.0	3.9
Progression Factor	0.71			1.00	1.00	1.00
Incremental Delay, d2	0.4			2.2	1.5	1.5
Delay (s)	15.4			24.3	5.5	5.4
Level of Service	B			C	A	A
Approach Delay (s)	15.4			24.3	5.4	
Approach LOS	B			C	A	

Intersection Summary			
HCM Average Control Delay	14.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	25.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0		
Lane Util. Factor	0.95	1.00	1.00	0.95		
Frt	1.00	0.85	1.00	1.00		
Flt Protected	1.00	1.00	0.95	1.00		
Satd. Flow (prot)	2739	680	760	2097		
Flt Permitted	1.00	1.00	0.95	1.00		
Satd. Flow (perm)	2739	680	760	2097		
Volume (vph)	180	90	110	275	0	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	189	95	116	289	0	0
RTOR Reduction (vph)	0	32	0	0	0	0
Lane Group Flow (vph)	189	63	116	289	0	0
Heavy Vehicles (%)	11%	100%	100%	45%	0%	0%
Turn Type		Perm	Prot			
Protected Phases	4		3	8		
Permitted Phases		4				
Actuated Green, G (s)	39.5	39.5	12.5	60.0		
Effective Green, g (s)	39.5	39.5	12.5	60.0		
Actuated g/C Ratio	0.66	0.66	0.21	1.00		
Clearance Time (s)	4.0	4.0	4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	1803	448	158	2097		
v/s Ratio Prot	0.07		c0.15	c0.14		
v/s Ratio Perm		0.09				
v/c Ratio	0.10	0.14	0.73	0.14		
Uniform Delay, d1	3.8	3.9	22.2	0.0		
Progression Factor	1.00	1.00	0.70	1.00		
Incremental Delay, d2	0.0	0.1	14.5	0.0		
Delay (s)	3.8	4.0	30.2	0.0		
Level of Service	A	A	C	A		
Approach Delay (s)	3.9			8.7	0.0	
Approach LOS	A			A	A	

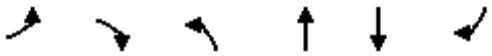
Intersection Summary			
HCM Average Control Delay	6.7	HCM Level of Service	A
HCM Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	4.0
Intersection Capacity Utilization	25.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	1.00	0.85	1.00	0.92		1.00	0.97		1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1448	1185	1295	1169	967		1448	2573		1169	2891	
Flt Permitted	0.31	1.00	1.00	0.69	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	469	1185	1295	852	967		1448	2573		1169	2891	
Volume (vph)	10	95	400	90	90	95	150	450	120	55	715	7
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	11	100	421	95	95	100	158	474	126	58	753	7
RTOR Reduction (vph)	0	0	123	0	40	0	0	19	0	0	1	0
Lane Group Flow (vph)	11	100	298	95	155	0	158	581	0	58	759	0
Heavy Vehicles (%)	5%	35%	5%	30%	45%	60%	5%	5%	50%	30%	5%	5%
Turn Type	pm+pt		pm+ov	pm+pt			Prot			Prot		
Protected Phases	7	4	5	3	8		5	2		1	6	
Permitted Phases	4		4	8								
Actuated Green, G (s)	13.8	13.8	29.3	20.8	20.8		15.5	53.9		8.5	46.9	
Effective Green, g (s)	13.8	13.8	29.3	20.8	20.8		15.5	53.9		8.5	46.9	
Actuated g/C Ratio	0.14	0.14	0.29	0.21	0.21		0.16	0.54		0.08	0.47	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	73	164	379	202	201		224	1387		99	1356	
v/s Ratio Prot	0.00	0.08	c0.12	0.04	c0.16		0.11	0.23		0.05	c0.26	
v/s Ratio Perm	0.02		0.11	0.06								
v/c Ratio	0.15	0.61	0.79	0.47	0.77		0.71	0.42		0.59	0.56	
Uniform Delay, d1	37.9	40.6	32.5	35.3	37.3		40.1	13.7		44.1	19.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.0	6.3	10.3	1.7	16.1		9.7	0.9		8.6	1.7	
Delay (s)	38.9	46.9	42.8	37.0	53.5		49.8	14.7		52.6	20.8	
Level of Service	D	D	D	D	D		D	B		D	C	
Approach Delay (s)		43.5			48.1			22.0			23.1	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM Average Control Delay	30.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

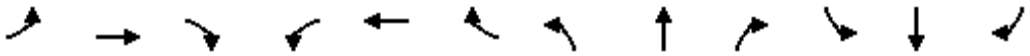
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	0.97	1.00	1.00	0.86	0.95	
Frt	1.00	0.85	1.00	1.00	0.98	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1843	1007	1086	5242	2708	
Flt Permitted	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (perm)	1843	1007	1086	5242	2708	
Volume (vph)	260	95	85	980	950	155
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	274	100	89	1032	1000	163
RTOR Reduction (vph)	0	82	0	0	12	0
Lane Group Flow (vph)	274	18	89	1032	1151	0
Heavy Vehicles (%)	60%	35%	40%	5%	5%	40%
Turn Type		Perm	Prot			
Protected Phases	4		5	2	3 6	
Permitted Phases		4				
Actuated Green, G (s)	17.8	17.8	9.5	54.7	60.7	
Effective Green, g (s)	17.8	17.8	9.5	54.7	60.7	
Actuated g/C Ratio	0.18	0.18	0.10	0.55	0.61	
Clearance Time (s)	4.0	4.0	4.0	4.0		
Vehicle Extension (s)	3.0	3.0	3.0	3.0		
Lane Grp Cap (vph)	328	179	103	2867	1644	
v/s Ratio Prot	c0.15		c0.08	0.20	c0.43	
v/s Ratio Perm		0.02				
v/c Ratio	0.84	0.10	0.86	0.36	0.70	
Uniform Delay, d1	39.7	34.4	44.6	12.8	13.4	
Progression Factor	1.00	1.00	1.00	1.00	0.09	
Incremental Delay, d2	16.6	0.2	48.2	0.4	0.9	
Delay (s)	56.3	34.6	92.8	13.1	2.1	
Level of Service	E	C	F	B	A	
Approach Delay (s)	50.5			19.5	2.1	
Approach LOS	D			B	A	

Intersection Summary			
HCM Average Control Delay	16.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		

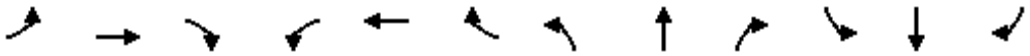
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		0.97	1.00			0.95	0.88	1.00	0.95	
Frt		0.93		1.00	0.87			1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1427		2730	1331			2598	2081	1490	2763	
Flt Permitted		0.92		0.95	1.00			1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1347		2730	1331			2598	2081	1490	2763	
Volume (vph)	5	0	5	100	5	30	0	985	255	25	1000	5
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	5	0	5	105	5	32	0	1037	268	26	1053	5
RTOR Reduction (vph)	0	4	0	0	22	0	0	0	121	0	1	0
Lane Group Flow (vph)	0	6	0	105	15	0	0	1037	147	26	1057	0
Heavy Vehicles (%)	2%	2%	2%	8%	2%	5%	2%	17%	15%	2%	10%	2%
Turn Type	Perm			Prot					Prot	Prot		
Protected Phases		4		3	8			2	2	1	6	
Permitted Phases	4											
Actuated Green, G (s)		17.8		9.1	30.9			54.7	54.7	2.4	47.6	
Effective Green, g (s)		17.8		9.1	30.9			54.7	54.7	2.4	47.6	
Actuated g/C Ratio		0.18		0.09	0.31			0.55	0.55	0.02	0.48	
Clearance Time (s)		4.0		4.0	4.0			4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		240		248	411			1421	1138	36	1315	
v/s Ratio Prot				c0.04	c0.01			c0.40	0.07	0.02	c0.38	
v/s Ratio Perm		0.00										
v/c Ratio		0.02		0.42	0.04			0.73	0.13	0.72	0.80	
Uniform Delay, d1		33.9		43.0	24.1			17.1	11.0	48.5	22.2	
Progression Factor		1.00		1.00	1.00			0.55	0.34	1.00	1.00	
Incremental Delay, d2		0.0		1.2	0.0			3.0	0.2	52.1	5.3	
Delay (s)		34.0		44.1	24.2			12.5	4.0	100.6	27.5	
Level of Service		C		D	C			B	A	F	C	
Approach Delay (s)		34.0			38.9			10.7			29.3	
Approach LOS		C			D			B			C	

Intersection Summary			
HCM Average Control Delay	20.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	45.7%	ICU Level of Service	A
Analysis Period (min)	15		

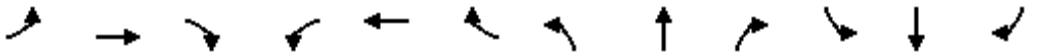
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Lane Util. Factor		0.95	1.00					0.86	1.00	0.97	0.91	
Frt		1.00	0.85					1.00	0.85	1.00	1.00	
Flt Protected		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (prot)		3047	1338					5365	1363	2956	4144	
Flt Permitted		1.00	1.00					1.00	1.00	0.95	1.00	
Satd. Flow (perm)		3047	1338					5365	1363	2956	4144	
Volume (vph)	0	260	390	0	0	0	0	1660	460	270	1040	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	274	411	0	0	0	0	1747	484	284	1095	0
RTOR Reduction (vph)	0	0	112	0	0	0	0	0	89	0	0	0
Lane Group Flow (vph)	0	274	299	0	0	0	0	1747	395	284	1095	0
Heavy Vehicles (%)	0%	6%	8%	0%	0%	0%	0%	9%	6%	6%	12%	0%
Turn Type			Perm						Perm	Prot		
Protected Phases		4						2		1	6	
Permitted Phases			4						2			
Actuated Green, G (s)		23.8	23.8					49.2	49.2	15.0	68.2	
Effective Green, g (s)		23.8	23.8					49.2	49.2	15.0	68.2	
Actuated g/C Ratio		0.24	0.24					0.49	0.49	0.15	0.68	
Clearance Time (s)		4.0	4.0					4.0	4.0	4.0	4.0	
Vehicle Extension (s)		3.0	3.0					3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		725	318					2640	671	443	2826	
v/s Ratio Prot		0.09						c0.33		c0.10	0.26	
v/s Ratio Perm			c0.22						0.29			
v/c Ratio		0.38	0.94					0.66	0.59	0.64	0.39	
Uniform Delay, d1		31.9	37.4					19.1	18.2	40.0	6.9	
Progression Factor		0.68	0.48					1.00	1.00	0.62	1.93	
Incremental Delay, d2		0.3	31.5					1.3	3.8	2.0	0.3	
Delay (s)		22.0	49.5					20.5	21.9	26.9	13.5	
Level of Service		C	D					C	C	C	B	
Approach Delay (s)		38.5			0.0			20.8			16.3	
Approach LOS		D			A			C			B	

Intersection Summary			
HCM Average Control Delay	22.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
Analysis Period (min)	15		

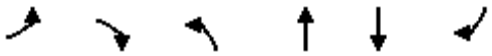
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.97	0.91	1.00	1.00	0.81	0.81	1.00	1.00	1.00	1.00	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1741	4001	1070	1242	4748	732	1196	1133	1070	808	1615	722
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.55	1.00	1.00	0.65	1.00	1.00
Satd. Flow (perm)	1741	4001	1070	1242	4748	732	687	1133	1070	556	1615	722
Volume (vph)	365	675	80	150	1625	225	30	60	50	75	245	170
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	397	734	87	163	1766	245	33	65	54	82	266	185
RTOR Reduction (vph)	0	0	48	0	0	141	0	0	35	0	0	39
Lane Group Flow (vph)	397	734	39	163	1766	104	33	65	19	82	266	146
Heavy Vehicles (%)	80%	16%	35%	30%	16%	60%	35%	50%	35%	100%	100%	100%
Turn Type	Prot		Perm	Prot		pm+ov	pm+pt		pm+ov	pm+pt		pm+ov
Protected Phases	7	4		3	8	1	5	2	3	1	6	7
Permitted Phases			4			8	2		2	6		6
Actuated Green, G (s)	24.2	45.1	45.1	17.6	38.5	42.5	19.7	17.3	34.9	22.9	18.9	43.1
Effective Green, g (s)	24.2	45.1	45.1	17.6	38.5	42.5	19.7	17.3	34.9	22.9	18.9	43.1
Actuated g/C Ratio	0.24	0.45	0.45	0.18	0.38	0.42	0.20	0.17	0.35	0.23	0.19	0.43
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	421	1804	483	219	1828	340	148	196	416	137	305	340
v/s Ratio Prot	c0.23	0.18		0.13	c0.37	0.01	0.01	0.06	0.01	c0.02	c0.16	0.10
v/s Ratio Perm			0.04			0.13	0.04		0.01	0.11		0.10
v/c Ratio	0.94	0.41	0.08	0.74	0.97	0.31	0.22	0.33	0.05	0.60	0.87	0.43
Uniform Delay, d1	37.2	18.5	15.6	39.1	30.1	19.0	33.2	36.3	21.5	34.2	39.4	19.9
Progression Factor	1.00	1.00	1.00	0.95	0.77	2.17	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	29.7	0.7	0.3	8.3	10.6	0.3	0.8	1.0	0.0	6.9	22.8	0.9
Delay (s)	66.9	19.1	16.0	45.4	33.8	41.6	33.9	37.3	21.6	41.1	62.2	20.7
Level of Service	E	B	B	D	C	D	C	D	C	D	E	C
Approach Delay (s)		34.5			35.5			31.0			44.6	
Approach LOS		C			D			C			D	

Intersection Summary			
HCM Average Control Delay	36.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.6%	ICU Level of Service	B
Analysis Period (min)	15		

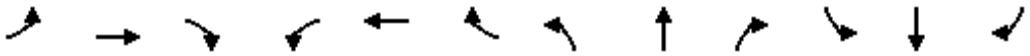
c Critical Lane Group



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700
Total Lost time (s)		4.0		4.0	4.0	
Lane Util. Factor		0.88		0.91	0.91	
Frt		0.85		1.00	1.00	
Flt Protected		1.00		1.00	1.00	
Satd. Flow (prot)		2377		4219	4144	
Flt Permitted		1.00		1.00	1.00	
Satd. Flow (perm)		2377		4219	4144	
Volume (vph)	0	305	0	1190	1200	0
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	321	0	1253	1263	0
RTOR Reduction (vph)	0	75	0	0	0	0
Lane Group Flow (vph)	0	246	0	1253	1263	0
Heavy Vehicles (%)	0%	7%	0%	10%	12%	0%
Turn Type		custom				
Protected Phases				2	6	
Permitted Phases		4				
Actuated Green, G (s)		14.3		77.7	77.7	
Effective Green, g (s)		14.3		77.7	77.7	
Actuated g/C Ratio		0.14		0.78	0.78	
Clearance Time (s)		4.0		4.0	4.0	
Vehicle Extension (s)		3.0		3.0	3.0	
Lane Grp Cap (vph)		340		3278	3220	
v/s Ratio Prot				0.30	c0.30	
v/s Ratio Perm		c0.10				
v/c Ratio		0.72		0.38	0.39	
Uniform Delay, d1		41.0		3.5	3.6	
Progression Factor		1.00		1.31	1.00	
Incremental Delay, d2		7.4		0.2	0.4	
Delay (s)		48.3		4.9	3.9	
Level of Service		D		A	A	
Approach Delay (s)	48.3			4.9	3.9	
Approach LOS	D			A	A	

Intersection Summary			
HCM Average Control Delay	9.4	HCM Level of Service	A
HCM Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		

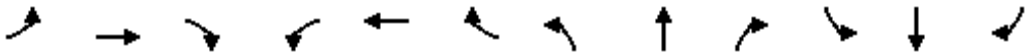
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.97			1.00		1.00	0.98		1.00	0.93	
Flt Protected	0.95	1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1520	2758			2837		1520	1465		1520	1383	
Flt Permitted	0.95	1.00			1.00		0.71	1.00		0.71	1.00	
Satd. Flow (perm)	1520	2758			2837		1134	1465		1134	1383	
Volume (vph)	20	530	115	0	585	10	20	60	10	15	35	35
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	558	121	0	616	11	21	63	11	16	37	37
RTOR Reduction (vph)	0	18	0	0	1	0	0	6	0	0	27	0
Lane Group Flow (vph)	21	661	0	0	626	0	21	68	0	16	47	0
Heavy Vehicles (%)	0%	8%	4%	0%	7%	0%	0%	8%	0%	0%	0%	14%
Turn Type	Prot			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases				8			2			6		
Actuated Green, G (s)	1.8	64.0			58.2		28.0	28.0		28.0	28.0	
Effective Green, g (s)	1.8	64.0			58.2		28.0	28.0		28.0	28.0	
Actuated g/C Ratio	0.02	0.64			0.58		0.28	0.28		0.28	0.28	
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	27	1765			1651		318	410		318	387	
v/s Ratio Prot	c0.01	c0.24			0.22			c0.05			0.03	
v/s Ratio Perm							0.02			0.01		
v/c Ratio	0.78	0.37			0.38		0.07	0.16		0.05	0.12	
Uniform Delay, d1	48.9	8.5			11.2		26.4	27.2		26.3	26.8	
Progression Factor	1.56	0.04			0.80		1.00	1.00		1.00	1.00	
Incremental Delay, d2	72.8	0.5			0.6		0.4	0.9		0.3	0.6	
Delay (s)	149.3	0.8			9.6		26.8	28.0		26.6	27.5	
Level of Service	F	A			A		C	C		C	C	
Approach Delay (s)		5.3			9.6			27.8			27.3	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM Average Control Delay	9.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	36.4%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	0.98		1.00	0.95		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1407	2842		1520	2851		1520	1486		1520	1471	
Flt Permitted	0.95	1.00		0.95	1.00		0.60	1.00		0.45	1.00	
Satd. Flow (perm)	1407	2842		1520	2851		967	1486		714	1471	
Volume (vph)	60	640	100	35	640	110	80	165	90	60	100	50
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	674	105	37	674	116	84	174	95	63	105	53
RTOR Reduction (vph)	0	11	0	0	13	0	0	20	0	0	18	0
Lane Group Flow (vph)	63	768	0	37	777	0	84	249	0	63	140	0
Heavy Vehicles (%)	8%	4%	10%	0%	5%	0%	0%	3%	0%	0%	5%	0%
Turn Type	Prot			Prot			Perm			Perm		
Protected Phases	7	4		3	8			2			6	
Permitted Phases							2			6		
Actuated Green, G (s)	8.8	50.5		5.5	47.2		32.0	32.0		32.0	32.0	
Effective Green, g (s)	8.8	50.5		5.5	47.2		32.0	32.0		32.0	32.0	
Actuated g/C Ratio	0.09	0.50		0.06	0.47		0.32	0.32		0.32	0.32	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	124	1435		84	1346		309	476		228	471	
v/s Ratio Prot	c0.04	c0.27		0.02	c0.27			c0.17			0.09	
v/s Ratio Perm							0.09			0.09		
v/c Ratio	0.51	0.53		0.44	0.58		0.27	0.52		0.28	0.30	
Uniform Delay, d1	43.5	16.8		45.8	19.2		25.3	27.8		25.4	25.5	
Progression Factor	1.41	0.47		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	2.9	1.3		3.7	1.8		2.2	4.1		3.0	1.6	
Delay (s)	64.2	9.1		49.4	21.0		27.5	31.9		28.3	27.1	
Level of Service	E	A		D	C		C	C		C	C	
Approach Delay (s)		13.2			22.2			30.8			27.5	
Approach LOS		B			C			C			C	

Intersection Summary			
HCM Average Control Delay	20.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.2%	ICU Level of Service	B
Analysis Period (min)	15		

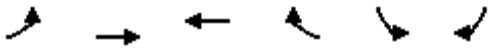
c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1369	1236	1455	1204	1277	1203
Flt Permitted	0.95	1.00	1.00	1.00	0.72	1.00
Satd. Flow (perm)	1369	1236	1455	1204	971	1203
Volume (vph)	45	105	50	40	80	45
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	111	53	42	84	47
RTOR Reduction (vph)	0	97	0	11	0	0
Lane Group Flow (vph)	47	14	53	31	84	47
Heavy Vehicles (%)	11%	10%	10%	13%	19%	33%
Turn Type		custom		Perm	Perm	
Protected Phases			2			6
Permitted Phases	8	8		2	6	
Actuated Green, G (s)	7.5	7.5	44.5	44.5	44.5	44.5
Effective Green, g (s)	7.5	7.5	44.5	44.5	44.5	44.5
Actuated g/C Ratio	0.12	0.12	0.74	0.74	0.74	0.74
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	171	155	1079	893	720	892
v/s Ratio Prot			0.04			0.04
v/s Ratio Perm	c0.03	0.01		0.03	c0.09	
v/c Ratio	0.27	0.09	0.05	0.03	0.12	0.05
Uniform Delay, d1	23.8	23.2	2.1	2.1	2.2	2.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	0.3	0.1	0.1	0.3	0.1
Delay (s)	24.7	23.5	2.2	2.1	2.5	2.2
Level of Service	C	C	A	A	A	A
Approach Delay (s)	23.8		2.1			2.4
Approach LOS	C		A			A

Intersection Summary			
HCM Average Control Delay	11.2	HCM Level of Service	B
HCM Volume to Capacity ratio	0.14		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	21.9%	ICU Level of Service	A
Analysis Period (min)	15		

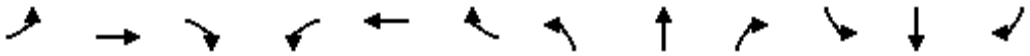
c Critical Lane Group



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0	4.0			4.0
Lane Util. Factor		0.95	0.95			1.00
Frt		1.00	1.00			0.86
Flt Protected		1.00	1.00			1.00
Satd. Flow (prot)		2923	2919			1384
Flt Permitted		1.00	1.00			1.00
Satd. Flow (perm)		2923	2919			1384
Volume (vph)	0	1135	1125	15	0	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1195	1184	16	0	26
RTOR Reduction (vph)	0	0	2	0	0	15
Lane Group Flow (vph)	0	1195	1198	0	0	11
Heavy Vehicles (%)	0%	4%	4%	0%	0%	0%
Turn Type						custom
Protected Phases		4	8			
Permitted Phases						6
Actuated Green, G (s)		24.2	24.2			7.8
Effective Green, g (s)		24.2	24.2			7.8
Actuated g/C Ratio		0.60	0.60			0.19
Clearance Time (s)		4.0	4.0			4.0
Vehicle Extension (s)		3.0	3.0			3.0
Lane Grp Cap (vph)		1768	1766			270
v/s Ratio Prot		0.41	c0.41			
v/s Ratio Perm						c0.01
v/c Ratio		0.68	0.68			0.04
Uniform Delay, d1		5.3	5.3			13.1
Progression Factor		1.00	1.00			1.00
Incremental Delay, d2		2.1	2.1			0.1
Delay (s)		7.4	7.4			13.1
Level of Service		A	A			B
Approach Delay (s)		7.4	7.4		13.1	
Approach LOS		A	A		B	

Intersection Summary			
HCM Average Control Delay	7.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.5%	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												
Ideal Flow (vphpl)	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Total Lost time (s)		4.0			4.0				4.0			4.0
Lane Util. Factor		0.95			0.95				1.00			1.00
Frt		1.00			1.00				0.86			0.86
Flt Protected		1.00			1.00				1.00			1.00
Satd. Flow (prot)		2889			2889				1384			1384
Flt Permitted		1.00			1.00				1.00			1.00
Satd. Flow (perm)		2889			2889				1384			1384
Volume (vph)	0	950	20	0	895	20	0	0	20	0	0	25
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	1000	21	0	942	21	0	0	21	0	0	26
RTOR Reduction (vph)	0	2	0	0	2	0	0	0	17	0	0	21
Lane Group Flow (vph)	0	1019	0	0	961	0	0	0	4	0	0	5
Heavy Vehicles (%)	0%	5%	0%	0%	5%	0%	0%	0%	0%	0%	0%	0%
Turn Type									custom			custom
Protected Phases		4			8							
Permitted Phases									2			6
Actuated Green, G (s)		24.4			24.4				7.6			7.6
Effective Green, g (s)		24.4			24.4				7.6			7.6
Actuated g/C Ratio		0.61			0.61				0.19			0.19
Clearance Time (s)		4.0			4.0				4.0			4.0
Vehicle Extension (s)		3.0			3.0				3.0			3.0
Lane Grp Cap (vph)		1762			1762				263			263
v/s Ratio Prot		c0.35			0.33							
v/s Ratio Perm									0.00			c0.00
v/c Ratio		0.58			0.55				0.02			0.02
Uniform Delay, d1		4.7			4.6				13.2			13.2
Progression Factor		1.00			1.00				1.00			1.00
Incremental Delay, d2		1.4			1.2				0.0			0.0
Delay (s)		6.1			5.8				13.2			13.2
Level of Service		A			A				B			B
Approach Delay (s)		6.1			5.8			13.2			13.2	
Approach LOS		A			A			B			B	

Intersection Summary			
HCM Average Control Delay	6.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	41.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	0	0	5	75	0	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	0	5	79	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			0		50	0
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			0		50	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1636		956	1091

Direction, Lane #	WB 1	WB 2	NB 1
Volume Total	32	53	0
Volume Left	5	0	0
Volume Right	0	0	0
cSH	1636	1700	1700
Volume to Capacity	0.00	0.03	0.00
Queue Length 95th (ft)	0	0	0
Control Delay (s)	1.2	0.0	0.0
Lane LOS	A		A
Approach Delay (s)	0.5		0.0
Approach LOS			A

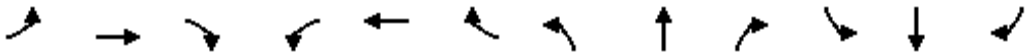
Intersection Summary			
Average Delay		0.5	
Intersection Capacity Utilization		6.7%	ICU Level of Service A
Analysis Period (min)		15	



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	725	20	0	665	0	55
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	763	21	0	700	0	58
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)	619			1280		
pX, platoon unblocked			0.90		0.90	0.90
vC, conflicting volume			784		1124	392
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			645		1024	208
tC, single (s)			4.1		6.8	7.1
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.4
p0 queue free %			100		100	92
cM capacity (veh/h)			852		211	697

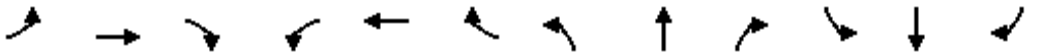
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	509	275	350	350	58
Volume Left	0	0	0	0	0
Volume Right	0	21	0	0	58
cSH	1700	1700	1700	1700	697
Volume to Capacity	0.30	0.16	0.21	0.21	0.08
Queue Length 95th (ft)	0	0	0	0	7
Control Delay (s)	0.0	0.0	0.0	0.0	10.6
Lane LOS					B
Approach Delay (s)	0.0		0.0		10.6
Approach LOS					B

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	166	458	181	92	526	162	70	928	56	86	963	188
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95		1.00	0.95	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1598	4396		1598	4429		1598	3168		1598	3117	
Flt Permitted	0.22	1.00		0.38	1.00		0.15	1.00		0.18	1.00	
Satd. Flow (perm)	376	4396		647	4429		260	3168		303	3117	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	175	482	191	97	554	171	74	977	59	91	1014	198
RTOR Reduction (vph)	0	36	0	0	65	0	0	8	0	0	27	0
Lane Group Flow (vph)	175	637	0	97	660	0	74	1028	0	91	1185	0
Turn Type	pm+pt			Perm			Perm			Perm		
Protected Phases	7	4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	22.0	22.0		13.9	13.9		25.9	25.9		25.9	25.9	
Effective Green, g (s)	22.0	22.0		13.9	13.9		25.9	25.9		25.9	25.9	
Actuated g/C Ratio	0.39	0.39		0.25	0.25		0.46	0.46		0.46	0.46	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	238	1730		161	1101		120	1468		140	1444	
v/s Ratio Prot	c0.05	0.14			0.15			0.32			c0.38	
v/s Ratio Perm	c0.24			0.15			0.28			0.30		
v/c Ratio	0.74	0.37		0.60	0.60		0.62	0.70		0.65	0.82	
Uniform Delay, d1	12.3	12.0		18.6	18.5		11.3	11.9		11.5	13.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.2	0.1		6.2	0.9		9.1	1.5		10.3	3.9	
Delay (s)	23.5	12.2		24.8	19.4		20.3	13.5		21.8	16.9	
Level of Service	C	B		C	B		C	B		C	B	
Approach Delay (s)		14.5			20.1			13.9			17.2	
Approach LOS		B			C			B			B	

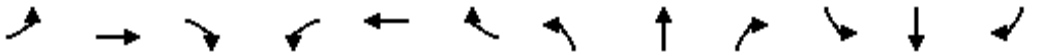
Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	55.9	Sum of lost time (s)	8.0
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	467	0	0	321	0	0	0	0	0	0	104
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	492	0	0	338	0	0	0	0	0	0	109
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	338			492			604	829	164	502	829	113
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	338			492			604	829	164	502	829	113
tC, single (s)	4.3			4.3			7.7	6.7	7.1	7.7	6.7	7.1
tC, 2 stage (s)												
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	100			100			100	100	100	100	100	88
cM capacity (veh/h)	1162			1014			321	290	827	435	290	894

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	WB 4	NB 1	SB 1
Volume Total	197	197	98	0	113	113	113	0	109
Volume Left	0	0	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	0	0	109
cSH	1700	1700	1700	1700	1700	1700	1700	1700	894
Volume to Capacity	0.12	0.12	0.06	0.00	0.07	0.07	0.07	0.00	0.12
Queue Length 95th (ft)	0	0	0	0	0	0	0	0	10
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.6
Lane LOS								A	A
Approach Delay (s)	0.0			0.0				0.0	9.6
Approach LOS								A	A

Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	19.7%	ICU Level of Service		A
Analysis Period (min)	15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	204	578	31	28	505	117	42	157	68	137	91	219
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	0.97			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.99	1.00		0.97	1.00
Satd. Flow (prot)	1598	3171		1598	3105			1664	1430		1633	1430
Flt Permitted	0.32	1.00		0.33	1.00			0.90	1.00		0.72	1.00
Satd. Flow (perm)	537	3171		550	3105			1520	1430		1204	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	215	608	33	29	532	123	44	165	72	144	96	231
RTOR Reduction (vph)	0	5	0	0	26	0	0	0	33	0	0	121
Lane Group Flow (vph)	215	636	0	29	629	0	0	209	39	0	240	110
Turn Type	Perm			Perm			Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		6
Actuated Green, G (s)	39.0	39.0		39.0	39.0			43.0	43.0		43.0	43.0
Effective Green, g (s)	39.0	39.0		39.0	39.0			43.0	43.0		43.0	43.0
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.48	0.48		0.48	0.48
Clearance Time (s)	4.0	4.0		4.0	4.0			4.0	4.0		4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	233	1374		238	1346			726	683		575	683
v/s Ratio Prot		0.20			0.20							
v/s Ratio Perm	c0.40			0.05				0.14	0.03		c0.20	0.08
v/c Ratio	0.92	0.46		0.12	0.47			0.29	0.06		0.42	0.16
Uniform Delay, d1	24.1	18.1		15.3	18.1			14.2	12.6		15.3	13.3
Progression Factor	1.00	1.00		1.00	1.00			0.61	0.46		0.86	0.59
Incremental Delay, d2	38.3	0.2		0.2	0.3			1.0	0.2		2.0	0.5
Delay (s)	62.4	18.3		15.5	18.4			9.6	5.9		15.3	8.3
Level of Service	E	B		B	B			A	A		B	A
Approach Delay (s)		29.4			18.3			8.7			11.8	
Approach LOS		C			B			A			B	

Intersection Summary			
HCM Average Control Delay	19.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



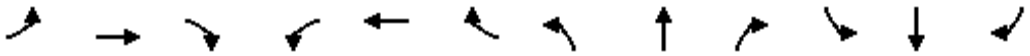
Movement	EBL	EBT	EBR	WBT	WBR	WBR2	SBL2	SBL	SBR	SEL	SET	SER
Lane Configurations												
Volume (vph)	12	578	286	666	185	6	10	0	4	63	76	7
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)		4.0	4.0	4.0		4.0		4.0		4.0	4.0	4.0
Lane Util. Factor		0.95	1.00	0.91		0.91		1.00		1.00	1.00	1.00
Frt		1.00	0.85	0.97		0.85		0.96		1.00	1.00	0.85
Flt Protected		1.00	1.00	1.00		1.00		0.96		0.95	1.00	1.00
Satd. Flow (prot)		3192	1430	2961		1301		1564		1598	1682	1430
Flt Permitted		0.93	1.00	1.00		1.00		0.96		0.59	1.00	1.00
Satd. Flow (perm)		2974	1430	2961		1301		1564		997	1682	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	13	608	301	701	195	6	11	0	4	66	80	7
RTOR Reduction (vph)	0	0	179	0	0	2	0	0	0	0	0	4
Lane Group Flow (vph)	0	621	122	897	0	3	0	15	0	66	80	3
Turn Type	Perm		Perm			Perm	Perm			Perm		Perm
Protected Phases		4		4				7			6	
Permitted Phases	4		4			4	7			6		6
Actuated Green, G (s)		36.5	36.5	36.5		36.5		1.6		39.9	39.9	39.9
Effective Green, g (s)		36.5	36.5	36.5		36.5		1.6		39.9	39.9	39.9
Actuated g/C Ratio		0.41	0.41	0.41		0.41		0.02		0.44	0.44	0.44
Clearance Time (s)		4.0	4.0	4.0		4.0		4.0		4.0	4.0	4.0
Vehicle Extension (s)		3.0	3.0	3.0		3.0		3.0		3.0	3.0	3.0
Lane Grp Cap (vph)		1206	580	1201		528		28		442	746	634
v/s Ratio Prot				c0.30							0.05	
v/s Ratio Perm		0.21	0.09			0.00		0.01		0.07		0.00
v/c Ratio		0.51	0.21	0.75		0.01		0.54		0.15	0.11	0.00
Uniform Delay, d1		20.1	17.4	22.8		15.9		43.8		14.9	14.6	14.0
Progression Factor		1.00	1.00	1.08		1.07		1.00		1.00	1.00	1.00
Incremental Delay, d2		0.4	0.2	2.1		0.0		18.3		0.2	0.1	0.0
Delay (s)		20.5	17.6	26.8		17.1		62.1		15.1	14.7	14.0
Level of Service		C	B	C		B		E		B	B	B
Approach Delay (s)		19.5		26.8				62.1			14.8	
Approach LOS		B		C				E			B	

Intersection Summary			
HCM Average Control Delay	20.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	56.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



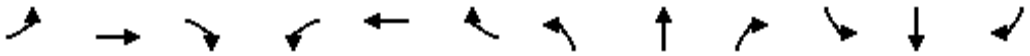
Movement	NWL	NWT	NWR	NWR2
Lane Configurations				
Volume (vph)	184	192	1	3
Ideal Flow (vphpl)	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0
Lane Util. Factor	1.00	1.00		1.00
Frt	1.00	1.00		0.85
Flt Protected	0.95	1.00		1.00
Satd. Flow (prot)	1598	1681		1430
Flt Permitted	0.70	1.00		1.00
Satd. Flow (perm)	1186	1681		1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95
Adj. Flow (vph)	194	202	1	3
RTOR Reduction (vph)	0	0	0	2
Lane Group Flow (vph)	194	203	0	1
Turn Type	Perm			Perm
Protected Phases		2		
Permitted Phases	2			2
Actuated Green, G (s)	39.9	39.9		39.9
Effective Green, g (s)	39.9	39.9		39.9
Actuated g/C Ratio	0.44	0.44		0.44
Clearance Time (s)	4.0	4.0		4.0
Vehicle Extension (s)	3.0	3.0		3.0
Lane Grp Cap (vph)	526	745		634
v/s Ratio Prot		0.12		
v/s Ratio Perm	c0.16			0.00
v/c Ratio	0.37	0.27		0.00
Uniform Delay, d1	16.7	15.9		14.0
Progression Factor	0.45	0.47		0.26
Incremental Delay, d2	1.5	0.7		0.0
Delay (s)	9.1	8.2		3.6
Level of Service	A	A		A
Approach Delay (s)		8.6		
Approach LOS		A		

Intersection Summary



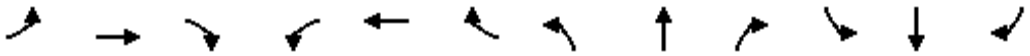
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	525	0	0	710	1	362	49	307	6	0	30
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0			4.0		4.0	4.0			4.0	
Lane Util. Factor	1.00	0.95			0.95		0.95	0.95			1.00	
Frt	1.00	1.00			1.00		1.00	0.88			0.89	
Flt Protected	0.95	1.00			1.00		0.95	1.00			0.99	
Satd. Flow (prot)	1598	3195			3195		1518	1404			1479	
Flt Permitted	0.18	1.00			1.00		0.95	1.00			0.99	
Satd. Flow (perm)	310	3195			3195		1518	1404			1479	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	28	553	0	0	747	1	381	52	323	6	0	32
RTOR Reduction (vph)	0	0	0	0	0	0	0	113	0	0	30	0
Lane Group Flow (vph)	28	553	0	0	748	0	343	300	0	0	8	0
Turn Type	Perm						Split			Split		
Protected Phases		4			8		2	2		6	6	
Permitted Phases	4											
Actuated Green, G (s)	27.2	27.2			27.2		44.3	44.3			6.5	
Effective Green, g (s)	27.2	27.2			27.2		44.3	44.3			6.5	
Actuated g/C Ratio	0.30	0.30			0.30		0.49	0.49			0.07	
Clearance Time (s)	4.0	4.0			4.0		4.0	4.0			4.0	
Vehicle Extension (s)	3.0	3.0			3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)	94	966			966		747	691			107	
v/s Ratio Prot		0.17			c0.23		c0.23	0.21			c0.01	
v/s Ratio Perm	0.09											
v/c Ratio	0.30	0.57			0.77		0.46	0.43			0.08	
Uniform Delay, d1	24.1	26.5			28.6		15.0	14.8			39.0	
Progression Factor	0.65	0.85			0.51		1.00	1.00			0.93	
Incremental Delay, d2	1.7	0.8			3.6		2.0	2.0			0.3	
Delay (s)	17.3	23.3			18.0		17.0	16.7			36.7	
Level of Service	B	C			B		B	B			D	
Approach Delay (s)		23.0			18.0			16.9			36.7	
Approach LOS		C			B			B			D	

Intersection Summary			
HCM Average Control Delay	19.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



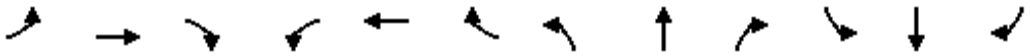
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	727	43	86	686	53	42	140	100	61	124	12
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.95	1.00	1.00	0.95	
Frt	1.00	0.99		1.00	0.99		1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1598	3169		1598	3161		1598	3195	1430	1598	3152	
Flt Permitted	0.21	1.00		0.20	1.00		0.66	1.00	1.00	0.66	1.00	
Satd. Flow (perm)	360	3169		333	3161		1111	3195	1430	1108	3152	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	765	45	91	722	56	44	147	105	64	131	13
RTOR Reduction (vph)	0	8	0	0	10	0	0	0	47	0	5	0
Lane Group Flow (vph)	41	802	0	91	768	0	44	147	58	64	139	0
Turn Type	Perm			Perm			Perm		Perm	Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2		2	6		
Actuated Green, G (s)	32.4	32.4		32.4	32.4		49.6	49.6	49.6	49.6	49.6	
Effective Green, g (s)	32.4	32.4		32.4	32.4		49.6	49.6	49.6	49.6	49.6	
Actuated g/C Ratio	0.36	0.36		0.36	0.36		0.55	0.55	0.55	0.55	0.55	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	130	1141		120	1138		612	1761	788	611	1737	
v/s Ratio Prot		0.25			0.24			0.05			0.04	
v/s Ratio Perm	0.11			c0.27			0.04		0.04	c0.06		
v/c Ratio	0.32	0.70		0.76	0.67		0.07	0.08	0.07	0.10	0.08	
Uniform Delay, d1	20.8	24.7		25.4	24.3		9.4	9.5	9.5	9.6	9.5	
Progression Factor	1.07	1.09		0.49	0.45		0.78	0.75	0.65	0.75	0.78	
Incremental Delay, d2	1.0	1.5		20.2	1.3		0.2	0.1	0.2	0.3	0.1	
Delay (s)	23.2	28.5		32.6	12.4		7.6	7.2	6.4	7.6	7.5	
Level of Service	C	C		C	B		A	A	A	A	A	
Approach Delay (s)		28.2			14.5			7.0			7.5	
Approach LOS		C			B			A			A	

Intersection Summary			
HCM Average Control Delay	18.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	50	561	6	7	698	49	189	156	129	52	16	124
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.95			0.95			1.00			1.00	
Frt		1.00			0.99			0.96			0.91	
Flt Protected		1.00			1.00			0.98			0.99	
Satd. Flow (prot)		3178			3163			1588			1515	
Flt Permitted		0.73			0.95			0.79			0.81	
Satd. Flow (perm)		2323			3004			1286			1245	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	591	6	7	735	52	199	164	136	55	17	131
RTOR Reduction (vph)	0	1	0	0	6	0	0	13	0	0	34	0
Lane Group Flow (vph)	0	649	0	0	788	0	0	486	0	0	169	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		29.7			29.7			52.3			52.3	
Effective Green, g (s)		29.7			29.7			52.3			52.3	
Actuated g/C Ratio		0.33			0.33			0.58			0.58	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		767			991			747			723	
v/s Ratio Prot												
v/s Ratio Perm		c0.28			0.26			c0.38			0.14	
v/c Ratio		0.85			0.80			0.65			0.23	
Uniform Delay, d1		28.0			27.4			12.7			9.1	
Progression Factor		1.00			0.70			0.98			1.00	
Incremental Delay, d2		8.6			4.1			4.4			0.8	
Delay (s)		36.6			23.4			16.7			9.9	
Level of Service		D			C			B			A	
Approach Delay (s)		36.6			23.4			16.7			9.9	
Approach LOS		D			C			B			A	

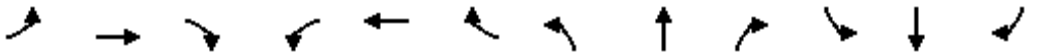
Intersection Summary			
HCM Average Control Delay	24.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	706	46	10	775	49	53	244	32	89	182	182
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	0.95		1.00	0.95	
Frt		0.99			0.99		1.00	0.98		1.00	0.93	
Flt Protected		0.99			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3153			3165		1598	3139		1598	2956	
Flt Permitted		0.76			0.94		0.44	1.00		0.53	1.00	
Satd. Flow (perm)		2411			2987		733	3139		886	2956	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	91	743	48	11	816	52	56	257	34	94	192	192
RTOR Reduction (vph)	0	5	0	0	5	0	0	12	0	0	139	0
Lane Group Flow (vph)	0	877	0	0	874	0	56	279	0	94	245	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		57.0			57.0		25.0	25.0		25.0	25.0	
Effective Green, g (s)		57.0			57.0		25.0	25.0		25.0	25.0	
Actuated g/C Ratio		0.63			0.63		0.28	0.28		0.28	0.28	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		1527			1892		204	872		246	821	
v/s Ratio Prot								0.09			0.08	
v/s Ratio Perm		c0.36			0.29		0.08			c0.11		
v/c Ratio		0.57			0.46		0.27	0.32		0.38	0.30	
Uniform Delay, d1		9.5			8.6		25.4	25.8		26.3	25.6	
Progression Factor		1.07			0.46		0.99	0.99		1.00	1.00	
Incremental Delay, d2		1.2			0.7		3.3	1.0		4.5	0.9	
Delay (s)		11.4			4.6		28.4	26.5		30.7	26.5	
Level of Service		B			A		C	C		C	C	
Approach Delay (s)		11.4			4.6			26.8			27.4	
Approach LOS		B			A			C			C	

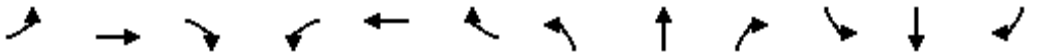
Intersection Summary			
HCM Average Control Delay	14.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	248	310	47	45	173	20	99	430	45	39	371	44
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0			5.0		4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	0.95			0.95		1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.98			0.99		1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00			0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1598	3133			3126		1598	1682	1430	1598	1655	
Flt Permitted	0.95	1.00			0.99		0.32	1.00	1.00	0.30	1.00	
Satd. Flow (perm)	1598	3133			3126		536	1682	1430	509	1655	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	261	326	49	47	182	21	104	453	47	41	391	46
RTOR Reduction (vph)	0	13	0	0	7	0	0	0	13	0	5	0
Lane Group Flow (vph)	261	362	0	0	243	0	104	453	35	41	432	0
Turn Type	Split			Split			custom		custom	custom		
Protected Phases	3	3		6	6			4			4	
Permitted Phases							8 4		8 4	8 4		
Actuated Green, G (s)	16.0	16.0			16.0		45.0	25.0	45.0	45.0	25.0	
Effective Green, g (s)	16.0	16.0			16.0		45.0	25.0	45.0	45.0	25.0	
Actuated g/C Ratio	0.18	0.18			0.18		0.50	0.28	0.50	0.50	0.28	
Clearance Time (s)	4.0	4.0			5.0			4.0			4.0	
Vehicle Extension (s)	3.0	3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)	284	557			556		268	467	715	255	460	
v/s Ratio Prot	c0.16	0.12			c0.08			c0.27			0.26	
v/s Ratio Perm							c0.19		0.02	0.08		
v/c Ratio	0.92	0.65			0.44		0.39	0.97	0.05	0.16	0.94	
Uniform Delay, d1	36.4	34.4			33.0		14.0	32.1	11.5	12.2	31.8	
Progression Factor	1.00	1.00			1.00		1.01	1.08	1.14	1.00	1.00	
Incremental Delay, d2	36.1	5.8			2.5		3.3	30.3	0.1	1.3	29.2	
Delay (s)	72.5	40.2			35.5		17.4	64.9	13.2	13.6	60.9	
Level of Service	E	D			D		B	E	B	B	E	
Approach Delay (s)		53.4			35.5			52.7			56.9	
Approach LOS		D			D			D			E	

Intersection Summary			
HCM Average Control Delay	51.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	13.0
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												
Volume (vph)	50	415	56	12	434	40	133	208	48	82	143	158
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	5.0		4.0	6.0		4.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	0.95	
Frt	1.00	0.98		1.00	0.99		1.00	0.97		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1598	1652		1598	1661		1598	1634		1598	2944	
Flt Permitted	0.95	1.00		0.95	1.00		0.49	1.00		0.37	1.00	
Satd. Flow (perm)	1598	1652		1598	1661		821	1634		624	2944	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	53	437	59	13	457	42	140	219	51	86	151	166
RTOR Reduction (vph)	0	4	0	0	2	0	0	7	0	0	130	0
Lane Group Flow (vph)	53	492	0	13	497	0	140	263	0	86	187	0
Turn Type	Prot			Prot			custom			custom		
Protected Phases	1	6		7	2			8			8	
Permitted Phases							4			4		
Actuated Green, G (s)	7.4	77.5		2.3	71.4		28.2	26.2		28.2	26.2	
Effective Green, g (s)	7.4	77.5		2.3	71.4		28.2	26.2		28.2	26.2	
Actuated g/C Ratio	0.06	0.65		0.02	0.60		0.23	0.22		0.23	0.22	
Clearance Time (s)	4.0	4.0		4.0	5.0		4.0	6.0		4.0	6.0	
Vehicle Extension (s)	2.0	2.0		2.0	4.0		3.0	4.0		3.0	4.0	
Lane Grp Cap (vph)	99	1067		31	988		193	357		147	643	
v/s Ratio Prot	0.03	c0.30		0.01	c0.30			0.16			0.06	
v/s Ratio Perm							c0.17			0.14		
v/c Ratio	0.54	0.46		0.42	0.50		0.73	0.74		0.59	0.29	
Uniform Delay, d1	54.6	10.7		58.2	14.0		42.3	43.7		40.7	39.1	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.01		1.00	1.00	
Incremental Delay, d2	2.8	1.4		3.3	1.8		12.7	8.2		5.8	0.3	
Delay (s)	57.4	12.2		61.5	15.9		54.9	52.1		46.5	39.5	
Level of Service	E	B		E	B		D	D		D	D	
Approach Delay (s)		16.5			17.0			53.1			41.0	
Approach LOS		B			B			D			D	

Intersection Summary			
HCM Average Control Delay	29.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	13.0
Intersection Capacity Utilization	64.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBT	EBR	EBR2	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2	SBL	SBT
Lane Configurations												
Volume (vph)	361	473	64	209	72	53	116	30	4	62	269	76
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	5.0	5.5		5.0		5.0	5.0				5.0	5.0
Lane Util. Factor	1.00	1.00		1.00		1.00	1.00				1.00	1.00
Frt	1.00	0.85		0.97		1.00	0.97				1.00	0.97
Flt Protected	1.00	1.00		1.00		0.95	1.00				0.95	1.00
Satd. Flow (prot)	1682	1430		1624		1598	1624				1598	1631
Flt Permitted	1.00	1.00		1.00		0.69	1.00				0.64	1.00
Satd. Flow (perm)	1682	1430		1624		1164	1624				1077	1631
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	380	498	67	220	76	56	122	32	4	65	283	80
RTOR Reduction (vph)	0	5	0	12	0	0	1	0	0	0	0	6
Lane Group Flow (vph)	380	560	0	284	0	56	157	0	0	0	348	95
Turn Type		pm+ov				Perm				Perm	Perm	
Protected Phases	3	2		4			1					1
Permitted Phases		3		8 3		1				1	1	
Actuated Green, G (s)	16.0	27.7		20.0		54.0	54.0				54.0	54.0
Effective Green, g (s)	16.0	27.7		20.0		54.0	54.0				54.0	54.0
Actuated g/C Ratio	0.13	0.23		0.17		0.45	0.45				0.45	0.45
Clearance Time (s)	5.0	5.5		5.0		5.0	5.0				5.0	5.0
Vehicle Extension (s)	4.0	4.0		3.0		3.0	3.0				3.0	3.0
Lane Grp Cap (vph)	224	396		338		524	731				485	734
v/s Ratio Prot	c0.23	c0.14		c0.03			0.10					0.06
v/s Ratio Perm		0.25		0.15		0.05					c0.32	
v/c Ratio	1.70	1.42		0.84		0.11	0.22				0.72	0.13
Uniform Delay, d1	52.0	46.1		48.5		19.1	20.1				26.8	19.3
Progression Factor	1.00	1.00		1.00		1.00	1.00				1.00	1.00
Incremental Delay, d2	331.9	201.2		17.0		0.4	0.7				8.8	0.4
Delay (s)	383.9	247.3		65.4		19.5	20.8				35.6	19.6
Level of Service	F	F		E		B	C				D	B
Approach Delay (s)	302.2			65.4			20.4					32.1
Approach LOS	F			E			C					C

Intersection Summary			
HCM Average Control Delay	205.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	29.3
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

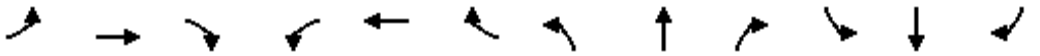


Movement	SBR	NWL	NWR	NWR2
Lane Configurations				
Volume (vph)	19	284	138	29
Ideal Flow (vphpl)	1850	1850	1850	1850
Total Lost time (s)		5.5		
Lane Util. Factor		0.97		
Frt		0.94		
Flt Protected		0.97		
Satd. Flow (prot)		2987		
Flt Permitted		0.97		
Satd. Flow (perm)		2987		
Peak-hour factor, PHF	0.95	0.95	0.95	0.95
Adj. Flow (vph)	20	299	145	31
RTOR Reduction (vph)	0	5	0	0
Lane Group Flow (vph)	0	470	0	0
Turn Type				
Protected Phases		2		
Permitted Phases				
Actuated Green, G (s)		11.7		
Effective Green, g (s)		11.7		
Actuated g/C Ratio		0.10		
Clearance Time (s)		5.5		
Vehicle Extension (s)		4.0		
Lane Grp Cap (vph)		291		
v/s Ratio Prot		0.16		
v/s Ratio Perm				
v/c Ratio		1.62		
Uniform Delay, d1		54.1		
Progression Factor		1.00		
Incremental Delay, d2		292.9		
Delay (s)		347.1		
Level of Service		F		
Approach Delay (s)		347.1		
Approach LOS		F		

Intersection Summary

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Volume (vph)	17	1163	10	297	1491	126	79	44	18	16	44	265
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.95		1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	0.96		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1598	4585		1598	3195	1430	1598	3055		1598	3195	1430
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1598	4585		1598	3195	1430	1598	3055		1598	3195	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	18	1224	11	313	1569	133	83	46	19	17	46	279
RTOR Reduction (vph)	0	1	0	0	0	16	0	16	0	0	0	245
Lane Group Flow (vph)	18	1234	0	313	1569	117	83	49	0	17	46	34
Turn Type	Prot			Prot		Perm	Prot			Prot		Perm
Protected Phases	5	2		1	6		7	4		3	8	
Permitted Phases						6						8
Actuated Green, G (s)	1.6	35.5		22.4	56.3	56.3	5.0	14.5		1.6	11.1	11.1
Effective Green, g (s)	1.6	35.5		22.4	56.3	56.3	5.0	14.5		1.6	11.1	11.1
Actuated g/C Ratio	0.02	0.39		0.25	0.63	0.63	0.06	0.16		0.02	0.12	0.12
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	28	1809		398	1999	895	89	492		28	394	176
v/s Ratio Prot	0.01	0.27		c0.20	c0.49		c0.05	c0.02		0.01	0.01	
v/s Ratio Perm						0.08						c0.02
v/c Ratio	0.64	0.68		0.79	0.78	0.13	0.93	0.10		0.61	0.12	0.20
Uniform Delay, d1	43.9	22.6		31.6	12.4	6.9	42.3	32.2		43.9	35.1	35.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	40.9	2.1		9.8	3.2	0.3	73.0	0.1		32.0	0.1	0.5
Delay (s)	84.9	24.7		41.4	15.6	7.2	115.3	32.3		75.9	35.2	36.0
Level of Service	F	C		D	B	A	F	C		E	D	D
Approach Delay (s)		25.5			19.0			78.8			37.9	
Approach LOS		C			B			E			D	

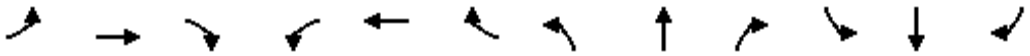
Intersection Summary			
HCM Average Control Delay	25.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	173	600	88	101	583	373	85	531	93	301	421	134
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95		0.97	0.95		0.97	0.95	
Frt	1.00	0.98		1.00	0.94		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1598	3134		1598	3008		3100	3124		3100	3080	
Flt Permitted	0.25	1.00		0.32	1.00		0.41	1.00		0.36	1.00	
Satd. Flow (perm)	420	3134		535	3008		1326	3124		1172	3080	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	182	632	93	106	614	393	89	559	98	317	443	141
RTOR Reduction (vph)	0	29	0	0	104	0	0	35	0	0	76	0
Lane Group Flow (vph)	182	696	0	106	903	0	89	622	0	317	508	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Effective Green, g (s)	16.0	16.0		16.0	16.0		16.0	16.0		16.0	16.0	
Actuated g/C Ratio	0.40	0.40		0.40	0.40		0.40	0.40		0.40	0.40	
Clearance Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)	168	1254		214	1203		530	1250		469	1232	
v/s Ratio Prot		0.22			0.30			0.20			0.16	
v/s Ratio Perm	c0.43			0.20			0.07			c0.27		
v/c Ratio	1.08	0.56		0.50	0.75		0.17	0.50		0.68	0.41	
Uniform Delay, d1	12.0	9.3		9.0	10.3		7.7	9.0		9.9	8.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	93.4	1.8		8.0	4.3		0.7	1.4		7.6	1.0	
Delay (s)	105.4	11.0		17.0	14.6		8.4	10.4		17.5	9.6	
Level of Service	F	B		B	B		A	B		B	A	
Approach Delay (s)		30.0			14.8			10.2			12.4	
Approach LOS		C			B			B			B	

Intersection Summary			
HCM Average Control Delay	17.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	40.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	78.9%	ICU Level of Service	D
Analysis Period (min)	15		

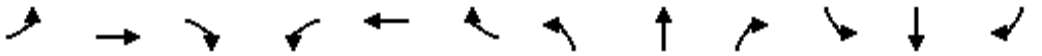
c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	932	16	26	964	28	3	3	23	38	6	31
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	21	981	17	27	1015	29	3	3	24	40	6	33
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		663										
pX, platoon unblocked				0.96			0.96	0.96	0.96	0.96	0.96	
vC, conflicting volume	1044			998			1629	2131	499	1643	2124	522
vC1, stage 1 conf vol							1032	1032		1084	1084	
vC2, stage 2 conf vol							598	1099		558	1040	
vCu, unblocked vol	1044			918			1575	2096	400	1589	2089	522
tC, single (s)	4.3			4.3			7.7	6.7	7.1	7.7	6.7	7.1
tC, 2 stage (s)							6.7	5.7		6.7	5.7	
tF (s)	2.3			2.3			3.6	4.1	3.4	3.6	4.1	3.4
p0 queue free %	97			96			98	98	96	79	97	93
cM capacity (veh/h)	616			664			203	184	556	189	186	479

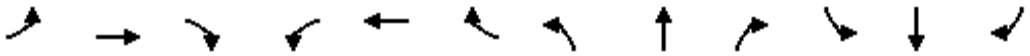
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	512	507	535	537	31	79
Volume Left	21	0	27	0	3	40
Volume Right	0	17	0	29	24	33
cSH	616	1700	664	1700	400	251
Volume to Capacity	0.03	0.30	0.04	0.32	0.08	0.31
Queue Length 95th (ft)	3	0	3	0	6	32
Control Delay (s)	1.0	0.0	1.1	0.0	14.7	25.7
Lane LOS	A		A		B	D
Approach Delay (s)	0.5		0.6		14.7	25.7
Approach LOS					B	D

Intersection Summary				
Average Delay	1.6			
Intersection Capacity Utilization	65.3%	ICU Level of Service	C	
Analysis Period (min)	15			



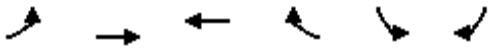
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	149	662	100	68	687	190	260	704	158	216	311	173
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	0.95		1.00	0.95	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.97		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1598	3133		1598	3195	1430	1598	1636		1598	1592	
Flt Permitted	0.26	1.00		0.25	1.00	1.00	0.38	1.00		0.15	1.00	
Satd. Flow (perm)	431	3133		420	3195	1430	633	1636		259	1592	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	157	697	105	72	723	200	274	741	166	227	327	182
RTOR Reduction (vph)	0	24	0	0	0	114	0	16	0	0	25	0
Lane Group Flow (vph)	157	778	0	72	723	86	274	891	0	227	484	0
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)	16.0	16.0		16.0	16.0	16.0	26.0	26.0		26.0	26.0	
Effective Green, g (s)	16.0	16.0		16.0	16.0	16.0	26.0	26.0		26.0	26.0	
Actuated g/C Ratio	0.32	0.32		0.32	0.32	0.32	0.52	0.52		0.52	0.52	
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
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)	138	1003		134	1022	458	329	851		135	828	
v/s Ratio Prot		0.25			0.23			0.54			0.30	
v/s Ratio Perm	c0.36			0.17		0.06	0.43			c0.88		
v/c Ratio	1.14	0.78		0.54	0.71	0.19	0.83	1.05		1.68	0.58	
Uniform Delay, d1	17.0	15.4		14.0	14.9	12.3	10.2	12.0		12.0	8.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	118.4	3.8		4.1	2.3	0.2	16.3	43.8		336.6	1.1	
Delay (s)	135.4	19.2		18.1	17.2	12.5	26.5	55.8		348.6	9.3	
Level of Service	F	B		B	B	B	C	E		F	A	
Approach Delay (s)		38.2			16.3			49.0			114.0	
Approach LOS		D			B			D			F	

Intersection Summary			
HCM Average Control Delay	50.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.48		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			



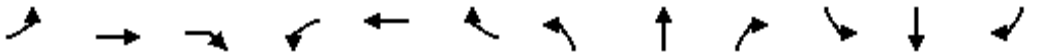
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	670	7	43	537	0	1	0	38	118	5	8
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)		4.0			4.0			4.0		4.0	4.0	
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	
Frt		1.00			1.00			0.87		1.00	0.91	
Flt Protected		1.00			1.00			1.00		0.95	1.00	
Satd. Flow (prot)		1680			1676			1459		1598	1527	
Flt Permitted		1.00			0.78			1.00		0.95	1.00	
Satd. Flow (perm)		1680			1309			1459		1598	1527	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	705	7	45	565	0	1	0	40	124	5	8
RTOR Reduction (vph)	0	0	0	0	0	0	0	32	0	0	7	0
Lane Group Flow (vph)	0	712	0	0	610	0	0	9	0	124	6	0
Turn Type				Perm			Split			Split		
Protected Phases		4			8		2	2		6	6	
Permitted Phases				8								
Actuated Green, G (s)		48.7			48.7			17.3		12.0	12.0	
Effective Green, g (s)		48.7			48.7			17.3		12.0	12.0	
Actuated g/C Ratio		0.54			0.54			0.19		0.13	0.13	
Clearance Time (s)		4.0			4.0			4.0		4.0	4.0	
Vehicle Extension (s)		3.0			3.0			3.0		3.0	3.0	
Lane Grp Cap (vph)		909			708			280		213	204	
v/s Ratio Prot		0.42						c0.01		c0.08	0.00	
v/s Ratio Perm					c0.47							
v/c Ratio		0.78			0.86			0.03		0.58	0.03	
Uniform Delay, d1		16.4			17.8			29.5		36.6	33.9	
Progression Factor		1.00			0.68			1.00		1.00	1.00	
Incremental Delay, d2		4.4			9.3			0.2		4.0	0.1	
Delay (s)		20.9			21.4			29.7		40.7	34.0	
Level of Service		C			C			C		D	C	
Approach Delay (s)		20.9			21.4			29.7			40.0	
Approach LOS		C			C			C			D	

Intersection Summary			
HCM Average Control Delay	23.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	279	265	628	127	0	0
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0	4.0			
Lane Util. Factor	1.00	0.95	0.95			
Frt	1.00	1.00	0.97			
Flt Protected	0.95	1.00	1.00			
Satd. Flow (prot)	1598	3195	3115			
Flt Permitted	0.95	1.00	1.00			
Satd. Flow (perm)	1598	3195	3115			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	294	279	661	134	0	0
RTOR Reduction (vph)	0	0	41	0	0	0
Lane Group Flow (vph)	294	279	754	0	0	0
Turn Type	Prot					
Protected Phases	7	4	8			
Permitted Phases						
Actuated Green, G (s)	8.2	30.5	14.3			
Effective Green, g (s)	8.2	30.5	14.3			
Actuated g/C Ratio	0.27	1.00	0.47			
Clearance Time (s)	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0			
Lane Grp Cap (vph)	430	3195	1460			
v/s Ratio Prot	c0.18	0.09	c0.24			
v/s Ratio Perm						
v/c Ratio	0.68	0.09	0.52			
Uniform Delay, d1	10.0	0.0	5.7			
Progression Factor	1.00	1.00	1.00			
Incremental Delay, d2	4.5	0.0	0.3			
Delay (s)	14.4	0.0	6.0			
Level of Service	B	A	A			
Approach Delay (s)		7.4	6.0		0.0	
Approach LOS		A	A		A	

Intersection Summary			
HCM Average Control Delay	6.6	HCM Level of Service	A
HCM Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	30.5	Sum of lost time (s)	8.0
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL2	SBT	SBR
Lane Configurations												
Volume (vph)	377	110	134	169	16	291	41	595	159	327	588	280
Ideal Flow (vphpl)	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850	1850
Total Lost time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.95	1.00
Frt	1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1598	2932		1598	1682	1430	1598	4591	1430	1598	3195	1430
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1598	2932		1598	1682	1430	1598	4591	1430	1598	3195	1430
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	397	116	141	178	17	306	43	626	167	344	619	295
RTOR Reduction (vph)	0	0	0	0	0	255	0	0	0	0	0	184
Lane Group Flow (vph)	397	257	0	178	17	51	43	626	167	344	619	111
Turn Type	Split			Split		Perm	Prot		Perm	Prot		Perm
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases						8			2			6
Actuated Green, G (s)	16.1	16.1		12.9	12.9	12.9	3.4	16.4	16.4	16.1	29.1	29.1
Effective Green, g (s)	16.1	16.1		12.9	12.9	12.9	3.4	16.4	16.4	16.1	29.1	29.1
Actuated g/C Ratio	0.21	0.21		0.17	0.17	0.17	0.04	0.21	0.21	0.21	0.38	0.38
Clearance Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	332	609		266	280	238	70	972	303	332	1200	537
v/s Ratio Prot	c0.25	0.09		c0.11	0.01		0.03	c0.14		c0.22	0.19	
v/s Ratio Perm						0.04			0.12			0.08
v/c Ratio	1.20	0.42		0.67	0.06	0.21	0.61	0.64	0.55	1.04	0.52	0.21
Uniform Delay, d1	30.7	26.7		30.3	27.2	27.9	36.4	27.9	27.3	30.7	18.7	16.4
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	113.8	0.5		6.3	0.1	0.5	14.9	1.5	2.2	59.1	0.4	0.2
Delay (s)	144.5	27.1		36.6	27.3	28.4	51.3	29.4	29.4	89.8	19.1	16.6
Level of Service	F	C		D	C	C	D	C	C	F	B	B
Approach Delay (s)		98.3			31.2			30.5			37.8	
Approach LOS		F			C			C			D	

Intersection Summary			
HCM Average Control Delay	47.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	77.5	Sum of lost time (s)	16.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

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