

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)				170			
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			

Washington Gateway
2: Florida Ave & Eckington Place

Existing AM
No Circle

												
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	75.0		15.0		15.0	15.0	
Effective Green, g (s)		77.0			77.0	77.0		17.0		17.0	17.0	
Actuated g/C Ratio		0.77			0.77	0.77		0.17		0.17	0.17	
Clearance Time (s)		30.0			5.0	5.0		5.0		5.0	5.0	
Lane Grp Cap (vph)		3218			2342	1031		284		207	201	
v/s Ratio Prot								0.02			0.08	
v/s Ratio Perm		0.20			c0.45	0.23				c0.16		
v/c Ratio		0.26			0.58	0.30		0.14		0.97	0.49	
Uniform Delay, d1		3.3			4.8	3.4		35.3		41.2	37.5	
Progression Factor		1.00			0.46	0.00		1.00		1.00	1.00	
Incremental Delay, d2		0.2			0.4	0.3		1.1		54.3	8.1	
Delay (s)		3.5			2.6	0.3		36.4		95.6	45.7	
Level of Service		A			A	A		D		F	D	
Approach Delay (s)		3.5			2.1			36.4			72.1	
Approach LOS		A			A			D			E	
Intersection Summary												
HCM Average Control Delay		11.7			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												

Washington Gateway
3: Florida Ave & New York Avenue

Existing AM
No Circle

												
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	
Frft		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			c0.31			0.29			c0.68	
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			1.25			0.42			1.23	
Incremental Delay, d2		1.3			3.0			0.7			130.5	
Delay (s)		26.5			36.6			7.2			159.3	
Level of Service		C			D			A			F	
Approach Delay (s)		26.5			36.6			7.2			159.3	
Approach LOS		C			D			A			F	
Intersection Summary												
HCM Average Control Delay		84.2					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												

Washington Gateway
4: Access Road & New York Avenue

Existing AM
No Circle

												
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		1 4	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		1.11	1.12		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		38.8	62.3		90.3
Level of Service		D				D	A		D	E		F
Approach Delay (s)		42.0				26.1			47.8			90.3
Approach LOS		D				C			D			F
Intersection Summary												
HCM Average Control Delay		128.3				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)			167.9		
Level of Service			F		
Approach Delay (s)			167.9		
Approach LOS			F		
Intersection Summary					

	→	↗	↖	←	↘	↙	
Movement	EBT	EBR	WBL	WBT	NEL	NER	
Lane Configurations	↑↑↑			↑↑↑		↗	
Sign Control	Free			Free	Stop		
Grade	0%			0%	0%		
Volume (veh/h)	758	0	0	1400	0	97	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	
Hourly flow rate (vph)	773	0	0	1429	0	99	
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			554			
pX, platoon unblocked			0.87		0.88	0.87	
vC, conflicting volume			773		1250	482	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			448		348	114	
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	85	
cM capacity (veh/h)			967		546	651	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NE 1
Volume Total	258	258	258	476	476	476	99
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	99
cSH	1700	1700	1700	1700	1700	1700	651
Volume to Capacity	0.15	0.15	0.15	0.28	0.28	0.28	0.15
Queue Length 95th (ft)	0	0	0	0	0	0	13
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	11.5
Lane LOS							B
Approach Delay (s)	0.0			0.0			11.5
Approach LOS							B

Intersection Summary

Average Delay	0.5		
Intersection Capacity Utilization	37.6%	ICU Level of Service	A
Analysis Period (min)	15		

Washington Gateway
6: N Street & 1st Street

Existing AM
No Circle

												
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			

Washington Gateway
7: Florida Ave & Burger King

Existing AM
No Circle

												
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			1483	
Flt Permitted		0.94			0.92			0.78			0.95	
Satd. Flow (perm)		4104			4229			1274			1432	
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	29	0	0	0	0	0	2	0	0	8	0
Lane Group Flow (vph)	0	832	0	0	1280	0	0	81	0	0	19	0
Confl. Peds. (#/hr)	25		73	73		25	6		23	23		6
Turn Type	Perm		Perm		Perm		Perm		Perm			
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		44.0			44.0			46.0			46.0	
Effective Green, g (s)		46.0			46.0			48.0			48.0	
Actuated g/C Ratio		0.46			0.46			0.48			0.48	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1888			1945			612			687	
v/s Ratio Prot												
v/s Ratio Perm		0.20			0.30			0.06			0.01	
v/c Ratio		0.44			0.66			0.13			0.03	
Uniform Delay, d1		18.3			20.9			14.4			13.7	
Progression Factor		0.16			1.98			1.00			1.00	
Incremental Delay, d2		0.1			0.5			0.4			0.1	
Delay (s)		3.1			42.0			14.9			13.8	
Level of Service		A			D			B			B	
Approach Delay (s)		3.1			42.0			14.9			13.8	
Approach LOS		A			D			B			B	
Intersection Summary												
HCM Average Control Delay		25.8		HCM Level of Service				C				
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												

Washington Gateway
8: Florida Ave & 4th Street

Existing AM
No Circle

												
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
Frft		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	54
Lane Group Flow (vph)	0	750	0	0	1413	0	0	0	0	14	79	17
Confl. Peds. (#/hr)	29		26	26		29	8			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)		26.3			37.2					21.5	21.5	21.5
Effective Green, g (s)		28.3			39.2					23.5	23.5	23.5
Actuated g/C Ratio		0.28			0.39					0.24	0.24	0.24
Clearance Time (s)		5.0			5.0					5.0	5.0	5.0
Vehicle Extension (s)		3.0			3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1266			1788					363	394	326
v/s Ratio Prot		c0.17			c0.31						c0.05	
v/s Ratio Perm										0.01		0.01
v/c Ratio		0.59			0.79					0.04	0.20	0.05
Uniform Delay, d1		30.9			26.8					29.5	30.7	29.6
Progression Factor		1.12			1.00					1.00	1.00	1.00
Incremental Delay, d2		0.7			2.5					0.2	1.1	0.3
Delay (s)		35.4			29.2					29.7	31.9	29.9
Level of Service		D			C					C	C	C
Approach Delay (s)		35.4			29.2			0.0			30.8	
Approach LOS		D			C			A			C	
Intersection Summary												
HCM Average Control Delay		31.4			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			0.68	0.95	1.00
Satd. Flow (perm)	4522			3123	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)	6	0	0	0	0	12
Lane Group Flow (vph)	1339	0	0	3180	37	31
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)	52.9			79.0	11.0	37.1
Effective Green, g (s)	54.9			81.0	13.0	39.1
Actuated g/C Ratio	0.55			0.81	0.13	0.39
Clearance Time (s)	5.0			5.0	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	2483			2862	402	507
v/s Ratio Prot	0.30			c0.26	c0.01	0.02
v/s Ratio Perm				c0.64		
v/c Ratio	0.54			1.11	0.09	0.06
Uniform Delay, d1	14.4			9.5	38.3	19.0
Progression Factor	2.06			1.00	1.00	1.00
Incremental Delay, d2	0.2			55.7	0.5	0.1
Delay (s)	30.0			65.2	38.8	19.1
Level of Service	C			E	D	B
Approach Delay (s)	30.0			65.2	28.2	
Approach LOS	C			E	C	
Intersection Summary						
HCM Average Control Delay		54.2		HCM Level of Service		D
HCM Volume to Capacity ratio		0.96				
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					0.92		
vC, conflicting volume			1362		2106	584	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			1362		2115	584	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			81		0	98	
cM capacity (veh/h)			474		29	408	
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	1700	1700	1700	474	1700	29	408
Volume to Capacity	0.27	0.27	0.22	0.19	0.45	3.45	0.02
Queue Length 95th (ft)	0	0	0	17	0	Err	2
Control Delay (s)	0.0	0.0	0.0	5.6	0.0	Err	14.0
Lane LOS				A		F	B
Approach Delay (s)	0.0			2.1		9230.9	
Approach LOS						F	

Intersection Summary

Average Delay	378.5		
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		

Washington Gateway
2: Florida Avenue & Eckington Place

Existing PM
No Circle

												
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		0.96		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		
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			c0.33	0.22		0.01		c0.23		
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												

Washington Gateway
3: Florida Avenue & New York Avenue

Existing PM
No Circle

												
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			1.71			1.85			0.94	
Incremental Delay, d2		4.4			1.2			120.0			1.7	
Delay (s)		31.8			42.4			163.4			18.6	
Level of Service		C			D			F			B	
Approach Delay (s)		31.8			42.4			163.4			18.6	
Approach LOS		C			D			F			B	
Intersection Summary												
HCM Average Control Delay		86.0										
HCM Volume to Capacity ratio		1.08										
Actuated Cycle Length (s)		100.0							8.0			
Intersection Capacity Utilization		100.3%							G			
Analysis Period (min)		15										
c Critical Lane Group												

Washington Gateway
4: Access Road & New York Avenue

Existing PM
No Circle

												
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					0.93	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					1531	1406		1633	954	
Flt Permitted		0.98					0.73	1.00		0.51	1.00	
Satd. Flow (perm)		1349					1133	1406		860	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	4	0	0	0	0	0	52	0	0	9	0
Lane Group Flow (vph)	0	88	0	0	0	0	253	371	0	212	89	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		1 4	8		8	
Actuated Green, G (s)		10.4					24.6	37.6		24.6	24.6	
Effective Green, g (s)		13.4					26.6	39.6		26.6	26.6	
Actuated g/C Ratio		0.13					0.27	0.40		0.27	0.27	
Clearance Time (s)		6.0					5.0			5.0	5.0	
Vehicle Extension (s)		3.0					3.0			3.0	3.0	
Lane Grp Cap (vph)		181					301	557		229	254	
v/s Ratio Prot												
v/s Ratio Perm		0.06					0.22	0.26		0.25	0.09	
v/c Ratio		0.48					0.84	0.67		0.93	0.35	
Uniform Delay, d1		40.1					34.7	24.8		35.7	29.7	
Progression Factor		1.00					1.00	1.00		1.00	1.00	
Incremental Delay, d2		9.0					18.6	3.0		39.3	0.8	
Delay (s)		49.1					53.3	27.8		75.0	30.6	
Level of Service		D					D	C		E	C	
Approach Delay (s)		49.1					37.3			61.0		
Approach LOS		D					D			E		

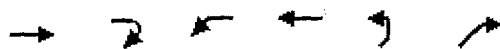
Intersection Summary

HCM Average Control Delay	125.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.02		
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		
Vehicle Extension (s)		3.0			3.0		
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			1.81		
Incremental Delay, d2		180.9			1.0		
Delay (s)		211.9			35.4		
Level of Service		F			D		
Approach Delay (s)		211.9			35.4		
Approach LOS		F			D		

Intersection Summary



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑↑↑			↑↑↑		↑
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1080	0	0	1056	0	86
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	1125	0	0	1100	0	90
Pedestrians				165		
Lane Width (ft)				12.0		
Walking Speed (ft/s)				4.0		
Percent Blockage				14		
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)	230			510		
pX, platoon unblocked			0.75		0.81	0.75
vC, conflicting volume			1125		1492	540
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			499		430	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	87
cM capacity (veh/h)			796		451	701

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NE 1
Volume Total	375	375	375	367	367	367	90
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	90
cSH	1700	1700	1700	1700	1700	1700	701
Volume to Capacity	0.22	0.22	0.22	0.22	0.22	0.22	0.13
Queue Length 95th (ft)	0	0	0	0	0	0	11
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	10.9
Lane LOS							B
Approach Delay (s)	0.0			0.0			10.9
Approach LOS							B

Intersection Summary							
Average Delay			0.4				
Intersection Capacity Utilization			43.2%	ICU Level of Service		A	
Analysis Period (min)			15				

Washington Gateway
6: N Street & 1st Street

Existing PM
No Circle

												
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
No Circle

												
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)		4518			4575			1552			1491	
Flt Permitted		0.93			0.93			0.77			0.93	
Satd. Flow (perm)		4210			4266			1236			1412	
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	6	0	0	0	0	0	4	0	0	7	0
Lane Group Flow (vph)	0	1214	0	0	884	0	0	158	0	0	23	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)		33.4			33.4			56.6			56.6	
Effective Green, g (s)		35.4			35.4			58.6			58.6	
Actuated g/C Ratio		0.35			0.35			0.59			0.59	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1490			1510			724			827	
v/s Ratio Prot												
v/s Ratio Perm		c0.29			0.21			c0.13			0.02	
v/c Ratio		0.81			0.59			0.22			0.03	
Uniform Delay, d1		29.3			26.3			9.8			8.7	
Progression Factor		0.64			1.19			1.00			1.00	
Incremental Delay, d2		2.3			0.2			0.7			0.1	
Delay (s)		21.0			31.4			10.5			8.8	
Level of Service		C			C			B			A	
Approach Delay (s)		21.0			31.4			10.5			8.8	
Approach LOS		C			C			B			A	
Intersection Summary												
HCM Average Control Delay		24.1				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												

Washington Gateway
8: Florida Avenue & 4th Street

Existing PM
No Circle

												
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
Fr _t		0.99			1.00					1.00	1.00	0.85
Fl _t Protected		1.00			1.00					0.95	1.00	1.00
Satd. Flow (prot)		4515			4546					1545	1676	1363
Fl _t 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
Vehicle Extension (s)		3.0			3.0					3.0	3.0	3.0
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		0.34			1.00					1.00	1.00	1.00
Incremental Delay, d2		20.9			36.0					0.3	1.0	0.3
Delay (s)		30.7			73.0					31.1	32.5	31.1
Level of Service		C			E					C	C	C
Approach Delay (s)		30.7			73.0			0.0			31.7	
Approach LOS		C			E			A			C	

Intersection Summary

HCM Average Control Delay	47.8	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	0.96
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	1382
Flt Permitted	1.00			0.67	0.97	1.00
Satd. Flow (perm)	5073			3422	3273	1382
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	16	2
Lane Group Flow (vph)	3119	0	0	1718	48	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)	70.2			81.9	10.1	17.8
Effective Green, g (s)	71.2			82.9	11.1	19.8
Actuated g/C Ratio	0.71			0.83	0.11	0.20
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)	3612			2980	363	315
v/s Ratio Prot	c0.61			c0.05	0.01	c0.02
v/s Ratio Perm				0.43		0.03
v/c Ratio	0.86			0.58	0.13	0.21
Uniform Delay, d1	10.8			2.8	40.1	33.5
Progression Factor	0.42			1.00	1.00	1.00
Incremental Delay, d2	0.2			0.3	0.8	0.3
Delay (s)	4.8			3.1	40.9	33.8
Level of Service	A			A	D	C
Approach Delay (s)	4.8			3.1	37.3	
Approach LOS	A			A	D	
Intersection Summary						
HCM Average Control Delay		5.0		HCM Level of Service		A
HCM Volume to Capacity ratio		0.72				
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	↑↑↑			↑↑	↘	↗	
Sign Control	Free			Free	Stop		
Grade	0%			0%	0%		
Volume (veh/h)	861	450	347	1597	115	15	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	
Hourly flow rate (vph)	879	459	354	1630	117	15	
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)				170			
pX, platoon unblocked					0.75		
vC, conflicting volume			1435		2827	724	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			1435		3104	724	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			18		0	95	
cM capacity (veh/h)			431		1	309	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	NB 2
Volume Total	351	351	635	897	1086	117	15
Volume Left	0	0	0	354	0	117	0
Volume Right	0	0	459	0	0	0	15
cSH	1700	1700	1700	431	1700	1	309
Volume to Capacity	0.21	0.21	0.37	0.82	0.64	115.84	0.05
Queue Length 95th (ft)	0	0	0	192	0	Err	4
Control Delay (s)	0.0	0.0	0.0	46.9	0.0	Err	17.3
Lane LOS				E		F	C
Approach Delay (s)	0.0			21.2		8847.3	
Approach LOS						F	

Intersection Summary

Average Delay	351.9			
Intersection Capacity Utilization	115.1%	ICU Level of Service	H	
Analysis Period (min)	15			

	→	↘	↙	←	↖	↗
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	3.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	0.93		1.00	1.00	1.00	0.94
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.95		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4058		1593	3185	1593	1344
Flt Permitted	1.00		0.11	1.00	0.95	1.00
Satd. Flow (perm)	4058		191	3185	1593	1344
Volume (vph)	861	450	347	1597	115	15
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	879	459	354	1630	117	15
RTOR Reduction (vph)	102	0	0	0	0	8
Lane Group Flow (vph)	1236	0	354	1630	117	7
Confl. Peds. (#/hr)		97	97		99	105
Turn Type			pm+pt		pm+ov	
Protected Phases	6		5	2	8	5
Permitted Phases			2			8
Actuated Green, G (s)	40.5		79.6	79.6	12.4	44.5
Effective Green, g (s)	42.5		80.6	80.6	13.4	48.5
Actuated g/C Ratio	0.42		0.81	0.81	0.13	0.48
Clearance Time (s)	5.0		6.0	4.0	4.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1725		646	2567	213	692
v/s Ratio Prot	c0.30		0.19	c0.51	c0.07	0.00
v/s Ratio Perm			0.25			0.00
v/c Ratio	0.72		0.55	0.63	0.55	0.01
Uniform Delay, d1	23.8		14.8	3.9	40.5	13.3
Progression Factor	1.00		0.60	0.31	1.23	1.64
Incremental Delay, d2	1.4		0.6	0.7	0.3	0.0
Delay (s)	25.2		9.4	1.9	50.1	21.9
Level of Service	C		A	A	D	C
Approach Delay (s)	25.2			3.3	46.9	
Approach LOS	C			A	D	

Intersection Summary			
HCM Average Control Delay	13.4	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	76.2%	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)	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	0.81	
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)		4572			3185	1339		1671		1584	1170	
Flt Permitted		0.91			0.95	1.00		1.00		0.73	1.00	
Satd. Flow (perm)		4153			3041	1339		1671		1215	1170	
Volume (vph)	7	902	3	1	1602	511	0	42	1	234	18	230
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	521	0	43	1	239	18	235
RTOR Reduction (vph)	0	0	0	0	0	120	0	1	0	0	50	0
Lane Group Flow (vph)	0	930	0	0	1636	401	0	43	0	239	203	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		75.0		15.0		15.0	
Effective Green, g (s)	77.0				77.0		77.0		17.0		17.0	
Actuated g/C Ratio	0.77				0.77		0.77		0.17		0.17	
Clearance Time (s)	30.0				5.0		5.0		5.0		5.0	
Lane Grp Cap (vph)	3198				2342		1031		284		207	
v/s Ratio Prot							0.03				0.17	
v/s Ratio Perm	0.22				c0.54		0.30				c0.20	
v/c Ratio	0.29				0.70		0.39		0.15		1.15	
Uniform Delay, d1	3.4				5.7		3.8		35.4		41.5	
Progression Factor	1.00				0.88		3.09		1.00		1.00	
Incremental Delay, d2	0.2				0.2		0.1		1.1		110.5	
Delay (s)	3.6				5.2		11.8		36.5		152.0	
Level of Service	A				A		B		D		F	
Approach Delay (s)	3.6				6.8		36.5				130.8	
Approach LOS	A				A		D				F	
Intersection Summary												
HCM Average Control Delay			23.2		HCM Level of Service				C			
HCM Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			100.0		Sum of lost time (s)				6.0			
Intersection Capacity Utilization			79.9%		ICU Level of Service				D			
Analysis Period (min)			15									
c Critical Lane Group												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑			↑↑↑			↑↑↑	
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)		4551			4544			4577			4430	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		4551			4544			4577			4430	
Volume (vph)	0	1113	31	0	1582	54	0	1492	0	0	3263	592
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	1136	32	0	1614	55	0	1522	0	0	3330	604
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1168	0	0	1666	0	0	1522	0	0	3934	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)		29.0			29.0			60.0			60.0	
Effective Green, g (s)		30.0			30.0			62.0			62.0	
Actuated g/C Ratio		0.30			0.30			0.62			0.62	
Clearance Time (s)		5.0			5.0			6.0			6.0	
Lane Grp Cap (vph)		1365			1363			2838			2747	
v/s Ratio Prot		0.26			c0.37			0.33			c0.89	
v/s Ratio Perm												
v/c Ratio		0.86			1.22			0.54			1.43	
Uniform Delay, d1		33.0			35.0			10.8			19.0	
Progression Factor		0.89			0.72			0.49			0.41	
Incremental Delay, d2		6.4			105.8			0.6			194.6	
Delay (s)		35.7			130.9			5.9			202.5	
Level of Service		D			F			A			F	
Approach Delay (s)		35.7			130.9			5.9			202.5	
Approach LOS		D			F			A			F	
Intersection Summary												
HCM Average Control Delay		128.5										
HCM Volume to Capacity ratio		1.36										
Actuated Cycle Length (s)		100.0										
Intersection Capacity Utilization		127.7%										
Analysis Period (min)		15										
c Critical Lane Group												

Washington Gateway
4: Access Road & New York Avenue

Background AM
No Circle

												
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	1406		1664	633	
Flt Permitted		0.97					0.29	1.00		0.80	1.00	
Satd. Flow (perm)		1272					484	1406		1344	633	
Volume (vph)	3	83	45	25	80	32	168	153	75	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	77	442	163	60
RTOR Reduction (vph)	0	7	0	0	0	0	0	13	0	0	13	0
Lane Group Flow (vph)	0	153	0	0	0	0	286	143	0	519	210	0
Confl. Peds. (#/hr)	72		39	92	92	65		2	8		92	40
Turn Type	Perm				Perm	Perm	custom		Perm		Perm	
Protected Phases		9					4			8		
Permitted Phases	9				4	4		1 4	8		8	
Actuated Green, G (s)		6.0					33.0	43.0		33.0	33.0	
Effective Green, g (s)		8.0					35.0	45.0		35.0	35.0	
Actuated g/C Ratio		0.08					0.35	0.45		0.35	0.35	
Clearance Time (s)		5.0					5.0			5.0	5.0	
Lane Grp Cap (vph)		102					169	633		470	222	
v/s Ratio Prot												
v/s Ratio Perm		0.12					0.59	0.10		0.39	0.33	
v/c Ratio		1.50					1.69	0.23		1.10	0.95	
Uniform Delay, d1		46.0					32.5	16.8		32.5	31.6	
Progression Factor		1.00					1.00	1.00		0.93	0.93	
Incremental Delay, d2		267.8					335.7	0.8		72.4	46.9	
Delay (s)		313.8					368.2	17.7		102.6	76.4	
Level of Service		F					F	B		F	E	
Approach Delay (s)		313.8					244.5			94.7		
Approach LOS		F					F			F		

Intersection Summary

HCM Average Control Delay	362.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.92		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	172.6%	ICU Level of Service	H
Analysis Period (min)	15		

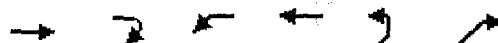
dl Defacto Left Lane. Recode with 1 though lane as a left lane.

c Critical Lane Group



Movement	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		
Frpb, ped/bikes	0.99			0.99		
Flpb, ped/bikes	1.00			1.00		
Frt	0.99			1.00		
Flt Protected	1.00			0.99		
Satd. Flow (prot)	4523			4464		
Flt Permitted	1.00			0.66		
Satd. Flow (perm)	4523			2969		
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)	4	0	0	0	0	0
Lane Group Flow (vph)	1079	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)	36.0			45.0		
Effective Green, g (s)	38.0			48.0		
Actuated g/C Ratio	0.38			0.48		
Clearance Time (s)	5.0			6.0		
Lane Grp Cap (vph)	1719			1530		
v/s Ratio Prot	0.24			c0.15		
v/s Ratio Perm				c0.90		
v/c Ratio	0.63			3.56dl		
Uniform Delay, d1	25.2			26.0		
Progression Factor	1.00			0.33		
Incremental Delay, d2	1.7			539.0		
Delay (s)	27.0			547.5		
Level of Service	C			F		
Approach Delay (s)	27.0			547.5		
Approach LOS	C			F		

Intersection Summary



Movement	EBT	EBR	WBL	WBT	NEL	NER	
Lane Configurations	↑↑↑			↑↑↑		↑	
Sign Control	Free			Free	Stop		
Grade	0%			0%	0%		
Volume (veh/h)	831	0	0	1634	0	122	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	
Hourly flow rate (vph)	848	0	0	1667	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			554			
pX, platoon unblocked			0.81		0.89	0.81	
vC, conflicting volume			848		1404	507	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			332		365	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	82	
cM capacity (veh/h)			988		541	711	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NE 1
Volume Total	283	283	283	556	556	556	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	711
Volume to Capacity	0.17	0.17	0.17	0.33	0.33	0.33	0.18
Queue Length 95th (ft)	0	0	0	0	0	0	16
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	11.1
Lane LOS							B
Approach Delay (s)	0.0			0.0			11.1
Approach LOS							B

Intersection Summary

Average Delay	0.5		
Intersection Capacity Utilization	40.9%	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)	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	0.95		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.97	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)	1539	1483		1593	1350		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)	1188	1483		305	1350		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	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	261	326		67	297		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	0.42	1.17		0.19	0.03		1.57	0.30		0.31	0.98	
Uniform Delay, d1	33.5	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		0.65	0.69	
Incremental Delay, d2	1.1	105.2		1.4	0.0		290.6	0.7		0.1	4.4	
Delay (s)	34.6	144.2		33.2	30.6		304.6	5.7		3.4	13.6	
Level of Service	C	F		C	C		F	A		A	B	
Approach Delay (s)		120.5			31.3			110.9			12.1	
Approach LOS		F			C			F			B	
Intersection Summary												
HCM Average Control Delay		57.8		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)		4359			4571			1566			1482	
Flt Permitted		0.94			0.92			0.76			0.95	
Satd. Flow (perm)		4088			4224			1240			1421	
Volume (vph)	2	836	117	16	1438	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	853	119	16	1467	1	88	2	7	8	3	17
RTOR Reduction (vph)	0	18	0	0	0	0	0	3	0	0	11	0
Lane Group Flow (vph)	0	956	0	0	1484	0	0	94	0	0	17	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)		59.1			59.1			30.9			30.9	
Effective Green, g (s)		61.1			61.1			32.9			32.9	
Actuated g/C Ratio		0.61			0.61			0.33			0.33	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		2498			2581			408			468	
v/s Ratio Prot												
v/s Ratio Perm		0.23			0.35			0.08			0.01	
v/c Ratio		0.38			0.57			0.23			0.04	
Uniform Delay, d1		9.9			11.7			24.4			22.8	
Progression Factor		1.26			0.10			1.00			1.00	
Incremental Delay, d2		0.1			0.2			1.3			0.1	
Delay (s)		12.5			1.3			25.7			22.9	
Level of Service		B			A			C			C	
Approach Delay (s)		12.5			1.3			25.7			22.9	
Approach LOS		B			A			C			C	
Intersection Summary												
HCM Average Control Delay		6.7					HCM Level of Service		A			
HCM Volume to Capacity ratio		0.45										
Actuated Cycle Length (s)		100.0					Sum of lost time (s)		6.0			
Intersection Capacity Utilization		63.3%					ICU Level of Service		B			
Analysis Period (min)		15										
c Critical Lane Group												

Washington Gateway
8: Florida Ave & 4th Street

Background AM
No Circle

												
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)		4475			4562					1545	1676	1387
Flt Permitted		0.99			1.00					0.95	1.00	1.00
Satd. Flow (perm)		4475			4562					1545	1676	1387
Volume (vph)	101	678	55	85	1503	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	692	56	87	1534	4	0	0	0	15	83	76
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	0	0	0	60
Lane Group Flow (vph)	0	843	0	0	1625	0	0	0	0	15	83	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			42.3					18.7	18.7	18.7
Effective Green, g (s)		26.0			44.3					20.7	20.7	20.7
Actuated g/C Ratio		0.26			0.44					0.21	0.21	0.21
Clearance Time (s)		5.0			5.0					5.0	5.0	5.0
Vehicle Extension (s)		3.0			3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1164			2021					320	347	287
v/s Ratio Prot		c0.19			c0.36						c0.05	
v/s Ratio Perm										0.01		0.01
v/c Ratio		0.72			0.80					0.05	0.24	0.05
Uniform Delay, d1		33.7			24.1					31.8	33.1	31.8
Progression Factor		0.90			1.00					1.00	1.00	1.00
Incremental Delay, d2		2.1			2.4					0.3	1.6	0.4
Delay (s)		32.5			26.5					32.0	34.7	32.2
Level of Service		C			C					C	C	C
Approach Delay (s)		32.5			26.5			0.0			33.4	
Approach LOS		C			C			A			C	
Intersection Summary												
HCM Average Control Delay		28.9				HCM Level of Service		C				
HCM Volume to Capacity ratio		0.65										
Actuated Cycle Length (s)		100.0				Sum of lost time (s)		9.0				
Intersection Capacity Utilization		76.0%				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	0.99	1.00
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	0.99			1.00	0.97	0.85
Flt Protected	1.00			1.00	0.96	1.00
Satd. Flow (prot)	4527			4566	2999	1297
Flt Permitted	1.00			0.66	0.96	1.00
Satd. Flow (perm)	4527			3037	2999	1297
Volume (vph)	1445	96	193	3816	38	44
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1474	98	197	3894	39	45
RTOR Reduction (vph)	7	0	0	0	9	25
Lane Group Flow (vph)	1565	0	0	4091	41	9
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)	65.0			73.0	17.0	25.0
Effective Green, g (s)	67.0			75.0	19.0	27.0
Actuated g/C Ratio	0.67			0.75	0.19	0.27
Clearance Time (s)	5.0			5.0	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	3033			2354	570	350
v/s Ratio Prot	0.35			c0.09	c0.01	0.01
v/s Ratio Perm				c1.22		
v/c Ratio	0.52			1.74	0.07	0.03
Uniform Delay, d1	8.3			12.5	33.3	26.8
Progression Factor	0.55			1.00	1.00	1.00
Incremental Delay, d2	0.1			333.8	0.2	0.0
Delay (s)	4.7			346.3	33.5	26.9
Level of Service	A			F	C	C
Approach Delay (s)	4.7			346.3	30.8	
Approach LOS	A			F	C	

Intersection Summary			
HCM Average Control Delay	248.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.40		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	143.0%	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)	925	27	5	1592	42	6						
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98						
Hourly flow rate (vph)	944	28	5	1624	43	6						
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None											
Median storage (veh)												
Upstream signal (ft)	355			415								
pX, platoon unblocked			0.83			0.91	0.83					
vC, conflicting volume			971			1509	328					
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol			559			532	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			90	99					
cM capacity (veh/h)			838			433	901					
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2				
Volume Total	378	378	216	330	650	650	43	6				
Volume Left	0	0	0	5	0	0	43	0				
Volume Right	0	0	28	0	0	0	0	6				
cSH	1700	1700	1700	838	1700	1700	433	901				
Volume to Capacity	0.22	0.22	0.13	0.01	0.38	0.38	0.10	0.01				
Queue Length 95th (ft)	0	0	0	0	0	0	8	1				
Control Delay (s)	0.0	0.0	0.0	0.2	0.0	0.0	14.2	9.0				
Lane LOS				A				B	A			
Approach Delay (s)	0.0			0.0			13.6					
Approach LOS							B					
Intersection Summary												
Average Delay				0.3								
Intersection Capacity Utilization				44.2%	ICU Level of Service	A						
Analysis Period (min)				15								

						
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)	5063			5085	1770	1583
Flt Permitted	1.00			0.94	0.95	1.00
Satd. Flow (perm)	5063			4767	1770	1583
Volume (vph)	925	27	5	1592	42	6
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	944	28	5	1624	43	6
RTOR Reduction (vph)	3	0	0	0	0	4
Lane Group Flow (vph)	969	0	0	1629	43	2
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	58.0			58.0	32.0	32.0
Effective Green, g (s)	60.0			60.0	34.0	34.0
Actuated g/C Ratio	0.60			0.60	0.34	0.34
Clearance Time (s)	5.0			5.0	5.0	5.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	3038			2860	602	538
v/s Ratio Prot	0.19				c0.02	
v/s Ratio Perm				c0.34		0.00
v/c Ratio	0.32			0.57	0.07	0.00
Uniform Delay, d1	9.9			12.2	22.3	21.8
Progression Factor	0.10			0.29	1.00	1.00
Incremental Delay, d2	0.2			0.7	0.2	0.0
Delay (s)	1.2			4.3	22.6	21.8
Level of Service	A			A	C	C
Approach Delay (s)	1.2			4.3	22.5	
Approach LOS	A			A	C	
Intersection Summary						
HCM Average Control Delay		3.5		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						

	→	↘	↙	←	↖	↗	
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↑↑↑			↑↑	↑	↑	
Sign Control	Free			Free	Stop		
Grade	0%			0%	0%		
Volume (veh/h)	1226	288	137	1320	513	8	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly flow rate (vph)	1277	300	143	1375	534	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					0.86		
vC, conflicting volume			1640		2527	702	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			1640		2613	702	
tC, single (s)			4.1		6.8	6.9	
tC, 2 stage (s)							
tF (s)			2.2		3.5	3.3	
p0 queue free %			61		0	98	
cM capacity (veh/h)			370		9	342	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	NB 1	NB 2
Volume Total	511	511	555	601	917	534	8
Volume Left	0	0	0	143	0	534	0
Volume Right	0	0	300	0	0	0	8
cSH	1700	1700	1700	370	1700	9	342
Volume to Capacity	0.30	0.30	0.33	0.39	0.54	56.93	0.02
Queue Length 95th (ft)	0	0	0	44	0	Err	2
Control Delay (s)	0.0	0.0	0.0	13.2	0.0	Err	15.8
Lane LOS				B		F	C
Approach Delay (s)	0.0			5.2		9845.7	
Approach LOS						F	

Intersection Summary

Average Delay	1471.1		
Intersection Capacity Utilization	120.9%	ICU Level of Service	H
Analysis Period (min)	15		

	→	↘	↙	←	↖	↗
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	3.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	0.98		1.00	1.00	1.00	0.87
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4338		1593	3185	1593	1242
Flt Permitted	1.00		0.08	1.00	0.95	1.00
Satd. Flow (perm)	4338		141	3185	1593	1242
Volume (vph)	1226	288	137	1320	513	8
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1277	300	143	1375	534	8
RTOR Reduction (vph)	40	0	0	0	0	5
Lane Group Flow (vph)	1537	0	143	1375	534	3
Confl. Peds. (#/hr)		63	63		64	63
Turn Type			pm+pt			Perm
Protected Phases	6		5	2	8	
Permitted Phases			2			8
Actuated Green, G (s)	42.4		56.4	56.4	34.1	34.1
Effective Green, g (s)	44.4		58.4	58.4	36.1	36.1
Actuated g/C Ratio	0.44		0.58	0.58	0.36	0.36
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1916		241	1851	572	446
v/s Ratio Prot	c0.35		0.06	c0.43	c0.34	
v/s Ratio Perm			0.28			0.00
v/c Ratio	0.80		0.59	0.74	0.93	0.01
Uniform Delay, d1	24.3		16.2	15.5	31.0	20.7
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5		3.9	2.7	22.4	0.0
Delay (s)	26.8		20.1	18.3	53.5	20.7
Level of Service	C		C	B	D	C
Approach Delay (s)	26.8			18.4	53.0	
Approach LOS	C			B	D	

Intersection Summary			
HCM Average Control Delay	27.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.5	Sum of lost time (s)	9.0
Intersection Capacity Utilization	84.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Washington Gateway
2: Florida Avenue & Eckington Place

Background PM
No Circle

												
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	
Frbp, ped/bikes		1.00			1.00	0.89		0.99		1.00	0.88	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		0.99	1.00	
Frt		1.00			1.00	0.85		0.95		1.00	0.86	
Flt Protected		1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		4564			3185	1266		1577		1570	1275	
Flt Permitted		0.92			0.95	1.00		0.99		0.82	1.00	
Satd. Flow (perm)		4222			3034	1266		1569		1359	1275	
Volume (vph)	8	1266	15	3	1160	410	1	19	11	426	11	120
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	1319	16	3	1208	427	1	20	11	444	11	125
RTOR Reduction (vph)	0	1	0	0	0	98	0	9	0	0	99	0
Lane Group Flow (vph)	0	1342	0	0	1211	329	0	23	0	444	37	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)		53.0			75.0	75.0		15.0		15.0	15.0	
Effective Green, g (s)		77.0			77.0	77.0		17.0		17.0	17.0	
Actuated g/C Ratio		0.77			0.77	0.77		0.17		0.17	0.17	
Clearance Time (s)		27.0			5.0	5.0		5.0		5.0	5.0	
Lane Grp Cap (vph)		3251			2336	975		267		231	217	
v/s Ratio Prot											0.03	
v/s Ratio Perm		0.32			0.40	0.26		0.01		0.33		
v/c Ratio		0.41			0.52	0.34		0.09		1.92	0.17	
Uniform Delay, d1		3.9			4.4	3.6		35.0		41.5	35.5	
Progression Factor		1.00			1.95	9.71		1.00		1.00	1.00	
Incremental Delay, d2		0.4			0.2	0.3		0.6		430.6	1.7	
Delay (s)		4.3			8.8	34.9		35.6		472.1	37.2	
Level of Service		A			A	C		D		F	D	
Approach Delay (s)		4.3			15.6			35.6			370.1	
Approach LOS		A			B			D			F	

Intersection Summary

HCM Average Control Delay	68.8	HCM Level of Service	E
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Washington Gateway
3: Florida Avenue & New York Avenue

Background PM
No Circle

												
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			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		1.00			0.98			1.00			0.96	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		4556			4446			4577			4349	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		4556			4446			4577			4349	
Volume (vph)	0	1626	40	0	1161	212	0	3732	0	0	1386	524
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	1694	42	0	1209	221	0	3888	0	0	1444	546
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	1733	0	0	1430	0	0	3888	0	0	1989	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)		29.0			29.0			61.0			61.0	
Effective Green, g (s)		30.0			30.0			62.0			62.0	
Actuated g/C Ratio		0.30			0.30			0.62			0.62	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		1367			1334			2838			2696	
v/s Ratio Prot		c0.38			0.32			c0.85			0.46	
v/s Ratio Perm												
v/c Ratio		1.27			1.07			1.37			0.74	
Uniform Delay, d1		35.0			35.0			19.0			13.3	
Progression Factor		1.26			0.38			0.75			1.23	
Incremental Delay, d2		124.1			45.8			166.7			1.1	
Delay (s)		168.1			59.3			181.0			17.5	
Level of Service		F			E			F			B	
Approach Delay (s)		168.1			59.3			181.0			17.5	
Approach LOS		F			E			F			B	
Intersection Summary												
HCM Average Control Delay		123.3					HCM Level of Service		F			
HCM Volume to Capacity ratio		1.34										
Actuated Cycle Length (s)		100.0					Sum of lost time (s)		8.0			
Intersection Capacity Utilization		122.7%					ICU Level of Service		H			
Analysis Period (min)		15										
c Critical Lane Group												

Washington Gateway
4: Access Road & New York Avenue

Background PM
No Circle

												
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		0.96					1.00	0.99		1.00	0.67	
Flpb, ped/bikes		0.94					1.00	1.00		1.00	1.00	
Frft		0.94					1.00	0.85		1.00	0.85	
Flt Protected		0.97					0.99	1.00		0.98	1.00	
Satd. Flow (prot)		1372					1653	1406		1640	954	
Flt Permitted		0.97					0.52	1.00		0.10	1.00	
Satd. Flow (perm)		1372					880	1406		161	954	
Volume (vph)	3	273	137	86	190	47	593	763	122	156	118	73
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	284	143	90	198	49	618	795	127	162	123	76
RTOR Reduction (vph)	0	8	0	0	0	0	0	52	0	0	22	0
Lane Group Flow (vph)	0	512	0	0	0	0	865	743	0	289	177	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		1 4	8		8	
Actuated Green, G (s)		20.0					28.0	33.0		28.0	28.0	
Effective Green, g (s)		23.0					30.0	37.0		30.0	30.0	
Actuated g/C Ratio		0.23					0.30	0.37		0.30	0.30	
Clearance Time (s)		6.0					5.0			5.0	5.0	
Vehicle Extension (s)		3.0					3.0			3.0	3.0	
Lane Grp Cap (vph)		316					264	520		48	286	
v/s Ratio Prot												
v/s Ratio Perm		0.37					0.98	c0.53		c1.80	0.19	
v/c Ratio		1.62					3.28	1.43		6.02	0.62	
Uniform Delay, d1		38.5					35.0	31.5		35.0	30.1	
Progression Factor		1.00					1.00	1.00		1.07	1.07	
Incremental Delay, d2		293.7					1034.2	203.7		2303.3	3.9	
Delay (s)		332.2					1069.2	235.2		2340.7	36.2	
Level of Service		F					F	F		F	D	
Approach Delay (s)		332.2					669.7			1400.9		
Approach LOS		F					F			F		
Intersection Summary												
HCM Average Control Delay		503.1					HCM Level of Service			F		
HCM Volume to Capacity ratio		3.21										
Actuated Cycle Length (s)		100.0					Sum of lost time (s)			12.0		
Intersection Capacity Utilization		197.1%					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			0.99		
Flpb, ped/bikes		1.00			1.00		
Frt		1.00			0.99		
Flt Protected		1.00			0.99		
Satd. Flow (prot)		4571			4478		
Flt Permitted		0.94			0.68		
Satd. Flow (perm)		4286			3044		
Volume (vph)	3	2291	14	199	1160	59	8
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	3	2386	15	207	1208	61	8
RTOR Reduction (vph)	0	1	0	0	1	0	0
Lane Group Flow (vph)	0	2403	0	0	1483	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)		26.0			36.0		
Effective Green, g (s)		28.0			38.0		
Actuated g/C Ratio		0.28			0.38		
Clearance Time (s)		5.0			5.0		
Vehicle Extension (s)		3.0			3.0		
Lane Grp Cap (vph)		1200			1257		
v/s Ratio Prot					0.08		
v/s Ratio Perm		0.56			0.37		
v/c Ratio		2.00			1.18		
Uniform Delay, d1		36.0			31.0		
Progression Factor		1.00			0.48		
Incremental Delay, d2		454.2			87.0		
Delay (s)		490.2			102.0		
Level of Service		F			F		
Approach Delay (s)		490.2			102.0		
Approach LOS		F			F		

Intersection Summary

							
Movement	EBT	EBR	WBL	WBT	NEL	NER	
Lane Configurations	↑↑↑			↑↑↑		↑	
Sign Control	Free			Free	Stop		
Grade	0%			0%	0%		
Volume (veh/h)	1230	0	0	1373	0	142	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly flow rate (vph)	1281	0	0	1430	0	148	
Pedestrians				165			
Lane Width (ft)				12.0			
Walking Speed (ft/s)				4.0			
Percent Blockage				14			
Right turn flare (veh)							
Median type					None		
Median storage (veh)							
Upstream signal (ft)	230			511			
pX, platoon unblocked			0.72		0.77	0.72	
vC, conflicting volume			1281		1758	592	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			609		780	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	78	
cM capacity (veh/h)			694		256	672	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NE 1
Volume Total	427	427	427	477	477	477	148
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	148
cSH	1700	1700	1700	1700	1700	1700	672
Volume to Capacity	0.25	0.25	0.25	0.28	0.28	0.28	0.22
Queue Length 95th (ft)	0	0	0	0	0	0	21
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	11.9
Lane LOS							B
Approach Delay (s)	0.0			0.0			11.9
Approach LOS							B
Intersection Summary							
Average Delay			0.6				
Intersection Capacity Utilization			50.2%		ICU Level of Service		A
Analysis Period (min)			15				

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
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	0.90		1.00	0.96		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.94	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.89		1.00	0.85		1.00	1.00		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)	1587	1342		1497	1369		1593	1668		1593	1632	
Flt Permitted	0.57	1.00		0.43	1.00		0.29	1.00		0.09	1.00	
Satd. Flow (perm)	951	1342		676	1369		488	1668		156	1632	
Volume (vph)	566	91	275	46	0	216	39	808	22	48	387	70
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)	590	95	286	48	0	225	41	842	23	50	403	73
RTOR Reduction (vph)	0	108	0	0	39	0	0	1	0	0	6	0
Lane Group Flow (vph)	590	273	0	48	186	0	41	864	0	50	470	0
Confl. Peds. (#/hr)	3		36	48		15	1		3	3		1
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	49.5	49.5		49.5	49.5		41.5	41.5		41.5	41.5	
Effective Green, g (s)	51.0	51.0		51.0	51.0		43.0	43.0		43.0	43.0	
Actuated g/C Ratio	0.51	0.51		0.51	0.51		0.43	0.43		0.43	0.43	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	485	684		345	698		210	717		67	702	
v/s Ratio Prot		0.20			0.14			0.52			0.29	
v/s Ratio Perm	0.62			0.07			0.08			0.32		
v/c Ratio	1.22	0.40		0.14	0.27		0.20	1.20		0.75	0.67	
Uniform Delay, d1	24.5	15.1		12.9	13.9		17.7	28.5		23.9	22.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.01	1.01	
Incremental Delay, d2	115.1	0.4		0.2	0.2		2.1	105.1		6.7	0.5	
Delay (s)	139.6	15.5		13.1	14.1		19.8	133.6		30.9	23.6	
Level of Service	F	B		B	B		B	F		C	C	
Approach Delay (s)		90.9			13.9			128.5			24.3	
Approach LOS		F			B			F			C	
Intersection Summary												
HCM Average Control Delay		82.7		HCM Level of Service				F				
HCM Volume to Capacity ratio		1.21										
Actuated Cycle Length (s)		100.0		Sum of lost time (s)				6.0				
Intersection Capacity Utilization		109.9%		ICU Level of Service				H				
Analysis Period (min)		15										
c Critical Lane Group												

Washington Gateway
7: Florida Avenue & Burger King Entrance

Background PM
No Circle

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		0.99			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)		4519			4576			1560			1495	
Flt Permitted		0.93			0.93			0.73			0.91	
Satd. Flow (perm)		4209			4266			1190			1381	
Volume (vph)	10	1347	38	5	961	0	195	3	26	11	3	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)	10	1403	40	5	1001	0	203	3	27	11	3	18
RTOR Reduction (vph)	0	3	0	0	0	0	0	5	0	0	11	0
Lane Group Flow (vph)	0	1450	0	0	1006	0	0	228	0	0	21	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)		52.0			52.0			38.0			38.0	
Effective Green, g (s)		54.0			54.0			40.0			40.0	
Actuated g/C Ratio		0.54			0.54			0.40			0.40	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		2273			2304			476			552	
v/s Ratio Prot												
v/s Ratio Perm		0.34			0.24			0.19			0.02	
v/c Ratio		0.64			0.44			0.48			0.04	
Uniform Delay, d1		16.1			13.8			22.3			18.3	
Progression Factor		0.56			1.00			1.00			1.00	
Incremental Delay, d2		0.1			0.0			3.4			0.1	
Delay (s)		9.1			13.9			25.7			18.4	
Level of Service		A			B			C			B	
Approach Delay (s)		9.1			13.9			25.7			18.4	
Approach LOS		A			B			C			B	
Intersection Summary												
HCM Average Control Delay		12.4				HCM Level of Service		B				
HCM Volume to Capacity ratio		0.57										
Actuated Cycle Length (s)		100.0				Sum of lost time (s)		6.0				
Intersection Capacity Utilization		65.2%				ICU Level of Service		C				
Analysis Period (min)		15										
c Critical Lane Group												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑			↑↑↑					↑	↑	↑
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
Frbp, 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)		4516			4548					1545	1676	1363
Flt Permitted		0.65			0.77					0.95	1.00	1.00
Satd. Flow (perm)		2935			3501					1545	1676	1363
Volume (vph)	81	1300	64	53	976	14	0	0	0	20	62	68
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)	84	1354	67	55	1017	15	0	0	0	21	65	71
RTOR Reduction (vph)	0	5	0	0	1	0	0	0	0	0	0	58
Lane Group Flow (vph)	0	1500	0	0	1086	0	0	0	0	21	65	13
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)		44.0			25.0					16.0	16.0	16.0
Effective Green, g (s)		46.0			27.0					18.0	18.0	18.0
Actuated g/C Ratio		0.46			0.27					0.18	0.18	0.18
Clearance Time (s)		5.0			5.0					5.0	5.0	5.0
Vehicle Extension (s)		3.0			3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1350			945					278	302	245
v/s Ratio Prot											c0.04	
v/s Ratio Perm		c0.51			c0.31					0.01		0.01
v/c Ratio		1.17dl			1.15					0.08	0.22	0.05
Uniform Delay, d1		27.0			36.5					34.1	35.0	33.9
Progression Factor		0.32			1.00					1.00	1.00	1.00
Incremental Delay, d2		59.1			79.3					0.5	1.6	0.4
Delay (s)		67.8			115.8					34.6	36.6	34.3
Level of Service		E			F					C	D	C
Approach Delay (s)		67.8			115.8			0.0			35.3	
Approach LOS		E			F			A			D	
Intersection Summary												
HCM Average Control Delay		85.0			HCM Level of Service			F				
HCM Volume to Capacity ratio		0.95										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			9.0				
Intersection Capacity Utilization		77.3%			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												

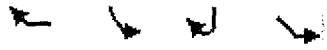
	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑			↑↑↑	↑↑	↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0			3.0	3.0	3.0
Lane Util. Factor	0.91			0.91	0.97	0.91
Frpb, ped/bikes	1.00			1.00	0.97	0.94
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	1.00			1.00	0.93	0.85
Flt Protected	1.00			1.00	0.97	1.00
Satd. Flow (prot)	5075			5074	3159	1353
Flt Permitted	1.00			0.66	0.97	1.00
Satd. Flow (perm)	5075			3335	3159	1353
Volume (vph)	3863	51	86	1864	47	87
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	4024	53	90	1942	49	91
RTOR Reduction (vph)	1	0	0	0	35	0
Lane Group Flow (vph)	4076	0	0	2032	58	47
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)	64.6			71.6	20.4	23.4
Effective Green, g (s)	65.6			72.6	21.4	25.4
Actuated g/C Ratio	0.66			0.73	0.21	0.25
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	3329			2491	676	384
v/s Ratio Prot	c0.80			c0.03	0.02	c0.00
v/s Ratio Perm				0.56		0.03
v/c Ratio	1.22			0.82	0.09	0.12
Uniform Delay, d1	17.2			9.2	31.5	28.7
Progression Factor	0.12			1.00	1.00	1.00
Incremental Delay, d2	101.2			2.2	0.3	0.1
Delay (s)	103.2			11.4	31.7	28.9
Level of Service	F			B	C	C
Approach Delay (s)	103.2			11.4	30.8	
Approach LOS	F			B	C	
Intersection Summary						
HCM Average Control Delay		71.7		HCM Level of Service		E
HCM Volume to Capacity ratio		0.91				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		3.0
Intersection Capacity Utilization		120.5%		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)	1293	12	5	1180	193	21			
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96			
Hourly flow rate (vph)	1347	12	5	1229	201	22			
Pedestrians									
Lane Width (ft)									
Walking Speed (ft/s)									
Percent Blockage									
Right turn flare (veh)									
Median type							None		
Median storage (veh)									
Upstream signal (ft)	336			405					
pX, platoon unblocked			0.73		0.79	0.73			
vC, conflicting volume			1359		1773	455			
vC1, stage 1 conf vol									
vC2, stage 2 conf vol									
vCu, unblocked vol			756		807	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		19	97			
cM capacity (veh/h)			622		249	793			
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2	
Volume Total	539	539	282	251	492	492	201	22	
Volume Left	0	0	0	5	0	0	201	0	
Volume Right	0	0	12	0	0	0	0	22	
cSH	1700	1700	1700	622	1700	1700	249	793	
Volume to Capacity	0.32	0.32	0.17	0.01	0.29	0.29	0.81	0.03	
Queue Length 95th (ft)	0	0	0	1	0	0	155	2	
Control Delay (s)	0.0	0.0	0.0	0.3	0.0	0.0	60.7	9.7	
Lane LOS				A			F	A	
Approach Delay (s)	0.0			0.1			55.7		
Approach LOS							F		
Intersection Summary									
Average Delay			4.4						
Intersection Capacity Utilization			43.6%	ICU Level of Service				A	
Analysis Period (min)			15						

	→	↘	↙	←	↖	↗
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)	5079			5084	1770	1583
Flt Permitted	1.00			0.93	0.95	1.00
Satd. Flow (perm)	5079			4753	1770	1583
Volume (vph)	1293	12	5	1180	193	21
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1347	12	5	1229	201	22
RTOR Reduction (vph)	0	0	0	0	0	18
Lane Group Flow (vph)	1359	0	0	1234	201	4
Turn Type			Perm			Perm
Protected Phases	4			8	2	
Permitted Phases			8			2
Actuated Green, G (s)	74.6			74.6	15.4	15.4
Effective Green, g (s)	76.6			76.6	17.4	17.4
Actuated g/C Ratio	0.77			0.77	0.17	0.17
Clearance Time (s)	5.0			5.0	5.0	5.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	3891			3641	308	275
v/s Ratio Prot	c0.27				c0.11	
v/s Ratio Perm				0.26		0.00
v/c Ratio	0.35			0.34	0.65	0.01
Uniform Delay, d1	3.7			3.7	38.5	34.2
Progression Factor	0.08			0.33	1.00	1.00
Incremental Delay, d2	0.0			0.2	10.3	0.1
Delay (s)	0.3			1.5	48.8	34.3
Level of Service	A			A	D	C
Approach Delay (s)	0.3			1.5	47.4	
Approach LOS	A			A	D	
Intersection Summary						
HCM Average Control Delay		4.5		HCM Level of Service		A
HCM Volume to Capacity ratio		0.41				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		6.0
Intersection Capacity Utilization		43.6%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

Appendix D

Background Future Intersection Capacity Analyses with NY/FLA Circle



Movement	WBR	SBL	SBR	SEL
Lane Configurations	FF			
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)	3.0			
Lane Util. Factor	0.88			
Frt	0.85			
Flt Protected	1.00			
Satd. Flow (prot)	2508			
Flt Permitted	1.00			
Satd. Flow (perm)	2508			
Volume (vph)	1864	0	0	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1902	0	0	0
RTOR Reduction (vph)	0	0	0	0
Lane Group Flow (vph)	1902	0	0	0
Turn Type				
Protected Phases	6			
Permitted Phases				
Actuated Green, G (s)	80.0			
Effective Green, g (s)	82.0			
Actuated g/C Ratio	0.82			
Clearance Time (s)	5.0			
Lane Grp Cap (vph)	2057			
v/s Ratio Prot	0.76			
v/s Ratio Perm				
v/c Ratio	0.92			
Uniform Delay, d1	6.7			
Progression Factor	0.77			
Incremental Delay, d2	4.9			
Delay (s)	10.1			
Level of Service	B			
Approach Delay (s)	10.1	0.0		0.0
Approach LOS	B	A		A

Intersection Summary			
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	75.8%	ICU Level of Service	D
Analysis Period (min)	15		
c - Critical Lane Group			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	TT					TTT
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0					3.0
Lane Util. Factor	0.97					0.91
Frt	1.00					1.00
Flt Protected	0.95					1.00
Satd. Flow (prot)	3090					4577
Flt Permitted	0.95					1.00
Satd. Flow (perm)	3090					4577
Volume (vph)	1358	0	0	0	0	1274
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1386	0	0	0	0	1300
RTOR Reduction (vph)	27	0	0	0	0	0
Lane Group Flow (vph)	1360	0	0	0	0	1300
Turn Type						
Protected Phases	6					8
Permitted Phases						
Actuated Green, G (s)	45.0					45.0
Effective Green, g (s)	47.0					47.0
Actuated g/C Ratio	0.47					0.47
Clearance Time (s)	5.0					5.0
Lane Grp Cap (vph)	1452					2151
v/s Ratio Prot	c0.44					c0.28
v/s Ratio Perm						
v/c Ratio	0.94					0.60
Uniform Delay, d1	25.1					19.6
Progression Factor	0.98					1.00
Incremental Delay, d2	7.6					1.3
Delay (s)	32.1					20.9
Level of Service	C					C
Approach Delay (s)	32.1		0.0			20.9
Approach LOS	C		A			C
Intersection Summary						
HCM Average Control Delay		26.7		HCM Level of Service		C
HCM Volume to Capacity ratio		0.77				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		6.0
Intersection Capacity Utilization		82.7%		ICU Level of Service		E
Analysis Period (min)		15				
c Critical Lane Group						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↑↑↑	↑		↑			↑	↑
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	1.00		1.00			0.95	0.95
Frpb, ped/bikes					1.00	0.95		1.00			0.96	1.00
Flpb, ped/bikes					1.00	1.00		1.00			1.00	1.00
Frt					1.00	0.85		1.00			0.86	0.85
Flt Protected					1.00	1.00		1.00			1.00	1.00
Satd. Flow (prot)					4577	1356		1676			1313	1354
Flt Permitted					1.00	1.00		1.00			1.00	1.00
Satd. Flow (perm)					4577	1356		1676			1313	1354
Volume (vph)	0	0	0	1	2660	567	0	42	0	0	18	453
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	0	0	1	2714	579	0	43	0	0	18	462
RTOR Reduction (vph)	0	0	0	0	0	197	0	0	0	0	2	2
Lane Group Flow (vph)	0	0	0	0	2715	382	0	43	0	0	247	229
Confl. Peds. (#/hr)	11					11				38		15
Turn Type				Perm		Perm						custom
Protected Phases					6			4			4	8
Permitted Phases				6		6						8
Actuated Green, G (s)					64.0	64.0		26.0			26.0	26.0
Effective Green, g (s)					66.0	66.0		28.0			28.0	28.0
Actuated g/C Ratio					0.66	0.66		0.28			0.28	0.28
Clearance Time (s)					5.0	5.0		5.0			5.0	5.0
Lane Grp Cap (vph)					3021	895		469			368	379
v/s Ratio Prot								0.03			0.19	0.17
v/s Ratio Perm					0.59	0.28						
v/c Ratio					0.90	0.43		0.09			0.67	0.60
Uniform Delay, d1					14.2	8.0		26.6			31.9	31.2
Progression Factor					1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2					4.8	1.5		0.4			9.4	7.0
Delay (s)					19.0	9.5		27.0			41.3	38.2
Level of Service					B	A		C			D	D
Approach Delay (s)		0.0			17.3			27.0			39.8	
Approach LOS		A			B			C			D	
Intersection Summary												
HCM Average Control Delay		20.3					HCM Level of Service		C			
HCM Volume to Capacity ratio		0.83										
Actuated Cycle Length (s)		100.0					Sum of lost time (s)		6.0			
Intersection Capacity Utilization		86.1%					ICU Level of Service		E			
Analysis Period (min)		15										
c Critical Lane Group												

	→	←	↖	↗	↖	↗
Movement	EBT	WBT	WBR	NBL	NWT	NWR
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	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	1.00	
Flt Protected	1.00	1.00		0.95	1.00	
Satd. Flow (prot)	4577	4290		3090	4556	
Flt Permitted	1.00	1.00		0.95	1.00	
Satd. Flow (perm)	4577	4290		3090	4556	
Volume (vph)	1497	2403	1451	255	1583	44
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1528	2452	1481	260	1615	45
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1528	3933	0	260	1660	0
Confl. Peds. (#/hr)			3			2
Turn Type						
Protected Phases	2	6		9	4	
Permitted Phases						
Actuated Green, G (s)	71.5	71.0		4.0	16.0	
Effective Green, g (s)	73.0	73.0		5.5	17.5	
Actuated g/C Ratio	0.70	0.70		0.05	0.17	
Clearance Time (s)	4.5	5.0		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	3182	2983		162	759	
v/s Ratio Prot	0.33	c0.92		c0.08	c0.36	
v/s Ratio Perm						
v/c Ratio	0.48	1.49dr		1.60	2.19	
Uniform Delay, d1	7.3	16.0		49.8	43.8	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	145.8		299.1	538.5	
Delay (s)	7.8	161.8		348.8	582.3	
Level of Service	A	F		F	F	
Approach Delay (s)	7.8	161.8		348.8	582.3	
Approach LOS	A	F		F	F	

Intersection Summary			
HCM Average Control Delay	231.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.49		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	141.0%	ICU Level of Service	H
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)	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				0.88	0.94	0.95	
Frpb, ped/bikes		1.00			1.00				1.00	1.00	1.00	
Flpb, ped/bikes		1.00			1.00				1.00	1.00	1.00	
Frt		0.99			1.00				0.85	1.00	0.97	
Flt Protected		1.00			1.00				1.00	0.95	1.00	
Satd. Flow (prot)		4547			4577				2508	4491	3095	
Flt Permitted		1.00			1.00				1.00	0.95	1.00	
Satd. Flow (perm)		4547			4577				2508	4491	3095	
Volume (vph)	0	1073	44	0	2389	0	0	0	353	1163	1273	266
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	1095	45	0	2438	0	0	0	360	1187	1299	271
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	55	0	1	0
Lane Group Flow (vph)	0	1135	0	0	2438	0	0	0	305	1187	1569	0
Confl. Peds. (#/hr)	79		1	1		79	2		28	28		2
Turn Type									custom	Prot		
Protected Phases		2			6				4	3	8	
Permitted Phases									4			
Actuated Green, G (s)		47.0			47.0				15.0	21.0	42.0	
Effective Green, g (s)		49.0			49.0				18.0	24.0	45.0	
Actuated g/C Ratio		0.49			0.49				0.18	0.24	0.45	
Clearance Time (s)		5.0			5.0				6.0	6.0	6.0	
Lane Grp Cap (vph)		2228			2243				451	1078	1393	
v/s Ratio Prot		0.25			c0.53				0.12	0.26	c0.51	
v/s Ratio Perm												
v/c Ratio		0.51			1.09				0.68	1.10	1.13	
Uniform Delay, d1		17.3			25.5				38.3	38.0	27.5	
Progression Factor		1.00			1.00				1.00	1.04	1.06	
Incremental Delay, d2		0.8			47.4				7.9	55.0	63.5	
Delay (s)		18.2			72.9				46.2	94.5	92.6	
Level of Service		B			E				D	F	F	
Approach Delay (s)		18.2			72.9			46.2			93.4	
Approach LOS		B			E			D			F	
Intersection Summary												
HCM Average Control Delay		70.6			HCM Level of Service				E			
HCM Volume to Capacity ratio		1.11										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)				6.0			
Intersection Capacity Utilization		106.5%			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												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	84	273	114	13	0	42	192	245	64	248	769	317
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)	86	279	116	13	0	43	196	250	65	253	785	323
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage (veh)												
Upstream signal (ft)											442	
pX, platoon unblocked	0.52	0.52	0.52	0.52	0.52		0.52					
vC, conflicting volume	2170	2160	946	2383	2289	283	1108			315		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	3231	3211	898	3636	3457	283	1206			315		
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 %	0	0	34	0	100	94	35			80		
cM capacity (veh/h)	1	1	177	0	1	756	303			1245		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	481	56	511	1361								
Volume Left	86	13	196	253								
Volume Right	116	43	65	323								
cSH	2	0	303	1245								
Volume to Capacity	265.48	Err	0.65	0.20								
Queue Length 95th (ft)	Err	Err	104	19								
Control Delay (s)	Err	Err	31.6	5.7								
Lane LOS	F	F	D	A								
Approach Delay (s)	Err	Err	31.6	5.7								
Approach LOS	F	F										

Intersection Summary

Average Delay	Err		
Intersection Capacity Utilization	131.6%	ICU Level of Service	H
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	
Fr _t	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)	1593	1603		1593	1425		1593	1625		1593	1603	
Flt Permitted	0.73	1.00		0.18	1.00		0.07	1.00		0.54	1.00	
Satd. Flow (perm)	1222	1603		308	1425		118	1625		898	1603	
Volume (vph)	84	273	114	13	0	42	192	245	64	248	769	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)	86	279	116	13	0	43	196	250	65	253	785	323
RTOR Reduction (vph)	0	15	0	0	31	0	0	9	0	0	14	0
Lane Group Flow (vph)	86	380	0	13	12	0	196	306	0	253	1094	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	4			8			2			6		
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	24.9	24.9		24.9	24.9		65.1	65.1		65.1	65.1	
Effective Green, g (s)	26.9	26.9		26.9	26.9		67.1	67.1		67.1	67.1	
Actuated g/C Ratio	0.27	0.27		0.27	0.27		0.67	0.67		0.67	0.67	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	329	431		83	383		79	1090		603	1076	
v/s Ratio Prot		c0.24			0.01			0.19			0.68	
v/s Ratio Perm	0.07			0.04			c1.66			0.28		
v/c Ratio	0.26	0.88		0.16	0.03		2.48	0.28		0.42	1.02	
Uniform Delay, d1	28.7	35.0		27.9	26.9		16.5	6.7		7.5	16.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.08	1.15	
Incremental Delay, d2	0.4	18.5		0.9	0.0		702.7	0.6		0.2	12.7	
Delay (s)	29.2	53.6		28.8	27.0		719.1	7.3		0.8	31.6	
Level of Service	C	D		C	C		F	A		A	C	
Approach Delay (s)		49.2			27.4			280.3			25.9	
Approach LOS		D			C			F			C	

Intersection Summary

HCM Average Control Delay	84.5	HCM Level of Service	F
HCM Volume to Capacity ratio	2.02		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	111.9%	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	
Flt		0.98			1.00			0.99			0.92	
Flt Protected		1.00			1.00			0.96			0.99	
Satd. Flow (prot)		4502			4574			1588			1517	
Flt Permitted		0.94			0.92			0.74			0.94	
Satd. Flow (perm)		4223			4221			1222			1440	
Volume (vph)	2	836	101	16	1438	1	87	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	853	103	16	1467	1	89	2	7	8	3	17
RTOR Reduction (vph)	0	8	0	0	0	0	0	2	0	0	14	0
Lane Group Flow (vph)	0	950	0	0	1484	0	0	96	0	0	14	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		91.3			91.3			22.7			22.7	
Effective Green, g (s)		93.3			93.3			24.7			24.7	
Actuated g/C Ratio		0.75			0.75			0.20			0.20	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		3177			3176			243			287	
v/s Ratio Prot												
v/s Ratio Perm		0.22			0.35			0.08			0.01	
v/c Ratio		0.30			0.47			0.39			0.05	
Uniform Delay, d1		4.9			5.9			43.1			40.2	
Progression Factor		1.00			0.53			1.00			1.00	
Incremental Delay, d2		0.1			0.1			4.7			0.3	
Delay (s)		5.0			3.2			47.9			40.5	
Level of Service		A			A			D			D	
Approach Delay (s)		5.0			3.2			47.9			40.5	
Approach LOS		A			A			D			D	
Intersection Summary												
HCM Average Control Delay			5.9			HCM Level of Service			A			
HCM Volume to Capacity ratio			0.45									
Actuated Cycle Length (s)			124.0			Sum of lost time (s)			6.0			
Intersection Capacity Utilization			62.5%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						  	
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	
Lane Util. Factor		0.91			0.91						1.00	
Frt		0.99			1.00						0.94	
Flt Protected		0.99			1.00						1.00	
Satd. Flow (prot)		4504			4563						1571	
Flt Permitted		0.99			1.00						1.00	
Satd. Flow (perm)		4504			4563						1571	
Volume (vph)	101	678	55	85	1503	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	692	56	87	1534	4	0	0	0	15	83	76
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0	0	23	0
Lane Group Flow (vph)	0	845	0	0	1625	0	0	0	0	0	151	0
Turn Type	custom			custom						Perm		
Protected Phases	1	1		5	5							6
Permitted Phases	1			5						6		
Actuated Green, G (s)		36.3			51.3						21.4	
Effective Green, g (s)		38.3			53.3						23.4	
Actuated g/C Ratio		0.31			0.43						0.19	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		1391			1961						296	
v/s Ratio Prot		c0.19			c0.36							
v/s Ratio Perm											0.10	
v/c Ratio		0.61			0.83						0.51	
Uniform Delay, d1		36.5			31.3						45.2	
Progression Factor		0.89			1.00						1.00	
Incremental Delay, d2		0.7			3.0						6.2	
Delay (s)		33.1			34.3						51.3	
Level of Service		C			C						D	
Approach Delay (s)		33.1			34.3			0.0			51.3	
Approach LOS		C			C			A			D	

Intersection Summary

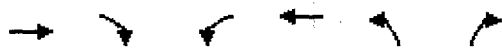
HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	124.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

	→	↘	↙	←	↖	↗				
Movement	EBT	EBR	WBL	WBT	NBL	NBR				
Lane Configurations	↑↑↑↘			↙↑↑↑	↖	↗				
Sign Control	Free			Free	Stop					
Grade	0%			0%	0%					
Volume (veh/h)	1024	55	5	1591	35	6				
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				
Hourly flow rate (vph)	1045	56	5	1623	36	6				
Pedestrians										
Lane Width (ft)										
Walking Speed (ft/s)										
Percent Blockage										
Right turn flare (veh)										
Median type	None									
Median storage (veh)										
Upstream signal (ft)	506									
pX, platoon unblocked	0.90									
vC, conflicting volume			1101			1624	376			
vC1, stage 1 conf vol										
vC2, stage 2 conf vol										
vCu, unblocked vol			1101			1466	376			
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			67	99			
cM capacity (veh/h)			636			107	624			
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1	NB 2		
Volume Total	418	418	265	330	649	649	36	6		
Volume Left	0	0	0	5	0	0	36	0		
Volume Right	0	0	56	0	0	0	0	6		
cSH	1700	1700	1700	636	1700	1700	107	624		
Volume to Capacity	0.25	0.25	0.16	0.01	0.38	0.38	0.33	0.01		
Queue Length 95th (ft)	0	0	0	1	0	0	33	1		
Control Delay (s)	0.0	0.0	0.0	0.3	0.0	0.0	54.9	10.8		
Lane LOS			A				F	B		
Approach Delay (s)	0.0			0.1			48.4			
Approach LOS							E			
Intersection Summary										
Average Delay			0.8	ICU Level of Service			A			
Intersection Capacity Utilization	47.9%									
Analysis Period (min)	15									

	→	↘	↙	←	↖	↗
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
Frt	0.99			1.00	0.96	0.85
Flt Protected	1.00			1.00	0.97	1.00
Satd. Flow (prot)	4534			4566	3009	1297
Flt Permitted	1.00			0.66	0.97	1.00
Satd. Flow (perm)	4534			3019	3009	1297
Volume (vph)	1445	96	193	3816	33	44
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1474	98	197	3894	34	45
RTOR Reduction (vph)	6	0	0	0	11	25
Lane Group Flow (vph)	1566	0	0	4091	36	7
Turn Type			pm+pt			pt+ov
Protected Phases	4		3	8	9	9 3
Permitted Phases			8			
Actuated Green, G (s)	89.0			97.0	17.0	25.0
Effective Green, g (s)	91.0			99.0	19.0	27.0
Actuated g/C Ratio	0.73			0.80	0.15	0.22
Clearance Time (s)	5.0			5.0	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	3327			2473	461	282
v/s Ratio Prot	0.35			c0.07	c0.01	0.01
v/s Ratio Perm				c1.25		
v/c Ratio	0.47			1.65	0.08	0.02
Uniform Delay, d1	6.7			12.5	45.0	38.1
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.1			296.2	0.3	0.0
Delay (s)	6.8			308.7	45.3	38.2
Level of Service	A			F	D	D
Approach Delay (s)	6.8			308.7	42.4	
Approach LOS	A			F	D	
Intersection Summary						
HCM Average Control Delay		222.4		HCM Level of Service		F
HCM Volume to Capacity ratio		1.40				
Actuated Cycle Length (s)		124.0		Sum of lost time (s)		6.0
Intersection Capacity Utilization		133.0%		ICU Level of Service		H
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)			3.0			
Lane Util. Factor			0.95			
Frt			1.00			
Flt Protected			1.00			
Satd. Flow (prot)			3539			
Flt Permitted			1.00			
Satd. Flow (perm)			3539			
Volume (vph)	0	0	2058	0	0	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	2100	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	2100	0	0	0
Turn Type						
Protected Phases			6			
Permitted Phases						
Actuated Green, G (s)			80.0			
Effective Green, g (s)			82.0			
Actuated g/C Ratio			0.82			
Clearance Time (s)			5.0			
Lane Grp Cap (vph)			2902			
v/s Ratio Prot			c0.59			
v/s Ratio Perm						
v/c Ratio			0.72			
Uniform Delay, d1			4.0			
Progression Factor			0.90			
Incremental Delay, d2			1.1			
Delay (s)			4.7			
Level of Service			A			
Approach Delay (s)		0.0	4.7		0.0	
Approach LOS		A	A		A	
Intersection Summary						
HCM Average Control Delay			4.7	HCM Level of Service		A
HCM Volume to Capacity ratio			0.72			
Actuated Cycle Length (s)			100.0	Sum of lost time (s)		18.0
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	↑↑↑			↑↑↑	↑	↑
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	0.99			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	4587			4621	1608	1439
Flt Permitted	1.00			0.94	0.95	1.00
Satd. Flow (perm)	4587			4330	1608	1439
Volume (vph)	1024	55	5	1591	35	6
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1045	56	5	1623	36	6
RTOR Reduction (vph)	8	0	0	0	0	3
Lane Group Flow (vph)	1093	0	0	1628	36	3
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type			Perm		custom	
Protected Phases	4			8		
Permitted Phases			8		2	2
Actuated Green, G (s)	44.8			44.8	46.2	46.2
Effective Green, g (s)	46.3			46.3	47.7	47.7
Actuated g/C Ratio	0.46			0.46	0.48	0.48
Clearance Time (s)	4.5			4.5	4.5	4.5
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2124			2005	767	686
v/s Ratio Prot	0.24					
v/s Ratio Perm				c0.38	c0.02	0.00
v/c Ratio	0.51			0.81	0.05	0.00
Uniform Delay, d1	18.9			23.1	14.0	13.7
Progression Factor	1.09			1.00	1.00	1.00
Incremental Delay, d2	0.1			2.6	0.1	0.0
Delay (s)	20.8			25.7	14.1	13.7
Level of Service	C			C	B	B
Approach Delay (s)	20.8			25.7	14.0	
Approach LOS	C			C	B	

Intersection Summary

HCM Average Control Delay	23.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

						
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations				↑↑↑↑	↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0	
Lane Util. Factor				0.91	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				5085	3433	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				5085	3433	
Volume (vph)	0	0	0	1504	814	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	1535	831	0
RTOR Reduction (vph)	0	0	0	0	7	0
Lane Group Flow (vph)	0	0	0	1535	824	0
Turn Type						
Protected Phases				8	6	
Permitted Phases						
Actuated Green, G (s)				41.0	49.0	
Effective Green, g (s)				43.0	51.0	
Actuated g/C Ratio				0.43	0.51	
Clearance Time (s)				5.0	5.0	
Lane Grp Cap (vph)				2187	1751	
v/s Ratio Prot				c0.30	c0.24	
v/s Ratio Perm						
v/c Ratio				0.70	0.47	
Uniform Delay, d1				23.3	15.8	
Progression Factor				1.00	1.80	
Incremental Delay, d2				1.9	0.6	
Delay (s)				25.2	29.0	
Level of Service				C	C	
Approach Delay (s)	0.0			25.2	29.0	
Approach LOS	A			C	C	
Intersection Summary						
HCM Average Control Delay			26.5	HCM Level of Service		C
HCM Volume to Capacity ratio			0.58			
Actuated Cycle Length (s)			100.0	Sum of lost time (s)		6.0
Intersection Capacity Utilization			92.6%	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)	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	1.00		1.00			0.95	0.95
Frpb, ped/bikes					1.00	0.95		1.00			0.96	1.00
Flpb, ped/bikes					1.00	1.00		1.00			1.00	1.00
Frft					1.00	0.85		1.00			0.86	0.85
Flt Protected					1.00	1.00		1.00			1.00	1.00
Satd. Flow (prot)					5084	1507		1858			1448	1504
Flt Permitted					1.00	1.00		0.99			1.00	1.00
Satd. Flow (perm)					5084	1507		1847			1448	1504
Volume (vph)	0	0	0	8	2167	420	1	19	0	0	11	529
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	0	0	8	2211	429	1	19	0	0	11	540
RTOR Reduction (vph)	0	0	0	0	0	206	0	0	0	0	2	2
Lane Group Flow (vph)	0	0	0	0	2219	223	0	20	0	0	279	268
Confl. Peds. (#/hr)	11					11				38		15
Turn Type				Perm		Perm	Perm					custom
Protected Phases					6			4			4	8
Permitted Phases				6		6	4					8
Actuated Green, G (s)					50.0	50.0		40.0			40.0	40.0
Effective Green, g (s)					52.0	52.0		42.0			42.0	42.0
Actuated g/C Ratio					0.52	0.52		0.42			0.42	0.42
Clearance Time (s)					5.0	5.0		5.0			5.0	5.0
Lane Grp Cap (vph)					2644	784		776			608	632
v/s Ratio Prot											0.19	0.18
v/s Ratio Perm					0.44	0.15		0.01				
v/c Ratio					0.84	0.28		0.03			0.46	0.42
Uniform Delay, d1					20.4	13.5		17.0			20.8	20.5
Progression Factor					1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2					3.4	0.9		0.1			2.5	2.1
Delay (s)					23.8	14.4		17.1			23.3	22.6
Level of Service					C	B		B			C	C
Approach Delay (s)		0.0			22.3			17.1			22.9	
Approach LOS		A			C			B			C	
Intersection Summary												
HCM Average Control Delay			22.4				HCM Level of Service			C		
HCM Volume to Capacity ratio			0.67									
Actuated Cycle Length (s)			100.0				Sum of lost time (s)		6.0			
Intersection Capacity Utilization			80.4%				ICU Level of Service		D			
Analysis Period (min)			15									
c Critical Lane Group												

	→	←	↖	↗	↖	↗	↖
Movement	EBT	WBT	WBR	NBL	NWL	NWT	NWR
Lane Configurations	↑↑↑	↑↑↑		↑↑	↑	↑↑	
Ideal Flow (vphpl)	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		0.97		0.95	
Frpb, ped/bikes	1.00	0.99		1.00		1.00	
Flpb, ped/bikes	1.00	1.00		1.00		1.00	
Frt	1.00	0.94		1.00		0.98	
Flt Protected	1.00	1.00		0.95		1.00	
Satd. Flow (prot)	5085	4743		3433		3476	
Flt Permitted	1.00	1.00		0.95		1.00	
Satd. Flow (perm)	5085	4743		3433		3476	
Volume (vph)	3778	1125	785	794	0	1123	136
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	3855	1148	801	810	0	1146	139
RTOR Reduction (vph)	0	0	0	0	0	11	0
Lane Group Flow (vph)	3855	1949	0	810	0	1274	0
Confl. Peds. (#/hr)			3		3		2
Turn Type				Perm			
Protected Phases	2	6		9		4	
Permitted Phases					4		
Actuated Green, G (s)	49.5	49.0		4.0		16.0	
Effective Green, g (s)	51.0	51.0		5.5		17.5	
Actuated g/C Ratio	0.61	0.61		0.07		0.21	
Clearance Time (s)	4.5	5.0		4.5		4.5	
Vehicle Extension (s)	3.0	3.0		3.0		3.0	
Lane Grp Cap (vph)	3125	2914		227		733	
v/s Ratio Prot	c0.76	0.41		c0.24		c0.37	
v/s Ratio Perm							
v/c Ratio	1.23	0.67		3.57		1.74	
Uniform Delay, d1	16.0	10.5		38.8		32.8	
Progression Factor	1.00	1.00		1.00		1.00	
Incremental Delay, d2	108.1	1.2		1166.6		337.8	
Delay (s)	124.1	11.7		1205.4		370.5	
Level of Service	F	B		F		F	
Approach Delay (s)	124.1	11.7		1205.4		370.5	
Approach LOS	F	B		F		F	
Intersection Summary							
HCM Average Control Delay		247.3		HCM Level of Service		F	
HCM Volume to Capacity ratio		1.53					
Actuated Cycle Length (s)		83.0		Sum of lost time (s)		9.0	
Intersection Capacity Utilization		141.0%		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	3.0	
Lane Util. Factor		0.91			0.91				0.88	0.94	0.95	
Frpb, ped/bikes		1.00			1.00				1.00	1.00	0.99	
Flpb, ped/bikes		1.00			1.00				1.00	1.00	1.00	
Frt		1.00			1.00				0.85	1.00	0.93	
Flt Protected		1.00			1.00				1.00	0.95	1.00	
Satd. Flow (prot)		5080			5085				2787	4990	3273	
Flt Permitted		1.00			1.00				1.00	0.95	1.00	
Satd. Flow (perm)		5080			5085				2787	4990	3273	
Volume (vph)	0	2301	14	0	1120	0	0	0	1566	1896	450	382
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	2348	14	0	1143	0	0	0	1598	1935	459	390
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	7	0
Lane Group Flow (vph)	0	2361	0	0	1143	0	0	0	1598	1935	842	0
Confl. Peds. (#/hr)	79		1	1		79	2		28	28		2
Turn Type									custom	Prot		
Protected Phases		2			6				4	3	8	
Permitted Phases									4			
Actuated Green, G (s)		40.0			40.0				20.0	23.0	49.0	
Effective Green, g (s)		42.0			42.0				23.0	26.0	52.0	
Actuated g/C Ratio		0.42			0.42				0.23	0.26	0.52	
Clearance Time (s)		5.0			5.0				6.0	6.0	6.0	
Lane Grp Cap (vph)		2134			2136				641	1297	1702	
v/s Ratio Prot		c0.46			0.22				c0.57	c0.39	0.26	
v/s Ratio Perm												
v/c Ratio		1.11			0.54				2.49	1.49	0.49	
Uniform Delay, d1		29.0			21.7				38.5	37.0	15.5	
Progression Factor		1.00			1.00				0.90	0.88	1.02	
Incremental Delay, d2		55.5			1.0				672.3	224.9	0.9	
Delay (s)		84.5			22.7				706.8	257.5	16.6	
Level of Service		F			C				F	F	B	
Approach Delay (s)		84.5			22.7			706.8			184.0	
Approach LOS		F			C			F			F	
Intersection Summary												
HCM Average Control Delay		236.8				HCM Level of Service			F			
HCM Volume to Capacity ratio		1.57										
Actuated Cycle Length (s)		100.0				Sum of lost time (s)			9.0			
Intersection Capacity Utilization		148.2%				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)	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	
Frts	1.00	0.88		1.00	0.85		1.00	1.00		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)	1593	1477		1593	1425		1593	1669		1593	1638	
Flt Permitted	0.50	1.00		0.47	1.00		0.26	1.00		0.11	1.00	
Satd. Flow (perm)	831	1477		792	1425		432	1669		176	1638	
Volume (vph)	561	73	275	46	0	319	39	756	22	67	382	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)	572	74	281	47	0	326	40	771	22	68	390	71
RTOR Reduction (vph)	0	124	0	0	32	0	0	1	0	0	7	0
Lane Group Flow (vph)	572	231	0	47	294	0	40	792	0	68	454	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	4			8			2			6		
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	54.0	54.0		54.0	54.0		36.0	36.0		36.5	36.5	
Effective Green, g (s)	56.0	56.0		56.0	56.0		38.0	38.0		38.0	38.0	
Actuated g/C Ratio	0.56	0.56		0.56	0.56		0.38	0.38		0.38	0.38	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	465	827		444	798		164	634		67	622	
v/s Ratio Prot		0.16			0.21			0.47			0.28	
v/s Ratio Perm	0.69			0.06			0.09			0.39		
v/c Ratio	1.23	0.28		0.11	0.37		0.24	1.25		1.01	0.73	
Uniform Delay, d1	22.0	11.5		10.3	12.2		21.2	31.0		31.0	26.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.55	1.60	
Incremental Delay, d2	121.2	0.2		0.1	0.3		3.5	124.8		108.7	6.7	
Delay (s)	143.2	11.7		10.4	12.5		24.7	155.8		156.8	49.2	
Level of Service	F	B		B	B		C	F		F	D	
Approach Delay (s)		92.8			12.2			149.5			63.1	
Approach LOS		F			B			F			E	

Intersection Summary

HCM Average Control Delay	93.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.24		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	119.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Washington Gateway - Square 3584
6: Florida Ave & Burger King Entrance

Background PM
With NY/FLA Circlce

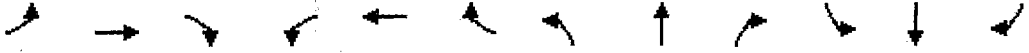
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0			3.0			3.0	
Lane Util. Factor		0.91			0.91			1.00			1.00	
Fr't		1.00			1.00			0.98			0.93	
Flt Protected		1.00			1.00			0.96			0.98	
Satd. Flow (prot)		4558			4576			1582			1525	
Flt Permitted		0.81			0.93			0.39			0.89	
Satd. Flow (perm)		3679			4255			640			1376	
Volume (vph)	10	1347	35	5	961	0	203	3	26	11	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)	10	1374	36	5	981	0	207	3	27	11	3	17
RTOR Reduction (vph)	0	3	0	0	0	0	0	4	0	0	13	0
Lane Group Flow (vph)	0	1417	0	0	986	0	0	233	0	0	18	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			8!			8!			9	
Permitted Phases	2			8!			8!			9		
Actuated Green, G (s)		41.0			24.0			24.0			20.0	
Effective Green, g (s)		43.0			26.0			26.0			22.0	
Actuated g/C Ratio		0.43			0.26			0.26			0.22	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1582			1106			166			303	
v/s Ratio Prot												
v/s Ratio Perm		c0.39			0.23			c0.36			c0.01	
v/c Ratio		0.90			0.89			1.40			0.06	
Uniform Delay, d1		26.4			35.6			37.0			30.8	
Progression Factor		0.44			0.92			1.00			1.00	
Incremental Delay, d2		6.5			6.5			212.6			0.4	
Delay (s)		18.1			39.2			249.6			31.2	
Level of Service		B			D			F			C	
Approach Delay (s)		18.1			39.2			249.6			31.2	
Approach LOS		B			D			F			C	

Intersection Summary

HCM Average Control Delay	46.6	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

! Phase conflict between lane groups.

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	
Lane Util. Factor		0.91			0.91						1.00	
Frt		0.99			1.00						0.94	
Flt Protected		1.00			1.00						0.99	
Satd. Flow (prot)		4533			4556						1563	
Flt Permitted		1.00			1.00						0.99	
Satd. Flow (perm)		4533			4556						1563	
Volume (vph)	81	1300	65	53	976	14	0	0	0	20	62	68
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)	83	1327	66	54	996	14	0	0	0	20	63	69
RTOR Reduction (vph)	0	5	0	0	1	0	0	0	0	0	28	0
Lane Group Flow (vph)	0	1471	0	0	1063	0	0	0	0	0	124	0
Turn Type	custom				custom				Perm			
Protected Phases	1	1		5	5						6	
Permitted Phases	1			5						6		
Actuated Green, G (s)		31.5			29.0						24.5	
Effective Green, g (s)		33.5			31.0						26.5	
Actuated g/C Ratio		0.34			0.31						0.26	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		1519			1412						414	
v/s Ratio Prot		c0.32			c0.23							
v/s Ratio Perm											0.08	
v/c Ratio		0.97			0.75						0.30	
Uniform Delay, d1		32.7			31.0						29.3	
Progression Factor		1.46			1.00						1.00	
Incremental Delay, d2		9.8			2.3						1.8	
Delay (s)		57.6			33.4						31.2	
Level of Service		E			C						C	
Approach Delay (s)		57.6			33.4			0.0			31.2	
Approach LOS		E			C			A			C	

Intersection Summary

HCM Average Control Delay	46.5	HCM Level of Service	D
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	73.3%	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	1.00	1.00
Fr't	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	4568			4567	1593	1425
Flt Permitted	1.00			0.66	0.95	1.00
Satd. Flow (perm)	4568			3034	1593	1425
Volume (vph)	3863	51	86	1864	48	87
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	3942	52	88	1902	49	89
RTOR Reduction (vph)	1	0	0	0	0	0
Lane Group Flow (vph)	3993	0	0	1990	49	89
Turn Type			pm+pt		pm+ov	
Protected Phases	4		3	8	9	3
Permitted Phases			8			9
Actuated Green, G (s)	70.2			82.5	9.5	17.8
Effective Green, g (s)	71.2			83.5	10.5	19.8
Actuated g/C Ratio	0.71			0.84	0.10	0.20
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)	3252			2676	167	325
v/s Ratio Prot	c0.87			c0.07	0.03	c0.03
v/s Ratio Perm				0.55		0.04
v/c Ratio	1.23			0.74	0.29	0.27
Uniform Delay, d1	14.4			3.6	41.3	34.0
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	105.4			1.2	4.4	0.5
Delay (s)	119.8			4.7	45.7	34.5
Level of Service	F			A	D	C
Approach Delay (s)	119.8			4.7	38.5	
Approach LOS	F			A	D	
Intersection Summary						
HCM Average Control Delay		80.6		HCM Level of Service		F
HCM Volume to Capacity ratio		1.02				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		3.0
Intersection Capacity Utilization		121.6%		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)	4622			4621	1608	1439
Flt Permitted	1.00			0.93	0.95	1.00
Satd. Flow (perm)	4622			4307	1608	1439
Volume (vph)	1631	0	5	1248	90	21
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1664	0	5	1273	92	21
RTOR Reduction (vph)	0	0	0	0	0	13
Lane Group Flow (vph)	1664	0	0	1278	92	8
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%
Turn Type			Perm		custom	
Protected Phases	4			8		
Permitted Phases			8		2	2
Actuated Green, G (s)	52.3			52.3	37.7	37.7
Effective Green, g (s)	54.3			54.3	39.7	39.7
Actuated g/C Ratio	0.54			0.54	0.40	0.40
Clearance Time (s)	5.0			5.0	5.0	5.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2510			2339	638	571
v/s Ratio Prot	c0.36					
v/s Ratio Perm				0.30	c0.06	0.01
v/c Ratio	0.66			0.55	0.14	0.01
Uniform Delay, d1	16.3			14.8	19.3	18.3
Progression Factor	0.98			2.25	1.00	1.00
Incremental Delay, d2	0.1			0.1	0.5	0.0
Delay (s)	16.1			33.5	19.8	18.3
Level of Service	B			C	B	B
Approach Delay (s)	16.1			33.5	19.5	
Approach LOS	B			C	B	

Intersection Summary

HCM Average Control Delay	23.5	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	47.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Appendix E

Total 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	3.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	0.94		1.00	1.00	1.00	0.94
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.95		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4064		1593	3185	1593	1343
Flt Permitted	1.00		0.11	1.00	0.95	1.00
Satd. Flow (perm)	4064		181	3185	1593	1343
Volume (vph)	892	458	371	1623	115	15
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	910	467	379	1656	117	15
RTOR Reduction (vph)	99	0	0	0	0	8
Lane Group Flow (vph)	1278	0	379	1656	117	7
Confl. Peds. (#/hr)		97	97		99	105
Turn Type			pm+pt		pm+ov	
Protected Phases	6		5	2	8	5
Permitted Phases			2			8
Actuated Green, G (s)	41.1		79.6	79.6	12.4	43.9
Effective Green, g (s)	43.1		80.6	80.6	13.4	47.9
Actuated g/C Ratio	0.43		0.81	0.81	0.13	0.48
Clearance Time (s)	5.0		6.0	4.0	4.0	6.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1752		633	2567	213	684
v/s Ratio Prot	c0.31		0.21	c0.52	c0.07	0.00
v/s Ratio Perm			0.28			0.00
v/c Ratio	0.73		0.60	0.65	0.55	0.01
Uniform Delay, d1	23.6		15.7	3.9	40.5	13.6
Progression Factor	1.00		0.63	0.27	1.32	2.11
Incremental Delay, d2	1.6		1.0	0.8	0.3	0.0
Delay (s)	25.2		10.9	1.9	53.8	28.8
Level of Service	C		B	A	D	C
Approach Delay (s)	25.2			3.5	50.9	
Approach LOS	C			A	D	
Intersection Summary						
HCM Average Control Delay		13.7		HCM Level of Service		B
HCM Volume to Capacity ratio		0.67				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		6.0
Intersection Capacity Utilization		78.5%		ICU Level of Service		D
Analysis Period (min)		15				
c Critical Lane Group						

Washington Gateway
2: Florida Ave & Eckington Place

Total Future AM
No Circle

												
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	0.81	
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)		4572			3185	1339		1671		1584	1170	
Flt Permitted		0.91			0.95	1.00		1.00		0.73	1.00	
Satd. Flow (perm)		4155			3041	1339		1671		1215	1170	
Volume (vph)	7	933	3	1	1615	515	0	42	1	245	18	230
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	952	3	1	1648	526	0	43	1	250	18	235
RTOR Reduction (vph)	0	0	0	0	0	121	0	1	0	0	48	0
Lane Group Flow (vph)	0	962	0	0	1649	405	0	43	0	250	205	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	75.0		15.0		15.0	15.0	
Effective Green, g (s)		77.0			77.0	77.0		17.0		17.0	17.0	
Actuated g/C Ratio		0.77			0.77	0.77		0.17		0.17	0.17	
Clearance Time (s)		30.0			5.0	5.0		5.0		5.0	5.0	
Lane Grp Cap (vph)		3199			2342	1031		284		207	199	
v/s Ratio Prot								0.03			0.18	
v/s Ratio Perm		0.23			c0.54	0.30				c0.21		
v/c Ratio		0.30			0.70	0.39		0.15		1.21	1.03	
Uniform Delay, d1		3.4			5.8	3.8		35.4		41.5	41.5	
Progression Factor		1.00			0.92	3.63		1.00		1.00	1.00	
Incremental Delay, d2		0.2			0.2	0.1		1.1		129.9	71.7	
Delay (s)		3.7			5.5	13.9		36.5		171.4	113.2	
Level of Service		A			A	B		D		F	F	
Approach Delay (s)		3.7			7.5			36.5			142.1	
Approach LOS		A			A			D			F	

Intersection Summary

HCM Average Control Delay	25.2	HCM Level of Service	C
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	80.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Washington Gateway
3: Florida Ave & New York Avenue

Total Future AM
No Circle

												
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			0.98	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		4552			4542			4577			4431	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		4552			4542			4577			4431	
Volume (vph)	0	1155	31	0	1686	61	0	1515	0	0	3322	600
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	1179	32	0	1720	62	0	1546	0	0	3390	612
RTOR Reduction (vph)	0	0	0	0	4	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1211	0	0	1779	0	0	1546	0	0	4002	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)		29.0			29.0			60.0			60.0	
Effective Green, g (s)		30.0			30.0			62.0			62.0	
Actuated g/C Ratio		0.30			0.30			0.62			0.62	
Clearance Time (s)		5.0			5.0			6.0			6.0	
Lane Grp Cap (vph)		1366			1363			2838			2747	
v/s Ratio Prot		0.27			c0.39			0.34			c0.90	
v/s Ratio Perm												
v/c Ratio		0.89			1.30			0.54			1.46	
Uniform Delay, d1		33.4			35.0			10.9			19.0	
Progression Factor		0.88			0.48			0.49			0.41	
Incremental Delay, d2		7.9			141.8			0.6			205.8	
Delay (s)		37.2			158.8			5.9			213.6	
Level of Service		D			F			A			F	
Approach Delay (s)		37.2			158.8			5.9			213.6	
Approach LOS		D			F			A			F	

Intersection Summary

HCM Average Control Delay	139.6	HCM Level of Service	F
HCM Volume to Capacity ratio	1.41		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	131.6%	ICU Level of Service	H
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	1406		1664	633	
Flt Permitted		0.97					0.27	1.00		0.80	1.00	
Satd. Flow (perm)		1272					445	1406		1348	633	
Volume (vph)	3	83	45	25	80	32	168	153	75	449	176	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	77	458	180	60
RTOR Reduction (vph)	0	7	0	0	0	0	0	12	0	0	12	0
Lane Group Flow (vph)	0	153	0	0	0	0	286	144	0	535	228	0
Confl. Peds. (#/hr)	72		39	92	92	65		2	8		92	40
Turn Type	Perm			Perm		Perm	custom		Perm	Perm		
Protected Phases		9					4			8		
Permitted Phases	9				4	4		1 4	8		8	
Actuated Green, G (s)		6.0					33.0	43.0		33.0	33.0	
Effective Green, g (s)		8.0					35.0	45.0		35.0	35.0	
Actuated g/C Ratio		0.08					0.35	0.45		0.35	0.35	
Clearance Time (s)		5.0					5.0			5.0	5.0	
Lane Grp Cap (vph)		102					156	633		472	222	
v/s Ratio Prot												
v/s Ratio Perm		0.12					0.64	0.10		0.40	0.36	
v/c Ratio		1.50					1.83	0.23		1.13	1.03	
Uniform Delay, d1		46.0					32.5	16.8		32.5	32.5	
Progression Factor		1.00					1.00	1.00		0.93	0.94	
Incremental Delay, d2		267.8					398.9	0.8		82.8	67.0	
Delay (s)		313.8					431.4	17.7		113.1	97.4	
Level of Service		F					F	B		F	F	
Approach Delay (s)		313.8					285.4			108.2		
Approach LOS		F					F			F		

Intersection Summary

HCM Average Control Delay	374.9	HCM Level of Service	F
HCM Volume to Capacity ratio	1.99		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	175.4%	ICU Level of Service	H
Analysis Period (min)	15		

d1 Defacto Left Lane. Recode with 1 though lane as a left lane.

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			
Frpb, ped/bikes	0.99			0.99			
Flpb, ped/bikes	1.00			1.00			
Frt	0.99			1.00			
Flt Protected	1.00			0.99			
Satd. Flow (prot)	4524			4462			
Flt Permitted	1.00			0.66			
Satd. Flow (perm)	4524			2983			
Volume (vph)	1040	44	830	2419	101	4	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	
Adj. Flow (vph)	1061	45	847	2468	103	4	
RTOR Reduction (vph)	4	0	0	0	0	0	
Lane Group Flow (vph)	1102	0	0	3422	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)	36.0			45.0			
Effective Green, g (s)	38.0			48.0			
Actuated g/C Ratio	0.38			0.48			
Clearance Time (s)	5.0			6.0			
Lane Grp Cap (vph)	1719			1535			
v/s Ratio Prot	0.24			c0.16			
v/s Ratio Perm				c0.91			
v/c Ratio	0.64			3.90dl			
Uniform Delay, d1	25.4			26.0			
Progression Factor	1.00			0.34			
Incremental Delay, d2	1.8			553.4			
Delay (s)	27.3			562.1			
Level of Service	C			F			
Approach Delay (s)	27.3			562.1			
Approach LOS	C			F			
Intersection Summary							

							
Movement	EBT	EBR	WBL	WBT	NEL	NER	
Lane Configurations	↑↑↑			↑↑↑		↑	
Sign Control	Free			Free	Stop		
Grade	0%			0%	0%		
Volume (veh/h)	873	0	0	1686	0	122	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	
Hourly flow rate (vph)	891	0	0	1720	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			0.79		0.89	0.79	
vC, conflicting volume			891		1464	521	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			334		270	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	82	
cM capacity (veh/h)			967		621	698	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NE 1
Volume Total	297	297	297	573	573	573	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	698
Volume to Capacity	0.17	0.17	0.17	0.34	0.34	0.34	0.18
Queue Length 95th (ft)	0	0	0	0	0	0	16
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	11.3
Lane LOS							B
Approach Delay (s)	0.0			0.0			11.3
Approach LOS							B
Intersection Summary							
Average Delay			0.5				
Intersection Capacity Utilization			41.8%		ICU Level of Service		A
Analysis Period (min)			15				

Washington Gateway
6: N Street & 1st Street

Total Future AM
No Circle

												
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	0.94		1.00	0.95		1.00	0.99		1.00	0.99	
Flpb, ped/bikes	0.97	1.00		1.00	1.00		1.00	1.00		0.98	1.00	
Fr _t	1.00	0.96		1.00	0.85		1.00	0.96		1.00	0.96	
Fl _t Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1539	1514		1593	1350		1593	1591		1561	1581	
Fl _t Permitted	0.73	1.00		0.17	1.00		0.09	1.00		0.49	1.00	
Satd. Flow (perm)	1188	1514		279	1350		145	1591		805	1581	
Volume (vph)	108	352	114	34	0	35	192	290	94	259	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	359	116	35	0	36	196	296	96	264	805	323
RTOR Reduction (vph)	0	11	0	0	27	0	0	12	0	0	14	0
Lane Group Flow (vph)	110	464	0	35	9	0	196	380	0	264	1114	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)	22.0	22.0		22.0	22.0		68.0	68.0		68.0	68.0	
Effective Green, g (s)	24.0	24.0		24.0	24.0		70.0	70.0		70.0	70.0	
Actuated g/C Ratio	0.24	0.24		0.24	0.24		0.70	0.70		0.70	0.70	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	285	363		67	324		102	1114		564	1107	
v/s Ratio Prot		c0.31			0.01			0.24			0.70	
v/s Ratio Perm	0.09			0.13			c1.35			0.33		
v/c Ratio	0.39	1.28		0.52	0.03		1.92	0.34		0.47	1.01	
Uniform Delay, d ₁	31.8	38.0		33.0	29.1		15.0	5.9		6.7	15.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.60	0.77	
Incremental Delay, d ₂	0.9	144.4		7.2	0.0		448.7	0.8		0.3	9.6	
Delay (s)	32.7	182.4		40.2	29.1		463.7	6.7		4.3	21.2	
Level of Service	C	F		D	C		F	A		A	C	
Approach Delay (s)		154.3			34.6			159.1			18.0	
Approach LOS		F			C			F			B	

Intersection Summary			
HCM Average Control Delay	80.2	HCM Level of Service	F
HCM Volume to Capacity ratio	1.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	121.1%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Washington Gateway
7: Florida Ave & Burger King

Total Future AM
No Circle

												
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			1482	
Flt Permitted		0.94			0.92			0.76			0.94	
Satd. Flow (perm)		4090			4226			1237			1420	
Volume (vph)	2	850	117	16	1499	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	867	119	16	1530	1	88	2	7	8	3	17
RTOR Reduction (vph)	0	17	0	0	0	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	971	0	0	1547	0	0	94	0	0	16	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)		61.0			61.0			29.0			29.0	
Effective Green, g (s)		63.0			63.0			31.0			31.0	
Actuated g/C Ratio		0.63			0.63			0.31			0.31	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		2577			2662			383			440	
v/s Ratio Prot												
v/s Ratio Perm		0.24			0.37			0.08			0.01	
v/c Ratio		0.38			0.58			0.25			0.04	
Uniform Delay, d1		9.0			10.8			25.8			24.1	
Progression Factor		1.49			0.06			1.00			1.00	
Incremental Delay, d2		0.1			0.2			1.5			0.2	
Delay (s)		13.5			0.9			27.3			24.2	
Level of Service		B			A			C			C	
Approach Delay (s)		13.5			0.9			27.3			24.2	
Approach LOS		B			A			C			C	

Intersection Summary

HCM Average Control Delay	6.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	64.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Washington Gateway
8: Florida Ave & 4th Street

Total Future AM
No Circle

												
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
Frbp, 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)		4475			4562					1545	1676	1387
Flt Permitted		0.99			1.00					0.95	1.00	1.00
Satd. Flow (perm)		4475			4562					1545	1676	1387
Volume (vph)	101	691	56	85	1564	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	705	57	87	1596	4	0	0	0	15	83	76
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	0	0	0	61
Lane Group Flow (vph)	0	857	0	0	1687	0	0	0	0	15	83	15
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)		24.1			43.7					17.2	17.2	17.2
Effective Green, g (s)		26.1			45.7					19.2	19.2	19.2
Actuated g/C Ratio		0.26			0.46					0.19	0.19	0.19
Clearance Time (s)		5.0			5.0					5.0	5.0	5.0
Vehicle Extension (s)		3.0			3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1168			2085					297	322	266
v/s Ratio Prot		c0.19			c0.37						c0.05	
v/s Ratio Perm										0.01		0.01
v/c Ratio		0.73			0.81					0.05	0.26	0.05
Uniform Delay, d1		33.8			23.4					33.0	34.3	33.0
Progression Factor		0.63			1.00					1.00	1.00	1.00
Incremental Delay, d2		2.3			2.4					0.3	1.9	0.4
Delay (s)		23.6			25.8					33.3	36.3	33.4
Level of Service		C			C					C	D	C
Approach Delay (s)		23.6			25.8			0.0			34.8	
Approach LOS		C			C			A			C	
Intersection Summary												
HCM Average Control Delay		25.7			HCM Level of Service			C				
HCM Volume to Capacity ratio		0.67										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			9.0				
Intersection Capacity Utilization		77.6%			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	0.99	1.00
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	0.99			1.00	0.97	0.85
Flt Protected	1.00			1.00	0.96	1.00
Satd. Flow (prot)	4528			4565	2999	1297
Flt Permitted	1.00			0.66	0.96	1.00
Satd. Flow (perm)	4528			3000	2999	1297
Volume (vph)	1466	96	207	3888	38	44
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1496	98	211	3967	39	45
RTOR Reduction (vph)	7	0	0	0	9	25
Lane Group Flow (vph)	1587	0	0	4178	41	9
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)	65.0			73.0	17.0	25.0
Effective Green, g (s)	67.0			75.0	19.0	27.0
Actuated g/C Ratio	0.67			0.75	0.19	0.27
Clearance Time (s)	5.0			5.0	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	3034			2328	570	350
v/s Ratio Prot	0.35			c0.09	c0.01	0.01
v/s Ratio Perm				c1.26		
v/c Ratio	0.52			1.79	0.07	0.03
Uniform Delay, d1	8.4			12.5	33.3	26.8
Progression Factor	0.55			1.00	1.00	1.00
Incremental Delay, d2	0.1			359.3	0.2	0.0
Delay (s)	4.8			371.8	33.5	26.9
Level of Service	A			F	C	C
Approach Delay (s)	4.8			371.8	30.8	
Approach LOS	A			F	C	

Intersection Summary			
HCM Average Control Delay	267.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.44		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	145.3%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Washington Gateway
10: Florida Ave & Site Driveway

Total Future AM
No Circle

												
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			0.91		1.00	1.00		1.00	1.00	
Frt		1.00			0.99		1.00	1.00		1.00	0.89	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		5054			5057		1770	1854		1770	1663	
Flt Permitted		0.79			0.94		0.71	1.00		0.54	1.00	
Satd. Flow (perm)		4024			4740		1320	1854		1013	1663	
Volume (vph)	42	925	27	5	1592	61	42	183	6	14	21	52
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)	43	944	28	5	1624	62	43	187	6	14	21	53
RTOR Reduction (vph)	0	3	0	0	4	0	0	1	0	0	18	0
Lane Group Flow (vph)	0	1012	0	0	1687	0	43	192	0	14	56	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases	2			6			4			8		
Permitted Phases	2			6			4			8		
Actuated Green, G (s)	58.0			58.0			32.0			32.0		
Effective Green, g (s)	60.0			60.0			34.0			34.0		
Actuated g/C Ratio	0.60			0.60			0.34			0.34		
Clearance Time (s)	5.0			5.0			5.0			5.0		
Vehicle Extension (s)	3.0			3.0			3.0			3.0		
Lane Grp Cap (vph)	2414			2844			449			344		
v/s Ratio Prot							c0.10			0.03		
v/s Ratio Perm	0.25			c0.36			0.03			0.01		
v/c Ratio	0.42			0.59			0.10			0.04		
Uniform Delay, d1	10.7			12.4			22.5			22.1		
Progression Factor	0.09			0.29			1.00			1.00		
Incremental Delay, d2	0.3			0.8			0.4			0.2		
Delay (s)	1.3			4.4			22.9			22.3		
Level of Service	A			A			C			C		
Approach Delay (s)	1.3			4.4			25.1			22.8		
Approach LOS	A			A			C			C		

Intersection Summary

HCM Average Control Delay	5.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	68.3%	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	Yield	
Grade	0%			0%	0%	
Volume (veh/h)	1549	23	0	3927	0	13
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	1581	23	0	4007	0	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)	267					
pX, platoon unblocked			0.81		0.81	0.81
vC, conflicting volume			1604		2928	539
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1287		2912	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	99
cM capacity (veh/h)			445		10	889

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1
Volume Total	632	632	340	1336	1336	1336	13
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	23	0	0	0	13
cSH	1700	1700	1700	1700	1700	1700	889
Volume to Capacity	0.37	0.37	0.20	0.79	0.79	0.79	0.01
Queue Length 95th (ft)	0	0	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	9.1
Lane LOS							A
Approach Delay (s)	0.0			0.0			9.1
Approach LOS							A

Intersection Summary							
Average Delay			0.0				
Intersection Capacity Utilization			79.2%		ICU Level of Service		D
Analysis Period (min)			15				

	→	↘	↙	←	↖	↗
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	3.0
Lane Util. Factor	0.91		1.00	0.95	1.00	1.00
Frpb, ped/bikes	0.98		1.00	1.00	1.00	0.87
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.97		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	4337		1593	3185	1593	1243
Flt Permitted	1.00		0.08	1.00	0.95	1.00
Satd. Flow (perm)	4337		141	3185	1593	1243
Volume (vph)	1239	293	169	1400	513	8
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	1291	305	176	1458	534	8
RTOR Reduction (vph)	39	0	0	0	0	5
Lane Group Flow (vph)	1557	0	176	1458	534	3
Confl. Peds. (#/hr)		63	63		64	63
Turn Type			pm+pt			Perm
Protected Phases	6		5	2	8	
Permitted Phases			2			8
Actuated Green, G (s)	42.7		58.5	58.5	31.5	31.5
Effective Green, g (s)	44.7		60.5	60.5	33.5	33.5
Actuated g/C Ratio	0.45		0.60	0.60	0.34	0.34
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1939		271	1927	534	416
v/s Ratio Prot	c0.36		0.08	c0.46	c0.34	
v/s Ratio Perm			0.31			0.00
v/c Ratio	0.80		0.65	0.76	1.00	0.01
Uniform Delay, d1	23.9		20.4	14.4	33.2	22.2
Progression Factor	1.00		1.00	1.00	1.82	2.80
Incremental Delay, d2	2.5		5.3	2.8	11.7	0.0
Delay (s)	26.4		25.7	17.2	72.1	62.1
Level of Service	C		C	B	E	E
Approach Delay (s)	26.4			18.1	72.0	
Approach LOS	C			B	E	

Intersection Summary			
HCM Average Control Delay	29.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	86.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Washington Gateway
2: Florida Avenue & Eckington Place

Total Future PM
No Circle

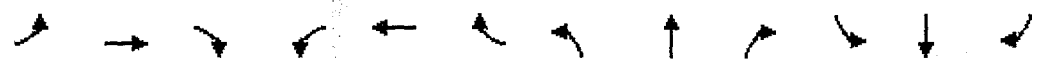
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			 					  	  	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		3.0			3.0	3.0		3.0		3.0	3.0	
Lane Util. Factor		0.91			0.95	1.00		1.00		1.00	1.00	
Frbp, ped/bikes		1.00			1.00	0.89		0.99		1.00	0.88	
Flpb, ped/bikes		1.00			1.00	1.00		1.00		0.99	1.00	
Frt		1.00			1.00	0.85		0.95		1.00	0.86	
Flt Protected		1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		4564			3185	1266		1577		1570	1275	
Flt Permitted		0.92			0.95	1.00		0.99		0.82	1.00	
Satd. Flow (perm)		4212			3035	1266		1569		1359	1275	
Volume (vph)	8	1279	15	3	1273	420	1	19	11	431	11	120
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	1332	16	3	1326	438	1	20	11	449	11	125
RTOR Reduction (vph)	0	1	0	0	0	101	0	9	0	0	80	0
Lane Group Flow (vph)	0	1355	0	0	1329	337	0	23	0	449	56	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)		53.0			75.0	75.0		15.0		15.0	15.0	
Effective Green, g (s)		77.0			77.0	77.0		17.0		17.0	17.0	
Actuated g/C Ratio		0.77			0.77	0.77		0.17		0.17	0.17	
Clearance Time (s)		27.0			5.0	5.0		5.0		5.0	5.0	
Lane Grp Cap (vph)		3243			2337	975		267		231	217	
v/s Ratio Prot											0.04	
v/s Ratio Perm		0.32			0.44	0.27		0.01		0.33		
v/c Ratio		0.42			0.57	0.35		0.09		1.94	0.26	
Uniform Delay, d1		3.9			4.7	3.6		35.0		41.5	36.0	
Progression Factor		2.09			2.34	11.93		1.00		1.00	1.00	
Incremental Delay, d2		0.2			0.1	0.1		0.6		440.2	2.9	
Delay (s)		8.4			11.1	43.1		35.6		481.7	38.9	
Level of Service		A			B	D		D		F	D	
Approach Delay (s)		8.4			19.0			35.6			378.7	
Approach LOS		A			B			D			F	

Intersection Summary

HCM Average Control Delay	71.6	HCM Level of Service	E
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Washington Gateway
3: Florida Avenue & New York Avenue

Total Future PM
No Circle

												
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			0.99			1.00			0.99	
Flpb, ped/bikes		1.00			1.00			1.00			1.00	
Frt		1.00			0.98			1.00			0.96	
Flt Protected		1.00			1.00			1.00			1.00	
Satd. Flow (prot)		4556			4444			4577			4350	
Flt Permitted		1.00			1.00			1.00			1.00	
Satd. Flow (perm)		4556			4444			4577			4350	
Volume (vph)	0	1644	40	0	1281	238	0	3743	0	0	1405	526
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	1712	42	0	1334	248	0	3899	0	0	1464	548
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	0	0	1	0
Lane Group Flow (vph)	0	1751	0	0	1582	0	0	3899	0	0	2011	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)		29.0			29.0			61.0			61.0	
Effective Green, g (s)		30.0			30.0			62.0			62.0	
Actuated g/C Ratio		0.30			0.30			0.62			0.62	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Lane Grp Cap (vph)		1367			1333			2838			2697	
v/s Ratio Prot		c0.38			0.36			c0.85			0.46	
v/s Ratio Perm												
v/c Ratio		1.28			1.19			1.37			0.75	
Uniform Delay, d1		35.0			35.0			19.0			13.4	
Progression Factor		1.54			0.54			0.78			1.28	
Incremental Delay, d2		129.8			91.4			168.4			1.1	
Delay (s)		183.6			110.5			183.2			18.2	
Level of Service		F			F			F			B	
Approach Delay (s)		183.6			110.5			183.2			18.2	
Approach LOS		F			F			F			B	
Intersection Summary												
HCM Average Control Delay		134.9					HCM Level of Service				F	
HCM Volume to Capacity ratio		1.34										
Actuated Cycle Length (s)		100.0					Sum of lost time (s)			8.0		
Intersection Capacity Utilization		123.4%					ICU Level of Service			H		
Analysis Period (min)		15										
c Critical Lane Group												

Washington Gateway
4: Access Road & New York Avenue

Total Future PM
No Circle

												
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		0.96					1.00	0.99		1.00	0.67	
Flpb, ped/bikes		0.94					1.00	1.00		1.00	1.00	
Frt		0.94					1.00	0.85		1.00	0.85	
Flt Protected		0.97					0.99	1.00		0.98	1.00	
Satd. Flow (prot)		1372					1653	1406		1641	954	
Flt Permitted		0.97					0.53	1.00		0.09	1.00	
Satd. Flow (perm)		1372					881	1406		154	954	
Volume (vph)	3	273	137	86	190	47	593	763	122	163	148	73
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	284	143	90	198	49	618	795	127	170	154	76
RTOR Reduction (vph)	0	8	0	0	0	0	0	52	0	0	18	0
Lane Group Flow (vph)	0	512	0	0	0	0	865	743	0	297	212	0
Confl. Peds. (#/hr)	65		10	40	40	65		2	2		40	17
Turn Type	Perm			Perm			custom		Perm	Perm		
Protected Phases		9					4			8		
Permitted Phases	9				4	4		1 4	8		8	
Actuated Green, G (s)		20.0					29.0	34.0		29.0	29.0	
Effective Green, g (s)		23.0					31.0	38.0		31.0	31.0	
Actuated g/C Ratio		0.23					0.31	0.38		0.31	0.31	
Clearance Time (s)		6.0					5.0			5.0	5.0	
Vehicle Extension (s)		3.0					3.0			3.0	3.0	
Lane Grp Cap (vph)		316					273	534		48	296	
v/s Ratio Prot												
v/s Ratio Perm		0.37					0.98	c0.53		c1.92	0.22	
v/c Ratio		1.62					3.17	1.39		6.19	0.72	
Uniform Delay, d1		38.5					34.5	31.0		34.5	30.6	
Progression Factor		1.00					1.00	1.00		1.01	0.96	
Incremental Delay, d2		293.7					985.4	187.3		2366.3	5.9	
Delay (s)		332.2					1019.9	218.3		2401.1	35.2	
Level of Service		F					F	F		F	D	
Approach Delay (s)		332.2					636.0			1368.5		
Approach LOS		F					F			F		

Intersection Summary

HCM Average Control Delay	514.5	HCM Level of Service	F
HCM Volume to Capacity ratio	3.37		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	198.2%	ICU Level of Service	H
Analysis Period (min)	15		

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

c Critical Lane Group

							
Movement	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			0.99		
Flpb, ped/bikes		1.00			1.00		
Frt		1.00			0.99		
Flt Protected		1.00			0.99		
Satd. Flow (prot)		4571			4477		
Flt Permitted		0.94			0.68		
Satd. Flow (perm)		4286			3066		
Volume (vph)	3	2302	14	218	1160	59	8
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	3	2398	15	227	1208	61	8
RTOR Reduction (vph)	0	1	0	0	1	0	0
Lane Group Flow (vph)	0	2415	0	0	1503	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)		25.0			35.0		
Effective Green, g (s)		27.0			37.0		
Actuated g/C Ratio		0.27			0.37		
Clearance Time (s)		5.0			5.0		
Vehicle Extension (s)		3.0			3.0		
Lane Grp Cap (vph)		1157			1233		
v/s Ratio Prot					0.09		
v/s Ratio Perm		0.56			0.37		
v/c Ratio		2.09			1.27dl		
Uniform Delay, d1		36.5			31.5		
Progression Factor		1.00			0.55		
Incremental Delay, d2		492.4			104.0		
Delay (s)		528.9			121.2		
Level of Service		F			F		
Approach Delay (s)		528.9			121.2		
Approach LOS		F			F		
Intersection Summary							



Movement	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations	↑↑↑			↑↑↑		↑
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	1248	0	0	1502	0	142
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Hourly flow rate (vph)	1300	0	0	1565	0	148
Pedestrians				165		
Lane Width (ft)				12.0		
Walking Speed (ft/s)				4.0		
Percent Blockage				14		
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)	230			106		
pX, platoon unblocked			0.72		0.77	0.72
vC, conflicting volume			1300		1822	598
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			653		910	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	78
cM capacity (veh/h)			673		212	678

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NE 1
Volume Total	433	433	433	522	522	522	148
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	0	0	0	0	148
cSH	1700	1700	1700	1700	1700	1700	678
Volume to Capacity	0.25	0.25	0.25	0.31	0.31	0.31	0.22
Queue Length 95th (ft)	0	0	0	0	0	0	21
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	11.8
Lane LOS							B
Approach Delay (s)	0.0			0.0			11.8
Approach LOS							B

Intersection Summary							
Average Delay			0.6				
Intersection Capacity Utilization			50.6%		ICU Level of Service		A
Analysis Period (min)			15				

Washington Gateway
6: N Street & 1st Street

Total Future PM
No Circle

												
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	0.91		1.00	0.96		1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		0.95	1.00		1.00	1.00		1.00	1.00	
Frt	1.00	0.90		1.00	0.85		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)	1587	1371		1510	1369		1593	1663		1593	1632	
Flt Permitted	0.57	1.00		0.39	1.00		0.30	1.00		0.09	1.00	
Satd. Flow (perm)	947	1371		622	1369		503	1663		152	1632	
Volume (vph)	566	128	275	96	0	216	39	808	39	74	387	70
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)	590	133	286	100	0	225	41	842	41	77	403	73
RTOR Reduction (vph)	0	78	0	0	42	0	0	2	0	0	7	0
Lane Group Flow (vph)	590	342	0	100	183	0	41	881	0	77	469	0
Confl. Peds. (#/hr)	3		36	48		15	1		3	3		1
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	48.5	48.5		48.5	48.5		42.5	42.5		42.5	42.5	
Effective Green, g (s)	50.0	50.0		50.0	50.0		44.0	44.0		44.0	44.0	
Actuated g/C Ratio	0.50	0.50		0.50	0.50		0.44	0.44		0.44	0.44	
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	474	686		311	685		221	732		67	718	
v/s Ratio Prot		0.25			0.13			c0.53			0.29	
v/s Ratio Perm	c0.62			0.16			0.08			0.51		
v/c Ratio	1.24	0.50		0.32	0.27		0.19	1.20		1.15	0.65	
Uniform Delay, d1	25.0	16.6		14.9	14.4		17.1	28.0		28.0	22.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.03	1.04	
Incremental Delay, d2	126.9	0.6		0.6	0.2		1.8	104.5		82.3	0.4	
Delay (s)	151.9	17.2		15.5	14.6		18.9	132.5		111.2	23.4	
Level of Service	F	B		B	B		B	F		F	C	
Approach Delay (s)		96.0			14.9			127.5			35.6	
Approach LOS		F			B			F			D	

Intersection Summary

HCM Average Control Delay	85.1	HCM Level of Service	F
HCM Volume to Capacity ratio	1.23		
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			

Washington Gateway
7: Florida Avenue & Burger King Entrance

Total Future PM
No Circle

												
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		0.99			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)		4520			4576			1560			1495	
Flt Permitted		0.93			0.93			0.73			0.91	
Satd. Flow (perm)		4210			4265			1190			1380	
Volume (vph)	10	1390	38	5	983	0	195	3	26	11	3	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)	10	1448	40	5	1024	0	203	3	27	11	3	18
RTOR Reduction (vph)	0	3	0	0	0	0	0	5	0	0	11	0
Lane Group Flow (vph)	0	1495	0	0	1029	0	0	228	0	0	21	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)		53.0			53.0			37.0			37.0	
Effective Green, g (s)		55.0			55.0			39.0			39.0	
Actuated g/C Ratio		0.55			0.55			0.39			0.39	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		2316			2346			464			538	
v/s Ratio Prot												
v/s Ratio Perm		0.36			0.24			0.19			0.02	
v/c Ratio		0.65			0.44			0.49			0.04	
Uniform Delay, d1		15.7			13.3			23.0			18.9	
Progression Factor		0.35			1.06			1.00			1.00	
Incremental Delay, d2		0.6			0.0			3.7			0.1	
Delay (s)		6.1			14.1			26.7			19.0	
Level of Service		A			B			C			B	
Approach Delay (s)		6.1			14.1			26.7			19.0	
Approach LOS		A			B			C			B	
Intersection Summary												
HCM Average Control Delay		10.9				HCM Level of Service				B		
HCM Volume to Capacity ratio		0.58										
Actuated Cycle Length (s)		100.0				Sum of lost time (s)			6.0			
Intersection Capacity Utilization		66.1%				ICU Level of Service			C			
Analysis Period (min)		15										
c Critical Lane Group												

Washington Gateway
8: Florida Avenue & 4th Street

Total Future PM
No Circle

												
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)		4516			4549					1545	1676	1363
Flt Permitted		0.65			0.76					0.95	1.00	1.00
Satd. Flow (perm)		2935			3488					1545	1676	1363
Volume (vph)	81	1341	66	53	998	14	0	0	0	20	62	68
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)	84	1397	69	55	1040	15	0	0	0	21	65	71
RTOR Reduction (vph)	0	5	0	0	1	0	0	0	0	0	0	58
Lane Group Flow (vph)	0	1545	0	0	1109	0	0	0	0	21	65	13
Confl. Peds. (#/hr)	23		22	22		23	17			16		17
Turn Type	Perm			Perm						Perm		Perm
Protected Phases		2			8						9	
Permitted Phases	2			8						9		9
Actuated Green, G (s)		44.0			25.0					16.0	16.0	16.0
Effective Green, g (s)		46.0			27.0					18.0	18.0	18.0
Actuated g/C Ratio		0.46			0.27					0.18	0.18	0.18
Clearance Time (s)		5.0			5.0					5.0	5.0	5.0
Vehicle Extension (s)		3.0			3.0					3.0	3.0	3.0
Lane Grp Cap (vph)		1350			942					278	302	245
v/s Ratio Prot											c0.04	
v/s Ratio Perm		c0.53			c0.32					0.01		0.01
v/c Ratio		1.17dl			1.18					0.08	0.22	0.05
Uniform Delay, d1		27.0			36.5					34.1	35.0	33.9
Progression Factor		0.31			1.00					1.00	1.00	1.00
Incremental Delay, d2		72.5			90.7					0.5	1.6	0.4
Delay (s)		80.8			127.2					34.6	36.6	34.3
Level of Service		F			F					C	D	C
Approach Delay (s)		80.8			127.2			0.0			35.3	
Approach LOS		F			F			A			D	

Intersection Summary

HCM Average Control Delay	96.6	HCM Level of Service	F
HCM Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	78.7%	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	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
Frbp, ped/bikes	1.00			1.00	0.97	0.94
Flpb, ped/bikes	1.00			1.00	1.00	1.00
Frt	1.00			1.00	0.93	0.85
Flt Protected	1.00			1.00	0.97	1.00
Satd. Flow (prot)	5076			5074	3159	1353
Flt Permitted	1.00			0.65	0.97	1.00
Satd. Flow (perm)	5076			3318	3159	1353
Volume (vph)	3942	51	90	1886	47	87
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	4106	53	94	1965	49	91
RTOR Reduction (vph)	1	0	0	0	35	0
Lane Group Flow (vph)	4158	0	0	2059	58	47
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)	64.8			71.8	20.2	23.2
Effective Green, g (s)	65.8			72.8	21.2	25.2
Actuated g/C Ratio	0.66			0.73	0.21	0.25
Clearance Time (s)	4.0			4.0	4.0	4.0
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	3340			2486	670	382
v/s Ratio Prot	c0.82			c0.03	0.02	c0.00
v/s Ratio Perm				0.57		0.03
v/c Ratio	1.24			0.83	0.09	0.12
Uniform Delay, d1	17.1			9.3	31.6	28.9
Progression Factor	0.11			1.00	1.00	1.00
Incremental Delay, d2	110.4			2.4	0.3	0.1
Delay (s)	112.2			11.7	31.9	29.0
Level of Service	F			B	C	C
Approach Delay (s)	112.2			11.7	30.9	
Approach LOS	F			B	C	
Intersection Summary						
HCM Average Control Delay		77.9		HCM Level of Service		E
HCM Volume to Capacity ratio		0.92				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		3.0
Intersection Capacity Utilization		124.1%		ICU Level of Service		H
Analysis Period (min)		15				
c Critical Lane Group						

Washington Gateway
10: Florida Avenue & Site Driveway

Total Future PM
No Circle

												
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			0.91		1.00	1.00		1.00	1.00	
Frt		1.00			1.00		1.00	0.97		1.00	0.89	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		5075			5070		1770	1804		1770	1654	
Flt Permitted		0.91			0.93		0.46	1.00		0.64	1.00	
Satd. Flow (perm)		4614			4739		848	1804		1195	1654	
Volume (vph)	18	1293	12	5	1180	22	193	80	21	43	50	147
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)	19	1347	12	5	1229	23	201	83	22	45	52	153
RTOR Reduction (vph)	0	1	0	0	1	0	0	13	0	0	28	0
Lane Group Flow (vph)	0	1377	0	0	1256	0	201	92	0	45	177	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			4			8	
Permitted Phases	2			6			4			8		
Actuated Green, G (s)		67.7			67.7		22.3	22.3		22.3	22.3	
Effective Green, g (s)		69.7			69.7		24.3	24.3		24.3	24.3	
Actuated g/C Ratio		0.70			0.70		0.24	0.24		0.24	0.24	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		3216			3303		206	438		290	402	
v/s Ratio Prot								0.05			0.11	
v/s Ratio Perm		c0.30			0.26		c0.24			0.04		
v/c Ratio		0.43			0.38		0.98	0.21		0.16	0.44	
Uniform Delay, d1		6.5			6.2		37.6	30.2		29.8	32.1	
Progression Factor		0.15			0.35		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.0			0.3		55.2	0.2		0.3	0.8	
Delay (s)		1.0			2.5		92.8	30.4		30.0	32.9	
Level of Service		A			A		F	C		C	C	
Approach Delay (s)		1.0			2.5			71.4			32.3	
Approach LOS		A			A			E			C	

Intersection Summary

HCM Average Control Delay	10.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	70.2%	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	Yield		
Grade	0%			0%	0%		
Volume (veh/h)	3940	11	0	1933	0	53	
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	
Hourly flow rate (vph)	4104	11	0	2014	0	55	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type					None		
Median storage veh							
Upstream signal (ft)	271						
pX, platoon unblocked			0.40		0.40	0.40	
vC, conflicting volume			4116		4781	1374	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			5815		7494	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	87	
cM capacity (veh/h)			3		0	432	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1
Volume Total	1642	1642	832	671	671	671	55
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	11	0	0	0	55
cSH	1700	1700	1700	1700	1700	1700	432
Volume to Capacity	0.97	0.97	0.49	0.39	0.39	0.39	0.13
Queue Length 95th (ft)	0	0	0	0	0	0	11
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	14.5
Lane LOS							B
Approach Delay (s)	0.0			0.0			14.5
Approach LOS							B
Intersection Summary							
Average Delay			0.1				
Intersection Capacity Utilization			86.4%		ICU Level of Service		E
Analysis Period (min)			15				

Appendix F

Total Future Intersection Capacity Analyses with NY/FLA Circle



Movement	WBR	SBL	SBR	SEL
Lane Configurations	FF			
Ideal Flow (vphpl)	1900	1900	1900	1900
Total Lost time (s)	3.0			
Lane Util. Factor	0.88			
Frt	0.85			
Flt Protected	1.00			
Satd. Flow (prot)	2508			
Flt Permitted	1.00			
Satd. Flow (perm)	2508			
Volume (vph)	1890	0	0	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1929	0	0	0
RTOR Reduction (vph)	0	0	0	0
Lane Group Flow (vph)	1929	0	0	0
Turn Type				
Protected Phases	6			
Permitted Phases				
Actuated Green, G (s)	80.0			
Effective Green, g (s)	82.0			
Actuated g/C Ratio	0.82			
Clearance Time (s)	5.0			
Lane Grp Cap (vph)	2057			
v/s Ratio Prot	c0.77			
v/s Ratio Perm				
v/c Ratio	0.94			
Uniform Delay, d1	7.0			
Progression Factor	0.71			
Incremental Delay, d2	5.2			
Delay (s)	10.1			
Level of Service	B			
Approach Delay (s)	10.1	0.0		0.0
Approach LOS	B	A		A

Intersection Summary

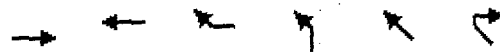
HCM Average Control Delay	10.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.0					3.0
Lane Util. Factor	0.97					0.91
Frt	1.00					1.00
Flt Protected	0.95					1.00
Satd. Flow (prot)	3090					4577
Flt Permitted	0.95					1.00
Satd. Flow (perm)	3090					4577
Volume (vph)	1468	0	0	0	0	1313
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1498	0	0	0	0	1340
RTOR Reduction (vph)	23	0	0	0	0	0
Lane Group Flow (vph)	1475	0	0	0	0	1340
Turn Type						
Protected Phases	6					8
Permitted Phases						
Actuated Green, G (s)	45.0					45.0
Effective Green, g (s)	47.0					47.0
Actuated g/C Ratio	0.47					0.47
Clearance Time (s)	5.0					5.0
Lane Grp Cap (vph)	1452					2151
v/s Ratio Prot	c0.48					c0.29
v/s Ratio Perm						
v/c Ratio	1.02					0.62
Uniform Delay, d1	26.5					19.9
Progression Factor	1.00					1.00
Incremental Delay, d2	20.1					1.4
Delay (s)	46.7					21.2
Level of Service	D					C
Approach Delay (s)	46.7		0.0			21.2
Approach LOS	D		A			C
Intersection Summary						
HCM Average Control Delay			34.7		HCM Level of Service	C
HCM Volume to Capacity ratio			0.82			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	6.0
Intersection Capacity Utilization			89.2%		ICU Level of Service	E
Analysis Period (min)			15			
c Critical Lane Group						

Washington Gateway - Square 3584
2: WB Florida Ave & Eckington Pl

Total Future AM
With NY/FLA Circle

												
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	1.00		1.00			0.95	0.95
Frpb, ped/bikes					1.00	0.95		1.00			0.96	1.00
Flpb, ped/bikes					1.00	1.00		1.00			1.00	1.00
Frt					1.00	0.85		1.00			0.86	0.85
Flt Protected					1.00	1.00		1.00			1.00	1.00
Satd. Flow (prot)					4577	1356		1676			1312	1354
Flt Permitted					1.00	1.00		1.00			1.00	1.00
Satd. Flow (perm)					4577	1356		1676			1312	1354
Volume (vph)	0	0	0	1	2784	571	0	42	0	0	18	464
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	0	0	1	2841	583	0	43	0	0	18	473
RTOR Reduction (vph)	0	0	0	0	0	198	0	0	0	0	2	2
Lane Group Flow (vph)	0	0	0	0	2842	385	0	43	0	0	252	235
Confl. Peds. (#/hr)	11					11				38		15
Turn Type				Perm		Perm						custom
Protected Phases					6			4			4	8
Permitted Phases				6		6						8
Actuated Green, G (s)					64.0	64.0		26.0			26.0	26.0
Effective Green, g (s)					66.0	66.0		28.0			28.0	28.0
Actuated g/C Ratio					0.66	0.66		0.28			0.28	0.28
Clearance Time (s)					5.0	5.0		5.0			5.0	5.0
Lane Grp Cap (vph)					3021	895		469			367	379
v/s Ratio Prot								0.03			0.19	0.17
v/s Ratio Perm					0.62	0.28						
v/c Ratio					0.94	0.43		0.09			0.69	0.62
Uniform Delay, d1					15.2	8.1		26.6			32.1	31.4
Progression Factor					1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2					7.4	1.5		0.4			10.0	7.4
Delay (s)					22.7	9.6		27.0			42.1	38.8
Level of Service					C	A		C			D	D
Approach Delay (s)		0.0			20.4			27.0			40.5	
Approach LOS		A			C			C			D	
Intersection Summary												
HCM Average Control Delay			23.0				HCM Level of Service			C		
HCM Volume to Capacity ratio			0.86									
Actuated Cycle Length (s)			100.0				Sum of lost time (s)		6.0			
Intersection Capacity Utilization			89.2%				ICU Level of Service		E			
Analysis Period (min)			15									
c Critical Lane Group												



Movement	EBT	WBT	WBR	NBL	NWT	NWR
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	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00		1.00	1.00	
Frt	1.00	0.94		1.00	1.00	
Flt Protected	1.00	1.00		0.95	1.00	
Satd. Flow (prot)	4577	4280		3090	4554	
Flt Permitted	1.00	1.00		0.95	1.00	
Satd. Flow (perm)	4577	4280		3090	4554	
Volume (vph)	1519	2403	1536	255	1629	51
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1550	2452	1567	260	1662	52
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	1550	4019	0	260	1714	0
Confl. Peds. (#/hr)			3			2
Turn Type						
Protected Phases	2	6		9	4	
Permitted Phases						
Actuated Green, G (s)	71.5	71.0		4.0	16.0	
Effective Green, g (s)	73.0	73.0		5.5	17.5	
Actuated g/C Ratio	0.70	0.70		0.05	0.17	
Clearance Time (s)	4.5	5.0		4.5	4.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	3182	2976		162	759	
v/s Ratio Prot	0.34	c0.94		c0.08	c0.38	
v/s Ratio Perm						
v/c Ratio	0.49	1.58dr		1.60	2.26	
Uniform Delay, d1	7.4	16.0		49.8	43.8	
Progression Factor	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.5	160.0		299.1	570.4	
Delay (s)	7.9	176.0		348.8	614.2	
Level of Service	A	F		F	F	
Approach Delay (s)	7.9	176.0		348.8	614.2	
Approach LOS	A	F		F	F	

Intersection Summary

HCM Average Control Delay	247.0	HCM Level of Service	F
HCM Volume to Capacity ratio	1.53		
Actuated Cycle Length (s)	105.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	144.3%	ICU Level of Service	H
Analysis Period (min)	15		

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

Washington Gateway - Square 3584
4: New York Avenue & 1st Street

Total Future AM
With NY/FLA Circle

												
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				0.88	0.94	0.95	
Frpb, ped/bikes		1.00			1.00				1.00	1.00	1.00	
Flpb, ped/bikes		1.00			1.00				1.00	1.00	1.00	
Frt		0.99			1.00				0.85	1.00	0.97	
Flt Protected		1.00			1.00				1.00	0.95	1.00	
Satd. Flow (prot)		4548			4577				2508	4491	3096	
Flt Permitted		1.00			1.00				1.00	0.95	1.00	
Satd. Flow (perm)		4548			4577				2508	4491	3096	
Volume (vph)	0	1095	44	0	2389	0	0	0	353	1199	1369	282
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	1117	45	0	2438	0	0	0	360	1223	1397	288
RTOR Reduction (vph)	0	4	0	0	0	0	0	0	51	0	1	0
Lane Group Flow (vph)	0	1158	0	0	2438	0	0	0	309	1223	1684	0
Confl. Peds. (#/hr)	79		1	1		79	2		28	28		2
Turn Type									custom	Prot		
Protected Phases		2			6				4	3	8	
Permitted Phases									4			
Actuated Green, G (s)		47.0			47.0				15.0	21.0	42.0	
Effective Green, g (s)		49.0			49.0				18.0	24.0	45.0	
Actuated g/C Ratio		0.49			0.49				0.18	0.24	0.45	
Clearance Time (s)		5.0			5.0				6.0	6.0	6.0	
Lane Grp Cap (vph)		2229			2243				451	1078	1393	
v/s Ratio Prot		0.25			c0.53				0.12	0.27	c0.54	
v/s Ratio Perm												
v/c Ratio		0.52			1.09				0.69	1.13	1.21	
Uniform Delay, d1		17.4			25.5				38.4	38.0	27.5	
Progression Factor		1.00			1.00				1.23	1.03	1.04	
Incremental Delay, d2		0.9			47.4				8.0	67.6	98.2	
Delay (s)		18.3			72.9				55.3	106.5	126.6	
Level of Service		B			E				E	F	F	
Approach Delay (s)		18.3			72.9			55.3			118.2	
Approach LOS		B			E			E			F	
Intersection Summary												
HCM Average Control Delay			81.9			HCM Level of Service				F		
HCM Volume to Capacity ratio			1.15									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			6.0			
Intersection Capacity Utilization			110.0%			ICU Level of Service			H			
Analysis Period (min)			15									
c Critical Lane Group												

Washington Gateway - Square 3584
5: N Street & 1st Street

Total Future AM
With NY/FLA Circle

												
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	
Frt	1.00	0.96		1.00	0.85		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)	1593	1615		1593	1425		1593	1609		1593	1603	
Flt Permitted	0.73	1.00		0.13	1.00		0.06	1.00		0.51	1.00	
Satd. Flow (perm)	1222	1615		224	1425		105	1609		852	1603	
Volume (vph)	109	353	114	34	0	42	192	245	90	344	769	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)	111	360	116	35	0	43	196	250	92	351	785	323
RTOR Reduction (vph)	0	12	0	0	30	0	0	13	0	0	15	0
Lane Group Flow (vph)	111	464	0	35	13	0	196	329	0	351	1093	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	28.0	28.0		28.0	28.0		62.0	62.0		62.0	62.0	
Effective Green, g (s)	30.0	30.0		30.0	30.0		64.0	64.0		64.0	64.0	
Actuated g/C Ratio	0.30	0.30		0.30	0.30		0.64	0.64		0.64	0.64	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	367	485		67	428		67	1030		545	1026	
v/s Ratio Prot		c0.29			0.01			0.20			0.68	
v/s Ratio Perm	0.09			0.16			c1.87			0.41		
v/c Ratio	0.30	0.96		0.52	0.03		2.93	0.32		0.64	1.07	
Uniform Delay, d1	26.9	34.4		29.1	24.7		18.0	8.1		11.0	18.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.17	0.51	
Incremental Delay, d2	0.5	29.9		7.2	0.0		905.5	0.8		0.5	31.9	
Delay (s)	27.4	64.2		36.2	24.8		923.5	9.0		2.4	41.1	
Level of Service	C	E		D	C		F	A		A	D	
Approach Delay (s)		57.3			29.9			342.1			31.8	
Approach LOS		E			C			F			C	

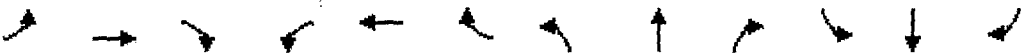
Intersection Summary

HCM Average Control Delay	100.1	HCM Level of Service	F
HCM Volume to Capacity ratio	2.29		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	119.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Washington Gateway - Square 3584
6: Florida Ave & Burger King Entrance

Total Future AM
With NY/FLA Circle

												
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	
Frt		0.98			1.00			0.99			0.92	
Flt Protected		1.00			1.00			0.96			0.99	
Satd. Flow (prot)		4504			4574			1588			1517	
Flt Permitted		0.94			0.92			0.76			0.93	
Satd. Flow (perm)		4224			4222			1255			1438	
Volume (vph)	2	850	101	16	1488	1	87	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	867	103	16	1518	1	89	2	7	8	3	17
RTOR Reduction (vph)	0	8	0	0	0	0	0	2	0	0	14	0
Lane Group Flow (vph)	0	964	0	0	1535	0	0	96	0	0	14	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		92.5			92.5			21.5			21.5	
Effective Green, g (s)		94.5			94.5			23.5			23.5	
Actuated g/C Ratio		0.76			0.76			0.19			0.19	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		3219			3218			238			273	
v/s Ratio Prot												
v/s Ratio Perm		0.23			0.36			0.08			0.01	
v/c Ratio		0.30			0.48			0.40			0.05	
Uniform Delay, d1		4.5			5.5			44.1			41.1	
Progression Factor		1.00			0.53			1.00			1.00	
Incremental Delay, d2		0.1			0.1			5.0			0.4	
Delay (s)		4.6			3.0			49.1			41.5	
Level of Service		A			A			D			D	
Approach Delay (s)		4.6			3.0			49.1			41.5	
Approach LOS		A			A			D			D	
Intersection Summary												
HCM Average Control Delay		5.7			HCM Level of Service			A				
HCM Volume to Capacity ratio		0.46										
Actuated Cycle Length (s)		124.0			Sum of lost time (s)			6.0				
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		↑↑↑			↑↑↑						↑↓	
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	
Lane Util. Factor		0.91			0.91						1.00	
Frt		0.99			1.00						0.94	
Flt Protected		0.99			1.00						1.00	
Satd. Flow (prot)		4505			4563						1571	
Flt Permitted		0.99			1.00						1.00	
Satd. Flow (perm)		4505			4563						1571	
Volume (vph)	101	691	56	85	1553	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	705	57	87	1585	4	0	0	0	15	83	76
RTOR Reduction (vph)	0	6	0	0	0	0	0	0	0	0	23	0
Lane Group Flow (vph)	0	859	0	0	1676	0	0	0	0	0	151	0
Turn Type	custom				custom				Perm			
Protected Phases	1	1		5	5						6	
Permitted Phases	1			5						6		
Actuated Green, G (s)		36.5			52.4						20.1	
Effective Green, g (s)		38.5			54.4						22.1	
Actuated g/C Ratio		0.31			0.44						0.18	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		1399			2002						280	
v/s Ratio Prot		c0.19			c0.37							
v/s Ratio Perm											0.10	
v/c Ratio		0.61			0.84						0.54	
Uniform Delay, d1		36.4			30.9						46.3	
Progression Factor		0.89			1.00						1.00	
Incremental Delay, d2		0.8			3.2						7.3	
Delay (s)		33.3			34.1						53.6	
Level of Service		C			C						D	
Approach Delay (s)		33.3			34.1			0.0			53.6	
Approach LOS		C			C			A			D	

Intersection Summary

HCM Average Control Delay	35.1	HCM Level of Service	D
HCM Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	124.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	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
Frt	0.99			1.00	0.96	0.85
Flt Protected	1.00			1.00	0.97	1.00
Satd. Flow (prot)	4535			4566	3009	1297
Flt Permitted	1.00			0.66	0.97	1.00
Satd. Flow (perm)	4535			3013	3009	1297
Volume (vph)	1466	96	194	3901	33	44
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	1496	98	198	3981	34	45
RTOR Reduction (vph)	6	0	0	0	11	25
Lane Group Flow (vph)	1588	0	0	4179	36	7
Turn Type			pm+pt			pt+ov
Protected Phases	4		3	8	9	9 3
Permitted Phases			8			
Actuated Green, G (s)	89.0			97.0	17.0	25.0
Effective Green, g (s)	91.0			99.0	19.0	27.0
Actuated g/C Ratio	0.73			0.80	0.15	0.22
Clearance Time (s)	5.0			5.0	5.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	3328			2468	461	282
v/s Ratio Prot	0.35			c0.07	c0.01	0.01
v/s Ratio Perm				c1.28		
v/c Ratio	0.48			1.69	0.08	0.02
Uniform Delay, d1	6.8			12.5	45.0	38.1
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.1			313.7	0.3	0.0
Delay (s)	6.9			326.2	45.3	38.2
Level of Service	A			F	D	D
Approach Delay (s)	6.9			326.2	42.4	
Approach LOS	A			F	D	

Intersection Summary

HCM Average Control Delay	235.4	HCM Level of Service	F
HCM Volume to Capacity ratio	1.43		
Actuated Cycle Length (s)	124.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	135.3%	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)	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			0.91		1.00	1.00		1.00	1.00	
Frt		1.00			1.00		1.00	1.00		1.00	0.89	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		4613			4599		1608	1670		1593	1496	
Flt Permitted		0.79			0.94		0.71	1.00		0.57	1.00	
Satd. Flow (perm)		3652			4310		1200	1670		954	1496	
Volume (vph)	36	1024	0	5	1591	50	35	201	6	14	21	52
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)	37	1045	0	5	1623	51	36	205	6	14	21	53
RTOR Reduction (vph)	0	0	0	0	5	0	0	1	0	0	19	0
Lane Group Flow (vph)	0	1082	0	0	1674	0	36	210	0	14	55	0
Heavy Vehicles (%)	2%	1%	1%	1%	1%	2%	1%	2%	1%	2%	2%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		46.6			46.6		44.4	44.4		44.4	44.4	
Effective Green, g (s)		48.1			48.1		45.9	45.9		45.9	45.9	
Actuated g/C Ratio		0.48			0.48		0.46	0.46		0.46	0.46	
Clearance Time (s)		4.5			4.5		4.5	4.5		4.5	4.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		1757			2073		551	767		438	687	
v/s Ratio Prot								c0.13			0.04	
v/s Ratio Perm		0.30			c0.39		0.03			0.01		
v/c Ratio		0.62			0.81		0.07	0.27		0.03	0.08	
Uniform Delay, d1		19.1			22.0		15.1	16.7		14.9	15.2	
Progression Factor		1.33			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.4			2.4		0.2	0.9		0.1	0.2	
Delay (s)		25.8			24.4		15.3	17.6		15.0	15.4	
Level of Service		C			C		B	B		B	B	
Approach Delay (s)		25.8			24.4			17.3			15.3	
Approach LOS		C			C			B			B	

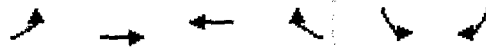
Intersection Summary

HCM Average Control Delay	24.1	HCM Level of Service	C
HCM Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	70.9%	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)	1549	22	0	3940	0	13
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Hourly flow rate (vph)	1581	22	0	4020	0	13
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh						
Upstream signal (ft)	308					
pX, platoon unblocked			0.85		0.85	0.85
vC, conflicting volume			1603		2932	538
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			1362		2920	113
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	98
cM capacity (veh/h)			427		10	783

Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1
Volume Total	632	632	339	1340	1340	1340	13
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	22	0	0	0	13
cSH	1700	1700	1700	1700	1700	1700	783
Volume to Capacity	0.37	0.37	0.20	0.79	0.79	0.79	0.02
Queue Length 95th (ft)	0	0	0	0	0	0	1
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	9.7
Lane LOS							A
Approach Delay (s)	0.0			0.0			9.7
Approach LOS							A

Intersection Summary							
Average Delay			0.0				
Intersection Capacity Utilization			87.9%		ICU Level of Service		E
Analysis Period (min)			15				



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑↑			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			3.0			
Lane Util. Factor			0.95			
Fr _t			1.00			
Flt Protected			1.00			
Satd. Flow (prot)			3539			
Flt Permitted			1.00			
Satd. Flow (perm)			3539			
Volume (vph)	0	0	2138	0	0	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	2182	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	2182	0	0	0
Turn Type						
Protected Phases			6			
Permitted Phases						
Actuated Green, G (s)			80.0			
Effective Green, g (s)			82.0			
Actuated g/C Ratio			0.82			
Clearance Time (s)			5.0			
Lane Grp Cap (vph)			2902			
v/s Ratio Prot			c0.62			
v/s Ratio Perm						
v/c Ratio			0.75			
Uniform Delay, d ₁			4.2			
Progression Factor			0.90			
Incremental Delay, d ₂			1.2			
Delay (s)			5.0			
Level of Service			A			
Approach Delay (s)		0.0	5.0		0.0	
Approach LOS		A	A		A	
Intersection Summary						
HCM Average Control Delay			5.0	HCM Level of Service		A
HCM Volume to Capacity ratio			0.75			
Actuated Cycle Length (s)			100.0	Sum of lost time (s)		18.0
Intersection Capacity Utilization			42.3%	ICU Level of Service		A
Analysis Period (min)			15			
c Critical Lane Group						

Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.0	3.0	
Lane Util. Factor				0.91	0.97	
Frt				1.00	1.00	
Flt Protected				1.00	0.95	
Satd. Flow (prot)				5085	3433	
Flt Permitted				1.00	0.95	
Satd. Flow (perm)				5085	3433	
Volume (vph)	0	0	0	1522	874	0
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	0	0	0	1553	892	0
RTOR Reduction (vph)	0	0	0	0	7	0
Lane Group Flow (vph)	0	0	0	1553	885	0
Turn Type						
Protected Phases				8	6	
Permitted Phases						
Actuated Green, G (s)				41.0	49.0	
Effective Green, g (s)				43.0	51.0	
Actuated g/C Ratio				0.43	0.51	
Clearance Time (s)				5.0	5.0	
Lane Grp Cap (vph)				2187	1751	
v/s Ratio Prot				c0.31	c0.26	
v/s Ratio Perm						
v/c Ratio				0.71	0.51	
Uniform Delay, d1				23.4	16.2	
Progression Factor				1.00	1.78	
Incremental Delay, d2				2.0	0.7	
Delay (s)				25.4	29.5	
Level of Service				C	C	
Approach Delay (s)	0.0			25.4	29.5	
Approach LOS	A			C	C	
Intersection Summary						
HCM Average Control Delay		26.9		HCM Level of Service		C
HCM Volume to Capacity ratio		0.60				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		6.0
Intersection Capacity Utilization		95.2%		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)	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	1.00		1.00			0.95	0.95
Frpb, ped/bikes					1.00	0.95		1.00			0.96	1.00
Flpb, ped/bikes					1.00	1.00		1.00			1.00	1.00
Frt					1.00	0.85		1.00			0.86	0.85
Flt Protected					1.00	1.00		1.00			1.00	1.00
Satd. Flow (prot)					5085	1507		1858			1448	1504
Flt Permitted					1.00	1.00		0.99			1.00	1.00
Satd. Flow (perm)					5085	1507		1847			1448	1504
Volume (vph)	0	0	0	3	2300	430	1	19	0	0	11	534
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	0	0	3	2347	439	1	19	0	0	11	545
RTOR Reduction (vph)	0	0	0	0	0	202	0	0	0	0	1	1
Lane Group Flow (vph)	0	0	0	0	2350	237	0	20	0	0	282	272
Confl. Peds. (#/hr)	11					11				38		15
Turn Type				Perm		Perm	Perm					custom
Protected Phases					6			4			4	8
Permitted Phases				6		6	4					8
Actuated Green, G (s)					50.0	50.0		40.0			40.0	40.0
Effective Green, g (s)					52.0	52.0		42.0			42.0	42.0
Actuated g/C Ratio					0.52	0.52		0.42			0.42	0.42
Clearance Time (s)					5.0	5.0		5.0			5.0	5.0
Lane Grp Cap (vph)					2644	784		776			608	632
v/s Ratio Prot											0.19	0.18
v/s Ratio Perm					0.46	0.16		0.01				
v/c Ratio					0.89	0.30		0.03			0.46	0.43
Uniform Delay, d1					21.4	13.7		17.0			20.9	20.5
Progression Factor					1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2					5.0	1.0		0.1			2.5	2.1
Delay (s)					26.4	14.7		17.1			23.4	22.7
Level of Service					C	B		B			C	C
Approach Delay (s)		0.0			24.5			17.1			23.0	
Approach LOS		A			C			B			C	
Intersection Summary												
HCM Average Control Delay			24.2				HCM Level of Service			C		
HCM Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			100.0				Sum of lost time (s)		6.0			
Intersection Capacity Utilization			83.0%				ICU Level of Service		E			
Analysis Period (min)			15									
c Critical Lane Group												

Movement	EBT	WBT	WBR	NBL	NWL	NWT	NWR
Lane Configurations							
Ideal Flow (vphpl)	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		0.97		0.95	
Frpb, ped/bikes	1.00	0.99		1.00		1.00	
Flpb, ped/bikes	1.00	1.00		1.00		1.00	
Frft	1.00	0.94		1.00		0.98	
Flt Protected	1.00	1.00		0.95		1.00	
Satd. Flow (prot)	5085	4743		3433		3466	
Flt Permitted	1.00	1.00		0.95		1.00	
Satd. Flow (perm)	5085	4743		3433		3466	
Volume (vph)	3778	1125	785	794	0	1123	162
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	3855	1148	801	810	0	1146	165
RTOR Reduction (vph)	0	0	0	0	0	13	0
Lane Group Flow (vph)	3855	1949	0	810	0	1298	0
Confl. Peds. (#/hr)			3		3		2
Turn Type				Perm			
Protected Phases	2	6		9		4	
Permitted Phases					4		
Actuated Green, G (s)	49.5	49.0		4.0		16.0	
Effective Green, g (s)	51.0	51.0		5.5		17.5	
Actuated g/C Ratio	0.61	0.61		0.07		0.21	
Clearance Time (s)	4.5	5.0		4.5		4.5	
Vehicle Extension (s)	3.0	3.0		3.0		3.0	
Lane Grp Cap (vph)	3125	2914		227		731	
v/s Ratio Prot	c0.76	0.41		c0.24		c0.37	
v/s Ratio Perm							
v/c Ratio	1.23	0.67		3.57		1.78	
Uniform Delay, d1	16.0	10.5		38.8		32.8	
Progression Factor	1.00	1.00		1.00		1.00	
Incremental Delay, d2	108.1	1.2		1166.6		354.3	
Delay (s)	124.1	11.7		1205.4		387.1	
Level of Service	F	B		F		F	
Approach Delay (s)	124.1	11.7		1205.4		387.1	
Approach LOS	F	B		F		F	
Intersection Summary							
HCM Average Control Delay		250.5		HCM Level of Service		F	
HCM Volume to Capacity ratio		1.53					
Actuated Cycle Length (s)		83.0		Sum of lost time (s)		9.0	
Intersection Capacity Utilization		141.9%		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	3.0	
Lane Util. Factor		0.91			0.91				0.88	0.94	0.95	
Frpb, ped/bikes		1.00			1.00				1.00	1.00	0.99	
Flpb, ped/bikes		1.00			1.00				1.00	1.00	1.00	
Frft		1.00			1.00				0.85	1.00	0.93	
Flt Protected		1.00			1.00				1.00	0.95	1.00	
Satd. Flow (prot)		5080			5085				2787	4990	3272	
Flt Permitted		1.00			1.00				1.00	0.95	1.00	
Satd. Flow (perm)		5080			5085				2787	4990	3272	
Volume (vph)	0	2310	14	0	1120	0	0	0	1566	1910	482	412
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	2357	14	0	1143	0	0	0	1598	1949	492	420
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	7	0
Lane Group Flow (vph)	0	2370	0	0	1143	0	0	0	1598	1949	905	0
Confl. Peds. (#/hr)	79		1	1		79	2		28	28		2
Turn Type									custom	Prot		
Protected Phases		2			6				4	3	8	
Permitted Phases									4			
Actuated Green, G (s)		40.0			40.0				20.0	23.0	49.0	
Effective Green, g (s)		42.0			42.0				23.0	26.0	52.0	
Actuated g/C Ratio		0.42			0.42				0.23	0.26	0.52	
Clearance Time (s)		5.0			5.0				6.0	6.0	6.0	
Lane Grp Cap (vph)		2134			2136				641	1297	1701	
v/s Ratio Prot		c0.47			0.22				c0.57	c0.39	0.28	
v/s Ratio Perm												
v/c Ratio		1.11			0.54				2.49	1.50	0.53	
Uniform Delay, d1		29.0			21.7				38.5	37.0	15.9	
Progression Factor		1.00			1.00				1.03	0.89	1.01	
Incremental Delay, d2		57.2			1.0				672.3	229.7	1.0	
Delay (s)		86.2			22.7				711.8	262.6	17.1	
Level of Service		F			C				F	F	B	
Approach Delay (s)		86.2			22.7			711.8			184.3	
Approach LOS		F			C			F			F	
Intersection Summary												
HCM Average Control Delay		237.7								F		
HCM Volume to Capacity ratio		1.57										
Actuated Cycle Length (s)		100.0							9.0			
Intersection Capacity Utilization		148.6%							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		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	
Fr't	1.00	0.89		1.00	0.85		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)	1593	1497		1593	1425		1593	1665		1593	1638	
Flt Permitted	0.46	1.00		0.40	1.00		0.33	1.00		0.09	1.00	
Satd. Flow (perm)	777	1497		674	1425		552	1665		146	1638	
Volume (vph)	561	111	275	96	0	319	39	756	37	99	382	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)	572	113	281	98	0	326	40	771	38	101	390	71
RTOR Reduction (vph)	0	89	0	0	62	0	0	2	0	0	6	0
Lane Group Flow (vph)	572	305	0	98	264	0	40	807	0	101	455	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)	46.0	46.0		46.0	46.0		44.0	44.0		44.0	44.0	
Effective Green, g (s)	48.0	48.0		48.0	48.0		46.0	46.0		46.0	46.0	
Actuated g/C Ratio	0.48	0.48		0.48	0.48		0.46	0.46		0.46	0.46	
Clearance Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	373	719		324	684		254	766		67	753	
v/s Ratio Prot		0.20			0.19			0.49			0.28	
v/s Ratio Perm	c0.74			0.15			0.07			c0.69		
v/c Ratio	1.53	0.42		0.30	0.39		0.16	1.05		1.51	0.60	
Uniform Delay, d1	26.0	17.0		15.8	16.6		15.7	27.0		27.0	20.2	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.86	2.04	
Incremental Delay, d2	253.2	0.4		0.5	0.4		1.3	47.7		284.8	3.2	
Delay (s)	279.2	17.4		16.3	17.0		17.0	74.7		335.2	44.3	
Level of Service	F	B		B	B		B	E		F	D	
Approach Delay (s)		172.4			16.8			72.0			96.6	
Approach LOS		F			B			E			F	
Intersection Summary												
HCM Average Control Delay		103.2		HCM Level of Service						F		
HCM Volume to Capacity ratio		1.52										
Actuated Cycle Length (s)		100.0		Sum of lost time (s)						6.0		
Intersection Capacity Utilization		122.6%		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)	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	
Frst		1.00			1.00			0.98			0.93	
Flt Protected		1.00			1.00			0.96			0.98	
Satd. Flow (prot)		4558			4576			1582			1525	
Flt Permitted		0.81			0.93			0.39			0.89	
Satd. Flow (perm)		3679			4255			640			1376	
Volume (vph)	10	1347	35	5	961	0	203	3	26	11	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)	10	1374	36	5	981	0	207	3	27	11	3	17
RTOR Reduction (vph)	0	3	0	0	0	0	0	4	0	0	13	0
Lane Group Flow (vph)	0	1417	0	0	986	0	0	233	0	0	18	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			8!			8!			9	
Permitted Phases	2			8!			8!			9		
Actuated Green, G (s)		41.0			24.0			24.0			20.0	
Effective Green, g (s)		43.0			26.0			26.0			22.0	
Actuated g/C Ratio		0.43			0.26			0.26			0.22	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		3.0			3.0			3.0			3.0	
Lane Grp Cap (vph)		1582			1106			166			303	
v/s Ratio Prot												
v/s Ratio Perm		c0.39			0.23			c0.36			c0.01	
v/c Ratio		0.90			0.89			1.40			0.06	
Uniform Delay, d1		26.4			35.6			37.0			30.8	
Progression Factor		0.72			0.91			1.00			1.00	
Incremental Delay, d2		6.0			6.6			212.6			0.4	
Delay (s)		25.1			39.0			249.6			31.2	
Level of Service		C			D			F			C	
Approach Delay (s)		25.1			39.0			249.6			31.2	
Approach LOS		C			D			F			C	

Intersection Summary

HCM Average Control Delay	50.2	HCM Level of Service	D
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		

! Phase conflict between lane groups.

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	
Lane Util. Factor		0.91			0.91						1.00	
Frst		0.99			1.00						0.94	
Flt Protected		1.00			1.00						0.99	
Satd. Flow (prot)		4534			4557						1563	
Flt Permitted		1.00			1.00						0.99	
Satd. Flow (perm)		4534			4557						1563	
Volume (vph)	81	1341	67	53	998	14	0	0	0	20	62	68
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)	83	1368	68	54	1018	14	0	0	0	20	63	69
RTOR Reduction (vph)	0	5	0	0	1	0	0	0	0	0	28	0
Lane Group Flow (vph)	0	1514	0	0	1085	0	0	0	0	0	124	0
Turn Type	custom			custom						Perm		
Protected Phases	1	1		5	5						6	
Permitted Phases	1			5						6		
Actuated Green, G (s)		31.5			29.9						23.6	
Effective Green, g (s)		33.5			31.9						25.6	
Actuated g/C Ratio		0.34			0.32						0.26	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		3.0			3.0						3.0	
Lane Grp Cap (vph)		1519			1454						400	
v/s Ratio Prot		c0.33			c0.24							
v/s Ratio Perm											0.08	
v/c Ratio		1.00			0.75						0.31	
Uniform Delay, d1		33.2			30.4						30.1	
Progression Factor		1.46			1.00						1.00	
Incremental Delay, d2		15.8			2.1						2.0	
Delay (s)		64.1			32.6						32.1	
Level of Service		E			C						C	
Approach Delay (s)		64.1			32.6			0.0			32.1	
Approach LOS		E			C			A			C	
Intersection Summary												
HCM Average Control Delay			49.9			HCM Level of Service				D		
HCM Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			9.0			
Intersection Capacity Utilization			74.7%			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
Fr _t	1.00			1.00	0.97	0.85
Flt Protected	1.00			1.00	0.96	1.00
Satd. Flow (prot)	4568			4567	3035	1297
Flt Permitted	1.00			0.66	0.96	1.00
Satd. Flow (perm)	4568			3025	3035	1297
Volume (vph)	3942	51	88	1888	48	87
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	4022	52	90	1927	49	89
RTOR Reduction (vph)	1	0	0	0	11	0
Lane Group Flow (vph)	4073	0	0	2017	50	77
Turn Type			pm+pt		pm+ov	
Protected Phases	4		3	8	9	3
Permitted Phases			8			9
Actuated Green, G (s)	70.2			82.4	9.6	17.8
Effective Green, g (s)	71.2			83.4	10.6	19.8
Actuated g/C Ratio	0.71			0.83	0.11	0.20
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)	3252			2665	322	296
v/s Ratio Prot	c0.89			c0.07	0.02	c0.02
v/s Ratio Perm				0.56		0.04
v/c Ratio	1.25			0.76	0.16	0.26
Uniform Delay, d1	14.4			3.7	40.6	33.9
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	116.2			1.3	1.0	0.5
Delay (s)	130.6			5.0	41.7	34.4
Level of Service	F			A	D	C
Approach Delay (s)	130.6			5.0	37.6	
Approach LOS	F			A	D	
Intersection Summary						
HCM Average Control Delay		87.9		HCM Level of Service		F
HCM Volume to Capacity ratio		1.04				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		3.0
Intersection Capacity Utilization		123.9%		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		3.0	3.0	
Lane Util. Factor		0.91			0.91		1.00	1.00		1.00	1.00	
Frst		1.00			1.00		1.00	0.97		1.00	0.89	
Flt Protected		1.00			1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		4620			4608		1608	1631		1593	1489	
Flt Permitted		0.92			0.93		0.56	1.00		0.67	1.00	
Satd. Flow (perm)		4266			4293		950	1631		1127	1489	
Volume (vph)	14	1631	0	5	1170	22	90	86	21	43	50	147
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)	14	1664	0	5	1194	22	92	88	21	44	51	150
RTOR Reduction (vph)	0	0	0	0	2	0	0	8	0	0	48	0
Lane Group Flow (vph)	0	1678	0	0	1219	0	92	101	0	44	153	0
Heavy Vehicles (%)	2%	1%	1%	1%	1%	2%	1%	2%	1%	2%	2%	2%
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		51.6			51.6		38.4	38.4		38.4	38.4	
Effective Green, g (s)		53.6			53.6		40.4	40.4		40.4	40.4	
Actuated g/C Ratio		0.54			0.54		0.40	0.40		0.40	0.40	
Clearance Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		2287			2301		384	659		455	602	
v/s Ratio Prot								0.06			c0.10	
v/s Ratio Perm		c0.39			0.28		0.10			0.04		
v/c Ratio		0.73			0.53		0.24	0.15		0.10	0.25	
Uniform Delay, d1		17.7			15.0		19.7	18.9		18.5	19.8	
Progression Factor		1.07			0.91		1.00	1.00		1.00	1.00	
Incremental Delay, d2		0.1			0.1		1.5	0.5		0.4	1.0	
Delay (s)		19.1			13.8		21.1	19.4		18.9	20.8	
Level of Service		B			B		C	B		B	C	
Approach Delay (s)		19.1			13.8			20.2			20.5	
Approach LOS		B			B			C			C	

Intersection Summary

HCM Average Control Delay	17.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	6.0
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
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)	3940	9	0	1935	0	53	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	
Hourly flow rate (vph)	4020	9	0	1974	0	54	
Pedestrians							
Lane Width (ft)							
Walking Speed (ft/s)							
Percent Blockage							
Right turn flare (veh)							
Median type					None		
Median storage (veh)							
Upstream signal (ft)	316						
pX, platoon unblocked			0.40		0.40	0.40	
vC, conflicting volume			4030		4683	1345	
vC1, stage 1 conf vol							
vC2, stage 2 conf vol							
vCu, unblocked vol			5586		7228	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	87	
cM capacity (veh/h)			4		0	432	
Direction, Lane #	EB 1	EB 2	EB 3	WB 1	WB 2	WB 3	NB 1
Volume Total	1608	1608	813	658	658	658	54
Volume Left	0	0	0	0	0	0	0
Volume Right	0	0	9	0	0	0	54
cSH	1700	1700	1700	1700	1700	1700	432
Volume to Capacity	0.95	0.95	0.48	0.39	0.39	0.39	0.13
Queue Length 95th (ft)	0	0	0	0	0	0	11
Control Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0	14.5
Lane LOS							B
Approach Delay (s)	0.0			0.0			14.5
Approach LOS							B
Intersection Summary							
Average Delay			0.1				
Intersection Capacity Utilization			95.1%		ICU Level of Service		F
Analysis Period (min)			15				