

Appendix B

Existing Intersection Capacity Analyses



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑	↑	↑
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	766	162	244	1358	57	14
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	782	165	249	1386	58	14
Pedestrians	99			105	97	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	8			9	8	
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)	178					
pX, platoon unblocked	0.83					
vC, conflicting volume			1044			2251 545
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1044			2304 545
tC, single (s)			4.1			6.8 6.9
tC, 2 stage (s)						
tF (s)			2.2			3.5 3.3
p0 queue free %			59			0 96
cM capacity (veh/h)			609			13 405
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1 NB 2
Volume Total	313	313	322	711	924	58 14
Volume Left	0	0	0	249	0	58 0
Volume Right	0	0	165	0	0	0 14
cSH	1700	1700	1700	609	1700	13 405
Volume to Capacity	0.18	0.18	0.19	0.41	0.54	4.37 0.04
Queue Length 95th (ft)	0	0	0	50	0	Err 3
Control Delay (s)	0.0	0.0	0.0	10.7	0.0	Err 14.2
Lane LOS				B	F B	
Approach Delay (s)	0.0				4.7	8030.2
Approach LOS				F		
Intersection Summary						
Average Delay	222.1					
Intersection Capacity Utilization	94.1%			ICU Level of Service		F
Analysis Period (min)	15					

												
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)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor		0.91			0.95	1.00		1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	0.94		1.00		1.00	0.82	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		0.99	1.00	
Frt		1.00			1.00	0.85		1.00		1.00	0.86	
Flt Protected		1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		4571			3185	1339		1670		1584	1182	
Flt Permitted		0.91			0.95	1.00		1.00		0.73	1.00	
Satd. Flow (perm)		4179			3041	1339		1670		1217	1182	
Volume (vph)	7	804	3	1	1339	390	0	40	1	196	17	158
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	7	820	3	1	1366	398	0	41	1	200	17	161
RTOR Reduction (vph)	0	0	0	0	0	92	0	1	0	0	81	0
Lane Group Flow (vph)	0	830	0	0	1367	306	0	41	0	200	97	0
Confl. Peds. (#/hr)	18		90	90		18	111		3	3		111
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	8			4			2			6		
Permitted Phases	8			4			4			6		
Actuated Green, G (s)	50.0			75.0			15.0			15.0		
Effective Green, g (s)	77.0			77.0			17.0			17.0		
Actuated g/C Ratio	0.77			0.77			0.17			0.17		
Clearance Time (s)	30.0			5.0			5.0			5.0		
Lane Grp Cap (vph)	3218			2342			1031			284		
v/s Ratio Prot							0.02			0.08		
v/s Ratio Perm	0.20			0.45			0.23			0.16		
v/c Ratio	0.26			0.58			0.30			0.14		
Uniform Delay, d1	3.3			4.8			3.4			35.3		
Progression Factor	1.00			0.56			0.00			1.00		
Incremental Delay, d2	0.2			0.4			0.3			1.1		
Delay (s)	3.5			3.1			0.3			36.4		
Level of Service	A			A			A			D		
Approach Delay (s)	3.5			2.5						36.4		
Approach LOS	A			A			D			E		
Intersection Summary												
HCM Average Control Delay	12.0			HCM Level of Service			B					
HCM Volume to Capacity ratio	0.65											
Actuated Cycle Length (s)	100.0			Sum of lost time (s)			6.0					
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	
Lane Util. Factor		0.91			0.91			0.91			0.91	
Frpb, ped/bikes		1.00			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		1.00			1.00			1.00			0.98	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		4554			4561			4577			4433	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		4554			4561			4577			4433	
Volume (vph)	0	984	25	0	1355	24	0	1294	0	0	2539	431
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1004	26	0	1383	24	0	1320	0	0	2591	440
RTOR Reduction (vph)	0	1	0	0	2	0	0	0	0	0	2	0
Lane Group Flow (vph)	0	1029	0	0	1405	0	0	1320	0	0	3029	0
Confl. Peds. (#/hr)	57		44	44		57	101		178	178		101
Turn Type												
Protected Phases		6			2			4			8	
Permitted Phases												
Actuated Green, G (s)		38.0			38.0			51.0			51.0	
Effective Green, g (s)		39.0			39.0			53.0			53.0	
Actuated g/C Ratio		0.39			0.39			0.53			0.53	
Clearance Time (s)		5.0			5.0			6.0			6.0	
Lane Grp Cap (vph)		1776			1779			2426			2349	
v/s Ratio Prot		0.23			0.31			0.29			0.68	
v/s Ratio Perm												
v/c Ratio		0.58			0.79			0.54			1.29	
Uniform Delay, d1		24.0			26.9			15.5			23.5	
Progression Factor		1.05			1.06			0.42			1.23	
Incremental Delay, d2		1.3			3.4			0.7			130.5	
Delay (s)		26.5			32.0			7.2			159.3	
Level of Service		C			C			A			F	
Approach Delay (s)		26.5			32.0			7.2			159.3	
Approach LOS		C			C			A			F	
Intersection Summary												
HCM Average Control Delay		83.2			HCM Level of Service			F				
HCM Volume to Capacity ratio		1.08										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			8.0				
Intersection Capacity Utilization		102.5%			ICU Level of Service			G				
Analysis Period (min)		15										
c Critical Lane Group												

												
Movement	EBL2	EBL	EBR	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2	NET
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0				3.0	3.0		3.0	3.0		3.0
Lane Util. Factor		1.00				1.00	1.00		1.00	1.00		0.91
Frpb, ped/bikes		0.98				1.00	0.99		1.00	0.44		0.99
Flpb, ped/bikes		0.90				1.00	1.00		1.00	1.00		1.00
Frt		0.98				1.00	0.85		1.00	0.85		0.99
Flt Protected		0.96				0.98	1.00		0.99	1.00		1.00
Satd. Flow (prot)		1374				1639	1407		1651	633		4523
Flt Permitted		0.96				0.62	1.00		0.89	1.00		1.00
Satd. Flow (perm)		1374				1048	1407		1486	633		4523
Volume (vph)	3	6	2	52	27	93	102	62	201	114	48	961
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	3	6	2	53	28	95	104	63	205	116	49	981
RTOR Reduction (vph)	0	0	0	0	0	0	34	0	0	15	0	5
Lane Group Flow (vph)	0	11	0	0	0	176	70	0	268	150	0	1019
Confl. Peds. (#/hr)	72		39	92	65		2	8		92	40	
Turn Type	Perm			Perm	Perm	custom	Perm			Perm		
Protected Phases		9				4			8			2
Permitted Phases	9			4	4		14	8		8		
Actuated Green, G (s)		8.0				28.0	58.0		28.0	28.0		19.0
Effective Green, g (s)		10.0				30.0	60.0		30.0	30.0		21.0
Actuated g/C Ratio		0.10				0.30	0.60		0.30	0.30		0.21
Clearance Time (s)		5.0				5.0			5.0	5.0		5.0
Lane Grp Cap (vph)		137				314	844		446	190		950
v/s Ratio Prot												0.23
v/s Ratio Perm		0.01				0.17	0.05		0.18	0.24		
v/c Ratio		0.08				0.56	0.08		0.60	0.79		1.07
Uniform Delay, d1		40.8				29.5	8.4		29.9	32.1		39.5
Progression Factor		1.00				1.00	1.00		1.14	1.15		1.00
Incremental Delay, d2		1.1				7.1	0.2		5.7	26.5		50.8
Delay (s)		42.0				36.5	8.6		39.7	63.3		90.3
Level of Service		D				D	A		D	E		F
Approach Delay (s)		42.0				26.1			48.7			90.3
Approach LOS		D				C			D			F
Intersection Summary												
HCM Average Control Delay		128.4				HCM Level of Service			F			
HCM Volume to Capacity ratio		1.01										
Actuated Cycle Length (s)		100.0				Sum of lost time (s)			9.0			
Intersection Capacity Utilization		137.0%				ICU Level of Service			H			
Analysis Period (min)		15										
c Critical Lane Group												



Movement	NER	SWL	SWT	SWR	SWR2
Left-Through Configurations			↑↑↑		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900
Total Lost time (s)			3.0		
Lane Util. Factor			0.91		
Frpb, ped/bikes			1.00		
Flpb, ped/bikes			1.00		
Frt			1.00		
Flt Protected			0.99		
Satd. Flow (prot)			4540		
Flt Permitted			0.66		
Satd. Flow (perm)			3016		
Volume (vph)	42	261	2281	18	4
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	43	266	2328	18	4
RTOR Reduction (vph)	0	0	0	0	0
Lane Group Flow (vph)	0	0	2616	0	0
Confl. Peds. (#/hr)	39	39		85	72
Turn Type	pm+pt				
Protected Phases		1	6		
Permitted Phases		6			
Actuated Green, G (s)			48.0		
Effective Green, g (s)			51.0		
Actuated g/C Ratio			0.51		
Clearance Time (s)			6.0		
Lane Grp Cap (vph)			1950		
v/s Ratio Prot			c0.36		
v/s Ratio Perm			c0.32		
v/c Ratio			1.34		
Uniform Delay, d1			24.5		
Progression Factor			0.56		
Incremental Delay, d2			154.0		
Delay (s)			167.8		
Level of Service			F		
Approach Delay (s)			167.8		
Approach LOS			F		
Intersection Summary					

												
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)	50	0	54	0	0	0	50	224	1	1	462	43
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	51	0	55	0	0	0	51	229	1	1	471	44
Pedestrians		10			13			80			22	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			1			7			2	
Right turn flare (veh)												
Median type	None			None								
Median storage (veh)												
Upstream signal (ft)												397
pX, platoon unblocked	0.91	0.91	0.91	0.91	0.91		0.91					
vC, conflicting volume	859	850	583	975	871	264	525			243		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	845	836	543	972	859	264	480			243		
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 %	79	100	88	100	100	100	95			100		
cM capacity (veh/h)	237	257	456	162	249	752	980			1309		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	106	0	281	516								
Volume Left	51	0	51	1								
Volume Right	55	0	1	44								
cSH	316	1700	980	1309								
Volume to Capacity	0.34	0.00	0.05	0.00								
Queue Length 95th (ft)	36	0	4	0								
Control Delay (s)	22.0	0.0	2.1	0.0								
Lane LOS	C	A	A	A								
Approach Delay (s)	22.0	0.0	2.1	0.0								
Approach LOS	C	A										
Intersection Summary												
Average Delay				3.2								
Intersection Capacity Utilization				69.5%	ICU Level of Service				C			
Analysis Period (min)				15								

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑			↑			↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		0.91			0.91			1.00			1.00	
Frpb, ped/bikes		0.97			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			0.99			0.99	
Frt		0.98			1.00			0.99			0.92	
Flt Protected		1.00			1.00			0.96			0.99	
Satd. Flow (prot)		4375			4570			1564			1484	
Flt Permitted		0.94			0.93			0.76			0.94	
Satd. Flow (perm)		4105			4233			1242			1415	
Volume (vph)	2	747	95	15	1239	1	73	2	7	8	3	16
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	2	762	97	15	1264	1	74	2	7	8	3	16
RTOR Reduction (vph)	0	16	0	0	0	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	845	0	0	1280	0	0	80	0	0	15	0
Confl. Peds. (#/hr)	25		73	73		25	6		23	23		6
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		8		2		6					
Permitted Phases	4		8		2		6					
Actuated Green, G (s)	68.0		68.0		22.0		22.0					
Effective Green, g (s)	70.0		70.0		24.0		24.0					
Actuated g/C Ratio	0.70		0.70		0.24		0.24					
Clearance Time (s)	5.0		5.0		5.0		5.0					
Lane Grp Cap (vph)	2874		2963		298		340					
v/s Ratio Prot												
v/s Ratio Perm	0.21		c0.30		c0.06		0.01					
v/c Ratio	0.29		0.43		0.27		0.04					
Uniform Delay, d1	5.7		6.5		30.9		29.2					
Progression Factor	0.38		0.44		1.00		1.00					
Incremental Delay, d2	0.2		0.3		2.2		0.2					
Delay (s)	2.4		3.2		33.1		29.4					
Level of Service	A		A		C		C					
Approach Delay (s)	2.4		3.2		33.1		29.4					
Approach LOS	A		A		C		C					
Intersection Summary												
HCM Average Control Delay	4.3		HCM Level of Service		A							
HCM Volume to Capacity ratio	0.39											
Actuated Cycle Length (s)	100.0		Sum of lost time (s)		6.0							
Intersection Capacity Utilization	58.2%		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)		3.0			3.0					3.0	3.0	3.0
Lane Util. Factor		0.91			0.91					1.00	1.00	1.00
Frpb, ped/bikes		0.99			1.00					1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00					0.97	1.00	1.00
Frt		0.99			1.00					1.00	1.00	0.85
Flt Protected		0.99			1.00					0.95	1.00	1.00
Satd. Flow (prot)		4473			4560					1545	1676	1387
Flt Permitted		0.99			1.00					0.95	1.00	1.00
Satd. Flow (perm)		4473			4560					1545	1676	1387
Volume (vph)	95	599	49	80	1300	4	0	0	0	14	77	70
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	97	611	50	82	1327	4	0	0	0	14	79	71
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	0	0	0	55
Lane Group Flow (vph)	0	750	0	0	1413	0	0	0	0	14	79	16
Confl. Peds. (#/hr)	29		26	26		29	8		16	16		8
Turn Type	custom		custom						Perm		Perm	
Protected Phases	1	1		5	5						6	
Permitted Phases	1			5						6		6
Actuated Green, G (s)		24.0			41.0					20.0	20.0	20.0
Effective Green, g (s)		26.0			43.0					22.0	22.0	22.0
Actuated g/C Ratio		0.26			0.43					0.22	0.22	0.22
Clearance Time (s)		5.0			5.0					5.0	5.0	5.0
Lane Grp Cap (vph)		1163			1961					340	369	305
v/s Ratio Prot		c0.17			c0.31						c0.05	
v/s Ratio Perm										0.01		0.01
v/c Ratio		0.64			0.72					0.04	0.21	0.05
Uniform Delay, d1		32.9			23.5					30.7	31.9	30.8
Progression Factor		0.64			1.00					1.00	1.00	1.00
Incremental Delay, d2		2.7			2.3					0.2	1.3	0.3
Delay (s)		23.6			25.9					30.9	33.2	31.1
Level of Service		C			C					C	C	C
Approach Delay (s)		23.6			25.9			0.0			32.1	
Approach LOS		C			C			A			C	
Intersection Summary												
HCM Average Control Delay		25.6			HCM Level of Service			C				
HCM Volume to Capacity ratio		0.58										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			9.0				
Intersection Capacity Utilization		69.5%			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)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0			3.0	3.0	3.0
Lane Util. Factor	0.91			0.91	0.97	0.91
Frpb, ped/bikes	1.00			1.00	1.00	1.00
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	0.99			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	4522			4563	3090	1297
Flt Permitted	1.00			0.67	0.95	1.00
Satd. Flow (perm)	4522			3061	3090	1297
Volume (vph)	1227	91	182	2934	36	42
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1252	93	186	2994	37	43
RTOR Reduction (vph)	8	0	0	0	0	9
Lane Group Flow (vph)	1337	0	0	3180	37	34
Confl. Peds. (#/hr)		1	1		2	16
Turn Type			pm+pt			pt+ov
Protected Phases	4		3	8	9	9 3
Permitted Phases			8			
Actuated Green, G (s)	40.0			79.0	11.0	50.0
Effective Green, g (s)	42.0			81.0	13.0	52.0
Actuated g/C Ratio	0.42			0.81	0.13	0.52
Clearance Time (s)	5.0			5.0	5.0	
Lane Grp Cap (vph)	1899			3020	402	674
v/s Ratio Prot	0.30			c0.38	c0.01	0.03
v/s Ratio Perm				c0.47		
v/c Ratio	0.70			1.05	0.09	0.05
Uniform Delay, d1	23.9			9.5	38.3	11.8
Progression Factor	2.28			1.00	1.00	1.00
Incremental Delay, d2	1.9			32.5	0.5	0.1
Delay (s)	56.3			42.0	38.8	12.0
Level of Service	E			D	D	B
Approach Delay (s)	56.3			42.0	24.4	
Approach LOS	E			D	C	
Intersection Summary						
HCM Average Control Delay		45.9		HCM Level of Service		D
HCM Volume to Capacity ratio		0.91				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		6.0
Intersection Capacity Utilization		119.0%		ICU Level of Service		H
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)	1102	145	86	1106	96	8	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly flow rate (vph)	1148	151	90	1152	100	8	
Pedestrians	64			63	63		
Lane Width (ft)	12.0			12.0	12.0		
Walking Speed (ft/s)	4.0			4.0	4.0		
Percent Blockage	5			5	5		
Right turn flare (veh)							
Median type				None			
Median storage (veh)							
Upstream signal (ft)				161			
pX, platoon unblocked	0.00	0.00	0.00	0.00	0.00	0.00	
vC, conflicting volume			0		0	0	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			0		0	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 %			0		0	0	
cM capacity (veh/h)			0		0	0	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	NB 2
Volume Total	459	459	381	474	768	100	8
Volume Left	0	0	0	90	0	100	0
Volume Right	0	0	151	0	0	0	8
cSH	0	0	0	0	0	0	0
Volume to Capacity	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Queue Length 95th (ft)	0	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS				A		A	A
Approach Delay (s)	0.0			0.0		0.0	
Approach LOS						A	
Intersection Summary							
Average Delay			0.0				
Intersection Capacity Utilization			87.0%		ICU Level of Service		E
Analysis Period (min)			15				

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑	↑		↑		↑	↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor		0.91			0.95	1.00		1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	0.87		0.99		1.00	0.87	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		0.98	1.00	
Frt		1.00			1.00	0.85		0.95		1.00	0.87	
Flt Protected		1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		4563			3185	1240		1576		1566	1263	
Flt Permitted		0.93			0.95	1.00		0.99		0.80	1.00	
Satd. Flow (perm)		4237			3033	1240		1569		1323	1263	
Volume (vph)	8	1140	14	3	956	323	1	18	10	293	10	69
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	8	1188	15	3	996	336	1	19	10	305	10	72
RTOR Reduction (vph)	0	1	0	0	0	64	0	9	0	0	62	0
Lane Group Flow (vph)	0	1210	0	0	999	272	0	21	0	305	20	0
Confl. Peds. (#/hr)	41		50	50		41	67		8	8		67
Turn Type	Perm			Perm		Perm	Perm			Perm		
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		
Actuated Green, G (s)		73.0			95.0	95.0		15.0		15.0	15.0	
Effective Green, g (s)		97.0			97.0	97.0		17.0		17.0	17.0	
Actuated g/C Ratio		0.81			0.81	0.81		0.14		0.14	0.14	
Clearance Time (s)		27.0			5.0	5.0		5.0		5.0	5.0	
Lane Grp Cap (vph)		3425			2452	1002		222		187	179	
v/s Ratio Prot											0.02	
v/s Ratio Perm		0.29			0.33	0.22		0.01		0.23		
v/c Ratio		0.35			0.41	0.27		0.10		1.63	0.11	
Uniform Delay, d1		3.1			3.3	2.8		44.8		51.5	44.9	
Progression Factor		1.00			1.00	1.00		1.00		1.00	1.00	
Incremental Delay, d2		0.3			0.5	0.7		0.9		307.0	1.3	
Delay (s)		3.4			3.8	3.5		45.7		358.5	46.2	
Level of Service		A			A	A		D		F	D	
Approach Delay (s)		3.4			3.7			45.7			292.3	
Approach LOS		A			A			D			F	
Intersection Summary												
HCM Average Control Delay		41.7			HCM Level of Service			D				
HCM Volume to Capacity ratio		0.59										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)			6.0				
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)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		0.91			0.91			0.91			0.91	
Frpb, ped/bikes		1.00			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		1.00			0.99			1.00			0.96	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		4572			4537			4577			4338	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		4572			4537			4577			4338	
Volume (vph)	0	1402	8	0	934	48	0	2948	0	0	1158	455
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	0	1460	8	0	973	50	0	3071	0	0	1206	474
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	15	0
Lane Group Flow (vph)	0	1467	0	0	1023	0	0	3071	0	0	1665	0
Confl. Peds. (#/hr)	24		24	24		24	44		128	128		44
Turn Type												
Protected Phases		6			2			4			8	
Permitted Phases												
Actuated Green, G (s)		38.0			38.0			52.0			52.0	
Effective Green, g (s)		39.0			39.0			53.0			53.0	
Actuated g/C Ratio		0.39			0.39			0.53			0.53	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		1783			1769			2426			2299	
v/s Ratio Prot		c0.32			0.23			c0.67			0.38	
v/s Ratio Perm												
v/c Ratio		0.82			0.58			1.27			0.72	
Uniform Delay, d1		27.4			24.0			23.5			17.9	
Progression Factor		1.00			1.48			1.84			0.94	
Incremental Delay, d2		4.4			1.3			120.0			1.7	
Delay (s)		31.8			36.9			163.3			18.6	
Level of Service		C			D			F			B	
Approach Delay (s)		31.8			36.9			163.3			18.6	
Approach LOS		C			D			F			B	
Intersection Summary												
HCM Average Control Delay		85.2			HCM Level of Service			F				
HCM Volume to Capacity ratio		1.08										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			8.0				
Intersection Capacity Utilization		100.3%			ICU Level of Service			G				
Analysis Period (min)		15										
c Critical Lane Group												

Movement	EBL2	EBL	EBR	EBR2	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0					3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00					1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.93					1.00	0.99		1.00	0.67	
Flpb, ped/bikes		0.96					0.92	1.00		1.00	1.00	
Frt		0.91					1.00	0.85		1.00	0.85	
Flt Protected		0.98					0.99	1.00		0.97	1.00	
Satd. Flow (prot)		1349					1526	1406		1631	954	
Flt Permitted		0.98					0.78	1.00		0.57	1.00	
Satd. Flow (perm)		1349					1208	1406		950	954	
Volume (vph)	3	27	48	11	47	27	169	406	108	96	77	17
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	3	28	50	11	49	28	176	423	112	100	80	18
RTOR Reduction (vph)	0	5	0	0	0	0	0	49	0	0	8	0
Lane Group Flow (vph)	0	88	0	0	0	0	253	374	0	212	90	0
Confl. Peds. (#/hr)	65		10	40	40	65		2	2		40	17
Turn Type	Perm				Perm	Perm	custom	Perm		Perm		
Protected Phases		9					4			8		
Permitted Phases	9				4	4		14	8		8	
Actuated Green, G (s)		7.0					28.0	41.0		28.0	28.0	
Effective Green, g (s)		10.0					30.0	43.0		30.0	30.0	
Actuated g/C Ratio		0.10					0.30	0.43		0.30	0.30	
Clearance Time (s)		6.0					5.0			5.0	5.0	
Lane Grp Cap (vph)		135					362	605		285	286	
v/s Ratio Prot												
v/s Ratio Perm		0.06					0.21	0.27		0.22	0.09	
v/c Ratio		0.65					0.70	0.62		0.74	0.31	
Uniform Delay, d1		43.3					31.0	22.1		31.5	27.0	
Progression Factor		1.00					1.00	1.00		1.00	1.00	
Incremental Delay, d2		21.6					10.7	4.7		16.1	2.8	
Delay (s)		64.9					41.7	26.8		47.6	29.9	
Level of Service		E					D	C		D	C	
Approach Delay (s)		64.9					32.4			42.0		
Approach LOS		E					C			D		
Intersection Summary												
HCM Average Control Delay		124.0					HCM Level of Service			F		
HCM Volume to Capacity ratio		0.99										
Actuated Cycle Length (s)		100.0					Sum of lost time (s)			9.0		
Intersection Capacity Utilization		129.6%					ICU Level of Service			H		
Analysis Period (min)		15										
c Critical Lane Group												

							
Movement	NEL	NET	NER	SWL	SWT	SWR	SWR2
Lane Configurations		↑↑↑			↑↑↑		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0		
Lane Util. Factor		0.91			0.91		
Frpb, ped/bikes		1.00			1.00		
Flpb, ped/bikes		1.00			1.00		
Frt		1.00			1.00		
Flt Protected		1.00			1.00		
Satd. Flow (prot)		4571			4542		
Flt Permitted		0.94			0.66		
Satd. Flow (perm)		4290			3001		
Volume (vph)	3	2165	13	85	1066	7	8
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	3	2255	14	89	1110	7	8
RTOR Reduction (vph)	0	1	0	0	0	0	0
Lane Group Flow (vph)	0	2271	0	0	1214	0	0
Confl. Peds. (#/hr)	67		10	10		65	67
Turn Type	Perm			pm+pt			
Protected Phases		2		1	6		
Permitted Phases	2			6			
Actuated Green, G (s)		36.0			49.0		
Effective Green, g (s)		38.0			51.0		
Actuated g/C Ratio		0.38			0.51		
Clearance Time (s)		5.0			5.0		
Lane Grp Cap (vph)		1630			1685		
v/s Ratio Prot					c0.07		
v/s Ratio Perm		c0.53			0.30		
v/c Ratio		1.39			0.72		
Uniform Delay, d1		31.0			19.0		
Progression Factor		1.00			1.79		
Incremental Delay, d2		180.9			1.8		
Delay (s)		211.9			35.8		
Level of Service		F			D		
Approach Delay (s)		211.9			35.8		
Approach LOS		F			D		
Intersection Summary							

												
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)	161	0	78	1	0	4	10	484	0	1	227	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	168	0	81	1	0	4	10	504	0	1	236	15
Pedestrians	1			3			48			15		
Lane Width (ft)	12.0			12.0			12.0			12.0		
Walking Speed (ft/s)	4.0			4.0			4.0			4.0		
Percent Blockage	0			0			4			1		
Right turn flare (veh)												
Median type	None			None								
Median storage veh												
Upstream signal (ft)	384											
pX, platoon unblocked												
vC, conflicting volume	791	775	293	903	782	522	252				507	
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	791	775	293	903	782	522	252				507	
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 %	44	100	89	100	100	99	99				100	
cM capacity (veh/h)	298	325	716	217	322	546	1312				1055	
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	249	5	515	252								
Volume Left	168	1	10	1								
Volume Right	81	4	0	15								
cSH	368	419	1312	1055								
Volume to Capacity	0.68	0.01	0.01	0.00								
Queue Length 95th (ft)	119	1	1	0								
Control Delay (s)	32.9	13.7	0.2	0.0								
Lane LOS	D	B	A	A								
Approach Delay (s)	32.9	13.7	0.2	0.0								
Approach LOS	D	B										
Intersection Summary												
Average Delay	8.2											
Intersection Capacity Utilization	65.8%			ICU Level of Service				C				
Analysis Period (min)	15											

Washington Gateway
7: Florida Avenue & Burger King Entrance

Existing PM

												
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)		3.0			3.0			3.0			3.0	
Lane Util. Factor		0.91			0.91			1.00			1.00	
Frbp, ped/bikes		0.99			1.00			0.99			0.99	
Flpb, ped/bikes		1.00			1.00			0.99			0.99	
Frt		1.00			1.00			0.98			0.92	
Flt Protected		1.00			1.00			0.96			0.98	
Satd. Flow (prot)		4517			4574			1552			1494	
Flt Permitted		0.93			0.93			0.76			0.91	
Satd. Flow (perm)		4216			4272			1228			1386	
Volume (vph)	9	1130	33	5	844	0	128	3	25	10	3	16
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	9	1177	34	5	879	0	133	3	26	10	3	17
RTOR Reduction (vph)	0	3	0	0	0	0	0	7	0	0	13	0
Lane Group Flow (vph)	0	1217	0	0	884	0	0	155	0	0	17	0
Confl. Peds. (#/hr)	34		90	90		34	5		20	20		5
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		68.0			68.0			22.0			22.0	
Effective Green, g (s)		70.0			70.0			24.0			24.0	
Actuated g/C Ratio		0.70			0.70			0.24			0.24	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		2951			2990			295			333	
v/s Ratio Prot												
v/s Ratio Perm		c0.29			0.21			c0.13			0.01	
v/c Ratio		0.41			0.30			0.53			0.05	
Uniform Delay, d1		6.3			5.7			33.1			29.2	
Progression Factor		2.58			4.11			1.00			1.00	
Incremental Delay, d2		0.3			0.1			6.6			0.3	
Delay (s)		16.6			23.4			39.6			29.5	
Level of Service		B			C			D			C	
Approach Delay (s)		16.6			23.4			39.6			29.5	
Approach LOS		B			C			D			C	
Intersection Summary												
HCM Average Control Delay		21.0			HCM Level of Service			C				
HCM Volume to Capacity ratio		0.44										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			6.0				
Intersection Capacity Utilization		55.5%			ICU Level of Service			B				
Analysis Period (min)		15										
c Critical Lane Group												

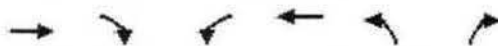
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑					↑	↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0					3.0	3.0	3.0
Lane Util. Factor		0.91			0.91					1.00	1.00	1.00
Frpb, ped/bikes		1.00			1.00					1.00	1.00	0.96
Flpb, ped/bikes		1.00			1.00					0.97	1.00	1.00
Frt		0.99			1.00					1.00	1.00	0.85
Flt Protected		1.00			1.00					0.95	1.00	1.00
Satd. Flow (prot)		4515			4546					1545	1676	1363
Flt Permitted		0.65			0.79					0.95	1.00	1.00
Satd. Flow (perm)		2944			3596					1545	1676	1363
Volume (vph)	77	1093	54	50	858	13	0	0	0	19	59	64
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	80	1139	56	52	894	14	0	0	0	20	61	67
RTOR Reduction (vph)	0	5	0	0	1	0	0	0	0	0	0	52
Lane Group Flow (vph)	0	1270	0	0	959	0	0	0	0	20	61	15
Confl. Peds. (#/hr)	23		22	22		23	17		16	16		17
Turn Type	Perm			Perm						Perm		Perm
Protected Phases		2			8						9	
Permitted Phases	2			8						9		9
Actuated Green, G (s)		41.0			24.0					20.0	20.0	20.0
Effective Green, g (s)		43.0			26.0					22.0	22.0	22.0
Actuated g/C Ratio		0.43			0.26					0.22	0.22	0.22
Clearance Time (s)		5.0			5.0					5.0	5.0	5.0
Lane Grp Cap (vph)		1266			935					340	369	300
v/s Ratio Prot											c0.04	
v/s Ratio Perm		c0.43			c0.27					0.01		0.01
v/c Ratio		1.11dl			1.03					0.06	0.17	0.05
Uniform Delay, d1		28.5			37.0					30.8	31.6	30.8
Progression Factor		0.39			1.00					1.00	1.00	1.00
Incremental Delay, d2		25.2			36.0					0.3	1.0	0.3
Delay (s)		36.5			73.0					31.1	32.5	31.1
Level of Service		D			E					C	C	C
Approach Delay (s)		36.5			73.0			0.0			31.7	
Approach LOS		D			E			A			C	

Intersection Summary

HCM Average Control Delay	50.9	HCM Level of Service	D
HCM Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		

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

c Critical Lane Group



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑	↑↑↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0			3.0	3.0	3.0
Lane Util. Factor	0.91			0.91	0.97	0.91
Frpb, ped/bikes	1.00			1.00	0.98	0.97
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	1.00			1.00	0.96	0.85
Flt Protected	1.00			1.00	0.97	1.00
Satd. Flow (prot)	5073			5073	3273	1402
Flt Permitted	1.00			0.68	0.97	1.00
Satd. Flow (perm)	5073			3440	3273	1402
Volume (vph)	2948	48	81	1569	44	82
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	3071	50	84	1634	46	85
RTOR Reduction (vph)	2	0	0	0	17	2
Lane Group Flow (vph)	3119	0	0	1718	47	65
Confl. Peds. (#/hr)					2	33
Turn Type			pm+pt		pm+ov	
Protected Phases	4		3	8	9	3
Permitted Phases			8			9
Actuated Green, G (s)	71.0			86.0	6.0	17.0
Effective Green, g (s)	72.0			87.0	7.0	19.0
Actuated g/C Ratio	0.72			0.87	0.07	0.19
Clearance Time (s)	4.0			4.0	4.0	4.0
Lane Grp Cap (vph)	3653			3189	229	308
v/s Ratio Prot	c0.61			c0.06	0.01	c0.03
v/s Ratio Perm				0.40		0.02
v/c Ratio	0.85			0.54	0.21	0.21
Uniform Delay, d1	10.2			1.6	43.9	34.2
Progression Factor	0.44			1.00	1.00	1.00
Incremental Delay, d2	0.3			0.7	2.0	1.5
Delay (s)	4.8			2.2	45.9	35.7
Level of Service	A			A	D	D
Approach Delay (s)	4.8			2.2	40.7	
Approach LOS	A			A	D	
Intersection Summary						
HCM Average Control Delay		4.8		HCM Level of Service		A
HCM Volume to Capacity ratio		0.73				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		3.0
Intersection Capacity Utilization		111.6%		ICU Level of Service		H
Analysis Period (min)		15				
c Critical Lane Group						

Appendix C

Background Future Intersection Capacity Analyses



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑		←	↑↑	←	←
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0		3.0	3.0	3.0	
Lane Util. Factor	0.91		1.00	0.95	0.97	
Frpb, ped/bikes	0.93		1.00	1.00	0.98	
Flpb, ped/bikes	1.00		1.00	1.00	1.00	
Frt	0.95		1.00	1.00	0.98	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	4058		1593	3185	2985	
Flt Permitted	1.00		0.09	1.00	0.96	
Satd. Flow (perm)	4058		156	3185	2985	
Volume (vph)	861	450	364	1597	115	15
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	879	459	371	1630	117	15
RTOR Reduction (vph)	94	0	0	0	10	0
Lane Group Flow (vph)	1244	0	371	1630	122	0
Confl. Peds. (#/hr)		97	97		99	105
Turn Type			pm+pt			
Protected Phases	8		7	4	2	
Permitted Phases			4			
Actuated Green, G (s)	38.0		75.0	75.0	15.0	
Effective Green, g (s)	40.0		77.0	77.0	17.0	
Actuated g/C Ratio	0.40		0.77	0.77	0.17	
Clearance Time (s)	5.0		4.0	5.0	5.0	
Lane Grp Cap (vph)	1623		609	2452	507	
v/s Ratio Prot	c0.31		0.21	c0.51	c0.04	
v/s Ratio Perm			0.26			
v/c Ratio	0.77		0.61	0.66	0.24	
Uniform Delay, d1	26.0		19.3	5.4	35.9	
Progression Factor	1.00		1.62	0.51	0.69	
Incremental Delay, d2	3.5		2.7	0.8	0.1	
Delay (s)	29.5		33.9	3.6	24.7	
Level of Service	C		C	A	C	
Approach Delay (s)	29.5			9.2	24.7	
Approach LOS	C			A	C	
Intersection Summary						
HCM Average Control Delay		17.6		HCM Level of Service		B
HCM Volume to Capacity ratio		0.63				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		9.0
Intersection Capacity Utilization		76.6%		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)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor		0.91			0.95	1.00		1.00		1.00	1.00	
Frpb, ped/bikes		1.00			1.00	0.94		1.00		1.00	0.77	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		1.00	1.00	
Frt		1.00			1.00	0.85		1.00		1.00	0.86	
Flt Protected		1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		4572			3185	1339		1671		1586	1112	
Flt Permitted		0.87			0.95	1.00		1.00		0.61	1.00	
Satd. Flow (perm)		3995			3041	1339		1671		1024	1112	
Volume (vph)	7	902	3	1	1602	519	0	42	1	250	18	247
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	7	920	3	1	1635	530	0	43	1	255	18	252
RTOR Reduction (vph)	0	0	0	0	0	196	0	1	0	0	21	0
Lane Group Flow (vph)	0	930	0	0	1636	334	0	43	0	255	249	0
Confl. Peds. (#/hr)	18		90	90		18	111		3	3		111
Turn Type	Perm			Perm		Perm				pm+pt		
Protected Phases		8			4			2		1	6	
Permitted Phases	8			4		4				6		
Actuated Green, G (s)		36.0			61.0	61.0		14.0		29.0	29.0	
Effective Green, g (s)		63.0			63.0	63.0		16.0		31.0	31.0	
Actuated g/C Ratio		0.63			0.63	0.63		0.16		0.31	0.31	
Clearance Time (s)		30.0			5.0	5.0		5.0		4.0	5.0	
Lane Grp Cap (vph)		2517			1916	844		267		385	345	
v/s Ratio Prot								0.03		0.08	0.22	
v/s Ratio Perm		0.23			0.54	0.25				0.13		
v/c Ratio		0.37			0.85	0.40		0.16		0.66	0.72	
Uniform Delay, d1		8.9			14.8	9.1		36.2		28.7	30.7	
Progression Factor		0.13			0.45	0.00		1.00		1.00	1.00	
Incremental Delay, d2		0.3			0.5	0.1		1.3		8.7	12.4	
Delay (s)		1.5			7.2	0.1		37.5		37.4	43.0	
Level of Service		A			A	A		D		D	D	
Approach Delay (s)		1.5			5.5			37.5			40.3	
Approach LOS		A			A			D			D	
Intersection Summary												
HCM Average Control Delay		9.8			HCM Level of Service			A				
HCM Volume to Capacity ratio		0.81										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			6.0				
Intersection Capacity Utilization		80.5%			ICU Level of Service			D				
Analysis Period (min)		15										
c Critical Lane Group												

												
Movement	EBL2	EBL	EBR	EBR2	NBL2	NBL	NBT	NBR	SBL	SBT	SBR	SBR2
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0					3.0	3.0		3.0	3.0	
Lane Util. Factor		1.00					1.00	1.00		1.00	1.00	
Frpb, ped/bikes		0.89					1.00	0.99		1.00	0.44	
Flpb, ped/bikes		0.93					1.00	1.00		1.00	1.00	
Frt		0.94					1.00	0.85		1.00	0.85	
Flt Protected		0.97					0.98	1.00		0.99	1.00	
Satd. Flow (prot)		1272					1643	1407		1662	633	
Flt Permitted		0.97					0.13	1.00		0.67	1.00	
Satd. Flow (perm)		1272					214	1407		1118	633	
Volume (vph)	3	83	45	25	80	32	168	153	92	433	160	59
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	3	85	46	26	82	33	171	156	94	442	163	60
RTOR Reduction (vph)	0	7	0	0	0	0	0	12	0	0	13	0
Lane Group Flow (vph)	0	153	0	0	0	0	286	144	0	536	210	0
Confl. Peds. (#/hr)	72		39	92	92	65		2	8		92	40
Turn Type	Perm				Perm	Perm	custom	Perm		Perm		Perm
Protected Phases		9					4			8		
Permitted Phases	9				4	4		14	8			8
Actuated Green, G (s)		8.0					28.0	58.0		28.0	28.0	
Effective Green, g (s)		10.0					30.0	60.0		30.0	30.0	
Actuated g/C Ratio		0.10					0.30	0.60		0.30	0.30	
Clearance Time (s)		5.0					5.0			5.0	5.0	
Lane Grp Cap (vph)		127					64	844		335	190	
v/s Ratio Prot												
v/s Ratio Perm		0.12					0.134	0.10		0.48	0.33	
v/c Ratio		1.20					4.47	0.17		1.60	1.10	
Uniform Delay, d1		45.0					35.0	8.9		35.0	35.0	
Progression Factor		1.00					1.08	1.35		0.75	0.73	
Incremental Delay, d2		144.5					1595.1	0.4		279.7	85.2	
Delay (s)		189.5					1632.8	12.5		305.8	110.7	
Level of Service		F					F	B		F	F	
Approach Delay (s)		189.5					1060.9			248.5		
Approach LOS		F					F			F		
Intersection Summary												
HCM Average Control Delay		326.8					HCM Level of Service			F		
HCM Volume to Capacity ratio		2.54										
Actuated Cycle Length (s)		100.0					Sum of lost time (s)			9.0		
Intersection Capacity Utilization		173.7%					ICU Level of Service			H		
Analysis Period (min)		15										
c Critical Lane Group												



Movement	NET	NER	SWL	SWT	SWR	SWR2
Lane Configurations	↑↑↑			↑↑↑		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0			3.0		
Lane Util. Factor	0.91			0.91		
Frbp, ped/bikes	1.00			0.99		
Flpb, ped/bikes	1.00			1.00		
Frt	0.99			1.00		
Flt Protected	1.00			0.99		
Satd. Flow (prot)	4533			4474		
Flt Permitted	1.00			0.70		
Satd. Flow (perm)	4533			3169		
Volume (vph)	1017	44	771	2419	101	4
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1038	45	787	2468	103	4
RTOR Reduction (vph)	5	0	0	0	0	0
Lane Group Flow (vph)	1078	0	0	3362	0	0
Confl. Peds. (#/hr)		39	39		85	72
Turn Type		pm+pt				
Protected Phases	2		1	6		
Permitted Phases			6			
Actuated Green, G (s)	19.0			48.0		
Effective Green, g (s)	21.0			51.0		
Actuated g/C Ratio	0.21			0.51		
Clearance Time (s)	5.0			6.0		
Lane Grp Cap (vph)	952			1969		
v/s Ratio Prot	0.24			c0.46		
v/s Ratio Perm				c0.41		
v/c Ratio	1.13			1.71		
Uniform Delay, d1	39.5			24.5		
Progression Factor	1.00			0.20		
Incremental Delay, d2	72.9			318.6		
Delay (s)	112.4			323.5		
Level of Service	F			F		
Approach Delay (s)	112.4			323.5		
Approach LOS	F			F		
Intersection Summary						

												
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	
Lane Util. Factor		0.91			0.91			0.91			0.91	
Frpb, ped/bikes		1.00			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		1.00			1.00			1.00			0.98	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		4553			4546			4577			4424	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		4553			4546			4577			4424	
Volume (vph)	0	1130	31	0	1586	54	0	1509	0	0	3263	596
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	1153	32	0	1618	55	0	1540	0	0	3330	608
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	1185	0	0	1669	0	0	1540	0	0	3937	0
Confl. Peds. (#/hr)	57		44	44		57	101		178	178		101
Turn Type												
Protected Phases		6			2			4			8	
Permitted Phases												
Actuated Green, G (s)		38.0			38.0			51.0			51.0	
Effective Green, g (s)		39.0			39.0			53.0			53.0	
Actuated g/C Ratio		0.39			0.39			0.53			0.53	
Clearance Time (s)		5.0			5.0			6.0			6.0	
Lane Grp Cap (vph)		1776			1773			2426			2345	
v/s Ratio Prot		0.26			0.37			0.34			0.89	
v/s Ratio Perm												
v/c Ratio		0.67			0.94			0.63			1.68	
Uniform Delay, d1		25.1			29.4			16.6			23.5	
Progression Factor		0.74			0.48			0.32			1.00	
Incremental Delay, d2		1.8			10.6			0.6			307.4	
Delay (s)		20.4			24.8			6.0			330.9	
Level of Service		C			C			A			F	
Approach Delay (s)		20.4			24.8			6.0			330.9	
Approach LOS		C			C			A			F	
Intersection Summary												
HCM Average Control Delay		165.3										
HCM Volume to Capacity ratio		1.37										
Actuated Cycle Length (s)		100.0							8.0			
Intersection Capacity Utilization		127.9%										
Analysis Period (min)		15										
c Critical Lane Group												



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑↑↑			↑↑↑		↑
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	847	0	0	1638	0	122
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	864	0	0	1671	0	124
Pedestrians				224		
Lane Width (ft)				12.0		
Walking Speed (ft/s)				4.0		
Percent Blockage				19		
Right turn flare (veh)						
Median type				None		
Median storage (veh)						
Upstream signal (ft)	216			139		
pX, platoon unblocked			0.83		0.89	0.83
vC, conflicting volume			864		1421	512
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			434		630	10
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	83
cM capacity (veh/h)			934		369	723

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NE 1
Volume Total	288	288	288	557	557	557	124
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	124
cSH	1700	1700	1700	1700	1700	1700	723
Volume to Capacity	0.17	0.17	0.17	0.33	0.33	0.33	0.17
Queue Length 95th (ft)	0	0	0	0	0	0	15
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	11.0
Lane LOS							B
Approach Delay (s)	0.0			0.0			11.0
Approach LOS							B

Intersection Summary			
Average Delay		0.5	
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)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Frpb, ped/bikes	1.00	0.93		1.00	0.93		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.95	1.00		1.00	1.00		1.00	1.00		0.98	1.00	
Frt	1.00	0.96		1.00	0.85		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)	1521	1483		1593	1331		1593	1614		1558	1581	
Flt Permitted	0.73	1.00		0.18	1.00		0.10	1.00		0.52	1.00	
Satd. Flow (perm)	1174	1483		305	1331		174	1614		845	1581	
Volume (vph)	108	275	114	13	0	35	192	290	64	184	789	317
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	110	281	116	13	0	36	196	296	65	188	805	323
RTOR Reduction (vph)	0	15	0	0	28	0	0	8	0	0	15	0
Lane Group Flow (vph)	110	382	0	13	8	0	196	353	0	188	1113	0
Confl. Peds. (#/hr)	19		77	80		22	10		13	13		10
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	4			8			2			6		
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	20.0	20.0		20.0	20.0		70.0	70.0		70.0	70.0	
Effective Green, g (s)	22.0	22.0		22.0	22.0		72.0	72.0		72.0	72.0	
Actuated g/C Ratio	0.22	0.22		0.22	0.22		0.72	0.72		0.72	0.72	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lane Grp Cap (vph)	258	326		67	293		125	1162		608	1138	
v/s Ratio Prot	c0.26			0.01			0.22			0.70		
v/s Ratio Perm	0.09			0.04			c1.13			0.22		
v/c Ratio	0.43	1.17		0.19	0.03		1.57	0.30		0.31	0.98	
Uniform Delay, d1	33.6	39.0		31.8	30.6		14.0	5.0		5.0	13.3	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.11	0.87	
Incremental Delay, d2	5.1	105.2		6.4	0.2		290.6	0.7		0.1	4.4	
Delay (s)	38.7	144.2		38.1	30.8		304.6	5.7		5.7	15.9	
Level of Service	D	F		D	C		F	A		A	B	
Approach Delay (s)	121.3			32.7			110.9			14.5		
Approach LOS	F			C			F			B		
Intersection Summary												
HCM Average Control Delay	59.2			HCM Level of Service					E			
HCM Volume to Capacity ratio	1.47											
Actuated Cycle Length (s)	100.0			Sum of lost time (s)					6.0			
Intersection Capacity Utilization	115.0%			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)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		0.91			0.91			1.00			1.00	
Frpb, ped/bikes		0.97			1.00			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			0.99			0.99	
Frt		0.98			1.00			0.99			0.92	
Flt Protected		1.00			1.00			0.96			0.99	
Satd. Flow (prot)		4362			4571			1566			1483	
Flt Permitted		0.94			0.92			0.75			0.94	
Satd. Flow (perm)		4092			4224			1223			1412	
Volume (vph)	2	852	117	16	1442	1	86	2	7	8	3	17
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	2	869	119	16	1471	1	88	2	7	8	3	17
RTOR Reduction (vph)	0	18	0	0	0	0	0	3	0	0	13	0
Lane Group Flow (vph)	0	972	0	0	1488	0	0	94	0	0	15	0
Confl. Peds. (#/hr)	25		73	73		25	6		23	23		6
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		68.0			68.0			22.0			22.0	
Effective Green, g (s)		70.0			70.0			24.0			24.0	
Actuated g/C Ratio		0.70			0.70			0.24			0.24	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		2864			2957			294			339	
v/s Ratio Prot												
v/s Ratio Perm		0.24			0.35			0.08			0.01	
v/c Ratio		0.34			0.50			0.32			0.04	
Uniform Delay, d1		5.9			6.9			31.3			29.2	
Progression Factor		0.62			1.66			1.00			1.00	
Incremental Delay, d2		0.3			0.5			2.8			0.2	
Delay (s)		4.0			12.0			34.1			29.4	
Level of Service		A			B			C			C	
Approach Delay (s)		4.0			12.0			34.1			29.4	
Approach LOS		A			B			C			C	
Intersection Summary												
HCM Average Control Delay		10.0										
HCM Volume to Capacity ratio		0.46										
Actuated Cycle Length (s)		100.0							6.0			
Intersection Capacity Utilization		63.3%							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)		3.0			3.0					3.0	3.0	3.0
Lane Util. Factor		0.91			0.91					1.00	1.00	1.00
Frpb, ped/bikes		0.99			1.00					1.00	1.00	0.97
Flpb, ped/bikes		1.00			1.00					0.97	1.00	1.00
Frt		0.99			1.00					1.00	1.00	0.85
Flt Protected		0.99			1.00					0.95	1.00	1.00
Satd. Flow (prot)		4473			4557					1545	1676	1387
Flt Permitted		0.71			0.84					0.95	1.00	1.00
Satd. Flow (perm)		3183			3832					1545	1676	1387
Volume (vph)	101	694	55	85	1507	4	0	0	0	15	81	74
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	103	708	56	87	1538	4	0	0	0	15	83	76
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	0	0	0	43
Lane Group Flow (vph)	0	859	0	0	1629	0	0	0	0	15	83	33
Confl. Peds. (#/hr)	29		26	26		29	8		16	16		8
Turn Type	pm+pt			pm+pt						Perm		Perm
Protected Phases	5	2		1	6						4	
Permitted Phases	2			6						4		4
Actuated Green, G (s)		68.0			68.0					18.0	18.0	18.0
Effective Green, g (s)		71.0			71.0					20.0	20.0	20.0
Actuated g/C Ratio		0.71			0.71					0.20	0.20	0.20
Clearance Time (s)		5.0			5.0					5.0	5.0	5.0
Lane Grp Cap (vph)		2608			2916					309	335	277
v/s Ratio Prot		0.09			0.15						0.05	
v/s Ratio Perm		0.14			0.25					0.01		0.02
v/c Ratio		0.33			0.56					0.05	0.25	0.12
Uniform Delay, d1		5.5			7.0					32.3	33.7	32.8
Progression Factor		3.50			1.00					1.00	1.00	1.00
Incremental Delay, d2		0.3			0.8					0.3	1.8	0.9
Delay (s)		19.5			7.7					32.6	35.4	33.6
Level of Service		B			A					C	D	C
Approach Delay (s)		19.5			7.7			0.0			34.4	
Approach LOS		B			A			A			C	
Intersection Summary												
HCM Average Control Delay		13.3			HCM Level of Service			B				
HCM Volume to Capacity ratio		0.49										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			9.0				
Intersection Capacity Utilization		76.4%			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)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0			3.0	3.0	3.0
Lane Util. Factor	0.91			0.91	0.97	0.91
Frpb, ped/bikes	1.00			1.00	1.00	1.00
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	0.99			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	4528			4566	3090	1297
Flt Permitted	1.00			0.63	0.95	1.00
Satd. Flow (perm)	4528			2895	3090	1297
Volume (vph)	1462	96	193	3820	38	44
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1492	98	197	3898	39	45
RTOR Reduction (vph)	6	0	0	0	0	1
Lane Group Flow (vph)	1584	0	0	4095	39	44
Confl. Peds. (#/hr)		1	1		2	16
Turn Type		pm+pt			pt+ov	
Protected Phases	4		3	8	9	9 3
Permitted Phases			8			
Actuated Green, G (s)	39.0			94.0	10.0	65.0
Effective Green, g (s)	41.0			96.0	12.0	67.0
Actuated g/C Ratio	0.36			0.84	0.11	0.59
Clearance Time (s)	5.0			5.0	5.0	
Lane Grp Cap (vph)	1628			3200	325	762
v/s Ratio Prot	0.35			c0.58	c0.01	0.03
v/s Ratio Perm				c0.49		
v/c Ratio	0.97			1.28	0.12	0.06
Uniform Delay, d1	35.9			9.0	46.2	10.0
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	16.7			128.4	0.8	0.1
Delay (s)	52.7			137.4	47.0	10.2
Level of Service	D			F	D	B
Approach Delay (s)	52.7			137.4	27.3	
Approach LOS	D			F	C	

Intersection Summary

HCM Average Control Delay	112.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	114.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	138.5%	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)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0			3.0	3.0	3.0
Lane Util. Factor	0.91			0.91	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)	5064			5085	1770	1583
Flt Permitted	1.00			0.94	0.95	1.00
Satd. Flow (perm)	5064			4767	1770	1583
Volume (vph)	941	27	5	1596	42	6
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	960	28	5	1629	43	6
RTOR Reduction (vph)	3	0	0	0	0	5
Lane Group Flow (vph)	985	0	0	1634	43	1
Turn Type	custom			Perm		
Protected Phases	4				2	
Permitted Phases			8	8		2
Actuated Green, G (s)	73.0			73.0	17.0	17.0
Effective Green, g (s)	75.0			75.0	19.0	19.0
Actuated g/C Ratio	0.75			0.75	0.19	0.19
Clearance Time (s)	5.0			5.0	5.0	5.0
Lane Grp Cap (vph)	3798			3575	336	301
v/s Ratio Prot	0.19				c0.02	
v/s Ratio Perm				c0.34		0.00
v/c Ratio	0.26			0.46	0.13	0.00
Uniform Delay, d1	3.9			4.8	33.6	32.8
Progression Factor	0.09			0.35	1.00	1.00
Incremental Delay, d2	0.1			0.4	0.8	0.0
Delay (s)	0.5			2.1	34.4	32.9
Level of Service	A			A	C	C
Approach Delay (s)	0.5			2.1	34.2	
Approach LOS	A			A	C	

Intersection Summary

HCM Average Control Delay	2.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	44.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group