

APPENDIX B

Intersection Capacity Analyses



ZONING COMMISSION
District of Columbia
CASE NO. 05-16
EXHIBIT NO. 7B

SHORT REPORT

General Information				Site Information			
Analyst	SA			Intersection	1		
Agency or Co.	TGI			Area Type	All other areas		
Date Performed	5/2/2005			Jurisdiction	Washington, DC		
Time Period	Existing AM			Analysis Year	2005		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	10	220	22	33	949	27	204	121	17	7	82	25
% Heavy veh	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.85	0.85	0.85	0.94	0.94	0.94	0.92	0.92	0.92	0.81	0.81	0.81
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	3.0		2.0	3.0			3.0			3.0	
Arrival type	3	3		3	3			3			3	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0		10	0		10	0		10	0		5
Lane Width	10.0	10.0		10.0	10.0			16.0			16.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	Y	N	0	Y
Parking/hr									5			5
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Phasing	EW Perm	02	03	04	NB Only	NS Perm	07	08				
Timing	G = 70.0	G =	G =	G =	G = 25.0	G = 15.0	G =	G =				
	Y =	Y =	Y =	Y =	Y =	Y = 4	Y =	Y =				
Duration of Analysis (hrs) = 0.25							Cycle Length C = 120.0					

Lane Group Capacity, Control Delay, and LOS Determination												
	EB			WB			NB			SB		
Adj. flow rate	12	273		35	1028			362			135	
Lane group cap.	60	1041		562	1047			500			236	
v/c ratio	0.20	0.26		0.06	0.98			0.72			0.57	
Green ratio	0.58	0.59		0.58	0.59			0.37			0.13	
Unif. delay d1	11.8	11.8		10.8	23.9			32.8			48.8	
Delay factor k	0.11	0.11		0.11	0.49			0.28			0.17	
Increm. delay d2	1.6	0.1		0.0	23.4			5.2			3.3	
PF factor	1.000	1.000		1.000	1.000			1.000			1.000	
Control delay	13.4	12.0		10.9	47.3			37.9			52.1	
Lane group LOS	B	B		B	D			D			D	
Apprch. delay	12.0			46.1			37.9			52.1		
Approach LOS	B			D			D			D		
Intersec. delay	39.7			Intersection LOS						D		

SHORT REPORT

General Information				Site Information			
Analyst	SA	Intersection	1				
Agency or Co.	TGI	Area Type	All other areas				
Date Performed	5/2/2005	Jurisdiction	Washington, DC				
Time Period	Background AM	Analysis Year	2005				

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	10	220	22	35	949	27	204	152	26	7	99	25
% Heavy veh	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.90	0.90	0.90	0.94	0.94	0.94	0.92	0.92	0.92	0.90	0.90	0.90
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	2.0	3.0		2.0	3.0			3.0			3.0	
Arrival type	3	3		3	3			3			3	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0		10	0		10	0		10	0		5
Lane Width	10.0	10.0		10.0	10.0			16.0			16.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	Y	N	0	Y
Parking/hr									5			5
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	EW Perm	02	03	04	NB Only	NS Perm	07	08
Timing	G = 69.0	G =	G =	G =	G = 25.0	G = 15.0	G =	G =
	Y = 4	Y =	Y =	Y =	Y =	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25				Cycle Length C = 120.0				

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	11	257		37	1028			404			140	
Lane group cap.	60	1027		574	1032			501			238	
v/c ratio	0.18	0.25		0.06	1.00			0.81			0.59	
Green ratio	0.57	0.58		0.57	0.58			0.37			0.13	
Unif. delay d1	12.1	12.2		11.3	24.9			34.2			48.9	
Delay factor k	0.11	0.11		0.11	0.50			0.35			0.18	
Increm. delay d2	1.5	0.1		0.0	27.0			9.4			3.8	
PF factor	1.000	1.000		1.000	1.000			1.000			1.000	
Control delay	13.6	12.3		11.3	51.9			43.6			52.7	
Lane group LOS	B	B		B	D			D			D	
Approch. delay	12.4			50.5			43.6			52.7		
Approach LOS	B			D			D			D		
Intersec. delay	43.7			Intersection LOS						D		

SHORT REPORT

General Information

Analyst
Agency or Co.
Date Performed
Time Period

SA
TGI
5/4/2005
Total AM

Site Information

Intersection
Area Type
Jurisdiction
Analysis Year

1
All other areas
Washington, DC
2005

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Lane group	L	TR		L	TR			LTR			LTR	
Volume (vph)	10	220	39	35	949	27	266	154	26	7	108	25
% Heavy veh	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.90	0.90	0.90	0.94	0.94	0.94	0.92	0.92	0.92	0.90	0.90	0.90
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time	2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green	3.0	3.0		3.0	3.0			3.0			3.0	
Arrival type	3	3		3	3			3			3	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0		10	0		10	0		10	0		7
Lane Width	10.0	10.0		10.0	10.0			16.0			16.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	Y	N	0	Y
Parking/hr									5			5
Bus stops/hr	0	0		0	0			0			0	
Unit Extension	3.0	3.0		3.0	3.0			3.0			3.0	

Phasing	EW Perm	02	03	04	NB Only	NS Perm	07	08
Timing	G = 41.0	G =	G =	G =	G = 17.0	G = 10.0	G =	G =
	Y =	Y =	Y =	Y =	Y =	Y = 4	Y =	Y =

Duration of Analysis (hrs) = 0.25

Cycle Length C = 75.0

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
dj. flow rate	11	276		37	1028			473			148	
ane group cap.	96	976		530	991			495			261	
'/c ratio	0.11	0.28		0.07	1.04			0.96			0.57	
reen ratio	0.56	0.56		0.56	0.56			0.37			0.15	
Unif. delay d1	7.8	8.6		7.6	16.5			22.9			29.8	
elay factor k	0.11	0.11		0.11	0.50			0.47			0.16	
ncrem. delay d2	0.5	0.2		0.1	38.7			29.4			2.9	
'F factor	1.000	1.000		1.000	1.000			1.000			1.000	
ontrol delay	8.3	8.8		7.6	55.2			52.3			32.7	
ane group LOS	A	A		A	E			D			C	
pprch. delay	8.8			53.6			52.3			32.7		
Approach LOS	A			D			D			C		
ntersec. delay	45.2			Intersection LOS						D		

SHORT REPORT

General Information				Site Information			
Analyst	SA			Intersection	1		
Agency or Co.	TGI			Area Type	All other areas		
Date Performed	5/2/2005			Jurisdiction	Washington, DC		
Time Period	Existing PM			Analysis Year	2005		

Volume and Timing Input

			EB			WB			NB			SB		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes			1	1	0	1	1	0	0	1	0	0	1	0
Lane group			L	TR		L	TR			LTR			LTR	
Volume (vph)			10	929	60	34	215	12	29	97	29	22	113	10
% Heavy veh			0	0	0	0	0	0	0	0	0	0	0	0
PHF			0.82	0.82	0.82	0.91	0.91	0.91	0.84	0.84	0.84	0.86	0.86	0.86
Actuated (P/A)			A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time			2.0	2.0		2.0	2.0			2.0			2.0	
Ext. eff. green			2.0	3.0		2.0	3.0			3.0			3.0	
Arrival type			3	3		3	3			3			3	
Unit Extension			3.0	3.0		3.0	3.0			3.0			3.0	
Ped/Bike/RTOR Volume			0		10	0		10	0		10	0		5
Lane Width			10.0	10.0		10.0	10.0			16.0			16.0	
Parking/Grade/Parking			N	0	N	N	0	N	N	0	Y	N	0	Y
Parking/hr											5			5
Bus stops/hr			0	0		0	0			0			0	
Unit Extension			3.0	3.0		3.0	3.0			3.0			3.0	
Phasing	EW Perm	02	03		04		NS Perm		06		07		08	
Timing	G = 63.0	G =	G =		G =		G = 19.0		G =		G =		G =	
	Y = 4	Y =	Y =		Y =		Y = 4		Y =		Y =		Y =	
Duration of Analysis (hrs) = 0.25									Cycle Length C = 90.0					

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	12	1194		37	238			173			163	
Lane group cap.	758	1252		80	1259			381			394	
v/c ratio	0.02	0.95		0.46	0.19			0.45			0.41	
Green ratio	0.70	0.71		0.70	0.71			0.22			0.22	
Unif. delay d1	4.1	11.7		6.0	4.3			30.3			30.0	
Delay factor k	0.11	0.46		0.11	0.11			0.11			0.11	
Increm. delay d2	0.0	15.7		4.2	0.1			0.9			0.7	
PF factor	1.000	1.000		1.000	1.000			1.000			1.000	
Control delay	4.1	27.3		10.2	4.4			31.1			30.7	
Lane group LOS	A	C		B	A			C			C	
Apprch. delay	27.1			5.2			31.1			30.7		
Approach LOS	C			A			C			C		
Intersec. delay	24.5			Intersection LOS						C		

SHORT REPORT

General Information

Analyst
Agency or Co.
Date Performed
Time Period

SA
TGI
5/2/2005
Background PM

Site Information

Intersection
Area Type
Jurisdiction
Analysis Year

1
All other areas
Washington, DC
2005

Volume and Timing Input

			EB			WB			NB			SB			
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
Jum. of Lanes			1	1	0	1	1	0	0	1	0	0	1	0	
Lane group			L	TR		L	TR			LTR			LTR		
Volume (vph)			10	929	60	43	215	12	29	121	33	22	147	10	
% Heavy veh			0	0	0	0	0	0	0	0	0	0	0	0	
PHF			0.90	0.90	0.90	0.91	0.91	0.91	0.90	0.90	0.90	0.90	0.90	0.90	
Actuated (P/A)			A	A	A	A	A	A	A	A	A	A	A	A	
Startup lost time			2.0	2.0		2.0	2.0			2.0			2.0		
Ext. eff. green			2.0	3.0		2.0	3.0			3.0			3.0		
Arrival type			3	3		3	3			3			3		
Unit Extension			3.0	3.0		3.0	3.0			3.0			3.0		
Ped/Bike/RTOR Volume			0		10	0		10	0		10	0		5	
Lane Width			10.0	10.0		10.0	10.0			16.0			16.0		
Parking/Grade/Parking			N	0	N	N	0	N	N	0	Y	N	0	Y	
Parking/hr											5			5	
Bus stops/hr			0	0		0	0			0			0		
Unit Extension			3.0	3.0		3.0	3.0			3.0			3.0		
Phasing	EW Perm	02	03		04		NB Only		NS Perm		07		08		
Timing	G = 58.0	G =	G =		G =		G = 6.0		G = 15.0		G =		G =		
	Y = 4	Y =	Y =		Y =		Y =		Y = 4		Y =		Y =		
Duration of Analysis (hrs) = 0.25										Cycle Length C = 90.0					

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	11	1088		47	238			192			193	
Lane group cap.	689	1154		80	1161			396			316	
v/c ratio	0.02	0.94		0.59	0.20			0.48			0.61	
Green ratio	0.64	0.66		0.64	0.66			0.28			0.18	
Unif. delay d1	5.7	14.0		9.2	6.2			27.1			34.1	
Delay factor k	0.11	0.46		0.18	0.11			0.11			0.20	
Increm. delay d2	0.0	14.9		10.8	0.1			0.9			3.4	
PF factor	1.000	1.000		1.000	1.000			1.000			1.000	
Control delay	5.8	28.8		20.0	6.3			28.1			37.6	
Lane group LOS	A	C		B	A			C			D	
Apprch. delay	28.6			8.5			28.1			37.6		
Approach LOS	C			A			C			D		
Intersec. delay	26.3			Intersection LOS						C		

SHORT REPORT

General Information

Analyst
Agency or Co.
Date Performed
Time Period

SA
TGI
5/4/2005
Total PM

Site Information

Intersection
Area Type
Jurisdiction
Analysis Year

1
All other areas
Washington, DC
2005

Volume and Timing Input

			EB			WB			NB			SB			
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
Num. of Lanes			1	1	0	1	1	0	0	1	0	0	1	0	
Lane group			L	TR		L	TR			LTR			LTR		
Volume (vph)			10	929	119	43	215	12	48	128	33	22	151	10	
% Heavy veh			0	0	0	0	0	0	0	0	0	0	0	0	
PHF			0.90	0.90	0.90	0.91	0.91	0.91	0.90	0.90	0.90	0.90	0.90	0.90	
Actuated (P/A)			A	A	A	A	A	A	A	A	A	A	A	A	
Startup lost time			2.0	2.0		2.0	2.0			2.0			2.0		
Ext. eff. green			3.0	3.0		3.0	3.0			3.0			3.0		
Arrival type			3	3		3	3			3			3		
Unit Extension			3.0	3.0		3.0	3.0			3.0			3.0		
Ped/Bike/RTOR Volume			0		10	0		10	0		10	0		7	
Lane Width			10.0	10.0		10.0	10.0			16.0			16.0		
Parking/Grade/Parking			N	0	N	N	0	N	N	0	Y	N	0	Y	
Parking/hr											5			5	
Bus stops/hr			0	0		0	0			0			0		
Unit Extension			3.0	3.0		3.0	3.0			3.0			3.0		
Phasing	EW Perm	02	03		04		NS Perm		06		07		08		
Timing	G = 53.0	G =	G =		G =		G = 20.0		G =		G =		G =		
	Y =	Y =	Y =		Y =		Y = 4		Y =		Y =		Y =		
Duration of Analysis (hrs) = 0.25										Cycle Length C = 80.0					

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate	11	1153		47	238			221			195	
Lane group cap.	705	1178		90	1195			435			470	
//c ratio	0.02	0.98		0.52	0.20			0.51			0.41	
Green ratio	0.68	0.68		0.68	0.68			0.26			0.26	
Unif. delay d1	4.3	12.5		6.5	4.9			25.1			24.4	
Delay factor k	0.11	0.48		0.13	0.11			0.12			0.11	
Increm. delay d2	0.0	21.2		5.4	0.1			1.0			0.6	
PF factor	1.000	1.000		1.000	1.000			1.000			1.000	
Control delay	4.3	33.6		12.0	5.0			26.1			25.0	
Lane group LOS	A	C		B	A			C			C	
Apprch. delay	33.4			6.1			26.1			25.0		
Approach LOS	C			A			C			C		
Intersec. delay	27.5			Intersection LOS						C		

ALL-WAY STOP CONTROL ANALYSIS

General Information			Site Information	
Analyst	SA		Intersection	2
Agency/Co.	TGI		Jurisdiction	Washington DC
Date Performed	5/2/2005		Analysis Year	2005
Analysis Time Period	Existing AM			

Project ID 2005-0323

East/West Street: L Street

North/South Street: 3rd Street

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume	7	87	16	33	199	31
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume	64	81	13	8	61	9
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	0.83		0.84		0.82		0.85	
Flow Rate	131		311		191		90	
% Heavy Vehicles	2		2		2		2	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.1		0.1		0.4		0.1	
Prop. Right-Turns	0.1		0.1		0.1		0.1	
Prop. Heavy Vehicle								
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	5.07		5.07		5.07		5.07	

Departure Headway and Service Time

hd, initial value	3.20		3.20		3.20		3.20	
x, initial	0.12		0.28		0.17		0.08	
hd, final value	5.07		5.07		5.07		5.07	
x, final value	0.18		0.42		0.28		0.13	
Move-up time, m	2.0		2.0		2.0		2.0	
Service Time	3.1		3.1		3.1		3.1	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	381		561		441		340	
Delay	9.21		11.31		10.25		9.15	
LOS	A		B		B		A	
Approach: Delay	9.21		11.31		10.25		9.15	
LOS	A		B		B		A	
Intersection Delay	10.38							
Intersection LOS	B							

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Version 4.1d

ALL-WAY STOP CONTROL ANALYSIS

General Information			Site Information		
Analyst	SA		Intersection	2	
Agency/Co.	TGI		Jurisdiction	Washington DC	
Date Performed	5/4/2005		Analysis Year	2005	
Analysis Time Period	Total AM				

Project ID 2005-0323

East/West Street: L Street

North/South Street: 3rd Street

Volume Adjustments and Site Characteristics

Approach Movement	Eastbound			Westbound		
	L	T	R	L	T	R
Volume	20	124	25	46	296	42
6Thrus Left Lane	50			50		

Approach Movement	Northbound			Southbound		
	L	T	R	L	T	R
Volume	66	99	26	12	65	42
6Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	0.90		0.90		0.90		0.90	
Flow Rate	186		425		211		131	
% Heavy Vehicles	2		2		2		2	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.1		0.1		0.3		0.1	
Prop. Right-Turns	0.1		0.1		0.1		0.4	
Prop. Heavy Vehicle								
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	5.61		5.61		5.61		5.61	

Departure Headway and Service Time

nd, initial value	3.20		3.20		3.20		3.20	
x, initial	0.17		0.38		0.19		0.12	
nd, final value	5.61		5.61		5.61		5.61	
x, final value	0.29		0.62		0.34		0.21	
Move-up time, m	2.0		2.0		2.0		2.0	
Service Time	3.6		3.6		3.6		3.6	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	436		660		461		381	
Delay	10.89		16.46		11.92		10.46	
LOS	B		C		B		B	
Approach: Delay	10.89		16.46		11.92		10.46	
LOS	B		C		B		B	
Intersection Delay	13.54							
Intersection LOS	B							

ALL-WAY STOP CONTROL ANALYSIS

General Information			Site Information	
Analyst	SA		Intersection	2
Agency/Co.	TGI		Jurisdiction	Washington DC
Date Performed	5/2/2005		Analysis Year	2005
Analysis Time Period	Existing PM			

Project ID 2005-0323

East/West Street: L Street

North/South Street: 3rd Street

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
	L	T	R	L	T	R
Volume	13	279	67	17	46	32
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
	L	T	R	L	T	R
Volume	10	91	18	14	67	9
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	0.87		0.72		0.90		0.80	
Flow Rate	411		130		132		111	
% Heavy Vehicles	2		2		2		2	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.0		0.2		0.1		0.2	
Prop. Right-Turns	0.2		0.3		0.2		0.1	
Prop. Heavy Vehicle								
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	4.70		4.70		4.70		4.70	

Departure Headway and Service Time

hd, initial value	3.20		3.20		3.20		3.20	
x, initial	0.37		0.12		0.12		0.10	
hd, final value	4.70		4.70		4.70		4.70	
x, final value	0.54		0.18		0.20		0.17	
Move-up time, m	2.0		2.0		2.0		2.0	
Service Time	2.7		2.7		2.7		2.7	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	661		380		382		361	
Delay	13.01		9.10		9.72		9.58	
LOS	B		A		A		A	
Approach: Delay	13.01		9.10		9.72		9.58	
LOS	B		A		A		A	
Intersection Delay	11.32							
Intersection LOS	B							

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ALL-WAY STOP CONTROL ANALYSIS

General Information			Site Information	
Analyst	SA		Intersection	2
Agency/Co.	TGI		Jurisdiction	Washington DC
Date Performed	5/2/2005		Analysis Year	2005
Analysis Time Period	Background PM			
Project ID 2005-0323				
East/West Street: L Street			North/South Street: 3rd Street	

Volume Adjustments and Site Characteristics

Approach Movement	Eastbound			Westbound		
	L	T	R	L	T	R
Volume	13	306	67	33	68	39
Thrus Left Lane	50			50		
Approach Movement	Northbound			Southbound		
	L	T	R	L	T	R
Volume	10	100	33	25	85	9
Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	0.90		0.90		0.90		0.90	
Flow Rate	428		154		158		131	
Heavy Vehicles	2		2		2		2	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.0		0.2		0.1		0.2	
Prop. Right-Turns	0.2		0.3		0.2		0.1	
Prop. Heavy Vehicle								
LT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
RT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
HV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
adj, computed	4.92		4.92		4.92		4.92	

Departure Headway and Service Time

nd, initial value	3.20		3.20		3.20		3.20	
, initial	0.38		0.14		0.14		0.12	
d, final value	4.92		4.92		4.92		4.92	
, final value	0.59		0.23		0.24		0.21	
Move-up time, m	2.0		2.0		2.0		2.0	
Service Time	2.9		2.9		2.9		2.9	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	678		404		408		381	
Delay	14.64		9.83		10.36		10.25	
LOS	B		A		B		B	
Approach: Delay	14.64		9.83		10.36		10.25	
LOS	B		A		B		B	
Intersection Delay	12.35							
Intersection LOS	B							

ALL-WAY STOP CONTROL ANALYSIS

General Information		Site Information	
Analyst	SA	Intersection	2
Agency/Co.	TGI	Jurisdiction	Washington DC
Date Performed	5/4/2005	Analysis Year	2005
Analysis Time Period	Total PM		

Project ID 2005-0323

East/West Street: L Street

North/South Street: 3rd Street

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume	47	369	71	33	96	39
%Thrus Left Lane	50			50		
Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume	17	100	33	25	85	22
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LTR		LTR		LTR		LTR	
PHF	0.90		0.90		0.90		0.90	
Flow Rate	540		185		165		145	
% Heavy Vehicles	2		2		2		2	
No. Lanes	1		1		1		1	
Geometry Group	1		1		1		1	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.1		0.2		0.1		0.2	
Prop. Right-Turns	0.1		0.2		0.2		0.2	
Prop. Heavy Vehicle								
hLT-adj	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	5.18		5.18		5.18		5.18	

Departure Headway and Service Time

hd, initial value	3.20		3.20		3.20		3.20	
px, initial	0.48		0.16		0.15		0.13	
hd, final value	5.18		5.18		5.18		5.18	
px, final value	0.78		0.29		0.28		0.25	
Move-up time, m	2.0		2.0		2.0		2.0	
Service Time	3.2		3.2		3.2		3.2	

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	681		435		415		395	
Delay	23.79		11.03		11.50		11.29	
LOS	C		B		B		B	
Approach: Delay	23.79		11.03		11.50		11.29	
LOS	C		B		B		B	
Intersection Delay	17.80							
Intersection LOS	C							

ALL-WAY STOP CONTROL ANALYSIS

General Information		Site Information	
Analyst	SA	Intersection	3
Agency/Co.	TGI	Jurisdiction	Washington DC
Date Performed	5/2/2005	Analysis Year	2005
Analysis Time Period	Existing AM		

Project ID 2005-0323

East/West Street: L Street

North/South Street: 2nd Street

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume	2	109	54	37	224	15
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume	96	39	4	3	30	3
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LTR		LTR		LTR	
PHF	0.98	0.98	0.73		0.89		0.82	
Flow Rate	57	111	376		154		42	
% Heavy Vehicles	2	2	2		2		2	
No. Lanes	2		1		1		1	
Geometry Group	5		4a		2		2	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.0	0.0	0.1		0.7		0.1	
Prop. Right-Turns	0.0	0.5	0.1		0.0		0.1	
Prop. Heavy Vehicle								
hLT-adj	0.5	0.5	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	5.50	5.50	5.50		5.50		5.50	

Departure Headway and Service Time

hd, initial value	3.20	3.20	3.20		3.20		3.20	
x, initial	0.05	0.10	0.33		0.14		0.04	
hd, final value	5.50	5.50	5.50		5.50		5.50	
x, final value	0.09	0.16	0.50		0.23		0.06	
Move-up time, m	2.3		2.0		2.0		2.0	
Service Time	3.2	2.8	3.2	2.8	3.2	2.8	3.2	2.8

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	307	361	626		404		292	
Delay	8.73	8.80	12.61		10.11		8.90	
LOS	A	A	B		B		A	
Approach: Delay	8.77		12.61		10.11		8.90	
LOS	A		B		B		A	
Intersection Delay	11.01							
Intersection LOS	B							

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ALL-WAY STOP CONTROL ANALYSIS

General Information			Site Information		
Analyst	SA		Intersection	3	
Agency/Co.	TGI		Jurisdiction	Washington DC	
Date Performed	5/2/2005		Analysis Year	2005	
Analysis Time Period	Background AM				

Project ID 2005-0323

East/West Street: L Street

North/South Street: 2nd Street

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
	L	T	R	L	T	R
Volume	2	119	56	37	256	15
Thrus Left Lane	50			50		
Approach	Northbound			Southbound		
	L	T	R	L	T	R
Volume	105	57	4	3	34	3
Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LTR		LTR		LTR	
PHF	0.98	0.98	0.88		0.89		0.88	
Flow Rate	62	118	349		185		44	
Heavy Vehicles	2	2	2		2		2	
No. Lanes	2		1		1		1	
Geometry Group	5		4a		2		2	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.0	0.0	0.1		0.6		0.1	
Prop. Right-Turns	0.0	0.5	0.0		0.0		0.1	
Prop. Heavy Vehicle								
LT-adj	0.5	0.5	0.2	0.2	0.2	0.2	0.2	0.2
RT-adj	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
HV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
adj, computed	5.59	5.59	5.59		5.59		5.59	

Departure Headway and Service Time

hd, initial value	3.20	3.20	3.20		3.20		3.20	
hd, initial	0.06	0.10	0.31		0.16		0.04	
hd, final value	5.59	5.59	5.59		5.59		5.59	
hd, final value	0.10	0.17	0.48		0.28		0.07	
Move-up time, m	2.3		2.0		2.0		2.0	
Service Time	3.3	2.9	3.3	2.9	3.3	2.9	3.3	2.9

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	312	368	599		435		294	
Delay	8.89	9.02	12.41		10.53		8.97	
LOS	A	A	B		B		A	
Approach: Delay	8.97		12.41		10.53		8.97	
LOS	A		B		B		A	
Intersection Delay	10.94							
Intersection LOS	B							

ALL-WAY STOP CONTROL ANALYSIS

General Information			Site Information	
Analyst	SA		Intersection	3
Agency/Co.	TGI		Jurisdiction	Washington DC
Date Performed	5/4/2005		Analysis Year	2005
Analysis Time Period	Total AM			

Project ID 2005-0323

East/West Street: L Street

North/South Street: 2nd Street

Volume Adjustments and Site Characteristics

Approach Movement	Eastbound			Westbound		
	L	T	R	L	T	R
Volume	2	184	56	37	283	20
%Thrus Left Lane	50			50		
Approach Movement	Northbound			Southbound		
	L	T	R	L	T	R
Volume	105	65	4	15	56	3
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LTR		LTR		LTR	
PHF	0.98	0.98	0.88		0.89		0.88	
Flow Rate	95	150	385		194		83	
% Heavy Vehicles	2	2	2		2		2	
No. Lanes	2		1		1		1	
Geometry Group	5		4a		2		2	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.0	0.0	0.1		0.6		0.2	
Prop. Right-Turns	0.0	0.4	0.1		0.0		0.0	
Prop. Heavy Vehicle								
hLT-adj	0.5	0.5	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	5.89	5.89	5.89		5.89		5.89	

Departure Headway and Service Time

hd, initial value	3.20	3.20	3.20		3.20		3.20	
x, initial	0.08	0.13	0.34		0.17		0.07	
hd, final value	5.89	5.89	5.89		5.89		5.89	
x, final value	0.16	0.23	0.56		0.32		0.14	
Move-up time, m	2.3		2.0		2.0		2.0	
Service Time	3.6	3.3	3.6	3.3	3.6	3.3	3.6	3.3

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	345	400	635		444		333	
Delay	9.68	10.02	14.77		11.51		9.98	
LOS	A	B	B		B		A	
Approach: Delay	9.89		14.77		11.51		9.98	
LOS	A		B		B		A	
Intersection Delay	12.32							
Intersection LOS	B							

ALL-WAY STOP CONTROL ANALYSIS

General Information			Site Information	
Analyst	SA		Intersection	3
Agency/Co.	TGI		Jurisdiction	Washington DC
Date Performed	5/2/2005		Analysis Year	2005
Analysis Time Period	Existing PM			

Project ID 2005-0323

East/West Street: L Street

North/South Street: 2nd Street

Volume Adjustments and Site Characteristics

Approach	Eastbound			Westbound		
Movement	L	T	R	L	T	R
Volume	8	357	89	18	60	5
%Thrus Left Lane	50			50		

Approach	Northbound			Southbound		
Movement	L	T	R	L	T	R
Volume	42	66	10	10	18	4
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LTR		LTR		LTR	
PHF	0.98	0.98	0.86		0.70		0.80	
Flow Rate	189	272	94		168		38	
% Heavy Vehicles	2	2	2		2		2	
No. Lanes	2		1		1		1	
Geometry Group	5		4a		2		2	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.0	0.0	0.2		0.4		0.3	
Prop. Right-Turns	0.0	0.3	0.1		0.1		0.1	
Prop. Heavy Vehicle								
hLT-adj	0.5	0.5	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	5.24	5.24	5.24		5.24		5.24	

Departure Headway and Service Time

hd, initial value	3.20	3.20	3.20		3.20		3.20	
x, initial	0.17	0.24	0.08		0.15		0.03	
hd, final value	5.24	5.24	5.24		5.24		5.24	
x, final value	0.28	0.38	0.13		0.25		0.06	
Move-up time, m	2.3		2.0		2.0		2.0	
Service Time	2.9	2.7	2.9	2.7	2.9	2.7	2.9	2.7

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	439	522	344		418		288	
Delay	9.91	10.66	8.95		9.97		8.81	
LOS	A	B	A		A		A	
Approach: Delay	10.36		8.95		9.97		8.81	
LOS	B		A		A		A	
Intersection Delay	10.02							
Intersection LOS	B							

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ALL-WAY STOP CONTROL ANALYSIS

General Information				Site Information	
Analyst	SA			Intersection	3
Agency/Co.	TGI			Jurisdiction	Washington DC
Date Performed	5/2/2005			Analysis Year	2005
Analysis Time Period	Background PM				

Project ID 2005-0323

East/West Street: L Street

North/South Street: 2nd Street

Volume Adjustments and Site Characteristics

Approach Movement	Eastbound			Westbound		
	L	T	R	L	T	R
Volume	8	384	98	18	82	5
%Thrus Left Lane	50			50		
Approach Movement	Northbound			Southbound		
	L	T	R	L	T	R
Volume	46	75	10	10	36	4
%Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LTR		LTR		LTR	
PHF	0.98	0.98	0.88		0.88		0.88	
Flow Rate	203	294	118		148		55	
% Heavy Vehicles	2	2	2		2		2	
No. Lanes	2		1		1		1	
Geometry Group	5		4a		2		2	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.0	0.0	0.2		0.4		0.2	
Prop. Right-Turns	0.0	0.3	0.0		0.1		0.1	
Prop. Heavy Vehicle								
hLT-adj	0.5	0.5	0.2	0.2	0.2	0.2	0.2	0.2
hRT-adj	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
hHV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	5.27	5.27	5.27		5.27		5.27	

Departure Headway and Service Time

hd, initial value	3.20	3.20	3.20		3.20		3.20	
x, initial	0.18	0.26	0.10		0.13		0.05	
hd, final value	5.27	5.27	5.27		5.27		5.27	
x, final value	0.30	0.41	0.17		0.22		0.09	
Move-up time, m	2.3		2.0		2.0		2.0	
Service Time	3.0	2.7	3.0	2.7	3.0	2.7	3.0	2.7

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	453	544	368		398		305	
Delay	10.19	11.15	9.26		9.98		9.09	
LOS	B	B	A		A		A	
Approach: Delay	10.75		9.26		9.98		9.09	
LOS	B		A		A		A	
Intersection Delay	10.29							
Intersection LOS	B							

ALL-WAY STOP CONTROL ANALYSIS

General Information

Analyst	SA
Agency/Co.	TGI
Date Performed	5/4/2005
Analysis Time Period	Total PM

Site Information

Intersection	3
Jurisdiction	Washington DC
Analysis Year	2005

Project ID 2005-0323

East/West Street: L Street

North/South Street: 2nd Street

Volume Adjustments and Site Characteristics

Approach Movement	Eastbound			Westbound		
	L	T	R	L	T	R
Volume	8	412	98	18	145	14
Thrus Left Lane	50			50		
Approach Movement	Northbound			Southbound		
	L	T	R	L	T	R
Volume	46	95	10	16	43	4
Thrus Left Lane	50			50		

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Configuration	LT	TR	LTR		LTR		LTR	
HF	0.98	0.98	0.88		0.88		0.88	
Flow Rate	218	309	199		170		70	
Heavy Vehicles	2	2	2		2		2	
No. Lanes	2		1		1		1	
Geometry Group	5		4a		2		2	
Duration, T	0.25							

Saturation Headway Adjustment Worksheet

Prop. Left-Turns	0.0	0.0	0.1		0.3		0.3	
Prop. Right-Turns	0.0	0.3	0.1		0.1		0.1	
Prop. Heavy Vehicle								
hLT-adj	0.5	0.5	0.2	0.2	0.2	0.2	0.2	0.2
RT-adj	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6
HV-adj	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7
hadj, computed	5.53	5.53	5.53		5.53		5.53	

Departure Headway and Service Time

d, initial value	3.20	3.20	3.20		3.20		3.20	
h, initial	0.19	0.27	0.18		0.15		0.06	
d, final value	5.53	5.53	5.53		5.53		5.53	
h, final value	0.34	0.45	0.30		0.27		0.12	
Move-up time, m	2.3		2.0		2.0		2.0	
Service Time	3.2	3.0	3.2	3.0	3.2	3.0	3.2	3.0

Capacity and Level of Service

	Eastbound		Westbound		Northbound		Southbound	
	L1	L2	L1	L2	L1	L2	L1	L2
Capacity	468	559	449		420		320	
Delay	11.00	12.31	10.66		10.92		9.78	
LOS	B	B	B		B		A	
Approach: Delay	11.77		10.66		10.92		9.78	
LOS	B		B		B		A	
Intersection Delay	11.25							
Intersection LOS	B							

SHORT REPORT

General Information				Site Information			
Analyst	SA			Intersection	4		
Agency or Co.	TGI			Area Type	All other areas		
Date Performed	5/2/2005			Jurisdiction	Washington, DC		
Time Period	Existing AM			Analysis Year	2005		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Lane group		LTR			LTR			LTR			LTR	
Volume (vph)	6	204	37	28	1136	57	198	85	14	4	99	32
% Heavy veh	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.91	0.91	0.91	0.96	0.96	0.96	0.89	0.89	0.89	0.84	0.84	0.84
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0			2.0			2.0			2.0	
Ext. eff. green		3.0			3.0			3.0			3.0	
Arrival type		3			3			3			3	
Unit Extension		3.0			3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width		10.0			10.0			16.0			16.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	Y	N	0	Y
Parking/hr									5			5
Bus stops/hr		0			0			0			0	
Unit Extension		3.0			3.0			3.0			3.0	
Phasing	EW Perm	02	03	04	NB Only	NS Perm	07	08				
Timing	G = 60.0	G =	G =	G =	G = 17.0	G = 31.0	G =	G =				
	Y = 5	Y =	Y =	Y =	Y =	Y = 4	Y =	Y =				
Duration of Analysis (hrs) = 0.25								Cycle Length C = 120.0				

Lane Group Capacity, Control Delay, and LOS Determination												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Adj. flow rate		272			1271			334			161	
Lane group cap.		1546			1604			548			481	
v/c ratio		0.18			0.79			0.61			0.33	
Green ratio		0.51			0.51			0.43			0.27	
Unif. delay d1		15.9			24.3			26.2			35.4	
Delay factor k		0.11			0.34			0.20			0.11	
Increm. delay d2		0.1			2.8			2.0			0.4	
PF factor		1.000			1.000			1.000			1.000	
Control delay		16.0			27.1			28.2			35.8	
Lane group LOS		B			C			C			D	
Apprch. delay		16.0			27.1			28.2			35.8	
Approach LOS		B			C			C			D	
Intersec. delay		26.5			Intersection LOS						C	

SHORT REPORT

General Information						Site Information					
Analyst	SA					Intersection	4				
Agency or Co.	TGI					Area Type	All other areas				
Date Performed	5/2/2005					Jurisdiction	Washington, DC				
Time Period	Background AM					Analysis Year	2005				

Volume and Timing Input

			EB			WB			NB			SB			
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
Num. of Lanes			0	2	0	0	2	0	0	1	0	0	1	0	
Lane group				LTR			LTR			LTR			LTR		
Volume (vph)			6	204	39	28	1136	57	207	112	14	4	105	32	
% Heavy veh			0	0	0	0	0	0	0	0	0	0	0	0	
PHF			0.91	0.91	0.91	0.96	0.96	0.96	0.90	0.90	0.90	0.90	0.90	0.90	
Actuated (P/A)			A	A	A	A	A	A	A	A	A	A	A	A	
Startup lost time				2.0			2.0			2.0			2.0		
Ext. eff. green				3.0			3.0			3.0			3.0		
Arrival type				3			3			3			3		
Unit Extension				3.0			3.0			3.0			3.0		
Ped/Bike/RTOR Volume			0		0	0		0	0		0	0		0	
Lane Width				10.0			10.0			16.0			16.0		
Parking/Grade/Parking			N	0	N	N	0	N	N	0	Y	N	0	Y	
Parking/hr											5			5	
Bus stops/hr				0			0			0			0		
Unit Extension				3.0			3.0			3.0			3.0		
Phasing	EW Perm	02	03		04		NB Only		NS Perm		07		08		
Timing	G = 60.0	G =	G =		G =		G = 20.0		G = 28.0		G =		G =		
	Y = 5	Y =	Y =		Y =		Y =		Y = 4		Y =		Y =		
Duration of Analysis (hrs) = 0.25										Cycle Length C = 120.0					

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		274			1271			370			157	
Lane group cap.		1545			1604			566			437	
v/c ratio		0.18			0.79			0.65			0.36	
Green ratio		0.51			0.51			0.43			0.24	
Unif. delay d1		15.9			24.3			26.9			37.8	
Delay factor k		0.11			0.34			0.23			0.11	
Increment. delay d2		0.1			2.8			2.7			0.5	
PF factor		1.000			1.000			1.000			1.000	
Control delay		16.0			27.1			29.6			38.3	
Lane group LOS		B			C			C			D	
Approch. delay		16.0			27.1			29.6			38.3	
Approach LOS		B			C			C			D	
Intersec. delay		26.9			Intersection LOS						C	

SHORT REPORT

General Information						Site Information					
Analyst	SA					Intersection	4				
Agency or Co.	TGI					Area Type	All other areas				
Date Performed	5/4/2005					Jurisdiction	Washington, DC				
Time Period	Total AM					Analysis Year	2005				

Volume and Timing Input

	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Lane group	DefL	TR			LTR			LTR			LTR	
Volume (vph)	93	204	39	28	1136	119	207	199	14	21	142	70
% Heavy veh	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.91	0.91	0.91	0.96	0.96	0.96	0.90	0.90	0.90	0.90	0.90	0.90
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Start-up lost time	2.0	2.0			2.0			2.0			2.0	
Ext. eff. green	3.0	3.0			3.0			3.0			3.0	
Arrival type	3	3			3			3			3	
Unit Extension	3.0	3.0			3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width	14.0	14.0			10.0			16.0			16.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	Y	N	0	Y
Parking/hr									5			5
Bus-stops/hr	0	0			0			0			0	
Unit Extension	3.0	3.0			3.0			3.0			3.0	

Timing	EW Perm	02	03	04	NB Only	NS Perm	07	08
Timing	G = 43.0	G =	G =	G =	G = 15.0	G = 14.0	G =	G =
	Y = 5	Y =	Y =	Y =	Y =	Y = 4	Y =	Y =
Duration of Analysis (hrs) = 0.25						Cycle Length C = 84.0		

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
dj. flow rate	102	267			1336			467			259	
ane group cap.	111	1036			1646			490			301	
/c ratio	0.92	0.26			0.81			0.95			0.86	
reen ratio	0.52	0.52			0.52			0.39			0.18	
Unif. delay d1	18.4	11.0			16.6			24.7			33.5	
elay factor k	0.44	0.11			0.35			0.46			0.39	
Increment. delay d2	60.4	0.1			3.2			29.1			21.5	
F factor	1.000	1.000			1.000			1.000			1.000	
ontrol delay	78.8	11.1			19.8			53.8			55.0	
ane group LOS	E	B			B			D			D	
pprch. delay	29.8			19.8			53.8			55.0		
Approach LOS	C			B			D			D		
ntersec. delay	31.6			Intersection LOS						C		

SHORT REPORT

General Information				Site Information			
Analyst	SA			Intersection	4		
Agency or Co.	TGI			Area Type	All other areas		
Date Performed	5/3/2005			Jurisdiction	Washington, DC		
Time Period	Existing PM			Analysis Year	2005		

Volume and Timing Input												
	EB			WB			NB			SB		
	LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Lane group		LTR			LTR			LTR			LTR	
Volume (vph)	12	975	90	19	264	10	90	123	42	27	75	28
% Heavy veh	0	0	0	0	0	0	0	0	0	0	0	0
PHF	0.92	0.92	0.92	0.82	0.82	0.82	0.86	0.86	0.86	0.81	0.81	0.81
Actuated (P/A)	A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time		2.0			2.0			2.0			2.0	
Ext. eff. green		3.0			3.0			3.0			3.0	
Arrival type		3			3			3			3	
Unit Extension		3.0			3.0			3.0			3.0	
Ped/Bike/RTOR Volume	0		0	0		0	0		0	0		0
Lane Width		10.0			10.0			16.0			16.0	
Parking/Grade/Parking	N	0	N	N	0	N	N	0	Y	N	0	Y
Parking/hr									5			5
Bus stops/hr		0			0			0			0	
Unit Extension		3.0			3.0			3.0			3.0	
Phasing	EW Perm	02	03	04	NB Only	NS Perm	07	08				
Timing	G = 68.0	G =	G =	G =	G = 10.0	G = 30.0	G =	G =				
	Y = 5	Y =	Y =	Y =	Y =	Y = 4	Y =	Y =				
Duration of Analysis (hrs) = 0.25						Cycle Length C = 120.0						

Lane Group Capacity, Control Delay, and LOS Determination												
	EB			WB			NB			SB		
Adj. flow rate		1171			357			297			161	
Lane group cap.		1820			1629			516			422	
v/c ratio		0.64			0.22			0.58			0.38	
Green ratio		0.57			0.57			0.37			0.26	
Unif. delay d1		17.2			12.4			30.5			36.6	
Delay factor k		0.22			0.11			0.17			0.11	
Increm. delay d2		0.8			0.1			1.6			0.6	
PF factor		1.000			1.000			1.000			1.000	
Control delay		18.0			12.5			32.1			37.2	
Lane group LOS		B			B			C			D	
Apprch. delay	18.0			12.5			32.1			37.2		
Approach LOS	B			B			C			D		
Intersec. delay	20.7			Intersection LOS						C		

SHORT REPORT

General Information

Analyst SA
 Agency or Co. TGI
 Date Performed 5/3/2005
 Time Period Background PM

Site Information

Intersection 4
 Area Type All other areas
 Jurisdiction Washington, DC
 Analysis Year 2005

Volume and Timing Input

			EB			WB			NB			SB		
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT
Num. of Lanes			0	2	0	0	2	0	0	1	0	0	1	0
Lane group				LTR			LTR			LTR			LTR	
Volume (vph)			12	975	99	19	264	10	94	136	42	27	102	28
% Heavy veh			0	0	0	0	0	0	0	0	0	0	0	0
PHF			0.92	0.92	0.92	0.82	0.82	0.82	0.86	0.86	0.86	0.81	0.81	0.81
Actuated (P/A)			A	A	A	A	A	A	A	A	A	A	A	A
Startup lost time				2.0			2.0			2.0			2.0	
Ext. eff. green				3.0			3.0			3.0			3.0	
Arrival type				3			3			3			3	
Unit Extension				3.0			3.0			3.0			3.0	
Ped/Bike/RTOR Volume			0		0	0		0	0		0	0		0
Lane Width				10.0			10.0			16.0			16.0	
Parking/Grade/Parking			N	0	N	N	0	N	N	0	Y	N	0	Y
Parking/hr											5			5
Bus stops/hr				0			0			0			0	
Unit Extension				3.0			3.0			3.0			3.0	
Phasing	EW Perm	02	03		04		NB Only		NS Perm		07		08	
Timing	G = 68.0	G =	G =		G =		G = 10.0		G = 30.0		G =		G =	
	Y = 5	Y =	Y =		Y =		Y =		Y = 4		Y =		Y =	
Duration of Analysis (hrs) = 0.25									Cycle Length C = 120.0					

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1181			357			316			194	
Lane group cap.		1818			1627			493			430	
v/c ratio		0.65			0.22			0.64			0.45	
Green ratio		0.57			0.57			0.37			0.26	
Unif. delay d1		17.3			12.4			31.5			37.4	
Delay factor k		0.23			0.11			0.22			0.11	
Increm. delay d2		0.8			0.1			2.8			0.8	
PF factor		1.000			1.000			1.000			1.000	
Control delay		18.1			12.5			34.3			38.1	
Lane group LOS		B			B			C			D	
Approch. delay		18.1			12.5			34.3			38.1	
Approach LOS		B			B			C			D	
Intersec. delay		21.5			Intersection LOS						C	

SHORT REPORT

General Information						Site Information					
Analyst	SA					Intersection	4				
Agency or Co.	TGI					Area Type	All other areas				
Date Performed	5/4/2005					Jurisdiction	Washington, DC				
Time Period	Total PM					Analysis Year	2005				

Volume and Timing Input

			EB			WB			NB			SB			
			LT	TH	RT	LT	TH	RT	LT	TH	RT	LT	TH	RT	
Num. of Lanes			0	2	0	0	2	0	0	1	0	0	1	0	
Lane group				LTR			LTR			LTR			LTR		
Volume (vph)			50	975	99	19	264	29	94	173	42	86	187	114	
% Heavy veh			0	0	0	0	0	0	0	0	0	0	0	0	
PHF			0.92	0.92	0.92	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	
Actuated (P/A)			A	A	A	A	A	A	A	A	A	A	A	A	
Startup lost time				2.0			2.0			2.0			2.0		
Ext. eff. green				3.0			3.0			3.0			3.0		
Arrival type				3			3			3			3		
Unit Extension				3.0			3.0			3.0			3.0		
Ped/Bike/RTOR Volume			0		0	0		0	0		0	0		0	
Lane Width				14.0			10.0			16.0			16.0		
Parking/Grade/Parking			N	0	N	N	0	N	N	0	Y	N	0	Y	
Parking/hr											5			5	
Bus stops/hr				0			0			0			0		
Unit Extension				3.0			3.0			3.0			3.0		
Phasing	EW Perm	02	03		04		SB Only		NS Perm		07		08		
Timing	G = 63.0	G =	G =		G =		G = 10.0		G = 35.0		G =		G =		
	Y = 5	Y =	Y =		Y =		Y =		Y = 4		Y =		Y =		
Duration of Analysis (hrs) = 0.25										Cycle Length C = 120.0					

Lane Group Capacity, Control Delay, and LOS Determination

	EB			WB			NB			SB		
Adj. flow rate		1222			346			343			431	
Lane group cap.		1857			1504			427			582	
v/c ratio		0.66			0.23			0.80			0.74	
Green ratio		0.53			0.53			0.30			0.41	
Unif. delay d1		20.1			14.9			38.7			30.1	
Delay factor k		0.23			0.11			0.35			0.30	
Increm. delay d2		0.9			0.1			10.6			5.0	
PF factor		1.000			1.000			1.000			1.000	
Control delay		21.0			15.0			49.4			35.1	
Lane group LOS		C			B			D			D	
Approch. delay		21.0			15.0			49.4			35.1	
Approach LOS		C			B			D			D	
Intersec. delay		26.9		Intersection LOS							C	

TWO-WAY STOP CONTROL SUMMARY

General Information			Site Information	
Analyst	SA		Intersection	5
Agency/Co.	TGI		Jurisdiction	Washington, DC
Date Performed	5/4/2005		Analysis Year	2005
Analysis Time Period	Total AM			

Project Description 2005-0323

East/West Street: L Street

North/South Street: Site Access

Intersection Orientation: East-West

Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street		Eastbound			Westbound		
Movement		1	2	3	4	5	6
		L	T	R	L	T	R
Volume (veh/h)		0	124	79	101	307	0
Peak-hour factor, PHF		0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate (veh/h)		0	140	89	114	348	0
Proportion of heavy vehicles, P_{HV}		0	—	—	0	—	—
Median type		Undivided					
RT Channelized?				0			0
Lanes		0	1	0	0	1	0
Configuration				TR	LT		
Upstream Signal			0			0	
Minor Street		Northbound			Southbound		
Movement		7	8	9	10	11	12
		L	T	R	L	T	R
Volume (veh/h)		33	0	50	0	0	0
Peak-hour factor, PHF		0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate (veh/h)		37	0	56	0	0	0
Proportion of heavy vehicles, P_{HV}		0	0	0	0	0	0
Percent grade (%)		0			0		
Flared approach			N			N	
Storage			0			0	
RT Channelized?				0			0
Lanes		0	0	0	0	0	0
Configuration			LR				

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
Volume, v (vph)		114		93				
Capacity, c_m (vph)		1351		541				
v/c ratio		0.08		0.17				
Queue length (95%)		0.28		0.62				
Control Delay (s/veh)		7.9		13.0				
LOS		A		B				
Approach delay (s/veh)	—	—	13.0					
Approach LOS	—	—	B					

TWO-WAY STOP CONTROL SUMMARY

General Information			Site Information	
Analyst	SA		Intersection	5
Agency/Co.	TGI		Jurisdiction	Washington, DC
Date Performed	5/4/2005		Analysis Year	2005
Analysis Time Period	Total PM			

Project Description 2005-0323

East/West Street: L Street

North/South Street: Site Access

Intersection Orientation: East-West

Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)	0	396	42	53	100	0
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate (veh/h)	0	450	47	60	113	0
Proportion of heavy vehicles, P_{HV}	0	—	—	0	—	—
Median type	Undivided					
RT Channelized?			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	
Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	77	0	110	0	0	0
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate (veh/h)	87	0	125	0	0	0
Proportion of heavy vehicles, P_{HV}	0	0	0	0	0	0
Percent grade (%)	0			0		
Flared approach		N			N	
Storage		0			0	
RT Channelized?			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Control Delay, Queue Length, Level of Service

Approach	EB	WB	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
Volume, v (vph)		60		212				
Capacity, c_m (vph)		1077		484				
v/c ratio		0.06		0.44				
Queue length (95%)		0.18		2.20				
Control Delay (s/veh)		8.5		18.1				
LOS		A		C				
Approach delay (s/veh)	—	—	18.1					
Approach LOS	—	—	C					

TWO-WAY STOP CONTROL SUMMARY

General Information			Site Information		
Analyst	SA		Intersection	6	
Agency/Co.	TGI		Jurisdiction	Washington, DC	
Date Performed	5/4/2005		Analysis Year	2005	
Analysis Time Period	Total AM				
Project Description 2005-0323					
East/West Street: Site Access			North/South Street: 2nd Street		
Intersection Orientation: North-South			Study Period (hrs): 0.25		

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	173	238	23	140	0
Peak-Hour Factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate, HFR	0	196	270	26	159	0
Percent Heavy Vehicles	0	—	—	0	—	—
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0		0		
Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	93	0	9	0	0	0
Peak-Hour Factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate, HFR	105	0	10	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
Q (vph)		26		115				
C (m) (vph)		1106		507				
Q/c		0.02		0.23				
95% queue length		0.07		0.86				
Control Delay		8.3		14.2				
LOS		A		B				
Approach Delay	—	—	14.2					
Approach LOS	—	—	B					

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TWO-WAY STOP CONTROL SUMMARY

General Information			Site Information	
Analyst	SA		Intersection	6
Agency/Co.	TGI		Jurisdiction	Washington, DC
Date Performed	5/4/2005		Analysis Year	2005
Analysis Time Period	Total PM			
Project Description 2005-0323				
East/West Street: Site Access			North/South Street: 2nd Street	
Intersection Orientation: North-South			Study Period (hrs): 0.25	

Vehicle Volumes and Adjustments

Major Street	Northbound			Southbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume	0	153	99	10	154	0
Peak-Hour Factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate, HFR	0	173	112	11	175	0
Percent Heavy Vehicles	0	—	—	0	—	—
Median Type	Undivided					
Left Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0		0		
Minor Street	Westbound			Eastbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume	233	0	25	0	0	0
Peak-Hour Factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Hourly Flow Rate, HFR	264	0	28	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	0
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
Left Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	NB	SB	Westbound			Eastbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (vph)		11		292				
C (m) (vph)		1289		600				
v/c		0.01		0.49				
95% queue length		0.03		2.66				
Control Delay		7.8		16.6				
LOS		A		C				
Approach Delay	—	—		16.6				
Approach LOS	—	—		C				

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