



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑↑	↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.93			1.00	0.99	
Flt Protected	0.98			0.99	1.00	
Satd. Flow (prot)	1695			3512	3515	
Flt Permitted	0.98			0.56	1.00	
Satd. Flow (perm)	1695			1977	3515	
Volume (vph)	95	95	95	521	1361	64
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	103	103	566	1479	70
RTOR Reduction (vph)	36	0	0	0	3	0
Lane Group Flow (vph)	170	0	0	669	1546	0
Turn Type	D.P+P					
Protected Phases	4		3	2 3	2	
Permitted Phases			2			
Actuated Green, G (s)	14.0			74.0	54.0	
Effective Green, g (s)	14.0			74.0	54.0	
Actuated g/C Ratio	0.14			0.74	0.54	
Clearance Time (s)	4.0				4.0	
Lane Grp Cap (vph)	237			1770	1898	
v/s Ratio Prot	c0.10			c0.08	c0.44	
v/s Ratio Perm				0.20		
v/c Ratio	0.72			0.38	0.81	
Uniform Delay, d1	41.1			4.7	18.9	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	17.0			0.6	4.0	
Delay (s)	58.1			5.3	22.9	
Level of Service	E			A	C	
Approach Delay (s)	58.1			5.3	22.9	
Approach LOS	E			A	C	

Intersection Summary

HCM Average Control Delay	21.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

2007 Total Future Condition
1: Barry Place & Georgia Avenue

PM Peak Period
1/24/2006

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.95			1.00	0.99	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1714			3526	3490	
Flt Permitted	0.97			0.67	1.00	
Satd. Flow (perm)	1714			2389	3490	
Volume (vph)	172	106	65	792	1212	125
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	187	115	71	861	1317	136
RTOR Reduction (vph)	22	0	0	0	8	0
Lane Group Flow (vph)	280	0	0	932	1445	0
Turn Type	D.P+P					
Protected Phases	4		3	2 3	2	
Permitted Phases			2			
Actuated Green, G (s)	14.0			74.0	54.0	
Effective Green, g (s)	14.0			74.0	54.0	
Actuated g/C Ratio	0.14			0.74	0.54	
Clearance Time (s)	4.0				4.0	
Lane Grp Cap (vph)	240			1995	1885	
v/s Ratio Prot	c0.16			c0.09	c0.41	
v/s Ratio Perm				0.25		
v/c Ratio	1.17			0.47	0.77	
Uniform Delay, d1	43.0			5.2	18.1	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	110.1			0.8	3.0	
Delay (s)	153.1			6.0	21.1	
Level of Service	F			A	C	
Approach Delay (s)	153.1			6.0	21.1	
Approach LOS	F			A	C	
Intersection Summary						
HCM Average Control Delay			30.7		HCM Level of Service	C
HCM Volume to Capacity ratio			0.76			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	12.0
Intersection Capacity Utilization			87.3%		ICU Level of Service	E
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)	4.0			4.0	4.0	4.0
Lane Util. Factor	1.00			1.00	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)	1863			1863	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	1863			1863	1770	1583
Volume (vph)	246	0	0	204	1092	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	267	0	0	222	1187	5
RTOR Reduction (vph)	0	0	0	0	0	2
Lane Group Flow (vph)	267	0	0	222	1187	3
Turn Type					Perm	
Protected Phases	2			6	8	
Permitted Phases						8
Actuated Green, G (s)	32.0			32.0	60.0	60.0
Effective Green, g (s)	32.0			32.0	60.0	60.0
Actuated g/C Ratio	0.32			0.32	0.60	0.60
Clearance Time (s)	4.0			4.0	4.0	4.0
Lane Grp Cap (vph)	596			596	1062	950
v/s Ratio Prot	c0.14			0.12	c0.67	
v/s Ratio Perm						0.00
v/c Ratio	0.45			0.37	1.12	0.00
Uniform Delay, d1	27.0			26.2	20.0	8.0
Progression Factor	1.47			1.00	2.30	2.64
Incremental Delay, d2	2.3			1.8	54.4	0.0
Delay (s)	41.9			28.0	100.3	21.1
Level of Service	D			C	F	C
Approach Delay (s)	41.9			28.0	100.0	
Approach LOS	D			C	F	
Intersection Summary						
HCM Average Control Delay		81.3		HCM Level of Service		F
HCM Volume to Capacity ratio		0.88				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization		80.1%		ICU Level of Service		D
Analysis Period (min)		15				

c Critical Lane Group

	↑	↗	↘	↓	↙	↖
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↑			↑	↗	↖
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	4.0
Lane Util. Factor	1.00			1.00	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)	1863			1863	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	1863			1863	1770	1583
Volume (vph)	279	0	0	228	511	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	303	0	0	248	555	5
RTOR Reduction (vph)	0	0	0	0	0	2
Lane Group Flow (vph)	303	0	0	248	555	3
Turn Type					Perm	
Protected Phases	2			6	8	
Permitted Phases						8
Actuated Green, G (s)	32.0			32.0	60.0	60.0
Effective Green, g (s)	32.0			32.0	60.0	60.0
Actuated g/C Ratio	0.32			0.32	0.60	0.60
Clearance Time (s)	4.0			4.0	4.0	4.0
Lane Grp Cap (vph)	596			596	1062	950
v/s Ratio Prot	c0.16			0.13	c0.31	
v/s Ratio Perm						0.00
v/c Ratio	0.51			0.42	0.52	0.00
Uniform Delay, d1	27.6			26.7	11.7	8.0
Progression Factor	1.60			1.00	2.54	2.70
Incremental Delay, d2	2.2			2.1	0.2	0.0
Delay (s)	46.4			28.8	29.7	21.6
Level of Service	D			C	C	C
Approach Delay (s)	46.4			28.8	29.7	
Approach LOS	D			C	C	
Intersection Summary						
HCM Average Control Delay		34.0		HCM Level of Service		C
HCM Volume to Capacity ratio		0.52				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization		49.7%		ICU Level of Service		A
Analysis Period (min)		15				

c Critical Lane Group

2007 Total Future Condition
2: Bryant Street & Georgia Avenue

AM Peak Period
1/24/2006

												
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	
Lane Util. Factor								0.95			0.95	
Frt								0.98			1.00	
Flt Protected								1.00			0.99	
Satd. Flow (prot)								3481			3505	
Flt Permitted								1.00			0.63	
Satd. Flow (perm)								3481			2239	
Volume (vph)	0	0	0	0	0	0	0	616	75	287	1169	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	670	82	312	1271	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	740	0	0	1583	0
Turn Type										Prot		
Protected Phases								2		1	1	2
Permitted Phases												
Actuated Green, G (s)								46.0			72.0	
Effective Green, g (s)								46.0			72.0	
Actuated g/C Ratio								0.57			0.90	
Clearance Time (s)								4.0				
Lane Grp Cap (vph)								2002			2427	
v/s Ratio Prot								0.21			c0.21	
v/s Ratio Perm											c0.38	
v/c Ratio								0.37			0.65	
Uniform Delay, d1								9.2			1.0	
Progression Factor								1.00			1.00	
Incremental Delay, d2								0.5			1.4	
Delay (s)								9.7			2.3	
Level of Service								A			A	
Approach Delay (s)		0.0			0.0			9.7			2.3	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM Average Control Delay		4.7										
HCM Volume to Capacity ratio		0.65										
Actuated Cycle Length (s)		80.0								8.0		
Intersection Capacity Utilization		66.7%								C		
Analysis Period (min)		15										

c Critical Lane Group

2007 Total Future Condition
2: Bryant Street & Georgia Avenue

PM Peak Period
1/24/2006

												
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	
Lane Util. Factor								0.95			0.95	
Frt								0.98			1.00	
Flt Protected								1.00			0.99	
Satd. Flow (prot)								3482			3473	
Flt Permitted								1.00			0.53	
Satd. Flow (perm)								3482			1862	
Volume (vph)	0	0	0	0	0	0	0	858	103	386	894	38
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	933	112	420	972	41
RTOR Reduction (vph)	0	0	0	0	0	0	0	11	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	1034	0	0	1433	0
Turn Type										Prot		
Protected Phases								2		1	1	2
Permitted Phases												
Actuated Green, G (s)								46.0			72.0	
Effective Green, g (s)								46.0			72.0	
Actuated g/C Ratio								0.57			0.90	
Clearance Time (s)								4.0				
Lane Grp Cap (vph)								2002			2199	
v/s Ratio Prot								0.30			c0.21	
v/s Ratio Perm											c0.37	
v/c Ratio								0.52			0.65	
Uniform Delay, d1								10.3			1.0	
Progression Factor								1.00			1.00	
Incremental Delay, d2								1.0			1.5	
Delay (s)								11.2			2.5	
Level of Service								B			A	
Approach Delay (s)		0.0			0.0			11.2			2.5	
Approach LOS		A			A			B			A	
Intersection Summary												
HCM Average Control Delay			6.2									HCM Level of Service A
HCM Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			80.0									Sum of lost time (s) 8.0
Intersection Capacity Utilization			70.8%									ICU Level of Service C
Analysis Period (min)			15									

c Critical Lane Group

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	12	116	0	609	1297	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	126	0	662	1410	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)					318	
pX, platoon unblocked						
vC, conflicting volume	2072	705	1410			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2072	705	1410			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	72	67	100			
cM capacity (veh/h)	47	379	480			
Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2	
Volume Total	13	126	662	705	705	
Volume Left	13	0	0	0	0	
Volume Right	0	126	0	0	0	
cSH	47	379	1700	1700	1700	
Volume to Capacity	0.28	0.33	0.39	0.41	0.41	
Queue Length 95th (ft)	24	36	0	0	0	
Control Delay (s)	110.0	19.2	0.0	0.0	0.0	
Lane LOS	F	C				
Approach Delay (s)	27.7		0.0	0.0		
Approach LOS	D					
Intersection Summary						
Average Delay			1.7			
Intersection Capacity Utilization			49.7%	ICU Level of Service	A	
Analysis Period (min)			15			

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	44	179	0	1246	739	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	48	195	0	1354	803	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)					318	
pX, platoon unblocked						
vC, conflicting volume	2158	402	803			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2158	402	803			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	67	100			
cM capacity (veh/h)	41	598	816			
Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2	
Volume Total	48	195	1354	402	402	
Volume Left	48	0	0	0	0	
Volume Right	0	195	0	0	0	
cSH	41	598	1700	1700	1700	
Volume to Capacity	1.17	0.33	0.80	0.24	0.24	
Queue Length 95th (ft)	118	35	0	0	0	
Control Delay (s)	352.5	13.9	0.0	0.0	0.0	
Lane LOS	F	B				
Approach Delay (s)	80.7		0.0	0.0		
Approach LOS	F					
Intersection Summary						
Average Delay			8.1			
Intersection Capacity Utilization			75.6%	ICU Level of Service		D
Analysis Period (min)			15			

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.92		1.00			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1681		3539			3539
Flt Permitted	0.98		1.00			1.00
Satd. Flow (perm)	1681		3539			3539
Volume (vph)	156	222	469	0	0	1169
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	170	241	510	0	0	1271
RTOR Reduction (vph)	51	0	0	0	0	0
Lane Group Flow (vph)	360	0	510	0	0	1271
Turn Type						
Protected Phases	3		2			2
Permitted Phases						
Actuated Green, G (s)	34.0		58.0			58.0
Effective Green, g (s)	34.0		58.0			58.0
Actuated g/C Ratio	0.34		0.58			0.58
Clearance Time (s)	4.0		4.0			4.0
Lane Grp Cap (vph)	572		2053			2053
v/s Ratio Prot	c0.21		0.14			c0.36
v/s Ratio Perm						
v/c Ratio	0.63		0.25			0.62
Uniform Delay, d1	27.7		10.3			13.8
Progression Factor	1.00		0.82			1.00
Incremental Delay, d2	5.2		0.3			1.4
Delay (s)	32.9		8.8			15.2
Level of Service	C		A			B
Approach Delay (s)	32.9		8.8			15.2
Approach LOS	C		A			B
Intersection Summary						
HCM Average Control Delay			17.0		HCM Level of Service	B
HCM Volume to Capacity ratio			0.62			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			61.3%		ICU Level of Service	B
Analysis Period (min)			15			

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↑			↑↑
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00		0.95			0.95
Frt	0.92		1.00			1.00
Flt Protected	0.98		1.00			1.00
Satd. Flow (prot)	1680		3539			3539
Flt Permitted	0.98		1.00			1.00
Satd. Flow (perm)	1680		3539			3539
Volume (vph)	142	202	757	0	0	855
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	154	220	823	0	0	929
RTOR Reduction (vph)	51	0	0	0	0	0
Lane Group Flow (vph)	323	0	823	0	0	929
Turn Type						
Protected Phases	3		2			2
Permitted Phases						
Actuated Green, G (s)	34.0		58.0			58.0
Effective Green, g (s)	34.0		58.0			58.0
Actuated g/C Ratio	0.34		0.58			0.58
Clearance Time (s)	4.0		4.0			4.0
Lane Grp Cap (vph)	571		2053			2053
v/s Ratio Prot	c0.19		0.23			c0.26
v/s Ratio Perm						
v/c Ratio	0.56		0.40			0.45
Uniform Delay, d1	27.0		11.5			12.0
Progression Factor	1.00		0.75			1.00
Incremental Delay, d2	4.0		0.5			0.7
Delay (s)	31.0		9.1			12.7
Level of Service	C		A			B
Approach Delay (s)	31.0		9.1			12.7
Approach LOS	C		A			B
Intersection Summary						
HCM Average Control Delay			14.5		HCM Level of Service	B
HCM Volume to Capacity ratio			0.49			
Actuated Cycle Length (s)			100.0		Sum of lost time (s)	8.0
Intersection Capacity Utilization			50.6%		ICU Level of Service	A
Analysis Period (min)			15			

c Critical Lane Group

HCS2000: Unsignalized Intersections Release 4.1d

ALL-WAY STOP CONTROL(AWSC) ANALYSIS

Analyst: CFP
 Agency/Co.: Wells & Associates, LLC
 Date Performed: 1/24/2006
 Analysis Time Period: AM Peak Period
 Intersection: Florida/9th/V Streets
 Jurisdiction: Washington DC
 Units: U. S. Customary
 Analysis Year: 2007 TF Conditions
 Project ID: 2799 Atlantic North (Addendum)
 East/West Street: 9th Street/V Street
 North/South Street: Florida/9th Street

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	21	97	438	79	102	25	158	24	18	14	26	25
% Thrus Left Lane			55						45			

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LTR		LT	TR	LTR	
PHF	0.90	0.90	0.90		0.90	0.90	0.90	
Flow Rate	81	534	227		186	35	70	
% Heavy Veh	2	2	2		2	2	2	
No. Lanes		2		1		2		1
Opposing-Lanes		1		2		1		2
Conflicting-lanes		2		2		2		2
Geometry group		5		4b		5		4b
Duration, T	0.25	hrs.						

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	81	534	227		186	35	70	
Service Time	3.8	3.0	4.2		5.1	4.2	4.9	
Utilization, x	0.14	0.79	0.41		0.38	0.06	0.14	
Dep. headway, hd	6.10	5.32	6.46		7.39	6.51	7.15	
Capacity	331	668	477		436	285	320	
Delay	9.77	24.88	13.53		14.58	9.64	11.00	
LOS	A	C	B		B	A	B	
Approach:								
Delay		22.89	13.53		13.80		11.00	
LOS		C	B		B		B	
Intersection Delay	18.51							
Intersection LOS								

HCS2000: Unsignalized Intersections Release 4.1d

ALL-WAY STOP CONTROL(AWSC) ANALYSIS

Analyst: CFP
 Agency/Co.: Wells & Associates, LLC
 Date Performed: 1/24/2006
 Analysis Time Period: PM Peak Period
 Intersection: Florida/9th/V Streets
 Jurisdiction: Washington DC
 Units: U. S. Customary
 Analysis Year: 2007 TF Conditions
 Project ID: 2799 Atlantic North (Addendum)
 East/West Street: 9th Street/V Street
 North/South Street: Florida/9th Street

Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	30	106	260	102	169	27	354	41	32	32	28	24
% Thrus Left Lane			55						45			

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LTR		LT	TR	LTR	
PHF	0.90	0.90	0.90		0.90	0.90	0.90	
Flow Rate	97	341	330		413	60	92	
% Heavy Veh	2	2	2		2	2	2	
No. Lanes		2		1		2		1
Opposing-Lanes		1		2		1		2
Conflicting-lanes		2		2		2		2
Geometry group		5		4b		5		4b
Duration, T	0.25	hrs.						

Worksheet 5 - Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Flow Rate	97	341	330		413	60	92	
Service Time	5.5	4.7	5.4		5.5	4.6	6.3	
Utilization, x	0.21	0.66	0.70		0.90	0.12	0.22	
Dep. headway, hd	7.76	6.98	7.66		7.84	6.94	8.59	
Capacity	347	496	454		454	310	342	
Delay	12.51	22.29	26.47		48.71	10.55	13.69	
LOS	B	C	D		E	B	B	
Approach:								
Delay		20.13		26.47		43.87		13.69
LOS		C		D		E		B
Intersection Delay	29.68						Intersection LOS D	

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Volume (veh/h)	24	93	43	14	150	29	24	32	27	15	11	17
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	26	101	47	15	163	32	26	35	29	16	12	18
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None						None					
Median storage veh												
Upstream signal (ft)	311											
pX, platoon unblocked												
vC, conflicting volume	195			148			410	402	124	433	409	179
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	195			148			410	402	124	433	409	179
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	98			99			95	93	97	97	98	98
cM capacity (veh/h)	1379			1434			519	521	926	479	516	864
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	174	210	90	47								
Volume Left	26	15	26	16								
Volume Right	47	32	29	18								
cSH	1379	1434	607	595								
Volume to Capacity	0.02	0.01	0.15	0.08								
Queue Length 95th (ft)	1	1	13	6								
Control Delay (s)	1.3	0.6	12.0	11.6								
Lane LOS	A	A	B	B								
Approach Delay (s)	1.3	0.6	12.0	11.6								
Approach LOS				B	B							
Intersection Summary												
Average Delay				3.8								
Intersection Capacity Utilization				27.3%	ICU Level of Service				A			
Analysis Period (min)				15								

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Volume (veh/h)	9	114	44	18	222	73	76	26	44	33	16	32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	10	124	48	20	241	79	83	28	48	36	17	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None						None					
Median storage veh												
Upstream signal (ft)	310											
pX, platoon unblocked												
vC, conflicting volume	321			172			531	527	148	549	511	281
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	321			172			531	527	148	549	511	281
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	99			99			80	94	95	91	96	95
cM capacity (veh/h)	1239			1405			418	446	899	395	456	758
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	182	340	159	88								
Volume Left	10	20	83	36								
Volume Right	48	79	48	35								
cSH	1239	1405	505	504								
Volume to Capacity	0.01	0.01	0.31	0.17								
Queue Length 95th (ft)	1	1	33	16								
Control Delay (s)	0.5	0.6	15.4	13.7								
Lane LOS	A	A	C	B								
Approach Delay (s)	0.5	0.6	15.4	13.7								
Approach LOS			C	B								
Intersection Summary												
Average Delay			5.1									
Intersection Capacity Utilization			40.6%	ICU Level of Service					A			
Analysis Period (min)			15									

2007 Total Future Condition
11: U Street & Florida Avenue

AM Peak Period
1/24/2006

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑		↑↑		↑	↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95	1.00		0.95		1.00	0.95	
Frt		0.98			1.00	0.85		1.00		1.00	1.00	
Flt Protected		1.00			1.00	1.00		0.99		0.95	1.00	
Satd. Flow (prot)		3459			3539	1583		3502		1770	3524	
Flt Permitted		1.00			1.00	1.00		0.63		0.36	1.00	
Satd. Flow (perm)		3459			3539	1583		2218		666	3524	
Volume (vph)	0	556	99	0	862	154	68	359	8	272	1112	32
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	604	108	0	937	167	74	390	9	296	1209	35
RTOR Reduction (vph)	0	15	0	0	0	99	0	1	0	0	2	0
Lane Group Flow (vph)	0	697	0	0	937	68	0	472	0	296	1242	0
Turn Type						Perm	Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases						8	2			6		
Actuated Green, G (s)		41.0			41.0	41.0		36.0		51.0	51.0	
Effective Green, g (s)		41.0			41.0	41.0		36.0		51.0	51.0	
Actuated g/C Ratio		0.41			0.41	0.41		0.36		0.51	0.51	
Clearance Time (s)		4.0			4.0	4.0		4.0		4.0	4.0	
Lane Grp Cap (vph)		1418			1451	649		798		461	1797	
v/s Ratio Prot		0.20			c0.26					0.07	c0.35	
v/s Ratio Perm						0.04		0.21		0.26		
v/c Ratio		0.49			0.65	0.11		0.59		0.64	0.69	
Uniform Delay, d1		21.8			23.7	18.2		26.0		15.2	18.5	
Progression Factor		1.00			1.00	1.00		1.00		0.59	0.64	
Incremental Delay, d2		1.2			2.2	0.3		3.2		3.5	1.1	
Delay (s)		23.0			25.9	18.5		29.2		12.6	12.9	
Level of Service		C			C	B		C		B	B	
Approach Delay (s)		23.0			24.8			29.2			12.9	
Approach LOS		C			C			C			B	
Intersection Summary												
HCM Average Control Delay		20.2			HCM Level of Service			C				
HCM Volume to Capacity ratio		0.67										
Actuated Cycle Length (s)		100.0			Sum of lost time (s)			8.0				
Intersection Capacity Utilization		77.7%			ICU Level of Service			D				
Analysis Period (min)		15										
c Critical Lane Group												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑		↑↑		↑	↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95	1.00		0.95		1.00	0.95	
Frt		0.98			1.00	0.85		1.00		1.00	0.99	
Flt Protected		1.00			1.00	1.00		1.00		0.95	1.00	
Satd. Flow (prot)		3472			3539	1583		3526		1770	3510	
Flt Permitted		1.00			1.00	1.00		0.88		0.10	1.00	
Satd. Flow (perm)		3472			3539	1583		3096		186	3510	
Volume (vph)	0	785	114	0	717	201	49	935	9	268	603	35
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	853	124	0	779	218	53	1016	10	291	655	38
RTOR Reduction (vph)	0	11	0	0	0	129	0	1	0	0	4	0
Lane Group Flow (vph)	0	966	0	0	779	89	0	1078	0	291	689	0
Turn Type						Perm	Perm			pm+pt		
Protected Phases		4			8			2		1	6	
Permitted Phases						8	2			6		
Actuated Green, G (s)		41.0			41.0	41.0		36.0		51.0	51.0	
Effective Green, g (s)		41.0			41.0	41.0		36.0		51.0	51.0	
Actuated g/C Ratio		0.41			0.41	0.41		0.36		0.51	0.51	
Clearance Time (s)		4.0			4.0	4.0		4.0		4.0	4.0	
Lane Grp Cap (vph)		1424			1451	649		1115		269	1790	
v/s Ratio Prot		c0.28			0.22					c0.12	0.20	
v/s Ratio Perm						0.06		0.35		c0.43		
v/c Ratio		0.68			0.54	0.14		0.97		1.08	0.38	
Uniform Delay, d1		24.1			22.3	18.4		31.4		27.9	14.9	
Progression Factor		1.00			1.00	1.00		1.00		0.93	1.01	
Incremental Delay, d2		2.6			1.4	0.4		20.1		77.2	0.6	
Delay (s)		26.7			23.7	18.9		51.5		103.2	15.7	
Level of Service		C			C	B		D		F	B	
Approach Delay (s)		26.7			22.7			51.5			41.6	
Approach LOS		C			C			D			D	
Intersection Summary												
HCM Average Control Delay		36.0					HCM Level of Service			D		
HCM Volume to Capacity ratio		0.89										
Actuated Cycle Length (s)		100.0					Sum of lost time (s)			8.0		
Intersection Capacity Utilization		80.7%					ICU Level of Service			D		
Analysis Period (min)		15										
c Critical Lane Group												

2007 Total Future Condition
8: Florida Avenue & 8th Street

AM Peak Period
1/24/2006

																				
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR								
Lane Configurations																				
Sign Control	Free			Free			Stop			Stop										
Grade	0%			0%			0%			0%										
Volume (veh/h)	39	767	32	17	983	42	9	3	3	23	18	27								
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92								
Hourly flow rate (vph)	42	834	35	18	1068	46	10	3	3	25	20	29								
Pedestrians																				
Lane Width (ft)																				
Walking Speed (ft/s)																				
Percent Blockage																				
Right turn flare (veh)																				
Median type	None						None													
Median storage veh																				
Upstream signal (ft)	301																			
pX, platoon unblocked				0.86			0.86			0.86										
vC, conflicting volume	1114				868			1368			2087									
vC1, stage 1 conf vol																				
vC2, stage 2 conf vol																				
vCu, unblocked vol	1114				691			1269			2101									
tC, single (s)	4.1				4.1			7.5			6.5									
tC, 2 stage (s)																				
tF (s)	2.2				2.2			3.5			4.0									
p0 queue free %	93				98			84			92									
cM capacity (veh/h)	623				778			60			40									
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	SB 1													
Volume Total	459	452	286	534	313	16	74													
Volume Left	42	0	18	0	0	10	25													
Volume Right	0	35	0	0	46	3	29													
cSH	623	1700	778	1700	1700	66	75													
Volume to Capacity	0.07	0.27	0.02	0.31	0.18	0.25	0.98													
Queue Length 95th (ft)	5	0	2	0	0	22	129													
Control Delay (s)	2.0	0.0	0.9	0.0	0.0	77.2	193.5													
Lane LOS	A			A			F	F												
Approach Delay (s)	1.0			0.2			77.2	193.5												
Approach LOS							F	F												
Intersection Summary																				
Average Delay	7.8																			
Intersection Capacity Utilization	57.7%			ICU Level of Service			B													
Analysis Period (min)	15																			

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations	↕↕			↕↕↕			↕			↕				
Sign Control	Free			Free			Stop			Stop				
Grade	0%			0%			0%			0%				
Volume (veh/h)	78	960	23	24	874	50	8	19	4	31	11	33		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92		
Hourly flow rate (vph)	85	1043	25	26	950	54	9	21	4	34	12	36		
Pedestrians														
Lane Width (ft)														
Walking Speed (ft/s)														
Percent Blockage														
Right turn flare (veh)														
Median type	None						None							
Median storage (veh)														
Upstream signal (ft)	301													
pX, platoon unblocked				0.78			0.78			0.78	0.78	0.78		
vC, conflicting volume	1004				1068				1636	2282	534	1735	2267	344
vC1, stage 1 conf vol														
vC2, stage 2 conf vol														
vCu, unblocked vol	1004				807				1534	2361	123	1661	2342	344
tC, single (s)	4.1				4.1				7.5	6.5	6.9	7.5	6.5	6.9
tC, 2 stage (s)														
tF (s)	2.2				2.2				3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	88				96				72	10	99	0	49	94
cM capacity (veh/h)	685				635				31	23	706	10	24	652
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	SB 1							
Volume Total	607	547	264	475	292	34	82							
Volume Left	85	0	26	0	0	9	34							
Volume Right	0	25	0	0	54	4	36							
cSH	685	1700	635	1700	1700	28	20							
Volume to Capacity	0.12	0.32	0.04	0.28	0.17	1.19	3.99							
Queue Length 95th (ft)	11	0	3	0	0	98	Err							
Control Delay (s)	3.2	0.0	1.5	0.0	0.0	437.3	Err							
Lane LOS	A		A			F	F							
Approach Delay (s)	1.7		0.4			437.3	Err							
Approach LOS						F	F							
Intersection Summary														
Average Delay	362.0													
Intersection Capacity Utilization	65.1%													
ICU Level of Service	C													
Analysis Period (min)	15													



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑	↑	↘
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	51	16	54	14	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	55	17	59	15	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	109	15	15			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	109	15	15			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	95	99			
cM capacity (veh/h)	879	1064	1603			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	55	76	15			
Volume Left	0	17	0			
Volume Right	55	0	0			
cSH	1064	1603	1700			
Volume to Capacity	0.05	0.01	0.01			
Queue Length 95th (ft)	4	1	0			
Control Delay (s)	8.6	1.7	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.6	1.7	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			4.1			
Intersection Capacity Utilization		20.4%		ICU Level of Service		A
Analysis Period (min)			15			

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	42	63	29	42	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	46	68	32	46	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	214	46	46			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	214	46	46			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	96	96			
cM capacity (veh/h)	740	1024	1562			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	46	100	46			
Volume Left	0	68	0			
Volume Right	46	0	0			
cSH	1024	1562	1700			
Volume to Capacity	0.04	0.04	0.03			
Queue Length 95th (ft)	3	3	0			
Control Delay (s)	8.7	5.2	0.0			
Lane LOS	A	A				
Approach Delay (s)	8.7	5.2	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay		4.8				
Intersection Capacity Utilization		21.7%		ICU Level of Service		A
Analysis Period (min)		15				

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.97			0.97			0.99			0.99	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1770			1781			3503			3488	
Flt Permitted		0.86			0.90			0.78			0.93	
Satd. Flow (perm)		1555			1617			2736			3240	
Volume (vph)	48	54	33	28	49	22	40	399	18	33	1033	102
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	52	59	36	30	53	24	43	434	20	36	1123	111
RTOR Reduction (vph)	0	11	0	0	11	0	0	3	0	0	7	0
Lane Group Flow (vph)	0	136	0	0	96	0	0	494	0	0	1263	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		18.0			18.0			74.0			74.0	
Effective Green, g (s)		18.0			18.0			74.0			74.0	
Actuated g/C Ratio		0.18			0.18			0.74			0.74	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		280			291			2025			2398	
v/s Ratio Prot												
v/s Ratio Perm		c0.09			0.06			0.18			c0.39	
v/c Ratio		0.48			0.33			0.24			0.53	
Uniform Delay, d1		36.8			35.8			4.1			5.5	
Progression Factor		1.05			1.00			1.00			0.26	
Incremental Delay, d2		5.6			3.0			0.3			0.6	
Delay (s)		44.3			38.8			4.4			2.1	
Level of Service		D			D			A			A	
Approach Delay (s)		44.3			38.8			4.4			2.1	
Approach LOS		D			D			A			A	
Intersection Summary												
HCM Average Control Delay		7.7										
HCM Volume to Capacity ratio		0.52										
Actuated Cycle Length (s)		100.0										
Intersection Capacity Utilization		66.4%										
Analysis Period (min)		15										
c Critical Lane Group												
HCM Level of Service							A					
Sum of lost time (s)							8.0					
ICU Level of Service							C					

2007 Total Future Condition
5: V Street & Georgia Avenue

PM Peak Period
1/24/2006

												
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		1.00			1.00			0.95			0.95	
Frt		0.96			0.97			1.00			0.98	
Flt Protected		0.99			0.99			0.99			1.00	
Satd. Flow (prot)		1765			1789			3511			3467	
Flt Permitted		0.75			0.73			0.71			0.93	
Satd. Flow (perm)		1338			1327			2515			3235	
Volume (vph)	53	81	55	62	105	39	97	665	8	17	727	111
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	58	88	60	67	114	42	105	723	9	18	790	121
RTOR Reduction (vph)	0	15	0	0	8	0	0	1	0	0	12	0
Lane Group Flow (vph)	0	191	0	0	215	0	0	836	0	0	917	0
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		18.0			18.0			74.0			74.0	
Effective Green, g (s)		18.0			18.0			74.0			74.0	
Actuated g/C Ratio		0.18			0.18			0.74			0.74	
Clearance Time (s)		4.0			4.0			4.0			4.0	
Lane Grp Cap (vph)		241			239			1861			2394	
v/s Ratio Prot												
v/s Ratio Perm		0.14			c0.16			c0.33			0.28	
v/c Ratio		0.79			0.90			0.45			0.38	
Uniform Delay, d1		39.2			40.1			5.1			4.7	
Progression Factor		0.94			1.00			1.00			0.37	
Incremental Delay, d2		22.9			36.9			0.8			0.4	
Delay (s)		59.9			77.0			5.9			2.1	
Level of Service		E			E			A			A	
Approach Delay (s)		59.9			77.0			5.9			2.1	
Approach LOS		E			E			A			A	
Intersection Summary												
HCM Average Control Delay		16.6						HCM Level of Service		B		
HCM Volume to Capacity ratio		0.54										
Actuated Cycle Length (s)		100.0						Sum of lost time (s)		8.0		
Intersection Capacity Utilization		71.0%						ICU Level of Service		C		
Analysis Period (min)		15										

c Critical Lane Group



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	0	373	6	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	405	7	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)					299	
pX, platoon unblocked						
vC, conflicting volume	409	206			412	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	409	206			412	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	571	800			1143	
Direction, Lane #	WB 1	NB 1	NB 2			
Volume Total	0	270	142			
Volume Left	0	0	0			
Volume Right	0	0	7			
cSH	1700	1700	1700			
Volume to Capacity	0.00	0.16	0.08			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	0.0	0.0				
Approach LOS	A					
Intersection Summary						
Average Delay		0.0				
Intersection Capacity Utilization		13.8%		ICU Level of Service	A	
Analysis Period (min)		15				



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕			
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Volume (veh/h)	0	1	1004	3	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1	1091	3	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						299
pX, platoon unblocked						
vC, conflicting volume	1093	547			1095	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1093	547			1095	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	209	481			633	
Direction, Lane #						
	WB 1	NB 1	NB 2			
Volume Total	1	728	367			
Volume Left	0	0	0			
Volume Right	1	0	3			
cSH	481	1700	1700			
Volume to Capacity	0.00	0.43	0.22			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	12.5	0.0	0.0			
Lane LOS	B					
Approach Delay (s)	12.5	0.0				
Approach LOS	B					
Intersection Summary						
Average Delay		0.0				
Intersection Capacity Utilization		37.8%		ICU Level of Service		A
Analysis Period (min)		15				

Appendix B

Atlantic South Tables, Figures, And Analyses

Table 3-1
Atlantic South (Addendum)
Peak Hour Interaction Levels of Service²

Intersection	Type of Control	2005 Existing Conditions		2007 Background Conditions		2007 Total Future Conditions	
		AM	PM	AM	PM	AM	PM
1 Florida Ave./10th Ave./Barry Place	Stop Sign	A[9.6]	A[9.5]	A[9.9]	A[9.7]	B[10.0]	A[9.9]
		B[12.3]	B[10.5]	B[12.9]	B[10.9]	B[13.1]	B[11.1]
		B[11.3]	B[11.5]	B[12.4]	B[12.4]	B[12.9]	B[13.0]
		B[10.6]	B[12.0]	B[11.0]	B[12.5]	B[11.2]	B[12.7]
2 Barry Place/Sherman Street	Signal	A[7.4]	A[8.2]	A[7.4]	A[8.2]	A[7.4]	A[8.2]
		A[6.7]	A[6.9]	A[6.7]	A[6.9]	A[6.7]	A[6.9]
		D[50.6]	F[169.5]	D[49.8]	F[172.5]	D[49.1]	F[174.1]
		F[307.5]	F[126.2]	F[317.3]	F[129.7]	F[317.3]	F[126.8]
		F[205.9]	F[120.0]	F[211.8]	F[123.5]	F[211.7]	F[124.8]
3 9th Street/Barry Place	Stop Sign	A[9.0]	A[9.5]	A[9.1]	A[9.5]	A[9.1]	A[9.5]
		A[8.6]	A[8.7]	A[8.4]	A[8.7]	A[8.6]	A[8.7]
		A[7.5]	A[7.4]	A[7.5]	A[7.4]	A[7.5]	A[7.4]
4 8th Street/Barry Place	Stop Sign	A[0.5]	A[0.6]	A[0.5]	A[0.7]	A[0.5]	A[0.6]
		B[10.8]	B[10.9]	B[10.8]	B[10.9]	B[10.8]	B[10.9]
5 Barry Place/Georgia Avenue	Signal	E[57.4]	F[140.6]	E[58.7]	F[152.1]	E[58.1]	F[153.1]
		A[5.2]	A[5.9]	A[5.3]	A[5.9]	A[5.3]	A[6.0]
		C[22.5]	C[20.7]	C[22.9]	C[21.0]	C[22.9]	C[21.1]
		C[28.7]	C[30.0]	C[21.1]	C[30.7]	C[21.0]	C[30.7]
6 Florida Avenue/Sherman Street	Signal	D[41.3]	D[45.7]	D[41.9]	D[46.1]	D[41.9]	D[46.4]
		C[27.5]	C[24.7]	C[27.9]	C[28.0]	C[28.0]	C[28.8]
		F[95.2]	C[29.6]	F[100.0]	B[18.9]	F[100.0]	C[29.7]
		F[79.4]	C[33.3]	F[81.8]	C[27.0]	F[81.3]	C[34.0]
7 Bryant Street/Georgia Avenue	Signal	A[9.6]	B[11.1]	A[9.7]	B[11.2]	A[9.7]	B[11.2]
		A[2.3]	A[2.4]	A[2.3]	A[2.5]	A[2.3]	A[2.5]
		A[4.6]	A[4.1]	A[4.7]	A[4.1]	A[4.7]	A[4.2]
8 Florida Avenue/Parcel C/W Street	Stop Sign	D[31.3]	F[103.6]	D[27.1]	F[72.2]	D[27.7]	F[80.7]
		E[43.0]	A[0.0]	N/A	N/A	N/A	N/A
9 W Street/Georgia Avenue	Signal	C[32.6]	C[30.8]	C[32.9]	C[31.9]	C[32.9]	C[31.0]
		A[8.8]	A[9.3]	A[9.1]	A[9.3]	A[8.8]	A[9.1]
		B[15.1]	B[12.6]	B[15.2]	B[12.7]	B[15.2]	B[12.7]
		B[14.9]	B[14.5]	B[17.1]	B[14.9]	B[17.0]	B[14.5]
10 8th Street/Parcel A Driveway	Stop Sign	A[8.5]	A[8.8]	N/A	N/A	N/A	N/A
		A[1.0]	A[0.1]	N/A	N/A	N/A	N/A
11 9th Street/V Street/Florida Avenue ³	Stop Sign	C[17.53]	C[15.56]	C[21.55]	C[18.33]	C[22.89]	C[20.13]
		B[11.51]	C[17.52]	B[12.45]	C[21.65]	B[13.53]	D[26.47]
		B[12.80]	D[29.23]	B[13.65]	E[43.33]	B[13.80]	E[43.07]
		A[9.92]	B[11.40]	B[10.78]	B[13.14]	B[11.00]	B[13.69]
12 8th Street/V Street	Stop Sign	A[1.8]	A[0.7]	A[1.7]	A[0.6]	A[1.3]	A[0.5]
		A[0.7]	A[0.4]	A[0.7]	A[0.6]	A[0.6]	A[0.6]
		B[11.5]	B[12.2]	B[11.7]	B[12.4]	B[12.0]	C[15.4]
		B[11.4]	B[13.3]	B[11.4]	B[13.6]	B[11.4]	B[13.7]
13 8th Street/Parcel B Driveway	Stop Sign	A[9.2]	A[9.0]	N/A	N/A	N/A	N/A
14 9th Street/U Street/Florida Avenue	Signal	C[22.8]	C[24.1]	C[23.0]	C[26.3]	C[23.0]	C[26.7]
		C[24.4]	C[22.5]	C[24.5]	C[22.5]	C[24.8]	C[22.7]
		C[28.6]	D[44.4]	C[29.2]	D[49.1]	C[29.2]	E[51.5]
		B[11.6]	C[33.8]	B[12.8]	D[50.0]	B[12.9]	D[41.6]
		B[19.5]	C[32.0]	C[22.9]	C[34.8]	C[20.2]	D[36.9]
15 8th Street/Florida Avenue	Stop Sign	A[0.8]	A[1.1]	A[0.8]	A[1.1]	A[1.0]	A[1.7]
		A[0.2]	A[0.4]	A[0.2]	A[0.4]	A[0.2]	A[0.4]
		F[111.2]	F[239.3]	F[129.9]	F[498.4]	F[77.2]	F[437.3]
		F[140.0]	F[374.2]	F[168.0]	F[501.5]	F[193.5]	F[*]
16 New Parcel A and D/V Street/ New Parcel B Driveway	Stop Sign	N/A	N/A	N/A	N/A	A[0.5]	A[1.8]
		N/A	N/A	N/A	N/A	A[0.2]	A[0.5]
		N/A	N/A	N/A	N/A	B[10.0]	B[11.5]
		N/A	N/A	N/A	N/A	B[11.0]	B[13.1]
17 Georgia Avenue/V Street	Signal	D[42.9]	D[47.5]	D[42.7]	D[52.1]	D[44.3]	E[59.9]
		D[34.1]	D[41.4]	D[36.1]	D[42.0]	D[38.8]	E[77.0]
		A[4.4]	A[5.8]	A[4.3]	A[5.8]	A[4.4]	A[5.9]
		B[2.1]	B[2.2]	B[2.1]	B[2.4]	B[2.1]	B[2.1]
		A[7.2]	B[11.5]	A[7.4]	B[12.2]	A[7.7]	B[14.4]
18 Sherman Avenue/University Doms	Stop Sign	A[0.0]	B[12.4]	A[0.0]	B[12.5]	A[0.0]	B[12.5]

Notes: ¹ Analysis performed using Synchro/SimTraffic Version 6.0
² An asterisk (*) indicates delays greater than 999.9 seconds
³ Intersection analyzed using HCM, version 4.1a, as a four-way stop sign

Table 3-2
Atlantic South
Pipeline Developments Site Trip Generation Analysis ¹ (Addendum)

Land Use	Land Use Code	Size	Units	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
The Lincoln Condominium									
Condominiums	230	147	D.U.	12	58	70	55	27	82
Reduction for Transit Use ²		67%		8	39	47	37	18	55
Net New Residential Trips				4	19	23	18	9	27
The Floridian									
Condominiums	230	118	D.U.	10	49	59	46	23	69
Reduction for Transit Use ²		67%		7	33	39	31	15	46
Net New Residential Trips				3	16	20	15	8	23
The Rhapsody									
Condominiums	230	162	D.U.	13	63	76	60	29	89
Reduction for Transit Use ²		67%		9	42	51	40	20	59
Net New Residential Trips				4	21	25	20	9	30
The Brandon									
Condominiums	230	12	D.U.	2	7	9	7	4	11
Reduction for Transit Use ²		67%		1	5	6	5	2	7
Net New Residential Trips				1	2	3	2	2	4
Atlantic South									
Parcel C									
Existing Atlantic Plumbing Warehouse ³				7	5	12	5	0	5
Proposed Residential Condominium	230	266	D.U.	19	94	113	90	44	134
Reduction for Transit Use ³		50%		10	47	57	45	22	67
Net New Residential Trips				9	47	57	45	22	67
Proposed Retail	820	8,839	S.F.	23	14	37	60	66	126
Reduction Transit Use ³		70%		16	10	26	42	46	88
Net New Residential Trips				7	4	11	18	20	38
Net New Parcel C Site Trips				9	46	56	58	42	100
Total Pipeline Site Generated Trips				22	105	127	114	69	184

Notes: ¹ Based on Trip Generation, 7th Edition, Institute of Transportation Engineers.

² Transit reduction based on "Development-Related Ridership Survey II", by JHK & Associates, 1989.

³ Trips observed during peak hour traffic counts conducted on Tuesday, April 12, 2005.

Table 3-3
Atlantic South Plumbing Site
Site Trip Generation Analysis ¹ (Addendum)

Land Use	Land Use Code	Size	Units	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Existing Development ²									
Parcel A									
Existing Atlantic Plumbing Warehouse				13	5	18	1	12	13
Parcel B									
Existing Building				1	2	3	2	1	3
Parcel D									
Dumpster Gated Area				0	0	0	0	0	0
Proposed Development									
Parcel A									
Residential Condominium	230	348 D.U.		24	116	140	112	55	167
Reduction for Transit Use ³		50%		12	58	70	56	28	84
Net New Residential Trips				12	58	70	56	27	84
Retail	820	6,245 S.F.		18	12	30	48	52	100
Reduction Transit Use ³		70%		13	8	21	34	36	70
Net New Retail Trips				5	4	9	14	16	30
Total Net New Site-Generated Trips for Parcel A				5	56	61	69	31	101
Parcel B									
Residential Condominium	230	76 D.U.		7	34	41	32	16	48
Reduction for Transit Use ³		50%		3	17	21	16	8	24
Net New Residential Trips				4	17	21	16	8	24
Retail	820	4,306 S.F.		15	9	24	38	41	79
Reduction Transit Use ³		70%		10	7	17	27	29	55
Net New Retail Trips				4	3	7	11	12	24
Total Net New Site-Generated Trips for Parcel B				7	18	25	25	19	45
Parcel D									
Residential Condominium	230	10 D.U.		1	7	8	6	3	9
Reduction for Transit Use ³		50%		1	3	4	3	1	5
Net New Residential Trips				0	4	4	3	2	5
Retail	820	1,444 S.F.		7	5	12	18	20	38
Reduction Transit Use ³		70%		5	3	8	13	14	27
Net New Retail Trips				2	1	4	5	6	11
Total Net New Site-Generated Trips for Parcel D				3	5	8	8	7	16

Notes: ¹ Based on Trip Generation, 7th Edition, Institute of Transportation Engineers.

² Trips observed during peak hour traffic counts conducted on Tuesday, April 12, 2005.

³ Transit reduction based on "Development-Related Ridership Survey II", by JHK & Associates, 1989 and the 2000 US Census.

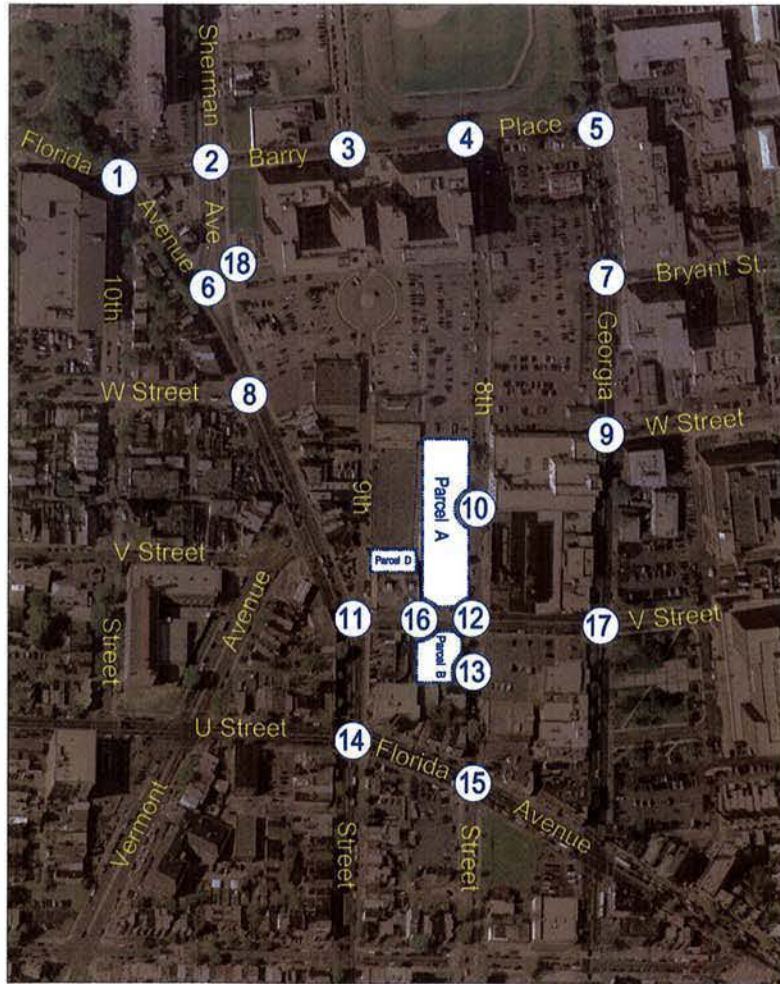
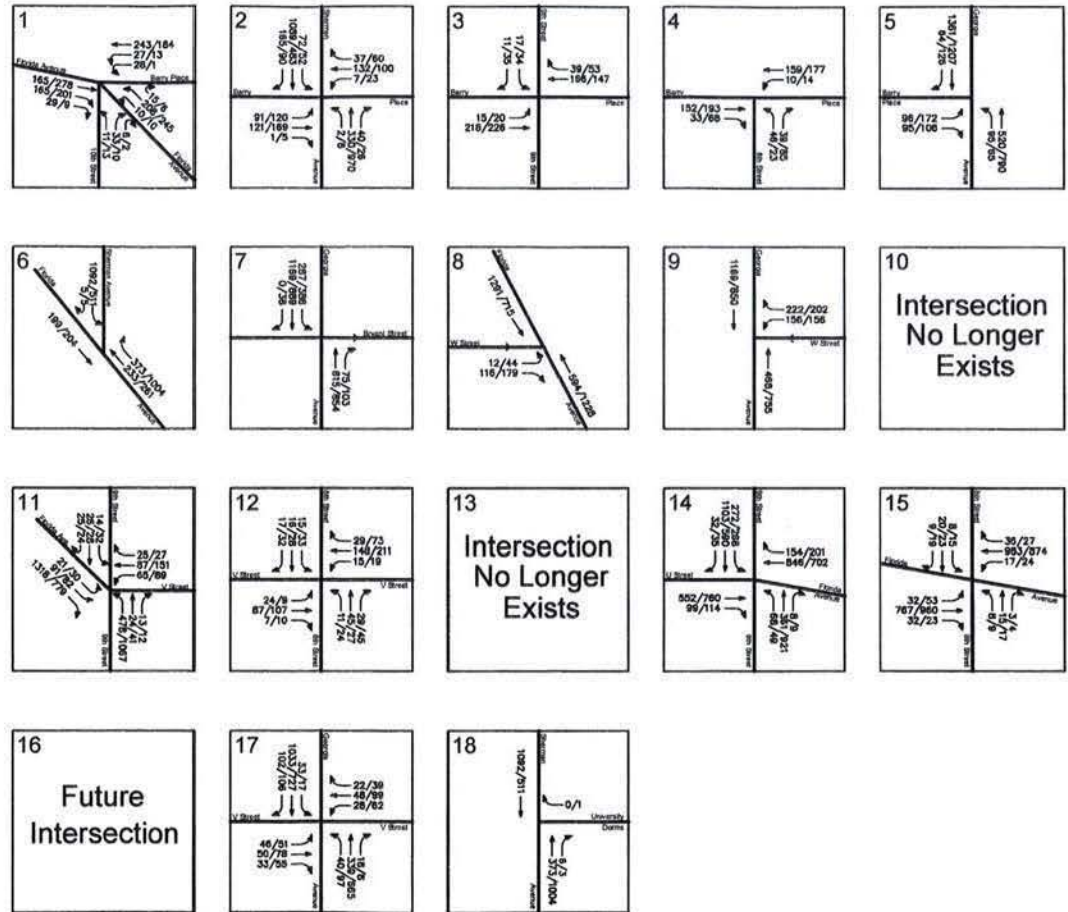


Figure 3-2
Background Peak Hour Traffic Volumes
(Atlantic South - Addendum)

AM PM - HOUR
PM - HOUR
000/000



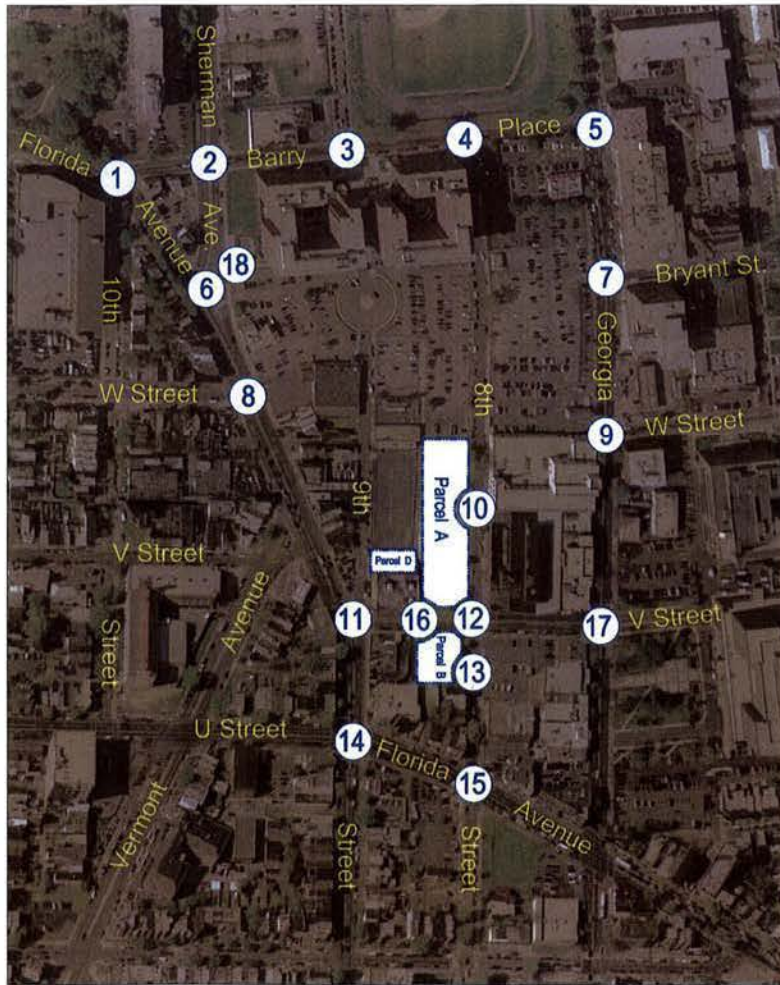
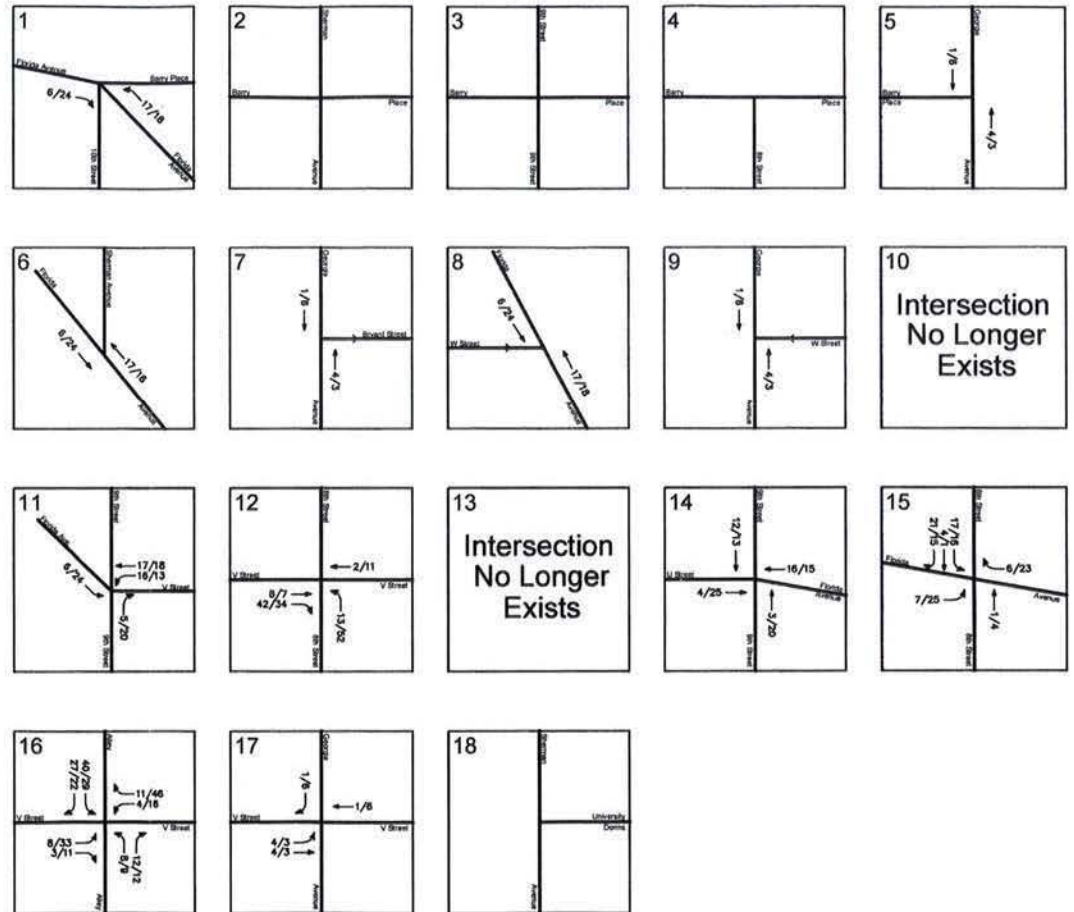


Figure 3-3
Site-Generated Trips
(Atlantic South - Addendum)

AM PEAK HOUR
PM PEAK HOUR
000/000



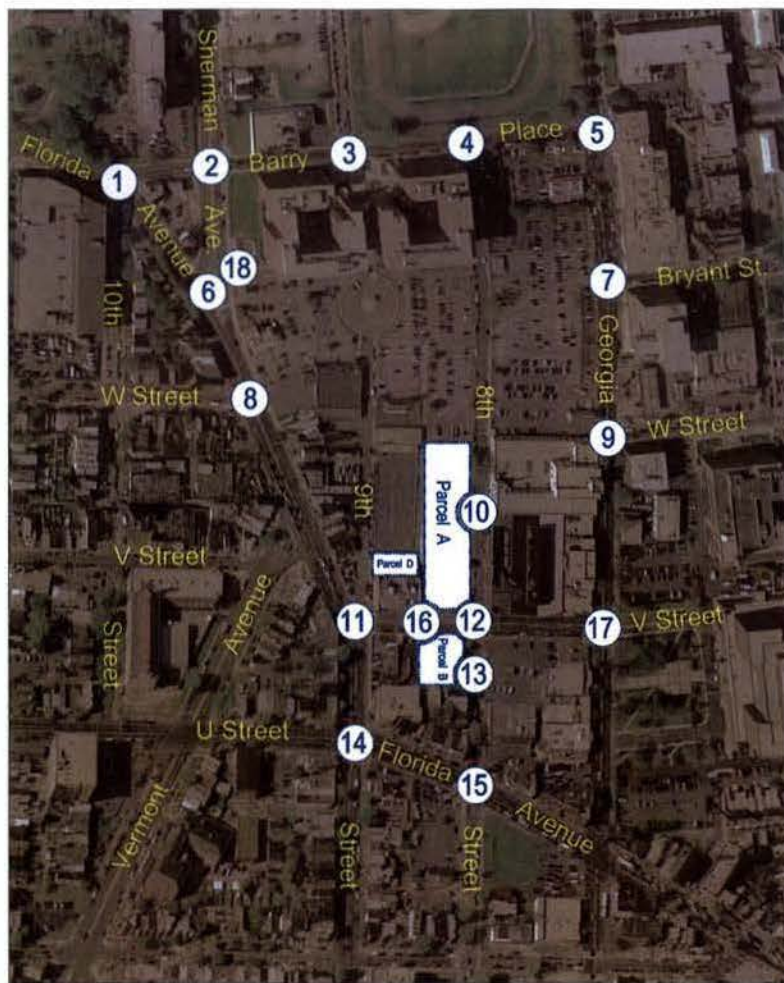
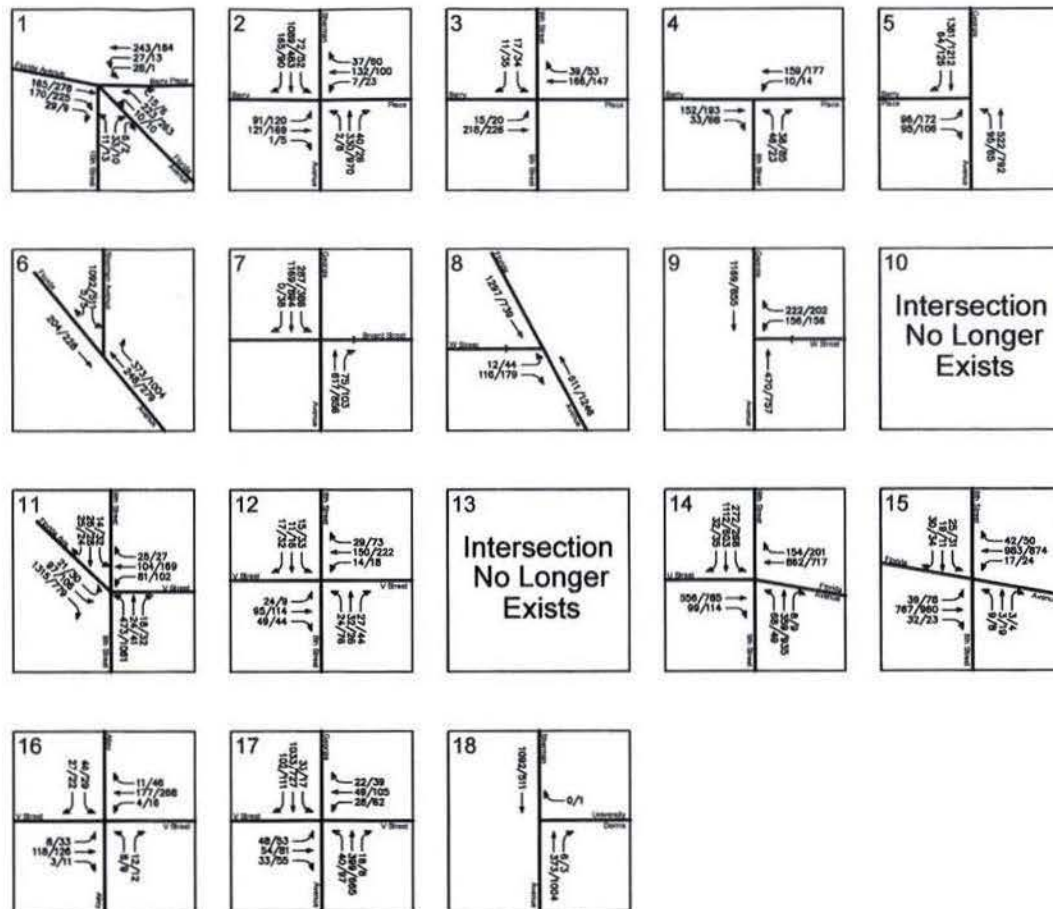


Figure 3-4
Total Future Peak Hour Traffic Volumes
(Atlantic South - Addendum)

AM PEAK HOUR
PM PEAK HOUR
000/000



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	SER2
Lane Configurations												
Sign Control		Stop			Stop			Stop		Stop		
Volume (vph)	11	33	6	28	27	243	10	208	15	165	165	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	36	7	30	29	264	11	226	16	179	179	32
Direction, Lane #	EB 1	WB 1	NB 1	SE 1	SE 2							
Volume Total (vph)	54	324	253	179	211							
Volume Left (vph)	12	30	11	179	0							
Volume Right (vph)	7	264	16	0	32							
Hadj (s)	0.01	-0.44	0.00	0.53	-0.07							
Departure Headway (s)	6.3	5.3	5.7	6.5	5.9							
Degree Utilization, x	0.09	0.47	0.40	0.32	0.34							
Capacity (veh/h)	481	639	587	528	583							
Control Delay (s)	9.9	12.9	12.4	11.4	10.7							
Approach Delay (s)	9.9	12.9	12.4	11.0								
Approach LOS	A	B	B	B								
Intersection Summary												
Delay			11.9									
HCM Level of Service			B									
Intersection Capacity Utilization			52.2%			ICU Level of Service			A			
Analysis Period (min)			15									

2007 Background Condition
15: 10th Avenue & Florida Avenue

PM Peak Period
1/24/2006

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL2	NBL	NBR	SEL	SER	SER2
Lane Configurations												
Sign Control		Stop			Stop			Stop		Stop		
Volume (vph)	13	10	2	1	13	184	10	245	6	278	201	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	11	2	1	14	200	11	266	7	302	218	10
Direction, Lane #	EB 1	WB 1	NB 1	SE 1	SE 2							
Volume Total (vph)	27	215	284	302	228							
Volume Left (vph)	14	1	11	302	0							
Volume Right (vph)	2	200	7	0	10							
Hadj (s)	0.09	-0.52	0.03	0.53	0.00							
Departure Headway (s)	6.4	5.4	5.4	6.1	5.5							
Degree Utilization, x	0.05	0.32	0.43	0.51	0.35							
Capacity (veh/h)	481	615	638	576	630							
Control Delay (s)	9.7	10.9	12.4	14.1	10.3							
Approach Delay (s)	9.7	10.9	12.4	12.5								
Approach LOS	A	B	B	B								
Intersection Summary												
Delay			12.0									
HCM Level of Service			B									
Intersection Capacity Utilization			52.0%			ICU Level of Service			A			
Analysis Period (min)			15									

2007 Background Condition
12: Barry Place & Sherman Street

AM Peak Period
1/24/2006

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	4.0
Lane Util. Factor		1.00			1.00			0.95			0.95	1.00
Fr _t		1.00			0.97			0.98			1.00	0.85
Flt Protected		0.98			1.00			1.00			1.00	1.00
Satd. Flow (prot)		1823			1806			3482			3528	1583
Flt Permitted		0.80			0.99			0.81			0.81	1.00
Satd. Flow (perm)		1498			1790			2815			2852	1583
Volume (vph)	91	121	1	7	132	37	2	330	40	72	1089	165
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	99	132	1	8	143	40	2	359	43	78	1184	179
RTOR Reduction (vph)	0	0	0	0	10	0	0	9	0	0	0	107
Lane Group Flow (vph)	0	232	0	0	181	0	0	395	0	0	1262	72
Turn Type	Perm			Perm			Perm			Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		65.0			65.0			25.0			25.0	25.0
Effective Green, g (s)		66.0			66.0			26.0			26.0	26.0
Actuated g/C Ratio		0.66			0.66			0.26			0.26	0.26
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Lane Grp Cap (vph)		989			1181			732			742	412
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.10			0.14			c0.44	0.05
v/c Ratio		0.23			0.15			0.54			1.70	0.18
Uniform Delay, d ₁		6.8			6.4			31.8			37.0	28.7
Progression Factor		1.00			1.00			1.48			1.00	1.00
Incremental Delay, d ₂		0.6			0.3			2.7			321.1	0.9
Delay (s)		7.4			6.7			49.8			358.1	29.6
Level of Service		A			A			D			F	C
Approach Delay (s)		7.4			6.7			49.8			317.3	
Approach LOS		A			A			D			F	
Intersection Summary												
HCM Average Control Delay		211.8					HCM Level of Service				F	
HCM Volume to Capacity ratio		0.65										
Actuated Cycle Length (s)		100.0					Sum of lost time (s)			8.0		
Intersection Capacity Utilization		77.0%					ICU Level of Service			D		
Analysis Period (min)		15										
c Critical Lane Group												

2007 Background Condition
12: Barry Place & Sherman Street

PM Peak Period
1/24/2006

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	↗
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0			4.0			4.0	4.0
Lane Util. Factor		1.00			1.00			0.95			0.95	1.00
Flt		1.00			0.96			1.00			1.00	0.85
Flt Protected		0.98			0.99			1.00			0.98	1.00
Satd. Flow (prot)		1822			1769			3524			3470	1583
Flt Permitted		0.80			0.94			0.95			0.56	1.00
Satd. Flow (perm)		1482			1677			3359			1987	1583
Volume (vph)	120	169	5	23	100	60	8	970	26	52	79	90
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	130	184	5	25	109	65	9	1054	28	57	86	98
RTOR Reduction (vph)	0	1	0	0	1	0	0	1	0	0	0	73
Lane Group Flow (vph)	0	318	0	0	198	0	0	1090	0	0	143	25
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		65.0			65.0			25.0			25.0	25.0
Effective Green, g (s)		66.0			66.0			26.0			26.0	26.0
Actuated g/C Ratio		0.66			0.66			0.26			0.26	0.26
Clearance Time (s)		5.0			5.0			5.0			5.0	5.0
Lane Grp Cap (vph)		978			1107			873			517	412
v/s Ratio Prot												
v/s Ratio Perm		c0.21			0.12			c0.32			0.07	0.02
v/c Ratio		0.33			0.18			1.25			0.28	0.06
Uniform Delay, d1		7.4			6.6			37.0			29.5	27.8
Progression Factor		1.00			1.00			1.46			1.00	1.00
Incremental Delay, d2		0.9			0.4			118.6			1.3	0.3
Delay (s)		8.2			6.9			172.5			30.8	28.1
Level of Service		A			A			F			C	C
Approach Delay (s)		8.2			6.9			172.5			29.7	
Approach LOS		A			A			F			C	
Intersection Summary												
HCM Average Control Delay	107.8		HCM Level of Service		F							
HCM Volume to Capacity ratio	0.59											
Actuated Cycle Length (s)	100.0		Sum of lost time (s)		8.0							
Intersection Capacity Utilization	70.9%		ICU Level of Service		C							
Analysis Period (min)	15											
c Critical Lane Group												

2007 Background Condition
9: Barry Place & 9th Street

AM Peak Period
1/24/2006

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	218	0	0	166	39	0	0	0	17	0	11
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	237	0	0	180	42	0	0	0	18	0	12
Direction, Lane #	EB 1	WB 1	SB 1	SB 2								
Volume Total (vph)	253	223	18	12								
Volume Left (vph)	16	0	18	0								
Volume Right (vph)	0	42	0	12								
Hadj (s)	0.05	-0.08	0.53	-0.67								
Departure Headway (s)	4.3	4.2	6.1	4.9								
Degree Utilization, x	0.30	0.26	0.03	0.02								
Capacity (veh/h)	832	840	548	672								
Control Delay (s)	9.1	8.6	8.1	6.7								
Approach Delay (s)	9.1	8.6	7.5									
Approach LOS	A	A	A									
Intersection Summary												
Delay			8.8									
HCM Level of Service			A									
Intersection Capacity Utilization		33.8%			ICU Level of Service		A					
Analysis Period (min)		15										

2007 Background Condition
9: Barry Place & 9th Street

PM Peak Period
1/24/2006

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	226	0	0	147	53	0	0	0	34	0	35
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	22	246	0	0	160	58	0	0	0	37	0	38
Direction, Lane #	EB 1	WB 1	SB 1	SB 2								
Volume Total (vph)	267	217	37	38								
Volume Left (vph)	22	0	37	0								
Volume Right (vph)	0	58	0	38								
Hadj (s)	0.05	-0.12	0.53	-0.67								
Departure Headway (s)	4.4	4.3	6.1	4.9								
Degree Utilization, x	0.33	0.26	0.06	0.05								
Capacity (veh/h)	802	812	546	669								
Control Delay (s)	9.5	8.7	8.3	7.0								
Approach Delay (s)	9.5	8.7	7.6									
Approach LOS	A	A	A									
Intersection Summary												
Delay			9.0									
HCM Level of Service			A									
Intersection Capacity Utilization		37.3%			ICU Level of Service		A					
Analysis Period (min)		15										



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↩			↩	↩	↩
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	152	33	10	159	46	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	165	36	11	173	50	42
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)				282		
pX, platoon unblocked						
vC, conflicting volume			201		378	183
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			201		378	183
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		92	95
cM capacity (veh/h)			1371		619	859
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	201	184	92			
Volume Left	0	11	50			
Volume Right	36	0	42			
cSH	1700	1371	710			
Volume to Capacity	0.12	0.01	0.13			
Queue Length 95th (ft)	0	1	11			
Control Delay (s)	0.0	0.5	10.8			
Lane LOS		A	B			
Approach Delay (s)	0.0	0.5	10.8			
Approach LOS			B			
Intersection Summary						
Average Delay			2.3			
Intersection Capacity Utilization		28.2%		ICU Level of Service		A
Analysis Period (min)			15			

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↰			↱	↰	↱
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	193	68	14	177	23	85
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	210	74	15	192	25	92
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage (veh)						
Upstream signal (ft)				282		
pX, platoon unblocked						
vC, conflicting volume			284		470	247
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			284		470	247
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		95	88
cM capacity (veh/h)			1279		546	792
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	284	208	117			
Volume Left	0	15	25			
Volume Right	74	0	92			
cSH	1700	1279	723			
Volume to Capacity	0.17	0.01	0.16			
Queue Length 95th (ft)	0	1	14			
Control Delay (s)	0.0	0.7	10.9			
Lane LOS		A	B			
Approach Delay (s)	0.0	0.7	10.9			
Approach LOS			B			
Intersection Summary						
Average Delay			2.3			
Intersection Capacity Utilization			34.0%		ICU Level of Service	A
Analysis Period (min)			15			

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.93			1.00	0.99	
Flt Protected	0.98			0.99	1.00	
Satd. Flow (prot)	1695			3512	3515	
Flt Permitted	0.98			0.56	1.00	
Satd. Flow (perm)	1695			1977	3515	
Volume (vph)	96	95	95	520	1361	64
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	104	103	103	565	1479	70
RTOR Reduction (vph)	35	0	0	0	3	0
Lane Group Flow (vph)	172	0	0	668	1546	0
Turn Type	D.P+P					
Protected Phases	4		3	2 3	2	
Permitted Phases			2			
Actuated Green, G (s)	14.0			74.0	54.0	
Effective Green, g (s)	14.0			74.0	54.0	
Actuated g/C Ratio	0.14			0.74	0.54	
Clearance Time (s)	4.0				4.0	
Lane Grp Cap (vph)	237			1770	1898	
v/s Ratio Prot	c0.10			c0.08	c0.44	
v/s Ratio Perm				0.20		
v/c Ratio	0.72			0.38	0.81	
Uniform Delay, d1	41.2			4.7	18.9	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	17.5			0.6	4.0	
Delay (s)	58.7			5.3	22.9	
Level of Service	E			A	C	
Approach Delay (s)	58.7			5.3	22.9	
Approach LOS	E			A	C	
Intersection Summary						
HCM Average Control Delay	21.1		HCM Level of Service		C	
HCM Volume to Capacity ratio	0.70					
Actuated Cycle Length (s)	100.0		Sum of lost time (s)		12.0	
Intersection Capacity Utilization	77.9%		ICU Level of Service		D	
Analysis Period (min)	15					
c Critical Lane Group						



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			↑↑	↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.95			1.00	0.99	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1714			3526	3489	
Flt Permitted	0.97			0.68	1.00	
Satd. Flow (perm)	1714			2392	3489	
Volume (vph)	172	106	65	790	1207	126
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	187	115	71	859	1312	137
RTOR Reduction (vph)	22	0	0	0	8	0
Lane Group Flow (vph)	280	0	0	930	1441	0
Turn Type	D.P+P					
Protected Phases	4		3	2 3	2	
Permitted Phases			2			
Actuated Green, G (s)	14.0			74.0	54.0	
Effective Green, g (s)	14.0			74.0	54.0	
Actuated g/C Ratio	0.14			0.74	0.54	
Clearance Time (s)	4.0				4.0	
Lane Grp Cap (vph)	240			1997	1884	
v/s Ratio Prot	c0.16			c0.09	c0.41	
v/s Ratio Perm				0.25		
v/c Ratio	1.17			0.47	0.76	
Uniform Delay, d1	43.0			5.2	18.0	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	110.1			0.8	3.0	
Delay (s)	153.1			5.9	21.0	
Level of Service	F			A	C	
Approach Delay (s)	153.1			5.9	21.0	
Approach LOS	F			A	C	

Intersection Summary

HCM Average Control Delay	30.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	87.1%	ICU Level of Service	E
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)	4.0			4.0	4.0	4.0
Lane Util. Factor	1.00			1.00	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)	1863			1863	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	1863			1863	1770	1583
Volume (vph)	233	0	0	199	1092	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	253	0	0	216	1187	5
RTOR Reduction (vph)	0	0	0	0	0	2
Lane Group Flow (vph)	253	0	0	216	1187	3
Turn Type					Perm	
Protected Phases	2			6	8	
Permitted Phases						8
Actuated Green, G (s)	32.0			32.0	60.0	60.0
Effective Green, g (s)	32.0			32.0	60.0	60.0
Actuated g/C Ratio	0.32			0.32	0.60	0.60
Clearance Time (s)	4.0			4.0	4.0	4.0
Lane Grp Cap (vph)	596			596	1062	950
v/s Ratio Prot	c0.14			0.12	c0.67	
v/s Ratio Perm						0.00
v/c Ratio	0.42			0.36	1.12	0.00
Uniform Delay, d1	26.8			26.2	20.0	8.0
Progression Factor	1.49			1.00	2.30	2.64
Incremental Delay, d2	2.1			1.7	54.4	0.0
Delay (s)	41.9			27.9	100.3	21.1
Level of Service	D			C	F	C
Approach Delay (s)	41.9			27.9	100.0	
Approach LOS	D			C	F	
Intersection Summary						
HCM Average Control Delay		81.8		HCM Level of Service		F
HCM Volume to Capacity ratio		0.88				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization		79.4%		ICU Level of Service		D
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)	4.0			4.0	4.0	4.0
Lane Util. Factor	1.00			1.00	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)	1863			1863	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	1863			1863	1770	1583
Volume (vph)	261	0	0	204	511	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	284	0	0	222	555	5
RTOR Reduction (vph)	0	0	0	0	0	2
Lane Group Flow (vph)	284	0	0	222	555	3
Turn Type					Perm	
Protected Phases	2			6	8	
Permitted Phases						8
Actuated Green, G (s)	32.0			32.0	60.0	60.0
Effective Green, g (s)	32.0			32.0	60.0	60.0
Actuated g/C Ratio	0.32			0.32	0.60	0.60
Clearance Time (s)	4.0			4.0	4.0	4.0
Lane Grp Cap (vph)	596			596	1062	950
v/s Ratio Prot	c0.15			0.12	c0.31	
v/s Ratio Perm						0.00
v/c Ratio	0.48			0.37	0.52	0.00
Uniform Delay, d1	27.3			26.2	11.7	8.0
Progression Factor	1.62			1.00	1.29	1.41
Incremental Delay, d2	1.9			1.8	1.8	0.0
Delay (s)	46.1			28.0	16.9	11.3
Level of Service	D			C	B	B
Approach Delay (s)	46.1			28.0	16.9	
Approach LOS	D			C	B	
Intersection Summary						
HCM Average Control Delay		27.0		HCM Level of Service		C
HCM Volume to Capacity ratio		0.51				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		8.0
Intersection Capacity Utilization		48.7%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

2007 Background Condition
2: Bryant Street & Georgia Avenue

AM Peak Period
1/24/2006

												
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	
Lane Util. Factor								0.95			0.95	
Frt								0.98			1.00	
Flt Protected								1.00			0.99	
Satd. Flow (prot)								3481			3505	
Flt Permitted								1.00			0.63	
Satd. Flow (perm)								3481			2241	
Volume (vph)	0	0	0	0	0	0	0	615	75	287	1169	0
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	668	82	312	1271	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	12	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	738	0	0	1583	0
Turn Type										Prot		
Protected Phases								2		1	1 2	
Permitted Phases												
Actuated Green, G (s)								46.0			72.0	
Effective Green, g (s)								46.0			72.0	
Actuated g/C Ratio								0.57			0.90	
Clearance Time (s)								4.0				
Lane Grp Cap (vph)								2002			2428	
v/s Ratio Prot								0.21			c0.21	
v/s Ratio Perm											c0.37	
v/c Ratio								0.37			0.65	
Uniform Delay, d1								9.2			1.0	
Progression Factor								1.00			1.00	
Incremental Delay, d2								0.5			1.4	
Delay (s)								9.7			2.3	
Level of Service								A			A	
Approach Delay (s)		0.0			0.0			9.7			2.3	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM Average Control Delay		4.7										
HCM Volume to Capacity ratio		0.65										
Actuated Cycle Length (s)		80.0										
Intersection Capacity Utilization		66.7%										
Analysis Period (min)		15										
c Critical Lane Group												

2007 Background Condition
2: Bryant Street & Georgia Avenue

PM Peak Period
1/24/2006

												
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	
Lane Util. Factor								0.95			0.95	
Fr _t								0.98			1.00	
Fl _t Protected								1.00			0.99	
Satd. Flow (prot)								3482			3473	
Fl _t Permitted								1.00			0.53	
Satd. Flow (perm)								3482			1864	
Volume (vph)	0	0	0	0	0	0	0	854	103	386	889	38
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	928	112	420	966	41
RTOR Reduction (vph)	0	0	0	0	0	0	0	11	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	1029	0	0	1427	0
Turn Type										Prot		
Protected Phases								2		1	1 2	
Permitted Phases												
Actuated Green, G (s)								46.0			72.0	
Effective Green, g (s)								46.0			72.0	
Actuated g/C Ratio								0.57			0.90	
Clearance Time (s)								4.0				
Lane Grp Cap (vph)								2002			2201	
v/s Ratio Prot								0.30			c0.21	
v/s Ratio Perm											c0.37	
v/c Ratio								0.51			0.65	
Uniform Delay, d ₁								10.3			1.0	
Progression Factor								1.00			1.00	
Incremental Delay, d ₂								0.9			1.5	
Delay (s)								11.2			2.5	
Level of Service								B			A	
Approach Delay (s)		0.0			0.0			11.2			2.5	
Approach LOS		A			A			B			A	
Intersection Summary												
HCM Average Control Delay			6.1									HCM Level of Service A
HCM Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			80.0									Sum of lost time (s) 8.0
Intersection Capacity Utilization			70.6%									ICU Level of Service C
Analysis Period (min)			15									
c Critical Lane Group												

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	12	116	0	594	1291	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	126	0	646	1403	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)					318	
pX, platoon unblocked						
vC, conflicting volume	2049	702	1403			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2049	702	1403			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	73	67	100			
cM capacity (veh/h)	48	381	483			
Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2	
Volume Total	13	126	646	702	702	
Volume Left	13	0	0	0	0	
Volume Right	0	126	0	0	0	
cSH	48	381	1700	1700	1700	
Volume to Capacity	0.27	0.33	0.38	0.41	0.41	
Queue Length 95th (ft)	23	36	0	0	0	
Control Delay (s)	105.2	19.1	0.0	0.0	0.0	
Lane LOS	F	C				
Approach Delay (s)	27.1		0.0	0.0		
Approach LOS	D					
Intersection Summary						
Average Delay			1.7			
Intersection Capacity Utilization			49.5%		ICU Level of Service	A
Analysis Period (min)			15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱		↑	↑↑	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	44	179	0	1228	715	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	48	195	0	1335	777	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)					318	
pX, platoon unblocked						
vC, conflicting volume	2112	389	777			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2112	389	777			
tC, single (s)	6.8	6.9	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	68	100			
cM capacity (veh/h)	44	610	835			
Direction, Lane #						
	EB 1	EB 2	NB 1	SB 1	SB 2	
Volume Total	48	195	1335	389	389	
Volume Left	48	0	0	0	0	
Volume Right	0	195	0	0	0	
cSH	44	610	1700	1700	1700	
Volume to Capacity	1.09	0.32	0.79	0.23	0.23	
Queue Length 95th (ft)	112	34	0	0	0	
Control Delay (s)	310.7	13.6	0.0	0.0	0.0	
Lane LOS	F	B				
Approach Delay (s)	72.2		0.0	0.0		
Approach LOS	F					
Intersection Summary						
Average Delay			7.4			
Intersection Capacity Utilization			74.6%	ICU Level of Service		D
Analysis Period (min)			15			