

Appendix A
Existing Traffic Counts

ZONING COMMISSION
CASE No. 05-32
EXHIBIT No. 11A

Wells & Associates, LLC

McLean, Virginia

Existing Traffic Count

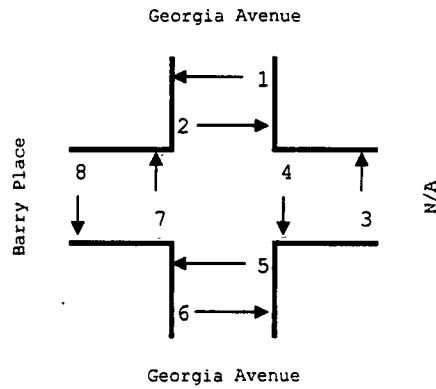
PROJECT: Atlantic Plumbing		DATE 11/2/2005		SOUTHBOUND ROAD: Georgia Avenue																	
W & A JOB NO 2799		DAY Wednesday		NORTHBOUND ROAD: Georgia Avenue																	
INTERSECTION: Georgia Avenue and Barry Place		WEATHER Clear		WESTBOUND ROAD N/A																	
LOCATION: Washington DC		COUNTED BY Roy		EASTBOUND ROAD Barry Place																	
		INPUTED BY CFP																			
Time Period	Turning Movements																		Total	PHF	Time Period
	Southbound Georgia Avenue				Westbound N/A				Northbound Georgia Avenue				Eastbound Barry Place				North & South	East & West			
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:00-6:15	6	96	0	102	0	0	0	0	0	62	2	64	5	0	2	7	166	7	173		6:00-6:15
6:15-6:30	3	134	0	137	0	0	0	0	0	59	8	67	5	0	6	11	204	11	215		6:15-6:30
6:30-6:45	5	165	0	170	0	0	0	0	0	88	3	91	7	0	3	10	261	10	271		6:30-6:45
6:45-7:00	9	149	0	158	0	0	0	0	0	94	9	103	9	0	4	13	261	13	274		6:45-7:00
7:00-7:15	13	200	0	213	0	0	0	0	0	107	10	117	10	0	4	14	330	14	344		7:00-7:15
7:15-7:30	20	211	0	231	0	0	0	0	0	99	15	114	6	0	11	17	345	17	362		7:15-7:30
7:30-7:45	16	228	0	244	0	0	0	0	0	113	18	131	7	0	15	22	375	22	397		7:30-7:45
7:45-8:00	40	282	0	322	0	0	0	0	0	120	16	136	17	0	19	36	458	36	494		7:45-8:00
8:00-8:15	27	213	0	240	0	0	0	0	0	104	26	130	23	0	24	47	370	47	417		8:00-8:15
8:15-8:30	34	242	0	276	0	0	0	0	0	127	22	149	24	0	22	46	425	46	471		8:15-8:30
8:30-8:45	30	286	0	316	0	0	0	0	0	127	24	151	24	0	22	46	467	46	513		8:30-8:45
8:45-9:00	21	287	0	308	0	0	0	0	0	123	17	140	17	0	19	36	448	36	484		8:45-9:00
3 Hour Totals	224	2,493	0	2,717	0	0	0	0	0	1,223	170	1,393	154	0	151	305	4,110	305	4,415		
1 Hour Totals																					
6:00-7:00	23	544	0	567	0	0	0	0	0	303	22	325	26	0	15	41	892	41	933	0.85	6:00-7:00
6:15-7:15	30	648	0	678	0	0	0	0	0	348	30	378	31	0	17	48	1,056	48	1,104	0.80	6:15-7:15
6:30-7:30	47	725	0	772	0	0	0	0	0	388	37	425	32	0	22	54	1,197	54	1,251	0.86	6:30-7:30
6:45-7:45	58	788	0	846	0	0	0	0	0	413	52	465	32	0	34	66	1,311	66	1,377	0.87	6:45-7:45
7:00-8:00	89	921	0	1,010	0	0	0	0	0	439	59	498	40	0	49	89	1,508	89	1,597	0.81	7:00-8:00
7:15-8:15	103	934	0	1,037	0	0	0	0	0	436	75	511	53	0	69	122	1,548	122	1,670	0.85	7:15-8:15
7:30-8:30	117	965	0	1,082	0	0	0	0	0	464	82	546	71	0	80	151	1,628	151	1,779	0.90	7:30-8:30
7:45-8:45	131	1,023	0	1,154	0	0	0	0	0	478	88	566	88	0	87	175	1,720	175	1,895	0.92	7:45-8:45
8:00-9:00	112	1,028	0	1,140	0	0	0	0	0	481	89	570	88	0	87	175	1,710	175	1,885	0.92	8:00-9:00
AM Peak 7:45-8:45	131	1,023	0	1,154	0	0	0	0	0	478	88	566	88	0	87	175	1,720	175	1,895	0.92	AM Peak 7:45-8:45
PM																					
4:00-4:15	23	150	0	173	0	0	0	0	0	178	12	190	17	0	42	59	363	59	422		4:00-4:15
4:15-4:30	12	162	0	174	0	0	0	0	0	130	15	145	25	0	33	58	319	58	377		4:15-4:30
4:30-4:45	16	124	0	140	0	0	0	0	0	196	15	211	20	0	35	55	351	55	406		4:30-4:45
4:45-5:00	16	162	0	178	0	0	0	0	0	178	12	190	21	0	38	59	368	59	427		4:45-5:00
5:00-5:15	22	180	0	202	0	0	0	0	0	171	13	184	27	0	41	68	386	68	454		5:00-5:15
5:15-5:30	19	150	0	169	0	0	0	0	0	208	16	224	22	0	43	65	393	65	458		5:15-5:30
5:30-5:45	13	171	0	184	0	0	0	0	0	185	13	198	19	0	32	51	382	51	433		5:30-5:45
5:45-6:00	13	165	0	178	0	0	0	0	0	177	19	196	27	0	37	64	374	64	438		5:45-6:00
6:00-6:15	11	172	0	183	0	0	0	0	0	165	17	182	18	0	22	40	365	40	405		6:00-6:15
6:15-6:30	12	133	0	145	0	0	0	0	0	150	19	169	16	0	49	65	314	65	379		6:15-6:30
6:30-6:45	19	145	0	164	0	0	0	0	0	170	17	187	30	0	29	59	351	59	410		6:30-6:45
6:45-7:00	24	148	0	172	0	0	0	0	0	126	18	144	17	0	20	37	316	37	353		6:45-7:00
3 Hour Totals	200	1,862	0	2,062	0	0	0	0	0	2,034	186	2,220	259	0	421	680	4,282	680	4,962		
1 Hour Totals																					
4:00-5:00	67	598	0	665	0	0	0	0	0	682	54	736	83	0	148	231	1,401	231	1,632	0.96	4:00-5:00
4:15-5:15	66	628	0	694	0	0	0	0	0	675	55	730	93	0	147	240	1,424	240	1,664	0.92	4:15-5:15
4:30-5:30	73	616	0	689	0	0	0	0	0	753	56	809	90	0	157	247	1,498	247	1,745	0.95	4:30-5:30
4:45-5:45	70	663	0	733	0	0	0	0	0	742	54	796	89	0	154	243	1,529	243	1,772	0.97	4:45-5:45
5:00-6:00	67	666	0	733	0	0	0	0	0	741	61	802	95	0	153	248	1,535	248	1,783	0.97	5:00-6:00
5:15-6:15	56	658	0	714	0	0	0	0	0	735	65	800	86	0	134	220	1,514	220	1,734	0.95	5:15-6:15
5:30-6:30	49	641	0	690	0	0	0	0	0	677	68	745	80	0	140	220	1,435	220	1,655	0.94	5:30-6:30
5:45-6:45	55	615	0	670	0	0	0	0	0	662	72	734	91	0	137	228	1,404	228	1,632	0.93	5:45-6:45
6:00-7:00	66	598	0	664	0	0	0	0	0	611	71	682	81	0	120	201	1,346	201	1,547	0.94	6:00-7:00
PM Peak 5:00-6:00	67	666	0	733	0	0	0	0	0	741	61	802	95	0	153	248	1,535	248	1,783	0.97	PM Peak 5:00-6:00

Wells & Associates, LLC
McLean, Virginia

Pedestrian Volume Survey



Project Name: Atlantic Plumbing
Project Number: 2799
Location: Washington DC
Intersection: Georgia Avenue and Barry Pl
Weather: Clear
Date: 11/2/2005
Surveyor: Milton
Hours: Mileage:



TIME	Movement							
	1	2	3	4	5	6	7	8
AM								
6:00-6:15	2	1	6	2	1	2	1	1
6:15-6:30	3	1	5	4	3	3	2	0
6:30-6:45	4	3	6	5	1	4	0	1
6:45-7:00	3	2	7	7	3	5	2	3
7:00-7:15	9	2	2	0	3	4	3	2
7:15-7:30	2	3	1	7	5	5	4	3
7:30-7:45	10	5	10	3	7	11	5	3
7:45-8:00	11	9	41	9	9	1	40	4
8:00-8:15	12	12	43	15	8	48	31	2
8:15-8:30	8	8	31	10	6	34	15	1
8:30-8:45	9	13	25	3	11	18	10	2
8:45-9:00	8	5	28	9	10	38	12	4
PM								
4:00-4:15	14	15	35	91	71	14	8	19
4:15-4:30	11	10	26	49	45	24	5	20
4:30-4:45	28	8	55	70	71	21	3	28
4:45-5:00	12	5	36	57	54	28	4	32
5:00-5:15	20	8	42	62	60	20	5	30
5:15-5:30	15	10	25	49	44	19	6	18
5:30-5:45	20	8	28	36	25	15	3	15
5:45-6:00	10	6	20	41	37	22	2	12
6:00-6:15	8	10	27	39	51	28	1	5
6:15-6:30	10	7	25	31	40	23	2	8
6:30-6:45	5	7	23	40	28	20	0	5
6:45-7:00	13	6	28	23	22	40	1	10

Wells & Associates, LLC

McLean, Virginia

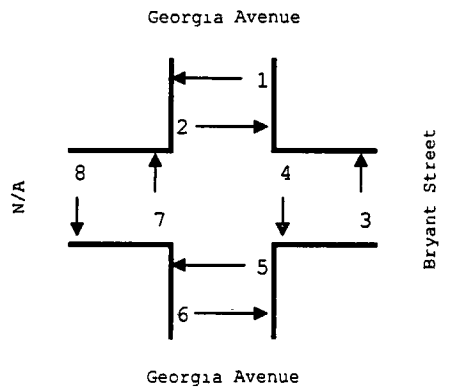
Existing Traffic Count

PROJECT		Atlantic Plumbing		DATE		11/2/2005		SOUTHBOUND ROAD		Georgia Avenue											
W & A JOB NO		2799		DAY		Wednesday		NORTHBOUND ROAD		Georgia Avenue											
INTERSECTION		Georgia Avenue and Bryant Street		WEATHER		Clear		WESTBOUND ROAD		Bryant Street											
LOCATION		Washington DC		COUNTED BY		Roy		EASTBOUND ROAD		Parking Lot											
				INPUTED BY		CFP															
Time Period	Turning Movements																		Total	PHF	Time Period
	Southbound Georgia Avenue				Westbound Bryant Street				Northbound Georgia Avenue				Eastbound Parking Lot				North & South	East & West			
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:00-6:15	0	85	12	97	0	0	0	0	2	52	0	54	0	0	0	0	151	0	151		6:00-6:15
6:15-6:30	0	148	7	155	0	0	0	0	5	67	0	72	0	0	0	0	227	0	227		6:15-6:30
6:30-6:45	0	151	25	176	0	0	0	0	12	89	0	101	0	0	0	0	277	0	277		6:30-6:45
6:45-7:00	0	176	21	197	0	0	0	0	15	106	0	121	0	0	0	0	318	0	318		6:45-7:00
7:00-7:15	0	162	19	181	0	0	0	0	10	114	0	124	0	0	0	0	305	0	305		7:00-7:15
7:15-7:30	0	240	30	270	0	0	0	0	17	111	0	128	0	0	0	0	398	0	398		7:15-7:30
7:30-7:45	0	215	31	246	0	0	0	0	5	132	0	137	0	0	0	0	383	0	383		7:30-7:45
7:45-8:00	0	286	56	342	0	0	0	0	28	146	0	174	0	0	0	0	516	0	516		7:45-8:00
8:00-8:15	0	283	98	381	0	0	0	0	21	139	0	160	0	0	0	0	541	0	541		8:00-8:15
8:15-8:30	0	271	80	351	0	0	0	0	21	151	0	172	0	0	0	0	523	0	523		8:15-8:30
8:30-8:45	0	261	50	311	0	0	0	0	18	160	0	178	0	0	0	0	489	0	489		8:30-8:45
8:45-9:00	0	342	56	398	0	0	0	0	14	155	0	169	0	0	0	0	567	0	567		8:45-9:00
3 Hour Totals	0	2,620	485	3,105	0	0	0	0	168	1,422	0	1,590	0	0	0	0	4,695	0	4,695		
1 Hour Totals																					
6:00-7:00	0	560	65	625	0	0	0	0	34	314	0	348	0	0	0	0	973	0	973	0.76	6:00-7:00
6:15-7:15	0	637	72	709	0	0	0	0	42	376	0	418	0	0	0	0	1,127	0	1,127	0.89	6:15-7:15
6:30-7:30	0	729	95	824	0	0	0	0	54	420	0	474	0	0	0	0	1,298	0	1,298	0.82	6:30-7:30
6:45-7:45	0	793	101	894	0	0	0	0	47	463	0	510	0	0	0	0	1,404	0	1,404	0.88	6:45-7:45
7:00-8:00	0	903	136	1,039	0	0	0	0	60	503	0	563	0	0	0	0	1,602	0	1,602	0.78	7:00-8:00
7:15-8:15	0	1,024	215	1,239	0	0	0	0	71	528	0	599	0	0	0	0	1,838	0	1,838	0.85	7:15-8:15
7:30-8:30	0	1,055	265	1,320	0	0	0	0	75	568	0	643	0	0	0	0	1,963	0	1,963	0.91	7:30-8:30
7:45-8:45	0	1,101	284	1,385	0	0	0	0	88	596	0	684	0	0	0	0	2,069	0	2,069	0.96	7:45-8:45
8:00-9:00	0	1,157	284	1,441	0	0	0	0	74	605	0	679	0	0	0	0	2,120	0	2,120	0.93	8:00-9:00
AM Peak 8:00-9:00																					
8:00-9:00	0	1,157	284	1,441	0	0	0	0	74	605	0	679	0	0	0	0	2,120	0	2,120	0.93	AM Peak 8:00-9:00
PM																					
4:00-4:15	50	114	53	217	0	0	0	0	18	176	0	194	0	0	0	0	411	0	411		4:00-4:15
4:15-4:30	28	123	30	181	0	0	0	0	11	145	0	156	0	0	0	0	337	0	337		4:15-4:30
4:30-4:45	0	159	65	224	0	0	0	0	17	221	0	238	0	0	0	0	462	0	462		4:30-4:45
4:45-5:00	47	202	43	292	0	0	0	0	19	184	0	203	0	0	0	0	495	0	495		4:45-5:00
5:00-5:15	44	211	66	321	0	0	0	0	27	201	0	228	0	0	0	0	549	0	549		5:00-5:15
5:15-5:30	3	220	98	321	0	0	0	0	25	235	0	260	0	0	0	0	581	0	581		5:15-5:30
5:30-5:45	0	231	68	299	0	0	0	0	25	199	0	224	0	0	0	0	523	0	523		5:30-5:45
5:45-6:00	4	203	108	315	0	0	0	0	22	200	0	222	0	0	0	0	537	0	537		5:45-6:00
6:00-6:15	31	221	108	360	0	0	0	0	30	210	0	240	0	0	0	0	600	0	600		6:00-6:15
6:15-6:30	0	212	86	298	0	0	0	0	14	173	0	187	0	0	0	0	485	0	485		6:15-6:30
6:30-6:45	0	223	130	353	0	0	0	0	18	218	0	236	0	0	0	0	589	0	589		6:30-6:45
6:45-7:00	12	175	82	269	0	0	0	0	14	203	0	217	0	0	0	0	486	0	486		6:45-7:00
3 Hour Totals	219	2,294	937	3,450	0	0	0	0	240	2,365	0	2,605	0	0	0	0	6,055	0	6,055		
1 Hour Totals																					
4:00-5:00	125	598	191	914	0	0	0	0	65	726	0	791	0	0	0	0	1,705	0	1,705	0.86	4:00-5:00
4:15-5:15	119	695	204	1,018	0	0	0	0	74	751	0	825	0	0	0	0	1,843	0	1,843	0.84	4:15-5:15
4:30-5:30	94	792	272	1,158	0	0	0	0	88	841	0	929	0	0	0	0	2,087	0	2,087	0.90	4:30-5:30
4:45-5:45	94	864	275	1,233	0	0	0	0	96	819	0	915	0	0	0	0	2,148	0	2,148	0.92	4:45-5:45
5:00-6:00	51	865	340	1,256	0	0	0	0	99	835	0	934	0	0	0	0	2,190	0	2,190	0.94	5:00-6:00
5:15-6:15	38	875	382	1,295	0	0	0	0	102	844	0	946	0	0	0	0	2,241	0	2,241	0.93	5:15-6:15
5:30-6:30	35	867	370	1,272	0	0	0	0	91	782	0	873	0	0	0	0	2,145	0	2,145	0.89	5:30-6:30
5:45-6:45	35	859	432	1,326	0	0	0	0	84	801	0	885	0	0	0	0	2,211	0	2,211	0.92	5:45-6:45
6:00-7:00	43	831	406	1,280	0	0	0	0	76	804	0	880	0	0	0	0	2,160	0	2,160	0.90	6:00-7:00
PM Peak 5:15-6:15																					
5:15-6:15	38	875	382	1,295	0	0	0	0	102	844	0	946	0	0	0	0	2,241	0	2,241	0.93	PM Peak 5:15-6:15

Wells & Associates, LLC
McLean, Virginia

Pedestrian Volume Survey

Project Name: Atlantic Plumbing
Project Number: 2799
Location: Washington DC
Intersection: Georgia Avenue and Bryant St
Weather: Clear
Date: 11/2/2005
Surveyor:
Hours: Mileage:



TIME	Movement							
	1	2	3	4	5	6	7	8
AM								
6:00-6:15	1	0	0	0	0	0	0	0
6:15-6:30	0	0	0	2	0	0	2	0
6:30-6:45	0	1	2	0	2	1	0	0
6:45-7:00	0	0	1	1	2	2	0	0
7:00-7:15	0	0	1	3	0	2	1	4
7:15-7:30	0	2	0	1	0	2	1	0
7:30-7:45	1	0	5	2	3	4	0	3
7:45-8:00	0	0	3	2	2	6	0	6
8:00-8:15	0	0	3	4	2	6	1	3
8:15-8:30	0	0	3	8	4	4	4	5
8:30-8:45	1	1	3	4	0	3	0	0
8:45-9:00	0	2	0	6	0	6	3	0
PM								
4:00-4:15	0	0	3	3	0	5	6	0
4:15-4:30	0	0	3	3	3	6	0	7
4:30-4:45	0	0	4	0	3	0	4	8
4:45-5:00	1	0	0	8	0	7	6	9
5:00-5:15	0	0	2	7	2	7	8	5
5:15-5:30	0	0	4	4	5	2	0	3
5:30-5:45	0	0	3	2	2	4	1	3
5:45-6:00	0	0	3	5	5	5	1	7
6:00-6:15	0	0	2	0	2	3	1	2
6:15-6:30	0	0	8	7	5	2	2	5
6:30-6:45	0	0	0	4	5	5	5	3
6:45-7:00	0	0	1	4	0	5	2	3

Wells & Associates, LLC

McLean, Virginia

Existing Traffic Count

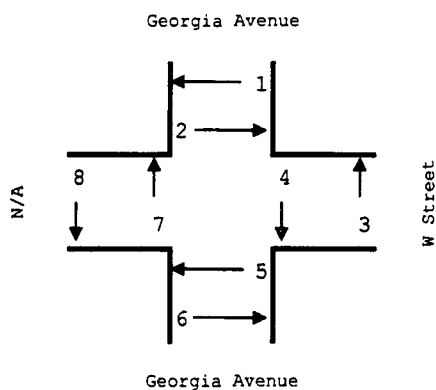
PROJECT: Atlantic Plumbing		DATE 11/2/2005		SOUTHBOUND ROAD		Georgia Avenue															
W & A JOB NO 2799		DAY Wednesday		NORTHBOUND ROAD		Georgia Avenue															
INTERSECTION: Georgia Avenue and W Street		WEATHER: Clear		WESTBOUND ROAD		W Street															
LOCATION: Washington DC		COUNTED BY: Roy		EASTBOUND ROAD		N/A															
		INPUTED BY: CFP																			
Time Period	Turning Movements																		Total	PHF	Time Period
	Southbound Georgia Avenue				Westbound W Street				Northbound Georgia Avenue				Eastbound N/A				North & South	East & West			
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:00-6:15	0	83	0	83	14	0	3	17	0	61	0	61	0	0	0	0	144	17	161		6:00-6:15
6:15-6:30	0	127	0	127	15	0	6	21	0	57	0	57	0	0	0	0	184	21	205		6:15-6:30
6:30-6:45	0	135	0	135	19	0	2	21	0	52	0	52	0	0	0	0	187	21	208		6:30-6:45
6:45-7:00	0	149	0	149	11	0	7	18	0	79	0	79	0	0	0	0	228	18	246		6:45-7:00
7:00-7:15	0	102	0	102	24	0	4	28	0	53	0	53	0	0	0	0	155	28	183		7:00-7:15
7:15-7:30	0	169	0	169	23	0	19	42	0	82	0	82	0	0	0	0	251	42	293		7:15-7:30
7:30-7:45	0	137	0	137	29	0	23	52	0	77	0	77	0	0	0	0	214	52	266		7:30-7:45
7:45-8:00	0	162	0	162	29	0	32	61	0	96	0	96	0	0	0	0	258	61	319		7:45-8:00
8:00-8:15	0	242	0	242	42	0	48	90	0	88	0	88	0	0	0	0	330	90	420		8:00-8:15
8:15-8:30	0	244	0	244	63	0	47	110	0	124	0	124	0	0	0	0	368	110	478		8:15-8:30
8:30-8:45	0	239	0	239	54	0	28	82	0	124	0	124	0	0	0	0	363	82	445		8:30-8:45
8:45-9:00	0	241	0	241	52	0	31	83	0	105	0	105	0	0	0	0	346	83	429		8:45-9:00
3 Hour Totals	0	2,030	0	2,030	375	0	250	625	0	998	0	998	0	0	0	0	3,028	625	3,653		
1 Hour Totals																					
6:00-7:00	0	494	0	494	59	0	18	77	0	249	0	249	0	0	0	0	743	77	820	0.83	6:00-7:00
6:15-7:15	0	513	0	513	69	0	19	88	0	241	0	241	0	0	0	0	754	88	842	0.86	6:15-7:15
6:30-7:30	0	555	0	555	77	0	32	109	0	266	0	266	0	0	0	0	821	109	930	0.79	6:30-7:30
6:45-7:45	0	557	0	557	87	0	53	140	0	291	0	291	0	0	0	0	848	140	988	0.84	6:45-7:45
7:00-8:00	0	570	0	570	105	0	78	183	0	308	0	308	0	0	0	0	878	183	1,061	0.83	7:00-8:00
7:15-8:15	0	710	0	710	123	0	122	245	0	343	0	343	0	0	0	0	1,053	245	1,298	0.77	7:15-8:15
7:30-8:30	0	785	0	785	163	0	150	313	0	385	0	385	0	0	0	0	1,170	313	1,483	0.78	7:30-8:30
7:45-8:45	0	887	0	887	188	0	155	343	0	432	0	432	0	0	0	0	1,319	343	1,662	0.87	7:45-8:45
8:00-9:00	0	966	0	966	211	0	154	365	0	441	0	441	0	0	0	0	1,407	365	1,772	0.93	8:00-9:00
AM Peak 8:00-9:00	0	966	0	966	211	0	154	365	0	441	0	441	0	0	0	0	1,407	365	1,772	0.93	AM Peak 8:00-9:00
PM																					
4:00-4:15	0	138	0	138	47	0	38	85	0	204	0	204	0	0	0	0	342	85	427		4:00-4:15
4:15-4:30	0	125	0	125	43	0	28	71	0	151	0	151	0	0	0	0	276	71	347		4:15-4:30
4:30-4:45	0	135	0	135	50	0	39	89	0	180	0	180	0	0	0	0	315	89	404		4:30-4:45
4:45-5:00	0	151	0	151	35	0	31	66	0	172	0	172	0	0	0	0	323	66	389		4:45-5:00
5:00-5:15	0	147	0	147	56	0	31	87	0	175	0	175	0	0	0	0	322	87	409		5:00-5:15
5:15-5:30	0	138	0	138	51	0	40	91	0	190	0	190	0	0	0	0	328	91	419		5:15-5:30
5:30-5:45	0	140	0	140	47	0	36	83	0	172	0	172	0	0	0	0	312	83	395		5:30-5:45
5:45-6:00	0	149	0	149	44	0	18	62	0	172	0	172	0	0	0	0	321	62	383		5:45-6:00
6:00-6:15	0	147	0	147	57	0	34	91	0	177	0	177	0	0	0	0	324	91	415		6:00-6:15
6:15-6:30	0	113	0	113	39	0	35	74	0	159	0	159	0	0	0	0	272	74	346		6:15-6:30
6:30-6:45	0	139	0	139	47	0	30	77	0	177	0	177	0	0	0	0	316	77	393		6:30-6:45
6:45-7:00	0	154	0	154	40	0	42	82	0	132	0	132	0	0	0	0	286	82	368		6:45-7:00
3 Hour Totals	0	1,676	0	1,676	556	0	402	958	0	2,061	0	2,061	0	0	0	0	3,737	556	4,695		
1 Hour Totals																					
4:00-5:00	0	549	0	549	175	0	136	311	0	707	0	707	0	0	0	0	1,256	311	1,567	0.92	4:00-5:00
4:15-5:15	0	558	0	558	184	0	129	313	0	678	0	678	0	0	0	0	1,236	313	1,549	0.95	4:15-5:15
4:30-5:30	0	571	0	571	192	0	141	333	0	717	0	717	0	0	0	0	1,288	333	1,621	0.97	4:30-5:30
4:45-5:45	0	576	0	576	189	0	138	327	0	709	0	709	0	0	0	0	1,285	327	1,612	0.96	4:45-5:45
5:00-6:00	0	574	0	574	198	0	125	323	0	709	0	709	0	0	0	0	1,283	323	1,606	0.96	5:00-6:00
5:15-6:15	0	574	0	574	199	0	128	327	0	711	0	711	0	0	0	0	1,285	327	1,612	0.96	5:15-6:15
5:30-6:30	0	549	0	549	187	0	123	310	0	680	0	680	0	0	0	0	1,229	310	1,539	0.93	5:30-6:30
5:45-6:45	0	548	0	548	187	0	117	304	0	685	0	685	0	0	0	0	1,233	304	1,537	0.93	5:45-6:45
6:00-7:00	0	553	0	553	183	0	141	324	0	645	0	645	0	0	0	0	1,198	324	1,522	0.92	6:00-7:00
PM Peak 4:30-5:30	0	571	0	571	192	0	141	333	0	717	0	717	0	0	0	0	1,288	333	1,621	0.97	PM Peak 4:30-5:30

Wells & Associates, LLC
McLean, Virginia

Pedestrian Volume Survey



Project Name: Atlantic Plumbing
Project Number: 2799
Location: Washington DC
Intersection: Georgia Avenue and W Street
Weather: Clear
Date: 11/2/2005
Surveyor: Matt and Zack
Hours: Mileage:



TIME	Movement							
	1	2	3	4	5	6	7	8
AM								
6:00-6:15	0	0	1	0	0	0	0	0
6:15-6:30	0	0	3	0	0	0	0	0
6:30-6:45	0	3	3	0	0	0	0	0
6:45-7:00	0	0	3	4	2	0	0	0
7:00-7:15	1	0	1	1	2	0	0	0
7:15-7:30	1	6	16	6	3	2	0	0
7:30-7:45	0	2	12	5	17	0	0	0
7:45-8:00	0	6	17	7	18	0	0	0
8:00-8:15	1	14	22	6	71	1	0	0
8:15-8:30	1	16	37	7	26	1	0	0
8:30-8:45	3	9	33	8	13	1	0	0
8:45-9:00	2	8	30	7	16	1	0	0
PM								
4:00-4:15	10	3	26	15	2	8	0	0
4:15-4:30	9	1	24	17	2	7	0	0
4:30-4:45	11	5	29	20	1	7	0	0
4:45-5:00	16	5	33	30	3	12	0	0
5:00-5:15	16	5	36	35	3	26	0	0
5:15-5:30	11	2	33	29	4	13	0	0
5:30-5:45	2	2	24	18	0	7	0	0
5:45-6:00	8	2	17	15	0	1	0	0
6:00-6:15	4	0	22	19	3	7	0	0
6:15-6:30	3	1	11	15	0	3	0	0
6:30-6:45	5	0	25	22	1	2	0	0
6:45-7:00	5	0	9	22	0	1	0	0

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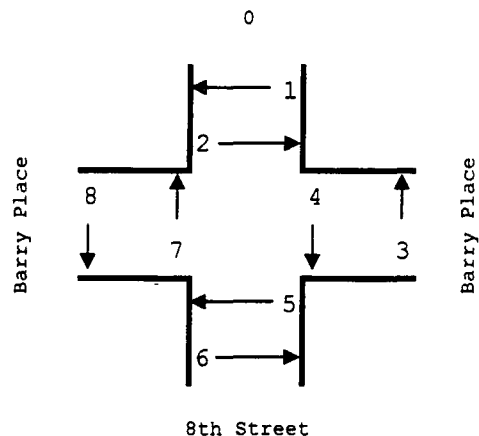
Existing Traffic Count

PROJECT		Atlantic Plumbing Site				DATE		4/12/2005		SOUTHBOUND ROAD.				0							
W & A JOB NO.		2799				DAY		Tuesday		NORTHBOUND ROAD.				8th Street							
INTERSECTION		8th Street & Barry Place				WEATHER		Clear		WESTBOUND ROAD				Barry Place							
LOCATION		Washington DC				COUNTED BY		Roy		EASTBOUND ROAD				Barry Place							
						INPUTED BY		agan													
Time Period	Turning Movements																Total	PHF	Time Period		
	Southbound 0				Westbound Barry Place				Northbound 8th Street				Eastbound Barry Place							North & South	East & West
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:00-6:15	0	0	0	0	0	8	2	10	1	0	1	2	5	10	0	15	2	25	27		6:00-6:15
6:15-6:30	0	0	0	0	0	8	3	11	1	0	2	3	9	5	0	14	3	25	28		6:15-6:30
6:30-6:45	0	0	0	0	0	15	3	18	0	0	2	2	4	11	0	15	2	33	35		6:30-6:45
6:45-7:00	0	0	0	0	0	14	3	17	2	0	6	8	9	13	0	22	8	39	47		6:45-7:00
7:00-7:15	0	0	0	0	0	18	4	22	0	0	5	5	13	11	0	24	5	46	51		7:00-7:15
7:15-7:30	0	0	0	0	0	22	3	25	0	0	5	5	17	15	0	32	5	57	62		7:15-7:30
7:30-7:45	0	0	0	0	0	16	6	22	7	0	12	19	7	17	0	24	19	46	65		7:30-7:45
7:45-8:00	0	0	0	0	0	26	8	34	9	0	11	20	18	23	0	41	20	75	95		7:45-8:00
8:00-8:15	0	0	0	0	0	32	12	44	8	0	14	22	22	25	0	47	22	91	113		8:00-8:15
8:15-8:30	0	0	0	0	0	38	17	55	11	0	10	21	14	39	0	53	21	108	129		8:15-8:30
8:30-8:45	0	0	0	0	0	39	10	49	9	0	12	21	24	45	0	69	21	118	139		8:30-8:45
8:45-9:00	0	0	0	0	0	33	14	47	6	0	5	11	23	41	0	64	11	111	122		8:45-9:00
3 Hour Totals	0	0	0	0	0	269	85	354	54	0	85	139	165	255	0	420	139	774	913		
1 Hour Totals																					
6:00-7:00	0	0	0	0	0	45	11	56	4	0	11	15	27	39	0	66	15	122	137	0.73	6:00-7:00
6:15-7:15	0	0	0	0	0	55	13	68	3	0	15	18	35	40	0	75	18	143	161	0.79	6:15-7:15
6:30-7:30	0	0	0	0	0	69	13	82	2	0	18	20	43	50	0	93	20	175	195	0.79	6:30-7:30
6:45-7:45	0	0	0	0	0	70	16	86	9	0	28	37	46	56	0	102	37	188	225	0.87	6:45-7:45
7:00-8:00	0	0	0	0	0	82	21	103	16	0	33	49	55	66	0	121	49	224	273	0.72	7:00-8:00
7:15-8:15	0	0	0	0	0	96	29	125	24	0	42	66	64	80	0	144	66	269	335	0.74	7:15-8:15
7:30-8:30	0	0	0	0	0	112	43	155	35	0	47	82	61	104	0	165	82	320	402	0.78	7:30-8:30
7:45-8:45	0	0	0	0	0	135	47	182	37	0	47	84	78	132	0	210	84	392	476	0.86	7:45-8:45
8:00-9:00	0	0	0	0	0	142	53	195	34	0	41	75	83	150	0	233	75	428	503	0.90	8:00-9:00
AM Peak 8:00-9:00																					
0	0	0	0	0	0	142	53	195	34	0	41	75	83	150	0	233	75	428	503	0.90	AM Peak 8:00-9:00
PM																					
4:00-4:15	0	0	0	0	0	11	7	18	12	0	13	25	16	39	0	55	25	73	98		4:00-4:15
4:15-4:30	0	0	0	0	0	13	8	21	17	0	5	22	20	42	0	62	22	83	105		4:15-4:30
4:30-4:45	0	0	0	0	0	29	9	38	9	0	16	25	19	43	0	62	25	100	125		4:30-4:45
4:45-5:00	0	0	0	0	0	30	6	36	14	0	15	29	28	41	0	69	29	105	134		4:45-5:00
5:00-5:15	0	0	0	0	0	29	11	40	27	0	17	44	23	54	0	77	44	117	161		5:00-5:15
5:15-5:30	0	0	0	0	0	32	6	38	20	0	19	39	14	45	0	59	39	97	136		5:15-5:30
5:30-5:45	0	0	0	0	0	21	6	27	23	0	19	42	22	51	0	73	42	100	142		5:30-5:45
5:45-6:00	0	0	0	0	0	30	7	37	21	0	11	32	19	45	0	64	32	101	133		5:45-6:00
6:00-6:15	0	0	0	0	0	24	10	34	13	0	17	30	20	54	0	74	30	108	138		6:00-6:15
6:15-6:30	0	0	0	0	0	36	7	43	21	0	13	34	13	46	0	59	34	102	136		6:15-6:30
6:30-6:45	0	0	0	0	0	24	7	31	22	0	7	29	14	49	0	63	29	94	123		6:30-6:45
6:45-7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		6:45-7:00
3 Hour Totals	0	0	0	0	0	279	84	363	199	0	152	351	208	509	0	717	351	1,080	1,431		
1 Hour Totals																					
4:00-5:00	0	0	0	0	0	83	30	113	52	0	49	101	83	185	0	248	101	361	462	0.86	4:00-5:00
4:15-5:15	0	0	0	0	0	101	34	135	67	0	53	120	90	180	0	270	120	405	525	0.82	4:15-5:15
4:30-5:30	0	0	0	0	0	120	32	152	70	0	67	137	84	183	0	267	137	419	556	0.86	4:30-5:30
4:45-5:45	0	0	0	0	0	112	29	141	84	0	70	154	87	191	0	278	154	419	573	0.89	4:45-5:45
5:00-6:00	0	0	0	0	0	112	30	142	91	0	66	157	78	195	0	273	157	415	572	0.89	5:00-6:00
5:15-6:15	0	0	0	0	0	107	29	136	77	0	66	143	75	195	0	270	143	406	549	0.97	5:15-6:15
5:30-6:30	0	0	0	0	0	111	30	141	78	0	60	138	74	196	0	270	138	411	549	0.97	5:30-6:30
5:45-6:45	0	0	0	0	0	114	31	145	77	0	48	125	66	194	0	260	125	405	530	0.96	5:45-6:45
6:00-7:00	0	0	0	0	0	84	24	108	56	0	37	93	47	149	0	196	93	304	397	0.72	6:00-7:00
PM Peak 4:45-5:45																					
0	0	0	0	0	0	112	29	141	84	0	70	154	87	191	0	278	154	419	573	0.89	PM Peak 4:45-5:45

Pedestrian Volume Survey



Project Name: Atlantic Plumbing Site
Project Number: 2799
Location: Washington, DC
Intersection: 8th Street & Barry Place
Weather: Clear
Date: 4/12/2005
Surveyor: Roy



TIME	Movement							
	1	2	3	4	5	6	7	8
AM								
6:00-6:15	4	2		1	1			
6:15-6:30				1			4	1
6:30-6:45							8	2
6:45-7:00							6	3
7:00-7:15							12	2
7:15-7:30							9	3
7:30-7:45	5	8					6	1
7:45-8:00	1	21					1	1
8:00-8:15	2	32	2	5	5	17		2
8:15-8:30	14	21		6	6	13	1	
8:30-8:45	4	22		1	1	14	4	1
8:45-9:00	7	26	1	2	2	7		
PM								
4:00-4:15	10	7			8	5		
4:15-4:30	11	8			9	9		
4:30-4:45	10	11			19	10		
4:45-5:00	10	10			20	9		
5:00-5:15	12	13		6	11	11		
5:15-5:30	12	21		1	16	13		
5:30-5:45	10	10		4	11	12	4	
5:45-6:00	15	12	1	10	16	12	8	3
6:00-6:15	13	9			12	11		
6:15-6:30	14	11			13	9		
6:30-6:45	13	14	4		19	9		
6:45-7:00	24	13			15	10		

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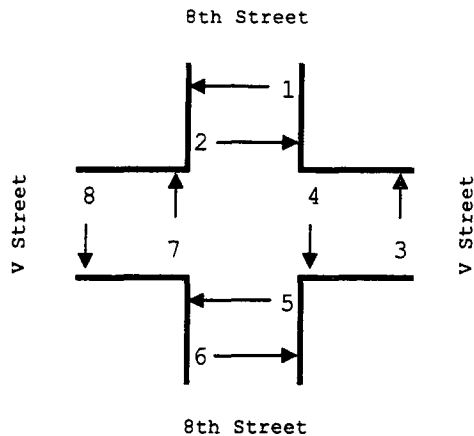
Existing Traffic Count

PROJECT		Atlantic Plumbing Site				DATE		4/12/2005				SOUTHBOUND ROAD				8th Street						
W & A JOB NO		2799				DAY		Tuesday				NORTHBOUND ROAD				8th Street						
INTERSECTION		8th Street & V Street				WEATHER		Clear				WESTBOUND ROAD				V Street						
LOCATION		Washington,DC				COUNTED BY		Rolando				EASTBOUND ROAD				V Street						
						INPUTED BY		agan														
Time Period	Turning Movements																		Total	PHF	Time Period	
	Southbound 8th Street				Westbound V Street				Northbound 8th Street				Eastbound V Street				North & South	East & West				
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total						
AM																						
6:00-6:15	1	1	0	2	1	3	0	4	1	1	0	2	0	0	1	1	4	5	9		6:00-6:15	
6:15-6:30	3	1	2	6	2	6	0	8	2	4	2	8	1	7	1	9	14	17	31		6:15-6:30	
6:30-6:45	2	0	0	2	0	12	0	12	0	4	2	6	0	3	1	4	8	16	24		6:30-6:45	
6:45-7:00	0	0	0	0	5	8	0	13	1	8	2	11	1	10	2	13	11	26	37		6:45-7:00	
7:00-7:15	2	1	1	4	1	9	2	12	2	10	3	15	1	14	3	18	19	30	49		7:00-7:15	
7:15-7:30	2	3	0	5	1	17	2	20	2	2	2	6	1	10	4	15	11	35	46		7:15-7:30	
7:30-7:45	4	2	1	7	3	26	4	33	3	7	1	11	0	9	8	17	18	50	68		7:30-7:45	
7:45-8:00	5	0	2	7	3	28	2	33	2	7	7	16	4	10	9	23	23	56	79		7:45-8:00	
8:00-8:15	4	2	2	8	11	37	0	48	6	8	2	16	3	15	7	25	24	73	97		8:00-8:15	
8:15-8:30	7	2	3	12	5	34	1	40	5	8	4	17	1	10	6	17	29	57	86		8:15-8:30	
8:30-8:45	5	5	5	15	7	33	10	50	6	19	3	28	1	23	5	29	43	79	122		8:30-8:45	
8:45-9:00	1	9	3	13	6	41	5	52	6	9	2	17	2	26	6	34	30	86	116		8:45-9:00	
3 Hour Totals		36	26	19	81	45	254	26	325	36	87	30	153	15	137	53	205	234	530	764		
1 Hour Totals																						
6:00-7:00	6	2	2	10	8	29	0	37	4	17	6	27	2	20	5	27	37	64	101	0.68	6:00-7:00	
6:15-7:15	7	2	3	12	8	35	2	45	5	26	9	40	3	34	7	44	52	89	141	0.72	6:15-7:15	
6:30-7:30	6	4	1	11	7	46	4	57	5	24	9	38	3	37	10	50	49	107	156	0.80	6:30-7:30	
6:45-7:45	8	6	2	16	10	60	8	78	8	27	8	43	3	43	17	63	59	141	200	0.74	6:45-7:45	
7:00-8:00	13	6	4	23	8	80	10	98	9	26	13	48	6	43	24	73	71	171	242	0.77	7:00-8:00	
7:15-8:15	15	7	5	27	18	108	8	134	13	24	12	49	8	44	28	80	76	214	290	0.75	7:15-8:15	
7:30-8:30	20	6	8	34	22	125	7	154	16	30	14	60	8	44	30	82	94	236	330	0.85	7:30-8:30	
7:45-8:45	21	9	12	42	26	132	13	171	19	42	16	77	9	58	27	94	119	265	384	0.79	7:45-8:45	
8:00-9:00	17	18	13	48	29	145	16	190	23	44	11	78	7	74	24	105	126	295	421	0.86	8:00-9:00	
AM Peak 8:00-9:00		17	18	13	48	29	145	16	190	23	44	11	78	7	74	24	105	126	295	421	0.86	AM Peak 8:00-9:00
PM																						
4:00-4:15	11	12	7	30	6	53	5	64	5	5	7	17	4	30	1	35	47	99	146		4:00-4:15	
4:15-4:30	2	5	8	15	3	47	4	54	11	6	12	29	2	24	3	29	44	83	127		4:15-4:30	
4:30-4:45	4	6	4	14	5	33	6	44	12	7	3	22	2	17	2	21	36	65	101		4:30-4:45	
4:45-5:00	10	9	9	28	8	47	5	60	9	10	7	26	1	21	2	24	54	84	138		4:45-5:00	
5:00-5:15	4	8	12	24	2	44	3	49	11	4	5	20	7	20	2	29	44	78	122		5:00-5:15	
5:15-5:30	12	6	4	22	3	51	6	60	9	4	3	16	2	23	1	26	38	86	124		5:15-5:30	
5:30-5:45	6	4	4	14	2	56	5	63	11	9	9	29	0	24	4	28	43	91	134		5:30-5:45	
5:45-6:00	7	7	4	18	3	57	3	63	15	4	5	24	4	21	5	30	42	93	135		5:45-6:00	
6:00-6:15	6	9	6	21	0	35	7	42	11	6	7	24	3	26	1	30	45	72	117		6:00-6:15	
6:15-6:30	10	7	4	21	1	31	5	37	8	8	6	22	1	22	2	25	43	62	105		6:15-6:30	
6:30-6:45	2	4	4	10	0	41	6	47	5	4	5	14	1	15	3	19	24	66	90		6:30-6:45	
6:45-7:00	7	3	5	15	4	26	4	34	5	3	10	18	0	15	1	16	33	50	83		6:45-7:00	
3 Hour Totals		81	80	71	232	37	621	59	617	112	70	79	261	27	258	27	312	493	929	1,422		
1 Hour Totals																						
4:00-5:00	27	32	28	87	22	180	20	222	37	28	29	94	9	92	8	109	181	331	512	0.88	4:00-5:00	
4:15-5:15	20	28	33	81	18	171	18	207	43	27	27	97	12	82	9	103	178	310	488	0.88	4:15-5:15	
4:30-5:30	30	29	29	88	18	175	20	213	41	25	18	84	12	81	7	100	172	313	485	0.88	4:30-5:30	
4:45-5:45	32	27	29	88	15	198	19	232	40	27	24	91	10	88	9	107	179	339	518	0.94	4:45-5:45	
5:00-6:00	29	25	24	78	10	208	17	235	46	21	22	89	13	88	12	113	167	348	515	0.95	5:00-6:00	
5:15-6:15	31	26	18	75	8	199	21	228	46	23	24	93	9	94	11	114	168	342	510	0.94	5:15-6:15	
5:30-6:30	29	27	18	74	6	179	20	205	45	27	27	99	8	93	12	113	173	318	491	0.91	5:30-6:30	
5:45-6:45	25	27	18	70	4	164	21	189	39	22	23	84	9	84	11	104	154	293	447	0.83	5:45-6:45	
6:00-7:00	25	23	19	67	5	133	22	160	29	21	28	78	5	78	7	90	145	250	395	0.84	6:00-7:00	
PM Peak 4:45-5:45		32	27	29	88	15	198	19	232	40	27	24	91	10	88	9	107	179	339	518	0.94	PM Peak 4:45-5:45

Pedestrian Volume Survey



Project Name: Atlantic Plumbing Site
Project Number: 2799
Location: Washington, DC
Intersection: 8th Street & V Street
Weather: Clear
Date: 4/12/2005
Surveyor: Rolando



TIME	Movement							
	1	2	3	4	5	6	7	8
AM								
6:00-6:15	1							
6:15-6:30			1		3	1	5	
6:30-6:45	2	1						
6:45-7:00	1					1		
7:00-7:15	1	1						
7:15-7:30	1		1		1	5		
7:30-7:45	2	2	1		1	1	1	
7:45-8:00	1		1		1		3	1
8:00-8:15	4	2			2	1		
8:15-8:30	2				1	1	4	1
8:30-8:45	4	2		2	1			
8:45-9:00	3	3	1			1	1	
PM								
4:00-4:15	5	1	3		3	1	3	
4:15-4:30	2	5			2	2		
4:30-4:45	4	2		2	2		1	3
4:45-5:00	1		1					
5:00-5:15	8	6	1	1	7	2	4	
5:15-5:30	2	2	1	3	4	5	2	
5:30-5:45	4	1	3		3			3
5:45-6:00	3	8	2		4		1	1
6:00-6:15	2	1	3		2	2	1	1
6:15-6:30	3	3	1		2	3		1
6:30-6:45	4	4	3			2	2	
6:45-7:00	2	2	4		1	1		

Wells & Associates, LLC

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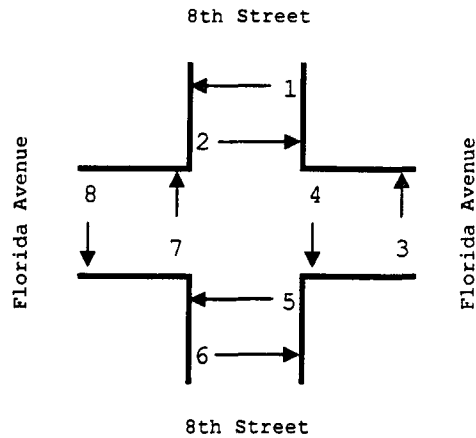
Existing Traffic Count

PROJECT: Atlantic Plumbing Site		DATE: 4/12/2005		SOUTHBOUND ROAD		8th Street															
W & A JOB NO 2799		DAY Tuesday		NORTHBOUND ROAD		8th Street															
INTERSECTION 8th Street & Florida Ave		WEATHER Clear		WESTBOUND ROAD		Florida Avenue															
LOCATION: Washington DC		COUNTED BY Al & Gerni		EASTBOUND ROAD		Florida Avenue															
		INPUTED BY: agan																			
Time Period	Turning Movements																		Total	PHF	Time Period
	Southbound 8th Street				Westbound Florida Avenue				Northbound 8th Street				Eastbound Florida Avenue				North & South	East & West			
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:00-6:15	0	1	0	1	2	98	2	102	0	0	0	0	3	75	1	79	1	181	182	6:00-6:15	
6:15-6:30	0	0	0	0	3	152	5	160	0	0	0	0	5	67	4	76	0	236	236	6:15-6:30	
6:30-6:45	0	0	0	0	3	145	13	161	0	0	1	1	3	69	2	74	1	235	236	6:30-6:45	
6:45-7:00	0	0	0	0	4	170	6	180	0	1	2	3	0	87	6	93	3	273	276	6:45-7:00	
7:00-7:15	1	2	1	4	10	229	4	243	0	0	0	0	0	110	5	115	4	358	362	7:00-7:15	
7:15-7:30	0	0	2	2	4	226	1	231	0	2	2	4	1	111	2	114	6	345	351	7:15-7:30	
7:30-7:45	4	0	0	4	3	247	0	250	1	0	1	2	2	133	4	139	6	389	395	7:30-7:45	
7:45-8:00	0	2	0	2	8	249	0	257	1	2	3	6	2	145	2	149	8	406	414	7:45-8:00	
8:00-8:15	0	2	1	3	7	263	1	271	1	0	3	4	6	152	9	167	7	438	445	8:00-8:15	
8:15-8:30	0	0	1	1	3	261	13	277	0	3	3	6	5	175	7	187	7	464	471	8:15-8:30	
8:30-8:45	6	1	1	8	18	209	3	230	1	6	3	10	9	183	9	201	18	431	449	8:30-8:45	
8:45-9:00	2	6	1	9	8	214	0	222	1	2	0	3	6	176	4	186	12	408	420	8:45-9:00	
3 Hour Totals	13	14	7	34	73	2,463	48	2,584	5	16	18	39	42	1,483	55	1,580	73	4,164	4,237		
1 Hour Totals																					
6:00-7:00	0	1	0	1	12	565	26	603	0	1	3	4	11	298	13	322	5	925	930	0.84 6:00-7:00	
6:15-7:15	1	2	1	4	20	696	28	744	0	1	3	4	8	333	17	358	8	1,102	1,110	0.77 6:15-7:15	
6:30-7:30	1	2	3	6	21	770	24	815	0	3	5	8	4	377	15	396	14	1,211	1,225	0.85 6:30-7:30	
6:45-7:45	5	2	3	10	21	872	11	904	1	3	5	9	3	441	17	461	19	1,365	1,384	0.88 6:45-7:45	
7:00-8:00	5	4	3	12	25	951	5	981	2	4	6	12	5	499	13	517	24	1,498	1,522	0.92 7:00-8:00	
7:15-8:15	4	4	3	11	22	985	2	1,009	3	4	9	16	11	541	17	569	27	1,578	1,605	0.90 7:15-8:15	
7:30-8:30	4	4	2	10	21	1,020	14	1,055	3	5	10	18	15	605	22	642	28	1,697	1,725	0.92 7:30-8:30	
7:45-8:45	6	5	3	14	36	982	17	1,035	3	11	12	26	22	655	27	704	40	1,739	1,779	0.94 7:45-8:45	
8:00-9:00	8	9	4	21	36	947	17	1,000	3	11	9	23	26	686	29	741	44	1,741	1,785	0.95 8:00-9:00	
AM Peak 8:00-9:00																					
8:00-9:00	8	9	4	21	36	947	17	1,000	3	11	9	23	26	686	29	741	44	1,741	1,785	0.95 AM Peak 8:00-9:00	
PM																					
4:00-4:15	9	6	8	23	8	153	7	168	4	2	0	6	9	237	6	252	29	420	449	4:00-4:15	
4:15-4:30	5	6	2	13	8	158	6	172	0	4	4	8	12	191	10	213	21	385	406	4:15-4:30	
4:30-4:45	3	2	3	8	11	180	6	197	1	5	1	7	9	194	9	212	15	409	424	4:30-4:45	
4:45-5:00	6	7	2	15	11	196	4	211	0	9	2	11	3	200	9	212	26	423	449	4:45-5:00	
5:00-5:15	5	8	4	17	4	170	6	180	2	2	3	7	17	239	9	265	24	445	469	5:00-5:15	
5:15-5:30	4	6	2	12	6	189	4	199	3	2	1	6	3	200	0	203	18	402	420	5:15-5:30	
5:30-5:45	3	3	2	8	8	223	5	236	2	5	2	9	6	221	10	237	17	473	490	5:30-5:45	
5:45-6:00	6	6	3	15	4	200	8	212	0	2	1	3	2	198	11	211	18	423	441	5:45-6:00	
6:00-6:15	6	6	1	13	9	210	7	226	0	4	0	4	10	212	9	231	17	457	474	6:00-6:15	
6:15-6:30	3	3	5	11	2	209	4	215	2	4	1	7	2	204	10	216	18	431	449	6:15-6:30	
6:30-6:45	8	1	1	10	5	173	2	180	0	1	6	7	7	185	7	199	17	379	396	6:30-6:45	
6:45-7:00	3	3	2	8	9	216	5	230	0	3	1	4	9	154	3	166	12	396	408	6:45-7:00	
3 Hour Totals	61	67	35	163	85	2,277	64	2,426	14	43	22	79	88	2,435	93	2,617	232	5,043	5,275		
1 Hour Totals																					
4:00-5:00	23	21	15	59	38	687	23	748	5	20	7	32	33	822	34	889	91	1,637	1,728	0.96 4:00-5:00	
4:15-5:15	19	23	11	53	34	704	22	760	3	20	10	33	41	824	37	902	86	1,662	1,748	0.93 4:15-5:15	
4:30-5:30	18	23	11	52	32	735	20	787	6	18	7	31	32	833	27	892	83	1,679	1,762	0.94 4:30-5:30	
4:45-5:45	18	24	10	52	29	778	19	826	7	18	8	33	29	860	28	917	85	1,743	1,828	0.93 4:45-5:45	
5:00-6:00	18	23	11	52	22	782	23	827	7	11	7	25	28	858	30	916	77	1,743	1,820	0.93 5:00-6:00	
5:15-6:15	19	21	8	48	27	822	24	873	5	13	4	22	21	831	30	882	70	1,755	1,825	0.93 5:15-6:15	
5:30-6:30	18	18	11	47	23	842	24	889	4	15	4	23	20	835	40	895	70	1,784	1,854	0.95 5:30-6:30	
5:45-6:45	23	16	10	49	20	792	21	833	2	11	8	21	21	799	37	857	70	1,690	1,760	0.93 5:45-6:45	
6:00-7:00	20	13	9	42	25	808	18	851	2	12	8	22	28	755	29	812	64	1,663	1,727	0.91 6:00-7:00	
PM Peak 5:30-6:30																					
5:30-6:30	18	18	11	47	23	842	24	889	4	15	4	23	20	835	40	895	70	1,784	1,854	0.95 PM Peak 5:30-6:30	

Pedestrian Volume Survey



Project Name: Atlantic Plumbing Site
Project Number: 2799
Location: Washington, DC
Intersection: 5th Street & Florida Ave.
Weather: Clear
Date: 4/12/2005
Surveyor: Al & Gerri



TIME	Movement							
	1	2	3	4	5	6	7	8
AM								
6:00-6:15	1					1		
6:15-6:30	2					2		
6:30-6:45		8			2			
6:45-7:00	3	2			1	2		1
7:00-7:15	2							
7:15-7:30	2					2		
7:30-7:45		5	3				2	
7:45-8:00	3			1	1			2
8:00-8:15	7	1				1		
8:15-8:30	1	3	1	2		3	4	
8:30-8:45	1	1			2	2		
8:45-9:00	1	2	3		2		1	
PM								
4:00-4:15	4	3		1	14	7	2	1
4:15-4:30	5	1	2	1	6	8	1	1
4:30-4:45	5	3		1	3	8	2	2
4:45-5:00	8	1		3	7	1		
5:00-5:15	3	6		1	2	2		1
5:15-5:30	3				5	6	5	2
5:30-5:45	6	2	2	4	4	4	2	
5:45-6:00	5	7		1	10	7		3
6:00-6:15	4	9	4	1	6	5	1	1
6:15-6:30	7		1		2	4		
6:30-6:45	3	3	4		7	4	1	3
6:45-7:00	6	1	1	2	7	2		

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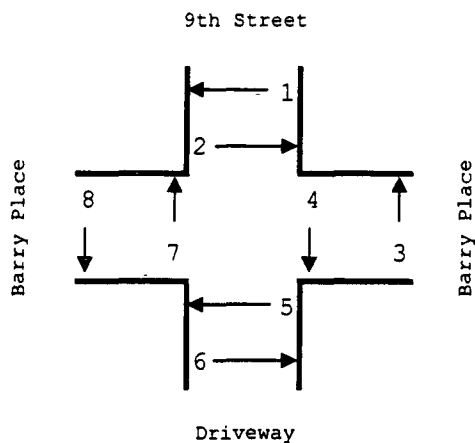
Existing Traffic Count

PROJECT		Atlantic Plumbing Site				DATE		4/12/2005				SOUTHBOUND ROAD				9th Street					
W & A JOB NO		2799				DAY		Tuesday				NORTHBOUND ROAD				Driveway					
INTERSECTION		9th Street & Barry Place				WEATHER		Clear				WESTBOUND ROAD				Barry Place					
LOCATION		Washington DC				COUNTED BY		Admir & Gina				EASTBOUND ROAD				Barry Place					
						INPUTED BY		agan													
Time Period	Turning Movements																Total	PHF	Time Period		
	Southbound 9th Street				Westbound Barry Place				Northbound Driveway				Eastbound Barry Place							North & South	East & West
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:00-6:15	1	0	2	3	0	7	0	7	0	0	0	0	0	9	0	9	3	16	19	6:00-6:15	
6:15-6:30	2	0	2	4	1	5	0	6	0	0	0	0	0	9	0	9	4	15	19	6:15-6:30	
6:30-6:45	0	0	2	2	1	14	0	15	0	0	0	0	0	12	0	12	2	27	29	6:30-6:45	
6:45-7:00	2	0	1	3	4	16	0	20	0	0	0	0	0	19	0	19	3	39	42	6:45-7:00	
7:00-7:15	1	0	0	1	3	19	0	22	0	0	0	0	0	24	1	25	1	47	48	7:00-7:15	
7:15-7:30	5	0	1	6	3	27	0	30	0	0	0	0	0	30	2	32	6	62	68	7:15-7:30	
7:30-7:45	2	0	2	4	5	23	0	28	0	0	0	0	0	24	2	26	4	54	58	7:30-7:45	
7:45-8:00	3	0	6	9	11	30	0	41	0	0	0	0	0	39	2	41	9	82	91	7:45-8:00	
8:00-8:15	2	0	2	4	6	41	0	47	0	0	0	0	0	48	4	52	4	99	103	8:00-8:15	
8:15-8:30	2	0	5	7	14	42	0	56	0	0	0	0	0	46	2	48	7	104	111	8:15-8:30	
8:30-8:45	5	0	5	10	12	42	0	54	0	0	0	0	0	60	4	64	10	118	128	8:30-8:45	
8:45-9:00	2	0	5	7	7	39	0	46	0	0	0	0	0	65	5	70	7	116	123	8:45-9:00	
3 Hour Totals	27	0	33	60	67	305	0	372	0	0	0	0	0	385	22	407	60	779	839		
1 Hour Totals																					
6:00-7:00	5	0	7	12	6	42	0	48	0	0	0	0	0	49	0	49	12	97	109	0.65 6:00-7:00	
6:15-7:15	5	0	5	10	9	54	0	63	0	0	0	0	0	64	1	65	10	128	138	0.72 6:15-7:15	
6:30-7:30	8	0	4	12	11	76	0	87	0	0	0	0	0	85	3	88	12	175	187	0.69 6:30-7:30	
6:45-7:45	10	0	4	14	15	85	0	100	0	0	0	0	0	97	5	102	14	202	216	0.79 6:45-7:45	
7:00-8:00	11	0	9	20	22	99	0	121	0	0	0	0	0	117	7	124	20	245	265	0.73 7:00-8:00	
7:15-8:15	12	0	11	23	25	121	0	146	0	0	0	0	0	141	10	151	23	297	320	0.78 7:15-8:15	
7:30-8:30	9	0	15	24	36	136	0	172	0	0	0	0	0	157	10	167	24	339	363	0.82 7:30-8:30	
7:45-8:45	12	0	18	30	43	155	0	198	0	0	0	0	0	193	12	205	30	403	433	0.85 7:45-8:45	
8:00-9:00	11	0	17	28	39	164	0	203	0	0	0	0	0	219	15	234	28	437	465	0.91 8:00-9:00	
AM Peak 8:00-9:00																					
PM																					
4:00-4:15	8	0	6	14	17	43	0	60	0	0	0	0	0	58	8	66	14	126	140	4:00-4:15	
4:15-4:30	5	0	13	18	15	27	0	42	0	0	0	0	0	47	3	50	18	92	110	4:15-4:30	
4:30-4:45	7	0	5	12	10	40	0	50	0	0	0	0	0	55	1	56	12	106	118	4:30-4:45	
4:45-5:00	8	0	9	17	11	36	0	47	0	0	0	0	0	55	2	57	17	104	121	4:45-5:00	
5:00-5:15	7	0	12	19	20	37	0	57	0	0	0	0	0	61	6	67	19	124	143	5:00-5:15	
5:15-5:30	4	0	5	9	8	44	0	52	0	0	0	0	0	56	3	59	9	111	120	5:15-5:30	
5:30-5:45	5	0	8	13	10	38	0	48	0	0	0	0	0	55	4	59	13	107	120	5:30-5:45	
5:45-6:00	8	0	9	17	14	27	0	41	0	0	0	0	0	67	7	74	17	115	132	5:45-6:00	
6:00-6:15	1	0	7	8	6	34	0	40	0	0	0	0	0	61	9	70	8	110	118	6:00-6:15	
6:15-6:30	5	0	9	14	12	43	0	55	0	0	0	0	0	50	2	52	14	107	121	6:15-6:30	
6:30-6:45	3	0	8	11	6	26	0	32	0	0	0	0	0	53	3	56	11	88	99	6:30-6:45	
6:45-7:00	2	0	12	14	10	28	0	38	0	0	0	0	0	49	8	57	14	95	109	6:45-7:00	
3 Hour Totals	63	0	103	166	139	423	0	562	0	0	0	0	0	667	56	723	166	1,285	1,451		
1 Hour Totals																					
4:00-5:00	28	0	33	61	53	146	0	199	0	0	0	0	0	215	14	229	61	428	489	0.87 4:00-5:00	
4:15-5:15	27	0	39	66	56	140	0	196	0	0	0	0	0	218	12	230	66	426	492	0.86 4:15-5:15	
4:30-5:30	26	0	31	57	49	157	0	206	0	0	0	0	0	227	12	239	57	445	502	0.88 4:30-5:30	
4:45-5:45	24	0	34	58	49	155	0	204	0	0	0	0	0	227	15	242	58	446	504	0.88 4:45-5:45	
5:00-6:00	24	0	34	58	52	146	0	198	0	0	0	0	0	239	20	259	58	457	515	0.90 5:00-6:00	
5:15-6:15	18	0	29	47	38	143	0	181	0	0	0	0	0	239	23	262	47	443	490	0.93 5:15-6:15	
5:30-6:30	19	0	33	52	42	142	0	184	0	0	0	0	0	233	22	255	52	439	491	0.93 5:30-6:30	
5:45-6:45	17	0	33	50	38	130	0	168	0	0	0	0	0	231	21	252	50	420	470	0.89 5:45-6:45	
6:00-7:00	11	0	36	47	34	131	0	165	0	0	0	0	0	213	22	235	47	400	447	0.92 6:00-7:00	
PM Peak 5:00-6:00																					
5:00-6:00																					

Pedestrian Volume Survey



Project Name: Atlantic Plumbing Site
 Project Number: 2799
 Location: Washington, DC
 Intersection: 9th Street & Barry Place
 Weather: Clear
 Date: 4/12/2005
 Surveyor: Admit & Gina



TIME	Movement							
	1	2	3	4	5	6	7	8
AM								
6:00-6:15					2	2		
6:15-6:30				1	3	4		
6:30-6:45					6	3		
6:45-7:00		1	1	2	7	8		
7:00-7:15	1	3	1	1	9	7		1
7:15-7:30	1	4		2	11	12	1	1
7:30-7:45	1	1		2	14	18		2
7:45-8:00	1	1	7	4	22	24		1
8:00-8:15	11	2	7	5	26	26	2	3
8:15-8:30	3	1	6	4	32	33		
8:30-8:45		5	1	4	38	28	3	1
8:45-9:00	2	2	3	4	33	31	1	
PM								
4:00-4:15	1	1	5	7	14	27	3	1
4:15-4:30	5	2	7	6	16	32	6	4
4:30-4:45	2	2	4	4	25	36	1	1
4:45-5:00	2	1	4	7	19	38	4	6
5:00-5:15	2	4	8	7	24	21	6	3
5:15-5:30	3	1	2	5	21	19	3	1
5:30-5:45	2	4	4	8	34	28	6	1
5:45-6:00	7		5	3	25	24	2	1
6:00-6:15	3	1	3	2	28	25	7	5
6:15-6:30	7	4	6	11	32	17	1	
6:30-6:45	2	1	12	6	19	22	3	
6:45-7:00	3	2	8	1	24	16	3	4

Wells & Associates, LLC

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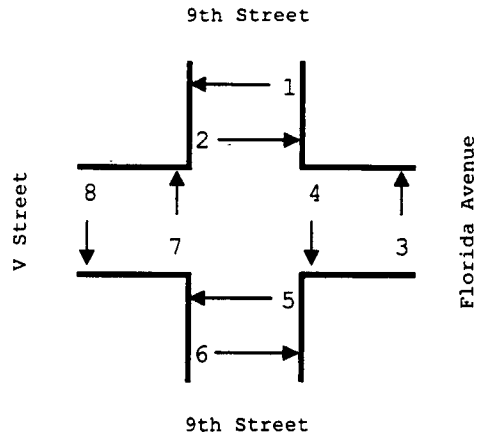
Existing Traffic Count

PROJECT		Atlantic Plumbing Site				DATE: 4/12/2005		SOUTHBOUND ROAD				9th Street									
W & A JOB NO		2799				DAY: Tuesday		NORTHBOUND ROAD				9th Street									
INTERSECTION		9th Street & V Street				WEATHER: Clear		WESTBOUND ROAD				Florida Avenue									
LOCATION		Washington DC				COUNTED BY: Belen & Tulu		EASTBOUND ROAD				V Street									
						INPUTED BY: agan															
Time Period	Turning Movements																Total	PHF	Time Period		
	Southbound 9th Street				Westbound Florida Avenue				Northbound 9th Street				Eastbound V Street							North & South	East & West
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:00-6:15	2	1	0	3	0	3	4	7	0	4	23	27	70	1	1	72	30	79	109	6:00-6:15	
6:15-6:30	0	0	0	0	1	3	4	8	0	2	40	42	76	10	1	87	42	95	137	6:15-6:30	
6:30-6:45	0	1	0	1	3	7	7	17	0	3	22	25	77	4	1	82	26	99	125	6:30-6:45	
6:45-7:00	1	0	1	2	1	4	3	8	1	7	32	40	88	11	1	100	42	108	150	6:45-7:00	
7:00-7:15	0	0	1	1	2	8	4	14	5	5	50	60	147	13	2	162	61	176	237	7:00-7:15	
7:15-7:30	1	1	0	2	3	5	7	15	5	5	64	74	155	7	0	162	76	177	253	7:15-7:30	
7:30-7:45	1	1	1	3	7	9	12	28	5	1	62	68	165	7	2	174	71	202	273	7:30-7:45	
7:45-8:00	0	0	1	1	8	11	11	30	2	4	89	95	226	13	2	241	96	271	367	7:45-8:00	
8:00-8:15	0	0	4	4	10	18	11	39	2	10	81	93	184	12	6	202	97	241	338	8:00-8:15	
8:15-8:30	5	0	2	7	5	21	17	43	3	2	78	83	223	8	3	234	90	277	367	8:15-8:30	
8:30-8:45	1	2	2	5	4	21	16	41	2	2	80	84	244	26	2	272	89	313	402	8:30-8:45	
8:45-9:00	1	1	1	3	4	24	20	48	6	3	69	78	238	33	3	274	81	322	403	8:45-9:00	
3 Hour Totals	12	7	13	32	48	134	116	298	31	48	690	769	1,893	145	24	2,062	801	2,360	3,161		
1 Hour Totals																					
6:00-7:00	3	2	1	6	5	17	18	40	1	16	117	134	311	26	4	341	140	381	521	0.87	6:00-7:00
6:15-7:15	1	1	2	4	7	22	18	47	6	17	144	167	388	38	5	431	171	478	649	0.68	6:15-7:15
6:30-7:30	2	2	2	6	9	24	21	54	11	20	168	199	467	35	4	506	205	560	765	0.76	6:30-7:30
6:45-7:45	3	2	3	8	13	26	26	65	16	18	208	242	555	38	5	598	250	663	913	0.84	6:45-7:45
7:00-8:00	2	2	3	7	20	33	34	87	17	15	265	297	693	40	6	739	304	826	1,130	0.77	7:00-8:00
7:15-8:15	2	2	6	10	28	43	41	112	14	20	296	330	730	39	10	779	340	891	1,231	0.84	7:15-8:15
7:30-8:30	6	1	8	15	30	59	51	140	12	17	310	339	798	40	13	851	354	991	1,345	0.92	7:30-8:30
7:45-8:45	6	2	9	17	27	71	55	153	9	18	328	355	877	59	13	949	372	1,102	1,474	0.92	7:45-8:45
8:00-9:00	7	3	9	19	23	84	64	171	13	17	308	338	889	79	14	982	357	1,153	1,510	0.94	8:00-9:00
AM Peak 8:00-9:00																					
7	3	9	19	23	84	64	171	13	17	308	338	889	79	14	982	357	1,153	1,510	0.94	AM Peak 8:00-9:00	
PM																					
4:00-4:15	1	3	6	10	4	43	30	77	6	2	106	114	184	25	4	213	124	290	414		4:00-4:15
4:15-4:30	5	5	4	14	6	40	19	65	4	0	90	94	171	21	2	194	108	259	367		4:15-4:30
4:30-4:45	3	5	4	12	7	18	18	43	3	4	117	124	136	12	1	149	136	192	328		4:30-4:45
4:45-5:00	4	2	3	9	3	27	28	58	3	0	113	116	170	20	2	192	125	250	375		4:45-5:00
5:00-5:15	0	5	1	6	1	22	17	40	0	2	140	142	202	15	0	217	148	257	405		5:00-5:15
5:15-5:30	1	1	2	4	1	30	25	56	5	8	131	144	198	8	0	206	148	262	410		5:15-5:30
5:30-5:45	1	4	1	6	5	38	27	70	4	1	172	177	168	16	0	184	183	254	437		5:30-5:45
5:45-6:00	2	0	4	6	3	30	19	52	3	3	148	154	193	15	1	209	160	261	421		5:45-6:00
6:00-6:15	0	1	1	2	7	13	7	27	2	2	89	93	231	8	0	239	95	266	361		6:00-6:15
6:15-6:30	0	0	0	0	8	5	11	24	3	1	90	94	194	6	3	203	94	227	321		6:15-6:30
6:30-6:45	0	3	1	4	5	19	20	44	0	1	100	101	170	9	3	182	105	226	331		6:30-6:45
6:45-7:00	7	1	2	10	2	5	7	14	2	0	45	47	111	9	9	129	57	143	200		6:45-7:00
3 Hour Totals	24	30	29	83	52	290	228	570	35	24	1,341	1,400	2,128	164	25	2,317	1,483	2,887	4,370		
1 Hour Totals																					
4:00-5:00	13	15	17	45	20	128	95	243	16	6	426	448	681	78	9	748	493	991	1,484	0.90	4:00-5:00
4:15-5:15	12	17	12	41	17	107	82	206	10	6	460	476	679	68	5	752	517	958	1,475	0.91	4:15-5:15
4:30-5:30	8	13	10	31	12	97	88	197	11	14	501	526	706	55	3	764	557	961	1,518	0.93	4:30-5:30
4:45-5:45	6	12	7	25	10	117	97	224	12	11	556	579	738	59	2	799	604	1,023	1,627	0.93	4:45-5:45
5:00-6:00	4	10	8	22	10	120	88	218	12	14	591	617	761	54	1	816	639	1,034	1,673	0.96	5:00-6:00
5:15-6:15	4	6	8	18	16	111	78	205	14	14	540	568	790	47	1	838	586	1,043	1,629	0.93	5:15-6:15
5:30-6:30	3	5	6	14	23	86	64	173	12	7	499	518	786	45	4	835	532	1,008	1,540	0.88	5:30-6:30
5:45-6:45	2	4	6	12	23	67	57	147	8	7	427	442	788	38	7	833	454	980	1,434	0.85	5:45-6:45
6:00-7:00	7	5	4	16	22	42	45	109	7	4	324	335	706	32	15	753	351	862	1,213	0.84	6:00-7:00
PM Peak 5:00-6:00																					
4	10	8	22	10	120	88	218	12	14	591	617	761	54	1	816	639	1,034	1,673	0.96	PM Peak 5:00-6:00	

Pedestrian Volume Survey



Project Name: Atlantic Plumbing Site
Project Number: 2799
Location: Washington, DC
Intersection: 9th Street & V Street
Weather: Clear
Date: 4/12/2005
Surveyor: Belen & Tulu



TIME	Movement							
	1	2	3	4	5	6	7	8
AM								
6:00-6:15	1			1				
6:15-6:30	6							
6:30-6:45	2	1		1				
6:45-7:00	1	2		2				1
7:00-7:15		1			1			
7:15-7:30		1	1			1		
7:30-7:45	2	1						
7:45-8:00	4	1	1			1		
8:00-8:15	4			1		2		
8:15-8:30	2	2	1	2				
8:30-8:45	3	2			1			
8:45-9:00	4	1		1				
PM								
4:00-4:15	8	3	1	1				
4:15-4:30	3	4	1	1	3			
4:30-4:45	1	2						
4:45-5:00	1							
5:00-5:15	2	1						
5:15-5:30		4		1	3	1		
5:30-5:45	4	1	1		2			
5:45-6:00	1	4	1					
6:00-6:15		1	2	3		1		
6:15-6:30	7	4	6	2		2		
6:30-6:45	2	7				1		
6:45-7:00		5	3					

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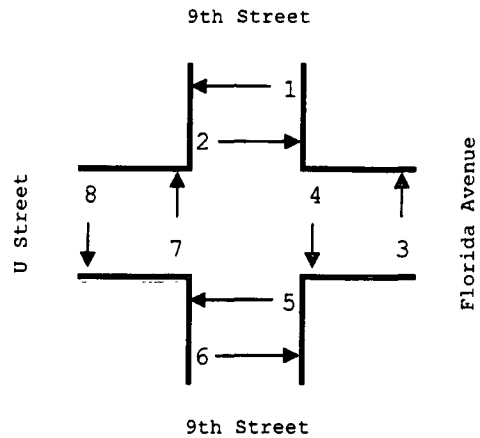
Existing Traffic Count

PROJECT		Atlantic Plumbing Site				DATE		4/12/2005		SOUTHBOUND ROAD.				9th Street							
W & A JOB NO.		2799				DAY		Tuesday		NORTHBOUND ROAD				9th Street							
INTERSECTION		9th Street & U Street				WEATHER		Clear		WESTBOUND ROAD				Florida Avenue							
LOCATION		Washington DC				COUNTED BY		Paco & Lilian		EASTBOUND ROAD				U Street							
						INPUTED BY		agan													
Time Period	Turning Movements																		Total	PHF	Time Period
	Southbound 9th Street				Westbound Florida Avenue				Northbound 9th Street				Eastbound U Street				North & South	East & West			
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:00-6:15	6	45	18	69	14	81	0	95	4	14	2	20	8	53	0	61	89	156	245	6:00-6:15	
6:15-6:30	3	47	20	70	31	126	0	157	1	7	2	10	6	64	0	70	80	227	307	6:15-6:30	
6:30-6:45	4	50	17	71	23	122	0	145	0	7	5	12	13	63	0	76	83	221	304	6:30-6:45	
6:45-7:00	0	66	18	84	25	146	0	171	2	14	5	21	5	73	0	78	105	249	354	6:45-7:00	
7:00-7:15	4	64	37	105	40	178	0	218	1	24	10	35	5	66	0	71	140	289	429	7:00-7:15	
7:15-7:30	4	91	37	132	34	181	0	215	1	34	8	43	12	78	0	90	175	305	480	7:15-7:30	
7:30-7:45	8	102	42	152	35	210	0	245	0	27	5	32	15	110	0	125	184	370	554	7:30-7:45	
7:45-8:00	2	153	34	189	49	198	0	247	1	44	7	52	14	114	0	128	241	375	616	7:45-8:00	
8:00-8:15	11	153	60	224	42	238	0	280	2	55	19	76	22	151	0	173	300	453	753	8:00-8:15	
8:15-8:30	9	161	64	234	39	217	0	256	3	45	19	67	20	123	0	143	301	399	700	8:15-8:30	
8:30-8:45	10	175	67	252	24	201	0	225	1	53	19	73	37	130	0	167	325	392	717	8:30-8:45	
8:45-9:00	9	187	57	253	39	181	0	220	2	35	10	47	19	138	0	157	300	377	677	8:45-9:00	
3 Hour Totals	70	1,294	471	1,835	395	2,078	0	2,474	18	359	111	488	176	1,163	0	1,339	2,323	3,813	6,136		
1 Hour Totals																					
6:00-7:00	13	208	73	294	93	475	0	568	7	42	14	63	32	253	0	285	357	853	1,210	0.85	6:00-7:00
6:15-7:15	11	227	92	330	119	572	0	691	4	52	22	78	29	266	0	295	408	986	1,394	0.81	6:15-7:15
6:30-7:30	12	271	109	392	122	627	0	749	4	79	28	111	35	280	0	315	503	1,064	1,567	0.82	6:30-7:30
6:45-7:45	16	323	134	473	134	715	0	849	4	99	28	131	37	327	0	364	604	1,213	1,817	0.82	6:45-7:45
7:00-8:00	18	410	150	578	158	767	0	925	3	129	30	162	46	368	0	414	740	1,339	2,079	0.84	7:00-8:00
7:15-8:15	25	499	173	697	160	827	0	987	4	160	39	203	63	453	0	516	900	1,503	2,403	0.80	7:15-8:15
7:30-8:30	30	569	200	799	165	863	0	1,028	6	171	50	227	71	498	0	569	1,026	1,597	2,623	0.87	7:30-8:30
7:45-8:45	32	642	225	899	154	854	0	1,008	7	197	64	268	93	518	0	611	1,167	1,619	2,786	0.92	7:45-8:45
8:00-9:00	39	676	248	963	144	837	0	981	8	188	67	263	98	542	0	640	1,226	1,621	2,847	0.95	8:00-9:00
AM Peak 8:00-9:00																					
39	676	248	963	144	837	0	981	8	188	67	263	98	542	0	640	1,226	1,621	2,847	0.95	AM Peak 8:00-9:00	
PM																					
4:00-4:15	13	136	70	219	17	133	0	150	7	79	12	98	31	162	0	193	317	343	660	4:00-4:15	
4:15-4:30	1	137	59	197	36	132	0	168	6	58	9	73	29	155	0	184	270	352	622	4:15-4:30	
4:30-4:45	1	111	46	158	47	145	0	192	3	64	14	81	30	147	0	177	239	369	608	4:30-4:45	
4:45-5:00	7	117	62	186	40	158	0	198	3	76	14	93	28	143	0	171	279	369	648	4:45-5:00	
5:00-5:15	6	136	76	218	39	144	0	183	4	98	11	113	22	194	0	216	331	399	730	5:00-5:15	
5:15-5:30	11	133	62	206	37	136	0	173	0	90	12	102	23	183	0	206	308	379	687	5:15-5:30	
5:30-5:45	5	101	61	167	43	172	0	215	3	93	14	110	40	199	0	239	277	454	731	5:30-5:45	
5:45-6:00	8	118	52	178	37	167	0	204	2	91	12	105	28	167	0	195	283	399	682	5:45-6:00	
6:00-6:15	7	103	69	179	41	162	0	203	4	68	13	85	32	153	0	185	264	388	652	6:00-6:15	
6:15-6:30	7	113	72	192	43	166	0	209	6	65	11	82	27	161	0	188	274	397	671	6:15-6:30	
6:30-6:45	8	109	57	174	58	127	0	185	5	59	10	74	32	134	0	166	248	351	599	6:30-6:45	
6:45-7:00	11	123	34	168	46	153	0	199	6	45	6	57	20	116	0	136	225	335	560	6:45-7:00	
3 Hour Totals	85	1,437	720	2,242	484	1,795	0	2,279	49	886	138	1,073	342	1,914	0	2,256	3,315	4,535	7,850		
1 Hour Totals																					
4:00-5:00	22	501	237	760	140	568	0	708	19	277	49	345	118	607	0	725	1,105	1,433	2,538	0.96	4:00-5:00
4:15-5:15	15	501	243	759	162	579	0	741	16	296	48	360	109	639	0	748	1,119	1,489	2,608	0.89	4:15-5:15
4:30-5:30	25	497	246	768	163	583	0	746	10	328	51	389	103	667	0	770	1,157	1,516	2,673	0.92	4:30-5:30
4:45-5:45	29	487	261	777	159	610	0	769	10	357	51	418	113	719	0	832	1,195	1,601	2,796	0.96	4:45-5:45
5:00-6:00	30	488	251	769	156	619	0	775	9	372	49	430	113	743	0	856	1,199	1,631	2,830	0.97	5:00-6:00
5:15-6:15	31	455	244	730	158	637	0	795	9	342	51	402	123	702	0	825	1,132	1,620	2,752	0.94	5:15-6:15
5:30-6:30	27	435	254	716	164	667	0	831	15	317	50	382	127	680	0	807	1,098	1,638	2,736	0.94	5:30-6:30
5:45-6:45	30	443	250	723	179	622	0	801	17	283	46	346	119	615	0	734	1,069	1,535	2,604	0.95	5:45-6:45
6:00-7:00	33	448	232	713	188	608	0	796	21	237	40	298	111	564	0	675	1,011	1,471	2,482	0.92	6:00-7:00
PM Peak 5:00-6:00																					
30	488	251	769	156	619	0	775	9	372	49	430	113	743	0	856	1,199	1,631	2,830	0.97	PM Peak 5:00-6:00	

Pedestrian Volume Survey



Project Name: Atlantic Plumbing Site
Project Number: 2789
Location: Washington, DC
Intersection: 9th Street & U Street
Weather: Clear
Date: 4/12/2005
Surveyor: Pacc & Lillian



TIME	Movement							
	1	2	3	4	5	6	7	8
AM								
6:00-6:15	2	3			1	1		
6:15-6:30	1					2		
6:30-6:45	2	9	1	1	1	1	2	1
6:45-7:00	1	3		2	1	1	1	1
7:00-7:15	5	1			1		2	
7:15-7:30	3	3	1	1	1	4	1	
7:30-7:45	1	7	1	2		1	2	2
7:45-8:00	2	2	1			4		
8:00-8:15	5	2			4	1	3	3
8:15-8:30	4	4	2	4	6	1	5	3
8:30-8:45	3	4		2	10	1	1	1
8:45-9:00	4	2			1	3		1
PM								
4:00-4:15	1				6	9	2	1
4:15-4:30	9	3		2	12	12	4	
4:30-4:45	7	3		2	7	11	7	5
4:45-5:00	8	1		3	4	4	2	1
5:00-5:15		5	2	4	4	6		1
5:15-5:30	8	3		1	6	13	2	2
5:30-5:45	8	3	2	2	10	15	3	1
5:45-6:00	7	5	1	3	9	9	1	1
6:00-6:15	8	7	6	1	12	9		
6:15-6:30	11	9	1	6	6	4	3	3
6:30-6:45	4	4	1	2	6	5	1	1
6:45-7:00	5	5	2	1	6	3	1	1

Wells & Associates, LLC

McLean, Virginia

Existing Traffic Count

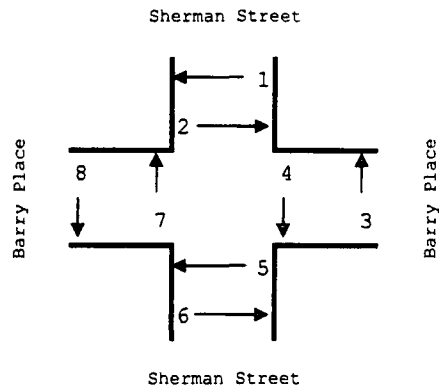
PROJECT: Atlantic Plumbing		DATE 11/2/2005		SOUTHBOUND ROAD		Sherman Street															
W & A JOB NO. 2799		DAY Wednesday		NORTHBOUND ROAD		Sherman Street															
INTERSECTION Barry Place and Sherman Street		WEATHER Clear		WESTBOUND ROAD		Barry Place															
LOCATION Washington DC		COUNTED BY Roy		EASTBOUND ROAD.		Barry Place															
		INPUTED BY CFP																			
Time Period	Turning Movements																		Total	PHF	Time Period
	Southbound Sherman Street				Westbound Barry Place				Northbound Sherman Street				Eastbound Barry Place				North & South	East & West			
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:00-6:15	10	81	3	94	1	7	0	8	2	37	4	43	0	8	5	13	137	21	158	6:00-6:15	
6:15-6:30	15	106	2	123	3	8	1	12	15	51	0	66	0	7	6	13	189	25	214	6:15-6:30	
6:30-6:45	15	107	1	123	3	5	1	9	4	41	0	45	0	4	6	10	168	19	187	6:30-6:45	
6:45-7:00	23	158	10	191	4	8	1	13	1	32	3	36	1	6	6	13	227	26	253	6:45-7:00	
7:00-7:15	20	144	7	171	5	18	2	25	1	31	0	32	0	10	11	21	203	46	249	7:00-7:15	
7:15-7:30	31	178	7	216	5	20	2	27	8	58	0	66	1	15	19	35	282	62	344	7:15-7:30	
7:30-7:45	26	196	10	232	7	14	0	21	4	54	0	58	2	8	17	27	290	48	338	7:30-7:45	
7:45-8:00	37	217	7	261	8	25	0	33	2	52	1	55	0	22	10	32	316	65	381	7:45-8:00	
8:00-8:15	31	247	17	295	6	39	2	47	12	69	0	81	0	21	11	32	376	79	455	8:00-8:15	
8:15-8:30	43	263	12	318	9	32	3	44	3	62	1	66	0	15	10	25	384	69	453	8:15-8:30	
8:30-8:45	48	263	8	319	11	31	0	42	11	30	1	42	0	23	11	34	361	76	437	8:30-8:45	
8:45-9:00	41	305	14	360	8	24	0	32	2	72	0	74	1	27	12	40	434	72	506	8:45-9:00	
3 Hour Totals	340	2,265	98	2,703	70	231	12	313	65	589	10	664	5	166	124	295	3,367	608	3,975		
1 Hour Totals																					
6:00-7:00	63	452	16	531	11	28	3	42	22	161	7	190	1	25	23	49	721	91	812	0.80 6:00-7:00	
6:15-7:15	73	515	20	608	15	39	5	59	21	155	3	179	1	27	29	57	787	116	903	0.89 6:15-7:15	
6:30-7:30	89	587	25	701	17	51	6	74	14	162	3	179	2	35	42	79	880	153	1,033	0.75 6:30-7:30	
6:45-7:45	100	676	34	810	21	60	5	86	14	175	3	192	4	39	53	96	1,002	182	1,184	0.86 6:45-7:45	
7:00-8:00	114	735	31	880	25	77	4	106	15	195	1	211	3	55	57	115	1,091	221	1,312	0.86 7:00-8:00	
7:15-8:15	125	838	41	1,004	26	98	4	128	26	233	1	260	3	66	57	126	1,264	254	1,518	0.83 7:15-8:15	
7:30-8:30	137	923	46	1,106	30	110	5	145	21	237	2	260	2	66	48	116	1,366	261	1,627	0.89 7:30-8:30	
7:45-8:45	159	990	44	1,193	34	127	5	166	28	213	3	244	0	81	42	123	1,437	289	1,726	0.95 7:45-8:45	
8:00-9:00	163	1,078	51	1,292	34	126	5	165	28	233	2	263	1	86	44	131	1,555	296	1,851	0.91 8:00-9:00	
AM Peak 8:00-9:00																					
163	1,078	51	1,292	34	126	5	165	28	233	2	263	1	86	44	131	1,555	296	1,851	0.91	AM Peak 8:00-9:00	
PM																					
4:00-4:15	17	150	9	176	13	10	8	31	8	168	0	176	0	12	34	46	352	77	429	4:00-4:15	
4:15-4:30	25	140	5	170	16	17	3	36	15	195	0	210	1	27	43	71	380	107	487	4:15-4:30	
4:30-4:45	24	149	8	181	8	25	1	34	17	182	1	200	0	24	41	65	381	99	480	4:30-4:45	
4:45-5:00	21	156	9	186	10	26	2	38	10	189	2	201	1	29	34	64	387	102	489	4:45-5:00	
5:00-5:15	17	182	8	207	10	20	3	33	12	234	4	250	1	35	49	85	457	118	575	5:00-5:15	
5:15-5:30	13	120	13	146	22	25	7	54	2	255	1	258	4	30	26	60	404	114	518	5:15-5:30	
5:30-5:45	28	163	13	204	14	19	7	40	7	271	1	279	0	34	34	68	483	108	591	5:30-5:45	
5:45-6:00	11	134	12	157	13	35	6	54	5	266	2	273	0	50	9	59	430	113	543	5:45-6:00	
6:00-6:15	10	131	5	146	16	26	2	44	8	173	0	181	1	34	56	91	327	135	462	6:00-6:15	
6:15-6:30	20	137	9	166	9	19	7	35	13	218	0	231	0	23	23	46	397	81	478	6:15-6:30	
6:30-6:45	13	132	9	154	15	20	8	43	12	221	0	233	0	12	15	27	387	70	457	6:30-6:45	
6:45-7:00	15	121	11	147	9	29	5	43	16	113	0	129	1	18	25	44	276	87	363	6:45-7:00	
3 Hour Totals	214	1,715	111	2,040	165	271	59	485	125	2,485	11	2,621	9	328	389	726	4,661	1,211	5,872		
1 Hour Totals																					
4:00-5:00	87	595	31	713	47	78	14	139	50	734	3	787	2	92	152	246	1,500	385	1,885	0.96 4:00-5:00	
4:15-5:15	87	627	30	744	44	88	9	141	54	800	7	861	3	115	167	285	1,605	426	2,031	0.88 4:15-5:15	
4:30-5:30	75	607	38	720	50	96	13	159	41	860	8	909	6	118	150	274	1,629	433	2,062	0.90 4:30-5:30	
4:45-5:45	79	621	43	743	56	90	19	165	31	949	8	988	6	128	143	277	1,731	442	2,173	0.92 4:45-5:45	
5:00-6:00	69	599	46	714	59	99	23	181	26	1,026	8	1,060	5	149	118	272	1,774	453	2,227	0.94 5:00-6:00	
5:15-6:15	62	548	43	653	65	105	22	192	22	965	4	991	5	148	125	278	1,644	470	2,114	0.89 5:15-6:15	
5:30-6:30	69	565	39	673	52	99	22	173	33	928	3	964	1	141	122	264	1,637	437	2,074	0.88 5:30-6:30	
5:45-6:45	54	534	35	623	53	100	23	176	38	878	2	918	1	119	103	223	1,541	399	1,940	0.89 5:45-6:45	
6:00-7:00	58	521	34	613	49	94	22	165	49	725	0	774	2	87	119	208	1,387	373	1,760	0.92 6:00-7:00	
PM Peak 5:00-6:00																					
69	599	46	714	59	99	23	181	26	1,026	8	1,060	5	149	118	272	1,774	453	2,227	0.94	PM Peak 5:00-6:00	

Wells & Associates, LLC
McLean, Virginia

Pedestrian Volume Survey



Project Name: Atlantic Plumbing
Project Number: 2799
Location: Washington DC
Intersection: Barry Place and Sherman Street
Weather: Clear
Date: 11/2/2005
Surveyor: Angela
Hours: Mileage:



TIME	Movement							
	1	2	3	4	5	6	7	8
AM								
6:00-6:15	1	0	0	0	0	0	0	0
6:15-6:30	0	0	0	3	0	0	0	0
6:30-6:45	0	3	0	0	0	0	1	1
6:45-7:00	1	0	0	0	0	0	0	0
7:00-7:15	0	0	0	0	3	0	0	0
7:15-7:30	0	0	0	0	1	0	0	8
7:30-7:45	4	2	1	0	2	0	1	0
7:45-8:00	0	0	0	0	4	0	1	0
8:00-8:15	0	0	0	0	0	0	1	0
8:15-8:30	0	2	0	0	0	0	0	8
8:30-8:45	2	0	3	3	2	0	0	0
8:45-9:00	0	0	0	0	1	0	0	4
PM								
4:00-4:15	1	3	3	0	0	0	2	4
4:15-4:30	12	0	0	3	3	0	0	0
4:30-4:45	0	2	3	0	4	0	1	1
4:45-5:00	3	3	0	2	2	1	1	2
5:00-5:15	0	0	0	0	1	1	0	0
5:15-5:30	0	0	0	0	0	1	0	0
5:30-5:45	7	0	1	0	3	0	2	0
5:45-6:00	0	0	0	1	6	0	0	0
6:00-6:15	4	0	0	0	1	1	0	0
6:15-6:30	0	0	0	0	3	0	0	0
6:30-6:45	0	2	2	2	0	1	5	0
6:45-7:00	1	1	0	1	5	1	0	0

Wells & Associates, LLC

McLean, Virginia

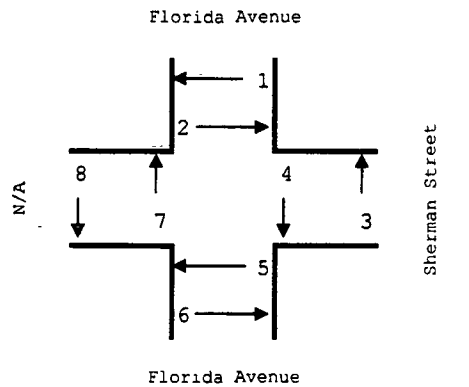
Existing Traffic Count

PROJECT		Atlantic Plumbing				DATE		11/2/2005		SOUTHBOUND ROAD				Florida Avenue							
W & A JOB NO		2799				DAY		Wednesday		NORTHBOUND ROAD				Florida Avenue							
INTERSECTION		Florida Avenue and Sherman Street				WEATHER		Clear		WESTBOUND ROAD				N/A							
LOCATION		Washington DC				COUNTED BY		Roy		EASTBOUND ROAD				Sherman Street							
						INPUTED BY		CFP													
Time Period	Turning Movements																		Total	PHF	Time Period
	Southbound Florida Avenue				Eastbound N/A				Northbound Florida Avenue				Westbound Sherman Street				North & South	East & West			
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:00-6:15	0	7	0	7	0	0	0	0	18	7	0	25	1	0	72	73	32	73	105		6:00-6:15
6:15-6:30	0	16	0	16	0	0	0	0	34	14	0	48	0	0	106	106	64	106	170		6:15-6:30
6:30-6:45	0	19	0	19	0	0	0	0	41	21	0	62	1	0	106	107	81	107	188		6:30-6:45
6:45-7:00	0	7	0	7	0	0	0	0	41	31	0	72	1	0	152	153	79	153	232		6:45-7:00
7:00-7:15	0	31	0	31	0	0	0	0	41	42	0	83	1	0	149	150	114	150	264		7:00-7:15
7:15-7:30	0	33	0	33	0	0	0	0	74	36	0	110	1	0	170	171	143	171	314		7:15-7:30
7:30-7:45	0	34	0	34	0	0	0	0	61	66	0	127	0	0	197	197	161	197	358		7:30-7:45
7:45-8:00	0	33	0	33	0	0	0	0	71	61	0	132	0	0	212	212	165	212	377		7:45-8:00
8:00-8:15	0	40	0	40	0	0	0	0	103	46	0	149	2	0	241	243	189	243	432		8:00-8:15
8:15-8:30	0	37	0	37	0	0	0	0	95	43	0	138	2	0	257	259	175	259	434		8:15-8:30
8:30-8:45	0	55	0	55	0	0	0	0	72	60	0	132	0	0	253	253	187	253	440		8:30-8:45
8:45-9:00	0	28	0	28	0	0	0	0	79	46	0	125	1	0	273	274	153	274	427		8:45-9:00
3 Hour Totals	0	340	0	340	0	0	0	0	730	473	0	1,203	10	0	2,188	2,198	1,543	2,198	3,741		
1 Hour Totals																					
6:00-7:00	0	49	0	49	0	0	0	0	134	73	0	207	3	0	436	439	256	439	695	0.75	6:00-7:00
6:15-7:15	0	73	0	73	0	0	0	0	157	108	0	265	3	0	513	516	338	516	854	0.81	6:15-7:15
6:30-7:30	0	90	0	90	0	0	0	0	197	130	0	327	4	0	577	581	417	581	998	0.79	6:30-7:30
6:45-7:45	0	105	0	105	0	0	0	0	217	175	0	392	3	0	668	671	497	671	1,168	0.82	6:45-7:45
7:00-8:00	0	131	0	131	0	0	0	0	247	205	0	452	2	0	728	730	583	730	1,313	0.87	7:00-8:00
7:15-8:15	0	140	0	140	0	0	0	0	309	209	0	518	3	0	820	823	658	823	1,481	0.86	7:15-8:15
7:30-8:30	0	144	0	144	0	0	0	0	330	216	0	546	4	0	907	911	690	911	1,601	0.92	7:30-8:30
7:45-8:45	0	165	0	165	0	0	0	0	341	210	0	551	4	0	963	967	716	967	1,683	0.96	7:45-8:45
8:00-9:00	0	160	0	160	0	0	0	0	349	195	0	544	5	0	1,024	1,029	704	1,029	1,733	0.98	8:00-9:00
AM Peak 8:00-9:00																					
4:00-4:15	0	56	0	56	0	0	0	0	185	45	0	230	4	0	133	137	286	137	423		4:00-4:15
4:15-4:30	0	47	0	47	0	0	0	0	208	62	0	270	1	0	147	148	317	148	465		4:15-4:30
4:30-4:45	0	53	0	53	0	0	0	0	178	62	0	240	0	0	150	150	293	150	443		4:30-4:45
4:45-5:00	0	44	0	44	0	0	0	0	199	54	0	253	0	0	146	146	297	146	443		4:45-5:00
5:00-5:15	0	40	0	40	0	0	0	0	209	58	0	267	3	0	167	170	307	170	477		5:00-5:15
5:15-5:30	0	31	0	31	0	0	0	0	257	60	0	317	2	0	136	138	348	138	486		5:15-5:30
5:30-5:45	0	35	0	35	0	0	0	0	243	60	0	303	0	0	144	144	338	144	482		5:30-5:45
5:45-6:00	0	36	0	36	0	0	0	0	218	52	0	270	0	0	136	136	306	136	442		5:45-6:00
6:00-6:15	0	38	0	38	0	0	0	0	181	51	0	232	2	0	121	123	270	123	393		6:00-6:15
6:15-6:30	0	30	0	30	0	0	0	0	193	52	0	245	0	0	142	142	275	142	417		6:15-6:30
6:30-6:45	0	29	0	29	0	0	0	0	188	48	0	236	0	0	125	125	265	125	390		6:30-6:45
6:45-7:00	0	27	0	27	0	0	0	0	153	35	0	188	0	0	119	119	215	119	334		6:45-7:00
3 Hour Totals	0	466	0	466	0	0	0	0	2,412	638	0	3,051	12	0	1,666	1,678	3,517	1,678	5,195		
1 Hour Totals																					
4:00-5:00	0	200	0	200	0	0	0	0	770	223	0	993	5	0	576	581	1,193	581	1,774	0.95	4:00-5:00
4:15-5:15	0	184	0	184	0	0	0	0	794	236	0	1,030	4	0	610	614	1,214	614	1,828	0.96	4:15-5:15
4:30-5:30	0	168	0	168	0	0	0	0	843	234	0	1,077	5	0	599	604	1,245	604	1,849	0.95	4:30-5:30
4:45-5:45	0	150	0	150	0	0	0	0	908	232	0	1,140	5	0	593	598	1,290	598	1,888	0.97	4:45-5:45
5:00-6:00	0	142	0	142	0	0	0	0	927	230	0	1,157	5	0	583	588	1,299	588	1,887	0.97	5:00-6:00
5:15-6:15	0	140	0	140	0	0	0	0	899	223	0	1,122	4	0	537	541	1,262	541	1,803	0.93	5:15-6:15
5:30-6:30	0	139	0	139	0	0	0	0	835	215	0	1,050	2	0	543	545	1,189	545	1,734	0.90	5:30-6:30
5:45-6:45	0	133	0	133	0	0	0	0	780	203	0	983	2	0	524	526	1,116	526	1,642	0.93	5:45-6:45
6:00-7:00	0	124	0	124	0	0	0	0	715	186	0	901	2	0	507	509	1,025	509	1,534	0.92	6:00-7:00
PM Peak 4:45-5:45																					
4:45-5:45	0	150	0	150	0	0	0	0	908	232	0	1,140	5	0	593	598	1,290	598	1,888	0.97	4:45-5:45

Wells & Associates, LLC
McLean, Virginia

Pedestrian Volume Survey

Project Name: Atlantic Plumbing
Project Number: 2799
Location: Washington DC
Intersection: Florida Avenue and Sherman S
Weather: Clear
Date: 11/2/2005
Surveyor:
Hours: Mileage:



TIME	Movement							
	1	2	3	4	5	6	7	8
AM								
6:00-6:15	1	2	1	2	0	0	0	0
6:15-6:30	1	1	1	1	0	0	0	0
6:30-6:45	1	2	1	2	0	0	0	0
6:45-7:00	1	3	1	3	0	0	0	0
7:00-7:15	3	1	3	1	0	0	0	0
7:15-7:30	8	3	8	3	0	0	0	0
7:30-7:45	4	3	4	3	0	0	0	0
7:45-8:00	9	7	9	7	0	0	0	0
8:00-8:15	6	4	6	4	0	0	0	0
8:15-8:30	7	9	7	9	0	0	0	0
8:30-8:45	6	4	6	4	0	0	0	0
8:45-9:00	4	2	4	2	0	0	0	0
PM								
4:00-4:15	1	8	1	8	0	0	0	0
4:15-4:30	1	4	1	4	0	0	0	0
4:30-4:45	1	2	1	2	0	0	0	0
4:45-5:00	2	5	2	6	0	0	0	0
5:00-5:15	1	19	1	19	0	0	0	0
5:15-5:30	1	7	1	7	0	0	0	0
5:30-5:45	1	1	1	1	0	0	0	0
5:45-6:00	1	3	1	3	0	0	0	0
6:00-6:15	0	9	0	9	0	0	0	0
6:15-6:30	0	0	0	0	0	0	0	0
6:30-6:45	5	1	5	1	0	0	0	0
6:45-7:00	1	0	1	0	0	0	0	0

Wells & Associates, LLC

McLean, Virginia

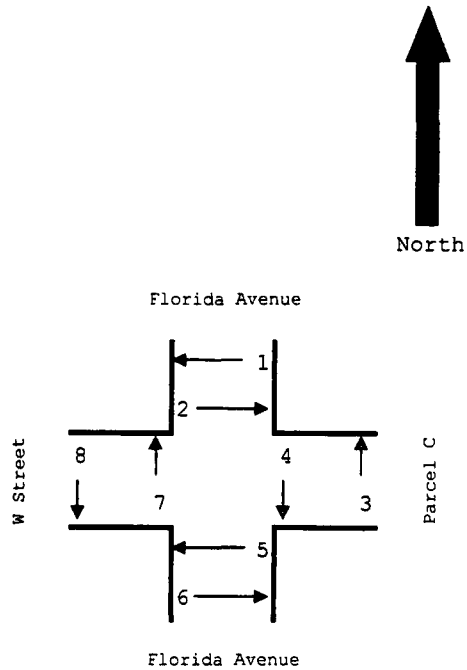
Existing Traffic Count

PROJECT		Atlantic Plumbing							DATE		11/2/2005		SOUTHBOUND ROAD		Florida Avenue						
W & A JOB NO		2799							DAY		Wednesday		NORTHBOUND ROAD		Florida Avenue						
INTERSECTION		Florida Avenue and W Street							WEATHER		Clear		WESTBOUND ROAD		N/A						
LOCATION		Washington DC							COUNTED BY		Roy		EASTBOUND ROAD		W Street						
									INPUTED BY		CFP										
Time Period	Turning Movements																Total	PHF	Time Period		
	Southbound Florida Avenue				Westbound N/A				Northbound Florida Avenue				Eastbound W Street							North & South	East & West
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:00-6:15	0	84	0	84	0	0	0	0	0	38	0	38	13	0	2	15	122	15	137		6:00-6:15
6:15-6:30	0	121	0	121	0	0	0	0	0	40	0	40	14	0	0	14	161	14	175		6:15-6:30
6:30-6:45	0	108	0	108	0	0	0	0	0	56	0	56	19	0	4	23	164	23	187		6:30-6:45
6:45-7:00	0	169	0	169	0	0	0	0	0	61	0	61	20	0	1	21	230	21	251		6:45-7:00
7:00-7:15	0	158	0	158	0	0	0	0	0	78	0	78	9	0	5	14	236	14	250		7:00-7:15
7:15-7:30	0	169	0	169	0	0	0	0	0	100	0	100	17	0	2	19	269	19	288		7:15-7:30
7:30-7:45	0	226	0	226	0	0	0	0	0	124	0	124	31	0	7	38	350	38	388		7:30-7:45
7:45-8:00	0	243	0	243	0	0	0	0	0	104	0	104	24	0	3	27	347	27	374		7:45-8:00
8:00-8:15	0	273	0	273	0	0	0	0	0	149	0	149	27	0	2	29	422	29	451		8:00-8:15
8:15-8:30	0	270	0	270	0	0	0	0	0	128	0	128	30	0	6	36	398	36	434		8:15-8:30
8:30-8:45	0	285	0	285	0	0	0	0	0	118	0	118	26	0	2	28	403	28	431		8:30-8:45
8:45-9:00	0	310	0	310	0	0	0	0	0	126	0	126	32	0	2	34	436	34	470		8:45-9:00
3 Hour Totals		0	2,416	0	2,416	0	0	0	0	1,122	0	1,122	262	0	36	298	3,538	298	3,836		
1 Hour Totals																					
6:00-7:00	0	482	0	482	0	0	0	0	0	195	0	195	66	0	7	73	677	73	750	0.75	6:00-7:00
6:15-7:15	0	556	0	556	0	0	0	0	0	235	0	235	62	0	10	72	791	72	863	0.86	6:15-7:15
6:30-7:30	0	604	0	604	0	0	0	0	0	295	0	295	65	0	12	77	899	77	976	0.85	6:30-7:30
6:45-7:45	0	722	0	722	0	0	0	0	0	363	0	363	77	0	15	92	1,085	92	1,177	0.76	6:45-7:45
7:00-8:00	0	796	0	796	0	0	0	0	0	406	0	406	81	0	17	98	1,202	98	1,300	0.84	7:00-8:00
7:15-8:15	0	911	0	911	0	0	0	0	0	477	0	477	99	0	14	113	1,388	113	1,501	0.83	7:15-8:15
7:30-8:30	0	1,012	0	1,012	0	0	0	0	0	505	0	505	112	0	18	130	1,517	130	1,647	0.91	7:30-8:30
7:45-8:45	0	1,071	0	1,071	0	0	0	0	0	499	0	499	107	0	13	120	1,570	120	1,690	0.94	7:45-8:45
8:00-9:00	0	1,138	0	1,138	0	0	0	0	0	521	0	521	115	0	12	127	1,659	127	1,786	0.95	8:00-9:00
AM Peak 8:00-9:00		0	1,138	0	1,138	0	0	0	0	521	0	521	115	0	12	127	1,659	127	1,786	0.95	AM Peak 8:00-9:00
PM																					
4:00-4:15	0	171	0	171	0	0	0	0	0	203	0	203	37	0	13	50	374	50	424		4:00-4:15
4:15-4:30	0	174	0	174	0	0	0	0	0	231	0	231	37	0	6	43	405	43	448		4:15-4:30
4:30-4:45	0	184	0	184	0	0	0	0	0	194	0	194	30	0	24	54	378	54	432		4:30-4:45
4:45-5:00	0	181	0	181	0	0	0	0	0	233	0	233	36	0	4	40	414	40	454		4:45-5:00
5:00-5:15	0	182	0	182	0	0	0	0	0	255	0	255	38	0	8	46	437	46	483		5:00-5:15
5:15-5:30	0	177	0	177	0	0	0	0	0	304	0	304	51	0	15	66	481	66	547		5:15-5:30
5:30-5:45	0	192	0	192	0	0	0	0	0	298	0	298	49	0	12	61	490	61	551		5:30-5:45
5:45-6:00	0	166	0	166	0	0	0	0	0	276	0	276	37	0	9	46	442	46	488		5:45-6:00
6:00-6:15	0	160	0	160	0	0	0	0	0	227	0	227	30	0	8	38	387	38	425		6:00-6:15
6:15-6:30	0	169	0	169	0	0	0	0	0	240	0	240	25	0	6	31	409	31	440		6:15-6:30
6:30-6:45	0	145	0	145	0	0	0	0	0	210	0	210	29	0	6	35	355	35	390		6:30-6:45
6:45-7:00	0	140	0	140	0	0	0	0	0	157	0	157	31	0	10	41	297	41	338		6:45-7:00
3 Hour Totals		0	2,041	0	2,041	0	0	0	0	2,828	0	2,828	430	0	121	551	4,868	551	5,420		
1 Hour Totals																					
4:00-5:00	0	710	0	710	0	0	0	0	0	861	0	861	140	0	47	187	1,571	187	1,758	0.97	4:00-5:00
4:15-5:15	0	721	0	721	0	0	0	0	0	913	0	913	141	0	42	183	1,634	183	1,817	0.94	4:15-5:15
4:30-5:30	0	724	0	724	0	0	0	0	0	986	0	986	155	0	51	206	1,710	206	1,916	0.88	4:30-5:30
4:45-5:45	0	732	0	732	0	0	0	0	0	1,090	0	1,090	174	0	39	213	1,822	213	2,035	0.92	4:45-5:45
5:00-6:00	0	717	0	717	0	0	0	0	0	1,133	0	1,133	175	0	44	219	1,850	219	2,069	0.94	5:00-6:00
5:15-6:15	0	695	0	695	0	0	0	0	0	1,105	0	1,105	167	0	44	211	1,800	211	2,011	0.91	5:15-6:15
5:30-6:30	0	687	0	687	0	0	0	0	0	1,041	0	1,041	141	0	35	176	1,728	176	1,904	0.86	5:30-6:30
5:45-6:45	0	640	0	640	0	0	0	0	0	953	0	953	121	0	29	150	1,593	150	1,743	0.89	5:45-6:45
6:00-7:00	0	614	0	614	0	0	0	0	0	834	0	834	115	0	30	145	1,448	145	1,593	0.91	6:00-7:00
PM Peak 5:00-6:00		0	717	0	717	0	0	0	0	1,133	0	1,133	175	0	44	219	1,850	219	2,069	0.94	PM Peak 5:00-6:00

Wells & Associates, LLC
McLean, Virginia

Pedestrian Volume Survey

Project Name: Atlantic Plumbing
Project Number: 2799
Location: Washington DC
Intersection: Florida Avenue and W Street
Weather: Clear
Date: 11/2/2005
Surveyor: Stuarts
Hours: Mileage:



TIME	Movement							
	1	2	3	4	5	6	7	8
AM								
6:00-6:15	0	0	0	2	0	0	0	2
6:15-6:30	0	2	0	0	0	0	0	0
6:30-6:45	0	0	1	1	0	0	0	1
6:45-7:00	0	1	3	0	0	0	1	0
7:00-7:15	2	1	2	0	0	0	0	0
7:15-7:30	0	4	6	0	0	0	1	1
7:30-7:45	1	3	3	5	0	0	0	0
7:45-8:00	3	5	6	4	0	0	0	0
8:00-8:15	0	1	3	2	0	0	0	1
8:15-8:30	2	1	4	1	0	0	1	1
8:30-8:45	1	1	4	3	0	0	0	0
8:45-9:00	2	2	4	6	0	0	3	0
PM								
4:00-4:15	0	2	2	12	0	0	0	1
4:15-4:30	4	3	7	10	0	0	0	2
4:30-4:45	2	3	6	1	0	0	1	0
4:45-5:00	5	2	4	3	0	1	1	1
5:00-5:15	2	3	4	5	1	1	3	0
5:15-5:30	3	1	11	6	0	1	2	0
5:30-5:45	0	1	4	3	0	0	0	1
5:45-6:00	1	0	7	6	0	0	0	0
6:00-6:15	2	1	7	2	0	1	0	0
6:15-6:30	2	3	2	4	0	0	0	1
6:30-6:45	1	2	8	7	0	1	0	0
6:45-7:00	2	0	3	3	0	1	1	1

Wells & Associates, LLC

McLean, Virginia

Existing Traffic Count

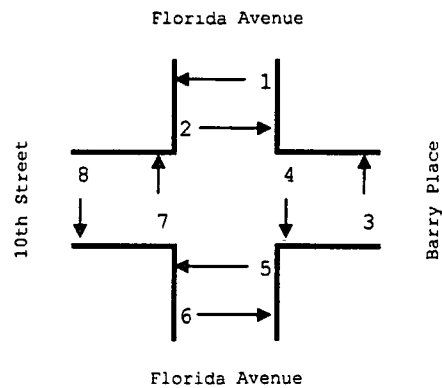
PROJECT: Atlantic Plumbing		DATE: 11/2/2005		SOUTHBOUND ROAD		Florida Avenue															
W & A JOB NO: 2799		DAY: Wednesday		NORTHBOUND ROAD		Florida Avenue															
INTERSECTION: Florida Avenue Barry Place 10th Avenue		WEATHER: Clear		WESTBOUND ROAD		Barry Place															
LOCATION: Washington DC		COUNTED BY: Roy		EASTBOUND ROAD		10th Avenue															
		INPUTED BY: CFP																			
Time Period	Turning Movements																		Total	PHF	Time Period
	Southbound Florida Avenue				Westbound Barry Place				Northbound Florida Avenue				Eastbound 10th Avenue				North & South	East & West			
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:00-6:15	0	6	9	15	14	4	2	20	0	7	4	11	1	0	2	3	26	23	49	6:00-6:15	
6:15-6:30	3	15	13	31	22	3	2	27	0	14	2	16	1	0	0	1	47	28	75	6:15-6:30	
6:30-6:45	0	12	11	23	18	0	2	20	2	17	0	19	0	0	2	2	42	22	64	6:30-6:45	
6:45-7:00	2	10	11	23	26	3	4	33	0	25	0	25	3	1	1	5	48	38	86	6:45-7:00	
7:00-7:15	1	25	22	48	25	3	4	32	1	37	3	41	3	0	4	7	89	39	128	7:00-7:15	
7:15-7:30	6	30	32	68	42	4	1	47	0	32	1	33	3	0	1	4	101	51	152	7:15-7:30	
7:30-7:45	2	33	30	65	34	1	4	39	2	60	3	65	3	0	0	3	130	42	172	7:30-7:45	
7:45-8:00	0	26	22	48	54	11	5	70	0	37	1	38	3	4	3	10	86	80	166	7:45-8:00	
8:00-8:15	5	34	42	81	57	6	6	69	9	41	1	51	3	11	2	16	132	85	217	8:00-8:15	
8:15-8:30	5	37	40	82	54	9	10	73	3	31	3	37	0	8	2	10	119	83	202	8:15-8:30	
8:30-8:45	9	56	45	110	65	6	6	77	1	48	4	53	2	8	4	14	163	91	254	8:30-8:45	
8:45-9:00	10	25	36	71	56	5	5	66	2	41	2	45	1	6	3	10	116	76	192	8:45-9:00	
3 Hour Totals	43	309	313	665	467	55	51	573	20	390	24	434	23	38	24	85	1,099	658	1,757		
1 Hour Totals																					
6:00-7:00	5	43	44	92	80	10	10	100	2	63	6	71	5	1	5	11	163	111	274	0.80 6:00-7:00	
6:15-7:15	6	62	57	125	91	9	12	112	3	93	5	101	7	1	7	15	226	127	353	0.69 6:15-7:15	
6:30-7:30	9	77	76	162	111	10	11	132	3	111	4	118	9	1	8	18	280	150	430	0.71 6:30-7:30	
6:45-7:45	11	98	95	204	127	11	13	151	3	154	7	164	12	1	6	19	368	170	538	0.78 6:45-7:45	
7:00-8:00	9	114	106	229	155	19	14	188	3	166	8	177	12	4	8	24	406	212	618	0.90 7:00-8:00	
7:15-8:15	13	123	126	262	187	22	16	225	11	170	6	187	12	15	6	33	449	258	707	0.81 7:15-8:15	
7:30-8:30	12	130	134	276	199	27	25	251	14	169	8	191	9	23	7	39	467	290	757	0.87 7:30-8:30	
7:45-8:45	19	153	149	321	230	32	27	289	13	157	9	179	8	31	11	50	500	339	839	0.83 7:45-8:45	
8:00-9:00	29	152	163	344	232	26	27	285	15	161	10	186	6	33	11	50	530	335	865	0.85 8:00-9:00	
AM Peak 8:00-9:00																					
29	152	163	344	232	26	27	285	15	161	10	186	6	33	11	50	530	335	865	0.85	AM Peak 8:00-9:00	
PM																					
4:00-4:15	6	28	69	103	39	4	4	47	1	27	6	34	1	9	7	17	137	64	201	4:00-4:15	
4:15-4:30	3	31	67	101	38	10	1	49	1	44	7	52	0	5	4	9	153	58	211	4:15-4:30	
4:30-4:45	4	43	61	108	35	9	3	47	7	47	1	55	0	7	1	8	163	55	218	4:30-4:45	
4:45-5:00	1	40	58	99	45	4	2	51	2	34	1	37	2	6	2	10	136	61	197	4:45-5:00	
5:00-5:15	3	39	75	117	27	7	1	35	2	57	2	61	1	7	2	10	178	45	223	5:00-5:15	
5:15-5:30	2	26	61	89	24	6	6	36	1	41	3	45	0	4	1	5	134	41	175	5:15-5:30	
5:30-5:45	3	37	76	116	50	5	0	55	1	48	1	50	0	4	1	5	166	60	226	5:30-5:45	
5:45-6:00	2	28	65	95	60	4	1	65	1	40	3	44	0	2	5	7	139	72	211	5:45-6:00	
6:00-6:15	0	39	93	132	41	2	0	43	4	43	1	48	2	4	4	10	180	53	233	6:00-6:15	
6:15-6:30	4	53	41	98	31	2	0	33	0	44	2	46	0	0	3	3	144	36	180	6:15-6:30	
6:30-6:45	1	29	54	84	24	0	0	24	2	43	1	46	0	4	1	5	130	29	159	6:30-6:45	
6:45-7:00	2	28	49	79	44	4	1	49	1	21	1	23	0	5	1	6	102	55	157	6:45-7:00	
3 Hour Totals	31	421	769	1,221	458	57	19	634	23	489	29	541	6	57	32	95	1,762	629	2,391		
1 Hour Totals																					
4:00-5:00	14	142	255	411	157	27	10	194	11	152	15	178	3	27	14	44	589	238	827	0.95 4:00-5:00	
4:15-5:15	11	153	261	425	145	30	7	182	12	182	11	205	3	25	9	37	630	219	849	0.95 4:15-5:15	
4:30-5:30	10	148	255	413	131	26	12	169	12	179	7	198	3	24	6	33	611	202	813	0.91 4:30-5:30	
4:45-5:45	9	142	270	421	146	22	9	177	6	180	7	193	3	21	6	30	614	207	821	0.91 4:45-5:45	
5:00-6:00	10	130	277	417	161	22	8	191	5	186	9	200	1	17	9	27	617	218	835	0.92 5:00-6:00	
5:15-6:15	7	130	295	432	175	17	7	199	7	172	8	187	2	14	11	27	619	226	845	0.91 5:15-6:15	
5:30-6:30	9	157	275	441	182	13	1	196	6	175	7	188	2	10	13	25	629	221	850	0.91 5:30-6:30	
5:45-6:45	7	149	253	409	156	8	1	165	7	170	7	184	2	10	13	25	553	190	783	0.84 5:45-6:45	
6:00-7:00	7	149	237	393	140	8	1	149	7	151	5	163	2	13	9	24	556	173	729	0.78 6:00-7:00	
PM Peak 5:30-6:30																					
9	157	275	441	182	13	1	196	6	175	7	188	2	10	13	25	629	221	850	0.91	PM Peak 5:30-6:30	

Wells & Associates, LLC
McLean, Virginia

Pedestrian Volume Survey



Project Name: Atlantic Plumbing
Project Number: 2799
Location: Washington DC
Intersection: Florida Avenue, Barry Place,
Weather: Clear
Date: 11/2/2005
Surveyor:
Hours: Mileage:



TIME	Movement							
	1	2	3	4	5	6	7	8
AM								
6:00-6:15	0	2	3	2	0	1	0	0
6:15-6:30	1	1	2	1	0	0	0	0
6:30-6:45	1	2	1	2	0	1	1	0
6:45-7:00	1	0	1	6	0	4	2	3
7:00-7:15	0	1	3	1	1	3	1	0
7:15-7:30	1	2	2	4	0	3	4	0
7:30-7:45	1	3	3	0	0	0	2	3
7:45-8:00	0	1	2	5	0	3	0	0
8:00-8:15	1	0	3	14	0	5	2	1
8:15-8:30	4	2	0	5	1	4	1	0
8:30-8:45	1	0	2	1	0	0	0	1
8:45-9:00	3	2	0	0	1	2	0	0
PM								
4:00-4:15	1	1	1	0	0	0	8	2
4:15-4:30	0	1	3	0	5	0	3	0
4:30-4:45	0	0	8	3	0	0	2	1
4:45-5:00	3	0	1	2	0	0	7	9
5:00-5:15	1	2	8	4	1	1	3	2
5:15-5:30	2	3	1	5	2	2	6	10
5:30-5:45	6	5	2	3	1	1	3	4
5:45-6:00	2	0	5	7	0	1	7	1
6:00-6:15	3	2	4	0	5	0	3	0
6:15-6:30	2	0	3	1	1	1	0	5
6:30-6:45	0	1	0	2	0	0	2	3
6:45-7:00	0	0	0	0	0	0	0	0

Wells & Associates, LLC

McLean, Virginia

Existing Traffic Count

PROJECT		Atlantic Plumbing				DATE:		12/22/2005		SOUTHBOUND ROAD				Georgia Avenue							
W & A JOB NO.		2799				DAY		Tuesday		NORTHBOUND ROAD				Georgia Avenue							
INTERSECTION		Georgia Avenue and V Street				WEATHER		Clear		WESTBOUND ROAD				V Street							
LOCATION		Washington DC				COUNTED BY		CFP		EASTBOUND ROAD				V Street							
						INPUTED BY:		CFP													
Time Period	Turning Movements																		Total	PHF	Time Period
	Southbound Georgia Avenue				Westbound V Street				Northbound Georgia Avenue				Eastbound V Street				North & South	East & West			
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:00-6:15	3	64	0	67	4	1	1	6	4	43	4	51	2	1	2	5	118	11	129		6:00-6:15
6:15-6:30	5	102	2	109	3	1	2	6	3	72	4	79	2	2	1	5	188	11	199		6:15-6:30
6:30-6:45	8	108	3	119	3	2	3	8	2	55	4	61	5	1	1	7	180	15	195		6:30-6:45
6:45-7:00	7	139	1	147	3	3	5	11	1	79	7	87	2	8	1	11	234	22	256		6:45-7:00
7:00-7:15	9	121	4	134	1	1	3	5	3	92	5	100	3	6	5	14	234	19	253		7:00-7:15
7:15-7:30	13	135	8	156	4	5	6	15	2	74	11	87	7	19	6	32	243	47	290		7:15-7:30
7:30-7:45	21	168	6	195	3	8	4	15	3	80	5	88	7	5	5	17	283	32	315		7:30-7:45
7:45-8:00	20	179	8	207	2	8	4	14	8	97	3	108	3	8	2	13	315	27	342		7:45-8:00
8:00-8:15	18	187	3	208	5	8	7	20	2	102	6	110	5	9	11	25	318	45	363		8:00-8:15
8:15-8:30	24	217	6	247	3	11	5	19	2	106	10	118	11	12	5	28	365	47	412		8:15-8:30
8:30-8:45	20	210	8	238	3	12	6	21	6	79	8	93	7	8	10	25	331	46	377		8:30-8:45
8:45-9:00	19	215	11	245	1	9	10	20	8	78	6	92	10	16	6	32	337	52	389		8:45-9:00
3 Hour Totals	167	1,845	60	2,072	35	69	56	160	44	957	73	1,074	64	95	55	214	3,146	374	3,520		
1 Hour Totals																					
6:00-7:00	23	413	6	442	13	7	11	31	10	249	19	278	11	12	5	28	720	59	779	0.76	6:00-7:00
6:15-7:15	29	470	10	509	10	7	13	30	9	298	20	327	12	17	8	37	836	67	903	0.88	6:15-7:15
6:30-7:30	37	503	16	556	11	11	17	39	8	300	27	335	17	34	13	64	891	103	994	0.86	6:30-7:30
6:45-7:45	50	563	19	632	11	17	18	46	9	325	28	362	19	38	17	74	994	120	1,114	0.88	6:45-7:45
7:00-8:00	63	603	26	692	10	22	17	49	16	343	24	383	20	38	18	76	1,075	125	1,200	0.88	7:00-8:00
7:15-8:15	72	669	25	766	14	29	21	64	15	353	25	393	22	41	24	87	1,159	151	1,310	0.90	7:15-8:15
7:30-8:30	83	751	23	857	13	35	20	68	15	385	24	424	26	34	23	83	1,281	151	1,432	0.87	7:30-8:30
7:45-8:45	82	793	25	900	13	39	22	74	18	384	27	429	26	37	28	91	1,329	165	1,494	0.91	7:45-8:45
8:00-9:00	81	829	28	938	12	40	28	80	18	365	30	413	33	45	32	110	1,351	190	1,541	0.94	8:00-9:00
AM Peak 8:00-9:00																					
PM																					
4:00-4:15	14	141	4	159	3	17	21	41	5	128	10	143	17	12	21	50	302	91	393		4:00-4:15
4:15-4:30	22	140	3	165	10	9	16	35	0	123	8	131	14	4	7	25	296	60	356		4:15-4:30
4:30-4:45	24	144	1	169	10	16	10	36	4	125	12	141	16	12	7	35	310	71	381		4:30-4:45
4:45-5:00	22	118	3	143	9	21	19	49	0	127	13	140	16	6	5	27	283	76	359		4:45-5:00
5:00-5:15	15	145	3	163	13	20	14	47	2	127	15	144	9	9	9	27	307	74	381		5:00-5:15
5:15-5:30	19	149	3	171	7	16	18	41	2	127	7	136	13	10	8	31	307	72	379		5:15-5:30
5:30-5:45	18	131	2	151	8	16	20	44	2	125	17	144	7	8	12	27	295	71	366		5:30-5:45
5:45-6:00	16	137	1	154	5	10	13	28	0	141	7	148	9	6	9	24	302	52	354		5:45-6:00
6:00-6:15	19	138	1	158	4	9	18	31	0	132	13	145	7	8	12	27	303	58	361		6:00-6:15
6:15-6:30	17	125	0	142	4	12	12	28	3	119	13	135	11	3	9	23	277	51	328		6:15-6:30
6:30-6:45	14	135	1	150	2	9	4	15	4	125	22	151	12	4	12	28	301	43	344		6:30-6:45
6:45-7:00	20	117	0	137	8	8	14	30	0	120	9	129	15	6	4	25	266	55	321		6:45-7:00
3 Hour Totals	220	1,620	22	1,862	83	163	179	425	22	1,519	146	1,687	146	88	115	349	3,549	774	4,323		
1 Hour Totals																					
4:00-5:00	82	543	11	636	32	63	66	161	9	503	43	555	63	34	40	137	1,191	298	1,489	0.95	4:00-5:00
4:15-5:15	83	547	10	640	42	66	59	167	6	502	48	556	55	31	28	114	1,196	281	1,477	0.97	4:15-5:15
4:30-5:30	80	556	10	646	39	73	61	173	8	506	47	561	54	37	29	120	1,207	293	1,500	0.98	4:30-5:30
4:45-5:45	74	543	11	628	37	73	71	181	6	506	52	564	45	33	34	112	1,192	293	1,485	0.97	4:45-5:45
5:00-6:00	68	562	9	639	33	62	65	160	6	520	46	572	38	33	38	109	1,211	269	1,480	0.97	5:00-6:00
5:15-6:15	72	555	7	634	24	51	69	144	4	525	44	573	36	32	41	109	1,207	253	1,460	0.96	5:15-6:15
5:30-6:30	70	531	4	605	21	47	63	131	5	517	50	572	34	25	42	101	1,177	232	1,409	0.96	5:30-6:30
5:45-6:45	66	535	3	604	15	40	47	102	7	517	55	579	39	21	42	102	1,183	204	1,387	0.96	5:45-6:45
6:00-7:00	70	515	2	587	18	38	48	104	7	496	57	560	45	21	37	103	1,147	207	1,354	0.94	6:00-7:00
PM Peak 4:30-5:30																					
80	556	10	646	39	73	61	173	8	506	47	561	54	37	29	120	1,207	293	1,500	0.98	PM Peak 4:30-5:30	

Wells & Associates, LLC

McLean, Virginia

Existing Traffic Count

PROJECT		Atlantic Plumbing				DATE		12/22/2005		SOUTHBOUND ROAD				Sherman							
W & A JOB NO		2799				DAY		Tuesday		NORTHBOUND ROAD				Sherman							
INTERSECTION		Sherman Avenue and University Doms				WEATHER		Clear		WESTBOUND ROAD				University Doms							
LOCATION		Washington DC				COUNTED BY		CFP		EASTBOUND ROAD				N/A							
						INPUTED BY		CFP													
Time Period	Turning Movements																Total	PHF	Time Period		
	Southbound Sherman				Westbound University Doms				Northbound Sherman				Eastbound N/A							North & South	East & West
	1 Right	2 Thru	3 Left	Total	4 Right	5 Thru	6 Left	Total	7 Right	8 Thru	9 Left	Total	10 Right	11 Thru	12 Left	Total					
AM																					
6:00-6:15	0	67	0	67	0	0	0	0	0	25	0	25	0	0	0	0	92	0	92	6:00-6:15	
6:15-6:30	0	80	0	80	1	0	0	1	1	22	0	23	0	0	0	0	103	1	104	6:15-6:30	
6:30-6:45	0	103	0	103	0	0	0	0	0	40	0	40	0	0	0	0	143	0	143	6:30-6:45	
6:45-7:00	0	124	0	124	0	0	0	0	0	49	0	49	0	0	0	0	173	0	173	6:45-7:00	
7:00-7:15	0	133	0	133	0	0	0	0	1	55	0	56	0	0	0	0	189	0	189	7:00-7:15	
7:15-7:30	0	152	0	152	0	0	0	0	0	68	0	68	0	0	0	0	220	0	220	7:15-7:30	
7:30-7:45	0	197	0	197	0	0	0	0	0	70	0	70	0	0	0	0	267	0	267	7:30-7:45	
7:45-8:00	0	210	0	210	0	0	0	0	0	72	0	73	0	0	0	0	283	0	283	7:45-8:00	
8:00-8:15	0	260	0	260	0	0	0	0	1	90	0	91	0	0	0	0	351	0	351	8:00-8:15	
8:15-8:30	0	232	0	232	0	0	0	0	1	93	0	94	0	0	0	0	326	0	326	8:15-8:30	
8:30-8:45	0	282	0	282	0	0	0	0	2	86	0	88	0	0	0	0	370	0	370	8:30-8:45	
8:45-9:00	0	273	0	273	0	0	0	0	2	103	0	105	0	0	0	0	378	0	378	8:45-9:00	
3 Hour Totals	0	2,113	0	2,113	1	0	0	1	9	773	0	782	0	0	0	0	2,895	1	2,896		
1 Hour Totals																					
6:00-7:00	0	374	0	374	1	0	0	1	1	136	0	137	0	0	0	0	511	1	512	0.74 6:00-7:00	
6:15-7:15	0	440	0	440	1	0	0	1	2	166	0	168	0	0	0	0	608	1	609	0.81 6:15-7:15	
6:30-7:30	0	512	0	512	0	0	0	0	1	212	0	213	0	0	0	0	725	0	725	0.82 6:30-7:30	
6:45-7:45	0	606	0	606	0	0	0	0	1	242	0	243	0	0	0	0	849	0	849	0.79 6:45-7:45	
7:00-8:00	0	692	0	692	0	0	0	0	2	265	0	267	0	0	0	0	959	0	959	0.85 7:00-8:00	
7:15-8:15	0	819	0	819	0	0	0	0	2	300	0	302	0	0	0	0	1,121	0	1,121	0.80 7:15-8:15	
7:30-8:30	0	899	0	899	0	0	0	0	3	325	0	328	0	0	0	0	1,227	0	1,227	0.87 7:30-8:30	
7:45-8:45	0	984	0	984	0	0	0	0	5	341	0	346	0	0	0	0	1,330	0	1,330	0.90 7:45-8:45	
8:00-9:00	0	1,047	0	1,047	0	0	0	0	6	372	0	378	0	0	0	0	1,425	0	1,425	0.94 8:00-9:00	
AM Peak 8:00-9:00																					
0	1,047	0	1,047	0	0	0	0	6	372	0	378	0	0	0	0	0	1,425	0	1,425	0.94 AM Peak 8:00-9:00	
PM																					
4:00-4:15	0	158	0	158	0	0	0	0	2	157	0	159	0	0	0	0	317	0	317	4:00-4:15	
4:15-4:30	0	123	0	123	0	0	0	0	1	172	0	173	0	0	0	0	296	0	296	4:15-4:30	
4:30-4:45	0	131	0	131	2	0	0	2	1	160	0	161	0	0	0	0	292	2	294	4:30-4:45	
4:45-5:00	0	158	0	158	1	0	0	1	0	174	0	174	0	0	0	0	332	1	333	4:45-5:00	
5:00-5:15	0	145	0	145	0	0	0	0	0	217	0	217	0	0	0	0	362	0	362	5:00-5:15	
5:15-5:30	0	140	0	140	0	0	0	0	2	215	0	217	0	0	0	0	357	0	357	5:15-5:30	
5:30-5:45	0	134	0	134	0	0	0	0	0	244	0	244	0	0	0	0	378	0	378	5:30-5:45	
5:45-6:00	0	154	0	154	1	0	0	1	1	271	0	272	0	0	0	0	426	1	427	5:45-6:00	
6:00-6:15	0	126	0	126	0	0	0	0	1	206	0	207	0	0	0	0	333	0	333	6:00-6:15	
6:15-6:30	0	124	0	124	0	0	0	0	1	198	0	199	0	0	0	0	323	0	323	6:15-6:30	
6:30-6:45	0	100	0	100	0	0	0	0	2	158	0	160	0	0	0	0	260	0	260	6:30-6:45	
6:45-7:00	0	100	0	100	0	0	0	0	0	155	0	155	0	0	0	0	255	0	255	6:45-7:00	
3 Hour Totals	0	1,593	0	1,593	4	0	0	4	11	2,327	0	2,338	0	0	0	0	3,931	4	3,935		
1 Hour Totals																					
4:00-5:00	0	570	0	570	3	0	0	3	4	663	0	667	0	0	0	0	1,237	3	1,240	0.93 4:00-5:00	
4:15-5:15	0	557	0	557	3	0	0	3	2	723	0	725	0	0	0	0	1,282	3	1,285	0.89 4:15-5:15	
4:30-5:30	0	574	0	574	3	0	0	3	3	766	0	769	0	0	0	0	1,343	3	1,346	0.93 4:30-5:30	
4:45-5:45	0	577	0	577	1	0	0	1	2	850	0	852	0	0	0	0	1,429	1	1,430	0.95 4:45-5:45	
5:00-6:00	0	573	0	573	1	0	0	1	3	947	0	950	0	0	0	0	1,523	1	1,524	0.89 5:00-6:00	
5:15-6:15	0	554	0	554	1	0	0	1	4	936	0	940	0	0	0	0	1,494	1	1,495	0.88 5:15-6:15	
5:30-6:30	0	538	0	538	1	0	0	1	3	919	0	922	0	0	0	0	1,460	1	1,461	0.86 5:30-6:30	
5:45-6:45	0	504	0	504	1	0	0	1	5	833	0	838	0	0	0	0	1,342	1	1,343	0.79 5:45-6:45	
6:00-7:00	0	450	0	450	0	0	0	0	4	717	0	721	0	0	0	0	1,171	0	1,171	0.88 6:00-7:00	
PM Peak 5:00-6:00																					
0	573	0	573	1	0	0	1	3	947	0	950	0	0	0	0	0	1,523	1	1,524	0.89 PM Peak 5:00-6:00	

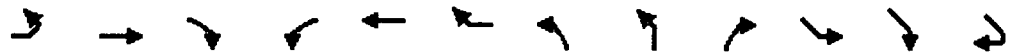
Appendix B
Existing Levels of Service



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	241	10	170	15	163	152	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	262	11	185	16	177	165	32

Direction Lane #	EB 1	WB 1	NB 1	SE 1	SE 2
Volume Total (vph)	54	322	212	177	197
Volume Left (vph)	12	30	11	177	0
Volume Right (vph)	7	262	16	0	32
Hadj (s)	0.01	-0.44	0.00	0.53	-0.08
Departure Headway (s)	6.0	5.1	5.6	6.4	5.8
Degree Utilization, x	0.09	0.46	0.33	0.31	0.31
Capacity (veh/h)	517	661	590	537	594
Control Delay (s)	9.6	12.3	11.3	11.1	10.2
Approach Delay (s)	9.6	12.3	11.3	10.6	
Approach LOS	A	B	B	B	

Intersection Summary				
Delay		11.3		
HCM Level of Service		B		
Intersection Capacity Utilization		49.8%	ICU Level of Service	A
Analysis Period (min)		15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SEL	SEB	SEB
Lane Configurations		↔			↔			↔		↔	↔	↔
Sign Control		Stop			Stop			Stop		Stop		
Volume (vph)	13	10	2	1	13	182	10	216	6	275	157	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	198	11	235	7	299	171	10

Direction Lane #	EB 1	WB 1	NB 1	SE 1	SE 2
Volume Total (vph)	27	213	252	299	180
Volume Left (vph)	14	1	11	299	0
Volume Right (vph)	2	198	7	0	10
Hadj (s)	0.09	-0.52	0.03	0.53	0.00
Departure Headway (s)	6.2	5.2	5.3	6.0	5.5
Degree Utilization, x	0.05	0.31	0.37	0.50	0.27
Capacity (veh/h)	501	634	645	582	638
Control Delay (s)	9.5	10.5	11.5	13.7	9.3
Approach Delay (s)	9.5	10.5	11.5	12.0	
Approach LOS	A	B	B	B	

Intersection Summary				
Delay		11.5		
HCM Level of Service		B		
Intersection Capacity Utilization		50.1%	ICU Level of Service	A
Analysis Period (min)		15		

2005 Existing Conditions
12: Barry Place & Sherman Street

AM Peak Period
12/21/2005

												
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
Frt		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			3481			3528	1583
Flt Permitted		0.80			0.99			0.81			0.81	1.00
Satd. Flow (perm)		1499			1790			2815			2867	1583
Volume (vph)	90	120	1	7	131	37	2	327	40	71	1078	163
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)	98	130	1	8	142	40	2	355	43	77	1172	177
RTOR Reduction (vph)	0	0	0	0	10	0	0	9	0	0	0	107
Lane Group Flow (vph)	0	229	0	0	180	0	0	391	0	0	1249	70
Turn Type	Perm		Perm		Perm		Perm		Perm		Perm	
Protected Phases	4		8		2		2		6		6	
Permitted Phases	4		8		2		2		6		6	
Actuated Green, G (s)	65.0		65.0		25.0		25.0		25.0		25.0	
Effective Green, g (s)	66.0		66.0		26.0		26.0		26.0		26.0	
Actuated g/C Ratio	0.66		0.66		0.26		0.26		0.26		0.26	
Clearance Time (s)	5.0		5.0		5.0		5.0		5.0		5.0	
Lane Grp Cap (vph)	989		1181		732		732		745		412	
v/s Ratio Prot												
v/s Ratio Perm	c0.15		0.10		0.14		0.14		c0.44		0.04	
v/c Ratio	0.23		0.15		0.53		0.53		1.68		0.17	
Uniform Delay, d1	6.8		6.4		31.8		31.8		37.0		28.7	
Progression Factor	1.00		1.00		1.51		1.51		1.00		1.00	
Incremental Delay, d2	0.5		0.3		2.6		2.6		310.3		0.9	
Delay (s)	7.4		6.7		50.6		50.6		347.3		29.6	
Level of Service	A		A		D		D		F		C	
Approach Delay (s)	7.4		6.7		50.6		50.6		307.9			
Approach LOS	A		A		D		D		F			
Intersection Summary												
HCM Average Control Delay	205.9				HCM Level of Service				F			
HCM Volume to Capacity ratio	0.64											
Actuated Cycle Length (s)	100.0				Sum of lost time (s)				8.0			
Intersection Capacity Utilization	76.5%				ICU Level of Service				D			
Analysis Period (min)	15											
c Critical Lane Group												

2005 Existing Conditions
12: Barry Place & Sherman Street

PM Peak Period
12/21/2005

												
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
Frt		1.00			0.96			1.00			1.00	0.85
Flt Protected		0.98			0.99			1.00			1.00	1.00
Satd. Flow (prot)		1822			1770			3524			3522	1583
Flt Permitted		0.80			0.94			0.95			0.52	1.00
Satd. Flow (perm)		1483			1677			3345			1853	1583
Volume (vph)	119	167	5	23	99	59	8	960	26	51	478	89
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)	129	182	5	25	108	64	9	1043	28	55	520	97
RTOR Reduction (vph)	0	1	0	0	1	0	0	2	0	0	0	72
Lane Group Flow (vph)	0	315	0	0	196	0	0	1078	0	0	575	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)		979			1107			870			482	412
v/s Ratio Prot												
v/s Ratio Perm		0.21			0.12			0.32			0.31	0.02
v/c Ratio		0.32			0.18			1.24			1.19	0.06
Uniform Delay, d1		7.3			6.5			37.0			37.0	27.8
Progression Factor		1.00			1.00			1.48			1.00	1.00
Incremental Delay, d2		0.9			0.3			114.7			105.8	0.3
Delay (s)		8.2			6.9			169.5			142.8	28.1
Level of Service		A			A			F			F	C
Approach Delay (s)		8.2			6.9			169.5			126.2	
Approach LOS		A			A			F			F	
Intersection Summary												
HCM Average Control Delay	120.0			HCM Level of Service			F					
HCM Volume to Capacity ratio	0.58											
Actuated Cycle Length (s)	100.0			Sum of lost time (s)			8.0					
Intersection Capacity Utilization	81.4%			ICU Level of Service			D					
Analysis Period (min)	15											
c Critical Lane Group												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↰					↰		↰
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	15	216	0	0	164	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	235	0	0	178	42	0	0	0	18	0	12
Direction, Lane #	EB 1	WB 1	SB 1	SB 2								
Volume Total (vph)	251	221	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	4.8								
Degree Utilization, x	0.30	0.25	0.03	0.02								
Capacity (veh/h)	832	841	549	674								
Control Delay (s)	9.0	8.6	8.0	6.7								
Approach Delay (s)	9.0	8.6	7.5									
Approach LOS	A	A	A									
Intersection Summary												
Delay			8.7									
HCM Level of Service			A									
Intersection Capacity Utilization		33.7%			ICU Level of Service		A					
Analysis Period (min)		15										

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Volume (vph)	20	224	0	0	146	52	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	243	0	0	159	57	0	0	0	37	0	38
Direction, Lane #	EB 1	WB 1	SB 1	SB 2								
Volume Total (vph)	265	215	37	38								
Volume Left (vph)	22	0	37	0								
Volume Right (vph)	0	57	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	0.32	0.26	0.06	0.05								
Capacity (veh/h)	803	812	547	671								
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			8.9									
HCM Level of Service			A									
Intersection Capacity Utilization			37.1%		ICU Level of Service					A		
Analysis Period (min)			15									



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1			1	1	
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	150	33	10	157	46	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	163	36	11	171	50	41
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			199		373	181
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			199		373	181
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)			1373		623	862

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	199	182	91
Volume Left	0	11	50
Volume Right	36	0	41
cSH	1700	1373	712
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	28.0%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↑	↑
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	191	67	13	175	23	84
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	208	73	14	190	25	91
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			280		462	244
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			280		462	244
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	89
cM capacity (veh/h)			1282		551	795

Direction Lane #	EB 1	WB 1	NB 1
Volume Total	280	204	116
Volume Left	0	14	25
Volume Right	73	0	91
cSH	1700	1282	726
Volume to Capacity	0.16	0.01	0.16
Queue Length 95th (ft)	0	1	14
Control Delay (s)	0.0	0.6	10.9
Lane LOS		A	B
Approach Delay (s)	0.0	0.6	10.9
Approach LOS			B

Intersection Summary			
Average Delay		2.3	
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		



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	3516	
Flt Permitted	0.98			0.56	1.00	
Satd. Flow (perm)	1695			1990	3516	
Volume (vph)	94	94	94	511	1347	63
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	102	102	102	555	1464	68
RTOR Reduction (vph)	36	0	0	0	3	0
Lane Group Flow (vph)	168	0	0	657	1529	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			1777	1899	
v/s Ratio Prot	c0.10			c0.07	c0.43	
v/s Ratio Perm				0.20		
v/c Ratio	0.71			0.37	0.81	
Uniform Delay, d1	41.1			4.7	18.7	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	16.4			0.6	3.8	
Delay (s)	57.4			5.2	22.5	
Level of Service	E			A	C	
Approach Delay (s)	57.4			5.2	22.5	
Approach LOS	E			A	C	

Intersection Summary			
HCM Average Control Delay	20.7	HCM Level of Service	C
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰			↱↰	↱↰	
Ideal Flow (vphpl)	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			2420	3489	
Volume (vph)	170	105	64	780	1190	124
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	185	114	70	848	1293	135
RTOR Reduction (vph)	22	0	0	0	8	0
Lane Group Flow (vph)	277	0	0	918	1420	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			2012	1884	
v/s Ratio Prot	c0.16			c0.09	c0.41	
v/s Ratio Perm				0.25		
v/c Ratio	1.15			0.46	0.75	
Uniform Delay, d1	43.0			5.1	17.8	
Progression Factor	1.00			1.00	1.00	
Incremental Delay, d2	105.6			0.7	2.9	
Delay (s)	148.6			5.9	20.7	
Level of Service	F			A	C	
Approach Delay (s)	148.6			5.9	20.7	
Approach LOS	F			A	C	

Intersection Summary			
HCM Average Control Delay	30.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	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)	195	0	0	186	1081	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	212	0	0	202	1175	5
RTOR Reduction (vph)	0	0	0	0	0	2
Lane Group Flow (vph)	212	0	0	202	1175	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	c0.11			0.11	c0.66	
v/s Ratio Perm						0.00
v/c Ratio	0.36			0.34	1.11	0.00
Uniform Delay, d1	26.1			25.9	20.0	8.0
Progression Factor	1.52			1.00	2.30	2.64
Incremental Delay, d2	1.6			1.5	49.4	0.0
Delay (s)	41.3			27.5	95.5	21.1
Level of Service	D			C	F	C
Approach Delay (s)	41.3			27.5	95.2	
Approach LOS	D			C	F	

Intersection Summary			
HCM Average Control Delay	79.4	HCM Level of Service	E
HCM Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	76.8%	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)	232	0	0	160	506	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	252	0	0	174	550	5
RTOR Reduction (vph)	0	0	0	0	0	2
Lane Group Flow (vph)	252	0	0	174	550	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			0.09	c0.31	
v/s Ratio Perm						0.00
v/c Ratio	0.42			0.29	0.52	0.00
Uniform Delay, d1	26.7			25.5	11.6	8.0
Progression Factor	1.65			1.00	2.55	2.70
Incremental Delay, d2	1.6			1.2	0.2	0.0
Delay (s)	45.7			26.7	29.7	21.6
Level of Service	D			C	C	C
Approach Delay (s)	45.7			26.7	29.6	
Approach LOS	D			C	C	

Intersection Summary			
HCM Average Control Delay	33.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

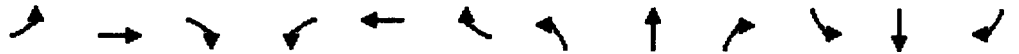
2005 Existing Conditions
2: Bryant Street & Georgia Avenue

AM Peak Period
12/21/2005

												
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			3505	
Flt Permitted								1.00			0.64	
Satd. Flow (perm)								3482			2255	
Volume (vph)	0	0	0	0	0	0	0	605	74	284	1157	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	658	80	309	1258	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	726	0	0	1567	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			2436	
v/s Ratio Prot								0.21			0.21	
v/s Ratio Perm											0.37	
v/c Ratio								0.36			0.64	
Uniform Delay, d1								9.1			0.9	
Progression Factor								1.00			1.00	
Incremental Delay, d2								0.5			1.3	
Delay (s)								9.6			2.3	
Level of Service								A			A	
Approach Delay (s)		0.0			0.0			9.6			2.3	
Approach LOS		A			A			A			A	
Intersection Summary												
HCM Average Control Delay		4.6						HCM Level of Service		A		
HCM Volume to Capacity ratio		0.64										
Actuated Cycle Length (s)		80.0						Sum of lost time (s)		8.0		
Intersection Capacity Utilization		66.0%						ICU Level of Service		C		
Analysis Period (min)		15										
c Critical Lane Group												

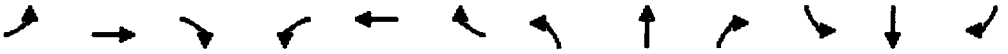
2005 Existing Conditions
2: Bryant Street & Georgia Avenue

PM Peak Period
12/21/2005



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			1871	
Volume (vph)	0	0	0	0	0	0	0	844	102	382	875	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	917	111	415	951	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	1017	0	0	1407	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			2205	
v/s Ratio Prot								0.29			c0.21	
v/s Ratio Perm											c0.37	
v/c Ratio								0.51			0.64	
Uniform Delay, d1								10.2			0.9	
Progression Factor								1.00			1.00	
Incremental Delay, d2								0.9			1.4	
Delay (s)								11.1			2.4	
Level of Service								B			A	
Approach Delay (s)		0.0			0.0			11.1			2.4	
Approach LOS		A			A			B			A	

Intersection Summary			
HCM Average Control Delay	6.1	HCM Level of Service	A
HCM Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰		↱	↰		↱		↱			↰	↰
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	12	0	115	3	0	2	0	552	5	1	1267	0
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)	13	0	125	3	0	2	0	600	5	1	1377	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh												
Upstream signal (ft)											318	
pX, platoon unblocked												
vC, conflicting volume	1984	1985	689	1418	1982	603	1377			605		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1984	1985	689	1418	1982	603	1377			605		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	64	100	68	95	100	100	100			100		
cM capacity (veh/h)	36	60	388	66	61	442	494			969		

Direction Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	13	125	4	1	605	460	918
Volume Left	13	0	3	0	0	1	0
Volume Right	0	125	1	1	5	0	0
cSH	36	388	78	442	1700	969	1700
Volume to Capacity	0.36	0.32	0.05	0.00	0.36	0.00	0.54
Queue Length 95th (ft)	30	34	4	0	0	0	0
Control Delay (s)	153.0	18.6	53.8	13.2	0.0	0.0	0.0
Lane LOS	F	C	F	B		A	
Approach Delay (s)	31.3		43.0		0.0	0.0	
Approach LOS	D		E				

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	55.5%	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		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Volume (veh/h)	44	0	175	0	0	0	0	1182	6	0	666	0
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)	48	0	190	0	0	0	0	1285	7	0	724	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh												
Upstream signal (ft)											318	
pX, platoon unblocked												
vC, conflicting volume	2012	2015	362	1840	2012	1288	724			1291		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2012	2015	362	1840	2012	1288	724			1291		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	70	100	100	100	100			100		
cM capacity (veh/h)	35	58	635	33	58	155	874			533		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	48	190	0	0	1291	241	483
Volume Left	48	0	0	0	0	0	0
Volume Right	0	190	0	0	7	0	0
cSH	35	635	1700	1700	1700	533	1700
Volume to Capacity	1.38	0.30	0.00	0.00	0.76	0.00	0.28
Queue Length 95th (ft)	129	31	0	0	0	0	0
Control Delay (s)	463.8	13.1	0.0	0.0	0.0	0.0	0.0
Lane LOS	F	B	A	A			
Approach Delay (s)	103.6		0.0		0.0	0.0	
Approach LOS	F		A				

Intersection Summary			
Average Delay	10.9		
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	YT		↑↑			↑↑
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)	154	220	459	0	0	1157
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	167	239	499	0	0	1258
RTOR Reduction (vph)	51	0	0	0	0	0
Lane Group Flow (vph)	355	0	499	0	0	1258
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	c0.21		0.14			c0.36
v/s Ratio Perm						
v/c Ratio	0.62		0.24			0.61
Uniform Delay, d1	27.6		10.3			13.7
Progression Factor	1.00		0.83			1.00
Incremental Delay, d2	5.0		0.3			1.4
Delay (s)	32.6		8.8			15.1
Level of Service	C		A			B
Approach Delay (s)	32.6		8.8			15.1
Approach LOS	C		A			B

Intersection Summary			
HCM Average Control Delay	16.9	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	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↰		↱		↱	↱
Ideal Flow (vphpl)	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)	141	200	746	0	0	837
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	153	217	811	0	0	910
RTOR Reduction (vph)	51	0	0	0	0	0
Lane Group Flow (vph)	319	0	811	0	0	910
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	c0.19		0.23			c0.26
v/s Ratio Perm						
v/c Ratio	0.56		0.40			0.44
Uniform Delay, d1	26.9		11.4			11.9
Progression Factor	1.00		0.77			1.00
Incremental Delay, d2	3.9		0.5			0.7
Delay (s)	30.8		9.3			12.6
Level of Service	C		A			B
Approach Delay (s)	30.8		9.3			12.6
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	49.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			Y	Y	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	0	5	13	84	43	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	5	14	91	47	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	166	47	47			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	166	47	47			
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	99	99			
cM capacity (veh/h)	817	1023	1561			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	5	105	47
Volume Left	0	14	0
Volume Right	5	0	0
cSH	1023	1561	1700
Volume to Capacity	0.01	0.01	0.03
Queue Length 95th (ft)	0	1	0
Control Delay (s)	8.5	1.0	0.0
Lane LOS	A	A	
Approach Delay (s)	8.5	1.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay		1.0	
Intersection Capacity Utilization	21.8%	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	12	1	107	80	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	13	1	116	87	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	205	87	87			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	205	87	87			
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	99	100			
cM capacity (veh/h)	782	972	1509			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	13	117	87
Volume Left	0	1	0
Volume Right	13	0	0
cSH	972	1509	1700
Volume to Capacity	0.01	0.00	0.05
Queue Length 95th (ft)	1	0	0
Control Delay (s)	8.8	0.1	0.0
Lane LOS	A	A	
Approach Delay (s)	8.8	0.1	0.0
Approach LOS	A		

Intersection Summary			
Average Delay		0.6	
Intersection Capacity Utilization	16.4%	ICU Level of Service	A
Analysis Period (min)	15		

HCS2000: Unsignalized Intersections Release 4.1d

ALL-WAY STOP CONTROL (AWSC) ANALYSIS

Analyst: CFP
 Agency/Co.: Wells & Associates, LLC
 Date Performed: 12/22/2005
 Analysis Time Period: AM Peak Period
 Intersection: Florida/9th/V Streets
 Jurisdiction: Washington DC
 Units: U. S. Customary
 Analysis Year: Existing Conditions
 Project ID:
 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	14	86	428	64	86	23	156	17	13	9	3	2
% 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	67	518	191		180	25	15	
% 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	67	518	191		180	25	15	
Service Time	3.4	2.6	3.7		4.7	3.8	4.7	
Utilization, x	0.11	0.71	0.32		0.35	0.04	0.03	
Dep. headway, hd	5.68	4.92	6.02		6.96	6.08	7.01	
Capacity	317	721	441		430	275	265	
Delay	9.05	18.63	11.51		13.32	9.04	9.92	
LOS	A	C	B		B	A	A	
Approach:								
Delay		17.53	11.51		12.80		9.92	
LOS		C	B		B		A	
Intersection Delay	15.29		Intersection LOS C					

HCS2000: Unsignalized Intersections Release 4.1d

ALL-WAY STOP CONTROL(AWSC) ANALYSIS

Analyst: CFP
 Agency/Co.: Wells & Associates, LLC
 Date Performed: 12/22/2005
 Analysis Time Period: PM Peak Period
 Intersection: Florida/9th/V Streets
 Jurisdiction: Washington DC
 Units: U. S. Customary
 Analysis Year: Existing Conditions
 Project ID:
 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	1	79	254	88	146	20	346	14	12	28	10	4
% 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	48	322	281		390	21	46	
% 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	48	322	281		390	21	46	
Service Time	4.5	3.9	4.6		4.9	3.9	5.5	
Utilization, x	0.09	0.55	0.54		0.77	0.04	0.10	
Dep. headway, hd	6.84	6.20	6.94		7.15	6.22	7.83	
Capacity	298	554	496		492	271	296	
Delay	10.22	16.36	17.52		30.33	9.15	11.40	
LOS	B	C	C		D	A	B	
Approach:								
Delay		15.56		17.52		29.25		11.40
LOS		C		C		D		B
Intersection Delay	20.96		Intersection LOS C					



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	77	7	15	145	29	11	44	29	15	16	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	84	8	16	158	32	12	48	32	16	17	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)	307													
pX, platoon unblocked														
vC, conflicting volume	189				91				373	361	88	401	349	173
vC1, stage 1 conf vol														
vC2, stage 2 conf vol														
vCu, unblocked vol	189				91				373	361	88	401	349	173
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				98	91	97	97	97	98
cM capacity (veh/h)	1385				1504				546	549	971	494	558	870

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	117	205	91	52
Volume Left	26	16	12	16
Volume Right	8	32	32	18
cSH	1385	1504	645	611
Volume to Capacity	0.02	0.01	0.14	0.09
Queue Length 95th (ft)	1	1	12	7
Control Delay (s)	1.8	0.7	11.5	11.4
Lane LOS	A	A	B	B
Approach Delay (s)	1.8	0.7	11.5	11.4
Approach LOS			B	B

Intersection Summary			
Average Delay	4.3		
Intersection Capacity Utilization	23.7%	ICU Level of Service	A
Analysis Period (min)	15		

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	9	100	10	19	198	72	24	27	45	33	27	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	109	11	21	215	78	26	29	49	36	29	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)					304							
pX, platoon unblocked	0.97						0.97	0.97		0.97	0.97	0.97
vC, conflicting volume	293			120			479	468	114	493	435	254
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	272			120			463	452	114	477	417	231
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			94	94	95	92	94	96
cM capacity (veh/h)	1253			1468			444	477	938	429	499	784

Direction Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	129	314	104	100
Volume Left	10	21	26	36
Volume Right	11	78	49	35
cSH	1253	1468	605	536
Volume to Capacity	0.01	0.01	0.17	0.19
Queue Length 95th (ft)	1	1	15	17
Control Delay (s)	0.7	0.6	12.2	13.3
Lane LOS	A	A	B	B
Approach Delay (s)	0.7	0.6	12.2	13.3
Approach LOS			B	B

Intersection Summary			
Average Delay	4.4		
Intersection Capacity Utilization	34.7%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			4	1	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	2	0	0	82	37	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	2	0	0	89	40	1
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	130	41	41			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	130	41	41			
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	100	100			
cM capacity (veh/h)	864	1030	1568			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	2	89	41
Volume Left	2	0	0
Volume Right	0	0	1
cSH	864	1568	1700
Volume to Capacity	0.00	0.00	0.02
Queue Length 95th (ft)	0	0	0
Control Delay (s)	9.2	0.0	0.0
Lane LOS	A		
Approach Delay (s)	9.2	0.0	0.0
Approach LOS	A		

Intersection Summary			
Average Delay		0.2	
Intersection Capacity Utilization	14.3%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑	↑	
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Volume (veh/h)	1	1	1	95	55	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1	1	1	103	60	1
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	166	60	61			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	166	60	61			
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	100	100			
cM capacity (veh/h)	824	1005	1542			

Direction Lane #	EB 1	NB 1	SB 1
Volume Total	2	104	61
Volume Left	1	1	0
Volume Right	1	0	1
cSH	906	1542	1700
Volume to Capacity	0.00	0.00	0.04
Queue Length 95th (ft)	0	0	0
Control Delay (s)	9.0	0.1	0.0
Lane LOS	A	A	
Approach Delay (s)	9.0	0.1	0.0
Approach LOS	A		

Intersection Summary		
Average Delay	0.2	
Intersection Capacity Utilization	15.8%	ICU Level of Service A
Analysis Period (min)	15	

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑		↑↑		↑	↑↑	
Ideal Flow (vphpl)	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	
Fr		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)		3458			3539	1583		3501		1770	3524	
Flt Permitted		1.00			1.00	1.00		0.64		0.36	1.00	
Satd. Flow (perm)		3458			3539	1583		2273		676	3524	
Volume (vph)	0	542	98	0	837	147	67	352	8	248	1072	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	589	107	0	910	160	73	383	9	270	1165	35
RTOR Reduction (vph)	0	15	0	0	0	94	0	1	0	0	2	0
Lane Group Flow (vph)	0	681	0	0	910	66	0	464	0	270	1198	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		818		465	1797	
v/s Ratio Prot		0.20			c0.26					0.06	c0.34	
v/s Ratio Perm						0.04		0.20		0.23		
v/c Ratio		0.48			0.63	0.10		0.57		0.58	0.67	
Uniform Delay, d1		21.7			23.4	18.2		25.7		14.9	18.2	
Progression Factor		1.00			1.00	1.00		1.00		0.54	0.60	
Incremental Delay, d2		1.2			2.1	0.3		2.8		2.5	0.9	
Delay (s)		22.8			25.5	18.5		28.6		10.5	11.8	
Level of Service		C			C	B		C		B	B	
Approach Delay (s)		22.8			24.4			28.6			11.6	
Approach LOS		C			C			C			B	

Intersection Summary			
HCM Average Control Delay	19.5	HCM Level of Service	B
HCM Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	75.7%	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)		3470			3539	1583		3525		1770	3509	
Flt Permitted		1.00			1.00	1.00		0.88		0.10	1.00	
Satd. Flow (perm)		3470			3539	1583		3099		186	3509	
Volume (vph)	0	750	113	0	690	174	49	890	9	251	573	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	815	123	0	750	189	53	967	10	273	623	38
RTOR Reduction (vph)	0	12	0	0	0	112	0	1	0	0	4	0
Lane Group Flow (vph)	0	926	0	0	750	77	0	1029	0	273	657	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)		1423			1451	649		1116		269	1790	
v/s Ratio Prot		c0.27			0.21					c0.11	0.19	
v/s Ratio Perm						0.05		0.33		c0.41		
v/c Ratio		0.65			0.52	0.12		0.92		1.01	0.37	
Uniform Delay, d1		23.7			22.1	18.3		30.7		27.7	14.8	
Progression Factor		1.00			1.00	1.00		1.00		0.85	0.92	
Incremental Delay, d2		2.3			1.3	0.4		13.8		57.7	0.6	
Delay (s)		26.1			23.4	18.7		44.4		81.3	14.2	
Level of Service		C			C	B		D		F	B	
Approach Delay (s)		26.1			22.5			44.4			33.8	
Approach LOS		C			C			D			C	

Intersection Summary

HCM Average Control Delay	32.0	HCM Level of Service	C
HCM Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔↔↔			↔			↔	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	31	739	28	17	966	36	9	15	3	8	20	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)	34	803	30	18	1050	39	10	16	3	9	22	10
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				0.87			0.87	0.87	0.87	0.87	0.87	
vC, conflicting volume	1089			834			1293	2012	417	1587	2008	370
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1089			658			1187	2014	179	1525	2009	370
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 %	95			98			87	65	100	82	54	98
cM capacity (veh/h)	636			804			74	47	724	48	47	628

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	435	432	281	525	302	29	40
Volume Left	34	0	18	0	0	10	9
Volume Right	0	30	0	0	39	3	10
cSH	636	1700	804	1700	1700	60	61
Volume to Capacity	0.05	0.25	0.02	0.31	0.18	0.49	0.66
Queue Length 95th (ft)	4	0	2	0	0	48	70
Control Delay (s)	1.6	0.0	0.9	0.0	0.0	111.3	140.0
Lane LOS	A		A			F	F
Approach Delay (s)	0.8		0.2			111.3	140.0
Approach LOS						F	F

Intersection Summary			
Average Delay	4.8		
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔↔			↔			↔	
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Volume (veh/h)	52	936	22	24	842	27	4	17	4	15	23	18
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)	57	1017	24	26	915	29	4	18	4	16	25	20
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				0.79			0.79	0.79	0.79	0.79	0.79	
vC, conflicting volume	945			1041			1532	2139	521	1617	2136	320
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	945			793			1410	2175	137	1518	2172	320
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 %	92			96			83	43	99	50	23	97
cM capacity (veh/h)	722			654			26	32	704	32	32	676

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	565	533	255	458	258	27	61
Volume Left	57	0	26	0	0	4	16
Volume Right	0	24	0	0	29	4	20
cSH	722	1700	654	1700	1700	36	47
Volume to Capacity	0.08	0.31	0.04	0.27	0.15	0.75	1.30
Queue Length 95th (ft)	6	0	3	0	0	67	144
Control Delay (s)	2.1	0.0	1.5	0.0	0.0	239.3	374.2
Lane LOS	A		A			F	F
Approach Delay (s)	1.1		0.4			239.3	374.2
Approach LOS						F	F

Intersection Summary

Average Delay	14.3		
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
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			4.0	
Lane Util. Factor		1.00		1.00	1.00			0.95			0.95	
Frt		0.96		1.00	0.95			0.99			0.99	
Flt Protected		0.98		0.95	1.00			1.00			1.00	
Satd. Flow (prot)		1763		1770	1775			3502			3488	
Flt Permitted		0.87		0.59	1.00			0.78			0.93	
Satd. Flow (perm)		1570		1100	1775			2738			3240	
Volume (vph)	42	46	33	28	48	22	40	395	18	33	1023	101
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)	46	50	36	30	52	24	43	429	20	36	1112	110
RTOR Reduction (vph)	0	13	0	0	16	0	0	3	0	0	7	0
Lane Group Flow (vph)	0	119	0	30	60	0	0	489	0	0	1251	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	18.0			74.0			74.0	
Effective Green, g (s)		18.0		18.0	18.0			74.0			74.0	
Actuated g/C Ratio		0.18		0.18	0.18			0.74			0.74	
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)		283		198	320			2026			2398	
v/s Ratio Prot					0.03							
v/s Ratio Perm		0.08		0.03				0.18			0.39	
v/c Ratio		0.42		0.15	0.19			0.24			0.52	
Uniform Delay, d1		36.4		34.6	34.8			4.1			5.5	
Progression Factor		1.07		1.00	1.00			1.00			0.26	
Incremental Delay, d2		4.0		1.6	1.3			0.3			0.6	
Delay (s)		42.9		36.2	36.1			4.4			2.1	
Level of Service		D		D	D			A			A	
Approach Delay (s)		42.9			36.1			4.4			2.1	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	7.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	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	1.00			0.95			0.95	
Frt		0.96		1.00	0.96			1.00			0.98	
Flt Protected		0.99		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1762		1770	1781			3511			3472	
Flt Permitted		0.82		0.46	1.00			0.72			0.93	
Satd. Flow (perm)		1472		861	1781			2531			3240	
Volume (vph)	49	75	54	61	93	39	96	658	8	17	720	100
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)	53	82	59	66	101	42	104	715	9	18	783	109
RTOR Reduction (vph)	0	16	0	0	15	0	0	1	0	0	11	0
Lane Group Flow (vph)	0	178	0	66	128	0	0	827	0	0	899	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	18.0			74.0			74.0	
Effective Green, g (s)		18.0		18.0	18.0			74.0			74.0	
Actuated g/C Ratio		0.18		0.18	0.18			0.74			0.74	
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)		265		155	321			1873			2398	
v/s Ratio Prot					0.07							
v/s Ratio Perm		0.12		0.08				0.33			0.28	
v/c Ratio		0.67		0.43	0.40			0.44			0.38	
Uniform Delay, d1		38.3		36.4	36.2			5.0			4.7	
Progression Factor		0.91		1.00	1.00			1.00			0.38	
Incremental Delay, d2		12.8		8.3	3.7			0.8			0.4	
Delay (s)		47.5		44.8	39.9			5.8			2.2	
Level of Service		D		D	D			A			A	
Approach Delay (s)		47.5			41.4			5.8			2.2	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	11.5	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	75.4%	ICU Level of Service	D
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	369	6	0	1086
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	401	7	0	1180
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						309
pX, platoon unblocked						
vC, conflicting volume	1585	204			408	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1585	204			408	
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)	99	803			1148	

Direction Lane #	WB 1	NB 1	NB 2
Volume Total	0	267	140
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		Err	
Intersection Capacity Utilization		Err%	ICU Level of Service H
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	994	3	0	511
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1	1080	3	0	555
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						309
pX, platoon unblocked						
vC, conflicting volume	1638	542			1084	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1638	542			1084	
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)	91	485			639	

Direction, Lane #	WB 1	NB 1	NB 2
Volume Total	1	720	363
Volume Left	0	0	0
Volume Right	1	0	3
cSH	485	1700	1700
Volume to Capacity	0.00	0.42	0.21
Queue Length 95th (ft)	0	0	0
Control Delay (s)	12.4	0.0	0.0
Lane LOS	B		
Approach Delay (s)	12.4	0.0	
Approach LOS	B		

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

Appendix C

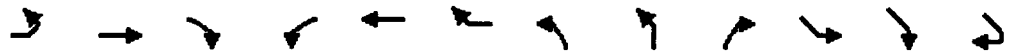
Background Future Traffic Forecasts



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	210	15	165	166	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	228	16	179	180	32

Direction, Lane #	EB 1	WB 1	NB 1	SE 1	SE 2
Volume Total (vph)	54	324	255	179	212
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	0.35
Capacity (veh/h)	480	638	587	527	582
Control Delay (s)	9.9	12.9	12.5	11.4	10.8
Approach Delay (s)	9.9	12.9	12.5	11.0	
Approach LOS	A	B	B	B	

Intersection Summary				
Delay		11.9		
HCM Level of Service		B		
Intersection Capacity Utilization		52.3%	ICU Level of Service	A
Analysis Period (min)		15		



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	246	6	278	197	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	267	7	302	214	10

Direction, Lane #	EB 1	WB 1	NB 1	SE 1	SE 2
Volume Total (vph)	27	215	285	302	224
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	616	639	576	630
Control Delay (s)	9.7	10.9	12.4	14.1	10.2
Approach Delay (s)	9.7	10.9	12.4	12.4	
Approach LOS	A	B	B	B	

Intersection Summary				
Delay		12.0		
HCM Level of Service		B		
Intersection Capacity Utilization		52.1%	ICU Level of Service	A
Analysis Period (min)		15		

Background Conditions
12: Barry Place & Sherman Street

AM Peak Period
12/21/2005



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
Frt		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		0.15			0.10			0.14			0.44	0.05
v/c Ratio		0.23			0.15			0.54			1.70	0.18
Uniform Delay, d1		6.8			6.4			31.8			37.0	28.7
Progression Factor		1.00			1.00			1.47			1.00	1.00
Incremental Delay, d2		0.6			0.3			2.7			321.1	0.9
Delay (s)		7.4			6.7			49.6			358.1	29.6
Level of Service		A			A			D			F	C
Approach Delay (s)		7.4			6.7			49.6			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			

												
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
Frt		1.00			0.96			1.00			1.00	0.85
Flt Protected		0.98			0.99			1.00			1.00	1.00
Satd. Flow (prot)		1822			1770			3524			3523	1583
Flt Permitted		0.80			0.94			0.95			0.52	1.00
Satd. Flow (perm)		1483			1677			3345			1853	1583
Volume (vph)	120	169	5	23	100	59	8	970	26	51	483	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	64	9	1054	28	55	525	98
RTOR Reduction (vph)	0	1	0	0	1	0	0	1	0	0	0	73
Lane Group Flow (vph)	0	318	0	0	197	0	0	1090	0	0	580	25
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)		979			1107			870			482	412
v/s Ratio Prot												
v/s Ratio Perm		0.21			0.12			0.33			0.31	0.02
v/c Ratio		0.33			0.18			1.25			1.20	0.06
Uniform Delay, d1		7.4			6.5			37.0			37.0	27.8
Progression Factor		1.00			1.00			1.46			1.00	1.00
Incremental Delay, d2		0.9			0.4			120.5			109.9	0.3
Delay (s)		8.2			6.9			174.5			146.9	28.1
Level of Service		A			A			F			F	C
Approach Delay (s)		8.2			6.9			174.5			129.7	
Approach LOS		A			A			F			F	
Intersection Summary												
HCM Average Control Delay		123.5						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		82.0%						ICU Level of Service		E		
Analysis Period (min)		15										
c Critical Lane Group												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰			↱					↰		↱
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									

												
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	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	165	36	11	173	50	41
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	91
Volume Left	0	11	50
Volume Right	36	0	41
cSH	1700	1371	709
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	28.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	1			1	1	
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Volume (veh/h)	193	67	13	177	23	85
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	210	73	14	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			283		467	246
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			283		467	246
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)			1280		548	793

Direction Lane #	EB 1	WB 1	NB 1
Volume Total	283	207	117
Volume Left	0	14	25
Volume Right	73	0	92
cSH	1700	1280	724
Volume to Capacity	0.17	0.01	0.16
Queue Length 95th (ft)	0	1	14
Control Delay (s)	0.0	0.6	10.9
Lane LOS		A	B
Approach Delay (s)	0.0	0.6	10.9
Approach LOS			B

Intersection Summary			
Average Delay		2.3	
Intersection Capacity Utilization	33.2%	ICU Level of Service	A
Analysis Period (min)	15		



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	520	1361	64
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	103	103	103	565	1479	70
RTOR Reduction (vph)	36	0	0	0	3	0
Lane Group Flow (vph)	170	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	41.1			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			



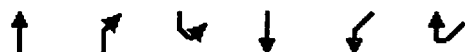
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0			4.0	4.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.95			1.00	0.99	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1714			3526	3489	
Flt Permitted	0.97			0.68	1.00	
Satd. Flow (perm)	1714			2393	3489	
Volume (vph)	172	106	65	790	1207	125
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	187	115	71	859	1312	136
RTOR Reduction (vph)	22	0	0	0	8	0
Lane Group Flow (vph)	280	0	0	930	1440	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	200	1092	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	253	0	0	217	1187	5
RTOR Reduction (vph)	0	0	0	0	0	2
Lane Group Flow (vph)	253	0	0	217	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	1.48			1.00	2.30	2.64
Incremental Delay, d2	2.1			1.7	54.4	0.0
Delay (s)	41.7			27.9	100.3	21.1
Level of Service	D			C	F	C
Approach Delay (s)	41.7			27.9	100.0	
Approach LOS	D			C	F	

Intersection Summary			
HCM Average Control Delay	81.7	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)	262	0	0	200	511	5
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	285	0	0	217	555	5
RTOR Reduction (vph)	0	0	0	0	0	2
Lane Group Flow (vph)	285	0	0	217	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			0.36	0.52	0.00
Uniform Delay, d1	27.3			26.2	11.7	8.0
Progression Factor	1.62			1.00	2.54	2.70
Incremental Delay, d2	2.0			1.7	0.2	0.0
Delay (s)	46.1			27.9	29.8	21.6
Level of Service	D			C	C	C
Approach Delay (s)	46.1			27.9	29.7	
Approach LOS	D			C	C	

Intersection Summary			
HCM Average Control Delay	33.7	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	48.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Background Conditions
2: Bryant Street & Georgia Avenue

AM Peak Period
12/21/2005



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 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	66.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Background Conditions
2: Bryant Street & Georgia Avenue

PM Peak Period
12/21/2005



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			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			0.21	
v/s Ratio Perm											0.37	
v/c Ratio								0.51			0.65	
Uniform Delay, d1								10.3			1.0	
Progression Factor								1.00			1.00	
Incremental Delay, d2								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	596	1293	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	126	0	648	1405	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	2053	703	1405			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2053	703	1405			
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	380	482			

Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2
Volume Total	13	126	648	703	703
Volume Left	13	0	0	0	0
Volume Right	0	126	0	0	0
cSH	48	380	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)	106.1	19.1	0.0	0.0	0.0
Lane LOS	F	C			
Approach Delay (s)	27.3		0.0	0.0	
Approach LOS	D				

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	49.6%	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	178	0	1222	711	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	48	193	0	1328	773	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	2101	386	773			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2101	386	773			
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	612	838			

Direction, Lane #	EB 1	EB 2	NB 1	SB 1	SB 2
Volume Total	48	193	1328	386	386
Volume Left	48	0	0	0	0
Volume Right	0	193	0	0	0
cSH	44	612	1700	1700	1700
Volume to Capacity	1.07	0.32	0.78	0.23	0.23
Queue Length 95th (ft)	111	34	0	0	0
Control Delay (s)	301.3	13.6	0.0	0.0	0.0
Lane LOS	F	B			
Approach Delay (s)	70.6		0.0	0.0	
Approach LOS	F				

Intersection Summary			
Average Delay	7.3		
Intersection Capacity Utilization	74.3%	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	468	0	0	1169
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	170	241	509	0	0	1271
RTOR Reduction (vph)	51	0	0	0	0	0
Lane Group Flow (vph)	360	0	509	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		0.83			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	↰		↱		↰	↱
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)	142	200	755	0	0	849
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	154	217	821	0	0	923
RTOR Reduction (vph)	51	0	0	0	0	0
Lane Group Flow (vph)	320	0	821	0	0	923
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	c0.19		0.23		c0.26	
v/s Ratio Perm						
v/c Ratio	0.56		0.40		0.45	
Uniform Delay, d1	26.9		11.5		11.9	
Progression Factor	1.00		0.76		1.00	
Incremental Delay, d2	3.9		0.5		0.7	
Delay (s)	30.8		9.3		12.6	
Level of Service	C		A		B	
Approach Delay (s)	30.8		9.3		12.6	
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	50.3%	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: 12/22/2005
 Analysis Time Period: AM Peak Period
 Intersection: Florida/9th/V Streets
 Jurisdiction: Washington DC
 Units: U. S. Customary
 Analysis Year: 2007 BG Conditions
 Project ID: 2799 Atlantic South
 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	24	91	438	65	87	26	158	23	13	13	25	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	531	196		186	28	68	
* 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	531	196		186	28	68	
Service Time	3.7	2.9	4.1		5.0	4.1	4.7	
Utilization, x	0.14	0.77	0.35		0.37	0.05	0.13	
Dep. headway, hd	6.02	5.21	6.37		7.25	6.42	6.97	
Capacity	331	681	446		436	278	318	
Delay	9.66	22.99	12.42		14.24	9.46	10.73	
LOS	A	C	B		B	A	B	
Approach:								
Delay		21.23		12.42		13.61		10.73
LOS		C		B		B		B
Intersection Delay	17.49		Intersection LOS C					

HCS2000: Unsignalized Intersections Release 4.1d

ALL-WAY STOP CONTROL(AWSC) ANALYSIS

Analyst: CFP
 Agency/Co.: Wells & Associates, LLC
 Date Performed: 12/22/2005
 Analysis Time Period: PM Peak Period
 Intersection: Florida/9th/V Streets
 Jurisdiction: Washington DC
 Units: U. S. Customary
 Analysis Year: 2007 BG Conditions
 Project ID: 2799 Atlantic South
 East/West Street: 9th Street/V Street
 North/South Street: Florida/9th Street

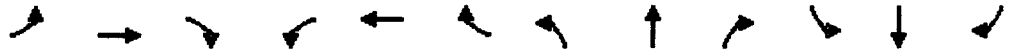
Worksheet 2 - Volume Adjustments and Site Characteristics

	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Volume	27	80	260	89	151	35	354	42	12	32	27	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	78	328	303		413	39	91	
* 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	78	328	303		413	39	91	
Service Time	5.3	4.5	5.2		5.3	4.6	5.9	
Utilization, x	0.16	0.62	0.63		0.87	0.07	0.21	
Dep. headway, hd	7.58	6.76	7.46		7.60	6.88	8.22	
Capacity	328	509	461		467	289	341	
Delay	11.76	19.67	21.94		43.25	10.13	13.07	
LOS	B	C	C		E	B	B	
Approach:								
Delay		18.15		21.94		40.39		13.07
LOS		C		C		E		B
Intersection Delay	26.73							
							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	86	7	14	146	29	11	44	27	10	16	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	93	8	15	159	32	12	48	29	11	17	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)					305							
pX, platoon unblocked												
vC, conflicting volume	190			101			382	370	97	408	358	174
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	190			101			382	370	97	408	358	174
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			98	91	97	98	97	98
cM capacity (veh/h)	1384			1491			539	543	959	490	552	869

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	127	205	89	47
Volume Left	26	15	12	11
Volume Right	8	32	29	18
cSH	1384	1491	633	623
Volume to Capacity	0.02	0.01	0.14	0.07
Queue Length 95th (ft)	1	1	12	6
Control Delay (s)	1.7	0.6	11.6	11.2
Lane LOS	A	A	B	B
Approach Delay (s)	1.7	0.6	11.6	11.2
Approach LOS			B	B

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	24.3%	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	105	10	18	210	73	24	27	44	21	27	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	114	11	20	228	79	26	29	48	23	29	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)					304							
pX, platoon unblocked	0.96						0.96	0.96		0.96	0.96	0.96
vC, conflicting volume	308			125			496	486	120	509	452	268
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	281			125			477	466	120	490	431	240
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			94	94	95	95	94	95
cM capacity (veh/h)	1234			1462			431	466	932	418	488	770

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	135	327	103	87
Volume Left	10	20	26	23
Volume Right	11	79	48	35
cSH	1234	1462	590	544
Volume to Capacity	0.01	0.01	0.17	0.16
Queue Length 95th (ft)	1	1	16	14
Control Delay (s)	0.6	0.6	12.4	12.9
Lane LOS	A	A	B	B
Approach Delay (s)	0.6	0.6	12.4	12.9
Approach LOS			B	B

Intersection Summary			
Average Delay	4.1		
Intersection Capacity Utilization	34.3%	ICU Level of Service	A
Analysis Period (min)	15		

Background Conditions
11: U Street & Florida Avenue

AM Peak Period
12/21/2005

												
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)		3458			3539	1583		3501		1770	3524	
Flt Permitted		1.00			1.00	1.00		0.63		0.36	1.00	
Satd. Flow (perm)		3458			3539	1583		2225		670	3524	
Volume (vph)	0	547	99	0	845	153	68	356	8	270	1104	33
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	595	108	0	918	166	74	387	9	293	1200	36
RTOR Reduction (vph)	0	15	0	0	0	98	0	1	0	0	2	0
Lane Group Flow (vph)	0	688	0	0	918	68	0	469	0	293	1234	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		801		463	1797	
v/s Ratio Prot		0.20			c0.26					0.07	c0.35	
v/s Ratio Perm						0.04		0.21		0.25		
v/c Ratio		0.49			0.63	0.10		0.59		0.63	0.69	
Uniform Delay, d1		21.7			23.5	18.2		25.9		15.2	18.5	
Progression Factor		1.00			1.00	1.00		1.00		0.94	0.94	
Incremental Delay, d2		1.2			2.1	0.3		3.1		6.4	2.2	
Delay (s)		22.9			25.6	18.5		29.1		20.6	19.6	
Level of Service		C			C	B		C		C	B	
Approach Delay (s)		22.9			24.5			29.1			19.8	
Approach LOS		C			C			C			B	
Intersection Summary												
HCM Average Control Delay	22.9			HCM Level of Service			C					
HCM Volume to Capacity ratio	0.66											
Actuated Cycle Length (s)	100.0			Sum of lost time (s)			8.0					
Intersection Capacity Utilization	77.0%			ICU Level of Service			D					
Analysis Period (min)	15											
c Critical Lane Group												

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑		↑↑		↑	↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0	4.0		4.0		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)		3470			3539	1583		3525		1770	3510	
Flt. Permitted		1.00			1.00	1.00		0.88		0.10	1.00	
Satd. Flow (perm)		3470			3539	1583		3095		186	3510	
Volume (vph)	0	758	114	0	697	201	49	915	9	268	593	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	824	124	0	758	218	53	995	10	291	645	38
RTOR Reduction (vph)	0	12	0	0	0	129	0	1	0	0	4	0
Lane Group Flow (vph)	0	936	0	0	758	89	0	1057	0	291	679	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)		1423			1451	649		1114		269	1790	
v/s Ratio Prot		c0.27			0.21					c0.12	0.19	
v/s Ratio Perm						0.06		0.34		c0.43		
v/c Ratio		0.66			0.52	0.14		0.95		1.08	0.38	
Uniform Delay, d1		23.8			22.1	18.4		31.1		27.8	14.9	
Progression Factor		1.00			1.00	1.00		1.00		0.90	0.97	
Incremental Delay, d2		2.4			1.3	0.4		17.2		77.3	0.6	
Delay (s)		26.2			23.5	18.9		48.3		102.3	15.0	
Level of Service		C			C	B		D		F	B	
Approach Delay (s)		26.2			22.5			48.3			41.1	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM Average Control Delay	34.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	79.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Background Conditions
8: Florida Avenue & 8th Street

AM Peak Period
12/21/2005

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)	31	763	32	17	981	36	9	15	3	8	20	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)	34	829	35	18	1066	39	10	16	3	9	22	10
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				0.87			0.87	0.87	0.87	0.87	0.87	
vC, conflicting volume	1105			864			1327	2057	432	1616	2054	375
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1105			690			1224	2065	192	1558	2063	375
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 %	95			98			85	62	100	80	50	98
cM capacity (veh/h)	627			781			66	43	709	44	43	623
Direction Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	SB 1					
Volume Total	448	449	285	533	306	29	40					
Volume Left	34	0	18	0	0	10	9					
Volume Right	0	35	0	0	39	3	10					
cSH	627	1700	781	1700	1700	55	56					
Volume to Capacity	0.05	0.26	0.02	0.31	0.18	0.53	0.72					
Queue Length 95th (ft)	4	0	2	0	0	52	75					
Control Delay (s)	1.6	0.0	0.9	0.0	0.0	127.8	162.3					
Lane LOS	A		A			F	F					
Approach Delay (s)	0.8		0.2			127.8	162.3					
Approach LOS						F	F					

Intersection Summary

Average Delay	5.4						
Intersection Capacity Utilization	54.9%		ICU Level of Service	A			
Analysis Period (min)	15						

Background Conditions
8: Florida Avenue & 8th Street

PM Peak Period
12/21/2005



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)	52	957	24	24	870	26	9	17	4	14	23	18
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)	57	1040	26	26	946	28	10	18	4	15	25	20
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				0.79			0.79	0.79	0.79	0.79	0.79	
vC, conflicting volume	974			1066			1566	2192	533	1659	2191	329
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	974			820			1451	2243	146	1569	2242	329
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 %	92			96			44	36	99	43	14	97
cM capacity (veh/h)	704			637			18	29	692	26	29	666

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	WB 3	NB 1	SB 1
Volume Total	577	546	262	473	265	33	60
Volume Left	57	0	26	0	0	10	15
Volume Right	0	26	0	0	28	4	20
cSH	704	1700	637	1700	1700	27	41
Volume to Capacity	0.08	0.32	0.04	0.28	0.16	1.20	1.47
Queue Length 95th (ft)	7	0	3	0	0	96	152
Control Delay (s)	2.1	0.0	1.5	0.0	0.0	454.3	460.9
Lane LOS	A		A			F	F
Approach Delay (s)	1.1		0.4			454.3	460.9
Approach LOS						F	F

Intersection Summary			
Average Delay	19.9		
Intersection Capacity Utilization	60.5%	ICU Level of Service	B
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			4.0	
Lane Util. Factor		1.00		1.00	1.00			0.95			0.95	
Frt		0.97		1.00	0.95			0.99			0.99	
Flt Protected		0.98		0.95	1.00			1.00			1.00	
Satd. Flow (prot)		1767		1770	1775			3503			3487	
Flt Permitted		0.87		0.58	1.00			0.78			0.93	
Satd. Flow (perm)		1563		1077	1775			2738			3239	
Volume (vph)	46	50	33	28	48	22	40	403	18	33	1033	103
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)	50	54	36	30	52	24	43	438	20	36	1123	112
RTOR Reduction (vph)	0	12	0	0	16	0	0	3	0	0	7	0
Lane Group Flow (vph)	0	128	0	30	60	0	0	498	0	0	1264	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	18.0			74.0			74.0	
Effective Green, g (s)		18.0		18.0	18.0			74.0			74.0	
Actuated g/C Ratio		0.18		0.18	0.18			0.74			0.74	
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)		281		194	320			2026			2397	
v/s Ratio Prot					0.03							
v/s Ratio Perm		0.08		0.03				0.18			0.39	
v/c Ratio		0.45		0.15	0.19			0.25			0.53	
Uniform Delay, d1		36.6		34.6	34.8			4.1			5.5	
Progression Factor		1.03		1.00	1.00			1.00			0.26	
Incremental Delay, d2		5.2		1.7	1.3			0.3			0.7	
Delay (s)		42.8		36.3	36.1			4.4			2.1	
Level of Service		D		D	D			A			A	
Approach Delay (s)		42.8			36.1			4.4			2.1	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM Average Control Delay	7.3	HCM Level of Service	A
HCM Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

	↗	→	↘	↙	←	↖	↗	↑	↘	↙	↓	↖
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↖			↕			↕	
Ideal Flow (vphpl)	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	1.00			0.95			0.95	
Frt		0.96		1.00	0.96			1.00			0.98	
Flt Protected		0.99		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1764		1770	1785			3511			3470	
Flt Permitted		0.79		0.46	1.00			0.71			0.93	
Satd. Flow (perm)		1420		848	1785			2518			3238	
Volume (vph)	51	78	54	61	99	39	97	662	8	17	727	106
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)	55	85	59	66	108	42	105	720	9	18	790	115
RTOR Reduction (vph)	0	16	0	0	14	0	0	1	0	0	11	0
Lane Group Flow (vph)	0	183	0	66	136	0	0	833	0	0	912	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	18.0			74.0			74.0	
Effective Green, g (s)		18.0		18.0	18.0			74.0			74.0	
Actuated g/C Ratio		0.18		0.18	0.18			0.74			0.74	
Clearance Time (s)		4.0		4.0	4.0			4.0			4.0	
Lane Grp Cap (vph)		256		153	321			1863			2396	
v/s Ratio Prot					0.08							
v/s Ratio Perm		0.13		0.08				0.33			0.28	
v/c Ratio		0.72		0.43	0.42			0.45			0.38	
Uniform Delay, d1		38.6		36.5	36.4			5.1			4.7	
Progression Factor		0.91		1.00	1.00			1.00			0.37	
Incremental Delay, d2		15.7		8.6	4.1			0.8			0.4	
Delay (s)		50.9		45.1	40.5			5.8			2.2	
Level of Service		D		D	D			A			A	
Approach Delay (s)		50.9			41.9			5.8			2.2	
Approach LOS		D			D			A			A	

Intersection Summary												
HCM Average Control Delay		12.0		HCM Level of Service				B				
HCM Volume to Capacity ratio		0.50										
Actuated Cycle Length (s)		100.0		Sum of lost time (s)				8.0				
Intersection Capacity Utilization		76.5%		ICU Level of Service				D				
Analysis Period (min)		15										
c Critical Lane Group												



Movement	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	1097
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	405	7	0	1192
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	1601	206			412	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1601	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)	97	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		Err	
Intersection Capacity Utilization		Err%	ICU Level of Service H
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	516
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	1	1091	3	0	561
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						309
pX, platoon unblocked						
vC, conflicting volume	1654	547			1095	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1654	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)	89	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		Err	
Intersection Capacity Utilization		Err%	ICU Level of Service
Analysis Period (min)		15	H

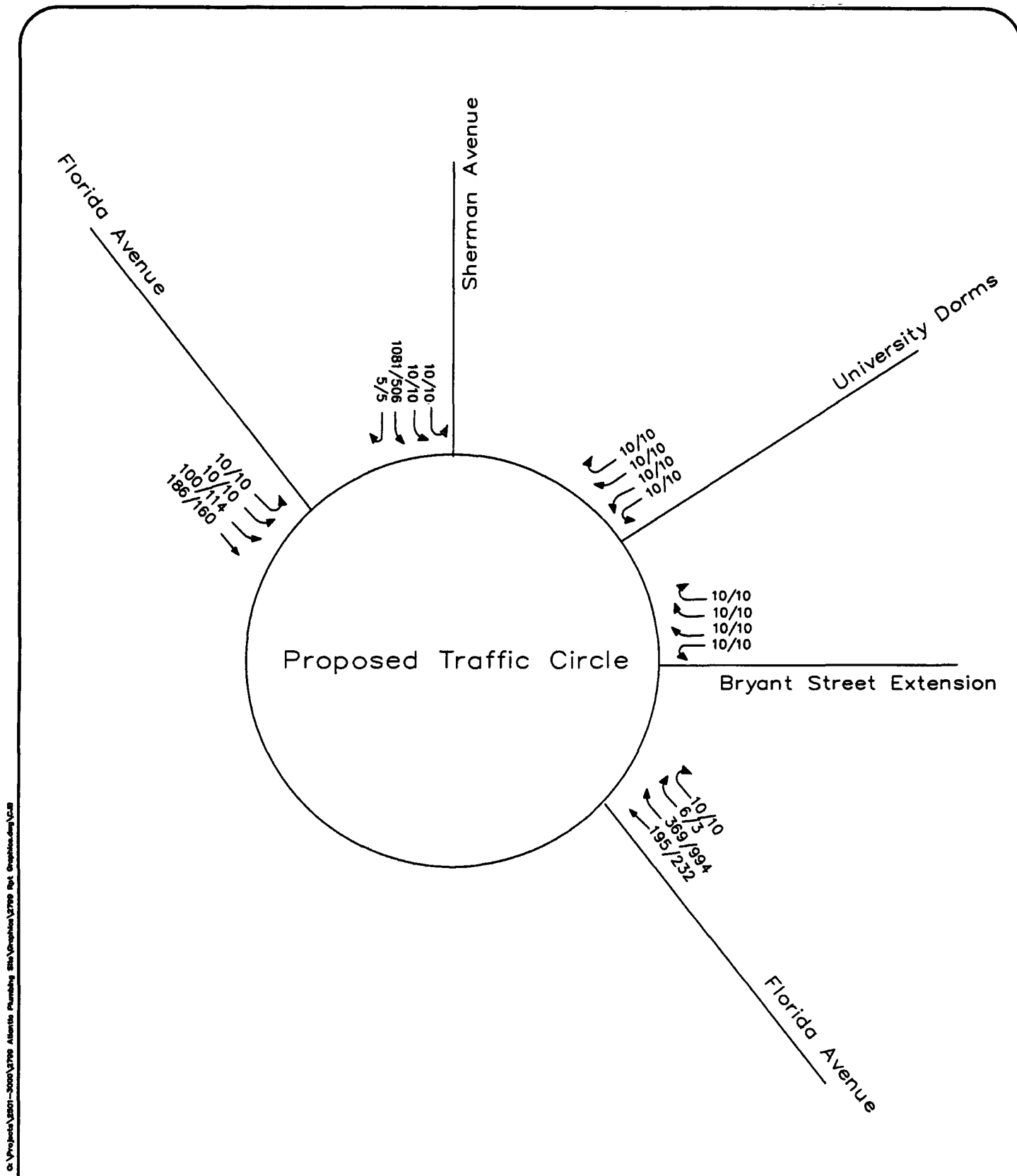


Figure E-1
Existing Re-Assigned Traffic Circle Peak Hour Volumes
(Atlantic South)



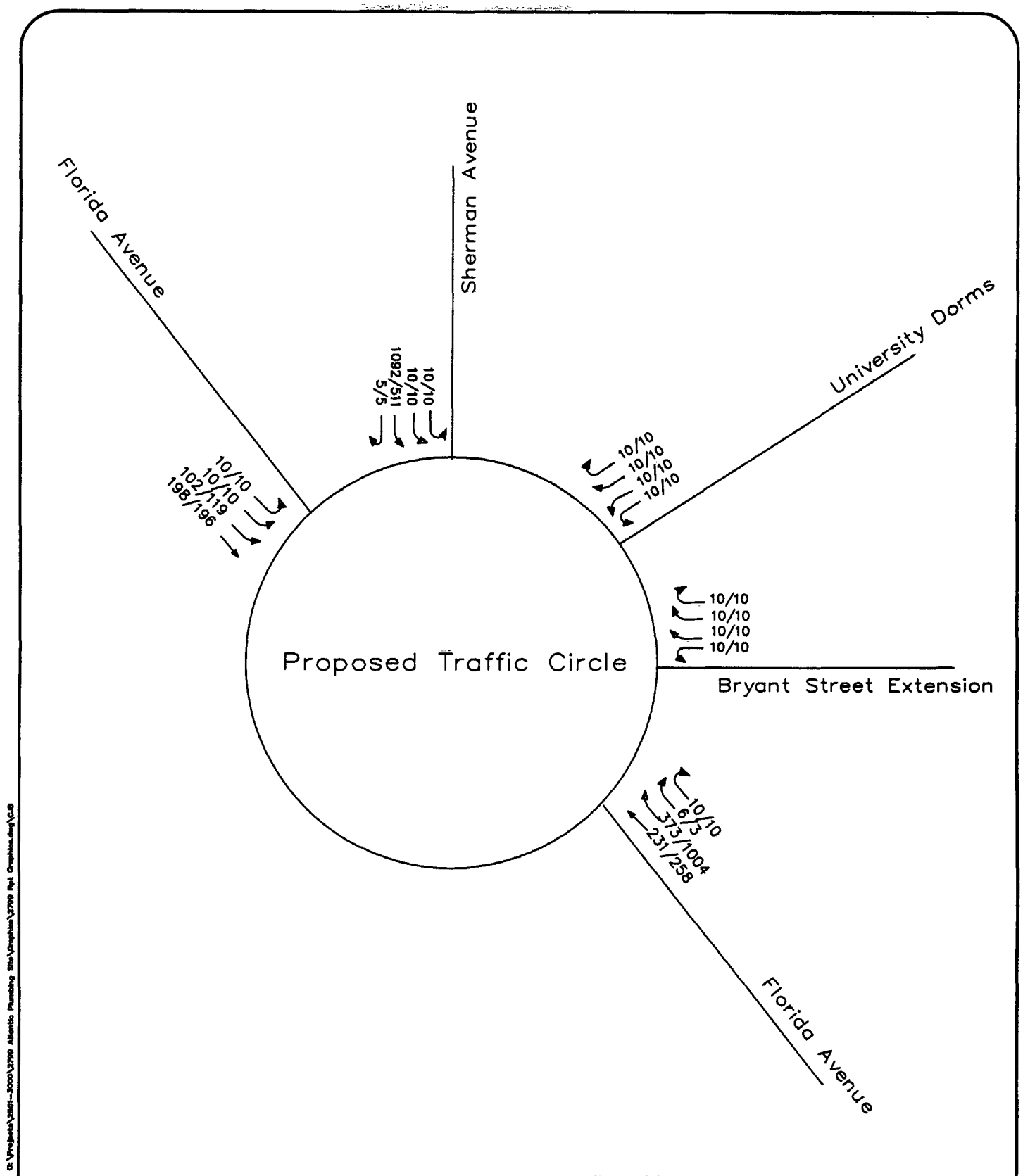


Figure E-2
Background Traffic Circle Peak Hour Volumes
(Atlantic South)



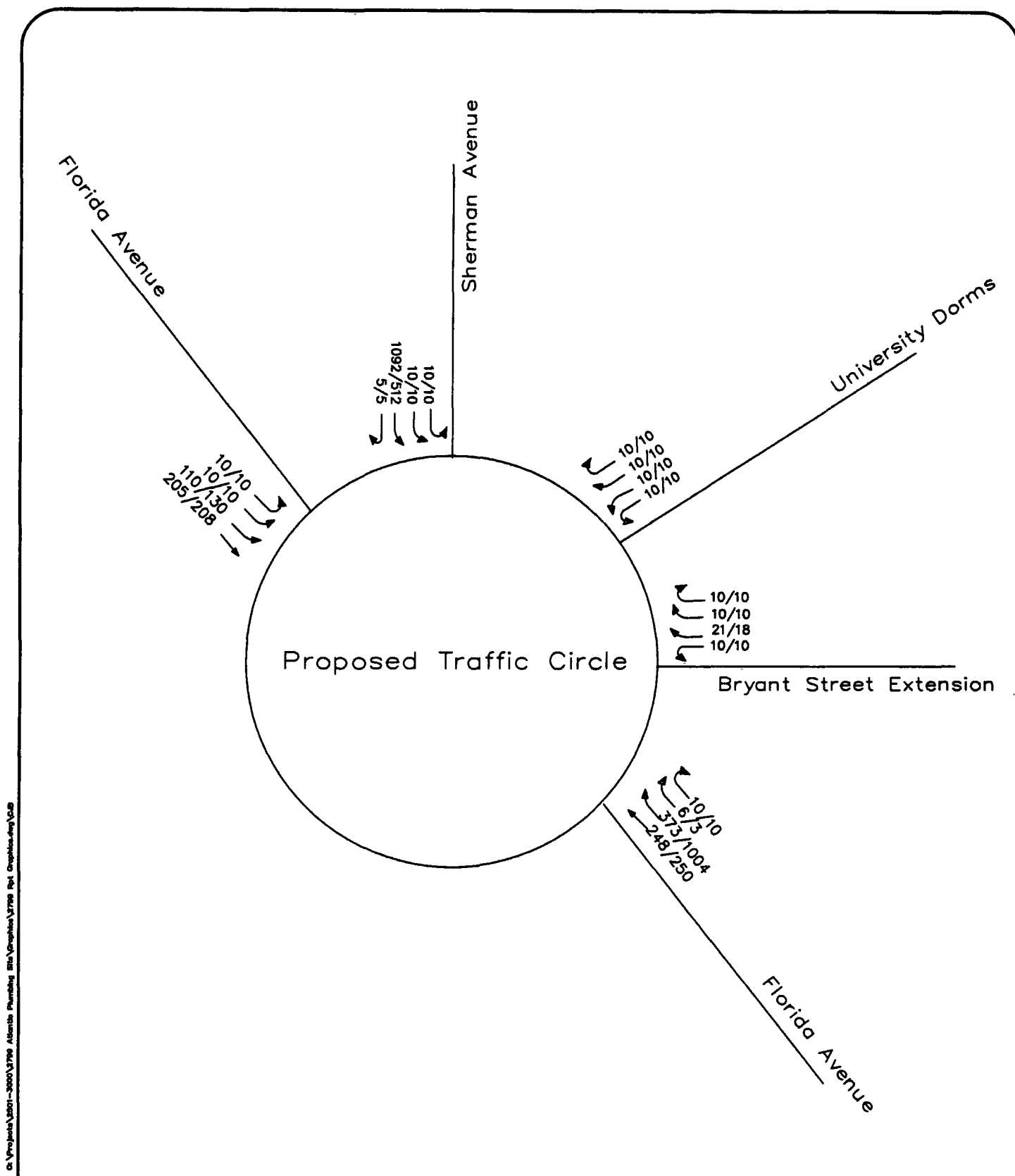


Figure E-3
Total Future Traffic Circle Peak Hour Volumes
(Atlantic North)



Wells & Associates, LLC

User ID: 38423

Licence Type: Multi Computer

Time and Date of Analysis 9:48 AM, Jan 4, 2006

Filename: C:\Documents and Settings\Catherine\Desktop\AaSidra Analysis\ExAM(1.OUT

Title

Subtitle

Intersection ID:

aaTraffic SIDRA US Highway Capacity Manual (2000) Version

RUN INFORMATION

* Basic Parameters:

Intersection Type: Roundabout

Driving on the right-hand side of the road

Input data specified in US units

Default Values File No. 11

Peak flow period (for performance): 30 minutes

Unit time (for volumes): 60 minutes (Total Flow Period)

Delay definition: Control delay

Geometric delay included

aaSIDRA Standard Delay and Queue models used

Level of Service based on: Delay (HCM method)

Queue definition: Back of queue, 95th Percentile

Title

Subtitle

Intersection ID:

Roundabout

Table S.0 - TRAFFIC FLOW DATA

Mov No.	Left		Through		Right		Flow Scale	Peak Flow Factor
	LV	HV	LV	HV	LV	HV		
VEHICLES Demand flows in veh/hour as used by the program								
SouthEast: NB Florida Avenue								
72	0	0	582	12	17	1	1.00	0.95
East: Bryant Street Extension								
22	10	1	1	1	21	1	1.00	0.95
NorthEast: University Dorms								
62	21	1	0	0	21	1	1.00	0.95
North: Sherman Avenue								
42	21	1	1012	21	10	1	1.00	0.95
NorthWest: SB Florida Avenue								
82	21	1	295	6	0	0	1.00	0.95

Based on unit time = 60 minutes.

Flow Scale and Peak Hour Factor effects included in flow values.

Title

Subtitle

Intersection ID:

Roundabout

Table R.0 - ROUNDABOUT BASIC PARAMETERS

Cent Island Diam (ft)	Circ Width (ft)	Insc Diam. (ft)	No.of Circ. Lanes	No.of Entry Lanes	Av.Ent Lane Width (ft)	Circulating/Exiting Stream					
						Flow (veh/ h)	%HV	Adjust. Flow (pcu/h)	%Exit Incl.	Cap. Constr. Effect	O-D Factor
SouthEast: NB Florida Avenue											
80	30	140	2	2	15.00	158	2.0	158	0	N	0.969
East: Bryant Street Extension											
80	30	140	2	1	15.00	632	2.0	632	0	N	0.955
NorthEast: University Dorms											
80	30	140	2	1	15.00	626	2.0	626	0	N	0.956
North: Sherman Avenue											
80	30	140	2	1	15.00	248	2.0	248	0	N	0.983
NorthWest: SB Florida Avenue											
80	30	140	2	1	15.00	1085	2.0	1085	0	N	0.642

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Roundabout

Table R.1 - ROUNDABOUT GAP ACCEPTANCE PARAMETERS

Turn	Lane No.	Lane Type	Circulating/Exiting Stream					Critical Gap		Foll-up
			Flow Rate (pcu/h)	Aver Speed (mph)	Aver Dist (ft)	In-Bnch Headway (s)	Prop Bunched	Hdwy (s)	Dist (ft)	Headway (s)
SouthEast: NB Florida Avenue										
Thru	1	Subdominant	158	14.9	499.2	2.00	0.175	3.58	78.5	2.51
	2	Dominant	158	14.9	499.2	2.00	0.175	3.35	73.4	2.35
Right	2	Dominant	158	14.9	499.2	2.00	0.175	3.38	73.9	2.36
East: Bryant Street Extension										
Left	1	Dominant	632	22.1	184.8	1.08	0.339	3.47	112.6	2.70
Thru	1	Dominant	632	22.1	184.8	1.08	0.339	4.83	156.7	3.76
Right	1	Dominant	632	22.1	184.8	1.08	0.339	3.34	108.3	2.60
NorthEast: University Dorms										
Left	1	Dominant	626	22.2	187.3	1.06	0.332	3.35	109.0	2.60
Right	1	Dominant	626	22.2	187.3	1.06	0.332	3.35	109.0	2.60
North: Sherman Avenue										
Left	1	Dominant	248	21.4	455.3	1.18	0.163	3.56	111.9	2.55
Thru	1	Dominant	248	21.4	455.3	1.18	0.163	3.55	111.7	2.54
Right	1	Dominant	248	21.4	455.3	1.18	0.163	3.70	116.3	2.65
NorthWest: SB Florida Avenue										
Left	1	Dominant	1085	14.9	72.6	2.00	0.770	2.89	63.3	2.43
Thru	1	Dominant	1085	14.9	72.6	2.00	0.770	2.89	63.2	2.42

Environment Factor: 1.00

Entry/Circulating Flow Adjustment: Medium

Priority sharing is implied for some movements (Follow-up Headway plus Intra-bunch Headway is larger than the Critical Gap). The O-D Factor (Table R.0) allows for priority sharing and priority emphasis.

42 LTR 1066 1188 0.897 1461 23.0 1118 -5.9 1032 -13.1

NorthWest: SB Florida Avenue

82 LT 323 393 0.822 717 82.4 674 71.5 507 29.0

Title

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Roundabout

Table S.2 - MOVEMENT CAPACITY PARAMETERS

Mov No.	Demand Flow (veh/h)	HV (%)	Opposing Movement Flow (veh/h)	HV (%)	Adjust. Flow (pcu/h)	Total Cap. (veh /h)	Prac. Deg. xp	Prac. Spare Cap. (%)	Lane Util (%)	Deg. Satn x
SouthEast: NB Florida Avenue										
72 TR	612	2.1	158	2.0	158	2595	0.85	260	100	0.236
East: Bryant Street Extension										
22 LTR	35	8.6	632	2.0	632	873	0.85	2020	100	0.040
NorthEast: University Dorns										
62 LR	44	4.5	626	2.0	626	924	0.85	1685	100	0.048
North: Sherman Avenue										
42 LTR	1066	2.2	248	2.0	248	1188	0.85	-5	100	0.897*
NorthWest: SB Florida Avenue										
82 LT	323	2.2	1085	2.0	1085	393	0.85	3	100	0.822

Title

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Intersection ID:

Roundabout

Table S.3 - INTERSECTION PARAMETERS

Intersection Level of Service	=	B
Worst movement Level of Service	=	D
Average intersection delay (s)	=	16.7
Largest average movement delay (s)	=	37.9
Largest back of queue, 95% (ft)	=	433
Performance Index	=	52.80
Degree of saturation (highest)	=	0.897
Practical Spare Capacity (lowest)	=	-5 %
Effective intersection capacity, (veh/h)	=	2318
Total vehicle flow (veh/h)	=	2080
Total person flow (pers/h)	=	3120
Total vehicle delay (veh-h/h)	=	9.65
Total person delay (pers-h/h)	=	14.47
Total effective vehicle stops (veh/h)	=	1753
Total effective person stops (pers/h)	=	2629
Total vehicle travel (veh-mi/h)	=	889.2
Total cost (\$/h)	=	832.25
Total fuel (gal/h)	=	35.4
Total CO2 (kg/h)	=	335.37

Title

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Intersection ID:

Roundabout

Table S.5 - MOVEMENT PERFORMANCE

Mov No.	Total Delay (veh-h/h)	Total Delay (pers-h/h)	Aver. Delay (sec)	Prop. Queued	Eff. Stop Rate	Longest Queue 95% Back (vehs) (ft)	Perf. Index	Aver. Speed (mph)
SouthEast: NB Florida Avenue								
72 TR	1.06	1.59	6.2	0.31	0.51	1.5 38	10.11	33.2
East: Bryant Street Extension								
22 LTR	0.10	0.15	10.6	0.43	0.69	0.2 4	0.66	31.0
NorthEast: University Dorns								
62 LR	0.14	0.21	11.3	0.42	0.71	0.2 5	0.85	30.6
North: Sherman Avenue								
42 LTR	4.95	7.43	16.7	0.89	0.90	17.0 433	27.87	28.0
NorthWest: SB Florida Avenue								
82 LT	3.40	5.10	37.9	1.00	1.32	12.0 305	13.31	20.1

Title

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Intersection ID:

Roundabout

Table S.6 - INTERSECTION PERFORMANCE

Total Flow (veh/h)	Deg. Satn x	Total Delay (veh-h/h)	Total Delay (pers-h/h)	Aver. Delay (sec)	Prop. Queued	Eff. Stop Rate	Longest Queue (ft)	Perf. Index	Aver. Speed (mph)
SouthEast: NB Florida Avenue									
612	0.236	1.06	1.59	6.2	0.31	0.51	38	10.11	33.2
East: Bryant Street Extension									
35	0.040	0.10	0.15	10.6	0.43	0.69	4	0.66	31.0
NorthEast: University Dorns									
44	0.048	0.14	0.21	11.3	0.42	0.71	5	0.85	30.6
North: Sherman Avenue									
1066	0.897	4.95	7.43	16.7	0.89	0.90	433	27.87	28.0
NorthWest: SB Florida Avenue									
323	0.822	3.40	5.10	37.9	1.00	1.32	305	13.31	20.1
ALL VEHICLES:									
2080	0.897	9.65	14.47	16.7	0.72	0.84	433	52.80	27.7
INTERSECTION (persons):									
3120	0.897		14.47	16.7	0.72	0.84		52.80	27.7

Queue values in this table are 95% back of queue (feet).

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Roundabout

Table S.7 - LANE PERFORMANCE

Dem

Queue

Lane No.	Mov No.	Flow (veh/h)	Cap (veh/h)	Deg. Satn x	Aver. Delay (sec)	Eff. Stop Rate	95% Back (vehs)	Short Lane (ft)
SouthEast: NB Florida Avenue								
1 T	72	295	1250	0.236	6.2	0.51	1.5	38
2 TR	72	317	1345	0.236	6.2	0.51	1.5	38
East: Bryant Street Extension								
1 LTR	22	35	873	0.040	10.6	0.69	0.2	4
NorthEast: University Dorms								
1 LR	62	44	924	0.048	11.3	0.71	0.2	5
North: Sherman Avenue								
1 LTR	42	1066	1188	0.897	16.7	0.90	17.0	433
NorthWest: SB Florida Avenue								
1 LT	82	323	393	0.822	37.9	1.32	12.0	305

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Table S.8A - LANE FLOW AND CAPACITY INFORMATION

Lane No.	Mov No.	Dem Flow (veh/h)				Min Cap (veh/h)	Tot Cap (veh/h)	Deg. Satn x	Lane Util %
		Lef	Thru	Rig	Tot				

SouthEast: NB Florida Avenue									
1 T	72	0	295	0	295	150	1250	0.236	100
2 TR	72	0	299	18	317	150	1345	0.236	100

East: Bryant Street Extension									
1 LTR	22	11	2	22	35	35	873	0.040	100

NorthEast: University Dorms									
1 LR	62	22	0	22	44	44	924	0.048	100

North: Sherman Avenue									
1 LTR	42	22	1033	11	1066	150	1188	0.897	100

NorthWest: SB Florida Avenue									
1 LT	82	22	301	0	323	150	393	0.822	100

For roundabouts, the capacity value for continuous movements is obtained as the basic saturation flow without any adjustments. Saturation flow scale applies if specified.

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Table S.12A - FUEL CONSUMPTION, EMISSIONS AND COST - TOTAL

Mov No.	Fuel Total gal/h	Cost Total \$/h	HC Total kg/h	CO Total kg/h	NOX Total kg/h	CO2 Total kg/h
---------	------------------	-----------------	---------------	---------------	----------------	----------------

SouthEast: NB Florida Avenue

1 LR	22	22	44	5	0.048	11.3	5	
	22	0	22	44	5	0.048	11.3	5

North: Sherman Avenue								
1 LTR	22	1033	11	1066	2	0.897	16.7	433
	22	1033	11	1066	2	0.897	16.7	433

NorthWest: SB Florida Avenue								
1 LT	22	301		323	2	0.822	37.9	305
	22	301	0	323	2	0.822	37.9	305
=====								
ALL VEHICLES			Total	%	Max	Aver.	Max	
			Flow	HV	X	Delay	Queue	
			2080	2	0.897	16.7	433	
=====								

Total flow period = 60 minutes. Peak flow period = 30 minutes.

Queue values in this table are 95% back of queue (feet).

Note: Basic Saturation Flows are not adjusted at roundabouts or sign-controlled intersections and apply only to continuous lanes.

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Table S.15 - CAPACITY AND LEVEL OF SERVICE

Mov No.	Mov Typ	Total Flow (veh/h)	Total Cap. (veh/h)	Deg. of Satn (v/c)	Aver. Delay (sec)	LOS	Longest Queue 95% Back (vehs)	Queue (ft)

SouthEast: NB Florida Avenue								
72	TR	612	2595	0.236	6.2	A	1.5	38
		612		0.236	6.2	A	1.5	38

East: Bryant Street Extension								
22	LTR	35	873	0.040	10.6	B	0.2	4
		35		0.040	10.6	B	0.2	4

NorthEast: University Dorns								
62	LR	44	924	0.048	11.3	B	0.2	5
		44		0.048	11.3	B	0.2	5

North: Sherman Avenue								
42	LTR	1066	1188	0.897*	16.7	B	17.0	433
		1066		0.897	16.7	B	17.0	433

NorthWest: SB Florida Avenue								
82	LT	323	393	0.822	37.9	D	12.0	305
		323		0.822	37.9	D	12.0	305

ALL VEHICLES:		2080		0.897	16.7	B	17.0	433

Level of Service calculations are based on average control delay including geometric delay (HCM criteria), independent of the current delay definition used. For the criteria, refer to the "Level of Service" topic in the

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Table D.0 - GEOMETRIC DELAY DATA

From Approach	To Approach	Negn Radius (ft)	Negn Speed (mph)	Negn Dist. (ft)	Appr. Dist. (ft)	Downstream Distance (ft)
SouthEast: NB Florida Avenue						
	East	62.7	16.0	32.8	1800	390
	NorthEast	87.1	18.2	54.5	1800	390
	North	153.9	22.5	98.5	1800	407
	NorthWest	153.9	22.5	131.4	1800	407
East: Bryant Street Extension						
	SouthEast	52.0	14.9	245.0	1800	573
	NorthEast	73.2	17.0	32.8	1800	394
	North	102.1	19.3	54.2	1800	394
	NorthWest	153.9	22.5	98.5	1800	405
NorthEast: University Dorms						
	SouthEast	52.0	14.9	204.2	1800	553
	East	52.0	14.9	245.0	1800	553
	North	73.2	17.0	32.8	1800	394
	NorthWest	102.1	19.3	54.2	1800	394
North: Sherman Avenue						
	SouthEast	52.0	14.9	163.4	1800	492
	East	52.0	14.9	204.2	1800	553
	NorthEast	52.0	14.9	245.0	1800	553
	NorthWest	73.2	17.0	32.8	1800	391
NorthWest: SB Florida Avenue						
	SouthEast	153.9	22.5	131.4	1800	443
	East	52.0	14.9	163.4	1800	443
	NorthEast	52.0	14.9	204.2	1800	553
	North	52.0	14.9	245.0	1800	553
Maximum Negotiation (Design) Speed = 50.0 mph						
Downstream Distance calculated by aaSIDRA						

Downstream distance is distance travelled from the stopline until exit cruise speed is reached (includes negotiation distance). Acceleration distance is weighted for light and heavy vehicles. The same distance applies for both stopped and unstopped vehicles.

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Table D.1 - LANE DELAYS

			Delay (seconds/veh)									
Lane	Mov	Deg.	Stop-line Delay			Acc.	Queuing		Stopd			
		Satn	1st	2nd	Total	Dec.	Total	MvUp	(Idle)	Geom	Control	
No.	No.	x	d1	d2	dSL	dn	dq	dqm	di	dig	dic	

SouthEast: NB Florida Avenue												
1	T	72	0.236	0.5	0.0	0.5	2.0	0.0	0.0	0.0	5.7	6.2

NorthEast: University Dorms												
1 LR	0.048	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.00	
North: Sherman Avenue												
1 LTR	0.897	1.0	4.0	2.0	6.0	9.2	11.6	13.4	17.0	20.0	0.24	
NorthWest: SB Florida Avenue												
1 LT	0.822	1.5	2.6	1.5	4.1	6.6	8.3	9.5	12.0	14.0	0.17	

Values printed in this table are back of queue (vehicles).

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Table D.3B - LANE QUEUES (feet)

Lane No.	Deg. Satn	Ovrfl. Queue	Average (feet)			Percentile (feet)					Queue Stor. Ratio
	x	No	Nb1	Nb2	Nb	70%	85%	90%	95%	98%	
SouthEast: NB Florida Avenue											
1 T	0.236	0	12	0	12	22	27	30	38	44	0.02
2 TR	0.236	0	12	0	12	23	27	31	38	44	0.02
East: Bryant Street Extension											
1 LTR	0.040	0	1	0	1	3	3	4	4	5	0.00
NorthEast: University Dorms											
1 LR	0.048	0	2	0	2	3	4	4	5	6	0.00
North: Sherman Avenue											
1 LTR	0.897	25	102	51	153	234	295	341	433	510	0.24
NorthWest: SB Florida Avenue											
1 LT	0.822	39	65	39	104	169	211	242	305	357	0.17

Values printed in this table are back of queue (feet).

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Table D.4 - MOVEMENT SPEEDS (mph)

Mov No.	App. Speeds		Exit Speeds		Queue Move-up		Av. Section Spd	
	Cruise	Negn	Negn	Cruise	1st Grn	2nd Grn	Running	Overall
SouthEast: NB Florida Avenue								
72	40.0	22.4	22.4	40.0			33.2	33.2
East: Bryant Street Extension								
22	40.0	17.2	17.2	40.0			31.0	31.0
NorthEast: University Dorms								
62	40.0	16.5	16.5	40.0			30.6	30.6
North: Sherman Avenue								
42	40.0	15.0	15.0	40.0	17.4		28.0	28.0

NorthWest: SB Florida Avenue

82 40.0 19.5 19.5 40.0 11.3 26.8 20.1

"Running Speed" is the average speed excluding stopped periods.

--- End of aaSIDRA Output ---

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Produced by aaSIDRA 2.1.3.356

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Title

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Intersection ID:

aaTraffic SIDRA US Highway Capacity Manual (2000) Version

RUN INFORMATION

* Basic Parameters:

Intersection Type: Roundabout

Driving on the right-hand side of the road

Input data specified in US units

Default Values File No. 11

Peak flow period (for performance): 30 minutes

Unit time (for volumes): 60 minutes (Total Flow Period)

Delay definition: Control delay

Geometric delay included

aaSIDRA Standard Delay and Queue models used

Level of Service based on: Delay (HCM method)

Queue definition: Back of queue, 95th Percentile

Title

Subtitle

Intersection ID:

Roundabout

Table S.0 - TRAFFIC FLOW DATA

Mov No.	Left		Through		Right		Flow Scale	Peak Flow Factor	
	LV	HV	LV	HV	LV	HV			
VEHICLES Demand flows in veh/hour as used by the program									
SouthEast: NB Florida Avenue									
72	0	0	1265	26	13	1	1.00	0.95	
East: Bryant Street Extension									
22	10	1	1	1	21	1	1.00	0.95	
NorthEast: University Dorms									
62	21	1	0	0	21	1	1.00	0.95	
North: Sherman Avenue									
42	21	1	522	11	10	1	1.00	0.95	
NorthWest: SB Florida Avenue									
82	21	1	283	6	0	0	1.00	0.95	

Based on unit time = 60 minutes.

Flow Scale and Peak Hour Factor effects included in flow values.

Title

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Intersection ID:

Roundabout

Table R.0 - ROUNDABOUT BASIC PARAMETERS

Cent Island Diam (ft)	Circ Width (ft)	Insc Diam. (ft)	No.of Circ. Lanes	No.Of Entry Lanes	Av.Ent Lane Width (ft)	Circulating/Exiting Stream					
						Flow (veh/ h)	%HV	Adjust. Flow (pcu/h)	%Exit Incl.	Cap. Constr. Effect	O-D Factor
SouthEast: NB Florida Avenue											
80	30	140	2	2	15.00	173	2.0	173	0	N	0.978
East: Bryant Street Extension											
80	30	140	2	1	15.00	1325	2.0	1325	0	N	0.857
NorthEast: University Dorns											
80	30	140	2	1	15.00	1323	2.0	1323	0	N	0.858
North: Sherman Avenue											
80	30	140	2	1	15.00	287	2.0	287	0	N	0.975
NorthWest: SB Florida Avenue											
80	30	140	2	1	15.00	585	2.0	585	0	N	0.925

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Table R.1 - ROUNDABOUT GAP ACCEPTANCE PARAMETERS

Turn	Lane No.	Lane Type	Flow Rate (pcu/h)	Circulating/Exiting Speed (mph)	Aver Dist (ft)	In-Bnch Headway (s)	Stream Prop Bunched	Critical Hdwy (s)	Gap Dist (ft)	Foll-up Headway (s)
SouthEast: NB Florida Avenue										
Thru	1	Subdominant	173	14.9	456.6	2.00	0.189	3.53	77.3	2.48
	2	Dominant	173	14.9	456.6	2.00	0.189	3.24	71.0	2.28
Right	2	Dominant	173	14.9	456.6	2.00	0.189	3.32	72.6	2.33
East: Bryant Street Extension										
Left	1	Dominant	1325	22.3	89.0	1.06	0.584	2.81	92.2	2.43
Thru	1	Dominant	1325	22.3	89.0	1.06	0.584	3.92	128.4	3.38
Right	1	Dominant	1325	22.3	89.0	1.06	0.584	2.71	88.7	2.34
NorthEast: University Dorns										
Left	1	Dominant	1323	22.4	89.3	1.05	0.581	2.71	88.9	2.34
Right	1	Dominant	1323	22.4	89.3	1.05	0.581	2.71	88.9	2.34
North: Sherman Avenue										
Left	1	Dominant	287	21.6	396.3	1.17	0.185	3.67	116.0	2.65
Thru	1	Dominant	287	21.6	396.3	1.17	0.185	3.66	115.9	2.64
Right	1	Dominant	287	21.6	396.3	1.17	0.185	3.81	120.6	2.75
NorthWest: SB Florida Avenue										
Left	1	Dominant	585	14.9	134.7	2.00	0.515	3.39	74.3	2.62
Thru	1	Dominant	585	14.9	134.7	2.00	0.515	3.39	74.2	2.61

Environment Factor: 1.00

Entry/Circulating Flow Adjustment: Medium

Priority sharing is implied for some movements (Follow-up Headway plus Intra-bunch Headway is larger than the Critical Gap). The O-D Factor (Table R.0) allows for priority sharing and priority emphasis.

Dist (Distance): Spacing, i.e. distance between the front ends of two successive vehicles across all lanes in the circulating or exiting stream

Title
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Table R.5 - ROUNDABOUT CAPACITY & LEVEL OF SERVICE - aaSIDRA & HCM MODELS

Mov No.	Dem Flow (veh /h)	aaSIDRA					HCM 2000 Lower					HCM 2000 Upper				
		Cap. (veh /h)	Deg. Satn x	Av. Delay (sec)	LOS		Cap. (veh /h)	Deg. Satn x	Av. Delay (sec)	LOS		Cap. (veh /h)	Deg. Satn x	Av. Delay (sec)	LOS	

SouthEast: NB Florida Avenue																
72 TR	1305	2654	0.492	6.4	A	-	-	-	-	NA	-	-	-	-	-	NA

East: Bryant Street Extension																
22 LTR	35	648	0.054	12.1	B	-	-	-	-	NA	-	-	-	-	-	NA

NorthEast: University Dorms																
62 LR	44	691	0.064	12.8	B	-	-	-	-	NA	-	-	-	-	-	NA

North: Sherman Avenue																
42 LTR	566	1101	0.514	12.2	B	-	-	-	-	NA	-	-	-	-	-	NA

NorthWest: SB Florida Avenue																
82 LT	311	843	0.369	10.9	B	-	-	-	-	NA	-	-	-	-	-	NA

NA Values for this roundabout capacity model have not been calculated because the model was not applicable for the given roundabout conditions. Note that the HCM models are only applicable to single-lane roundabouts with circulating flows less than 1200 veh/h. Also note that results are not calculated for any of the models for slip lane or continuous movements. See the aaSIDRA Traffic Model Reference Guide for roundabout limits.

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Table R.6 - ROUNDABOUT ALTERNATIVE CAPACITY MODELS

Mov	Dem	aaSIDRA		NAASRA 1986		Ger. Linear		Ger. GapAcc	
No.	Flow	Cap.	Deg.	Cap.	% Diff	Cap.	% Diff	Cap.	% Diff
	(veh	(veh	Satn	(veh	from	(veh	from	(veh	from
	/h)	/h)	x	/h)	aaSIDRA	/h)	aaSIDRA	/h)	aaSIDRA

SouthEast: NB Florida Avenue									
72 TR	1305	2654	0.492	3115	17.4	1293	-51.3	2192	-17.4

East: Bryant Street Extension									
22 LTR	35	648	0.054	524	-19.1	532	-17.9	345	-46.8

NorthEast: University Dorms									
62 LR	44	691	0.064	582	-15.8	554	-19.8	379	-45.2

North: Sherman Avenue									

42 LTR	566	1101	0.514	1413	28.3	1098	-0.3	1000	-9.2

NorthWest: SB Florida Avenue									
82 LT	311	843	0.369	1100	30.5	939	11.4	782	-7.2

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Table S.2 - MOVEMENT CAPACITY PARAMETERS

Mov No.	Demand Flow (veh/h)	HV (%)	Opposing Movement Flow (veh/h)	HV (%)	Adjust. Flow (pcu/h)	Total Cap. (veh /h)	Prac. Deg. xp	Prac. Spare Cap. (%)	Lane Util (%)	Deg. Satn x

SouthEast: NB Florida Avenue										
72 TR	1305	2.1	173	2.0	173	2654	0.85	73	100	0.492

East: Bryant Street Extension										
22 LTR	35	8.6	1325	2.0	1325	648	0.85	1474	100	0.054

NorthEast: University Dorns										
62 LR	44	4.5	1323	2.0	1323	691	0.85	1235	100	0.064

North: Sherman Avenue										
42 LTR	566	2.3	287	2.0	287	1101	0.85	65	100	0.514*

NorthWest: SB Florida Avenue										
82 LT	311	2.3	585	2.0	585	843	0.85	130	100	0.369

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Table S.3 - INTERSECTION PARAMETERS

Intersection Level of Service	=	A
Worst movement Level of Service	=	B
Average intersection delay (s)	=	8.7
Largest average movement delay (s)	=	12.8
Largest back of queue, 95% (ft)	=	98
Performance Index	=	41.91
Degree of saturation (highest)	=	0.514
Practical Spare Capacity (lowest)	=	65 %
Effective intersection capacity, (veh/h)	=	4398
Total vehicle flow (veh/h)	=	2261
Total person flow (pers/h)	=	3392
Total vehicle delay (veh-h/h)	=	5.47
Total person delay (pers-h/h)	=	8.21
Total effective vehicle stops (veh/h)	=	1435
Total effective person stops (pers/h)	=	2152
Total vehicle travel (veh-mi/h)	=	957.0
Total cost (\$/h)	=	783.81
Total fuel (gal/h)	=	35.9
Total CO2 (kg/h)	=	339.68

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Table S.5 - MOVEMENT PERFORMANCE

Mov No.	Total Delay (veh-h/h)	Total Delay (pers-h/h)	Aver. Delay (sec)	Prop. Queued	Eff. Stop Rate	Longest Queue 95% Back (vehs)	Queue (ft)	Perf. Index	Aver. Speed (mph)
SouthEast: NB Florida Avenue									
72 TR	2.34	3.51	6.4	0.39	0.54	3.8	98	22.30	32.9
East: Bryant Street Extension									
22 LTR	0.12	0.18	12.1	0.61	0.81	0.3	7	0.73	30.4
NorthEast: University Dorms									
62 LR	0.16	0.23	12.8	0.60	0.83	0.3	8	0.93	30.0
North: Sherman Avenue									
42 LTR	1.92	2.89	12.2	0.48	0.75	3.4	87	11.50	29.9
NorthWest: SB Florida Avenue									
82 LT	0.94	1.41	10.9	0.64	0.80	2.6	65	6.45	30.8

Title

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Roundabout

Table S.6 - INTERSECTION PERFORMANCE

Total Flow (veh/h)	Deg. Satn x	Total Delay (veh-h/h)	Total Delay (pers-h/h)	Aver. Delay (sec)	Prop. Queued	Eff. Stop Rate	Longest Queue (ft)	Perf. Index	Aver. Speed (mph)
SouthEast: NB Florida Avenue									
1305	0.492	2.34	3.51	6.4	0.39	0.54	98	22.30	32.9
East: Bryant Street Extension									
35	0.054	0.12	0.18	12.1	0.61	0.81	7	0.73	30.4
NorthEast: University Dorms									
44	0.064	0.16	0.23	12.8	0.60	0.83	8	0.93	30.0
North: Sherman Avenue									
566	0.514	1.92	2.89	12.2	0.48	0.75	87	11.50	29.9
NorthWest: SB Florida Avenue									
311	0.369	0.94	1.41	10.9	0.64	0.80	65	6.45	30.8
ALL VEHICLES:									
2261	0.514	5.47	8.21	8.7	0.46	0.63	98	41.91	31.7
INTERSECTION (persons):									
3392	0.514		8.21	8.7	0.46	0.63		41.91	31.7

Queue values in this table are 95% back of queue (feet).

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Roundabout

Table S.7 - LANE PERFORMANCE

Dem

Queue

Lane No.	Mov No.	Flow (veh /h)	Cap (veh /h)	Deg. Satn x	Aver. Delay (sec)	Eff. Stop Rate	95% Back (vehs)	Short Lane (ft)
SouthEast: NB Florida Avenue								
1 T	72	623	1266	0.492	6.5	0.54	3.8	96
2 TR	72	682	1388	0.492	6.4	0.53	3.8	98
East: Bryant Street Extension								
1 LTR	22	35	648	0.054	12.1	0.81	0.3	7
NorthEast: University Dorns								
1 LR	62	44	691	0.064	12.8	0.83	0.3	8
North: Sherman Avenue								
1 LTR	42	566	1101	0.514	12.2	0.75	3.4	87
NorthWest: SB Florida Avenue								
1 LT	82	311	843	0.369	10.9	0.80	2.6	65

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Table S.8A - LANE FLOW AND CAPACITY INFORMATION

Lane No.	Mov No.	Dem Flow (veh/h)				Min Cap (veh /h)	Tot Cap (veh /h)	Deg. Satn x	Lane Util %
		Lef	Thru	Rig	Tot				
SouthEast: NB Florida Avenue									
1 T	72	0	623	0	623	150	1266	0.492	100
2 TR	72	0	668	14	682	150	1388	0.492	100
East: Bryant Street Extension									
1 LTR	22	11	2	22	35	35	648	0.054	100
NorthEast: University Dorns									
1 LR	62	22	0	22	44	44	691	0.064	100
North: Sherman Avenue									
1 LTR	42	22	533	11	566	150	1101	0.514	100
NorthWest: SB Florida Avenue									
1 LT	82	22	289	0	311	150	843	0.369	100

For roundabouts, the capacity value for continuous movements is obtained as the basic saturation flow without any adjustments. Saturation flow scale applies if specified.

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Table S.12A - FUEL CONSUMPTION, EMISSIONS AND COST - TOTAL

Mov No.	Fuel Total gal/h	Cost Total \$/h	HC Total kg/h	CO Total kg/h	NOX Total kg/h	CO2 Total kg/h
---------	------------------	-----------------	---------------	---------------	----------------	----------------

SouthEast: NB Florida Avenue

1 LR	22		22	44	5	0.064	12.8	8
	22	0	22	44	5	0.064	12.8	8

North: Sherman Avenue								
1 LTR	22	533	11	566	2	0.514	12.2	87
	22	533	11	566	2	0.514	12.2	87

NorthWest: SB Florida Avenue								
1 LT	22	289		311	2	0.369	10.9	65
	22	289	0	311	2	0.369	10.9	65
=====								
ALL VEHICLES				Total	%	Max	Aver.	Max
				Flow	HV	X	Delay	Queue
				2261	2	0.514	8.7	98
=====								

Total flow period = 60 minutes. Peak flow period = 30 minutes.

Queue values in this table are 95% back of queue (feet).

Note: Basic Saturation Flows are not adjusted at roundabouts or sign-controlled intersections and apply only to continuous lanes.

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Table S.15 - CAPACITY AND LEVEL OF SERVICE

Mov No.	Mov Typ	Total Flow (veh/h)	Total Cap. (veh/h)	Deg. of Satn (v/c)	Aver. Delay (sec)	LOS	Longest Queue 95% Back (vehs)	Queue (ft)
SouthEast: NB Florida Avenue								
72	TR	1305	2654	0.492	6.4	A	3.8	98
		1305		0.492	6.4	A	3.8	98
East: Bryant Street Extension								
22	LTR	35	648	0.054	12.1	B	0.3	7
		35		0.054	12.1	B	0.3	7
NorthEast: University Dorns								
62	LR	44	691	0.064	12.8	B	0.3	8
		44		0.064	12.8	B	0.3	8
North: Sherman Avenue								
42	LTR	566	1101	0.514*	12.2	B	3.4	87
		566		0.514	12.2	B	3.4	87
NorthWest: SB Florida Avenue								
82	LT	311	843	0.369	10.9	B	2.6	65
		311		0.369	10.9	B	2.6	65
ALL VEHICLES:		2261		0.514	8.7	A	3.8	98

Level of Service calculations are based on average control delay including geometric delay (HCM criteria), independent of the current delay definition used. For the criteria, refer to the "Level of Service" topic in the

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 Roundabout

Table D.0 - GEOMETRIC DELAY DATA

From Approach	To Approach	Negn Radius (ft)	Negn Speed (mph)	Negn Dist. (ft)	Appr. Dist. (ft)	Downstream Distance (ft)
SouthEast: NB Florida Avenue						
	East	62.7	16.0	32.8	1800	389
	NorthEast	87.1	18.2	54.5	1800	389
	North	153.9	22.5	98.5	1800	407
	NorthWest	153.9	22.5	131.4	1800	407
East: Bryant Street Extension						
	SouthEast	52.0	14.9	245.0	1800	573
	NorthEast	73.2	17.0	32.8	1800	394
	North	102.1	19.3	54.2	1800	394
	NorthWest	153.9	22.5	98.5	1800	405
NorthEast: University Dorms						
	SouthEast	52.0	14.9	204.2	1800	553
	East	52.0	14.9	245.0	1800	553
	North	73.2	17.0	32.8	1800	394
	NorthWest	102.1	19.3	54.2	1800	394
North: Sherman Avenue						
	SouthEast	52.0	14.9	163.4	1800	492
	East	52.0	14.9	204.2	1800	553
	NorthEast	52.0	14.9	245.0	1800	553
	NorthWest	73.2	17.0	32.8	1800	391
NorthWest: SB Florida Avenue						
	SouthEast	153.9	22.5	131.4	1800	449
	East	52.0	14.9	163.4	1800	449
	NorthEast	52.0	14.9	204.2	1800	553
	North	52.0	14.9	245.0	1800	553
Maximum Negotiation (Design) Speed = 50.0 mph						
Downstream Distance calculated by aaSIDRA						

Downstream distance is distance travelled from the stopline until exit cruise speed is reached (includes negotiation distance). Acceleration distance is weighted for light and heavy vehicles. The same distance applies for both stopped and unstopped vehicles.

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Table D.1 - LANE DELAYS

----- Delay (seconds/veh) -----											
Lane No.	Mov No.	Deg.	Stop-line Delay			Acc.	Queuing		Stopd	Geom	Control
		Satn x	1st d1	2nd d2	Total dSL	Dec. dn	Total dq	MvUp dqm	(Idle) di		

SouthEast: NB Florida Avenue											
1 T	72	0.492	0.8	0.0	0.8	2.5	0.0	0.0	0.0	5.7	6.5

NorthEast: University Dorms											
1 LR	0.064	0.0	0.1	0.0	0.1	0.2	0.2	0.2	0.3	0.4	0.00
North: Sherman Avenue											
1 LTR	0.514	0.0	1.1	0.0	1.1	2.0	2.4	2.7	3.4	3.9	0.05
NorthWest: SB Florida Avenue											
1 LT	0.369	0.0	0.8	0.0	0.8	1.5	1.8	2.1	2.6	3.0	0.04

Values printed in this table are back of queue (vehicles).

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Table D.3B - LANE QUEUES (feet)

	Deg.	Ovrfl.	Average (feet)			Percentile (feet)					Queue
Lane	Satn	Queue									Stor.
No.	x	No	Nb1	Nb2	Nb	70%	85%	90%	95%	98%	Ratio
SouthEast: NB Florida Avenue											
1 T	0.492	0	31	0	31	56	68	77	96	111	0.05
2 TR	0.492	0	31	0	31	57	69	79	98	113	0.05
East: Bryant Street Extension											
1 LTR	0.054	0	2	0	2	4	5	5	7	8	0.00
NorthEast: University Dorms											
1 LR	0.064	0	2	0	2	5	6	6	8	9	0.00
North: Sherman Avenue											
1 LTR	0.514	0	28	0	28	50	62	70	87	100	0.05
NorthWest: SB Florida Avenue											
1 LT	0.369	0	21	0	21	38	46	52	65	75	0.04

Values printed in this table are back of queue (feet).

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Table D.4 - MOVEMENT SPEEDS (mph)

Mov No.	App. Speeds		Exit Speeds		Queue Move-up		Av. Section Spd	
	Cruise	Negn	Negn	Cruise	1st Grn	2nd Grn	Running	Overall
SouthEast: NB Florida Avenue								
72	40.0	22.5	22.5	40.0			32.9	32.9
East: Bryant Street Extension								
22	40.0	17.2	17.2	40.0			30.4	30.4
NorthEast: University Dorms								
62	40.0	16.5	16.5	40.0			30.0	30.0
North: Sherman Avenue								
42	40.0	15.0	15.0	40.0			29.9	29.9

NorthWest: SB Florida Avenue

82 40.0 19.1 19.1 40.0

30.8 30.8

"Running Speed" is the average speed excluding stopped periods.

--- End of aaSIDRA Output ---

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aaTraffic SIDRA US Highway Capacity Manual (2000) Version

RUN INFORMATION

* Basic Parameters:

Intersection Type: Roundabout

Driving on the right-hand side of the road

Input data specified in US units

Default Values File No. 11

Peak flow period (for performance): 30 minutes

Unit time (for volumes): 60 minutes (Total Flow Period)

Delay definition: Control delay

Geometric delay included

aaSIDRA Standard Delay and Queue models used

Level of Service based on: Delay (HCM method)

Queue definition: Back of queue, 95th Percentile

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Roundabout

Table S.0 - TRAFFIC FLOW DATA

Mov No.	Left		Through		Right		Flow Scale	Peak Flow Factor	
	LV	HV	LV	HV	LV	HV			
VEHICLES Demand flows in veh/hour as used by the program									
SouthEast: NB Florida Avenue									
72	0	0	619	13	17	1	1.00	0.95	
East: Bryant Street Extension									
22	10	1	1	1	21	1	1.00	0.95	
NorthEast: University Dorms									
62	21	1	0	0	21	1	1.00	0.95	
North: Sherman Avenue									
42	21	1	1012	21	10	1	1.00	0.95	
NorthWest: SB Florida Avenue									
82	21	1	307	6	0	0	1.00	0.95	

Based on unit time = 60 minutes.

Flow Scale and Peak Hour Factor effects included in flow values.

Title

Subtitle

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Roundabout

Table R.0 - ROUNDABOUT BASIC PARAMETERS

Cent Island Diam (ft)	Circ Width (ft)	Insc Diam. (ft)	No.of Circ. Lanes	No.of Entry Lanes	Av.Ent Lane Width (ft)	Circulating/Exiting Stream					
						Flow (veh/ h)	%HV	Adjust. Flow (pcu/h)	%Exit Incl.	Cap. Constr. Effect	O-D Factor
SouthEast: NB Florida Avenue											
80	30	140	2	2	15.00	158	2.0	158	0	N	0.969
East: Bryant Street Extension											
80	30	140	2	1	15.00	669	2.0	670	0	N	0.951
NorthEast: University Dorms											
80	30	140	2	1	15.00	664	2.0	664	0	N	0.952
North: Sherman Avenue											
80	30	140	2	1	15.00	286	2.0	286	0	N	0.980
NorthWest: SB Florida Avenue											
80	30	140	2	1	15.00	1085	2.0	1085	0	N	0.610

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Table R.1 - ROUNDABOUT GAP ACCEPTANCE PARAMETERS

Turn	Lane No.	Lane Type	Circulating/Exiting Stream					Critical Gap		Foll-up Headway (s)
			Flow Rate (pcu/h)	Aver Speed (mph)	Aver Dist (ft)	In-Bnch Headway (s)	Prop Bunched	Hdwy (s)	Dist (ft)	
SouthEast: NB Florida Avenue										
Thru	1	Subdominant	158	14.9	499.2	2.00	0.175	3.58	78.4	2.51
	2	Dominant	158	14.9	499.2	2.00	0.175	3.34	73.2	2.34
Right	2	Dominant	158	14.9	499.2	2.00	0.175	3.37	73.7	2.36
East: Bryant Street Extension										
Left	1	Dominant	670	22.1	174.5	1.08	0.355	3.43	111.2	2.69
Thru	1	Dominant	670	22.1	174.5	1.08	0.355	4.77	154.9	3.74
Right	1	Dominant	670	22.1	174.5	1.08	0.355	3.30	107.0	2.58
NorthEast: University Dorms										
Left	1	Dominant	664	22.2	176.7	1.06	0.348	3.30	107.7	2.59
Right	1	Dominant	664	22.2	176.7	1.06	0.348	3.30	107.7	2.59
North: Sherman Avenue										
Left	1	Dominant	286	21.6	397.7	1.16	0.182	3.54	112.1	2.56
Thru	1	Dominant	286	21.6	397.7	1.16	0.182	3.54	111.9	2.55
Right	1	Dominant	286	21.6	397.7	1.16	0.182	3.68	116.5	2.66
NorthWest: SB Florida Avenue										
Left	1	Dominant	1085	14.9	72.6	2.00	0.770	2.89	63.3	2.43
Thru	1	Dominant	1085	14.9	72.6	2.00	0.770	2.89	63.2	2.42

Environment Factor: 1.00

Entry/Circulating Flow Adjustment: Medium

Priority sharing is implied for some movements (Follow-up Headway plus Intra-bunch Headway is larger than the Critical Gap). The O-D Factor (Table R.0) allows for priority sharing and priority emphasis.

42 LTR	1066	1154	0.924	1415	22.6	1097	-4.9	1002	-13.2
--------	------	------	-------	------	------	------	------	------	-------

NorthWest: SB Florida Avenue

82 LT	335	373	0.898	717	92.2	674	80.7	522	39.9
-------	-----	-----	-------	-----	------	-----	------	-----	------

Title
Subtitle
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Table S.2 - MOVEMENT CAPACITY PARAMETERS

Mov No.	Demand		Opposing Movement		Adjust.	Total Cap.	Prac. Deg.	Prac. Spare Cap.	Lane Util	Deg. Satn
	Flow (veh/h)	HV (%)	Flow (veh/h)	HV (%)	Flow (pcu/h)	(veh /h)	xp	(%)	(%)	x
SouthEast: NB Florida Avenue										
72 TR	650	2.2	158	2.0	158	2600	0.85	240	100	0.250
East: Bryant Street Extension										
22 LTR	35	8.6	669	2.0	670	859	0.85	1986	100	0.041
NorthEast: University Dorms										
62 LR	44	4.5	664	2.0	664	910	0.85	1658	100	0.048
North: Sherman Avenue										
42 LTR	1066	2.2	286	2.0	286	1154	0.85	-8	100	0.924*
NorthWest: SB Florida Avenue										
82 LT	335	2.1	1085	2.0	1085	373	0.85	-5	100	0.898

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Table S.3 - INTERSECTION PARAMETERS

Intersection Level of Service	=	B
Worst movement Level of Service	=	D
Average intersection delay (s)	=	19.8
Largest average movement delay (s)	=	51.1
Largest back of queue, 95% (ft)	=	501
Performance Index	=	58.97
Degree of saturation (highest)	=	0.924
Practical Spare Capacity (lowest)	=	-8 %
Effective intersection capacity, (veh/h)	=	2306
Total vehicle flow (veh/h)	=	2130
Total person flow (pers/h)	=	3195
Total vehicle delay (veh-h/h)	=	11.71
Total person delay (pers-h/h)	=	17.57
Total effective vehicle stops (veh/h)	=	1961
Total effective person stops (pers/h)	=	2941
Total vehicle travel (veh-mi/h)	=	910.1
Total cost (\$/h)	=	899.52
Total fuel (gal/h)	=	37.0
Total CO2 (kg/h)	=	350.82

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Roundabout

Table S.5 - MOVEMENT PERFORMANCE

Mov No.	Total Delay (veh-h/h)	Total Delay (pers-h/h)	Aver. Delay (sec)	Prop. Queued	Eff. Stop Rate	Longest Queue 95% Back (vehs)	Queue (ft)	Perf. Index	Aver. Speed (mph)
SouthEast: NB Florida Avenue									
72 TR	1.12	1.69	6.2	0.31	0.51	1.6	41	10.76	33.2
East: Bryant Street Extension									
22 LTR	0.10	0.16	10.6	0.44	0.70	0.2	5	0.67	30.9
NorthEast: University Dorns									
62 LR	0.14	0.21	11.4	0.44	0.72	0.2	5	0.85	30.5
North: Sherman Avenue									
42 LTR	5.59	8.39	18.9	0.96	1.02	19.7	501	30.25	27.0
NorthWest: SB Florida Avenue									
82 LT	4.75	7.13	51.1	1.00	1.46	15.5	393	16.45	17.1

Title

Subtitle

Intersection ID:

Roundabout

Table S.6 - INTERSECTION PERFORMANCE

Total Flow (veh/h)	Deg. Satn x	Total Delay (veh-h/h)	Total Delay (pers-h/h)	Aver. Delay (sec)	Prop. Queued	Eff. Stop Rate	Longest Queue (ft)	Perf. Index	Aver. Speed (mph)
SouthEast: NB Florida Avenue									
650	0.250	1.12	1.69	6.2	0.31	0.51	41	10.76	33.2
East: Bryant Street Extension									
35	0.041	0.10	0.16	10.6	0.44	0.70	5	0.67	30.9
NorthEast: University Dorns									
44	0.048	0.14	0.21	11.4	0.44	0.72	5	0.85	30.5
North: Sherman Avenue									
1066	0.924	5.59	8.39	18.9	0.96	1.02	501	30.25	27.0
NorthWest: SB Florida Avenue									
335	0.898	4.75	7.13	51.1	1.00	1.46	393	16.45	17.1
ALL VEHICLES:									
2130	0.924	11.71	17.57	19.8	0.75	0.92	501	58.97	26.2
INTERSECTION (persons):									
3195	0.924		17.57	19.8	0.75	0.92		58.97	26.2

Queue values in this table are 95% back of queue (feet).

Title

Subtitle

Intersection ID:

Roundabout

Table S.7 - LANE PERFORMANCE

Dem

Q u e u e

1 LR	22		22	44	5	0.048	11.4	5
	22	0	22	44	5	0.048	11.4	5

North: Sherman Avenue								
1 LTR	22	1033	11	1066	2	0.923	18.9	501
	22	1033	11	1066	2	0.923	18.9	501

NorthWest: SB Florida Avenue								
1 LT	22	313		335	2	0.897	51.1	393
	22	313	0	335	2	0.897	51.1	393
=====								
ALL VEHICLES				Total	%	Max	Aver.	Max
				Flow	HV	X	Delay	Queue
				2130	2	0.924	19.8	501
=====								

Total flow period = 60 minutes. Peak flow period = 30 minutes.

Queue values in this table are 95% back of queue (feet).

Note: Basic Saturation Flows are not adjusted at roundabouts or sign-controlled intersections and apply only to continuous lanes.

Title
Subtitle
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Roundabout

Table S.15 - CAPACITY AND LEVEL OF SERVICE

Mov No.	Mov Typ	Total Flow (veh/h)	Total Cap. (veh/h)	Deg. of Satn (v/c)	Aver. Delay (sec)	LOS	Longest Queue 95% Back (vehs)	Queue (ft)
SouthEast: NB Florida Avenue								
72	TR	650	2600	0.250	6.2	A	1.6	41
		650		0.250	6.2	A	1.6	41
East: Bryant Street Extension								
22	LTR	35	859	0.041	10.6	B	0.2	5
		35		0.041	10.6	B	0.2	5
NorthEast: University Dorns								
62	LR	44	910	0.048	11.4	B	0.2	5
		44		0.048	11.4	B	0.2	5
North: Sherman Avenue								
42	LTR	1066	1154	0.924*	18.9	B	19.7	501
		1066		0.924	18.9	B	19.7	501
NorthWest: SB Florida Avenue								
82	LT	335	373	0.898	51.1	D	15.5	393
		335		0.898	51.1	D	15.5	393
=====								
ALL VEHICLES:		2130		0.924	19.8	B	19.7	501
=====								

Level of Service calculations are based on average control delay including geometric delay (HCM criteria), independent of the current delay definition used.
For the criteria, refer to the "Level of Service" topic in the

Title
 Subtitle
 Intersection ID:
 Roundabout

Table D.0 - GEOMETRIC DELAY DATA

From Approach	To Approach	Negn Radius (ft)	Negn Speed (mph)	Negn Dist. (ft)	Appr. Dist. (ft)	Downstream Distance (ft)
SouthEast: NB Florida Avenue						
	East	62.7	16.0	32.8	1800	390
	NorthEast	87.1	18.2	54.5	1800	390
	North	153.9	22.5	98.5	1800	407
	NorthWest	153.9	22.5	131.4	1800	407
East: Bryant Street Extension						
	SouthEast	52.0	14.9	245.0	1800	573
	NorthEast	73.2	17.0	32.8	1800	394
	North	102.1	19.3	54.2	1800	394
	NorthWest	153.9	22.5	98.5	1800	405
NorthEast: University Dorns						
	SouthEast	52.0	14.9	204.2	1800	553
	East	52.0	14.9	245.0	1800	553
	North	73.2	17.0	32.8	1800	394
	NorthWest	102.1	19.3	54.2	1800	394
North: Sherman Avenue						
	SouthEast	52.0	14.9	163.4	1800	492
	East	52.0	14.9	204.2	1800	553
	NorthEast	52.0	14.9	245.0	1800	553
	NorthWest	73.2	17.0	32.8	1800	391
NorthWest: SB Florida Avenue						
	SouthEast	153.9	22.5	131.4	1800	442
	East	52.0	14.9	163.4	1800	442
	NorthEast	52.0	14.9	204.2	1800	553
	North	52.0	14.9	245.0	1800	553

Maximum Negotiation (Design) Speed = 50.0 mph
 Downstream Distance calculated by aaSIDRA

Downstream distance is distance travelled from the stopline until exit cruise speed is reached (includes negotiation distance). Acceleration distance is weighted for light and heavy vehicles. The same distance applies for both stopped and unstopped vehicles.

Title
 Subtitle
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 Roundabout

Table D.1 - LANE DELAYS

----- Delay (seconds/veh) -----											
Lane No.	Mov No.	Deg. Satn x	Stop-line Delay			Acc. Dec. dn	Queuing		Stopd (Idle) di	Geom dig	Control dic
		1st d1	2nd d2	Total dSL	Total dq	MvUp dqm					
SouthEast: NB Florida Avenue											
1 T	72	0.250	0.5	0.0	0.5	2.0	0.0	0.0	0.0	5.7	6.2

NorthEast: University Dorms												
1 LR	0.048	0.0	0.1	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.00
North: Sherman Avenue												
1 LTR	0.923	1.5	4.2	2.9	7.1	10.5	13.4	15.5	19.7	23.2		0.28
NorthWest: SB Florida Avenue												
1 LT	0.897	2.5	2.9	2.5	5.4	8.4	10.6	12.2	15.5	18.2		0.22

Values printed in this table are back of queue (vehicles).

Title
Subtitle
Intersection ID:
Roundabout

Table D.3B - LANE QUEUES (feet)

	Deg.	Ovrfl.	Average (feet)			Percentile (feet)					Queue
Lane	Satn	Queue									Stor.
No.	x	No	Nb1	Nb2	Nb	70%	85%	90%	95%	98%	Ratio
SouthEast: NB Florida Avenue											
1 T	0.250	0	13	0	13	24	29	33	40	47	0.02
2 TR	0.250	0	13	0	13	24	30	33	41	48	0.02
East: Bryant Street Extension											
1 LTR	0.041	0	1	0	1	3	3	4	5	5	0.00
NorthEast: University Dorms											
1 LR	0.048	0	2	0	2	3	4	4	5	6	0.00
North: Sherman Avenue											
1 LTR	0.923	38	106	74	180	268	340	394	501	591	0.28
NorthWest: SB Florida Avenue											
1 LT	0.897	64	73	64	138	214	269	310	393	462	0.22

Values printed in this table are back of queue (feet).

Title
Subtitle
Intersection ID:
Roundabout

Table D.4 - MOVEMENT SPEEDS (mph)

Mov No.	App. Speeds		Exit Speeds		Queue Move-up		Av. Section Spd	
	Cruise	Negn	Negn	Cruise	1st Grn	2nd Grn	Running	Overall
SouthEast: NB Florida Avenue								
72	40.0	22.4	22.4	40.0			33.2	33.2
East: Bryant Street Extension								
22	40.0	17.2	17.2	40.0			30.9	30.9
NorthEast: University Dorms								
62	40.0	16.5	16.5	40.0			30.5	30.5
North: Sherman Avenue								
42	40.0	15.0	15.0	40.0	16.4		27.2	27.0

NorthWest: SB Florida Avenue

82 40.0 19.7 19.7 40.0 11.3 25.6 17.1

"Running Speed" is the average speed excluding stopped periods.

--- End of aaSIDRA Output ---

C:\Documents and Settings\Catherine\Desktop\AaSidra Analysis\BgAMS.OUT

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Title

Subtitle

Intersection ID:

aaTraffic SIDRA US Highway Capacity Manual (2000) Version

RUN INFORMATION

* Basic Parameters:

Intersection Type: Roundabout

Driving on the right-hand side of the road

Input data specified in US units

Default Values File No. 11

Peak flow period (for performance): 30 minutes

Unit time (for volumes): 60 minutes (Total Flow Period)

Delay definition: Control delay

Geometric delay included

aaSIDRA Standard Delay and Queue models used

Level of Service based on: Delay (HCM method)

Queue definition: Back of queue, 95th Percentile

Title

Subtitle

Intersection ID:

Roundabout

Table S.0 - TRAFFIC FLOW DATA

Mov No.	Left		Through		Right		Flow Scale	Peak Flow Factor	
	LV	HV	LV	HV	LV	HV			
VEHICLES Demand flows in veh/hour as used by the program									
SouthEast: NB Florida Avenue									
72	0	0	1292	26	13	1	1.00	0.95	
East: Bryant Street Extension									
22	10	1	10	1	21	1	1.00	0.95	
NorthEast: University Dorms									
62	21	1	0	0	21	1	1.00	0.95	
North: Sherman Avenue									
42	21	1	522	11	10	1	1.00	0.95	
NorthWest: SB Florida Avenue									
82	21	1	320	7	0	0	1.00	0.95	

Based on unit time = 60 minutes.

Flow Scale and Peak Hour Factor effects included in flow values.

Title

Subtitle

Intersection ID:

Roundabout

Table R.0 - ROUNDABOUT BASIC PARAMETERS

Cent Island Diam (ft)	Circ Width (ft)	Insc Diam. (ft)	No.of Circ. Lanes	No.of Entry Lanes	Av.Ent Lane Width (ft)	Circulating/Exiting Stream					
						Flow (veh/ h)	%HV	Adjust. Flow (pcu/h)	%Exit Incl.	Cap. Constr. Effect	O-D Factor
SouthEast: NB Florida Avenue											
80	30	140	2	2	15.00	173	2.0	173	0	N	0.977
East: Bryant Street Extension											
80	30	140	2	1	15.00	1353	2.0	1353	0	N	0.851
NorthEast: University Dorms											
80	30	140	2	1	15.00	1360	2.0	1360	0	N	0.851
North: Sherman Avenue											
80	30	140	2	1	15.00	324	2.0	324	0	N	0.973
NorthWest: SB Florida Avenue											
80	30	140	2	1	15.00	585	2.0	585	0	N	0.920

Title

Subtitle

Intersection ID:

Roundabout

Table R.1 - ROUNDABOUT GAP ACCEPTANCE PARAMETERS

Turn	Lane No.	Lane Type	---- Circulating/Exiting Stream ----					Critical Gap		Foll-up Headway (s)
			Flow Rate (pcu/h)	Aver Speed (mph)	Aver Dist (ft)	In-Bnch Headway (s)	Prop Bunched	Hdwy (s)	Dist (ft)	
SouthEast: NB Florida Avenue										
Thru	1	Subdominant	173	14.9	456.6	2.00	0.189	3.53	77.2	2.48
	2	Dominant	173	14.9	456.6	2.00	0.189	3.24	71.0	2.28
Right	2	Dominant	173	14.9	456.6	2.00	0.189	3.31	72.6	2.33
East: Bryant Street Extension										
Left	1	Dominant	1353	22.3	87.2	1.06	0.592	2.79	91.5	2.42
Thru	1	Dominant	1353	22.3	87.2	1.06	0.592	2.79	91.5	2.42
Right	1	Dominant	1353	22.3	87.2	1.06	0.592	2.69	88.1	2.33
NorthEast: University Dorms										
Left	1	Dominant	1360	22.4	86.9	1.06	0.594	2.68	88.1	2.32
Right	1	Dominant	1360	22.4	86.9	1.06	0.594	2.68	88.1	2.32
North: Sherman Avenue										
Left	1	Dominant	324	21.7	353.1	1.19	0.208	3.65	115.9	2.66
Thru	1	Dominant	324	21.7	353.1	1.19	0.208	3.64	115.7	2.65
Right	1	Dominant	324	21.7	353.1	1.19	0.208	3.79	120.5	2.76
NorthWest: SB Florida Avenue										
Left	1	Dominant	585	14.9	134.7	2.00	0.515	3.39	74.3	2.62
Thru	1	Dominant	585	14.9	134.7	2.00	0.515	3.39	74.2	2.61

Environment Factor: 1.00

Entry/Circulating Flow Adjustment: Medium

Priority sharing is implied for some movements (Follow-up Headway plus Intra-bunch Headway is larger than the Critical Gap). The O-D Factor (Table R.0) allows for priority sharing and priority emphasis.

Mov No.	Dem Flow (veh /h)	aaSIDRA		NAASRA 1986		Ger. Linear		Ger. GapAcc	
		Cap. (veh /h)	Deg. Satn x	Cap. (veh /h)	% Diff from aaSIDRA	Cap. (veh /h)	% Diff from aaSIDRA	Cap. (veh /h)	% Diff from aaSIDRA

SouthEast: NB Florida Avenue									
72 TR	1332	2654	0.502	3115	17.4	1293	-51.3	2192	-17.4

East: Bryant Street Extension									
22 LTR	44	660	0.067	543	-17.7	542	-17.9	353	-46.5

NorthEast: University Dorms									
62 LR	44	678	0.065	564	-16.8	548	-19.2	364	-46.3

North: Sherman Avenue									

42 LTR	566	1071	0.528	1370	27.9	1081	0.9	971	-9.3
--------	-----	------	-------	------	------	------	-----	-----	------

NorthWest: SB Florida Avenue

82 LT	349	839	0.416	1100	31.1	939	11.9	782	-6.8
-------	-----	-----	-------	------	------	-----	------	-----	------

Title
Subtitle
Intersection ID:
Roundabout

Table S.2 - MOVEMENT CAPACITY PARAMETERS

Mov No.	Demand		Opposing Movement		Adjust.	Total	Prac.	Prac.	Lane	Deg.
	Flow	HV	Flow	HV	Flow	Cap.	Deg.	Spare	Util	Satn
	(veh/h)	(%)	(veh/h)	(%)	(pcu/h)	(veh/h)	Satn xp	Cap. (%)	(%)	x
SouthEast: NB Florida Avenue										
72 TR	1332	2.0	173	2.0	173	2654	0.85	69	100	0.502
East: Bryant Street Extension										
22 LTR	44	6.8	1353	2.0	1353	660	0.85	1175	100	0.067
NorthEast: University Dorms										
62 LR	44	4.5	1360	2.0	1360	678	0.85	1210	100	0.065
North: Sherman Avenue										
42 LTR	566	2.3	324	2.0	324	1071	0.85	61	100	0.528*
NorthWest: SB Florida Avenue										
82 LT	349	2.3	585	2.0	585	839	0.85	104	100	0.416

Title
Subtitle
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Roundabout

Table S.3 - INTERSECTION PARAMETERS

Intersection Level of Service	=	A
Worst movement Level of Service	=	B
Average intersection delay (s)	=	8.8
Largest average movement delay (s)	=	12.9
Largest back of queue, 95% (ft)	=	101
Performance Index	=	43.70
Degree of saturation (highest)	=	0.528
Practical Spare Capacity (lowest)	=	61 %
Effective intersection capacity, (veh/h)	=	4418
Total vehicle flow (veh/h)	=	2335
Total person flow (pers/h)	=	3503
Total vehicle delay (veh-h/h)	=	5.71
Total person delay (pers-h/h)	=	8.56
Total effective vehicle stops (veh/h)	=	1510
Total effective person stops (pers/h)	=	2265
Total vehicle travel (veh-mi/h)	=	987.9
Total cost (\$/h)	=	810.10
Total fuel (gal/h)	=	37.1
Total CO2 (kg/h)	=	351.01

Title
Subtitle
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Roundabout

Table S.5 - MOVEMENT PERFORMANCE

Mov No.	Total Delay (veh-h/h)	Total Delay (pers-h/h)	Aver. Delay (sec)	Prop. Queued	Eff. Stop Rate	Longest Queue 95% Back (vehs)	Queue (ft)	Perf. Index	Aver. Speed (mph)
SouthEast: NB Florida Avenue									
72 TR	2.39	3.59	6.5	0.40	0.54	4.0	101	22.82	32.8
East: Bryant Street Extension									
22 LTR	0.14	0.21	11.4	0.61	0.81	0.3	8	0.90	30.7
NorthEast: University Dorms									
62 LR	0.16	0.24	12.9	0.61	0.84	0.3	8	0.93	30.0
North: Sherman Avenue									
42 LTR	1.97	2.96	12.6	0.51	0.77	3.6	93	11.72	29.8
NorthWest: SB Florida Avenue									
82 LT	1.05	1.57	10.8	0.67	0.81	3.0	77	7.31	30.8

Title

Subtitle

Intersection ID:

Roundabout

Table S.6 - INTERSECTION PERFORMANCE

Total Flow (veh/h)	Deg. Satn x	Total Delay (veh-h/h)	Total Delay (pers-h/h)	Aver. Delay (sec)	Prop. Queued	Eff. Stop Rate	Longest Queue (ft)	Perf. Index	Aver. Speed (mph)
SouthEast: NB Florida Avenue									
1332	0.502	2.39	3.59	6.5	0.40	0.54	101	22.82	32.8
East: Bryant Street Extension									
44	0.067	0.14	0.21	11.4	0.61	0.81	8	0.90	30.7
NorthEast: University Dorms									
44	0.065	0.16	0.24	12.9	0.61	0.84	8	0.93	30.0
North: Sherman Avenue									
566	0.528	1.97	2.96	12.6	0.51	0.77	93	11.72	29.8
NorthWest: SB Florida Avenue									
349	0.416	1.05	1.57	10.8	0.67	0.81	77	7.31	30.8
ALL VEHICLES:									
2335	0.528	5.71	8.56	8.8	0.47	0.65	101	43.70	31.6
INTERSECTION (persons):									
3503	0.528		8.56	8.8	0.47	0.65		43.70	31.6

Queue values in this table are 95% back of queue (feet).

Title

Subtitle

Intersection ID:

Roundabout

Table S.7 - LANE PERFORMANCE

Dem

Q u e u e

1 LR	22		22	44	5	0.065	12.9	8
	22	0	22	44	5	0.065	12.9	8

North: Sherman Avenue								
1 LTR	22	533	11	566	2	0.528	12.6	93
	22	533	11	566	2	0.528	12.6	93

NorthWest: SB Florida Avenue								
1 LT	22	327		349	2	0.416	10.8	77
	22	327	0	349	2	0.416	10.8	77
=====								
ALL VEHICLES				Total	%	Max	Aver.	Max
				Flow	HV	X	Delay	Queue
				2335	2	0.528	8.8	101

Total flow period = 60 minutes. Peak flow period = 30 minutes.

Queue values in this table are 95% back of queue (feet).

Note: Basic Saturation Flows are not adjusted at roundabouts or sign-controlled intersections and apply only to continuous lanes.

Title
Subtitle
Intersection ID:
Roundabout

Table S.15 - CAPACITY AND LEVEL OF SERVICE

Mov No.	Mov Typ	Total Flow (veh/h)	Total Cap. (veh/h)	Deg. of Satn (v/c)	Aver. Delay (sec)	LOS	Longest Queue 95% Back (vehs)	Queue (ft)
SouthEast: NB Florida Avenue								
72	TR	1332	2654	0.502	6.5	A	4.0	101
		1332		0.502	6.5	A	4.0	101
East: Bryant Street Extension								
22	LTR	44	660	0.067	11.4	B	0.3	8
		44		0.067	11.4	B	0.3	8
NorthEast: University Dorns								
62	LR	44	678	0.065	12.9	B	0.3	8
		44		0.065	12.9	B	0.3	8
North: Sherman Avenue								
42	LTR	566	1071	0.528*	12.6	B	3.6	93
		566		0.528	12.6	B	3.6	93
NorthWest: SB Florida Avenue								
82	LT	349	839	0.416	10.8	B	3.0	77
		349		0.416	10.8	B	3.0	77
ALL VEHICLES:		2335		0.528	8.8	A	4.0	101

Level of Service calculations are based on average control delay including geometric delay (HCM criteria), independent of the current delay definition used.
For the criteria, refer to the "Level of Service" topic in the

Title
 Subtitle
 Intersection ID:
 Roundabout

Table D.0 - GEOMETRIC DELAY DATA

From Approach	To Approach	Negn Radius (ft)	Negn Speed (mph)	Negn Dist. (ft)	Appr. Dist. (ft)	Downstream Distance (ft)
SouthEast: NB Florida Avenue						
	East	62.7	16.0	32.8	1800	389
	NorthEast	87.1	18.2	54.5	1800	389
	North	153.9	22.5	98.5	1800	407
	NorthWest	153.9	22.5	131.4	1800	407
East: Bryant Street Extension						
	SouthEast	52.0	14.9	245.0	1800	573
	NorthEast	73.2	17.0	32.8	1800	394
	North	102.1	19.3	54.2	1800	394
	NorthWest	153.9	22.5	98.5	1800	407
NorthEast: University Dorns						
	SouthEast	52.0	14.9	204.2	1800	553
	East	52.0	14.9	245.0	1800	553
	North	73.2	17.0	32.8	1800	394
	NorthWest	102.1	19.3	54.2	1800	394
North: Sherman Avenue						
	SouthEast	52.0	14.9	163.4	1800	492
	East	52.0	14.9	204.2	1800	553
	NorthEast	52.0	14.9	245.0	1800	553
	NorthWest	73.2	17.0	32.8	1800	391
NorthWest: SB Florida Avenue						
	SouthEast	153.9	22.5	131.4	1800	445
	East	52.0	14.9	163.4	1800	445
	NorthEast	52.0	14.9	204.2	1800	553
	North	52.0	14.9	245.0	1800	553
Maximum Negotiation (Design) Speed = 50.0 mph						
Downstream Distance calculated by aaSIDRA						

Downstream distance is distance travelled from the stopline until exit cruise speed is reached (includes negotiation distance). Acceleration distance is weighted for light and heavy vehicles. The same distance applies for both stopped and unstopped vehicles.

Title
 Subtitle
 Intersection ID:
 Roundabout

Table D.1 - LANE DELAYS

		Delay (seconds/veh)									
Lane No.	Mov No.	Deg. Satn x	Stop-line Delay			Acc. Dec. dn	Queuing		Stopd (Idle) di	Geom dig	Control dic
			1st d1	2nd d2	Total dSL		Total dq	MvUp dqm			
SouthEast: NB Florida Avenue											
1 T	72	0.502	0.8	0.0	0.8	2.6	0.0	0.0	0.0	5.7	6.5

NorthEast: University Dorms											
1 LR	0.065	0.0	0.1	0.0	0.1	0.2	0.2	0.3	0.3	0.4	0.00
North: Sherman Avenue											
1 LTR	0.528	0.0	1.1	0.0	1.2	2.1	2.6	2.9	3.6	4.2	0.05
NorthWest: SB Florida Avenue											
1 LT	0.416	0.0	1.0	0.0	1.0	1.8	2.2	2.5	3.0	3.5	0.04

Values printed in this table are back of queue (vehicles).

Title
Subtitle
Intersection ID:
Roundabout

Table D.3B - LANE QUEUES (feet)

	Deg.	Ovrfl.	Average (feet)			Percentile (feet)					Queue
Lane	Satn	Queue									Stor.
No.	x	No	Nb1	Nb2	Nb	70%	85%	90%	95%	98%	Ratio
SouthEast: NB Florida Avenue											
1 T	0.502	0	32	0	32	58	71	80	99	116	0.06
2 TR	0.502	0	33	0	33	59	72	82	101	118	0.06
East: Bryant Street Extension											
1 LTR	0.067	0	3	0	3	5	6	7	8	10	0.00
NorthEast: University Dorms											
1 LR	0.065	0	3	0	3	5	6	7	8	9	0.00
North: Sherman Avenue											
1 LTR	0.528	1	29	1	30	54	66	75	93	108	0.05
NorthWest: SB Florida Avenue											
1 LT	0.416	0	24	0	25	45	55	62	77	90	0.04

Values printed in this table are back of queue (feet).

Title
Subtitle
Intersection ID:
Roundabout

Table D.4 - MOVEMENT SPEEDS (mph)

Mov No.	App. Speeds		Exit Speeds		Queue Move-up		Av. Section Spd	
	Cruise	Negn	Negn	Cruise	1st Grn	2nd Grn	Running	Overall
SouthEast: NB Florida Avenue								
72	40.0	22.5	22.5	40.0			32.8	32.8
East: Bryant Street Extension								
22	40.0	18.4	18.4	40.0			30.7	30.7
NorthEast: University Dorms								
62	40.0	16.5	16.5	40.0			30.0	30.0
North: Sherman Avenue								
42	40.0	15.0	15.0	40.0	15.3		29.8	29.8

NorthWest: SB Florida Avenue

82 40.0 19.4 19.4 40.0 13.0 30.8 30.8

"Running Speed" is the average speed excluding stopped periods.

--- End of aaSIDRA Output ---

C:\Documents and Settings\Catherine\Desktop\AaSidra Analysis\BgPMS.OUT

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Title

Subtitle

Intersection ID:

aaTraffic SIDRA US Highway Capacity Manual (2000) Version

RUN INFORMATION

* Basic Parameters:

Intersection Type: Roundabout

Driving on the right-hand side of the road

Input data specified in US units

Default Values File No. 11

Peak flow period (for performance): 30 minutes

Unit time (for volumes): 60 minutes (Total Flow Period)

Delay definition: Control delay

Geometric delay included

aaSIDRA Standard Delay and Queue models used

Level of Service based on: Delay (HCM method)

Queue definition: Back of queue, 95th Percentile

Title

Subtitle

Intersection ID:

Roundabout

Table S.0 - TRAFFIC FLOW DATA

Mov No.	Left		Through		Right		Flow Scale	Peak Flow Factor
	LV	HV	LV	HV	LV	HV		
VEHICLES Demand flows in veh/hour as used by the program								
SouthEast: NB Florida Avenue								
72	0	0	641	13	17	1	1.00	0.95
East: Bryant Street Extension								
22	10	1	22	1	21	1	1.00	0.95
NorthEast: University Dorms								
62	21	1	0	0	21	1	1.00	0.95
North: Sherman Avenue								
42	21	1	1023	21	10	1	1.00	0.95
NorthWest: SB Florida Avenue								
82	21	1	325	7	0	0	1.00	0.95

Based on unit time = 60 minutes.

Flow Scale and Peak Hour Factor effects included in flow values.

Title

Subtitle

Intersection ID:

Roundabout

Table R.0 - ROUNDABOUT BASIC PARAMETERS

Cent Island Diam (ft)	Circ Width (ft)	Insc Diam. (ft)	No.of Circ. Lanes	No.of Entry Lanes	Av.Ent Lane Width (ft)	Circulating/Exiting Stream					
						Flow (veh/ h)	%HV	Adjust. Flow (pcu/h)	%Exit Incl.	Cap. Constr. Effect	O-D Factor
SouthEast: NB Florida Avenue											
80	30	140	2	2	15.00	168	2.0	168	0	N	0.967
East: Bryant Street Extension											
80	30	140	2	1	15.00	692	2.0	692	0	N	0.947
NorthEast: University Dorms											
80	30	140	2	1	15.00	707	2.0	707	0	N	0.947
North: Sherman Avenue											
80	30	140	2	1	15.00	325	2.0	325	0	N	0.979
NorthWest: SB Florida Avenue											
80	30	140	2	1	15.00	1097	2.0	1097	0	N	0.591

Title

Subtitle

Intersection ID:

Roundabout

Table R.1 - ROUNDABOUT GAP ACCEPTANCE PARAMETERS

Turn	Lane No.	Lane Type	Circulating/Exiting Stream					Critical Gap		Foll-up Headway (s)
			Flow Rate (pcu/h)	Aver Speed (mph)	Aver Dist (ft)	In-Bnch Headway (s)	Prop Bunched	Hdwy (s)	Dist (ft)	
SouthEast: NB Florida Avenue										
Thru	1	Subdominant	168	14.9	468.0	2.00	0.185	3.57	78.2	2.51
	2	Dominant	168	14.9	468.0	2.00	0.185	3.33	73.0	2.34
Right	2	Dominant	168	14.9	468.0	2.00	0.185	3.36	73.5	2.36
East: Bryant Street Extension										
Left	1	Dominant	692	22.1	169.0	1.07	0.364	3.40	110.5	2.68
Thru	1	Dominant	692	22.1	169.0	1.07	0.364	3.27	106.2	2.57
Right	1	Dominant	692	22.1	169.0	1.07	0.364	3.27	106.3	2.58
NorthEast: University Dorms										
Left	1	Dominant	707	22.3	166.1	1.08	0.373	3.25	106.2	2.57
Right	1	Dominant	707	22.3	166.1	1.08	0.373	3.25	106.2	2.57
North: Sherman Avenue										
Left	1	Dominant	325	21.7	352.0	1.20	0.212	3.52	111.9	2.56
Thru	1	Dominant	325	21.7	352.0	1.20	0.212	3.51	111.7	2.56
Right	1	Dominant	325	21.7	352.0	1.20	0.212	3.66	116.3	2.66
NorthWest: SB Florida Avenue										
Left	1	Dominant	1097	14.9	71.9	2.00	0.774	2.88	63.1	2.42
Thru	1	Dominant	1097	14.9	71.9	2.00	0.774	2.88	63.0	2.42

Environment Factor: 1.00

Entry/Circulating Flow Adjustment: Medium

Priority sharing is implied for some movements (Follow-up Headway plus Intra-bunch Headway is larger than the Critical Gap). The O-D Factor (Table R.0) allows for priority sharing and priority emphasis.

Mov No.	Dem Flow (veh /h)	aaSIDRA		NAASRA 1986		Ger. Linear		Ger. GapAcc	
		Cap. (veh /h)	Deg. Satn x	Cap. (veh /h)	% Diff from aaSIDRA	Cap. (veh /h)	% Diff from aaSIDRA	Cap. (veh /h)	% Diff from aaSIDRA

SouthEast: NB Florida Avenue									
72 TR	672	2577	0.261	3126	21.3	1295	-49.7	2203	-14.5

East: Bryant Street Extension									
22 LTR	56	888	0.063	990	11.5	875	-1.5	703	-20.8

NorthEast: University Dorms									
62 LR	44	893	0.049	989	10.8	873	-2.2	701	-21.5

North: Sherman Avenue									

42 LTR 1077 1124 0.958 1370 21.9 1077 -4.2 971 -13.6

NorthWest: SB Florida Avenue

82 LT 354 357 0.992 710 98.9 668 87.1 538 50.7

Title

Subtitle

Intersection ID:

Roundabout

Table S.2 - MOVEMENT CAPACITY PARAMETERS

Mov No.	Demand Flow (veh/h)	HV (%)	Opposing Movement Flow (veh/h)	HV (%)	Adjust. Flow (pcu/h)	Total Cap. (veh /h)	Prac. Deg. Satn xp	Prac. Spare Cap. (%)	Lane Util (%)	Deg. Satn x
SouthEast: NB Florida Avenue										
72 TR	672	2.1	168	2.0	168	2577	0.85	226	100	0.261
East: Bryant Street Extension										
22 LTR	56	5.4	692	2.0	692	888	0.85	1248	100	0.063
NorthEast: University Dorns										
62 LR	44	4.5	707	2.0	707	893	0.85	1625	100	0.049
North: Sherman Avenue										
42 LTR	1077	2.1	325	2.0	325	1124	0.85	-11	100	0.958
NorthWest: SB Florida Avenue										
82 LT	354	2.3	1097	2.0	1097	357	0.85	-14	100	0.992*

Title

Subtitle

Intersection ID:

Roundabout

Table S.3 - INTERSECTION PARAMETERS

Intersection Level of Service	=	C
Worst movement Level of Service	=	F
Average intersection delay (s)	=	27.7
Largest average movement delay (s)	=	85.4
Largest back of queue, 95% (ft)	=	645
Performance Index	=	72.92
Degree of saturation (highest)	=	0.992
Practical Spare Capacity (lowest)	=	-14 %
Effective intersection capacity, (veh/h)	=	2222
Total vehicle flow (veh/h)	=	2203
Total person flow (pers/h)	=	3305
Total vehicle delay (veh-h/h)	=	16.93
Total person delay (pers-h/h)	=	25.39
Total effective vehicle stops (veh/h)	=	2363
Total effective person stops (pers/h)	=	3545
Total vehicle travel (veh-mi/h)	=	941.0
Total cost (\$/h)	=	1053.74
Total fuel (gal/h)	=	40.3
Total CO2 (kg/h)	=	381.47

Title

Subtitle

Intersection ID:

Roundabout

Table S.5 - MOVEMENT PERFORMANCE

Mov No.	Total Delay (veh-h/h)	Total Delay (pers-h/h)	Aver. Delay (sec)	Prop. Queued	Eff. Stop Rate	Longest Queue 95% Back (vehs)	Queue (ft)	Perf. Index	Aver. Speed (mph)
SouthEast: NB Florida Avenue									
72 TR	1.17	1.76	6.3	0.33	0.51	1.7	44	11.18	33.2
East: Bryant Street Extension									
22 LTR	0.15	0.22	9.3	0.45	0.68	0.3	7	1.03	31.5
NorthEast: University Dorns									
62 LR	0.14	0.21	11.5	0.45	0.73	0.2	5	0.86	30.5
North: Sherman Avenue									
42 LTR	7.07	10.61	23.6	1.00	1.21	25.4	645	35.33	24.9
NorthWest: SB Florida Avenue									
82 LT	8.40	12.60	85.4	1.00	1.81	24.0	611	24.52	12.4

Title

Subtitle

Intersection ID:

Roundabout

Table S.6 - INTERSECTION PERFORMANCE

Total Flow (veh/h)	Deg. Satn x	Total Delay (veh-h/h)	Total Delay (pers-h/h)	Aver. Delay (sec)	Prop. Queued	Eff. Stop Rate	Longest Queue (ft)	Perf. Index	Aver. Speed (mph)
SouthEast: NB Florida Avenue									
672	0.261	1.17	1.76	6.3	0.33	0.51	44	11.18	33.2
East: Bryant Street Extension									
56	0.063	0.15	0.22	9.3	0.45	0.68	7	1.03	31.5
NorthEast: University Dorns									
44	0.049	0.14	0.21	11.5	0.45	0.73	5	0.86	30.5
North: Sherman Avenue									
1077	0.958	7.07	10.61	23.6	1.00	1.21	645	35.33	24.9
NorthWest: SB Florida Avenue									
354	0.992	8.40	12.60	85.4	1.00	1.81	611	24.52	12.4
ALL VEHICLES:									
2203	0.992	16.93	25.39	27.7	0.77	1.07	645	72.92	23.1
INTERSECTION (persons):									
3305	0.992		25.39	27.7	0.77	1.07		72.92	23.1

Queue values in this table are 95% back of queue (feet).

Title

Subtitle

Intersection ID:

Roundabout

Table S.7 - LANE PERFORMANCE

Dem

Queue

Lane No.	Mov No.	Flow (veh /h)	Cap (veh /h)	Deg. Satn x	Aver. Delay (sec)	Eff. Stop Rate	95% Back (vehs)	Short Lane (ft)
SouthEast: NB Florida Avenue								
1 T	72	323	1240	0.261	6.3	0.52	1.7	43
2 TR	72	349	1337	0.261	6.3	0.51	1.7	44
East: Bryant Street Extension								
1 LTR	22	56	888	0.063	9.3	0.68	0.3	7
NorthEast: University Dorms								
1 LR	62	44	893	0.049	11.5	0.73	0.2	5
North: Sherman Avenue								
1 LTR	42	1077	1124	0.958	23.6	1.21	25.4	645
NorthWest: SB Florida Avenue								
1 LT	82	354	357	0.992	85.4	1.81	24.0	611

Title
Subtitle
Intersection ID:
Roundabout

Table S.8A - LANE FLOW AND CAPACITY INFORMATION

Lane No.	Mov No.	Dem Flow (veh/h)				Min Cap (veh /h)	Tot Cap (veh /h)	Deg. Satn x	Lane Util %
		Lef	Thru	Rig	Tot				
SouthEast: NB Florida Avenue									
1 T	72	0	323	0	323	150	1240	0.261	100
2 TR	72	0	331	18	349	150	1337	0.261	100
East: Bryant Street Extension									
1 LTR	22	11	23	22	56	56	888	0.063	100
NorthEast: University Dorms									
1 LR	62	22	0	22	44	44	893	0.049	100
North: Sherman Avenue									
1 LTR	42	22	1044	11	1077	150	1124	0.958	100
NorthWest: SB Florida Avenue									
1 LT	82	22	332	0	354	150	357	0.992	100

For roundabouts, the capacity value for continuous movements is obtained as the basic saturation flow without any adjustments. Saturation flow scale applies if specified.

Title
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Roundabout

Table S.12A - FUEL CONSUMPTION, EMISSIONS AND COST - TOTAL

Mov No.	Fuel Total gal/h	Cost Total \$/h	HC Total kg/h	CO Total kg/h	NOX Total kg/h	CO2 Total kg/h
---------	------------------	-----------------	---------------	---------------	----------------	----------------

SouthEast: NB Florida Avenue

1 LR	22		22	44	5	0.049	11.5	5
	22	0	22	44	5	0.049	11.5	5

North: Sherman Avenue								
1 LTR	22	1044	11	1077	2	0.958	23.6	645
	22	1044	11	1077	2	0.958	23.6	645

NorthWest: SB Florida Avenue								
1 LT	22	332		354	2	0.992	85.4	611
	22	332	0	354	2	0.992	85.4	611
=====								
ALL VEHICLES				Total	%	Max	Aver.	Max
				Flow	HV	X	Delay	Queue
				2203	2	0.992	27.7	645

=====
Total flow period = 60 minutes. Peak flow period = 30 minutes.

Queue values in this table are 95% back of queue (feet).

Note: Basic Saturation Flows are not adjusted at roundabouts or sign-controlled intersections and apply only to continuous lanes.

Title
Subtitle
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Roundabout

Table S.15 - CAPACITY AND LEVEL OF SERVICE

Mov No.	Mov Typ	Total Flow (veh /h)	Total Cap. (veh /h)	Deg. of Satn (v/c)	Aver. Delay (sec)	LOS	Longest Queue 95% Back (vehs)	Queue (ft)

SouthEast: NB Florida Avenue								
72 TR		672	2577	0.261	6.3	A	1.7	44
		672		0.261	6.3	A	1.7	44

East: Bryant Street Extension								
22 LTR		56	888	0.063	9.3	A	0.3	7
		56		0.063	9.3	A	0.3	7

NorthEast: University Dorns								
62 LR		44	893	0.049	11.5	B	0.2	5
		44		0.049	11.5	B	0.2	5

North: Sherman Avenue								
42 LTR		1077	1124	0.958	23.6	C	25.4	645
		1077		0.958	23.6	C	25.4	645

NorthWest: SB Florida Avenue								
82 LT		354	357	0.992*	85.4	F	24.0	611
		354		0.992	85.4	F	24.0	611

ALL VEHICLES:		2203		0.992	27.7	C	25.4	645

Level of Service calculations are based on average control delay including geometric delay (HCM criteria), independent of the current delay definition used.
For the criteria, refer to the "Level of Service" topic in the

Title
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 Roundabout

Table D.0 - GEOMETRIC DELAY DATA

From Approach	To Approach	Negn Radius (ft)	Negn Speed (mph)	Negn Dist. (ft)	Appr. Dist. (ft)	Downstream Distance (ft)
SouthEast: NB Florida Avenue						
	East	62.7	16.0	32.8	1800	390
	NorthEast	87.1	18.2	54.5	1800	390
	North	153.9	22.5	98.5	1800	407
	NorthWest	153.9	22.5	131.4	1800	407
East: Bryant Street Extension						
	SouthEast	52.0	14.9	245.0	1800	573
	NorthEast	73.2	17.0	32.8	1800	394
	North	102.1	19.3	54.2	1800	394
	NorthWest	153.9	22.5	98.5	1800	407
NorthEast: University Dorns						
	SouthEast	52.0	14.9	204.2	1800	553
	East	52.0	14.9	245.0	1800	553
	North	73.2	17.0	32.8	1800	394
	NorthWest	102.1	19.3	54.2	1800	394
North: Sherman Avenue						
	SouthEast	52.0	14.9	163.4	1800	492
	East	52.0	14.9	204.2	1800	553
	NorthEast	52.0	14.9	245.0	1800	553
	NorthWest	73.2	17.0	32.8	1800	391
NorthWest: SB Florida Avenue						
	SouthEast	153.9	22.5	131.4	1800	443
	East	52.0	14.9	163.4	1800	443
	NorthEast	52.0	14.9	204.2	1800	553
	North	52.0	14.9	245.0	1800	553

Maximum Negotiation (Design) Speed = 50.0 mph
 Downstream Distance calculated by aaSIDRA

Downstream distance is distance travelled from the stopline until exit cruise speed is reached (includes negotiation distance). Acceleration distance is weighted for light and heavy vehicles. The same distance applies for both stopped and unstopped vehicles.

Title
 Subtitle
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 Roundabout

Table D.1 - LANE DELAYS

			Delay (seconds/veh)								
Lane No.	Mov No.	Deg. Satn x	Stop-line Delay			Acc. Dec. dn	Queuing		Stopd (Idle) di	Geom dig	Control dic
			1st d1	2nd d2	Total dSL		Total dq	MvUp dqm			
SouthEast: NB Florida Avenue											
1 T	72	0.261	0.6	0.0	0.6	2.1	0.0	0.0	0.0	5.7	6.3

NorthEast: University Dorms												
1 LR	0.049	0.0	0.1	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.00
North: Sherman Avenue												
1 LTR	0.958	2.8	4.5	4.8	9.3	13.2	17.0	19.8	25.4	30.0		0.36
NorthWest: SB Florida Avenue												
1 LT	0.992	5.4	3.3	5.5	8.8	12.6	16.1	18.7	24.0	28.4		0.34

Values printed in this table are back of queue (vehicles).

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Subtitle
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Roundabout

Table D.3B - LANE QUEUES (feet)

Lane No.	Deg. Satn	Ovrfl. Queue	Average (feet)			Percentile (feet)					Queue Stor.
	x	No	Nb1	Nb2	Nb	70%	85%	90%	95%	98%	Ratio
SouthEast: NB Florida Avenue											
1 T	0.261	0	14	0	14	25	30	35	43	49	0.02
2 TR	0.261	0	14	0	14	26	31	35	44	51	0.02
East: Bryant Street Extension											
1 LTR	0.063	0	2	0	2	4	5	6	7	8	0.00
NorthEast: University Dorms											
1 LR	0.049	0	2	0	2	3	4	4	5	6	0.00
North: Sherman Avenue											
1 LTR	0.958	71	114	123	237	336	431	502	645	763	0.36
NorthWest: SB Florida Avenue											
1 LT	0.992	138	83	140	224	320	410	477	611	723	0.34

Values printed in this table are back of queue (feet).

Title
Subtitle
Intersection ID:
Roundabout

Table D.4 - MOVEMENT SPEEDS (mph)

Mov No.	App. Speeds		Exit Speeds		Queue Move-up		Av. Section Spd	
	Cruise	Negn	Negn	Cruise	1st Grn	2nd Grn	Running	Overall
SouthEast: NB Florida Avenue								
72	40.0	22.4	22.4	40.0			33.2	33.2
East: Bryant Street Extension								
22	40.0	19.3	19.3	40.0			31.5	31.5
NorthEast: University Dorms								
62	40.0	16.5	16.5	40.0			30.5	30.5
North: Sherman Avenue								
42	40.0	15.0	15.0	40.0	15.6		25.9	24.9

NorthWest: SB Florida Avenue

82 40.0 19.6 19.6 40.0 11.3 23.2 12.4

"Running Speed" is the average speed excluding stopped periods.

--- End of aaSIDRA Output ---

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Title

Subtitle

Intersection ID:

aaTraffic SIDRA US Highway Capacity Manual (2000) Version

RUN INFORMATION

* Basic Parameters:

Intersection Type: Roundabout

Driving on the right-hand side of the road

Input data specified in US units

Default Values File No. 11

Peak flow period (for performance): 30 minutes

Unit time (for volumes): 60 minutes (Total Flow Period)

Delay definition: Control delay

Geometric delay included

aaSIDRA Standard Delay and Queue models used

Level of Service based on: Delay (HCM method)

Queue definition: Back of queue, 95th Percentile

Title

Subtitle

Intersection ID:

Roundabout

Table S.0 - TRAFFIC FLOW DATA

Mov No.	Left		Through		Right		Flow Scale	Peak Flow Factor
	LV	HV	LV	HV	LV	HV		
VEHICLES Demand flows in veh/hour as used by the program								
SouthEast: NB Florida Avenue								
72	0	0	1294	26	13	1	1.00	0.95
East: Bryant Street Extension								
22	10	1	19	1	21	1	1.00	0.95
NorthEast: University Dorms								
62	21	1	0	0	21	1	1.00	0.95
North: Sherman Avenue								
42	21	1	528	11	10	1	1.00	0.95
NorthWest: SB Florida Avenue								
82	21	1	349	7	0	0	1.00	0.95

Based on unit time = 60 minutes.

Flow Scale and Peak Hour Factor effects included in flow values.

Title

Subtitle

Intersection ID:

Roundabout

Table R.0 - ROUNDABOUT BASIC PARAMETERS

Cent Island Diam (ft)	Circ Width (ft)	Insc Diam. (ft)	No.of Circ. Lanes	No.of Entry Lanes	Av.Ent Lane Width (ft)	Circulating/Exiting Stream					
						Flow (veh/ h)	%HV	Adjust. Flow (pcu/h)	%Exit Incl.	Cap. Constr. Effect	O-D Factor
SouthEast: NB Florida Avenue											
80	35	150	2	2	15.00	189	2.0	190	0	N	0.974
East: Bryant Street Extension											
80	35	150	2	1	15.00	1355	2.0	1355	0	N	0.843
NorthEast: University Dorms											
80	35	150	2	1	15.00	1371	2.0	1371	0	N	0.843
North: Sherman Avenue											
80	35	150	2	1	15.00	324	2.0	324	0	N	0.972
NorthWest: SB Florida Avenue											
80	35	150	2	1	15.00	592	2.0	592	0	N	0.919

Title

Subtitle

Intersection ID:

Roundabout

Table R.1 - ROUNDABOUT GAP ACCEPTANCE PARAMETERS

Turn	Lane No.	Lane Type	---- Circulating/Exiting Stream ----					Critical Gap		Foll-up Headway (s)
			Flow Rate (pcu/h)	Aver Speed (mph)	Aver Dist (ft)	In-Bnch Headway (s)	Prop Bunched	Hdwy (s)	Dist (ft)	
SouthEast: NB Florida Avenue										
Thru	1	Subdominant	190	15.1	422.0	2.00	0.206	3.49	77.6	2.47
	2	Dominant	190	15.1	422.0	2.00	0.206	3.19	70.9	2.25
Right	2	Dominant	190	15.1	422.0	2.00	0.206	3.26	72.4	2.30
East: Bryant Street Extension										
Left	1	Dominant	1355	22.5	87.6	1.06	0.594	2.75	90.6	2.38
Thru	1	Dominant	1355	22.5	87.6	1.06	0.594	2.65	87.3	2.29
Right	1	Dominant	1355	22.5	87.6	1.06	0.594	2.64	87.1	2.29
NorthEast: University Dorms										
Left	1	Dominant	1371	22.5	86.8	1.07	0.601	2.63	87.0	2.28
Right	1	Dominant	1371	22.5	86.8	1.07	0.601	2.63	87.0	2.28
North: Sherman Avenue										
Left	1	Dominant	324	21.8	355.6	1.21	0.213	3.59	115.1	2.62
Thru	1	Dominant	324	21.8	355.6	1.21	0.213	3.59	114.9	2.61
Right	1	Dominant	324	21.8	355.6	1.21	0.213	3.74	119.7	2.72
NorthWest: SB Florida Avenue										
Left	1	Dominant	592	15.1	135.2	2.00	0.519	3.34	74.1	2.57
Thru	1	Dominant	592	15.1	135.2	2.00	0.519	3.33	74.0	2.57

Environment Factor: 1.00

Entry/Circulating Flow Adjustment: Medium

Priority sharing is implied for some movements (Follow-up Headway plus Intra-bunch Headway is larger than the Critical Gap). The O-D Factor (Table R.0) allows for priority sharing and priority emphasis.

42 LTR	572	1089	0.525	1370	25.8	1082	-0.6	971	-10.8
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NorthWest: SB Florida Avenue

82 LT	378	850	0.445	1094	28.7	936	10.1	778	-8.5
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Table S.2 - MOVEMENT CAPACITY PARAMETERS

Mov No.	Demand Flow (veh/h)	HV (%)	Opposing Movement Flow (veh/h)	HV (%)	Adjust. Flow (pcu/h)	Total Cap. (veh/h)	Prac. Deg. xp	Prac. Spare Cap. (%)	Lane Util (%)	Deg. Satn x
SouthEast: NB Florida Avenue										
72 TR	1334	2.0	189	2.0	190	2643	0.85	68	100	0.505
East: Bryant Street Extension										
22 LTR	53	5.7	1355	2.0	1355	679	0.85	989	100	0.078
NorthEast: University Dorns										
62 LR	44	4.5	1371	2.0	1371	683	0.85	1219	100	0.064
North: Sherman Avenue										
42 LTR	572	2.3	324	2.0	324	1089	0.85	62	100	0.525*
NorthWest: SB Florida Avenue										
82 LT	378	2.1	592	2.0	592	850	0.85	91	100	0.445

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Table S.3 - INTERSECTION PARAMETERS

Intersection Level of Service	=	A
Worst movement Level of Service	=	B
Average intersection delay (s)	=	8.9
Largest average movement delay (s)	=	12.8
Largest back of queue, 95% (ft)	=	103
Performance Index	=	44.80
Degree of saturation (highest)	=	0.525
Practical Spare Capacity (lowest)	=	62 %
Effective intersection capacity, (veh/h)	=	4533
Total vehicle flow (veh/h)	=	2381
Total person flow (pers/h)	=	3572
Total vehicle delay (veh-h/h)	=	5.87
Total person delay (pers-h/h)	=	8.81
Total effective vehicle stops (veh/h)	=	1553
Total effective person stops (pers/h)	=	2330
Total vehicle travel (veh-mi/h)	=	1008.7
Total cost (\$/h)	=	828.81
Total fuel (gal/h)	=	37.9
Total CO2 (kg/h)	=	358.64

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Table S.5 - MOVEMENT PERFORMANCE

Mov No.	Total Delay (veh-h/h)	Total Delay (pers-h/h)	Aver. Delay (sec)	Prop. Queued	Eff. Stop Rate	Longest Queue 95% Back (vehs)	Queue (ft)	Perf. Index	Aver. Speed (mph)
SouthEast: NB Florida Avenue									
72 TR	2.40	3.60	6.5	0.42	0.54	4.1	103	22.92	32.8
East: Bryant Street Extension									
22 LTR	0.16	0.24	10.8	0.62	0.79	0.4	10	1.07	30.9
NorthEast: University Dorms									
62 LR	0.16	0.24	12.8	0.62	0.83	0.3	8	0.93	30.0
North: Sherman Avenue									
42 LTR	1.99	2.98	12.5	0.50	0.77	3.6	92	11.81	29.8
NorthWest: SB Florida Avenue									
82 LT	1.17	1.75	11.1	0.68	0.83	3.4	87	8.06	30.7

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Table S.6 - INTERSECTION PERFORMANCE

Total Flow (veh/h)	Deg. Satn x	Total Delay (veh-h/h)	Total Delay (pers-h/h)	Aver. Delay (sec)	Prop. Queued	Eff. Stop Rate	Longest Queue (ft)	Perf. Index	Aver. Speed (mph)
SouthEast: NB Florida Avenue									
1334	0.505	2.40	3.60	6.5	0.42	0.54	103	22.92	32.8
East: Bryant Street Extension									
53	0.078	0.16	0.24	10.8	0.62	0.79	10	1.07	30.9
NorthEast: University Dorms									
44	0.064	0.16	0.24	12.8	0.62	0.83	8	0.93	30.0
North: Sherman Avenue									
572	0.525	1.99	2.98	12.5	0.50	0.77	92	11.81	29.8
NorthWest: SB Florida Avenue									
378	0.445	1.17	1.75	11.1	0.68	0.83	87	8.06	30.7
ALL VEHICLES:									
2381	0.525	5.87	8.81	8.9	0.49	0.65	103	44.80	31.6
INTERSECTION (persons):									
3572	0.525		8.81	8.9	0.49	0.65		44.80	31.6

Queue values in this table are 95% back of queue (feet).

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Table S.7 - LANE PERFORMANCE

Dem

Queue

Lane No.	Mov No.	Flow (veh/h)	Cap (veh/h)	Deg. Satn x	Aver. Delay (sec)	Eff. Stop Rate	95% Back (vehs)	Short Lane (ft)
SouthEast: NB Florida Avenue								
1 T	72	634	1255	0.505	6.5	0.54	4.0	101
2 TR	72	700	1388	0.505	6.4	0.54	4.1	103
East: Bryant Street Extension								
1 LTR	22	53	679	0.078	10.8	0.79	0.4	10
NorthEast: University Dorms								
1 LR	62	44	683	0.064	12.8	0.83	0.3	8
North: Sherman Avenue								
1 LTR	42	572	1089	0.525	12.5	0.77	3.6	92
NorthWest: SB Florida Avenue								
1 LT	82	378	850	0.445	11.1	0.83	3.4	87

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Table S.8A - LANE FLOW AND CAPACITY INFORMATION

Lane No.	Mov No.	Dem Flow (veh/h)				Min Cap (veh/h)	Tot Cap (veh/h)	Deg. Satn x	Lane Util %
		Lef	Thru	Rig	Tot				

SouthEast: NB Florida Avenue									
1 T	72	0	634	0	634	150	1255	0.505	100
2 TR	72	0	686	14	700	150	1388	0.505	100

East: Bryant Street Extension									
1 LTR	22	11	20	22	53	53	679	0.078	100

NorthEast: University Dorms									
1 LR	62	22	0	22	44	44	683	0.064	100

North: Sherman Avenue									
1 LTR	42	22	539	11	572	150	1089	0.525	100

NorthWest: SB Florida Avenue									
1 LT	82	22	356	0	378	150	850	0.445	100

For roundabouts, the capacity value for continuous movements is obtained as the basic saturation flow without any adjustments. Saturation flow scale applies if specified.

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Table S.12A - FUEL CONSUMPTION, EMISSIONS AND COST - TOTAL

Mov No.	Fuel Total gal/h	Cost Total \$/h	HC Total kg/h	CO Total kg/h	NOX Total kg/h	CO2 Total kg/h
---------	------------------	-----------------	---------------	---------------	----------------	----------------

SouthEast: NB Florida Avenue

1 LR	22		22	44	5	0.064	12.8	8
	22	0	22	44	5	0.064	12.8	8

North: Sherman Avenue								
1 LTR	22	539	11	572	2	0.525	12.5	92
	22	539	11	572	2	0.525	12.5	92

NorthWest: SB Florida Avenue								
1 LT	22	356		378	2	0.445	11.1	87
	22	356	0	378	2	0.445	11.1	87
=====								
ALL VEHICLES				Total	%	Max	Aver.	Max
				Flow	HV	X	Delay	Queue
				2381	2	0.525	8.9	103

Total flow period = 60 minutes. Peak flow period = 30 minutes.

Queue values in this table are 95% back of queue (feet).

Note: Basic Saturation Flows are not adjusted at roundabouts or sign-controlled intersections and apply only to continuous lanes.

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Table S.15 - CAPACITY AND LEVEL OF SERVICE

Mov No.	Mov Typ	Total Flow (veh/h)	Total Cap. (veh/h)	Deg. of Satn (v/c)	Aver. Delay (sec)	LOS	Longest Queue 95% Back (vehs)	Queue (ft)
SouthEast: NB Florida Avenue								
72	TR	1334	2643	0.505	6.5	A	4.1	103
		1334		0.505	6.5	A	4.1	103
East: Bryant Street Extension								
22	LTR	53	679	0.078	10.8	B	0.4	10
		53		0.078	10.8	B	0.4	10
NorthEast: University Dorns								
62	LR	44	683	0.064	12.8	B	0.3	8
		44		0.064	12.8	B	0.3	8
North: Sherman Avenue								
42	LTR	572	1089	0.525*	12.5	B	3.6	92
		572		0.525	12.5	B	3.6	92
NorthWest: SB Florida Avenue								
82	LT	378	850	0.445	11.1	B	3.4	87
		378		0.445	11.1	B	3.4	87
ALL VEHICLES:		2381		0.525	8.9	A	4.1	103

Level of Service calculations are based on average control delay including geometric delay (HCM criteria), independent of the current delay definition used.
For the criteria, refer to the "Level of Service" topic in the

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Table D.0 - GEOMETRIC DELAY DATA

From Approach	To Approach	Negn Radius (ft)	Negn Speed (mph)	Negn Dist. (ft)	Appr. Dist. (ft)	Downstream Distance (ft)
SouthEast: NB Florida Avenue						
	East	65.4	16.3	32.8	1800	390
	NorthEast	90.5	18.4	58.4	1800	390
	North	156.6	22.7	104.9	1800	407
	NorthWest	156.6	22.7	139.9	1800	407
East: Bryant Street Extension						
	SouthEast	54.0	15.1	254.5	1800	582
	NorthEast	75.9	17.2	32.8	1800	395
	North	105.5	19.5	58.1	1800	395
	NorthWest	156.6	22.7	104.9	1800	407
NorthEast: University Dorns						
	SouthEast	54.0	15.1	212.1	1800	561
	East	54.0	15.1	254.5	1800	561
	North	75.9	17.2	32.8	1800	395
	NorthWest	105.5	19.5	58.1	1800	395
North: Sherman Avenue						
	SouthEast	54.0	15.1	169.6	1800	497
	East	54.0	15.1	212.1	1800	561
	NorthEast	54.0	15.1	254.5	1800	561
	NorthWest	75.9	17.2	32.8	1800	391
NorthWest: SB Florida Avenue						
	SouthEast	156.6	22.7	139.9	1800	453
	East	54.0	15.1	169.6	1800	453
	NorthEast	54.0	15.1	212.1	1800	561
	North	54.0	15.1	254.5	1800	561

Maximum Negotiation (Design) Speed = 50.0 mph
 Downstream Distance calculated by aaSIDRA

Downstream distance is distance travelled from the stopline until exit cruise speed is reached (includes negotiation distance). Acceleration distance is weighted for light and heavy vehicles. The same distance applies for both stopped and unstopped vehicles.

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Table D.1 - LANE DELAYS

Delay (seconds/veh)												
Lane No.	Mov No.	Deg. Satn	Stop-line Delay			Acc. Dec.	Queuing		Stopd (Idle)	Geom dig	Control dic	
		x	1st d1	2nd d2	Total dSL	dn	Total dq	MvUp dqm	di			
SouthEast: NB Florida Avenue												
1	T	72	0.505	0.9	0.0	0.9	2.7	0.0	0.0	0.0	5.7	6.5

NorthEast: University Dorms												
1 LR	0.064	0.0	0.1	0.0	0.1	0.2	0.2	0.3	0.3	0.4	0.00	
North: Sherman Avenue												
1 LTR	0.525	0.0	1.1	0.0	1.2	2.1	2.6	2.9	3.6	4.2	0.05	
NorthWest: SB Florida Avenue												
1 LT	0.445	0.0	1.1	0.1	1.1	2.0	2.4	2.8	3.4	4.0	0.05	

Values printed in this table are back of queue (vehicles).

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Table D.3B - LANE QUEUES (feet)

	Deg.	Ovrfl.	Average (feet)			Percentile (feet)					Queue
Lane	Satn	Queue									Stor.
No.	x	No	Nb1	Nb2	Nb	70%	85%	90%	95%	98%	Ratio
SouthEast: NB Florida Avenue											
1 T	0.505	0	33	0	33	58	71	81	101	117	0.06
2 TR	0.505	0	33	0	33	60	73	83	103	120	0.06
East: Bryant Street Extension											
1 LTR	0.078	0	3	0	3	6	7	8	10	12	0.01
NorthEast: University Dorms											
1 LR	0.064	0	3	0	3	5	6	7	8	9	0.00
North: Sherman Avenue											
1 LTR	0.525	1	29	1	30	53	65	74	92	107	0.05
NorthWest: SB Florida Avenue											
1 LT	0.445	1	27	1	28	51	62	70	87	101	0.05

Values printed in this table are back of queue (feet).

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Table D.4 - MOVEMENT SPEEDS (mph)

Mov No.	App. Speeds		Exit Speeds		Queue Move-up		Av. Section Spd	
	Cruise	Negn	Negn	Cruise	1st Grn	2nd Grn	Running	Overall
SouthEast: NB Florida Avenue								
72	40.0	22.6	22.6	40.0			32.8	32.8
East: Bryant Street Extension								
22	40.0	19.3	19.3	40.0			30.9	30.9
NorthEast: University Dorms								
62	40.0	16.8	16.8	40.0			30.0	30.0
North: Sherman Avenue								
42	40.0	15.2	15.2	40.0	15.5		29.8	29.8

NorthWest: SB Florida Avenue

82 40.0 19.5 19.5 40.0 13.1 30.7 30.7

"Running Speed" is the average speed excluding stopped periods.

--- End of aaSIDRA Output ---

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