

APPENDIX A

Automatic Traffic Recorder Counts

Transportation Data Corporation

Mario Perone, mperone1@verizon.net

t. (781) 587-0086 f. (781) 587-0189

Washington Street
north of Elm Street
City, State: Holliston, MA
Client: McM/C. Medeiros

04384Aclass

Site Code: Y-13449.11

Northbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
9/12/13	0	55	15	0	2	0	0	0	0	0	0	0	0	72
01:00	0	18	10	0	0	0	0	0	0	0	0	0	0	28
02:00	0	11	10	3	1	0	0	0	1	0	0	0	0	26
03:00	0	24	4	0	1	1	0	0	1	0	0	0	0	31
04:00	0	49	20	1	1	0	0	0	1	0	0	0	0	72
05:00	0	245	79	1	16	3	0	0	1	0	0	0	0	345
06:00	5	853	233	10	40	5	0	5	3	1	0	0	0	1155
07:00	9	852	149	6	35	4	1	8	2	1	0	0	0	1067
08:00	6	879	145	6	36	9	1	4	4	2	0	0	0	1092
09:00	3	551	120	4	34	6	0	3	6	0	0	0	0	727
10:00	2	476	95	10	21	11	0	3	6	0	0	0	0	624
11:00	10	450	86	6	16	3	0	6	8	0	0	0	0	585
12 PM	3	434	86	3	20	3	0	4	3	0	0	0	0	556
13:00	3	392	102	10	22	1	0	7	4	1	0	0	0	542
14:00	3	515	94	8	15	4	0	7	4	0	0	0	0	650
15:00	4	442	84	1	16	2	0	5	3	0	0	0	0	557
16:00	7	480	90	1	10	1	0	1	0	0	0	0	0	590
17:00	9	501	60	0	13	1	0	1	4	0	0	0	0	589
18:00	2	413	63	0	14	2	0	4	1	0	0	0	0	499
19:00	1	316	55	0	7	0	0	2	0	0	0	0	0	381
20:00	1	266	39	0	5	0	0	0	1	0	0	0	0	312
21:00	0	152	16	0	5	1	0	1	0	0	0	0	0	175
22:00	0	108	23	0	4	0	0	0	1	0	0	0	0	136
23:00	0	72	13	0	1	0	0	0	0	0	0	0	0	86
Total	68	8554	1691	70	335	57	2	61	54	5	0	0	0	10897
Percent	0.6%	78.5%	15.5%	0.6%	3.1%	0.5%	0.0%	0.6%	0.5%	0.0%	0.0%	0.0%	0.0%	
AM Peak	11:00	08:00	06:00	06:00	06:00	10:00	07:00	07:00	11:00	08:00				06:00
Vol.	10	879	233	10	40	11	1	8	8	2				1155
PM Peak	17:00	14:00	13:00	13:00	13:00	14:00		13:00	13:00	13:00				14:00
Vol.	9	515	102	10	22	4		7	4	1				650
Grand Total	68	8554	1691	70	335	57	2	61	54	5	0	0	0	10897
Percent	0.6%	78.5%	15.5%	0.6%	3.1%	0.5%	0.0%	0.6%	0.5%	0.0%	0.0%	0.0%	0.0%	

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Washington Street
north of Elm Street
City, State: Holliston, MA
Client: McM/C. Medeiros

04384Aclass

Site Code: Y-13449.11

Southbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
9/12/13	1	53	12	0	3	0	0	0	0	0	0	0	0	69
01:00	0	24	5	0	2	0	0	0	0	0	0	0	0	31
02:00	1	20	4	0	0	0	0	0	1	0	0	0	0	26
03:00	0	9	2	1	0	0	0	0	2	0	0	0	0	14
04:00	0	20	7	0	2	0	0	0	0	1	0	0	0	30
05:00	0	79	17	0	4	1	0	0	2	1	0	0	0	104
06:00	1	246	62	4	8	1	0	2	2	0	0	0	0	326
07:00	4	419	78	4	14	5	2	6	0	0	0	0	0	532
08:00	8	394	50	1	18	13	3	1	3	0	0	0	0	491
09:00	3	377	81	4	19	4	3	2	5	0	0	0	0	498
10:00	4	333	83	8	27	5	1	6	5	0	0	0	0	472
11:00	6	462	75	2	18	7	1	6	8	0	0	0	0	585
12 PM	8	447	77	9	22	6	0	8	3	0	0	0	0	580
13:00	5	441	107	5	13	2	0	5	6	0	0	0	0	584
14:00	4	516	99	7	15	5	1	7	5	0	0	0	0	659
15:00	6	632	155	2	20	10	0	8	8	2	0	0	0	843
16:00	10	752	138	2	30	3	0	7	4	0	0	0	0	946
17:00	15	815	102	1	13	2	0	2	2	1	0	0	0	953
18:00	6	793	115	0	18	2	0	5	3	0	0	0	0	942
19:00	4	487	77	0	8	1	0	1	4	0	0	0	0	582
20:00	1	451	61	0	4	1	0	3	2	0	0	0	0	523
21:00	0	283	34	0	2	0	0	0	1	0	0	0	0	320
22:00	1	160	19	0	4	0	0	0	1	0	0	0	0	185
23:00	0	118	18	0	3	0	0	0	1	0	0	0	0	140
Total	88	8331	1478	50	267	68	11	69	68	5	0	0	0	10435
Percent	0.8%	79.8%	14.2%	0.5%	2.6%	0.7%	0.1%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	
AM Peak	08:00	11:00	10:00	10:00	10:00	08:00	08:00	07:00	11:00	04:00				11:00
Vol.	8	462	83	8	27	13	3	6	8	1				585
PM Peak	17:00	17:00	15:00	12:00	16:00	15:00	14:00	12:00	15:00	15:00				17:00
Vol.	15	815	155	9	30	10	1	8	8	2				953
Grand Total	88	8331	1478	50	267	68	11	69	68	5	0	0	0	10435
Percent	0.8%	79.8%	14.2%	0.5%	2.6%	0.7%	0.1%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	

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Page 1

Washington Street
north of Elm Street
City, State: Holliston, MA
Client: McM/C. Medeiros

04384Aspeed

Site Code: Y-13449.11

Northbound

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	Total
	15	20	25	30	35	40	45	50	55	60	65	70	75	
9/12/13	0	0	2	8	26	27	8	1	0	0	0	0	0	72
01:00	0	0	0	4	12	12	0	0	0	0	0	0	0	28
02:00	0	0	1	1	6	13	4	0	1	0	0	0	0	26
03:00	0	0	0	2	10	13	5	0	1	0	0	0	0	31
04:00	0	0	0	0	13	37	21	1	0	0	0	0	0	72
05:00	0	0	1	8	127	174	34	0	1	0	0	0	0	345
06:00	0	1	19	187	699	234	15	0	0	0	0	0	0	1155
07:00	8	2	62	320	527	133	12	2	1	0	0	0	0	1067
08:00	5	7	63	356	526	124	11	0	0	0	0	0	0	1092
09:00	0	1	12	83	424	191	15	1	0	0	0	0	0	727
10:00	1	2	7	89	340	164	21	0	0	0	0	0	0	624
11:00	0	0	8	62	257	209	47	2	0	0	0	0	0	585
12 PM	0	1	11	64	275	179	24	2	0	0	0	0	0	556
13:00	1	0	3	47	247	194	50	0	0	0	0	0	0	542
14:00	6	1	2	58	299	244	34	5	1	0	0	0	0	650
15:00	2	9	6	40	281	189	28	2	0	0	0	0	0	557
16:00	3	10	15	71	278	183	27	3	0	0	0	0	0	590
17:00	5	17	7	59	298	178	22	3	0	0	0	0	0	589
18:00	3	3	8	54	260	147	22	2	0	0	0	0	0	499
19:00	0	0	5	28	193	126	29	0	0	0	0	0	0	381
20:00	0	0	3	23	162	108	15	1	0	0	0	0	0	312
21:00	0	0	2	18	80	61	13	1	0	0	0	0	0	175
22:00	0	3	0	21	71	38	2	0	1	0	0	0	0	136
23:00	0	0	0	11	42	24	8	1	0	0	0	0	0	86
Total	34	57	237	1614	5453	3002	467	27	6	0	0	0	0	10897
Percent	0.3%	0.5%	2.2%	14.8%	50.0%	27.5%	4.3%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	

Daily

15th Percentile : 30 MPH
50th Percentile : 34 MPH
85th Percentile : 39 MPH
95th Percentile : 40 MPH

Mean Speed(Average) : 34 MPH

10 MPH Pace Speed : 31-40 MPH

Number in Pace : 8455

Percent in Pace : 77.6%

Number of Vehicles > 35 MPH : 3502

Percent of Vehicles > 35 MPH : 32.1%

Grand Total

34	57	237	1614	5453	3002	467	27	6	0	0	0	0	0	10897
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Overall

15th Percentile : 30 MPH
50th Percentile : 34 MPH
85th Percentile : 39 MPH
95th Percentile : 40 MPH

Mean Speed(Average) : 34 MPH

10 MPH Pace Speed : 31-40 MPH

Number in Pace : 8455

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04384Aspeed

Site Code: Y-13449.11

Southbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
9/12/13	0	0	1	8	32	22	6	0	0	0	0	0	0	69
01:00	0	0	0	2	9	17	3	0	0	0	0	0	0	31
02:00	0	0	0	0	13	10	3	0	0	0	0	0	0	26
03:00	0	0	0	1	6	6	1	0	0	0	0	0	0	14
04:00	0	0	0	4	10	11	5	0	0	0	0	0	0	30
05:00	0	0	0	6	46	41	11	0	0	0	0	0	0	104
06:00	0	0	5	55	203	57	5	1	0	0	0	0	0	326
07:00	0	2	14	123	297	85	11	0	0	0	0	0	0	532
08:00	0	2	19	130	268	68	4	0	0	0	0	0	0	491
09:00	0	3	13	101	271	101	9	0	0	0	0	0	0	498
10:00	0	1	3	84	277	98	8	1	0	0	0	0	0	472
11:00	1	2	13	119	325	117	7	0	0	0	1	0	0	585
12 PM	3	1	4	144	304	112	12	1	0	0	0	0	0	581
13:00	2	1	1	77	353	136	14	0	0	0	0	0	0	584
14:00	5	2	12	134	358	137	11	0	0	0	0	0	0	659
15:00	10	17	44	227	449	91	5	0	0	0	0	0	0	843
16:00	27	44	112	320	366	75	2	0	0	0	0	0	0	946
17:00	52	65	98	316	349	72	1	0	0	0	0	0	0	953
18:00	4	32	64	285	484	69	4	0	0	0	0	0	0	942
19:00	2	1	9	121	363	82	3	1	0	0	0	0	0	582
20:00	1	0	1	77	328	101	15	0	0	0	0	0	0	523
21:00	0	1	1	50	181	76	11	0	0	0	0	0	0	320
22:00	0	1	3	37	89	48	7	0	0	0	0	0	0	185
23:00	0	3	0	7	62	52	15	1	0	0	0	0	0	140
Total	107	178	417	2428	5443	1684	173	5	0	0	1	0	0	10436
Percent	1.0%	1.7%	4.0%	23.3%	52.2%	16.1%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily

15th Percentile : 27 MPH
50th Percentile : 32 MPH
85th Percentile : 36 MPH
95th Percentile : 39 MPH

Mean Speed(Average) : 32 MPH
10 MPH Pace Speed : 26-35 MPH

Number in Pace : 7871
Percent in Pace : 75.4%

Number of Vehicles > 35 MPH : 1863
Percent of Vehicles > 35 MPH : 17.9%

Grand Total

107 178 417 2428 5443 1684 173 5 0 0 1 0 0 10436

Overall

15th Percentile : 27 MPH
50th Percentile : 32 MPH
85th Percentile : 36 MPH
95th Percentile : 39 MPH

Mean Speed(Average) : 32 MPH
10 MPH Pace Speed : 26-35 MPH

Number in Pace : 7871
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Number of Vehicles > 35 MPH : 1863
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north of Elm Street
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04384Avolume
Site Code: Y-13449.11

Start Time	12-Sep-13 Thu	NB		Hour Totals		SB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		20	123			25	136				
12:15		12	140			19	156				
12:30		18	148			15	141				
12:45		22	145	72	556	10	148	69	581	141	1137
01:00		6	106			10	140				
01:15		8	150			9	151				
01:30		5	153			3	141				
01:45		9	133	28	542	9	152	31	584	59	1126
02:00		6	158			5	163				
02:15		9	178			7	149				
02:30		5	158			9	175				
02:45		6	156	26	650	5	172	26	659	52	1309
03:00		6	121			4	197				
03:15		9	151			3	201				
03:30		7	158			3	236				
03:45		9	127	31	557	4	209	14	843	45	1400
04:00		10	127			3	249				
04:15		8	153			6	239				
04:30		21	151			9	233				
04:45		33	159	72	590	12	225	30	946	102	1536
05:00		40	131			8	228				
05:15		80	153			34	241				
05:30		92	147			29	249				
05:45		133	158	345	589	33	235	104	953	449	1542
06:00		257	139			55	217				
06:15		293	120			80	256				
06:30		328	118			85	263				
06:45		277	122	1155	499	106	206	326	942	1481	1441
07:00		244	104			140	153				
07:15		273	106			125	169				
07:30		292	84			136	134				
07:45		258	87	1067	381	131	126	532	582	1599	963
08:00		301	103			113	134				
08:15		274	65			108	166				
08:30		247	86			128	129				
08:45		270	58	1092	312	142	94	491	523	1583	835
09:00		219	50			128	95				
09:15		182	45			122	78				
09:30		182	47			128	81				
09:45		144	33	727	175	120	66	498	320	1225	495
10:00		151	34			114	58				
10:15		143	47			119	52				
10:30		172	33			127	42				
10:45		158	22	624	136	112	33	472	185	1096	321
11:00		138	23			144	45				
11:15		129	21			151	37				
11:30		161	31			144	32				
11:45		157	11	585	86	146	26	585	140	1170	226
Total		5824	5073			3178	7258			9002	12331
Percent		53.4%	46.6%			30.5%	69.5%			42.2%	57.8%
Combined Total		10897				10436				21333	
Total		5824	5073			3178	7258			9002	12331
Percent		53.4%	46.6%			30.5%	69.5%			42.2%	57.8%
Combined Total		10897				10436				21333	
ADT		ADT 21,333				ADT 21,333					

Transportation Data Corporation

Mario Perone, mperone1@verizon.net

t. (781) 587-0086 f. (781) 587-0189

Hollis Street west of
Washington Street
City, State: Holliston, MA
Client: McM/C. Medeiros

04384Bclass

Site Code: Y-13449.11

Eastbound															
Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total	
9/12/13	0	3	1	0	0	0	0	0	0	0	0	0	0	4	
01:00	0	1	1	0	0	0	0	0	0	0	0	0	0	2	
02:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
03:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3	
04:00	0	3	2	0	0	0	0	0	0	0	0	0	0	5	
05:00	0	30	8	0	1	1	0	0	0	0	0	0	0	40	
06:00	2	175	43	0	6	0	0	0	0	0	0	0	0	226	
07:00	1	306	36	15	6	1	0	2	0	0	0	0	0	367	
08:00	1	227	39	5	6	3	0	0	1	0	0	0	0	282	
09:00	0	139	16	1	5	3	0	1	0	0	0	0	0	165	
10:00	0	140	32	0	5	4	0	1	0	0	0	0	0	182	
11:00	0	109	14	0	3	3	0	1	0	0	0	0	0	130	
12 PM	1	122	24	1	6	0	0	1	0	0	0	0	0	155	
13:00	0	91	22	3	3	0	0	2	0	1	0	0	0	122	
14:00	2	247	29	12	4	0	0	0	0	0	0	0	0	294	
15:00	0	177	14	8	4	0	0	0	0	0	0	0	0	203	
16:00	0	177	28	0	3	0	0	0	1	0	0	0	0	209	
17:00	0	232	23	1	5	0	0	0	0	0	0	0	0	261	
18:00	0	245	23	3	2	0	0	0	0	0	0	0	0	273	
19:00	0	146	13	1	2	0	0	0	0	0	0	0	0	162	
20:00	1	92	4	1	0	0	0	0	0	0	0	0	0	98	
21:00	0	37	4	0	1	0	0	0	0	0	0	0	0	42	
22:00	1	34	4	0	0	0	0	0	0	0	0	0	0	39	
23:00	0	13	2	0	0	0	0	0	0	0	0	0	0	15	
Total	9	2750	382	51	62	15	0	8	2	1	0	0	0	3280	
Percent	0.3%	83.8%	11.6%	1.6%	1.9%	0.5%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%		
AM Peak	06:00	07:00	06:00	07:00	06:00	10:00		07:00	08:00					07:00	
Vol.	2	306	43	15	6	4		2	1					367	
PM Peak	14:00	14:00	14:00	14:00	12:00			13:00	16:00	13:00				14:00	
Vol.	2	247	29	12	6			2	1	1				294	
Grand Total	9	2750	382	51	62	15	0	8	2	1	0	0	0	3280	
Percent	0.3%	83.8%	11.6%	1.6%	1.9%	0.5%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%		

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Client: McM/C. Medeiros

04384Bclass

Site Code: Y-13449.11

Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
9/12/13	0	30	7	0	0	0	0	0	0	0	0	0	0	37
01:00	0	10	4	0	1	0	0	0	0	0	0	0	0	15
02:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
03:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3
04:00	0	5	2	0	0	0	0	0	0	0	0	0	0	7
05:00	0	11	3	0	2	0	0	0	0	0	0	0	0	16
06:00	0	83	18	4	0	0	0	0	0	0	0	0	0	105
07:00	1	261	46	9	6	3	0	0	0	0	0	0	0	326
08:00	1	148	36	2	10	2	3	0	0	0	0	0	0	202
09:00	1	89	30	0	14	1	4	0	0	0	0	0	0	139
10:00	0	102	32	0	11	2	1	0	0	0	0	0	0	148
11:00	1	151	30	2	9	2	1	3	0	0	0	0	0	199
12 PM	0	120	24	4	9	1	0	0	0	0	0	0	0	158
13:00	0	119	32	1	9	1	0	1	0	0	0	0	0	163
14:00	1	226	49	18	3	0	1	1	0	0	0	0	0	299
15:00	2	233	53	5	8	2	0	1	0	0	0	0	0	304
16:00	4	291	67	2	9	0	0	1	0	0	1	0	0	375
17:00	1	319	41	3	5	0	0	0	0	0	0	0	0	369
18:00	0	254	30	1	4	0	1	0	0	0	0	0	0	290
19:00	0	157	26	1	5	0	0	0	0	0	0	0	0	189
20:00	2	141	24	0	3	0	0	0	0	0	0	0	0	170
21:00	0	62	9	0	0	0	0	0	0	0	0	0	0	71
22:00	0	42	5	0	0	0	0	0	0	0	0	0	0	47
23:00	0	24	8	0	0	0	0	0	0	0	0	0	0	32
Total	14	2883	577	52	108	14	11	7	0	0	1	0	0	3667
Percent	0.4%	78.6%	15.7%	1.4%	2.9%	0.4%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	07:00	07:00	09:00	07:00	09:00	11:00						07:00
Vol.	1	261	46	9	14	3	4	3						326
PM Peak	16:00	17:00	16:00	14:00	12:00	15:00	14:00	13:00			16:00			16:00
Vol.	4	319	67	18	9	2	1	1			1			375
Grand Total	14	2883	577	52	108	14	11	7	0	0	1	0	0	3667
Percent	0.4%	78.6%	15.7%	1.4%	2.9%	0.4%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	

Transportation Data Corporation

Mario Perone, mperone1@verizon.net

t. (781) 587-0086 f. (781) 587-0189

Hollis Street west of
Washington Street
City, State: Holliston, MA
Client: McM/C. Medeiros

04384Bspeed

Site Code: Y-13449.11

Eastbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
9/12/13	0	0	0	0	3	1	0	0	0	0	0	0	0	4
01:00	0	0	0	1	1	0	0	0	0	0	0	0	0	2
02:00	0	0	0	0	0	1	0	0	0	0	0	0	0	1
03:00	0	0	0	0	0	3	0	0	0	0	0	0	0	3
04:00	0	0	1	0	3	1	0	0	0	0	0	0	0	5
05:00	0	0	0	6	17	15	2	0	0	0	0	0	0	40
06:00	4	2	4	34	143	36	3	0	0	0	0	0	0	226
07:00	28	20	59	94	130	35	1	0	0	0	0	0	0	367
08:00	2	7	22	55	148	47	1	0	0	0	0	0	0	282
09:00	0	3	10	28	83	39	2	0	0	0	0	0	0	165
10:00	0	0	5	23	104	46	4	0	0	0	0	0	0	182
11:00	0	0	3	22	66	39	0	0	0	0	0	0	0	130
12 PM	0	0	0	24	93	34	4	0	0	0	0	0	0	155
13:00	3	0	4	19	63	31	2	0	0	0	0	0	0	122
14:00	36	25	14	60	136	22	1	0	0	0	0	0	0	294
15:00	0	1	16	32	119	34	1	0	0	0	0	0	0	203
16:00	3	3	8	30	138	26	1	0	0	0	0	0	0	209
17:00	0	2	9	52	153	43	2	0	0	0	0	0	0	261
18:00	4	3	6	48	160	52	0	0	0	0	0	0	0	273
19:00	0	0	9	45	88	19	1	0	0	0	0	0	0	162
20:00	0	0	1	21	62	14	0	0	0	0	0	0	0	98
21:00	0	0	2	4	27	9	0	0	0	0	0	0	0	42
22:00	0	0	2	7	22	7	1	0	0	0	0	0	0	39
23:00	0	0	2	1	7	5	0	0	0	0	0	0	0	15
Total	80	66	177	606	1766	559	26	0	0	0	0	0	0	3280
Percent	2.4%	2.0%	5.4%	18.5%	53.8%	17.0%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily

15th Percentile : 27 MPH
50th Percentile : 33 MPH
85th Percentile : 36 MPH
95th Percentile : 39 MPH

Mean Speed(Average) : 32 MPH

10 MPH Pace Speed : 26-35 MPH

Number in Pace : 2372

Percent in Pace : 72.3%

Number of Vehicles > 30 MPH : 2351

Percent of Vehicles > 30 MPH : 71.7%

Grand
Total

80 66 177 606 1766 559 26 0 0 0 0 0 0 3280

Overall

15th Percentile : 27 MPH
50th Percentile : 33 MPH
85th Percentile : 36 MPH
95th Percentile : 39 MPH

Mean Speed(Average) : 32 MPH

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Transportation Data Corporation

Mario Perone, mperone1@verizon.net

t. (781) 587-0086 f. (781) 587-0189

Hollis Street west of
Washington Street
City, State: Holliston, MA
Client: McM/C. Medeiros

04384Bspeed

Site Code: Y-13449.11

Westbound

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	Total
9/12/13	0	0	1	7	22	6	1	0	0	0	0	0	0	37
01:00	0	0	0	6	6	3	0	0	0	0	0	0	0	15
02:00	0	0	0	1	0	2	0	0	0	0	0	0	0	3
03:00	0	0	0	2	0	1	0	0	0	0	0	0	0	3
04:00	0	0	1	2	3	1	0	0	0	0	0	0	0	7
05:00	0	0	1	7	8	0	0	0	0	0	0	0	0	16
06:00	0	0	2	36	54	13	0	0	0	0	0	0	0	105
07:00	10	3	17	103	146	42	5	0	0	0	0	0	0	326
08:00	0	2	12	45	101	39	2	1	0	0	0	0	0	202
09:00	0	2	15	37	56	27	2	0	0	0	0	0	0	139
10:00	0	2	8	39	64	31	4	0	0	0	0	0	0	148
11:00	0	2	11	54	93	37	1	1	0	0	0	0	0	199
12 PM	0	0	13	36	76	29	4	0	0	0	0	0	0	158
13:00	0	1	8	45	94	12	3	0	0	0	0	0	0	163
14:00	6	14	20	95	127	33	3	0	1	0	0	0	0	299
15:00	1	0	13	65	179	44	2	0	0	0	0	0	0	304
16:00	1	0	10	68	209	75	12	0	0	0	0	0	0	375
17:00	0	1	13	81	202	68	3	0	1	0	0	0	0	369
18:00	0	0	8	59	160	57	6	0	0	0	0	0	0	290
19:00	0	0	9	54	97	29	0	0	0	0	0	0	0	189
20:00	0	2	7	48	88	23	2	0	0	0	0	0	0	170
21:00	0	0	1	29	33	7	1	0	0	0	0	0	0	71
22:00	0	0	2	24	18	3	0	0	0	0	0	0	0	47
23:00	0	0	2	11	16	2	1	0	0	0	0	0	0	32
Total	18	29	174	954	1852	584	52	2	2	0	0	0	0	3667
Percent	0.5%	0.8%	4.7%	26.0%	50.5%	15.9%	1.4%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

Daily

15th Percentile : 27 MPH
50th Percentile : 32 MPH
85th Percentile : 36 MPH
95th Percentile : 39 MPH

Mean Speed(Average) : 32 MPH

10 MPH Pace Speed : 26-35 MPH

Number in Pace : 2806

Percent in Pace : 76.5%

Number of Vehicles > 30 MPH : 2492

Percent of Vehicles > 30 MPH : 68.0%

Grand Total

18	29	174	954	1852	584	52	2	2	0	0	0	0	3667
----	----	-----	-----	------	-----	----	---	---	---	---	---	---	------

Overall

15th Percentile : 27 MPH
50th Percentile : 32 MPH
85th Percentile : 36 MPH
95th Percentile : 39 MPH

Mean Speed(Average) : 32 MPH

10 MPH Pace Speed : 26-35 MPH

Number in Pace : 2806

Percent in Pace : 76.5%

Number of Vehicles > 30 MPH : 2492

Percent of Vehicles > 30 MPH : 68.0%

Transportation Data Corporation

Mario Perone, mperone1@verizon.net

t. (781) 587-0086 f. (781) 587-0189

Page 1

Hollis Street west of
Washington Street
City, State: Holliston, MA
Client: McM/C. Medeiros

04384Bvolume
Site Code: Y-13449.11

Start Time	12-Sep-13 Thu	EB		Hour Totals		WB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		3	35			7	47				
12:15		1	51			10	35				
12:30		0	40			11	37				
12:45		0	29	4	155	9	39	37	158	41	313
01:00		0	29			11	44				
01:15		2	36			1	32				
01:30		0	26			1	29				
01:45		0	31	2	122	2	58	15	163	17	285
02:00		0	108			1	98				
02:15		0	77			1	56				
02:30		1	57			0	61				
02:45		0	52	1	294	1	84	3	299	4	593
03:00		1	55			1	60				
03:15		0	49			1	82				
03:30		1	52			1	74				
03:45		1	47	3	203	0	88	3	304	6	507
04:00		0	56			0	100				
04:15		1	55			1	81				
04:30		2	45			3	102				
04:45		2	53	5	209	3	92	7	375	12	584
05:00		6	72			1	92				
05:15		6	77			2	90				
05:30		12	60			7	88				
05:45		16	52	40	261	6	99	16	369	56	630
06:00		51	76			12	84				
06:15		35	86			19	64				
06:30		56	59			27	79				
06:45		84	52	226	273	47	63	105	290	331	563
07:00		91	43			118	46				
07:15		113	48			110	41				
07:30		66	37			45	50				
07:45		97	34	367	162	53	52	326	189	693	351
08:00		70	22			54	64				
08:15		71	27			42	45				
08:30		60	21			52	34				
08:45		81	28	282	98	54	27	202	170	484	268
09:00		60	12			43	27				
09:15		36	12			37	15				
09:30		30	10			28	19				
09:45		39	8	165	42	31	10	139	71	304	113
10:00		47	11			37	16				
10:15		43	10			36	13				
10:30		40	11			31	11				
10:45		52	7	182	39	44	7	148	47	330	86
11:00		35	2			54	8				
11:15		31	5			45	6				
11:30		39	5			39	7				
11:45		25	3	130	15	61	11	199	32	329	47
Total		1407	1873			1200	2467			2607	4340
Percent		42.9%	57.1%			32.7%	67.3%			37.5%	62.5%
Combined Total		3280				3667				6947	
Total		1407	1873			1200	2467			2607	4340
Percent		42.9%	57.1%			32.7%	67.3%			37.5%	62.5%
Combined Total		3280				3667				6947	
ADT		ADT 6,947				AADT 6,947					

Transportation Data Corporation

Mario Perone, mperone1@verizon.net

t. (781) 587-0086 f. (781) 587-0189

Central Street east of
Washington Street
City, State: Holliston, MA
Client: McM/C. Medeiros

04384CCLASS

Site Code: Y-13449.11

Eastbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
9/10/13	0	15	0	0	0	0	0	0	0	0	0	0	0	15
01:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3
02:00	0	1	0	1	0	0	0	0	0	0	0	0	0	2
03:00	0	0	1	0	0	0	0	0	0	0	0	0	0	1
04:00	0	15	4	0	1	0	0	0	0	0	0	0	0	20
05:00	0	65	13	0	2	0	0	0	1	0	0	0	0	81
06:00	2	120	40	2	7	5	0	0	0	0	0	0	0	176
07:00	5	302	54	3	10	3	0	3	0	0	0	0	0	380
08:00	1	236	58	2	7	1	0	1	1	0	0	0	0	307
09:00	3	162	37	4	8	3	0	2	1	0	0	0	0	220
10:00	1	169	43	3	6	2	0	3	0	0	0	0	0	227
11:00	0	194	46	2	5	3	0	2	0	0	0	0	0	252
12 PM	0	174	46	4	8	3	0	2	2	0	0	0	0	239
13:00	0	169	39	6	12	2	0	0	1	0	0	0	0	229
14:00	2	242	56	7	14	4	0	1	0	0	0	0	0	326
15:00	1	223	53	9	7	1	0	2	0	0	0	0	0	296
16:00	1	248	53	7	9	1	0	1	0	0	0	0	0	320
17:00	3	344	48	2	8	2	0	2	1	0	0	0	0	410
18:00	1	328	45	0	6	3	0	3	0	0	0	0	0	386
19:00	0	214	34	0	1	0	0	1	0	0	0	0	0	250
20:00	3	137	18	1	1	0	0	0	0	0	0	0	0	160
21:00	1	98	18	2	3	1	0	0	0	0	0	0	0	123
22:00	2	38	5	0	0	0	0	0	0	0	0	0	0	45
23:00	0	13	3	0	1	0	0	0	0	0	0	0	0	17
Total	26	3509	715	55	116	34	0	23	7	0	0	0	0	4485
Percent	0.6%	78.2%	15.9%	1.2%	2.6%	0.8%	0.0%	0.5%	0.2%	0.0%	0.0%	0.0%	0.0%	
AM Peak	07:00	07:00	08:00	09:00	07:00	06:00		07:00	05:00					07:00
Vol.	5	302	58	4	10	5		3	1					380
PM Peak	17:00	17:00	14:00	15:00	14:00	14:00		18:00	12:00					17:00
Vol.	3	344	56	9	14	4		3	2					410
Grand Total	26	3509	715	55	116	34	0	23	7	0	0	0	0	4485
Percent	0.6%	78.2%	15.9%	1.2%	2.6%	0.8%	0.0%	0.5%	0.2%	0.0%	0.0%	0.0%	0.0%	

Transportation Data Corporation

Mario Perone, mperone1@verizon.net

t. (781) 587-0086 f. (781) 587-0189

Central Street east of
Washington Street
City, State: Holliston, MA
Client: McM/C. Medeiros

04384CCLASS

Site Code: Y-13449.11

Westbound

Start Time	Bikes	Cars & Trailers	2 Axle Long	Buses	2 Axle 6 Tire	3 Axle Single	4 Axle Single	<5 Axl Double	5 Axle Double	>6 Axl Double	<6 Axl Multi	6 Axle Multi	>6 Axl Multi	Total
9/10/13	0	9	1	0	0	0	0	0	0	0	0	0	0	10
01:00	0	2	1	0	0	0	0	0	0	0	0	0	0	3
02:00	0	1	0	1	0	0	0	0	0	0	0	0	0	2
03:00	0	5	3	0	0	0	0	0	0	0	0	0	0	8
04:00	0	4	3	0	1	0	0	0	0	0	0	0	0	8
05:00	0	29	4	0	2	0	0	0	0	0	0	0	0	35
06:00	2	87	21	3	8	0	0	0	2	1	0	0	0	124
07:00	1	230	44	3	4	1	0	1	2	0	0	0	0	286
08:00	2	204	41	0	6	1	0	1	1	0	0	0	0	256
09:00	6	156	52	2	15	5	0	1	1	0	0	0	0	238
10:00	2	133	46	5	9	9	0	0	2	0	0	0	0	206
11:00	0	156	37	2	11	8	0	0	2	0	0	0	0	216
12 PM	2	185	43	2	8	6	0	2	2	0	0	0	0	250
13:00	5	174	45	3	9	6	0	2	1	0	0	0	0	245
14:00	0	226	45	4	6	3	0	3	0	0	0	0	0	287
15:00	4	220	44	3	10	2	0	1	1	0	0	0	0	285
16:00	0	225	54	4	10	0	0	2	0	0	0	0	0	295
17:00	2	258	44	2	8	2	0	0	0	0	0	0	0	316
18:00	1	214	44	1	7	1	0	1	1	0	0	0	0	270
19:00	2	184	43	0	4	0	0	0	0	0	0	0	0	233
20:00	0	177	26	2	3	0	0	0	0	0	0	0	0	208
21:00	0	83	12	0	0	0	0	0	0	0	0	0	0	95
22:00	0	28	6	0	2	0	0	0	0	0	0	0	0	36
23:00	0	16	3	0	0	0	0	0	0	0	0	0	0	19
Total	29	3006	662	37	123	44	0	14	15	1	0	0	0	3931
Percent	0.7%	76.5%	16.8%	0.9%	3.1%	1.1%	0.0%	0.4%	0.4%	0.0%	0.0%	0.0%	0.0%	
AM Peak	09:00	07:00	09:00	10:00	09:00	10:00		07:00	06:00	06:00				07:00
Vol.	6	230	52	5	15	9		1	2	1				286
PM Peak	13:00	17:00	16:00	14:00	15:00	12:00		14:00	12:00					17:00
Vol.	5	258	54	4	10	6		3	2					316
Grand Total	29	3006	662	37	123	44	0	14	15	1	0	0	0	3931
Percent	0.7%	76.5%	16.8%	0.9%	3.1%	1.1%	0.0%	0.4%	0.4%	0.0%	0.0%	0.0%	0.0%	

Transportation Data Corporation

Mario Perone, mperone1@verizon.net

t. (781) 587-0086 f. (781) 587-0189

Central Street east of
Washington Street
City, State: Holliston, MA
Client: McM/C. Medeiros

04384CSPEED

Site Code: Y-13449.11

Eastbound

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	Total
	15	20	25	30	35	40	45	50	55	60	65	70	75	
9/10/13	0	0	0	7	7	1	0	0	0	0	0	0	0	15
01:00	0	0	1	0	2	0	0	0	0	0	0	0	0	3
02:00	0	0	0	2	0	0	0	0	0	0	0	0	0	2
03:00	0	0	0	0	1	0	0	0	0	0	0	0	0	1
04:00	0	0	1	4	14	1	0	0	0	0	0	0	0	20
05:00	0	3	8	31	35	4	0	0	0	0	0	0	0	81
06:00	0	4	19	99	47	7	0	0	0	0	0	0	0	176
07:00	0	8	98	186	81	4	1	0	0	0	0	0	0	378
08:00	4	10	68	164	56	5	0	0	0	0	0	0	0	307
09:00	8	27	70	90	24	2	0	0	0	0	0	0	0	221
10:00	2	15	81	88	41	1	0	0	0	0	0	0	0	228
11:00	2	24	100	89	30	4	0	0	0	0	0	0	0	249
12 PM	1	27	100	91	22	0	0	0	0	0	0	0	0	241
13:00	1	19	82	109	18	1	0	0	0	0	0	0	0	230
14:00	0	43	142	119	21	1	0	0	0	0	0	0	0	326
15:00	2	28	114	115	36	1	0	0	0	0	0	0	0	296
16:00	2	12	104	149	52	1	0	0	0	0	0	0	0	320
17:00	4	23	134	193	53	3	0	0	0	0	0	0	0	410
18:00	4	18	129	196	37	2	0	0	0	0	0	0	0	386
19:00	0	1	67	140	40	2	0	0	0	0	0	0	0	250
20:00	2	2	29	96	28	3	0	0	0	0	0	0	0	160
21:00	0	1	25	65	29	2	1	0	0	0	0	0	0	123
22:00	0	2	6	22	15	0	0	0	0	0	0	0	0	45
23:00	1	1	1	8	6	0	0	0	0	0	0	0	0	17
Total	33	268	1379	2063	695	45	2	0	0	0	0	0	0	4485
Percent	0.7%	6.0%	30.7%	46.0%	15.5%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily

15th Percentile : 22 MPH
50th Percentile : 27 MPH
85th Percentile : 31 MPH
95th Percentile : 34 MPH

Mean Speed(Average) : 27 MPH

10 MPH Pace Speed : 21-30 MPH

Number in Pace : 3442

Percent in Pace : 76.7%

Number of Vehicles > 30 MPH : 742

Percent of Vehicles > 30 MPH : 16.5%

Grand Total

33	268	1379	2063	695	45	2	0	0	0	0	0	0	0	4485
----	-----	------	------	-----	----	---	---	---	---	---	---	---	---	------

Overall

15th Percentile : 22 MPH
50th Percentile : 27 MPH
85th Percentile : 31 MPH
95th Percentile : 34 MPH

Mean Speed(Average) : 27 MPH

10 MPH Pace Speed : 21-30 MPH

Number in Pace : 3442

Percent in Pace : 76.7%

Number of Vehicles > 30 MPH : 742

Percent of Vehicles > 30 MPH : 16.5%

Transportation Data Corporation

Mario Perone, mperone1@verizon.net

t. (781) 587-0086 f. (781) 587-0189

Central Street east of
Washington Street
City, State: Holliston, MA
Client: McM/C. Medeiros

04384CSPEED

Site Code: Y-13449.11

Westbound

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	Total
	15	20	25	30	35	40	45	50	55	60	65	70	75	
9/10/13	1	0	0	7	1	1	0	0	0	0	0	0	0	10
01:00	0	0	1	2	0	0	0	0	0	0	0	0	0	3
02:00	0	0	0	0	1	1	0	0	0	0	0	0	0	2
03:00	0	0	1	3	2	1	1	0	0	0	0	0	0	8
04:00	0	0	0	0	5	3	0	0	0	0	0	0	0	8
05:00	0	0	5	10	14	3	3	0	0	0	0	0	0	35
06:00	3	5	32	51	29	4	0	0	0	0	0	0	0	124
07:00	36	69	80	78	20	3	0	0	0	0	0	0	0	286
08:00	32	46	78	75	23	2	0	0	0	0	0	0	0	256
09:00	20	43	101	55	16	2	1	0	0	0	0	0	0	238
10:00	9	42	75	57	21	2	0	0	0	0	0	0	0	206
11:00	11	44	97	47	14	3	0	0	0	0	0	0	0	216
12 PM	44	71	82	44	9	0	0	0	0	0	0	0	0	250
13:00	24	63	97	47	13	1	0	0	0	0	0	0	0	245
14:00	48	68	110	52	9	0	0	0	0	0	0	0	0	287
15:00	69	87	80	39	10	0	0	0	0	0	0	0	0	285
16:00	16	58	112	89	19	1	0	0	0	0	0	0	0	295
17:00	34	69	115	79	18	1	0	0	0	0	0	0	0	316
18:00	9	26	108	100	23	3	0	1	0	0	0	0	0	270
19:00	1	4	75	111	41	1	0	0	0	0	0	0	0	233
20:00	2	9	48	105	39	5	0	0	0	0	0	0	0	208
21:00	0	3	8	48	34	2	0	0	0	0	0	0	0	95
22:00	0	0	4	14	12	4	1	1	0	0	0	0	0	36
23:00	0	0	2	4	10	3	0	0	0	0	0	0	0	19
Total	359	707	1311	1117	383	46	6	2	0	0	0	0	0	3931
Percent	9.1%	18.0%	33.4%	28.4%	9.7%	1.2%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

Daily

15th Percentile : 17 MPH
50th Percentile : 24 MPH
85th Percentile : 30 MPH
95th Percentile : 34 MPH

Mean Speed(Average) : 23 MPH

10 MPH Pace Speed : 21-30 MPH

Number in Pace : 2428

Percent in Pace : 61.8%

Number of Vehicles > 30 MPH : 437

Percent of Vehicles > 30 MPH : 11.1%

Grand Total

359 707 1311 1117 383 46 6 2 0 0 0 0 0 3931

Overall

15th Percentile : 17 MPH
50th Percentile : 24 MPH
85th Percentile : 30 MPH
95th Percentile : 34 MPH

Mean Speed(Average) : 23 MPH

10 MPH Pace Speed : 21-30 MPH

Number in Pace : 2428

Percent in Pace : 61.8%

Number of Vehicles > 30 MPH : 437

Percent of Vehicles > 30 MPH : 11.1%

Transportation Data Corporation

Mario Perone, mperone1@verizon.net

t. (781) 587-0086 f. (781) 587-0189

Page 1

Central Street east of
Washington Street
City, State: Holliston, MA
Client: McM/C. Medeiros

04384CVOLUME
Site Code: Y-13449.11

Start Time	10-Sep-13 Tue	EB		Hour Totals		WB		Hour Totals		Combined Totals	
		Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		4	61			2	90				
12:15		2	74			0	52				
12:30		4	49			4	67				
12:45		5	57	15	241	4	41	10	250	25	491
01:00		1	61			1	56				
01:15		1	57			2	69				
01:30		1	53			0	60				
01:45		0	59	3	230	0	60	3	245	6	475
02:00		1	59			0	69				
02:15		0	96			0	61				
02:30		1	92			1	78				
02:45		0	79	2	326	1	79	2	287	4	613
03:00		1	75			4	63				
03:15		0	74			2	65				
03:30		0	79			1	81				
03:45		0	68	1	296	1	76	8	285	9	581
04:00		0	71			1	71				
04:15		1	76			0	66				
04:30		5	99			3	73				
04:45		14	74	20	320	4	85	8	295	28	615
05:00		4	92			4	71				
05:15		11	106			5	83				
05:30		23	116			8	74				
05:45		43	96	81	410	18	88	35	316	116	726
06:00		21	91			24	56				
06:15		39	104			28	69				
06:30		51	112			28	73				
06:45		65	79	176	386	44	72	124	270	300	656
07:00		83	64			67	64				
07:15		109	83			80	43				
07:30		95	54			62	46				
07:45		91	49	378	250	77	80	286	233	664	483
08:00		87	36			73	61				
08:15		70	40			56	58				
08:30		66	39			69	60				
08:45		84	45	307	160	58	29	256	208	563	368
09:00		64	48			62	34				
09:15		49	28			60	16				
09:30		44	30			63	33				
09:45		64	17	221	123	53	12	238	95	459	218
10:00		54	15			59	9				
10:15		49	7			50	8				
10:30		64	9			45	10				
10:45		61	14	228	45	52	9	206	36	434	81
11:00		56	6			42	5				
11:15		69	4			59	8				
11:30		64	4			58	3				
11:45		60	3	249	17	57	3	216	19	465	36
Total		1681	2804			1392	2539			3073	5343
Percent		37.5%	62.5%			35.4%	64.6%			36.5%	63.5%
Combined Total		4485				3931				8416	
Total		1681	2804			1392	2539			3073	5343
Percent		37.5%	62.5%			35.4%	64.6%			36.5%	63.5%
Combined Total		4485				3931				8416	
ADT		ADT 8,416				AADT 8,416					

APPENDIX B

Manual turning Movement Counts

Transportation Data Corporation

Mario Perone, mperone1@verizon.net

t (781) 587-0086 f (781) 587-0189

N/S: Washington Street (Route 126)

E/W: Charles Street/Hollis Street

City, State: Holliston, MA

Client: McM/C. Medeiros

File Name : 04384A

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

	Washington Street (Route 126) From North				Charles Street From East				Washington Street (Route 126) From South				Hollis Street From West				Exclu. Total	Inclu. Total	Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds			
07:00 AM	53	99	1	0	0	0	0	1	0	242	67	0	49	0	46	2	3	557	560
07:15 AM	43	122	0	0	0	0	0	1	1	197	71	0	54	2	36	0	1	526	527
07:30 AM	18	120	1	0	0	0	0	3	3	272	41	0	24	2	33	2	5	514	519
07:45 AM	16	135	3	0	0	0	0	0	3	245	33	0	55	3	48	1	1	541	542
Total	130	476	5	0	0	0	0	5	7	956	212	0	182	7	163	5	10	2138	2148
08:00 AM	20	97	5	0	0	0	0	0	1	244	32	0	42	1	43	1	1	485	486
08:15 AM	12	101	3	0	0	0	0	0	0	269	29	0	41	1	24	2	2	480	482
08:30 AM	11	106	1	0	0	0	0	2	4	211	30	0	33	3	34	0	2	433	435
08:45 AM	12	122	3	0	0	0	1	3	4	216	26	0	27	2	46	4	7	459	466
Total	55	426	12	0	0	0	1	5	9	940	117	0	143	7	147	7	12	1857	1869
Grand Total	185	902	17	0	0	0	1	10	16	1896	329	0	325	14	310	12	22	3995	4017
Apprch %	16.8	81.7	1.5		0	0	100		0.7	84.6	14.7		50.1	2.2	47.8				
Total %	4.6	22.6	0.4		0	0	0		0.4	47.5	8.2		8.1	0.4	7.8		0.5	99.5	
Cars & Peds	174	858	16		0	0	1		16	1839	326		317	13	281		0	0	3858
% Cars & Peds	94.1	95.1	94.1	0	0	0	100	70	100	97	99.1	0	97.5	92.9	90.6	83.3	0	0	96
Trucks & Bikes	11	44	1		0	0	0		0	57	3		8	1	29		0	0	159
% Trucks & Bikes	5.9	4.9	5.9	0	0	0	0	30	0	3	0.9	0	2.5	7.1	9.4	16.7	0	0	4

	Washington Street (Route 126) From North				Charles Street From East				Washington Street (Route 126) From South				Hollis Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	53	99	1	153	0	0	0	0	0	242	67	309	49	0	46	95	557
07:15 AM	43	122	0	165	0	0	0	0	1	197	71	269	54	2	36	92	526
07:30 AM	18	120	1	139	0	0	0	0	3	272	41	316	24	2	33	59	514
07:45 AM	16	135	3	154	0	0	0	0	3	245	33	281	55	3	48	106	541
Total Volume	130	476	5	611	0	0	0	0	7	956	212	1175	182	7	163	352	2138
% App. Total	21.3	77.9	0.8		0	0	0		0.6	81.4	18		51.7	2	46.3		
PHF	.613	.881	.417	.926	.000	.000	.000	.000	.583	.879	.746	.930	.827	.583	.849	.830	.960
Cars & Peds	123	453	4	580	0	0	0	0	7	926	211	1144	176	7	147	330	2054
% Cars & Peds	94.6	95.2	80.0	94.9	0	0	0	0	100	96.9	99.5	97.4	96.7	100	90.2	93.8	96.1
Trucks & Bikes	7	23	1	31	0	0	0	0	0	30	1	31	6	0	16	22	84
% Trucks & Bikes	5.4	4.8	20.0	5.1	0	0	0	0	0	3.1	0.5	2.6	3.3	0	9.8	6.3	3.9

Transportation Data Corporation

Mario Perone, mperone1@verizon.net

t (781) 587-0086 f (781) 587-0189

N/S: Washington Street (Route 126)

E/W: Charles Street/Hollis Street

City, State: Holliston, MA

Client: McM/C. Medeiros

File Name : 04384A

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

Groups Printed- Cars & Peds

Start Time	Washington Street (Route 126) From North				Charles Street From East				Washington Street (Route 126) From South				Hollis Street From West				Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds			
07:00 AM	48	94	1	0	0	0	0	1	0	234	67	0	47	0	39	2	3	530	533
07:15 AM	41	117	0	0	0	0	0	0	1	188	71	0	53	2	32	0	0	505	505
07:30 AM	18	112	1	0	0	0	0	3	3	265	40	0	24	2	33	2	5	498	503
07:45 AM	16	130	2	0	0	0	0	0	3	239	33	0	52	3	43	1	1	521	522
Total	123	453	4	0	0	0	0	4	7	926	211	0	176	7	147	5	9	2054	2063
08:00 AM	18	91	5	0	0	0	0	0	1	236	32	0	41	1	42	1	1	467	468
08:15 AM	11	93	3	0	0	0	0	0	0	264	28	0	41	0	21	2	2	461	463
08:30 AM	11	102	1	0	0	0	0	2	4	202	30	0	33	3	29	0	2	415	417
08:45 AM	11	119	3	0	0	0	1	1	4	211	25	0	26	2	42	2	3	444	447
Total	51	405	12	0	0	0	1	3	9	913	115	0	141	6	134	5	8	1787	1795
Grand Total	174	858	16	0	0	0	1	7	16	1839	326	0	317	13	281	10	17	3841	3858
Apprch %	16.6	81.9	1.5		0	0	100		0.7	84.3	14.9		51.9	2.1	46				
Total %	4.5	22.3	0.4		0	0	0		0.4	47.9	8.5		8.3	0.3	7.3		0.4	99.6	

	Washington Street (Route 126) From North				Charles Street From East				Washington Street (Route 126) From South				Hollis Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	48	94	1	143	0	0	0	0	0	234	67	301	47	0	39	86	530
07:15 AM	41	117	0	158	0	0	0	0	1	188	71	260	53	2	32	87	505
07:30 AM	18	112	1	131	0	0	0	0	3	265	40	308	24	2	33	59	498
07:45 AM	16	130	2	148	0	0	0	0	3	239	33	275	52	3	43	98	521
Total Volume	123	453	4	580	0	0	0	0	7	926	211	1144	176	7	147	330	2054
% App. Total	21.2	78.1	0.7		0	0	0		0.6	80.9	18.4		53.3	2.1	44.5		
PHF	.641	.871	.500	.918	.000	.000	.000	.000	.583	.874	.743	.929	.830	.583	.855	.842	.969

Transportation Data Corporation

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t (781) 587-0086 f (781) 587-0189

N/S: Washington Street (Route 126)

E/W: Charles Street/Hollis Street

City, State: Holliston, MA

Client: McM/C. Medeiros

File Name : 04384A

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

Groups Printed- Trucks & Bikes

	Washington Street (Route 126) From North				Charles Street From East				Washington Street (Route 126) From South				Hollis Street From West				Exclu. Total	Inclu. Total	Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds			
07:00 AM	5	5	0	0	0	0	0	0	0	8	0	0	2	0	7	0	0	27	27
07:15 AM	2	5	0	0	0	0	0	1	0	9	0	0	1	0	4	0	1	21	22
07:30 AM	0	8	0	0	0	0	0	0	0	7	1	0	0	0	0	0	0	16	16
07:45 AM	0	5	1	0	0	0	0	0	0	6	0	0	3	0	5	0	0	20	20
Total	7	23	1	0	0	0	0	1	0	30	1	0	6	0	16	0	1	84	85
08:00 AM	2	6	0	0	0	0	0	0	0	8	0	0	1	0	1	0	0	18	18
08:15 AM	1	8	0	0	0	0	0	0	0	5	1	0	0	1	3	0	0	19	19
08:30 AM	0	4	0	0	0	0	0	0	0	9	0	0	0	0	5	0	0	18	18
08:45 AM	1	3	0	0	0	0	0	2	0	5	1	0	1	0	4	2	4	15	19
Total	4	21	0	0	0	0	0	2	0	27	2	0	2	1	13	2	4	70	74
Grand Total	11	44	1	0	0	0	0	3	0	57	3	0	8	1	29	2	5	154	159
Apprch %	19.6	78.6	1.8		0	0	0		0	95	5		21.1	2.6	76.3				
Total %	7.1	28.6	0.6		0	0	0		0	37	1.9		5.2	0.6	18.8		3.1	96.9	

	Washington Street (Route 126) From North				Charles Street From East				Washington Street (Route 126) From South				Hollis Street From West						
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total			Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:00 AM																			
07:00 AM	5	5	0	10	0	0	0	0	0	8	0	8	2	0	7	9			27
07:15 AM	2	5	0	7	0	0	0	0	0	9	0	9	1	0	4	5			21
07:30 AM	0	8	0	8	0	0	0	0	0	7	1	8	0	0	0	0			16
07:45 AM	0	5	1	6	0	0	0	0	0	6	0	6	3	0	5	8			20
Total Volume	7	23	1	31	0	0	0	0	0	30	1	31	6	0	16	22			84
% App. Total	22.6	74.2	3.2		0	0	0		0	96.8	3.2		27.3	0	72.7				
PHF	.350	.719	.250	.775	.000	.000	.000	.000	.000	.833	.250	.861	.500	.000	.571	.611			.778

Transportation Data Corporation

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N/S: Washington Street (Route 126)

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City, State: Holliston, MA

Client: McM/C. Medeiros

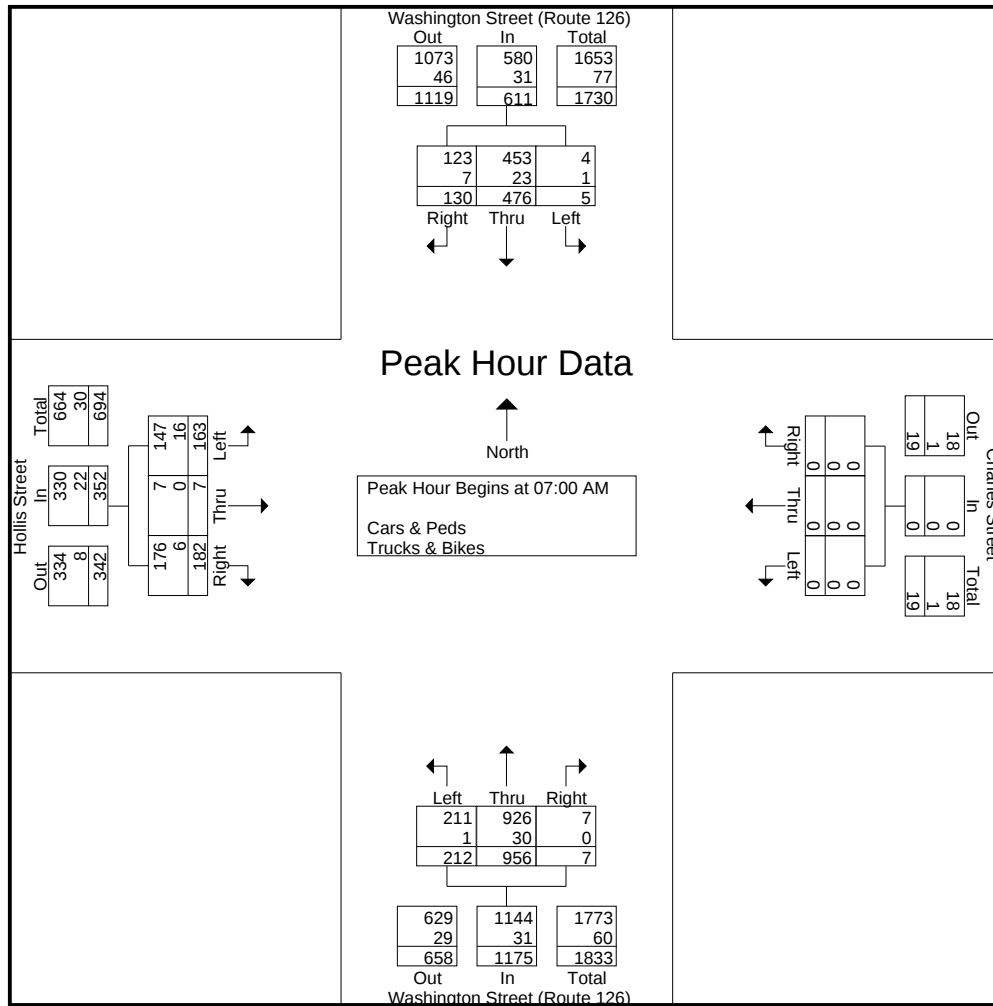
File Name : 04384A

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

	Washington Street (Route 126) From North				Charles Street From East				Washington Street (Route 126) From South				Hollis Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	53	99	1	153	0	0	0	0	0	242	67	309	49	0	46	95	557
07:15 AM	43	122	0	165	0	0	0	0	1	197	71	269	54	2	36	92	526
07:30 AM	18	120	1	139	0	0	0	0	3	272	41	316	24	2	33	59	514
07:45 AM	16	135	3	154	0	0	0	0	3	245	33	281	55	3	48	106	541
Total Volume	130	476	5	611	0	0	0	0	7	956	212	1175	182	7	163	352	2138
% App. Total	21.3	77.9	0.8		0	0	0		0.6	81.4	18		51.7	2	46.3		
PHF	.613	.881	.417	.926	.000	.000	.000	.000	.583	.879	.746	.930	.827	.583	.849	.830	.960
Cars & Peds	123	453	4	580	0	0	0	0	7	926	211	1144	176	7	147	330	2054
% Cars & Peds	94.6	95.2	80.0	94.9	0	0	0	0	100	96.9	99.5	97.4	96.7	100	90.2	93.8	96.1
Trucks & Bikes	7	23	1	31	0	0	0	0	0	30	1	31	6	0	16	22	84
% Trucks & Bikes	5.4	4.8	20.0	5.1	0	0	0	0	0	3.1	0.5	2.6	3.3	0	9.8	6.3	3.9



Transportation Data Corporation

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t (781) 587-0086 f (781) 587-0189

N/S: Washington Street (Route 126)

E/W: Charles Street/Hollis Street

City, State: Holliston, MA

Client: McM/C. Medeiros

File Name : 04384AA

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

Start Time	Washington Street (Route 126) From North				Charles Street From East				Washington Street (Route 126) From South				Hollis Street From West				Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds			
04:00 PM	54	208	4	0	0	0	0	1	6	119	33	0	27	1	23	0	1	475	476
04:15 PM	35	201	5	0	0	0	0	1	3	125	31	0	41	0	24	1	2	465	467
04:30 PM	54	236	4	0	1	0	0	1	1	113	31	0	41	1	14	0	1	496	497
04:45 PM	41	208	8	0	0	0	0	0	5	136	37	0	34	3	16	3	3	488	491
Total	184	853	21	0	1	0	0	3	15	493	132	0	143	5	77	4	7	1924	1931
05:00 PM	50	194	4	0	0	0	0	0	3	156	52	0	49	0	22	0	0	530	530
05:15 PM	42	211	0	0	0	1	0	0	4	176	46	0	92	5	39	1	1	616	617
05:30 PM	48	215	2	0	0	0	0	0	4	139	38	0	84	2	37	0	0	569	569
05:45 PM	41	207	0	0	0	0	0	0	2	141	35	0	68	0	18	0	0	512	512
Total	181	827	6	0	0	1	0	0	13	612	171	0	293	7	116	1	1	2227	2228
Grand Total	365	1680	27	0	1	1	0	3	28	1105	303	0	436	12	193	5	8	4151	4159
Apprch %	17.6	81.1	1.3		50	50	0		1.9	76.9	21.1		68	1.9	30.1				
Total %	8.8	40.5	0.7		0	0	0		0.7	26.6	7.3		10.5	0.3	4.6		0.2	99.8	
Cars & Peds	363	1646	27		1	1	0		28	1086	301		434	12	192		0	0	4097
% Cars & Peds	99.5	98	100	0	100	100	0	66.7	100	98.3	99.3	0	99.5	100	99.5	80	0	0	98.5
Trucks & Bikes	2	34	0		0	0	0		0	19	2		2	0	1		0	0	62
% Trucks & Bikes	0.5	2	0	0	0	0	0	33.3	0	1.7	0.7	0	0.5	0	0.5	20	0	0	1.5

	Washington Street (Route 126) From North				Charles Street From East				Washington Street (Route 126) From South				Hollis Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	50	194	4	248	0	0	0	0	3	156	52	211	49	0	22	71	530
05:15 PM	42	211	0	253	0	1	0	1	4	176	46	226	92	5	39	136	616
05:30 PM	48	215	2	265	0	0	0	0	4	139	38	181	84	2	37	123	569
05:45 PM	41	207	0	248	0	0	0	0	2	141	35	178	68	0	18	86	512
Total Volume	181	827	6	1014	0	1	0	1	13	612	171	796	293	7	116	416	2227
% App. Total	17.9	81.6	0.6		0	100	0		1.6	76.9	21.5		70.4	1.7	27.9		
PHF	.905	.962	.375	.957	.000	.250	.000	.250	.813	.869	.822	.881	.796	.350	.744	.765	.904
Cars & Peds	180	812	6	998	0	1	0	1	13	604	170	787	292	7	116	415	2201
% Cars & Peds	99.4	98.2	100	98.4	0	100	0	100	100	98.7	99.4	98.9	99.7	100	100	99.8	98.8
Trucks & Bikes	1	15	0	16	0	0	0	0	0	8	1	9	1	0	0	1	26
% Trucks & Bikes	0.6	1.8	0	1.6	0	0	0	0	0	1.3	0.6	1.1	0.3	0	0	0.2	1.2

Transportation Data Corporation

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N/S: Washington Street (Route 126)

E/W: Charles Street/Hollis Street

City, State: Holliston, MA

Client: McM/C. Medeiros

File Name : 04384AA

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

Groups Printed- Cars & Peds

Start Time	Washington Street (Route 126) From North				Charles Street From East				Washington Street (Route 126) From South				Hollis Street From West				Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds			
04:00 PM	53	201	4	0	0	0	0	1	6	115	32	0	27	1	22	0	1	461	462
04:15 PM	35	196	5	0	0	0	0	0	3	120	31	0	40	0	24	1	1	454	455
04:30 PM	54	233	4	0	1	0	0	1	1	112	31	0	41	1	14	0	1	492	493
04:45 PM	41	204	8	0	0	0	0	0	5	135	37	0	34	3	16	2	2	483	485
Total	183	834	21	0	1	0	0	2	15	482	131	0	142	5	76	3	5	1890	1895
05:00 PM	50	191	4	0	0	0	0	0	3	152	51	0	49	0	22	0	0	522	522
05:15 PM	42	206	0	0	0	1	0	0	4	175	46	0	91	5	39	1	1	609	610
05:30 PM	48	212	2	0	0	0	0	0	4	136	38	0	84	2	37	0	0	563	563
05:45 PM	40	203	0	0	0	0	0	0	2	141	35	0	68	0	18	0	0	507	507
Total	180	812	6	0	0	1	0	0	13	604	170	0	292	7	116	1	1	2201	2202
Grand Total	363	1646	27	0	1	1	0	2	28	1086	301	0	434	12	192	4	6	4091	4097
Apprch %	17.8	80.8	1.3		50	50	0		2	76.7	21.3		68	1.9	30.1				
Total %	8.9	40.2	0.7		0	0	0		0.7	26.5	7.4		10.6	0.3	4.7		0.1	99.9	

	Washington Street (Route 126) From North				Charles Street From East				Washington Street (Route 126) From South				Hollis Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	50	191	4	245	0	0	0	0	3	152	51	206	49	0	22	71	522
05:15 PM	42	206	0	248	0	1	0	1	4	175	46	225	91	5	39	135	609
05:30 PM	48	212	2	262	0	0	0	0	4	136	38	178	84	2	37	123	563
05:45 PM	40	203	0	243	0	0	0	0	2	141	35	178	68	0	18	86	507
Total Volume	180	812	6	998	0	1	0	1	13	604	170	787	292	7	116	415	2201
% App. Total	18	81.4	0.6		0	100	0		1.7	76.7	21.6		70.4	1.7	28		
PHF	.900	.958	.375	.952	.000	.250	.000	.250	.813	.863	.833	.874	.802	.350	.744	.769	.904

Transportation Data Corporation

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N/S: Washington Street (Route 126)

E/W: Charles Street/Hollis Street

City, State: Holliston, MA

Client: McM/C. Medeiros

File Name : 04384AA

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

Groups Printed- Trucks & Bikes

	Washington Street (Route 126) From North				Charles Street From East				Washington Street (Route 126) From South				Hollis Street From West				Exclu. Total	Inclu. Total	Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds			
04:00 PM	1	7	0	0	0	0	0	0	0	4	1	0	0	0	1	0	0	14	14
04:15 PM	0	5	0	0	0	0	0	1	0	5	0	0	1	0	0	0	1	11	12
04:30 PM	0	3	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4	4
04:45 PM	0	4	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	5	6
Total	1	19	0	0	0	0	0	1	0	11	1	0	1	0	1	1	2	34	36
05:00 PM	0	3	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	8	8
05:15 PM	0	5	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	7	7
05:30 PM	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	6	6
05:45 PM	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
Total	1	15	0	0	0	0	0	0	0	8	1	0	1	0	0	0	0	26	26
Grand Total	2	34	0	0	0	0	0	1	0	19	2	0	2	0	1	1	2	60	62
Apprch %	5.6	94.4	0		0	0	0		0	90.5	9.5		66.7	0	33.3				
Total %	3.3	56.7	0		0	0	0		0	31.7	3.3		3.3	0	1.7		3.2	96.8	

	Washington Street (Route 126) From North				Charles Street From East				Washington Street (Route 126) From South				Hollis Street From West						
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total			Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 04:00 PM																			
04:00 PM	1	7	0	8	0	0	0	0	0	4	1	5	0	0	1	1			14
04:15 PM	0	5	0	5	0	0	0	0	0	5	0	5	1	0	0	1			11
04:30 PM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0			4
04:45 PM	0	4	0	4	0	0	0	0	0	1	0	1	0	0	0	0			5
Total Volume	1	19	0	20	0	0	0	0	0	11	1	12	1	0	1	2			34
% App. Total	5	95	0		0	0	0		0	91.7	8.3		50	0	50				
PHF	.250	.679	.000	.625	.000	.000	.000	.000	.000	.550	.250	.600	.250	.000	.250	.500			.607

Transportation Data Corporation

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N/S: Washington Street (Route 126)

E/W: Charles Street/Hollis Street

City, State: Holliston, MA

Client: McM/C. Medeiros

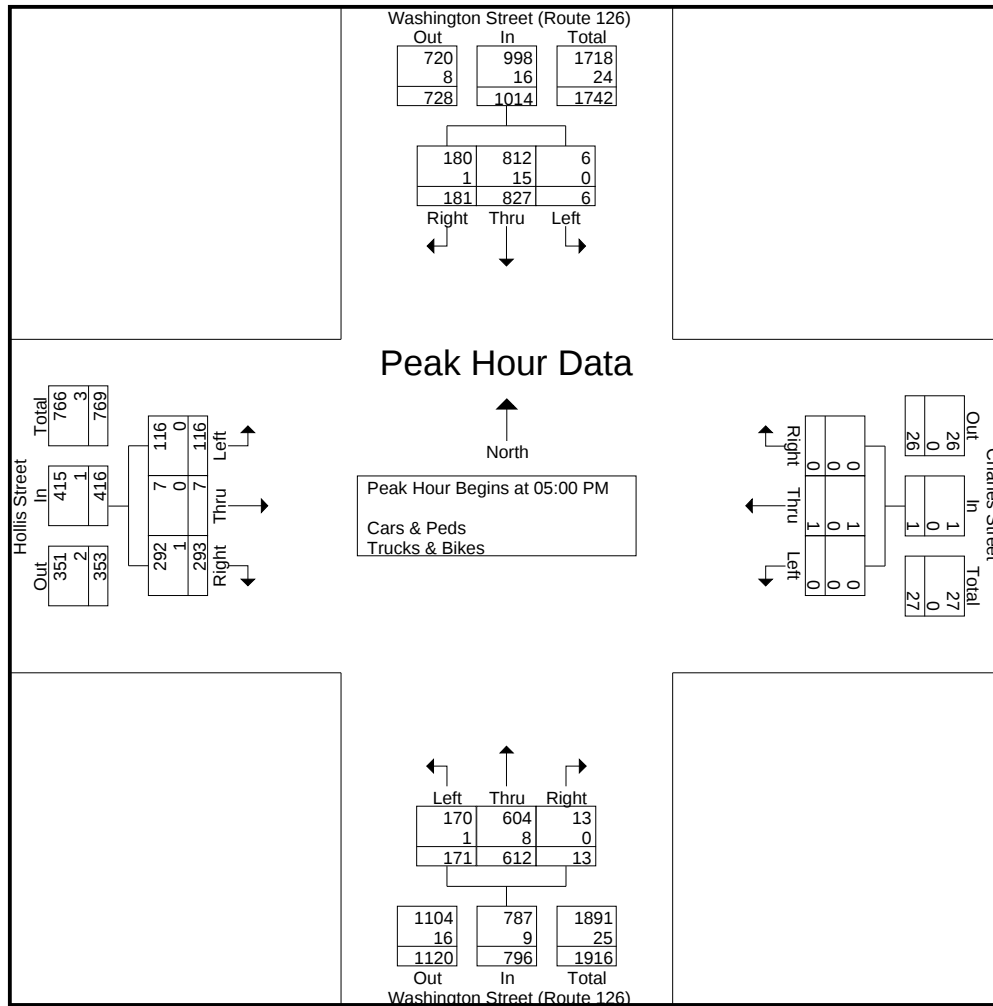
File Name : 04384AA

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

	Washington Street (Route 126) From North				Charles Street From East				Washington Street (Route 126) From South				Hollis Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	50	194	4	248	0	0	0	0	3	156	52	211	49	0	22	71	530
05:15 PM	42	211	0	253	0	1	0	1	4	176	46	226	92	5	39	136	616
05:30 PM	48	215	2	265	0	0	0	0	4	139	38	181	84	2	37	123	569
05:45 PM	41	207	0	248	0	0	0	0	2	141	35	178	68	0	18	86	512
Total Volume	181	827	6	1014	0	1	0	1	13	612	171	796	293	7	116	416	2227
% App. Total	17.9	81.6	0.6		0	100	0		1.6	76.9	21.5		70.4	1.7	27.9		
PHF	.905	.962	.375	.957	.000	.250	.000	.250	.813	.869	.822	.881	.796	.350	.744	.765	.904
Cars & Peds	180	812	6	998	0	1	0	1	13	604	170	787	292	7	116	415	2201
% Cars & Peds	99.4	98.2	100	98.4	0	100	0	100	100	98.7	99.4	98.9	99.7	100	100	99.8	98.8
Trucks & Bikes	1	15	0	16	0	0	0	0	0	8	1	9	1	0	0	1	26
% Trucks & Bikes	0.6	1.8	0	1.6	0	0	0	0	0	1.3	0.6	1.1	0.3	0	0	0.2	1.2



Transportation Data Corporation

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N/S: Washington Street (Route 126)

E: Central Street

City, State: Holliston, MA

Client: McM/C. Medeiros

File Name : 04384B

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

	Washington Street (Route 126) From North			Central Street From East			Washington Street (Route 126) From South			Exclu. Total	Inclu. Total	Int. Total
Start Time	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds			
07:00 AM	94	56	1	53	3	2	49	254	0	3	509	512
07:15 AM	128	57	1	48	17	0	58	229	0	1	537	538
07:30 AM	119	29	0	60	11	0	38	263	0	0	520	520
07:45 AM	133	59	1	53	13	0	38	231	0	1	527	528
Total	474	201	3	214	44	2	183	977	0	5	2093	2098
08:00 AM	95	43	1	47	9	2	41	227	0	3	462	465
08:15 AM	100	41	0	48	13	1	38	252	0	1	492	493
08:30 AM	104	30	3	32	13	0	43	215	0	3	437	440
08:45 AM	111	39	3	45	13	0	50	208	0	3	466	469
Total	410	153	7	172	48	3	172	902	0	10	1857	1867
Grand Total	884	354	10	386	92	5	355	1879	0	15	3950	3965
Apprch %	71.4	28.6		80.8	19.2		15.9	84.1				
Total %	22.4	9		9.8	2.3		9	47.6		0.4	99.6	
Cars & Peds	839	345		374	90		344	1830		0	0	3837
% Cars & Peds	94.9	97.5	100	96.9	97.8	100	96.9	97.4	0	0	0	96.8
Trucks & Bikes	45	9		12	2		11	49		0	0	128
% Trucks & Bikes	5.1	2.5	0	3.1	2.2	0	3.1	2.6	0	0	0	3.2

	Washington Street (Route 126) From North			Central Street From East			Washington Street (Route 126) From South			Int. Total
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	
07:00 AM	94	56	150	53	3	56	49	254	303	509
07:15 AM	128	57	185	48	17	65	58	229	287	537
07:30 AM	119	29	148	60	11	71	38	263	301	520
07:45 AM	133	59	192	53	13	66	38	231	269	527
Total Volume	474	201	675	214	44	258	183	977	1160	2093
% App. Total	70.2	29.8		82.9	17.1		15.8	84.2		
PHF	.891	.852	.879	.892	.647	.908	.789	.929	.957	.974
Cars & Peds	450	194	644	206	42	248	176	953	1129	2021
% Cars & Peds	94.9	96.5	95.4	96.3	95.5	96.1	96.2	97.5	97.3	96.6
Trucks & Bikes	24	7	31	8	2	10	7	24	31	72
% Trucks & Bikes	5.1	3.5	4.6	3.7	4.5	3.9	3.8	2.5	2.7	3.4

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 07:00 AM

Transportation Data Corporation

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N/S: Washington Street (Route 126)

E: Central Street

City, State: Holliston, MA

Client: McM/C. Medeiros

File Name : 04384B

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

Groups Printed- Cars & Peds

	Washington Street (Route 126) From North			Central Street From East			Washington Street (Route 126) From South			Exclu. Total	Inclu. Total	Int. Total
Start Time	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds			
07:00 AM	91	53	1	50	3	2	48	249	0	3	494	497
07:15 AM	121	56	1	48	16	0	53	219	0	1	513	514
07:30 AM	110	29	0	57	11	0	38	258	0	0	503	503
07:45 AM	128	56	1	51	12	0	37	227	0	1	511	512
Total	450	194	3	206	42	2	176	953	0	5	2021	2026
08:00 AM	88	43	1	46	9	2	39	220	0	3	445	448
08:15 AM	94	39	0	46	13	1	38	249	0	1	479	480
08:30 AM	100	30	3	32	13	0	42	205	0	3	422	425
08:45 AM	107	39	3	44	13	0	49	203	0	3	455	458
Total	389	151	7	168	48	3	168	877	0	10	1801	1811
Grand Total	839	345	10	374	90	5	344	1830	0	15	3822	3837
Apprch %	70.9	29.1		80.6	19.4		15.8	84.2				
Total %	22	9		9.8	2.4		9	47.9		0.4	99.6	

	Washington Street (Route 126) From North			Central Street From East			Washington Street (Route 126) From South			Int. Total
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	91	53	144	50	3	53	48	249	297	494
07:15 AM	121	56	177	48	16	64	53	219	272	513
07:30 AM	110	29	139	57	11	68	38	258	296	503
07:45 AM	128	56	184	51	12	63	37	227	264	511
Total Volume	450	194	644	206	42	248	176	953	1129	2021
% App. Total	69.9	30.1		83.1	16.9		15.6	84.4		
PHF	.879	.866	.875	.904	.656	.912	.830	.923	.950	.985

Transportation Data Corporation

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N/S: Washington Street (Route 126)

E: Central Street

City, State: Holliston, MA

Client: McM/C. Medeiros

File Name : 04384B

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

Groups Printed- Trucks & Bikes

	Washington Street (Route 126) From North			Central Street From East			Washington Street (Route 126) From South			Exclu. Total	Inclu. Total	Int. Total
Start Time	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds			
07:00 AM	3	3	0	3	0	0	1	5	0	0	15	15
07:15 AM	7	1	0	0	1	0	5	10	0	0	24	24
07:30 AM	9	0	0	3	0	0	0	5	0	0	17	17
07:45 AM	5	3	0	2	1	0	1	4	0	0	16	16
Total	24	7	0	8	2	0	7	24	0	0	72	72
08:00 AM	7	0	0	1	0	0	2	7	0	0	17	17
08:15 AM	6	2	0	2	0	0	0	3	0	0	13	13
08:30 AM	4	0	0	0	0	0	1	10	0	0	15	15
08:45 AM	4	0	0	1	0	0	1	5	0	0	11	11
Total	21	2	0	4	0	0	4	25	0	0	56	56
Grand Total	45	9	0	12	2	0	11	49	0	0	128	128
Apprch %	83.3	16.7		85.7	14.3		18.3	81.7				
Total %	35.2	7		9.4	1.6		8.6	38.3		0	100	

	Washington Street (Route 126) From North			Central Street From East			Washington Street (Route 126) From South			Int. Total
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	7	1	8	0	1	1	5	10	15	24
07:30 AM	9	0	9	3	0	3	0	5	5	17
07:45 AM	5	3	8	2	1	3	1	4	5	16
08:00 AM	7	0	7	1	0	1	2	7	9	17
Total Volume	28	4	32	6	2	8	8	26	34	74
% App. Total	87.5	12.5		75	25		23.5	76.5		
PHF	.778	.333	.889	.500	.500	.667	.400	.650	.567	.771

Transportation Data Corporation

Mario Perone, mperone1@verizon.net

t (781) 587-0086 f (781) 587-0189

N/S: Washington Street (Route 126)

E: Central Street

City, State: Holliston, MA

Client: McM/C. Medeiros

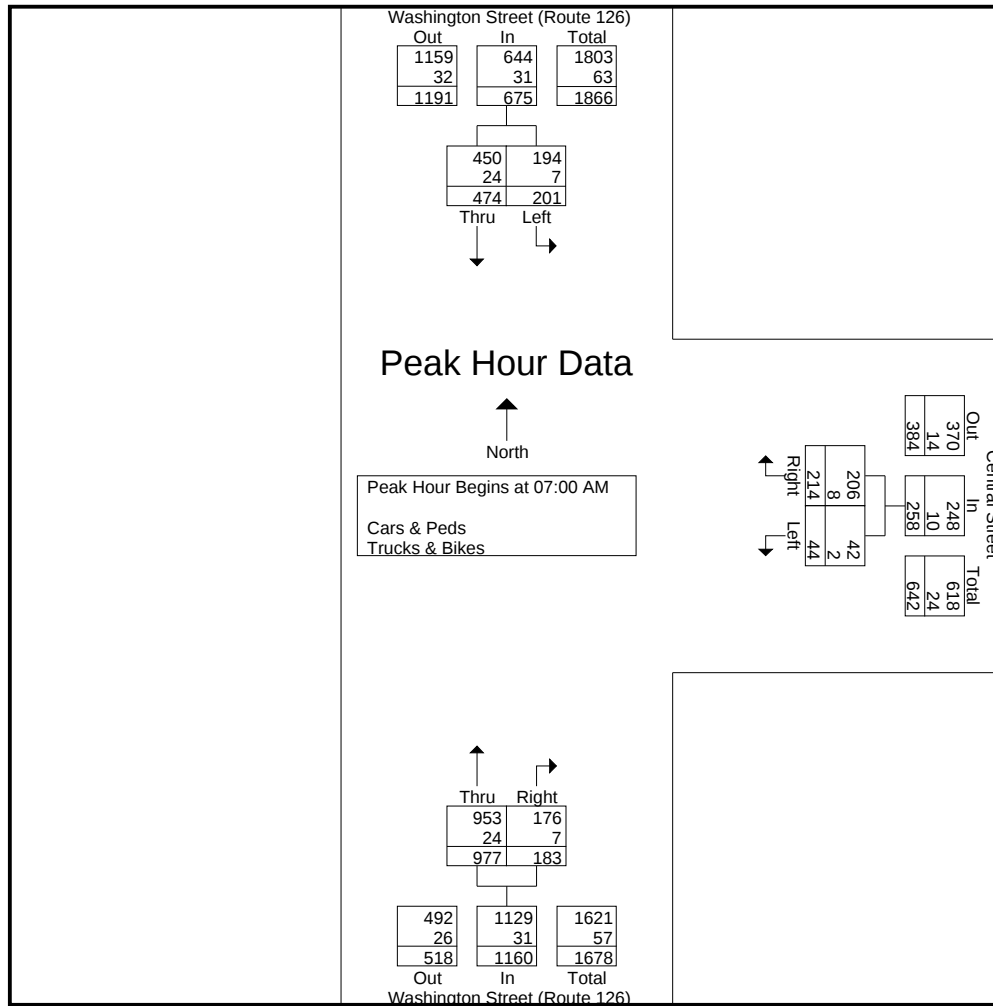
File Name : 04384B

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

	Washington Street (Route 126) From North			Central Street From East			Washington Street (Route 126) From South			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:00 AM										
07:00 AM	94	56	150	53	3	56	49	254	303	509
07:15 AM	128	57	185	48	17	65	58	229	287	537
07:30 AM	119	29	148	60	11	71	38	263	301	520
07:45 AM	133	59	192	53	13	66	38	231	269	527
Total Volume	474	201	675	214	44	258	183	977	1160	2093
% App. Total	70.2	29.8		82.9	17.1		15.8	84.2		
PHF	.891	.852	.879	.892	.647	.908	.789	.929	.957	.974
Cars & Peds	450	194	644	206	42	248	176	953	1129	2021
% Cars & Peds	94.9	96.5	95.4	96.3	95.5	96.1	96.2	97.5	97.3	96.6
Trucks & Bikes	24	7	31	8	2	10	7	24	31	72
% Trucks & Bikes	5.1	3.5	4.6	3.7	4.5	3.9	3.8	2.5	2.7	3.4



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N/S: Washington Street (Route 126)

E: Central Street

City, State: Holliston, MA

Client: McM/C. Medeiros

File Name : 04384BB

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

	Washington Street (Route 126) From North			Central Street From East			Washington Street (Route 126) From South			Exclu. Total	Inclu. Total	Int. Total
Start Time	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds			
04:00 PM	202	35	2	35	20	4	34	124	0	6	450	456
04:15 PM	202	46	5	42	24	10	28	119	0	15	461	476
04:30 PM	233	45	6	31	26	6	29	117	0	12	481	493
04:45 PM	197	44	9	49	25	4	26	133	0	13	474	487
Total	834	170	22	157	95	24	117	493	0	46	1866	1912
05:00 PM	199	46	10	60	16	6	36	150	0	16	507	523
05:15 PM	228	77	3	52	19	4	39	179	0	7	594	601
05:30 PM	224	80	3	37	21	3	33	147	0	6	542	548
05:45 PM	206	70	13	43	24	3	43	139	0	16	525	541
Total	857	273	29	192	80	16	151	615	0	45	2168	2213
Grand Total	1691	443	51	349	175	40	268	1108	0	91	4034	4125
Apprch %	79.2	20.8		66.6	33.4		19.5	80.5				
Total %	41.9	11		8.7	4.3		6.6	27.5		2.2	97.8	
Cars & Peds	1656	441		347	172		265	1088		0	0	4057
% Cars & Peds	97.9	99.5	96.1	99.4	98.3	97.5	98.9	98.2	0	0	0	98.4
Trucks & Bikes	35	2		2	3		3	20		0	0	68
% Trucks & Bikes	2.1	0.5	3.9	0.6	1.7	2.5	1.1	1.8	0	0	0	1.6

	Washington Street (Route 126) From North			Central Street From East			Washington Street (Route 126) From South			Int. Total
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	199	46	245	60	16	76	36	150	186	507
05:15 PM	228	77	305	52	19	71	39	179	218	594
05:30 PM	224	80	304	37	21	58	33	147	180	542
05:45 PM	206	70	276	43	24	67	43	139	182	525
Total Volume	857	273	1130	192	80	272	151	615	766	2168
% App. Total	75.8	24.2		70.6	29.4		19.7	80.3		
PHF	.940	.853	.926	.800	.833	.895	.878	.859	.878	.912
Cars & Peds	841	272	1113	191	80	271	150	607	757	2141
% Cars & Peds	98.1	99.6	98.5	99.5	100	99.6	99.3	98.7	98.8	98.8
Trucks & Bikes	16	1	17	1	0	1	1	8	9	27
% Trucks & Bikes	1.9	0.4	1.5	0.5	0	0.4	0.7	1.3	1.2	1.2

Transportation Data Corporation

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N/S: Washington Street (Route 126)

E: Central Street

City, State: Holliston, MA

Client: McM/C. Medeiros

File Name : 04384BB

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

Groups Printed- Cars & Peds

	Washington Street (Route 126) From North			Central Street From East			Washington Street (Route 126) From South			Exclu. Total	Inclu. Total	Int. Total
Start Time	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds			
04:00 PM	195	35	2	35	20	4	33	119	0	6	437	443
04:15 PM	197	45	5	41	24	9	28	114	0	14	449	463
04:30 PM	230	45	6	31	24	6	29	116	0	12	475	487
04:45 PM	193	44	8	49	24	4	25	132	0	12	467	479
Total	815	169	21	156	92	23	115	481	0	44	1828	1872
05:00 PM	196	46	10	59	16	6	35	146	0	16	498	514
05:15 PM	223	76	2	52	19	4	39	178	0	6	587	593
05:30 PM	220	80	3	37	21	3	33	144	0	6	535	541
05:45 PM	202	70	13	43	24	3	43	139	0	16	521	537
Total	841	272	28	191	80	16	150	607	0	44	2141	2185
Grand Total	1656	441	49	347	172	39	265	1088	0	88	3969	4057
Apprch %	79	21		66.9	33.1		19.6	80.4				
Total %	41.7	11.1		8.7	4.3		6.7	27.4		2.2	97.8	

	Washington Street (Route 126) From North			Central Street From East			Washington Street (Route 126) From South			Int. Total
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	196	46	242	59	16	75	35	146	181	498
05:15 PM	223	76	299	52	19	71	39	178	217	587
05:30 PM	220	80	300	37	21	58	33	144	177	535
05:45 PM	202	70	272	43	24	67	43	139	182	521
Total Volume	841	272	1113	191	80	271	150	607	757	2141
% App. Total	75.6	24.4		70.5	29.5		19.8	80.2		
PHF	.943	.850	.928	.809	.833	.903	.872	.853	.872	.912

Transportation Data Corporation

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N/S: Washington Street (Route 126)

E: Central Street

City, State: Holliston, MA

Client: McM/C. Medeiros

File Name : 04384BB

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

Groups Printed- Trucks & Bikes

	Washington Street (Route 126) From North			Central Street From East			Washington Street (Route 126) From South			Exclu. Total	Inclu. Total	Int. Total
Start Time	Thru	Left	Peds	Right	Left	Peds	Right	Thru	Peds			
04:00 PM	7	0	0	0	0	0	1	5	0	0	13	13
04:15 PM	5	1	0	1	0	1	0	5	0	1	12	13
04:30 PM	3	0	0	0	2	0	0	1	0	0	6	6
04:45 PM	4	0	1	0	1	0	1	1	0	1	7	8
Total	19	1	1	1	3	1	2	12	0	2	38	40
05:00 PM	3	0	0	1	0	0	1	4	0	0	9	9
05:15 PM	5	1	1	0	0	0	0	1	0	1	7	8
05:30 PM	4	0	0	0	0	0	0	3	0	0	7	7
05:45 PM	4	0	0	0	0	0	0	0	0	0	4	4
Total	16	1	1	1	0	0	1	8	0	1	27	28
Grand Total	35	2	2	2	3	1	3	20	0	3	65	68
Apprch %	94.6	5.4		40	60		13	87				
Total %	53.8	3.1		3.1	4.6		4.6	30.8		4.4	95.6	

	Washington Street (Route 126) From North			Central Street From East			Washington Street (Route 126) From South			Int. Total
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	7	0	7	0	0	0	1	5	6	13
04:15 PM	5	1	6	1	0	1	0	5	5	12
04:30 PM	3	0	3	0	2	2	0	1	1	6
04:45 PM	4	0	4	0	1	1	1	1	2	7
Total Volume	19	1	20	1	3	4	2	12	14	38
% App. Total	95	5		25	75		14.3	85.7		
PHF	.679	.250	.714	.250	.375	.500	.500	.600	.583	.731

Transportation Data Corporation

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N/S: Washington Street (Route 126)

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City, State: Holliston, MA

Client: McM/C. Medeiros

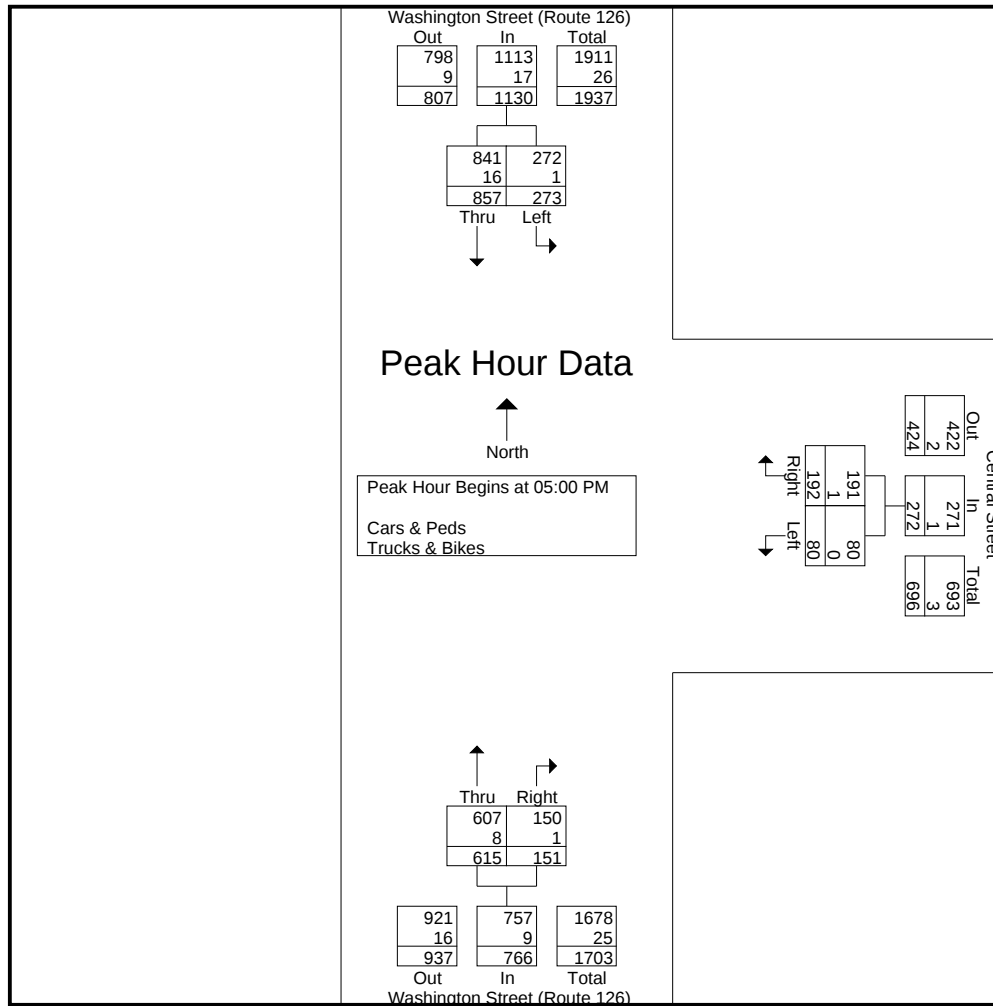
File Name : 04384BB

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

	Washington Street (Route 126) From North			Central Street From East			Washington Street (Route 126) From South			
Start Time	Thru	Left	App. Total	Right	Left	App. Total	Right	Thru	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 05:00 PM										
05:00 PM	199	46	245	60	16	76	36	150	186	507
05:15 PM	228	77	305	52	19	71	39	179	218	594
05:30 PM	224	80	304	37	21	58	33	147	180	542
05:45 PM	206	70	276	43	24	67	43	139	182	525
Total Volume	857	273	1130	192	80	272	151	615	766	2168
% App. Total	75.8	24.2		70.6	29.4		19.7	80.3		
PHF	.940	.853	.926	.800	.833	.895	.878	.859	.878	.912
Cars & Peds	841	272	1113	191	80	271	150	607	757	2141
% Cars & Peds	98.1	99.6	98.5	99.5	100	99.6	99.3	98.7	98.8	98.8
Trucks & Bikes	16	1	17	1	0	1	1	8	9	27
% Trucks & Bikes	1.9	0.4	1.5	0.5	0	0.4	0.7	1.3	1.2	1.2



Transportation Data Corporation

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N/S: Washington Street (Route 126)

E/W: Exchange Street/Green Street

City, State: Holliston, MA

Client: McM/C. Medeiros

File Name : 04384C

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

Start Time	Washington Street (Route 126) From North				Exchange Street From East				Washington Street (Route 126) From South				Green Street From West				Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds			
07:00 AM	3	94	3	0	18	0	7	1	2	286	0	1	2	0	5	1	3	420	423
07:15 AM	1	141	8	0	20	1	6	0	4	260	0	0	2	0	4	1	1	447	448
07:30 AM	2	117	5	0	12	1	4	1	4	287	1	2	1	0	3	0	3	437	440
07:45 AM	4	134	10	1	10	1	5	2	6	254	0	3	1	0	4	2	8	429	437
Total	10	486	26	1	60	3	22	4	16	1087	1	6	6	0	16	4	15	1733	1748
08:00 AM	2	94	7	0	4	0	11	1	5	258	0	1	1	0	6	2	4	388	392
08:15 AM	4	101	9	0	16	0	6	2	5	266	1	3	0	0	4	1	6	412	418
08:30 AM	2	118	5	0	9	0	5	1	2	249	2	0	0	0	4	4	5	396	401
08:45 AM	3	117	6	0	16	0	8	2	6	239	3	0	3	1	4	1	3	406	409
Total	11	430	27	0	45	0	30	6	18	1012	6	4	4	1	18	8	18	1602	1620
Grand Total	21	916	53	1	105	3	52	10	34	2099	7	10	10	1	34	12	33	3335	3368
Apprch %	2.1	92.5	5.4		65.6	1.9	32.5		1.6	98.1	0.3		22.2	2.2	75.6				
Total %	0.6	27.5	1.6		3.1	0.1	1.6		1	62.9	0.2		0.3	0	1		1	99	
Cars & Peds	20	872	53		105	3	52		33	2042	7		10	1	32		0	0	3262
% Cars & Peds	95.2	95.2	100	100	100	100	100	100	97.1	97.3	100	100	100	100	94.1	91.7	0	0	96.9
Trucks & Bikes	1	44	0		0	0	0		1	57	0		0	0	2		0	0	106
% Trucks & Bikes	4.8	4.8	0	0	0	0	0	0	2.9	2.7	0	0	0	0	5.9	8.3	0	0	3.1

Start Time	Washington Street (Route 126) From North				Exchange Street From East				Washington Street (Route 126) From South				Green Street From West					
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:00 AM																		
07:00 AM	3	94	3	100	18	0	7	25	2	286	0	288	2	0	5	7	420	
07:15 AM	1	141	8	150	20	1	6	27	4	260	0	264	2	0	4	6	447	
07:30 AM	2	117	5	124	12	1	4	17	4	287	1	292	1	0	3	4	437	
07:45 AM	4	134	10	148	10	1	5	16	6	254	0	260	1	0	4	5	429	
Total Volume	10	486	26	522	60	3	22	85	16	1087	1	1104	6	0	16	22	1733	
% App. Total	1.9	93.1	5		70.6	3.5	25.9		1.4	98.5	0.1		27.3	0	72.7			
PHF	.625	.862	.650	.870	.750	.750	.786	.787	.667	.947	.250	.945	.750	.000	.800	.786	.969	
Cars & Peds	10	461	26	497	60	3	22	85	15	1057	1	1073	6	0	16	22	1677	
% Cars & Peds	100	94.9	100	95.2	100	100	100	100	93.8	97.2	100	97.2	100	0	100	100	96.8	
Trucks & Bikes	0	25	0	25	0	0	0	0	1	30	0	31	0	0	0	0	56	
% Trucks & Bikes	0	5.1	0	4.8	0	0	0	0	6.3	2.8	0	2.8	0	0	0	0	3.2	

Transportation Data Corporation

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N/S: Washington Street (Route 126)

E/W: Exchange Street/Green Street

City, State: Holliston, MA

Client: McM/C. Medeiros

File Name : 04384C

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

Groups Printed- Cars & Peds

	Washington Street (Route 126) From North				Exchange Street From East				Washington Street (Route 126) From South				Green Street From West				Exclu. Total	Inclu. Total	Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds			
07:00 AM	3	90	3	0	18	0	7	1	2	281	0	1	2	0	5	1	3	411	414
07:15 AM	1	134	8	0	20	1	6	0	4	245	0	0	2	0	4	1	1	425	426
07:30 AM	2	108	5	0	12	1	4	1	4	282	1	2	1	0	3	0	3	423	426
07:45 AM	4	129	10	1	10	1	5	2	5	249	0	3	1	0	4	2	8	418	426
Total	10	461	26	1	60	3	22	4	15	1057	1	6	6	0	16	4	15	1677	1692
08:00 AM	1	88	7	0	4	0	11	1	5	251	0	1	1	0	4	2	4	372	376
08:15 AM	4	95	9	0	16	0	6	2	5	263	1	3	0	0	4	1	6	403	409
08:30 AM	2	115	5	0	9	0	5	1	2	238	2	0	0	0	4	4	5	382	387
08:45 AM	3	113	6	0	16	0	8	2	6	233	3	0	3	1	4	0	2	396	398
Total	10	411	27	0	45	0	30	6	18	985	6	4	4	1	16	7	17	1553	1570
Grand Total	20	872	53	1	105	3	52	10	33	2042	7	10	10	1	32	11	32	3230	3262
Apprch %	2.1	92.3	5.6		65.6	1.9	32.5		1.6	98.1	0.3		23.3	2.3	74.4				
Total %	0.6	27	1.6		3.3	0.1	1.6		1	63.2	0.2		0.3	0	1		1	99	

	Washington Street (Route 126) From North				Exchange Street From East				Washington Street (Route 126) From South				Green Street From West						
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total			
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 07:00 AM																			
07:00 AM	3	90	3	96	18	0	7	25	2	281	0	283	2	0	5	7			411
07:15 AM	1	134	8	143	20	1	6	27	4	245	0	249	2	0	4	6			425
07:30 AM	2	108	5	115	12	1	4	17	4	282	1	287	1	0	3	4			423
07:45 AM	4	129	10	143	10	1	5	16	5	249	0	254	1	0	4	5			418
Total Volume	10	461	26	497	60	3	22	85	15	1057	1	1073	6	0	16	22			1677
% App. Total	2	92.8	5.2		70.6	3.5	25.9		1.4	98.5	0.1		27.3	0	72.7				
PHF	.625	.860	.650	.869	.750	.750	.786	.787	.750	.937	.250	.935	.750	.000	.800	.786			.986

Transportation Data Corporation

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N/S: Washington Street (Route 126)

E/W: Exchange Street/Green Street

City, State: Holliston, MA

Client: McM/C. Medeiros

File Name : 04384C

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

Groups Printed- Trucks & Bikes

	Washington Street (Route 126) From North				Exchange Street From East				Washington Street (Route 126) From South				Green Street From West				Exclu. Total	Inclu. Total	Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds			
07:00 AM	0	4	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	9	9
07:15 AM	0	7	0	0	0	0	0	0	0	15	0	0	0	0	0	0	0	22	22
07:30 AM	0	9	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	14	14
07:45 AM	0	5	0	0	0	0	0	0	1	5	0	0	0	0	0	0	0	11	11
Total	0	25	0	0	0	0	0	0	1	30	0	0	0	0	0	0	0	56	56
08:00 AM	1	6	0	0	0	0	0	0	0	7	0	0	0	0	0	2	0	16	16
08:15 AM	0	6	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	9	9
08:30 AM	0	3	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	14	14
08:45 AM	0	4	0	0	0	0	0	0	0	6	0	0	0	0	0	1	1	10	11
Total	1	19	0	0	0	0	0	0	0	27	0	0	0	0	0	2	1	49	50
Grand Total	1	44	0	0	0	0	0	0	1	57	0	0	0	0	0	2	1	105	106
Apprch %	2.2	97.8	0		0	0	0		1.7	98.3	0		0	0	100		1		
Total %	1	41.9	0		0	0	0		1	54.3	0		0	0	1.9		0.9	99.1	

	Washington Street (Route 126) From North				Exchange Street From East				Washington Street (Route 126) From South				Green Street From West					Int. Total
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total		
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																		
Peak Hour for Entire Intersection Begins at 07:15 AM																		
07:15 AM	0	7	0	7	0	0	0	0	0	15	0	15	0	0	0	0	0	22
07:30 AM	0	9	0	9	0	0	0	0	0	5	0	5	0	0	0	0	0	14
07:45 AM	0	5	0	5	0	0	0	0	1	5	0	6	0	0	0	0	0	11
08:00 AM	1	6	0	7	0	0	0	0	0	7	0	7	0	0	2	2	0	16
Total Volume	1	27	0	28	0	0	0	0	1	32	0	33	0	0	2	2		63
% App. Total	3.6	96.4	0		0	0	0		3	97	0		0	0	100			
PHF	.250	.750	.000	.778	.000	.000	.000	.000	.250	.533	.000	.550	.000	.000	.250	.250		.716

Transportation Data Corporation

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N/S: Washington Street (Route 126)

E/W: Exchange Street/Green Street

City, State: Holliston, MA

Client: McM/C. Medeiros

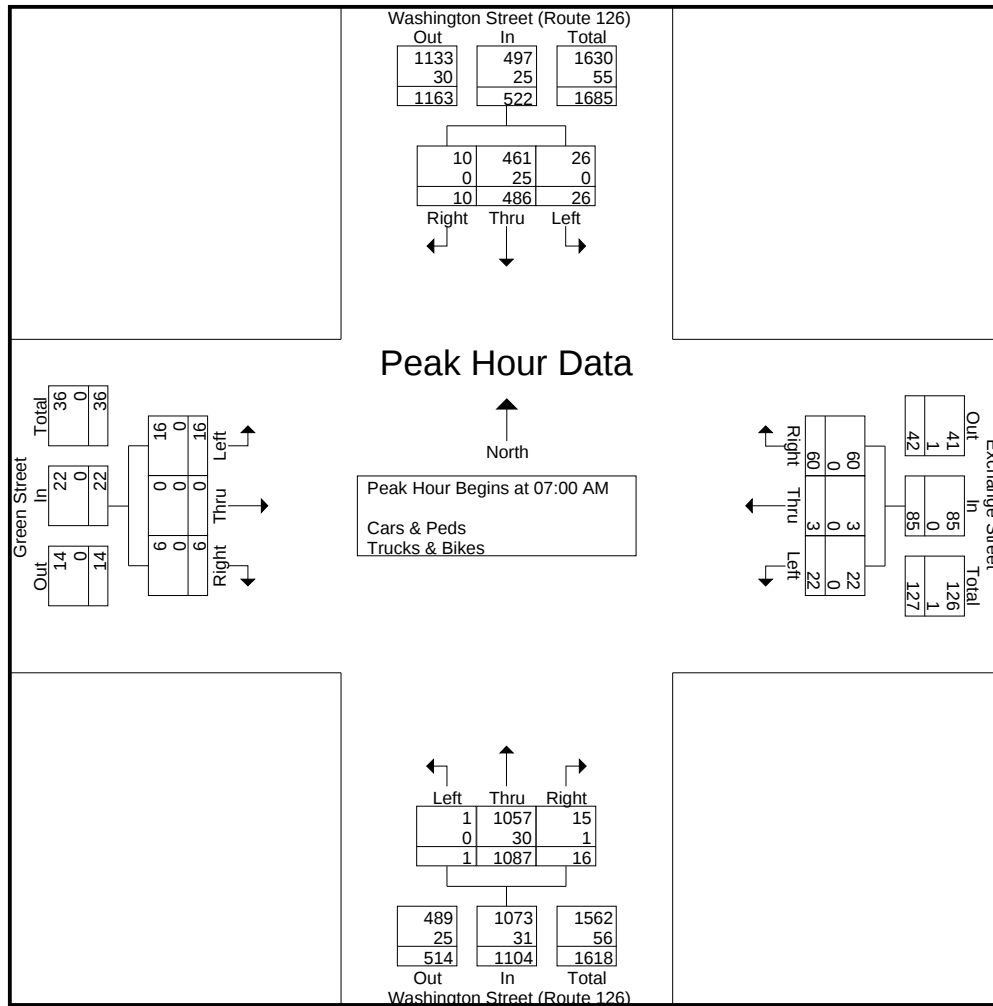
File Name : 04384C

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

	Washington Street (Route 126) From North				Exchange Street From East				Washington Street (Route 126) From South				Green Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	3	94	3	100	18	0	7	25	2	286	0	288	2	0	5	7	420
07:15 AM	1	141	8	150	20	1	6	27	4	260	0	264	2	0	4	6	447
07:30 AM	2	117	5	124	12	1	4	17	4	287	1	292	1	0	3	4	437
07:45 AM	4	134	10	148	10	1	5	16	6	254	0	260	1	0	4	5	429
Total Volume	10	486	26	522	60	3	22	85	16	1087	1	1104	6	0	16	22	1733
% App. Total	1.9	93.1	5		70.6	3.5	25.9		1.4	98.5	0.1		27.3	0	72.7		
PHF	.625	.862	.650	.870	.750	.750	.786	.787	.667	.947	.250	.945	.750	.000	.800	.786	.969
Cars & Peds	10	461	26	497	60	3	22	85	15	1057	1	1073	6	0	16	22	1677
% Cars & Peds	100	94.9	100	95.2	100	100	100	100	93.8	97.2	100	97.2	100	0	100	100	96.8
Trucks & Bikes	0	25	0	25	0	0	0	0	1	30	0	31	0	0	0	0	56
% Trucks & Bikes	0	5.1	0	4.8	0	0	0	0	6.3	2.8	0	2.8	0	0	0	0	3.2



Transportation Data Corporation

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City, State: Holliston, MA

Client: McM/C. Medeiros

File Name : 04384CC

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

Groups Printed- Cars & Peds - Trucks & Bikes

Start Time	Washington Street (Route 126) From North				Exchange Street From East				Washington Street (Route 126) From South				Green Street From West				Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds			
02:00 PM	4	157	3	0	12	1	15	0	1	115	1	1	7	0	2	5	6	318	324
02:15 PM	5	172	7	0	12	0	9	4	7	144	0	4	4	1	6	0	8	367	375
02:30 PM	3	171	5	0	9	1	14	3	2	156	0	1	0	1	3	3	7	365	372
02:45 PM	5	189	5	0	4	1	9	4	3	149	1	4	3	0	4	14	22	373	395
Total	17	689	20	0	37	3	47	11	13	564	2	10	14	2	15	22	43	1423	1466
03:00 PM	2	179	2	0	10	2	11	5	4	139	1	3	1	1	3	18	26	355	381
03:15 PM	4	198	5	0	11	1	12	2	3	138	1	2	2	0	8	1	5	383	388
03:30 PM	3	192	7	0	11	1	10	0	6	168	1	6	2	0	6	0	6	407	413
03:45 PM	7	201	4	0	10	1	10	0	3	143	4	10	3	0	1	19	29	387	416
Total	16	770	18	0	42	5	43	7	16	588	7	21	8	1	18	38	66	1532	1598
04:00 PM	5	209	5	0	10	0	6	2	4	148	2	1	4	1	4	2	5	398	403
04:15 PM	2	211	13	0	10	0	14	7	5	141	0	2	4	0	4	0	9	404	413
04:30 PM	5	247	9	0	15	0	8	4	5	132	0	0	1	0	1	3	7	423	430
04:45 PM	9	210	4	0	9	2	12	2	2	144	1	0	2	0	3	8	10	398	408
Total	21	877	31	0	44	2	40	15	16	565	3	3	11	1	12	13	31	1623	1654
05:00 PM	3	208	8	0	6	1	18	4	4	179	2	0	6	1	10	1	5	446	451
05:15 PM	0	243	4	0	14	0	12	5	3	198	1	3	4	0	2	2	10	481	491
05:30 PM	6	232	8	0	8	1	15	0	0	164	2	2	5	1	3	0	2	445	447
05:45 PM	11	216	6	0	8	2	10	2	3	173	3	0	2	1	3	2	4	438	442
Total	20	899	26	0	36	4	55	11	10	714	8	5	17	3	18	5	21	1810	1831
Grand Total	74	3235	95	0	159	14	185	44	55	2431	20	39	50	7	63	78	161	6388	6549
Apprch %	2.2	95	2.8		44.4	3.9	51.7		2.2	97	0.8		41.7	5.8	52.5				
Total %	1.2	50.6	1.5		2.5	0.2	2.9		0.9	38.1	0.3		0.8	0.1	1		2.5	97.5	
Cars & Peds	74	3119	95		159	14	184		55	2345	20		50	7	62		0	0	6335
% Cars & Peds	100	96.4	100	0	100	100	99.5	93.2	100	96.5	100	97.4	100	100	98.4	92.3	0	0	96.7
Trucks & Bikes	0	116	0		0	0	1		0	86	0		0	0	1		0	0	214
% Trucks & Bikes	0	3.6	0	0	0	0	0.5	6.8	0	3.5	0	2.6	0	0	1.6	7.7	0	0	3.3

Start Time	Washington Street (Route 126) From North				Exchange Street From East				Washington Street (Route 126) From South				Green Street From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	2	179	2	183	10	2	11	23	4	139	1	144	1	1	3	5	355
03:15 PM	4	198	5	207	11	1	12	24	3	138	1	142	2	0	8	10	383
03:30 PM	3	192	7	202	11	1	10	22	6	168	1	175	2	0	6	8	407
03:45 PM	7	201	4	212	10	1	10	21	3	143	4	150	3	0	1	4	387
Total Volume	16	770	18	804	42	5	43	90	16	588	7	611	8	1	18	27	1532
% App. Total	2	95.8	2.2		46.7	5.6	47.8		2.6	96.2	1.1		29.6	3.7	66.7		
PHF	.571	.958	.643	.948	.955	.625	.896	.938	.667	.875	.438	.873	.667	.250	.563	.675	.941
Cars & Peds	16	738	18	772	42	5	43	90	16	561	7	584	8	1	17	26	1472
% Cars & Peds	100	95.8	100	96.0	100	100	100	100	100	95.4	100	95.6	100	100	94.4	96.3	96.1
Trucks & Bikes	0	32	0	32	0	0	0	0	0	27	0	27	0	0	1	1	60
% Trucks & Bikes	0	4.2	0	4.0	0	0	0	0	0	4.6	0	4.4	0	0	5.6	3.7	3.9

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	3	208	8	219	6	1	18	25	4	179	2	185	6	1	10	17	446
05:15 PM	0	243	4	247	14	0	12	26	3	198	1	202	4	0	2	6	481
05:30 PM	6	232	8	246	8	1	15	24	0	164	2	166	5	1	3	9	445
05:45 PM	11	216	6	233	8	2	10	20	3	173	3	179	2	1	3	6	438
Total Volume	20	899	26	945	36	4	55	95	10	714	8	732	17	3	18	38	1810
% App. Total	2.1	95.1	2.8		37.9	4.2	57.9		1.4	97.5	1.1		44.7	7.9	47.4		
PHF	.455	.925	.813	.956	.643	.500	.764	.913	.625	.902	.667	.906	.708	.750	.450	.559	.941
Cars & Peds	20	883	26	929	36	4	55	95	10	705	8	723	17	3	18	38	1785
% Cars & Peds	100	98.2	100	98.3	100	100	100	100	100	98.7	100	98.8	100	100	100	100	98.6
Trucks & Bikes	0	16	0	16	0	0	0	0	0	9	0	9	0	0	0	0	25
% Trucks & Bikes	0	1.8	0	1.7	0	0	0	0	0	1.3	0	1.2	0	0	0	0	1.4

Transportation Data Corporation

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N/S: Washington Street (Route 126)

E/W: Exchange Street/Green Street

City, State: Holliston, MA

Client: McM/C. Medeiros

File Name : 04384CC

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

Groups Printed- Cars & Peds

Start Time	Washington Street (Route 126) From North				Exchange Street From East				Washington Street (Route 126) From South				Green Street From West				Exclu. Total	Inclu. Total	Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds			
02:00 PM	4	147	3	0	12	1	15	0	1	108	1	1	7	0	2	5	6	301	307
02:15 PM	5	164	7	0	12	0	9	4	7	133	0	4	4	1	6	0	8	348	356
02:30 PM	3	157	5	0	9	1	14	3	2	144	0	1	0	1	3	3	7	339	346
02:45 PM	5	175	5	0	4	1	8	4	3	142	1	4	3	0	4	14	22	351	373
Total	17	643	20	0	37	3	46	11	13	527	2	10	14	2	15	22	43	1339	1382
03:00 PM	2	176	2	0	10	2	11	3	4	134	1	3	1	1	3	15	21	347	368
03:15 PM	4	186	5	0	11	1	12	2	3	126	1	2	2	0	7	1	5	358	363
03:30 PM	3	181	7	0	11	1	10	0	6	163	1	6	2	0	6	0	6	391	397
03:45 PM	7	195	4	0	10	1	10	0	3	138	4	10	3	0	1	19	29	376	405
Total	16	738	18	0	42	5	43	5	16	561	7	21	8	1	17	35	61	1472	1533
04:00 PM	5	201	5	0	10	0	6	2	4	142	2	1	4	1	4	2	5	384	389
04:15 PM	2	207	13	0	10	0	14	6	5	136	0	1	4	0	4	0	7	395	402
04:30 PM	5	242	9	0	15	0	8	4	5	131	0	0	1	0	1	2	6	417	423
04:45 PM	9	205	4	0	9	2	12	2	2	143	1	0	2	0	3	7	9	392	401
Total	21	855	31	0	44	2	40	14	16	552	3	2	11	1	12	11	27	1588	1615
05:00 PM	3	205	8	0	6	1	18	4	4	174	2	0	6	1	10	1	5	438	443
05:15 PM	0	238	4	0	14	0	12	5	3	197	1	3	4	0	2	2	10	475	485
05:30 PM	6	228	8	0	8	1	15	0	0	161	2	2	5	1	3	0	2	438	440
05:45 PM	11	212	6	0	8	2	10	2	3	173	3	0	2	1	3	1	3	434	437
Total	20	883	26	0	36	4	55	11	10	705	8	5	17	3	18	4	20	1785	1805
Grand Total	74	3119	95	0	159	14	184	41	55	2345	20	38	50	7	62	72	151	6184	6335
Apprch %	2.3	94.9	2.9		44.5	3.9	51.5		2.3	96.9	0.8		42	5.9	52.1				
Total %	1.2	50.4	1.5		2.6	0.2	3		0.9	37.9	0.3		0.8	0.1	1		2.4	97.6	

	Washington Street (Route 126) From North				Exchange Street From East				Washington Street (Route 126) From South				Green Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	2	176	2	180	10	2	11	23	4	134	1	139	1	1	3	5	347
03:15 PM	4	186	5	195	11	1	12	24	3	126	1	130	2	0	7	9	358
03:30 PM	3	181	7	191	11	1	10	22	6	163	1	170	2	0	6	8	391
03:45 PM	7	195	4	206	10	1	10	21	3	138	4	145	3	0	1	4	376
Total Volume	16	738	18	772	42	5	43	90	16	561	7	584	8	1	17	26	1472
% App. Total	2.1	95.6	2.3		46.7	5.6	47.8		2.7	96.1	1.2		30.8	3.8	65.4		
PHF	.571	.946	.643	.937	.955	.625	.896	.938	.667	.860	.438	.859	.667	.250	.607	.722	.941

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	3	205	8	216	6	1	18	25	4	174	2	180	6	1	10	17	438
05:15 PM	0	238	4	242	14	0	12	26	3	197	1	201	4	0	2	6	475
05:30 PM	6	228	8	242	8	1	15	24	0	161	2	163	5	1	3	9	438
05:45 PM	11	212	6	229	8	2	10	20	3	173	3	179	2	1	3	6	434
Total Volume	20	883	26	929	36	4	55	95	10	705	8	723	17	3	18	38	1785
% App. Total	2.2	95	2.8		37.9	4.2	57.9		1.4	97.5	1.1		44.7	7.9	47.4		
PHF	.455	.928	.813	.960	.643	.500	.764	.913	.625	.895	.667	.899	.708	.750	.450	.559	.939

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File Name : 04384CC

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

Groups Printed- Trucks & Bikes

	Washington Street (Route 126) From North				Exchange Street From East				Washington Street (Route 126) From South				Green Street From West				Exclu. Total	Inclu. Total	Int. Total
Start Time	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds			
02:00 PM	0	10	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	17	17
02:15 PM	0	8	0	0	0	0	0	0	0	11	0	0	0	0	0	0	0	19	19
02:30 PM	0	14	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	26	26
02:45 PM	0	14	0	0	0	0	1	0	0	7	0	0	0	0	0	0	0	22	22
Total	0	46	0	0	0	0	1	0	0	37	0	0	0	0	0	0	0	84	84
03:00 PM	0	3	0	0	0	0	0	2	0	5	0	0	0	0	0	3	5	8	13
03:15 PM	0	12	0	0	0	0	0	0	0	12	0	0	0	0	1	0	0	25	25
03:30 PM	0	11	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	16	16
03:45 PM	0	6	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	11	11
Total	0	32	0	0	0	0	0	2	0	27	0	0	0	0	1	3	5	60	65
04:00 PM	0	8	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	14	14
04:15 PM	0	4	0	0	0	0	0	1	0	5	0	1	0	0	0	0	2	9	11
04:30 PM	0	5	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	6	7
04:45 PM	0	5	0	0	0	0	0	0	0	1	0	0	0	0	0	1	1	6	7
Total	0	22	0	0	0	0	0	1	0	13	0	1	0	0	0	2	4	35	39
05:00 PM	0	3	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	8	8
05:15 PM	0	5	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	6	6
05:30 PM	0	4	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	7	7
05:45 PM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	4	5
Total	0	16	0	0	0	0	0	0	0	9	0	0	0	0	1	1	1	25	26
Grand Total	0	116	0	0	0	0	1	3	0	86	0	1	0	0	1	6	10	204	214
Apprch %	0	100	0		0	0	100		0	100	0		0	0	100				
Total %	0	56.9	0		0	0	0.5		0	42.2	0		0	0	0.5		4.7	95.3	

	Washington Street (Route 126) From North				Exchange Street From East				Washington Street (Route 126) From South				Green Street From West						
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total			Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 02:00 PM																			
02:00 PM	0	10	0	10	0	0	0	0	0	7	0	7	0	0	0	0	0	17	
02:15 PM	0	8	0	8	0	0	0	0	0	11	0	11	0	0	0	0	0	19	
02:30 PM	0	14	0	14	0	0	0	0	0	12	0	12	0	0	0	0	0	26	
02:45 PM	0	14	0	14	0	0	1	1	0	7	0	7	0	0	0	0	0	22	
Total Volume	0	46	0	46	0	0	1	1	0	37	0	37	0	0	0	0	0	84	
% App. Total	0	100	0		0	0	100		0	100	0		0	0	0				
PHF	.000	.821	.000	.821	.000	.000	.250	.250	.000	.771	.000	.771	.000	.000	.000	.000	.000	.808	

Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 04:00 PM

04:00 PM	0	8	0	8	0	0	0	0	0	6	0	6	0	0	0	0	0	14	
04:15 PM	0	4	0	4	0	0	0	0	0	5	0	5	0	0	0	0	0	9	
04:30 PM	0	5	0	5	0	0	0	0	0	1	0	1	0	0	0	0	0	6	
04:45 PM	0	5	0	5	0	0	0	0	0	1	0	1	0	0	0	0	0	6	
Total Volume	0	22	0	22	0	0	0	0	0	13	0	13	0	0	0	0	0	35	
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0				
PHF	.000	.688	.000	.688	.000	.000	.000	.000	.000	.542	.000	.542	.000	.000	.000	.000	.000	.625	

Transportation Data Corporation

Mario Perone, mperone1@verizon.net

t (781) 587-0086 f (781) 587-0189

N/S: Washington Street (Route 126)

E/W: Exchange Street/Green Street

City, State: Holliston, MA

Client: McM/C. Medeiros

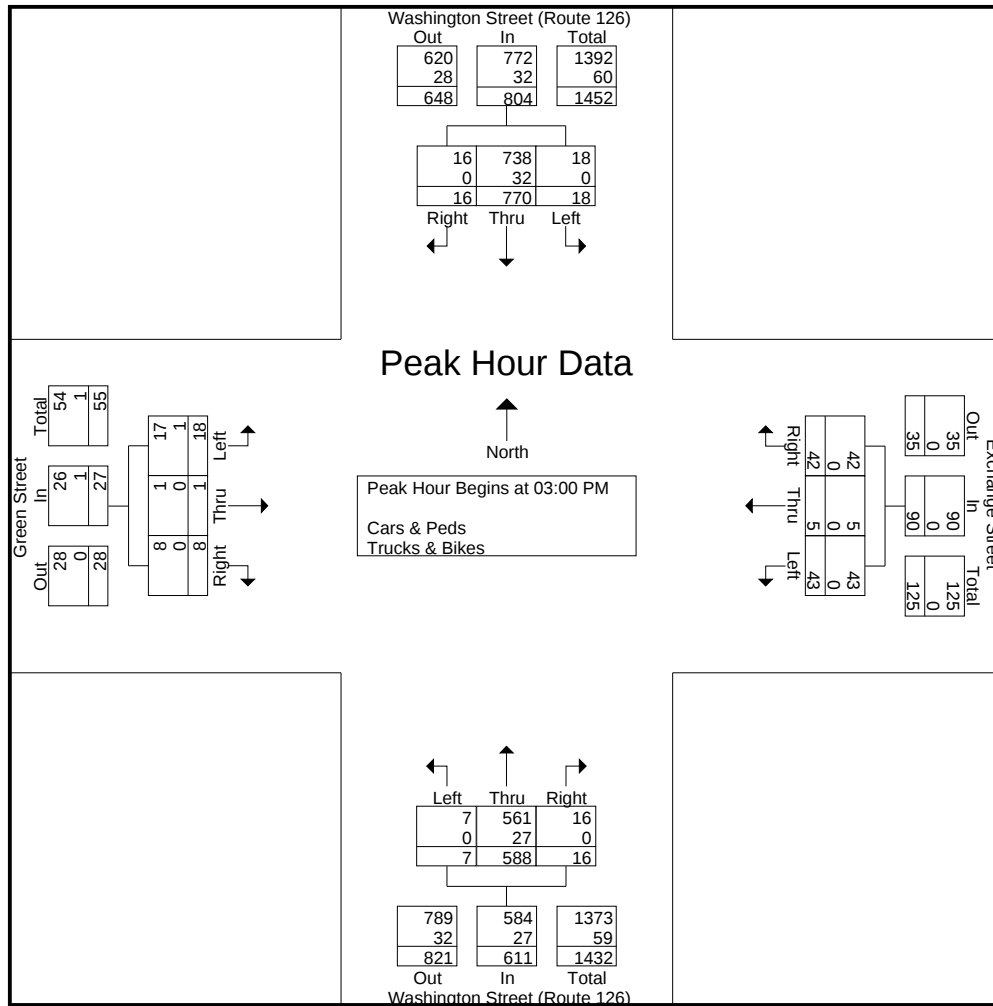
File Name : 04384CC

Site Code : Y1344911

Start Date : 9/17/2013

Page No : 1

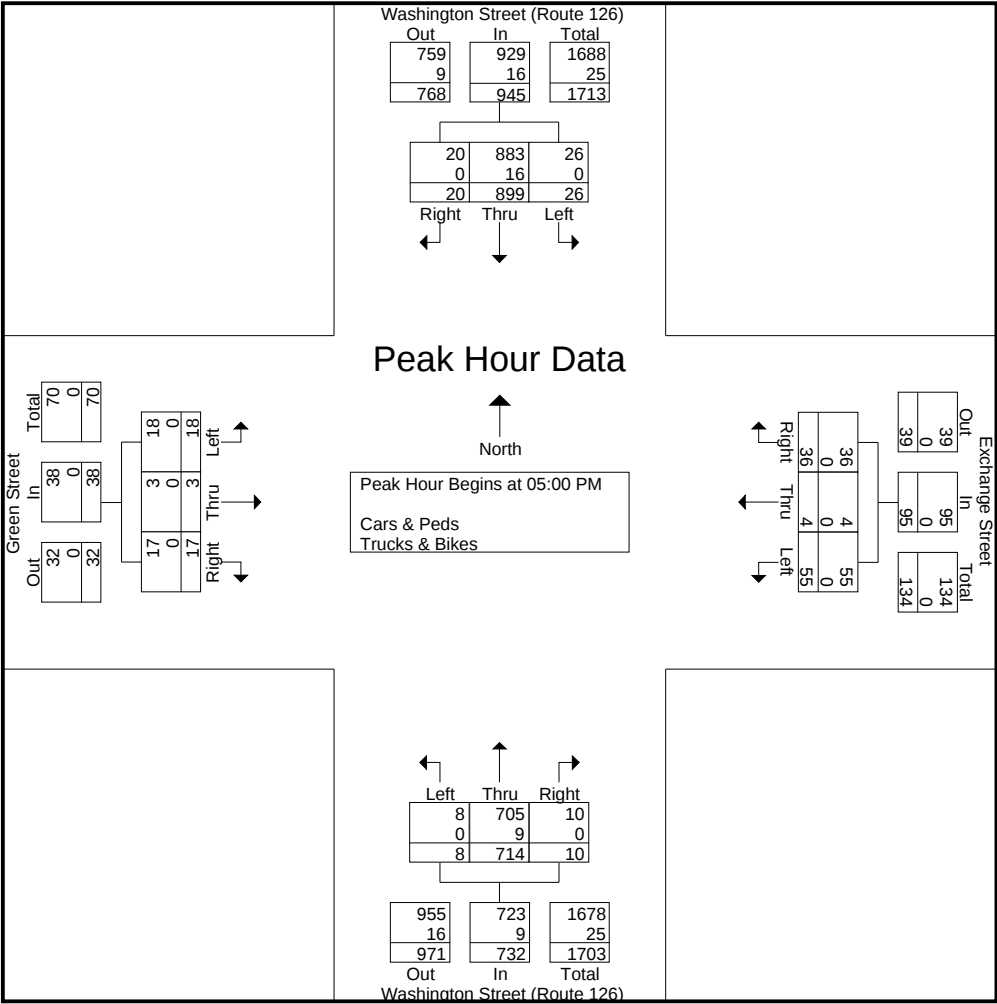
	Washington Street (Route 126) From North				Exchange Street From East				Washington Street (Route 126) From South				Green Street From West				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 02:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	2	179	2	183	10	2	11	23	4	139	1	144	1	1	3	5	355
03:15 PM	4	198	5	207	11	1	12	24	3	138	1	142	2	0	8	10	383
03:30 PM	3	192	7	202	11	1	10	22	6	168	1	175	2	0	6	8	407
03:45 PM	7	201	4	212	10	1	10	21	3	143	4	150	3	0	1	4	387
Total Volume	16	770	18	804	42	5	43	90	16	588	7	611	8	1	18	27	1532
% App. Total	2	95.8	2.2		46.7	5.6	47.8		2.6	96.2	1.1		29.6	3.7	66.7		
PHF	.571	.958	.643	.948	.955	.625	.896	.938	.667	.875	.438	.873	.667	.250	.563	.675	.941
Cars & Peds	16	738	18	772	42	5	43	90	16	561	7	584	8	1	17	26	1472
% Cars & Peds	100	95.8	100	96.0	100	100	100	100	100	95.4	100	95.6	100	100	94.4	96.3	96.1
Trucks & Bikes	0	32	0	32	0	0	0	0	0	27	0	27	0	0	1	1	60
% Trucks & Bikes	0	4.2	0	4.0	0	0	0	0	0	4.6	0	4.4	0	0	5.6	3.7	3.9



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1

Peak Hour for Entire Intersection Begins at 05:00 PM

05:00 PM	3	208	8	219	6	1	18	25	4	179	2	185	6	1	10	17	446
05:15 PM	0	243	4	247	14	0	12	26	3	198	1	202	4	0	2	6	481
05:30 PM	6	232	8	246	8	1	15	24	0	164	2	166	5	1	3	9	445
05:45 PM	11	216	6	233	8	2	10	20	3	173	3	179	2	1	3	6	438
Total Volume	20	899	26	945	36	4	55	95	10	714	8	732	17	3	18	38	1810
% App. Total	2.1	95.1	2.8		37.9	4.2	57.9		1.4	97.5	1.1		44.7	7.9	47.4		
PHF	.455	.925	.813	.956	.643	.500	.764	.913	.625	.902	.667	.906	.708	.750	.450	.559	.941
Cars & Peds	20	883	26	929	36	4	55	95	10	705	8	723	17	3	18	38	1785
% Cars & Peds	100	98.2	100	98.3	100	100	100	100	100	98.7	100	98.8	100	100	100	100	98.6
Trucks & Bikes	0	16	0	16	0	0	0	0	0	9	0	9	0	0	0	0	25



APPENDIX C

Traffic Projection Model

TRAFFIC PROJECTION MODEL

Washington Street Corridor Analysis

Weekday Morning Peak Hour

Holliston, MA

Intersection	Dir.	Turn	2013 Existing Volumes	Background Growth 10 yrs (at 1 % per year)	Milford Casino	2023 Build Volumes
Washington Street at Hollis Street/Charles Street	EB	L	163	17		180
		T	7	1		8
		R	182	19		201
	NB	L	212	22		234
		T	956	100	7	1063
		R	7	1		8
	SB	L	5	1		6
		T	476	50	12	538
		R	130	14		144
Washington Street at Central Street	WB	L	44	5		49
		R	214	22		236
	NB	T	980	103	7	1090
		R	183	19		202
	SB	L	201	21		222
		T	478	50	12	540
Washington Street at Green Street/Exchange Street	EB	L	16	2		18
		T	0	0		0
		R	6	1		7
	WB	L	22	2		24
		T	3	0		3
		R	60	6		66
	NB	L	1	0		1
		T	1087	114	7	1208
		R	16	2		18
	SB	L	26	3		29
		T	486	51	12	549
		R	10	1		11

TRAFFIC PROJECTION MODEL

Washington Street Corridor Analysis

Weekday Afternoon Peak Hour

Holliston, MA

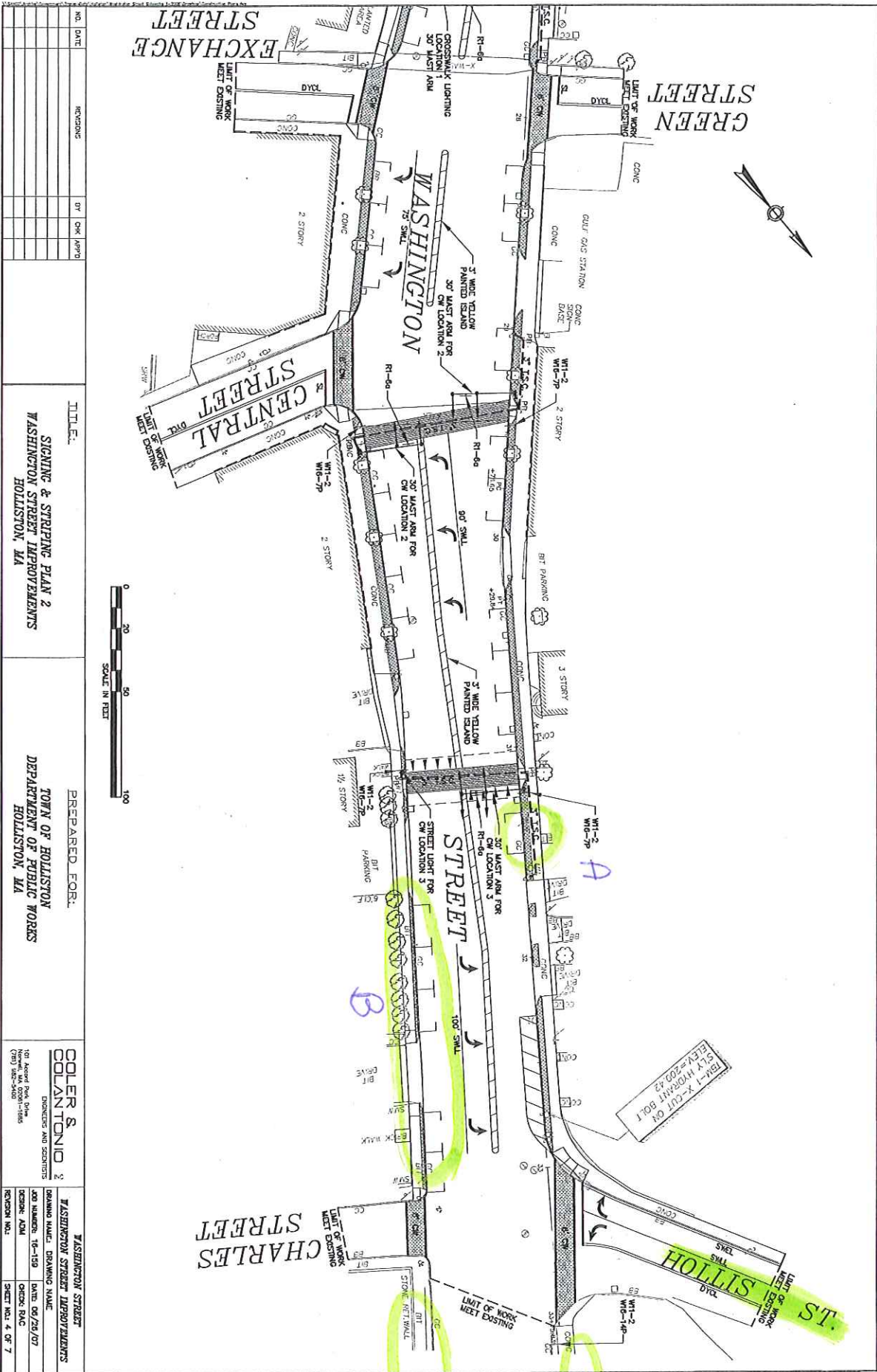
Intersection	Dir.	Turn	2013 Existing Volumes	Background Growth 10 yrs (at 1 % per year)	Milford Casino	2023 Build Volumes
Washington Street at Hollis Street/Charles Street	EB	L	116	12		128
		T	7	1		8
		R	293	31		324
	NB	L	171	18		189
		T	612	64	21	697
		R	13	1		14
	SB	L	6	1		7
		T	827	87	34	948
		R	181	19		200
Washington Street at Central Street	WB	L	80	8		88
		R	192	20		212
	NB	T	617	65	21	703
		R	151	16		167
	SB	L	273	29		302
		T	865	90	34	989
Washington Street at Green Street/Exchange Street	EB	L	18	2		20
		T	3	0		3
		R	17	2		19
	WB	L	55	6		61
		T	4	0		4
		R	36	4		40
	NB	L	8	1		9
		T	714	75	21	810
		R	10	1		11
	SB	L	26	3		29
		T	899	94	34	1026
		R	20	2		22

APPENDIX D

Parking Observation Worksheets

SIZE	WIDTH	HEIGHT	TEXT DIMENSIONS	NUMBER OF SPACES REQUIRED	COLOR			POST SIZE & NUMBER REQUIRED
					BACKGROUND	TEXT	BORDER	
W1-2	30"	30"	SEE 2003 MANUAL TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS	8	FLOOR, FLUORESCENT GREEN	BLACK	BLACK	P-5 8
W16-7P	30"	30"		6	FLOOR, YELLOW- GREEN	BLACK	BLACK	MOUNT 6 W/ W1-2
W16-14P	30"	24"	RAISED CROSSWALK ARROW	2	FLOOR, YELLOW- GREEN	BLACK	BLACK	MOUNT 2 W/ W1-2
RT-6a	30"	18"	YIELD TO PEDESTRIAN IN CROSSWALK	6	FLOOR, YELLOW- GREEN	BLACK	BLACK	MOUNT 6A W/ 16-7P





NO. DATE	REVISED	BY	CHK	APPR

TITLE

SIGNING & STRIPING PLAN 2

WASHINGTON STREET IMPROVEMENTS

HOLLISTON, MA

PREPARED FOR

TOWN OF HOLLISTON

DEPARTMENT OF PUBLIC WORKS

HOLLISTON, MA

COLER & COLANTONIO &

DRAWING AND SCHEMATIC

100 Acacia Road, Suite 100

Quincy, MA 02269

WASHINGTON STREET

DRAWING NAME

DATE: 06/26/07

DESIGN: AEM

CHECK: DAC

RECORD: MCL

SHEET NO. 4 OF 7

Parking Space Inventory
Holliston, MA

Intersection: _Washington Street in vicinity of Hollis/Charles Streets_____
Date: _9/17/13_____

	Parking Sections			
Time (Observe every 15 min.)	A	B	C	D
7:00 AM	0	0	0	0
7:15	0	0	0	0
7:30	0	0	0	0
7:45	0	0	0	1
8:00	0	0	0	1
8:15	0	0	0	1
8:30	0	0	0	2
8:45	0	0	0	2
9:00	1	1	0	3
4:00 PM	1	1	0	3
4:15	1	2	0	3
4:30	1	2	0	3
4:45	1	1	0	2
5:00	1	1	0	2
5:15	1	0	0	2
5:30	0	0	0	0
5:45	0	2	0	0
6:00	0	2	0	0

Parking Space Inventory
Holliston, MA

Intersection: _Washington Street in vicinity of Central Street_____

Date: _9/17/13_____

	Parking Sections			
Time (Observe every 15 min.)	A	B	C	D
7:00 AM	0	0	1	
7:15	0	0	0	
7:30	0	0	0	
7:45	0	1	1	
8:00	1	0	0	
8:15	1	0	1	
8:30	1	0	0	
8:45	0	0	0	
9:00	1	1	1	
4:00 PM	1	1	2	
4:15	1	2	3	
4:30	1	2	3	
4:45	1	3	4	
5:00	0	1	3	
5:15	0	3	2	
5:30	1	3	0	
5:45	1	3	3	
6:00	1	2	1	

Parking Space Inventory
Holliston, MA

Intersection: _Washington Street in vicinity of Exchange/Green Streets_____

Date: _9/17/13_____

Time (Observe every 15 min.)	Parking Sections			
	A	B	C	D
7:00 AM	0	0	1	
7:15	1	0	1	
7:30	2	1	0	
7:45	2	1	1	
8:00	2	0	1	
8:15	2	1	2	
8:30	2	1	1	
8:45	3	1	2	
9:00	3	1	2	
2:00 PM	3	1	2	
2:15	4	0	2	
2:30	3	0	3	
2:45	2	1	3	
3:00	3	0	2	
3:15	3	0	2	
3:30	4	0	0	
3:45	4	1	2	
4:00 PM	3	1	2	
4:15	3	1	2	
4:30	3	1	2	
4:45	4	1	3	
5:00	3	0	1	
5:15	2	1	1	
5:30	2	1	1	
5:45	2	1	1	
6:00	1	1	1	

APPENDIX E

Highway Capacity Manual Methodologies

CAPACITY/LEVEL-OF-SERVICE ANALYSES METHODOLOGY

The detailed capacity/level-of-service analysis contained in this traffic impact study was performed in accordance with the standard techniques contained in the "Highway Capacity Manual."⁽¹⁾ By definition, capacity represents "the maximum rate of flow that can reasonably be expected to pass a point on a uniform section of a lane or roadway under prevailing roadway, traffic, and control conditions." The level of functioning of an intersection or a uniform section of a lane or roadway can be expressed in terms of levels of service. Level of service (LOS) is defined as "a qualitative measure describing operational conditions within a traffic stream, and their perception by motorists and/or passengers". Such measures include "speed and travel time, freedom to maneuver, traffic interruptions, comfort and convenience, and safety."

At unsignalized intersections, a methodology for evaluating the relative functioning of intersections controlled by stop or yield signs has been developed, and is based on several assumptions, including:

- Major street flows are not affected by the minor (stop-sign controlled) street movements.
- Left turns from the major street to the minor street are influenced only by opposing major street through flow.
- Minor street left turns are impeded by all major street traffic plus opposing minor street traffic.
- Minor street through traffic is impeded by all major street traffic.
- Minor street right turns are impeded only by the major street traffic coming from the left.

The concept of stop-controlled or yield-controlled intersection analysis is based on the estimate of average total delay on minor streets. The methodology of analysis relies on three elements: the size and distribution of gaps in the major traffic stream, the usefulness of these gaps to the minor stream drivers, and the relative priority of the various traffic streams at the intersection. The results of the analysis provide an estimate of average total delay for the various critical movements at the unsignalized intersections. Correlation between average total delay and the respective levels of service are provided for unsignalized intersections as follows:

<i>Unsignalized Intersections</i>	
Level of Service	Control Delay Per Vehicle (seconds)
A	≤ 10.0
B	10.1 to 15.0
C	15.1 to 25.0
D	25.1 to 35.0
E	35.1 to 50.0
F	> 50.0

(1) *Transportation Research Board, Highway Capacity Manual 2000, published by the Transportation Research Board, Washington, DC, 2000.*

At signalized intersections, an additional element must be considered: time allocation. Level of service is based primarily on the average control delay per vehicle for various movements within the intersection. Volume/capacity relationships also affect level of service. Thus, both volume/capacity and delay must be considered to evaluate the overall operation of a signalized intersection. Correlation between average delay per vehicle and the respective levels of service are provided for signalized intersections as follows:

<i>Signalized Intersections</i>	
Level of Service	Control Delay Per Vehicle (seconds)
A	≤ 10.0
B	10.1 to 20.0
C	20.1 to 35.0
D	35.1 to 55.0
E	55.1 to 80.0
F	> 80.0

APPENDIX F

Capacity/Queue Analysis Worksheets

Holliston Corridor Study
3: Washington Street & Hollis Street/Charles Street

2013 Weekday Morning
2/10/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	163	7	182	0	0	0	212	956	7	5	476	130
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.83	0.83	0.83	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	196	8	219	0	0	0	228	1028	8	5	512	140
Pedestrians		5			5							
Lane Width (ft)		14.0			0.0							
Walking Speed (ft/s)		4.0			4.0							
Percent Blockage		0			0							
Right turn flare (veh)			2									
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2081	2094	587	2129	2160	1037	657			1040		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2081	2094	587	2129	2160	1037	657			1040		
tC, single (s)	7.2	6.5	6.2	7.1	6.5	6.2	4.1			4.3		
tC, 2 stage (s)												
tF (s)	3.6	4.0	3.3	3.5	4.0	3.3	2.2			2.4		
p0 queue free %	0	79	57	100	100	100	76			99		
cM capacity (veh/h)	30	39	505	14	36	283	931			604		
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2							
Volume Total	424	228	1035	5	652							
Volume Left	196	228	0	5	0							
Volume Right	219	0	8	0	140							
cSH	58	931	1700	604	1700							
Volume to Capacity	7.28	0.24	0.61	0.01	0.38							
Queue Length 95th (ft)	Err	24	0	1	0							
Control Delay (s)	Err	10.1	0.0	11.0	0.0							
Lane LOS	F	B		B								
Approach Delay (s)	Err	1.8		0.1								
Approach LOS	F											
Intersection Summary												
Average Delay			1809.7									
Intersection Capacity Utilization			73.5%			ICU Level of Service				D		
Analysis Period (min)			15									

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	44	214	980	183	201	478
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.91	0.91	0.96	0.96	0.88	0.88
Hourly flow rate (vph)	48	235	1021	191	228	543
Pedestrians	2					3
Lane Width (ft)	15.0					13.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	0					0
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2023	1026			1213	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2023	1026			1213	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	16			60	
cM capacity (veh/h)	37	281			567	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	284	1021	191	228	543	
Volume Left	48	0	0	228	0	
Volume Right	235	0	191	0	0	
cSH	133	1700	1700	567	1700	
Volume to Capacity	2.13	0.60	0.11	0.40	0.32	
Queue Length 95th (ft)	583	0	0	48	0	
Control Delay (s)	586.0	0.0	0.0	15.6	0.0	
Lane LOS	F			C		
Approach Delay (s)	586.0	0.0		4.6		
Approach LOS	F					
Intersection Summary						
Average Delay			74.9			
Intersection Capacity Utilization			88.6%	ICU Level of Service	E	
Analysis Period (min)			15			

Holliston Corridor Study
8: Washington Street & Green Street/Exchange Street

2013 Weekday Morning
2/10/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	16	0	6	22	3	60	1	1087	16	26	486	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.95	0.95	0.95	0.87	0.87	0.87
Hourly flow rate (vph)	20	0	8	28	4	76	1	1144	17	30	559	11
Pedestrians		4			4			6			1	
Lane Width (ft)		12.0			12.0			15.0			15.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			1			0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1862	1795	295	1511	1793	1158	574			1165		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1862	1795	295	1511	1793	1158	574			1165		
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 %	21	100	99	65	95	60	100			95		
cM capacity (veh/h)	25	77	701	79	77	192	1006			605		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2							
Volume Total	28	108	1162	309	291							
Volume Left	20	28	1	30	0							
Volume Right	8	76	17	0	11							
cSH	35	135	1006	605	1700							
Volume to Capacity	0.81	0.80	0.00	0.05	0.17							
Queue Length 95th (ft)	71	122	0	4	0							
Control Delay (s)	264.6	94.3	0.0	1.7	0.0							
Lane LOS	F	F	A	A								
Approach Delay (s)	264.6	94.3	0.0	0.9								
Approach LOS	F	F										
Intersection Summary												
Average Delay			9.5									
Intersection Capacity Utilization			70.9%			ICU Level of Service			C			
Analysis Period (min)			15									

Holliston Corridor Study
3: Washington Street & Hollis Street/Charles Street

2013 Weekday Afternoon

2/10/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	116	7	293	0	0	0	171	612	13	6	827	181
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.77	0.77	0.77	0.92	0.92	0.92	0.88	0.88	0.88	0.96	0.96	0.96
Hourly flow rate (vph)	151	9	381	0	0	0	194	695	15	6	861	189
Pedestrians		1										
Lane Width (ft)		14.0										
Walking Speed (ft/s)		4.0										
Percent Blockage		0										
Right turn flare (veh)			2									
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2053	2068	957	2160	2155	703	1051			710		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2053	2068	957	2160	2155	703	1051			710		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	76	0	0	100	100	71			99		
cM capacity (veh/h)	32	39	314	0	34	441	665			898		
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2							
Volume Total	540	194	710	6	1050							
Volume Left	151	194	0	6	0							
Volume Right	381	0	15	0	189							
cSH	88	665	1700	898	1700							
Volume to Capacity	6.15	0.29	0.42	0.01	0.62							
Queue Length 95th (ft)	Err	30	0	1	0							
Control Delay (s)	Err	12.6	0.0	9.0	0.0							
Lane LOS	F	B		A								
Approach Delay (s)	Err	2.7		0.1								
Approach LOS	F											
Intersection Summary												
Average Delay			2160.9									
Intersection Capacity Utilization			80.8%	ICU Level of Service					D			
Analysis Period (min)			15									

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	80	192	617	151	273	865
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.88	0.88	0.93	0.93
Hourly flow rate (vph)	89	213	701	172	294	930
Pedestrians	16					29
Lane Width (ft)	15.0					13.0
Walking Speed (ft/s)	4.0					4.0
Percent Blockage	2					3
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2234	746			889	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2234	746			889	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	0	46			61	
cM capacity (veh/h)	29	397			754	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	302	701	172	294	930	
Volume Left	89	0	0	294	0	
Volume Right	213	0	172	0	0	
cSH	83	1700	1700	754	1700	
Volume to Capacity	3.65	0.41	0.10	0.39	0.55	
Queue Length 95th (ft)	Err	0	0	46	0	
Control Delay (s)	Err	0.0	0.0	12.8	0.0	
Lane LOS	F			B		
Approach Delay (s)	Err	0.0		3.1		
Approach LOS	F					
Intersection Summary						
Average Delay		1261.4				
Intersection Capacity Utilization		75.7%		ICU Level of Service	D	
Analysis Period (min)		15				

Holliston Corridor Study
8: Washington Street & Green Street/Exchange Street

2013 Weekday Afternoon
2/10/2014

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	3	17	55	4	36	8	714	10	26	899	20
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.56	0.56	0.56	0.91	0.91	0.91	0.91	0.91	0.91	0.96	0.96	0.96
Hourly flow rate (vph)	32	5	30	60	4	40	9	785	11	27	936	21
Pedestrians		5			11			5				
Lane Width (ft)		12.0			12.0			15.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		0			1			1				
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1855	1830	489	1379	1835	801	962			807		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1855	1830	489	1379	1835	801	962			807		
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 %	14	93	94	32	94	88	99			97		
cM capacity (veh/h)	37	73	526	89	72	329	720			820		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1	SB 2							
Volume Total	68	104	804	495	489							
Volume Left	32	60	9	27	0							
Volume Right	30	40	11	0	21							
cSH	68	121	720	820	1700							
Volume to Capacity	1.00	0.86	0.01	0.03	0.29							
Queue Length 95th (ft)	126	133	1	3	0							
Control Delay (s)	210.8	116.1	0.3	0.9	0.0							
Lane LOS	F	F	A	A								
Approach Delay (s)	210.8	116.1	0.3	0.5								
Approach LOS	F	F										
Intersection Summary												
Average Delay			13.8									
Intersection Capacity Utilization			58.7%			ICU Level of Service			B			
Analysis Period (min)			15									

Holliston Corridor Study
3: Washington Street & Hollis Street/Charles Street

2023 Build AM - Existing Geometries

2/10/2014



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱				↰	↱		↰	↱	
Volume (vph)	180	8	201	0	0	0	234	1063	8	6	538	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		60	0		0	100		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			40			40		
Satd. Flow (prot)	0	1654	1777	0	0	0	1787	1659	0	1504	1568	0
Flt Permitted		0.954					0.320			0.123		
Satd. Flow (perm)	0	1654	1777	0	0	0	601	1659	0	195	1568	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			159					1			19	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		728			853			407			555	
Travel Time (s)		16.5			19.4			9.3			12.6	
Confl. Peds. (#/hr)							5		5	5		5
Confl. Bikes (#/hr)												
Peak Hour Factor	0.83	0.83	0.83	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	0%	3%	0%	0%	0%	1%	3%	0%	20%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)								0			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	227	242	0	0	0	252	1152	0	6	733	0
Turn Type	Perm	NA	Perm				Perm	NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4		4				2			6		
Total Split (s)	22.0	22.0	22.0				54.0	54.0		54.0	54.0	
Total Lost Time (s)		4.0	4.0				4.0	4.0		4.0	4.0	
Act Effect Green (s)		16.7	16.7				75.3	75.3		75.3	75.3	
Actuated g/C Ratio		0.17	0.17				0.75	0.75		0.75	0.75	
v/c Ratio		0.83	0.56				0.56	0.92		0.04	0.62	
Control Delay		64.4	19.2				4.3	9.5		4.3	8.6	
Queue Delay		0.0	0.0				0.0	0.1		0.0	0.0	
Total Delay		64.4	19.2				4.3	9.6		4.3	8.6	
LOS		E	B				A	A		A	A	
Approach Delay		41.1						8.7			8.5	
Approach LOS		D						A			A	
Queue Length 50th (ft)		139	46				35	171		1	185	
Queue Length 95th (ft)		#218	102				m34	m159		4	286	
Internal Link Dist (ft)		648			773			327			475	
Turn Bay Length (ft)			60				100			100		
Base Capacity (vph)		297	450				452	1249		146	1185	
Starvation Cap Reductn		0	0				0	2		0	0	
Spillback Cap Reductn		0	0				0	0		0	0	
Storage Cap Reductn		0	0				0	0		0	0	
Reduced v/c Ratio		0.76	0.54				0.56	0.92		0.04	0.62	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	24.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 14.5 Intersection LOS: B
 Intersection Capacity Utilization 85.2% ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Washington Street & Hollis Street/Charles Street

 p2 (L)	 p4	 p9
54 s	22 s	24 s
 p6 (R)		
54 s		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø2	ø4	ø9
Lane Configurations									
Volume (vph)	49	236	1090	202	222	540			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Lane Width (ft)	15	12	12	12	12	14			
Grade (%)	0%		0%			0%			
Storage Length (ft)	0	0		0	75				
Storage Lanes	1	0		1	1				
Taper Length (ft)	25				25				
Satd. Flow (prot)	1708	0	1863	1398	1736	1737			
Flt Permitted	0.991				0.077				
Satd. Flow (perm)	1708	0	1863	1367	141	1737			
Right Turn on Red		Yes		Yes					
Satd. Flow (RTOR)	186			141					
Link Speed (mph)	30		30			30			
Link Distance (ft)	850		124			407			
Travel Time (s)	19.3		2.8			9.3			
Confl. Peds. (#/hr)		3		2	2				
Confl. Bikes (#/hr)									
Peak Hour Factor	0.91	0.91	0.96	0.96	0.88	0.88			
Growth Factor	100%	100%	100%	100%	100%	100%			
Heavy Vehicles (%)	4%	4%	2%	4%	4%	5%			
Bus Blockages (#/hr)	0	0	0	0	0	0			
Parking (#/hr)				0		0			
Mid-Block Traffic (%)	0%		0%			0%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	313	0	1135	210	252	614			
Turn Type	Prot		NA	Perm	pm+pt	NA			
Protected Phases	3		2 4		1	6	2	4	9
Permitted Phases				2 4	6				
Total Split (s)	11.0				11.0	52.0	41.0	11.0	26.0
Total Lost Time (s)	4.0				4.0	4.0			
Act Effect Green (s)	7.0		58.9	58.9	74.0	74.0			
Actuated g/C Ratio	0.07		0.59	0.59	0.74	0.74			
v/c Ratio	1.07		1.03	0.24	0.55	0.48			
Control Delay	92.9		26.8	0.1	29.3	5.6			
Queue Delay	11.0		27.0	67.9	0.0	0.6			
Total Delay	103.9		53.8	68.0	29.3	6.3			
LOS	F		D	E	C	A			
Approach Delay	103.9		56.0			13.0			
Approach LOS	F		E			B			
Queue Length 50th (ft)	~103		102	0	107	131			
Queue Length 95th (ft)	#274		m15	m0	181	149			
Internal Link Dist (ft)	770		44			327			
Turn Bay Length (ft)					75				
Base Capacity (vph)	292		1097	863	456	1285			
Starvation Cap Reductn	0		341	693	0	334			
Spillback Cap Reductn	22		12	0	0	0			
Storage Cap Reductn	0		0	0	0	0			
Reduced v/c Ratio	1.16		1.50	1.24	0.55	0.65			

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.61

Intersection Signal Delay: 47.2

Intersection LOS: D

Intersection Capacity Utilization 97.2%

ICU Level of Service F

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

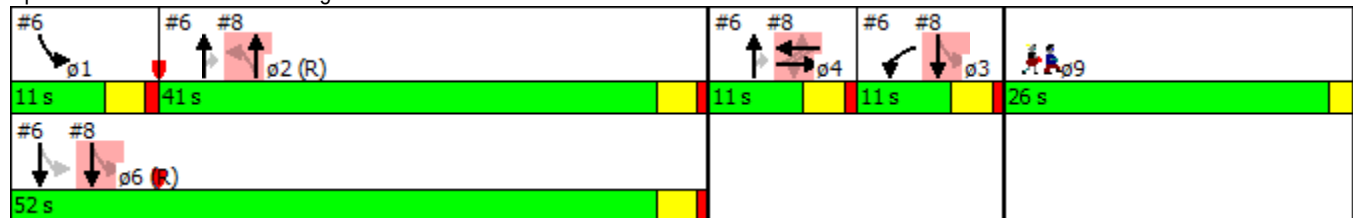
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Washington Street & Central Street



Holliston Corridor Study
8: Washington Street & Green Street/Exchange Street

2023 Build AM - Existing Geometries

2/10/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	0	7	24	3	66	1	1208	18	29	549	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	15	12	12	15	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1733	0	0	1676	0	0	2023	0	1805	1985	0
Flt Permitted		0.491			0.913			0.830		0.228		
Satd. Flow (perm)	0	881	0	0	1534	0	0	1679	0	433	1985	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		120			84			1			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		582			674			370			124	
Travel Time (s)		13.2			15.3			8.4			2.8	
Confl. Peds. (#/hr)	1		6	6		1	4		4	4		4
Confl. Bikes (#/hr)												
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.95	0.95	0.95	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	6%	0%	5%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)									0			0
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	32	0	0	118	0	0	1292	0	33	644	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			6 3	
Permitted Phases	4			4			2			6 3		
Total Split (s)	11.0	11.0		11.0	11.0		41.0	41.0				
Total Lost Time (s)		4.0			4.0			4.0				
Act Effect Green (s)		7.0			7.0			47.9		85.0	85.0	
Actuated g/C Ratio		0.07			0.07			0.48		0.85	0.85	
v/c Ratio		0.18			0.64			1.61		0.09	0.38	
Control Delay		2.4			33.1			302.9		0.8	1.0	
Queue Delay		0.2			2.6			0.5		1.9	0.3	
Total Delay		2.6			35.7			303.4		2.7	1.3	
LOS		A			D			F		A	A	
Approach Delay		2.6			35.7			303.4			1.4	
Approach LOS		A			D			F			A	
Queue Length 50th (ft)		0			21			~1172		1	13	
Queue Length 95th (ft)		0			60			#1438		m1	m15	
Internal Link Dist (ft)		502			594			290			44	
Turn Bay Length (ft)												
Base Capacity (vph)		173			185			804		368	1687	
Starvation Cap Reductn		0			0			0		257	479	
Spillback Cap Reductn		22			19			66		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.21			0.71			1.75		0.30	0.53	

Lane Group	ø1	ø3	ø6	ø9
Lane Configurations				
Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (ft)				
Grade (%)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Growth Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Mid-Block Traffic (%)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	6	9
Permitted Phases				
Total Split (s)	11.0	11.0	52.0	26.0
Total Lost Time (s)				
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Queue Length 50th (ft)				
Queue Length 95th (ft)				
Internal Link Dist (ft)				
Turn Bay Length (ft)				
Base Capacity (vph)				
Starvation Cap Reductn				
Spillback Cap Reductn				
Storage Cap Reductn				
Reduced v/c Ratio				

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.61

Intersection Signal Delay: 187.4

Intersection LOS: F

Intersection Capacity Utilization 78.0%

ICU Level of Service D

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

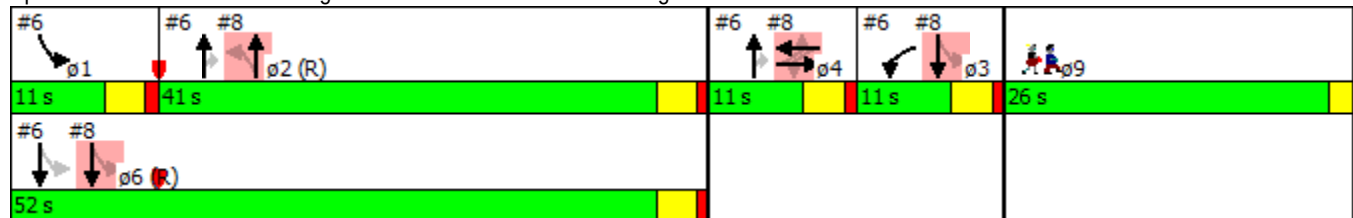
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Washington Street & Green Street/Exchange Street



Holliston Corridor Study
3: Washington Street & Hollis Street/Charles Street

2023 Build PM - Existing Geometries

2/10/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	128	8	324	0	0	0	189	697	14	7	948	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		60	0		0	100		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			40			40		
Satd. Flow (prot)	0	1659	1777	0	0	0	1787	1655	0	1504	1580	0
Flt Permitted		0.955					0.130			0.329		
Satd. Flow (perm)	0	1659	1777	0	0	0	244	1655	0	520	1580	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			327					2			18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		728			853			407			555	
Travel Time (s)		16.5			19.4			9.3			12.6	
Confl. Peds. (#/hr)							5		5	5		5
Confl. Bikes (#/hr)												
Peak Hour Factor	0.83	0.83	0.83	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	0%	3%	0%	0%	0%	1%	3%	0%	20%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)								0			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	164	390	0	0	0	203	764	0	8	1234	0
Turn Type	Perm	NA	Perm				Perm	NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4		4				2			6		
Total Split (s)	15.0	15.0	15.0				61.0	61.0		61.0	61.0	
Total Lost Time (s)		4.0	4.0				4.0	4.0		4.0	4.0	
Act Effect Green (s)		11.0	11.0				81.0	81.0		81.0	81.0	
Actuated g/C Ratio		0.11	0.11				0.81	0.81		0.81	0.81	
v/c Ratio		0.90	0.80				1.03	0.57		0.02	0.96	
Control Delay		90.7	22.6				69.4	3.2		2.0	27.6	
Queue Delay		0.0	56.3				0.0	0.2		0.0	13.6	
Total Delay		90.7	78.9				69.4	3.5		2.0	41.2	
LOS		F	E				E	A		A	D	
Approach Delay		82.4						17.3			40.9	
Approach LOS		F						B			D	
Queue Length 50th (ft)		105	38				~140	82		1	500	
Queue Length 95th (ft)		#200	108				m#173	m92		3	#1044	
Internal Link Dist (ft)		648			773			327			475	
Turn Bay Length (ft)			60				100			100		
Base Capacity (vph)		182	486				197	1340		421	1283	
Starvation Cap Reductn		0	0				0	137		0	0	
Spillback Cap Reductn		0	203				0	0		0	79	
Storage Cap Reductn		0	0				0	0		0	0	
Reduced v/c Ratio		0.90	1.38				1.03	0.64		0.02	1.02	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Total Split (s)	24.0
Total Lost Time (s)	
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.03
 Intersection Signal Delay: 41.0 Intersection LOS: D
 Intersection Capacity Utilization 90.1% ICU Level of Service E
 Analysis Period (min) 15
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Washington Street & Hollis Street/Charles Street

 p2 (L)	 p4	 p9
61 s	15 s	24 s
 p6 (R)		
61 s		

Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø2	ø4	ø9
Lane Configurations									
Volume (vph)	88	212	703	167	302	989			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Lane Width (ft)	15	12	12	12	12	14			
Grade (%)	0%		0%			0%			
Storage Length (ft)	0	0		0	75				
Storage Lanes	1	0		1	1				
Taper Length (ft)	25				25				
Satd. Flow (prot)	1752	0	1863	1398	1736	1737			
Flt Permitted	0.986				0.101				
Satd. Flow (perm)	1752	0	1863	1366	184	1737			
Right Turn on Red		Yes		Yes					
Satd. Flow (RTOR)	98			162					
Link Speed (mph)	30		30			30			
Link Distance (ft)	850		124			407			
Travel Time (s)	19.3		2.8			9.3			
Confl. Peds. (#/hr)		3		2	2				
Confl. Bikes (#/hr)									
Peak Hour Factor	0.91	0.91	0.96	0.96	0.88	0.88			
Growth Factor	100%	100%	100%	100%	100%	100%			
Heavy Vehicles (%)	4%	4%	2%	4%	4%	5%			
Bus Blockages (#/hr)	0	0	0	0	0	0			
Parking (#/hr)				0		0			
Mid-Block Traffic (%)	0%		0%			0%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	330	0	732	174	343	1124			
Turn Type	Prot		NA	Perm	pm+pt	NA			
Protected Phases	3		2 4		1	6	2	4	9
Permitted Phases				2 4	6				
Total Split (s)	16.0				12.0	47.0	35.0	11.0	26.0
Total Lost Time (s)	4.0				4.0	4.0			
Act Effect Green (s)	12.0		46.5	46.5	69.0	69.0			
Actuated g/C Ratio	0.12		0.46	0.46	0.69	0.69			
v/c Ratio	1.11		0.84	0.24	0.59	0.94			
Control Delay	116.9		3.7	0.1	24.8	22.1			
Queue Delay	0.2		54.0	75.7	0.0	44.6			
Total Delay	117.2		57.7	75.7	24.8	66.7			
LOS	F		E	E	C	E			
Approach Delay	117.2		61.2			56.9			
Approach LOS	F		E			E			
Queue Length 50th (ft)	~184		15	0	152	418			
Queue Length 95th (ft)	#358		m9	m0	m169	m#657			
Internal Link Dist (ft)	770		44			327			
Turn Bay Length (ft)					75				
Base Capacity (vph)	296		867	722	584	1198			
Starvation Cap Reductn	0		486	608	0	187			
Spillback Cap Reductn	6		0	0	0	3			
Storage Cap Reductn	0		0	0	0	0			
Reduced v/c Ratio	1.14		1.92	1.53	0.59	1.11			

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 2.08

Intersection Signal Delay: 65.7

Intersection LOS: E

Intersection Capacity Utilization 81.9%

ICU Level of Service D

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

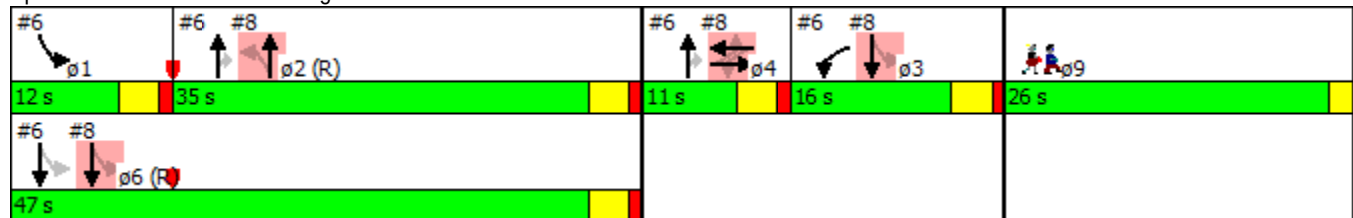
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Washington Street & Central Street



Holliston Corridor Study
8: Washington Street & Green Street/Exchange Street

2023 Build PM - Existing Geometries

2/10/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	3	19	61	4	40	9	810	11	29	1026	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	15	12	12	15	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1694	0	0	1740	0	0	2022	0	1805	1985	0
Flt Permitted		0.767			0.847			0.585		0.339		
Satd. Flow (perm)	0	1329	0	0	1487	0	0	1184	0	644	1985	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			24			1			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		582			674			370			124	
Travel Time (s)		13.2			15.3			8.4			2.8	
Confl. Peds. (#/hr)	1		6	6		1	4		4	4		4
Confl. Bikes (#/hr)												
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.95	0.95	0.95	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	6%	0%	5%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)									0			0
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	53	0	0	133	0	0	874	0	33	1204	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			6	3
Permitted Phases	4			4			2			6	3	
Total Split (s)	11.0	11.0		11.0	11.0		35.0	35.0				
Total Lost Time (s)		4.0			4.0			4.0				
Act Effect Green (s)		7.0			7.0			35.5		85.0	85.0	
Actuated g/C Ratio		0.07			0.07			0.36		0.85	0.85	
v/c Ratio		0.46			1.06			2.08		0.06	0.71	
Control Delay		41.9			134.5			515.1		0.6	1.5	
Queue Delay		0.4			11.8			0.2		4.9	7.5	
Total Delay		42.3			146.3			515.3		5.6	9.0	
LOS		D			F			F		A	A	
Approach Delay		42.3			146.3			515.3			8.9	
Approach LOS		D			F			F			A	
Queue Length 50th (ft)		18			~78			~884		1	28	
Queue Length 95th (ft)		48			#162			#1105		m1	m36	
Internal Link Dist (ft)		502			594			290			44	
Turn Bay Length (ft)												
Base Capacity (vph)		115			126			421		547	1687	
Starvation Cap Reductn		0			0			0		469	443	
Spillback Cap Reductn		4			4			9		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.48			1.09			2.12		0.42	0.97	

Lane Group	ø1	ø3	ø6	ø9
Lane Configurations				
Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (ft)				
Grade (%)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Growth Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Mid-Block Traffic (%)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	6	9
Permitted Phases				
Total Split (s)	12.0	16.0	47.0	26.0
Total Lost Time (s)				
Act Effct Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				
Approach Delay				
Approach LOS				
Queue Length 50th (ft)				
Queue Length 95th (ft)				
Internal Link Dist (ft)				
Turn Bay Length (ft)				
Base Capacity (vph)				
Starvation Cap Reductn				
Spillback Cap Reductn				
Storage Cap Reductn				
Reduced v/c Ratio				

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 2.08

Intersection Signal Delay: 210.3

Intersection LOS: F

Intersection Capacity Utilization 70.3%

ICU Level of Service C

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

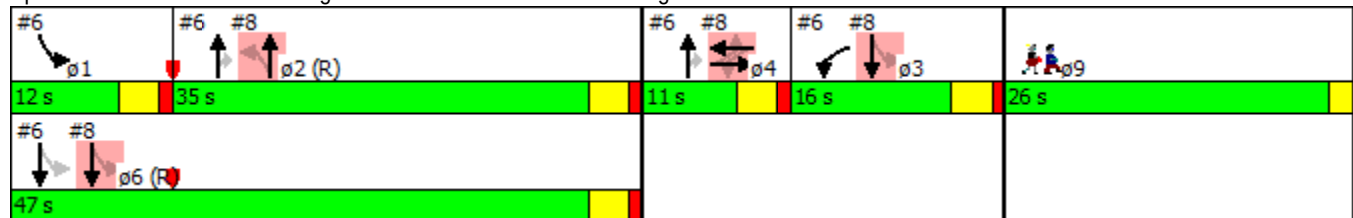
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Washington Street & Green Street/Exchange Street



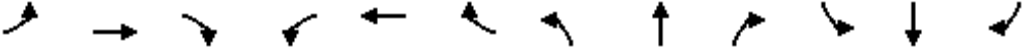
Holliston Corridor Study
3: Washington Street & Hollis Street/Charles Street

2023 Build AM - Minimum Concept

2/10/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	8	201	0	0	0	234	1063	8	6	538	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		60	0		0	100		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			40			40		
Satd. Flow (prot)	0	1654	1777	0	0	0	1787	1659	0	1504	1568	0
Flt Permitted		0.954					0.325			0.131		
Satd. Flow (perm)	0	1654	1777	0	0	0	611	1659	0	207	1568	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			155					1			20	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		728			853			208			422	
Travel Time (s)		16.5			19.4			4.7			9.6	
Confl. Peds. (#/hr)							5		5	5		5
Confl. Bikes (#/hr)												
Peak Hour Factor	0.83	0.83	0.83	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	0%	3%	0%	0%	0%	1%	3%	0%	20%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)								0			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	227	242	0	0	0	252	1152	0	6	733	0
Turn Type	Perm	NA	Perm				Perm	NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4		4				2			6		
Detector Phase	4	4	4				2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0				10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0	11.0				14.0	14.0		14.0	14.0	
Total Split (s)	20.0	20.0	20.0				56.0	56.0		56.0	56.0	
Total Split (%)	20.0%	20.0%	20.0%				56.0%	56.0%		56.0%	56.0%	
Yellow Time (s)	3.0	3.0	3.0				3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0				1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0				0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0				4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None				C-Max	C-Max		C-Max	C-Max	
Act Effect Green (s)		15.6	15.6				76.4	76.4		76.4	76.4	
Actuated g/C Ratio		0.16	0.16				0.76	0.76		0.76	0.76	
v/c Ratio		0.88	0.59				0.54	0.91		0.04	0.61	
Control Delay		75.4	21.3				5.4	19.4		3.7	7.7	
Queue Delay		0.0	0.0				0.0	0.0		0.0	0.0	
Total Delay		75.4	21.3				5.4	19.4		3.7	7.7	
LOS		E	C				A	B		A	A	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	24%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		47.5						16.9			7.7	
Approach LOS		D						B			A	
Queue Length 50th (ft)		143	50				21	318		1	166	
Queue Length 95th (ft)		#240	108				m30	m#814		4	257	
Internal Link Dist (ft)		648			773			128			342	
Turn Bay Length (ft)			60				100			100		
Base Capacity (vph)		264	414				467	1268		158	1203	
Starvation Cap Reductn		0	0				0	0		0	0	
Spillback Cap Reductn		0	0				0	0		0	0	
Storage Cap Reductn		0	0				0	0		0	0	
Reduced v/c Ratio		0.86	0.58				0.54	0.91		0.04	0.61	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 19.8

Intersection LOS: B

Intersection Capacity Utilization 85.2%

ICU Level of Service E

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Washington Street & Hollis Street/Charles Street

 ø2 (R) 56 s	 ø4 20 s	 ø9 24 s
 ø6 (R) 56 s		

Lane Group	ø9
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Holliston Corridor Study
6: Washington Street & Central Street

2023 Build AM - Minimum Concept
2/10/2014

							ø2	ø4	ø9
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT			
Lane Configurations									
Volume (vph)	49	236	1090	202	222	540			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Lane Width (ft)	15	12	12	12	12	14			
Grade (%)	0%		0%			0%			
Storage Length (ft)	0	0		0	150				
Storage Lanes	1	0		0	1				
Taper Length (ft)	25				25				
Satd. Flow (prot)	1735	0	3435	0	1736	1737			
Flt Permitted	0.991				0.121				
Satd. Flow (perm)	1735	0	3435	0	221	1737			
Right Turn on Red		Yes		Yes					
Satd. Flow (RTOR)	188		29						
Link Speed (mph)	30		30			30			
Link Distance (ft)	850		124			199			
Travel Time (s)	19.3		2.8			4.5			
Confl. Peds. (#/hr)		3		2	2				
Confl. Bikes (#/hr)									
Peak Hour Factor	0.91	0.91	0.96	0.96	0.88	0.88			
Growth Factor	100%	100%	100%	100%	100%	100%			
Heavy Vehicles (%)	4%	4%	2%	4%	4%	5%			
Bus Blockages (#/hr)	0	0	0	0	0	0			
Parking (#/hr)				0		0			
Mid-Block Traffic (%)	0%		0%			0%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	313	0	1345	0	252	614			
Turn Type	Prot		NA		pm+pt	NA			
Protected Phases	3		2 4		1	6	2	4	9
Permitted Phases					6				
Detector Phase	3		2 4		1	6			
Switch Phase									
Minimum Initial (s)	7.0				7.0	10.0	10.0	7.0	4.0
Minimum Split (s)	11.0				9.0	14.0	14.0	11.0	26.0
Total Split (s)	12.0				11.0	51.0	40.0	11.0	26.0
Total Split (%)	12.0%				11.0%	51.0%	40%	11%	26%
Yellow Time (s)	3.0				2.0	3.0	3.0	3.0	2.0
All-Red Time (s)	1.0				0.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)	0.0				0.0	0.0			
Total Lost Time (s)	4.0				2.0	4.0			
Lead/Lag	Lag				Lead		Lag	Lead	
Lead-Lag Optimize?	Yes				Yes		Yes	Yes	
Recall Mode	None				None	C-Max	C-Max	None	None
Act Effect Green (s)	8.0		63.2		75.0	73.0			
Actuated g/C Ratio	0.08		0.63		0.75	0.73			
v/c Ratio	1.01		0.62		0.56	0.48			
Control Delay	72.9		1.3		20.3	6.0			
Queue Delay	32.3		0.3		0.0	0.7			
Total Delay	105.2		1.7		20.3	6.7			
LOS	F		A		C	A			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø2	ø4	ø9
Approach Delay	105.2		1.7			10.7			
Approach LOS	F		A			B			
Queue Length 50th (ft)	~83		6		66	108			
Queue Length 95th (ft)	#261		12		129	143			
Internal Link Dist (ft)	770		44			119			
Turn Bay Length (ft)					150				
Base Capacity (vph)	311		2181		450	1268			
Starvation Cap Reductn	0		304		0	328			
Spillback Cap Reductn	54		225		0	0			
Storage Cap Reductn	0		0		0	0			
Reduced v/c Ratio	1.22		0.72		0.56	0.65			

Intersection Summary

Area Type: Other
Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.01
Intersection Signal Delay: 17.6
Intersection LOS: B
Intersection Capacity Utilization 76.5%
ICU Level of Service D
Analysis Period (min) 15
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Washington Street & Central Street

#6 ø1	#6 #8 ø2 (R)	#6 #8 ø4	#6 #8 ø3	#9
11 s	40 s	11 s	12 s	26 s
#6 #8 ø6 (R)				
51 s				

Holliston Corridor Study
8: Washington Street & Green Street/Exchange Street

2023 Build AM - Minimum Concept

2/10/2014



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	18	0	7	24	3	66	1	1208	18	29	549	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	15	12	12	15	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1733	0	0	1676	0	0	3845	0	0	3774	0
Flt Permitted		0.491			0.913			0.884			0.843	
Satd. Flow (perm)	0	881	0	0	1534	0	0	3399	0	0	3187	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		98			84			2			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		582			674			165			124	
Travel Time (s)		13.2			15.3			3.8			2.8	
Confl. Peds. (#/hr)	1		6	6		1	4		4	4		4
Confl. Bikes (#/hr)												
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.95	0.95	0.95	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	6%	0%	5%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)									0			0
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	32	0	0	118	0	0	1292	0	0	677	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			6 3	
Permitted Phases	4			4			2			6 3		
Detector Phase	4	4		4	4		2	2		6 3	6 3	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0				
Minimum Split (s)	11.0	11.0		11.0	11.0		14.0	14.0				
Total Split (s)	11.0	11.0		11.0	11.0		40.0	40.0				
Total Split (%)	11.0%	11.0%		11.0%	11.0%		40.0%	40.0%				
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0				
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		4.0			4.0			4.0				
Lead/Lag	Lead	Lead		Lead	Lead		Lag	Lag				
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes				
Recall Mode	None	None		None	None		C-Max	C-Max				
Act Effect Green (s)		7.0			7.0			52.2			85.0	
Actuated g/C Ratio		0.07			0.07			0.52			0.85	
v/c Ratio		0.21			0.64			0.73			0.25	
Control Delay		3.1			33.1			21.5			0.6	
Queue Delay		0.0			0.0			0.0			0.4	
Total Delay		3.1			33.1			21.5			1.0	
LOS		A			C			C			A	

Lane Group	ø1	ø3	ø6	ø9
Lane Configurations				
Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (ft)				
Grade (%)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Growth Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Mid-Block Traffic (%)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	6	9
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	7.0	7.0	10.0	4.0
Minimum Split (s)	9.0	11.0	14.0	26.0
Total Split (s)	11.0	12.0	51.0	26.0
Total Split (%)	11%	12%	51%	26%
Yellow Time (s)	2.0	3.0	3.0	2.0
All-Red Time (s)	0.0	1.0	1.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes		
Recall Mode	None	None	C-Max	None
Act Effect Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				

Holliston Corridor Study
8: Washington Street & Green Street/Exchange Street

2023 Build AM - Minimum Concept

2/10/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		3.1			33.1			21.5			1.0	
Approach LOS		A			C			C			A	
Queue Length 50th (ft)		0			21			311			6	
Queue Length 95th (ft)		0			60			412			m7	
Internal Link Dist (ft)		502			594			85			44	
Turn Bay Length (ft)												
Base Capacity (vph)		152			185			1775			2709	
Starvation Cap Reductn		0			0			0			1405	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.21			0.64			0.73			0.52	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 15.3

Intersection LOS: B

Intersection Capacity Utilization 49.6%

ICU Level of Service A

Analysis Period (min) 15

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Washington Street & Green Street/Exchange Street

 #6 ø1	 #6 ø2 (R)	 #8 ø2 (R)	 #6 ø4	 #8 ø4	 #6 ø3	 #8 ø3	 ø9
11 s	40 s		11 s		12 s		26 s
 #6 ø6 (R)	 #8 ø6 (R)						
51 s							

Lane Group	ø1	ø3	ø6	ø9
Approach Delay				
Approach LOS				
Queue Length 50th (ft)				
Queue Length 95th (ft)				
Internal Link Dist (ft)				
Turn Bay Length (ft)				
Base Capacity (vph)				
Starvation Cap Reductn				
Spillback Cap Reductn				
Storage Cap Reductn				
Reduced v/c Ratio				
Intersection Summary				

Holliston Corridor Study
3: Washington Street & Hollis Street/Charles Street

2023 Build PM - Minimum Concept

2/10/2014



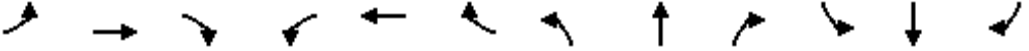
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱				↰	↱		↰	↱	
Volume (vph)	128	8	324	0	0	0	189	697	14	7	948	200
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	16	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		60	0		0	100		0	100		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	25			25			40			40		
Satd. Flow (prot)	0	1659	1777	0	0	0	1787	1655	0	1504	1580	0
Flt Permitted		0.955					0.138			0.333		
Satd. Flow (perm)	0	1659	1777	0	0	0	260	1655	0	527	1580	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			323					2			18	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		728			853			257			256	
Travel Time (s)		16.5			19.4			5.8			5.8	
Confl. Peds. (#/hr)							5		5	5		5
Confl. Bikes (#/hr)												
Peak Hour Factor	0.83	0.83	0.83	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	10%	0%	3%	0%	0%	0%	1%	3%	0%	20%	5%	5%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)								0			0	
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	164	390	0	0	0	203	764	0	8	1234	0
Turn Type	Perm	NA	Perm				Perm	NA		Perm	NA	
Protected Phases		4						2			6	
Permitted Phases	4		4				2			6		
Detector Phase	4	4	4				2	2		6	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0	7.0				10.0	10.0		10.0	10.0	
Minimum Split (s)	11.0	11.0	11.0				14.0	14.0		14.0	14.0	
Total Split (s)	14.0	14.0	14.0				62.0	62.0		62.0	62.0	
Total Split (%)	14.0%	14.0%	14.0%				62.0%	62.0%		62.0%	62.0%	
Yellow Time (s)	3.0	3.0	3.0				3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0				1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0	0.0				0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0	4.0				4.0	4.0		4.0	4.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None	None				C-Max	C-Max		C-Max	C-Max	
Act Effect Green (s)		10.0	10.0				82.0	82.0		82.0	82.0	
Actuated g/C Ratio		0.10	0.10				0.82	0.82		0.82	0.82	
v/c Ratio		0.99	0.83				0.95	0.56		0.02	0.95	
Control Delay		115.6	26.0				63.5	4.9		1.7	24.9	
Queue Delay		0.0	56.6				0.0	0.3		0.0	19.4	
Total Delay		115.6	82.6				63.5	5.2		1.7	44.4	
LOS		F	F				E	A		A	D	

Lane Group	ø9
Lane Configurations	
Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Grade (%)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Confl. Peds. (#/hr)	
Confl. Bikes (#/hr)	
Peak Hour Factor	
Growth Factor	
Heavy Vehicles (%)	
Bus Blockages (#/hr)	
Parking (#/hr)	
Mid-Block Traffic (%)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Turn Type	
Protected Phases	9
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	4.0
Minimum Split (s)	24.0
Total Split (s)	24.0
Total Split (%)	24%
Yellow Time (s)	2.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Recall Mode	None
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	

Holliston Corridor Study
3: Washington Street & Hollis Street/Charles Street

2023 Build PM - Mimimum Concept

2/10/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		92.3						17.4			44.1	
Approach LOS		F						B			D	
Queue Length 50th (ft)		106	41				99	91		1	462	
Queue Length 95th (ft)		#211	#135				m#245	m103		3	#1033	
Internal Link Dist (ft)		648			773			177			176	
Turn Bay Length (ft)			60				100			100		
Base Capacity (vph)		165	468				213	1357		432	1298	
Starvation Cap Reductn		0	0				0	178		0	0	
Spillback Cap Reductn		0	214				0	0		0	110	
Storage Cap Reductn		0	0				0	0		0	0	
Reduced v/c Ratio		0.99	1.54				0.95	0.65		0.02	1.04	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green, Master Intersection
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 44.4 Intersection LOS: D
 Intersection Capacity Utilization 90.1% ICU Level of Service E
 Analysis Period (min) 15
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Washington Street & Hollis Street/Charles Street

  ø2 (R)	  ø4	  ø9
62 s	14 s	24 s
  ø6 (R)		
62 s		

Lane Group	ø9
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	
Intersection Summary	

Holliston Corridor Study
6: Washington Street & Central Street

2023 Build PM - Minimum Concept
2/10/2014

							ø2	ø4	ø9
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT			
Lane Configurations									
Volume (vph)	88	212	703	167	302	989			
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900			
Lane Width (ft)	15	12	12	12	12	14			
Grade (%)	0%		0%			0%			
Storage Length (ft)	0	0		0	150				
Storage Lanes	1	0		0	1				
Taper Length (ft)	25				25				
Satd. Flow (prot)	1771	0	3409	0	1736	1737			
Flt Permitted	0.986				0.158				
Satd. Flow (perm)	1771	0	3409	0	289	1737			
Right Turn on Red		Yes		Yes					
Satd. Flow (RTOR)	102		32						
Link Speed (mph)	30		30			30			
Link Distance (ft)	850		124			151			
Travel Time (s)	19.3		2.8			3.4			
Confl. Peds. (#/hr)		3		2	2				
Confl. Bikes (#/hr)									
Peak Hour Factor	0.91	0.91	0.96	0.96	0.88	0.88			
Growth Factor	100%	100%	100%	100%	100%	100%			
Heavy Vehicles (%)	4%	4%	2%	4%	4%	5%			
Bus Blockages (#/hr)	0	0	0	0	0	0			
Parking (#/hr)				0		0			
Mid-Block Traffic (%)	0%		0%			0%			
Shared Lane Traffic (%)									
Lane Group Flow (vph)	330	0	906	0	343	1124			
Turn Type	Prot		NA		pm+pt	NA			
Protected Phases	3		2 4		1	6	2	4	9
Permitted Phases					6				
Detector Phase	3		2 4		1	6			
Switch Phase									
Minimum Initial (s)	7.0				7.0	10.0	10.0	7.0	4.0
Minimum Split (s)	18.0				9.0	14.0	14.0	11.0	26.0
Total Split (s)	19.0				11.0	44.0	33.0	11.0	26.0
Total Split (%)	19.0%				11.0%	44.0%	33%	11%	26%
Yellow Time (s)	3.0				2.0	3.0	3.0	3.0	2.0
All-Red Time (s)	1.0				0.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)	0.0				0.0	0.0			
Total Lost Time (s)	4.0				2.0	4.0			
Lead/Lag	Lead				Lead		Lag	Lag	
Lead-Lag Optimize?	Yes				Yes		Yes	Yes	
Recall Mode	None				None	C-Max	C-Max	None	None
Act Effect Green (s)	15.0		42.5		68.0	66.0			
Actuated g/C Ratio	0.15		0.42		0.68	0.66			
v/c Ratio	0.94		0.62		0.56	0.98			
Control Delay	64.9		2.5		17.5	30.6			
Queue Delay	0.0		0.3		0.0	39.7			
Total Delay	64.9		2.8		17.5	70.4			
LOS	E		A		B	E			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT	ø2	ø4	ø9
Approach Delay	64.9		2.8			58.0			
Approach LOS	E		A			E			
Queue Length 50th (ft)	148		3		121	526			
Queue Length 95th (ft)	#319		m0		m137	m#854			
Internal Link Dist (ft)	770		44			71			
Turn Bay Length (ft)					150				
Base Capacity (vph)	352		1468		608	1146			
Starvation Cap Reductn	0		155		0	175			
Spillback Cap Reductn	0		0		0	0			
Storage Cap Reductn	0		0		0	0			
Reduced v/c Ratio	0.94		0.69		0.56	1.16			

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 40.3

Intersection LOS: D

Intersection Capacity Utilization 76.9%

ICU Level of Service D

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Washington Street & Central Street

#6 ø1	#6 #8 ø2 (R)	#6 #8 ø3	#6 #8 ø4	#6 #8 ø9
11 s	33 s	19 s	11 s	26 s
#6 #8 ø6 (R)				
44 s				

Holliston Corridor Study
8: Washington Street & Green Street/Exchange Street

2023 Build PM - Minimum Concept

2/10/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	20	3	19	61	4	40	9	810	11	29	1026	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	15	12	12	15	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Satd. Flow (prot)	0	1714	0	0	1740	0	0	3842	0	0	3773	0
Flt Permitted		0.767			0.847			0.939			0.831	
Satd. Flow (perm)	0	1344	0	0	1498	0	0	3611	0	0	3139	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24			24			1			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		582			674			148			124	
Travel Time (s)		13.2			15.3			3.4			2.8	
Confl. Peds. (#/hr)	1		6	6		1	4		4	4		4
Confl. Bikes (#/hr)												
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.95	0.95	0.95	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	0%	3%	6%	0%	5%	0%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)									0			0
Mid-Block Traffic (%)		0%			0%			0%			0%	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	53	0	0	133	0	0	874	0	0	1237	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			4			2			6 3	
Permitted Phases	4			4			2			6 3		
Detector Phase	4	4		4	4		2	2		6 3	6 3	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		10.0	10.0				
Minimum Split (s)	11.0	11.0		11.0	11.0		14.0	14.0				
Total Split (s)	11.0	11.0		11.0	11.0		33.0	33.0				
Total Split (%)	11.0%	11.0%		11.0%	11.0%		33.0%	33.0%				
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0				
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		4.0			4.0			4.0				
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lag				
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes				
Recall Mode	None	None		None	None		C-Max	C-Max				
Act Effect Green (s)		7.0			7.0			35.5			85.0	
Actuated g/C Ratio		0.07			0.07			0.36			0.85	
v/c Ratio		0.46			1.05			0.68			0.46	
Control Delay		41.6			132.0			30.0			0.3	
Queue Delay		0.0			0.0			0.0			5.5	
Total Delay		41.6			132.0			30.0			5.8	
LOS		D			F			C			A	

Lane Group	ø1	ø3	ø6	ø9
Lane Configurations				
Volume (vph)				
Ideal Flow (vphpl)				
Lane Width (ft)				
Grade (%)				
Storage Length (ft)				
Storage Lanes				
Taper Length (ft)				
Satd. Flow (prot)				
Flt Permitted				
Satd. Flow (perm)				
Right Turn on Red				
Satd. Flow (RTOR)				
Link Speed (mph)				
Link Distance (ft)				
Travel Time (s)				
Confl. Peds. (#/hr)				
Confl. Bikes (#/hr)				
Peak Hour Factor				
Growth Factor				
Heavy Vehicles (%)				
Bus Blockages (#/hr)				
Parking (#/hr)				
Mid-Block Traffic (%)				
Shared Lane Traffic (%)				
Lane Group Flow (vph)				
Turn Type				
Protected Phases	1	3	6	9
Permitted Phases				
Detector Phase				
Switch Phase				
Minimum Initial (s)	7.0	7.0	10.0	4.0
Minimum Split (s)	9.0	18.0	14.0	26.0
Total Split (s)	11.0	19.0	44.0	26.0
Total Split (%)	11%	19%	44%	26%
Yellow Time (s)	2.0	3.0	3.0	2.0
All-Red Time (s)	0.0	1.0	1.0	0.0
Lost Time Adjust (s)				
Total Lost Time (s)				
Lead/Lag	Lead	Lead		
Lead-Lag Optimize?	Yes	Yes		
Recall Mode	None	None	C-Max	None
Act Effect Green (s)				
Actuated g/C Ratio				
v/c Ratio				
Control Delay				
Queue Delay				
Total Delay				
LOS				

Holliston Corridor Study

8: Washington Street & Green Street/Exchange Street

2023 Build PM - Mimimum Concept

2/10/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Approach Delay		41.6			132.0			30.0			5.8	
Approach LOS		D			F			C			A	
Queue Length 50th (ft)		18			~77			236			4	
Queue Length 95th (ft)		48			#162			298			m6	
Internal Link Dist (ft)		502			594			68			44	
Turn Bay Length (ft)												
Base Capacity (vph)		116			127			1283			2668	
Starvation Cap Reductn		0			0			0			1358	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.46			1.05			0.68			0.94	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green

Natural Cycle: 150

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.05

Intersection Signal Delay: 23.2

Intersection LOS: C

Intersection Capacity Utilization 65.0%

ICU Level of Service C

Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.

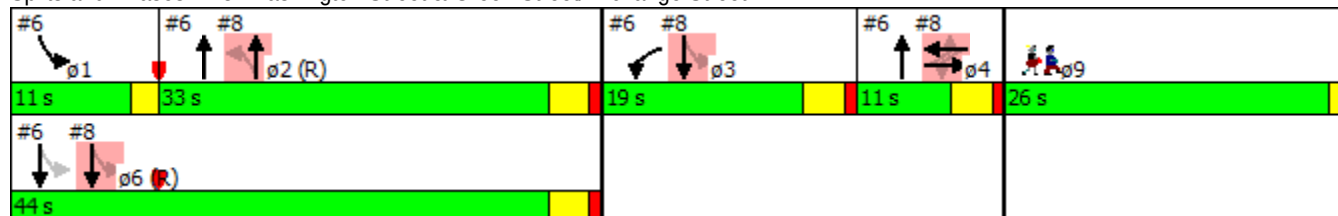
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 8: Washington Street & Green Street/Exchange Street



Lane Group	ø1	ø3	ø6	ø9
Approach Delay				
Approach LOS				
Queue Length 50th (ft)				
Queue Length 95th (ft)				
Internal Link Dist (ft)				
Turn Bay Length (ft)				
Base Capacity (vph)				
Starvation Cap Reductn				
Spillback Cap Reductn				
Storage Cap Reductn				
Reduced v/c Ratio				
Intersection Summary				

APPENDIX G

Signal Warrants

Washington Street Corridor Traffic Study
Holliston, MA

MUTCD Signal Warrant	Washington St at Hollis St	Washington St at Central St	Washington St at Exchange St
1) Eight-Hour Vehicular Volume	YES	YES	NO
2) Four-Hour Vehicular Volume	YES	YES	NO
3) Peak Hour	YES	YES	NO
4) Pedestrian Volume	NO	NO	NO
5) School Crossing	n/a	n/a	n/a
6) Coordinated Signal System	n/a	n/a	n/a
7) Crash Experience	NO	NO	NO
8) Roadway Network	YES	YES	NO
9) Intersection Near a Grade Crossing	n/a	n/a	n/a

Holliston Washington Street Corridor
Eight-Hour Vehicular Volume Signal Warrant
Intersection of Washington Street at Hollis Street/Charles Street

Existing 2013								
Hour	Northbound Volume	Southbound Volume	Total Major Street Volume	Minor Street Volume	Condition 1 Met ¹	Condition 2 Met ²	Condition 3a Met	Condition 3b Met
6:00 AM	1155	326	1481	226	yes	yes	yes	yes
7:00 AM	1067	532	1599	367	yes	yes	yes	yes
8:00 AM	1092	491	1583	282	yes	yes	yes	yes
9:00 AM	727	498	1225	165	no	yes	yes	yes
10:00 AM	624	472	1096	182	no	yes	yes	yes
11:00 AM	585	585	1170	130	no	yes	no	yes
12:00 PM	556	581	1137	155	no	yes	no	yes
1:00 PM	542	584	1126	122	no	yes	no	yes
2:00 PM	650	659	1309	294	yes	yes	yes	yes
3:00 PM	557	843	1400	203	yes	yes	yes	yes
4:00 PM	590	946	1536	209	yes	yes	yes	yes
5:00 PM	589	953	1542	261	yes	yes	yes	yes
6:00 PM	499	942	1441	273	yes	yes	yes	yes
7:00 PM	381	582	963	162	no	yes	yes	yes
8:00 PM	312	523	835	98	no	no	no	yes

1 Major street volume greater than 600 vehicles per hour and minor street volume greater than 200 vehicles per hour.

2 Major street volumes greater than 900 vehicles per hour and minor street volume greater than 100 vehicles per hour.

3 Major street volume greater than 480 vehicles per hour and minor street volume greater than 160 vehicles per hour

AND major street volume greater than 720 vehicles per hour and minor street volume greater than 80 vehicles per hour.

Signal warranted:

YES

WITHOUT RIGHT-TURN MINOR VOLUMES

Existing 2013								
Hour	Northbound Volume	Southbound Volume	Total Major Street Volume	Minor Street Volume	Condition 1 Met ¹	Condition 2 Met ²	Condition 3a Met	Condition 3b Met
6:00 AM	1155	326	1481	113	no	yes	no	yes
7:00 AM	1067	532	1599	183	yes	yes	yes	yes
8:00 AM	1092	491	1583	141	no	yes	yes	yes
9:00 AM	727	498	1225	82	no	yes	no	yes
10:00 AM	624	472	1096	91	no	yes	no	yes
11:00 AM	585	585	1170	65	no	no	no	yes
12:00 PM	556	581	1137	78	no	yes	no	yes
1:00 PM	542	584	1126	37	no	no	no	no
2:00 PM	650	659	1309	89	no	yes	no	yes
3:00 PM	557	843	1400	61	no	no	no	yes
4:00 PM	590	946	1536	62	no	no	no	yes
5:00 PM	589	953	1542	78	no	yes	no	yes
6:00 PM	499	942	1441	82	no	yes	no	yes
7:00 PM	381	582	963	49	no	no	no	no
8:00 PM	312	523	835	29	no	no	no	no

1 Major street volume greater than 600 vehicles per hour and minor street volume greater than 150 vehicles per hour.

2 Major street volumes greater than 900 vehicles per hour and minor street volume greater than 75 vehicles per hour.

3 Major street volume greater than 480 vehicles per hour and minor street volume greater than 120 vehicles per hour

AND major street volume greater than 720 vehicles per hour and minor street volume greater than 60 vehicles per hour.

Signal warranted:

YES

Holliston Washington Street Corridor
Eight-Hour Vehicular Volume Signal Warrant
Intersection of Washington Street at Central Street

Existing 2013									
Hour	Northbound Volume	Southbound Volume	Total Major Street Volume	Minor Street Volume	Condition 1 Met ¹	Condition 2 Met ²	Condition 3a Met	Condition 3b Met	
6:00 AM	1155	326	1481	176	no	yes	yes	yes	yes
7:00 AM	1067	532	1599	378	yes	yes	yes	yes	yes
8:00 AM	1092	491	1583	307	yes	yes	yes	yes	yes
9:00 AM	727	498	1225	221	yes	yes	yes	yes	yes
10:00 AM	624	472	1096	228	yes	yes	yes	yes	yes
11:00 AM	585	585	1170	249	yes	yes	yes	yes	yes
12:00 PM	556	581	1137	241	yes	yes	yes	yes	yes
1:00 PM	542	584	1126	230	yes	yes	yes	yes	yes
2:00 PM	650	659	1309	326	yes	yes	yes	yes	yes
3:00 PM	557	843	1400	296	yes	yes	yes	yes	yes
4:00 PM	590	946	1536	320	yes	yes	yes	yes	yes
5:00 PM	589	953	1542	410	yes	yes	yes	yes	yes
6:00 PM	499	942	1441	386	yes	yes	yes	yes	yes
7:00 PM	381	582	963	250	yes	yes	yes	yes	yes
8:00 PM	312	523	835	160	no	no	no	no	yes

1 Major street volume greater than 600 vehicles per hour and minor street volume greater than 200 vehicles per hour.

2 Major street volumes greater than 900 vehicles per hour and minor street volume greater than 100 vehicles per hour.

3 Major street volume greater than 480 vehicles per hour and minor street volume greater than 160 vehicles per hour

AND major street volume greater than 720 vehicles per hour and minor street volume greater than 80 vehicles per hour.

Signal warranted:

YES

Holliston Washington Street Corridor
Eight-Hour Vehicular Volume Signal Warrant
Intersection of Washington Street at Exchange Street

Existing 2013									
Hour	Northbound Volume	Southbound Volume	Total Major Street Volume	Minor Street Volume	Condition 1 Met ¹	Condition 2 Met ²	Condition 3a Met	Condition 3b Met	
6:00 AM	1155	326	1481		no	no	no	no	
7:00 AM	1067	532	1599	85	no	yes	no	yes	
8:00 AM	1092	491	1583	75	no	yes	no	yes	
9:00 AM	727	498	1225		no	no	no	no	
10:00 AM	624	472	1096		no	no	no	no	
11:00 AM	585	585	1170		no	no	no	no	
12:00 PM	556	581	1137		no	no	no	no	
1:00 PM	542	584	1126		no	no	no	no	
2:00 PM	650	659	1309	87	no	yes	no	yes	
3:00 PM	557	843	1400	90	no	yes	no	yes	
4:00 PM	590	946	1536	86	no	yes	no	yes	
5:00 PM	589	953	1542	95	no	yes	no	yes	
6:00 PM	499	942	1441		no	no	no	no	
7:00 PM	381	582	963		no	no	no	no	
8:00 PM	312	523	835		no	no	no	no	

1 Major street volume greater than 500 vehicles per hour and minor street volume greater than 150 vehicles per hour.

2 Major street volumes greater than 750 vehicles per hour and minor street volume greater than 75 vehicles per hour.

3 Major street volume greater than 400 vehicles per hour and minor street volume greater than 120 vehicles per hour

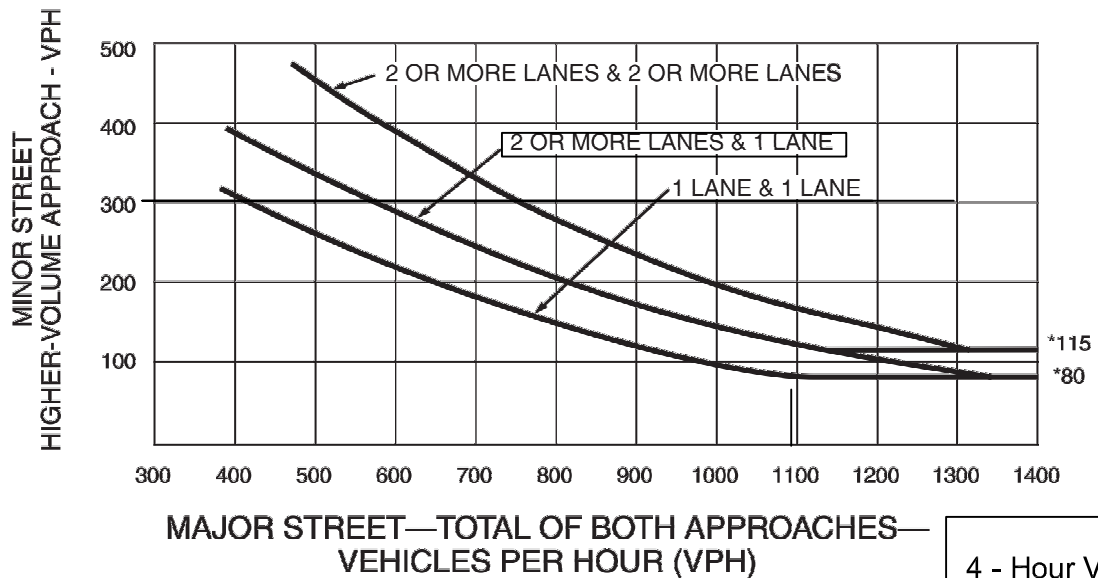
AND major street volume greater than 600 vehicles per hour and minor street volume greater than 60 vehicles per hour.

Signal warranted:

NO

Washington Street at Hollis Street/Charles Street

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



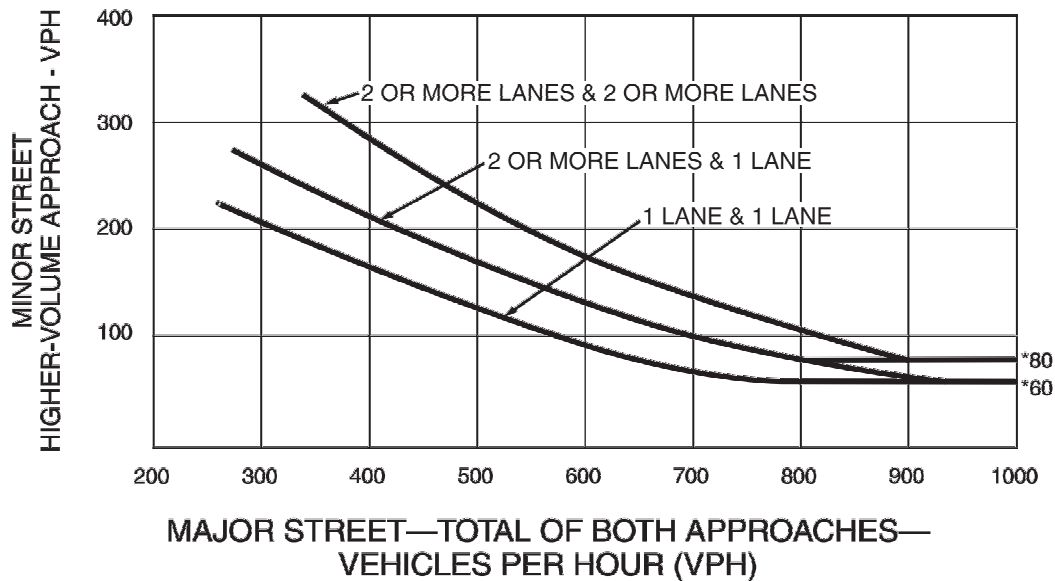
*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

4 - Hour Volumes
exceeds warrant
requirements for 2
or More Lanes & 1
Lane

Time	Major Vol	Minor Vol
7a-8a	1786	170
8a-9a	1559	154
4p-5p	1698	82
5p-6p	1810	123

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

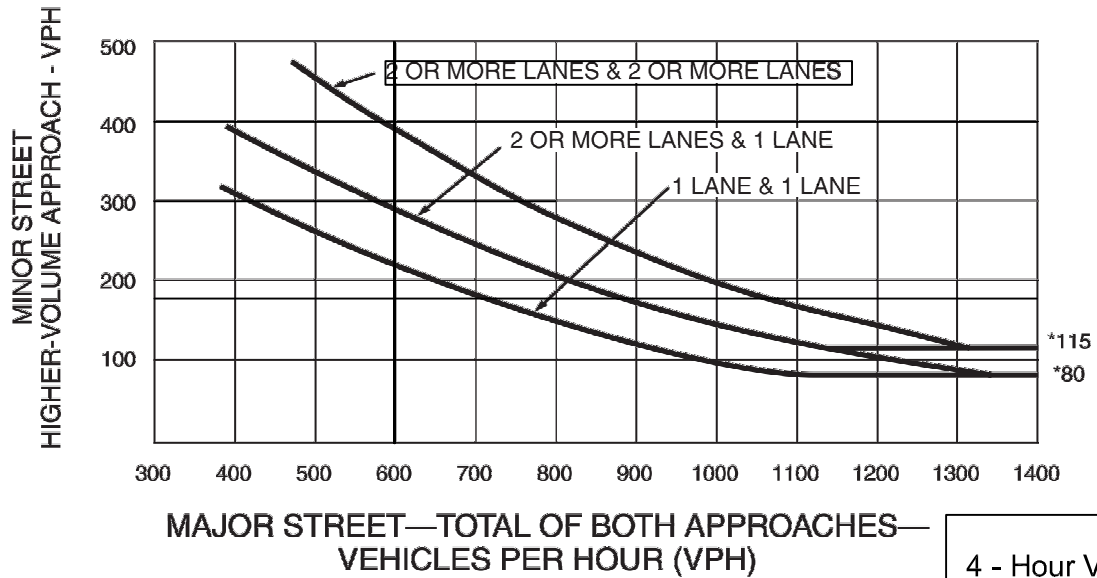
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

Washington Street at Central Street

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



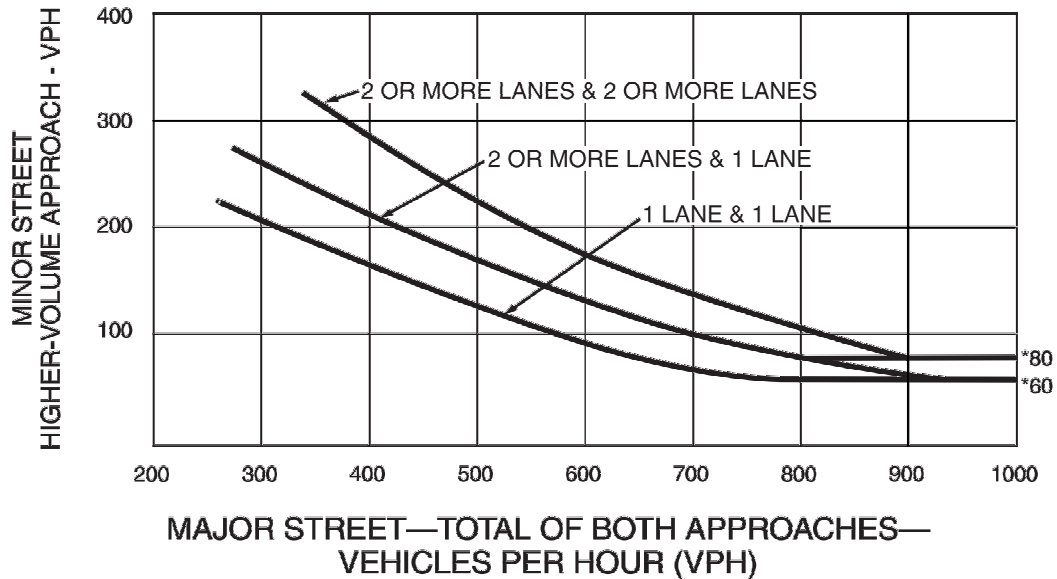
*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

4 - Hour Volumes exceeds warrant requirements for 2 or More Lanes & 2 or More Lanes

Time	Major Vol	Minor Vol
7a-8a	1855	258
8a-9a	1637	220
4p-5p	1614	252
5p-6p	1896	272

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

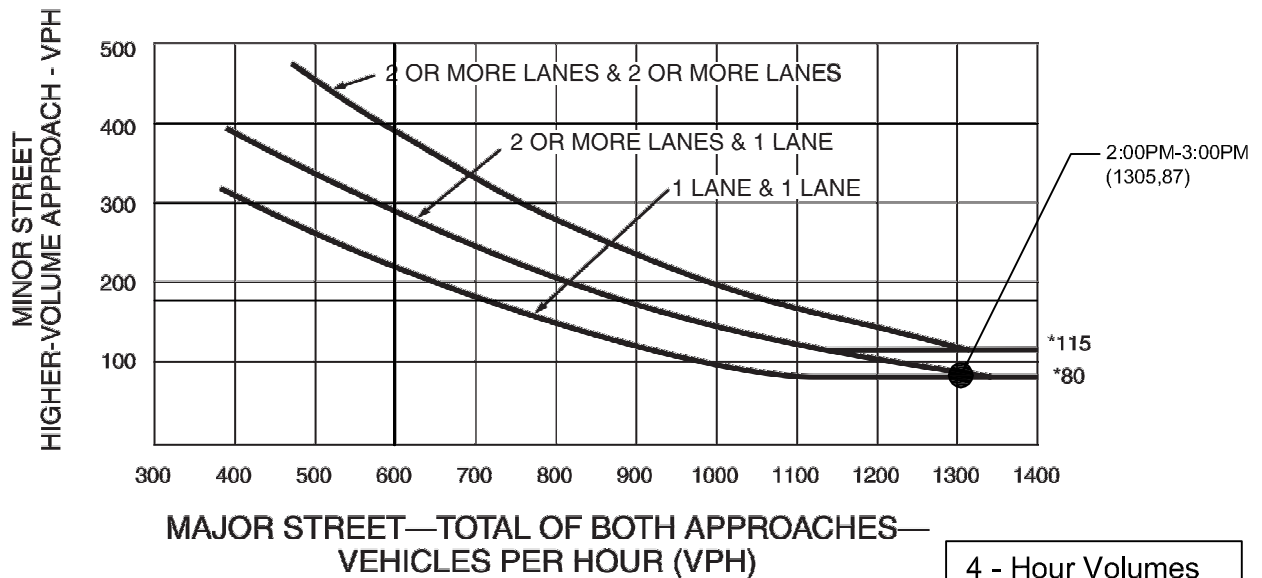
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

Washington Street at Green Street/Exchange Street

Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



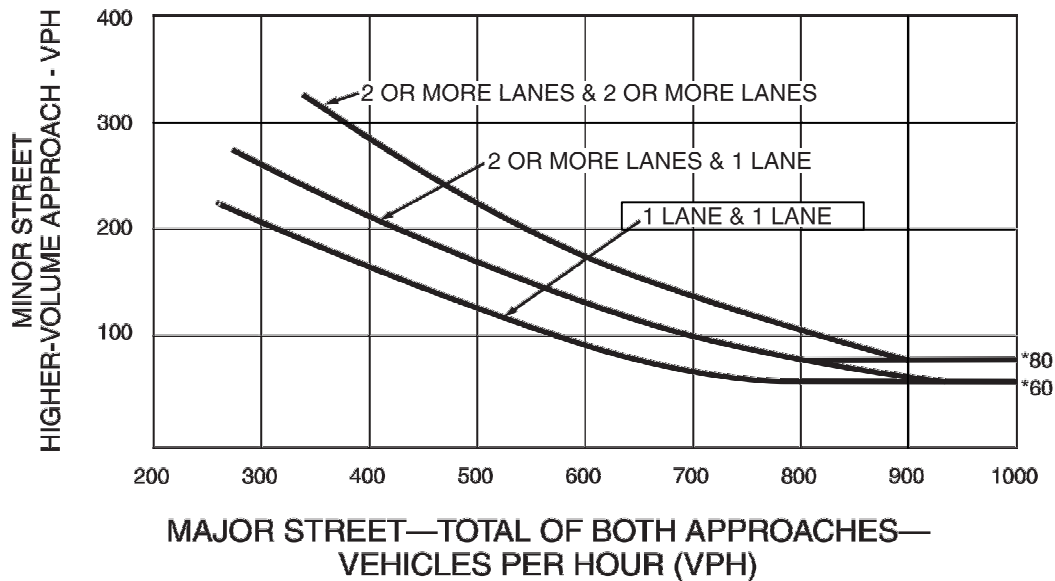
*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

4 - Hour Volumes
exceeds warrant
requirements for 1
Lane & 1 Lane

Time	Major Vol	Minor Vol
3p-4p	1415	90
4p-5p	1513	86
5p-6p	1677	95

Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

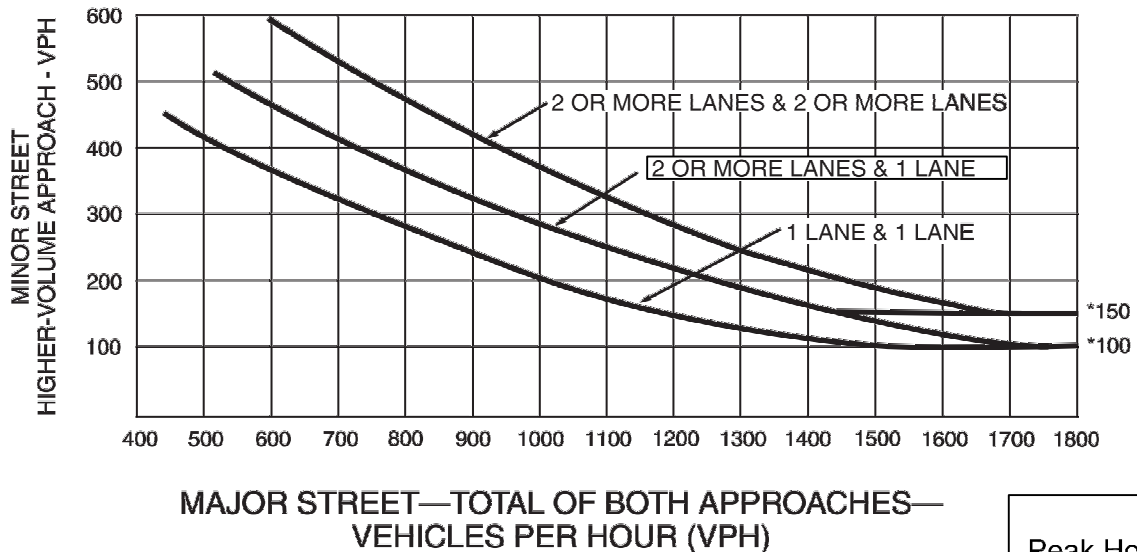
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

Washington Street at Hollis Street/Charles Street

Figure 4C-3. Warrant 3, Peak Hour



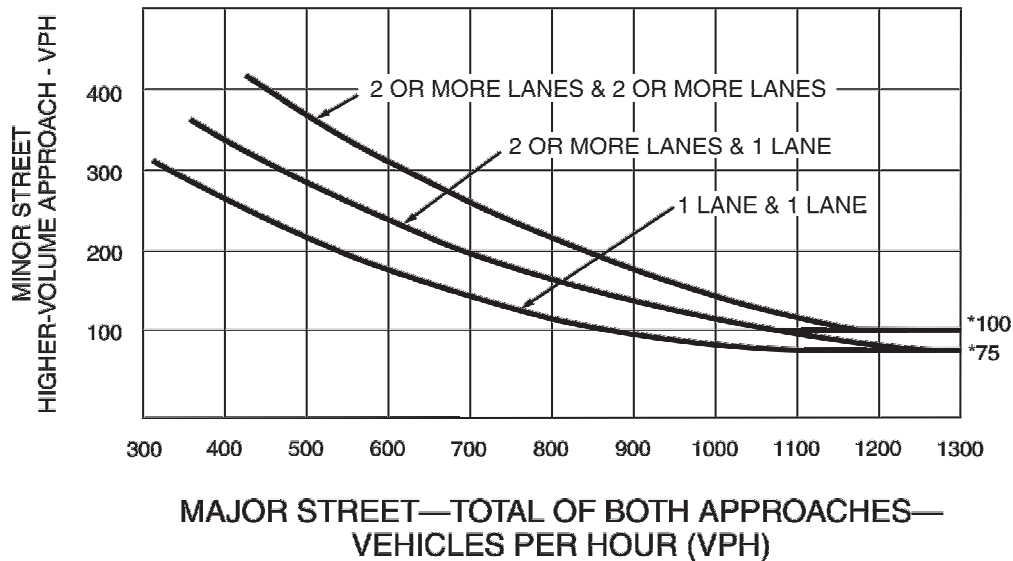
*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Peak Hour Volumes
exceeds warrant
requirements for 2
or More Lanes & 1
Lane

Peak Hour: 5:00-6:00 PM
Major Volume: 1810
Minor Volume: 123
**Exceeds Limits of Graph

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

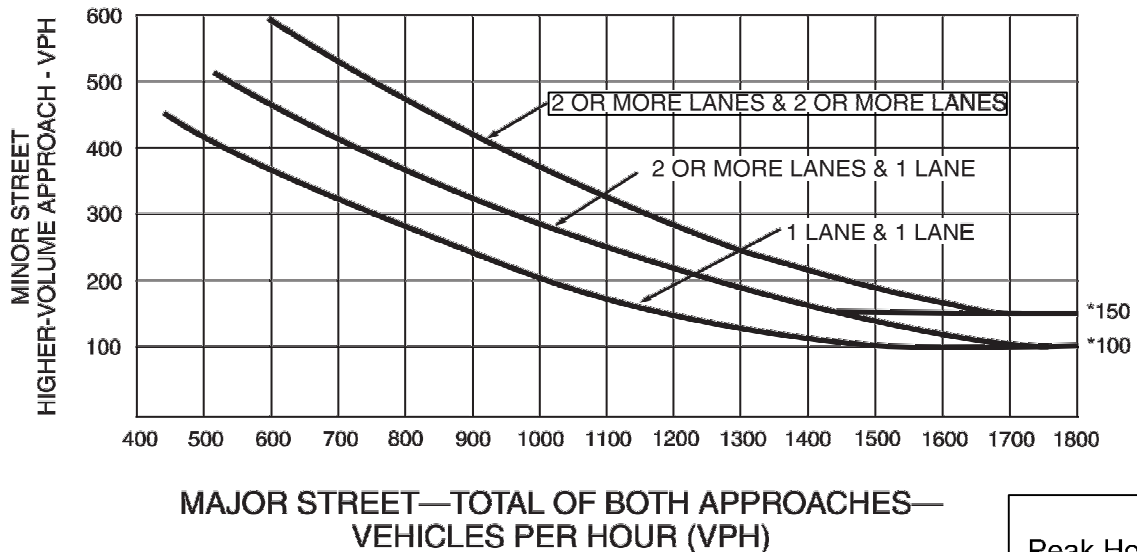
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Washington Street at Central Street

Figure 4C-3. Warrant 3, Peak Hour



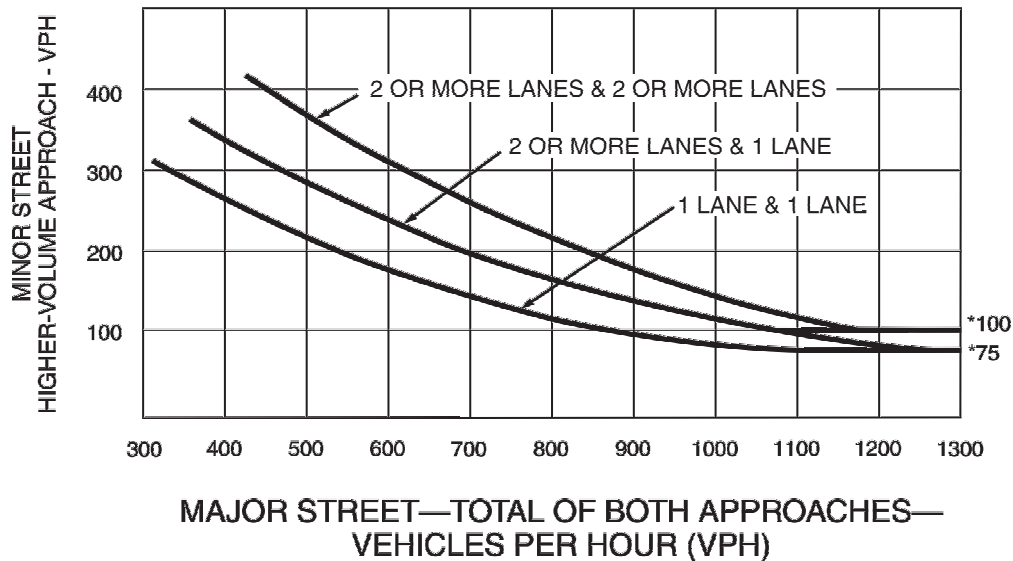
*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Peak Hour: 5:00-6:00 PM
Major Volume: 1855
Minor Volume: 272
**Exceeds Limits of Graph

Peak Hour Volumes exceeds warrant requirements for 2 or More Lanes & 2 or More Lanes

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

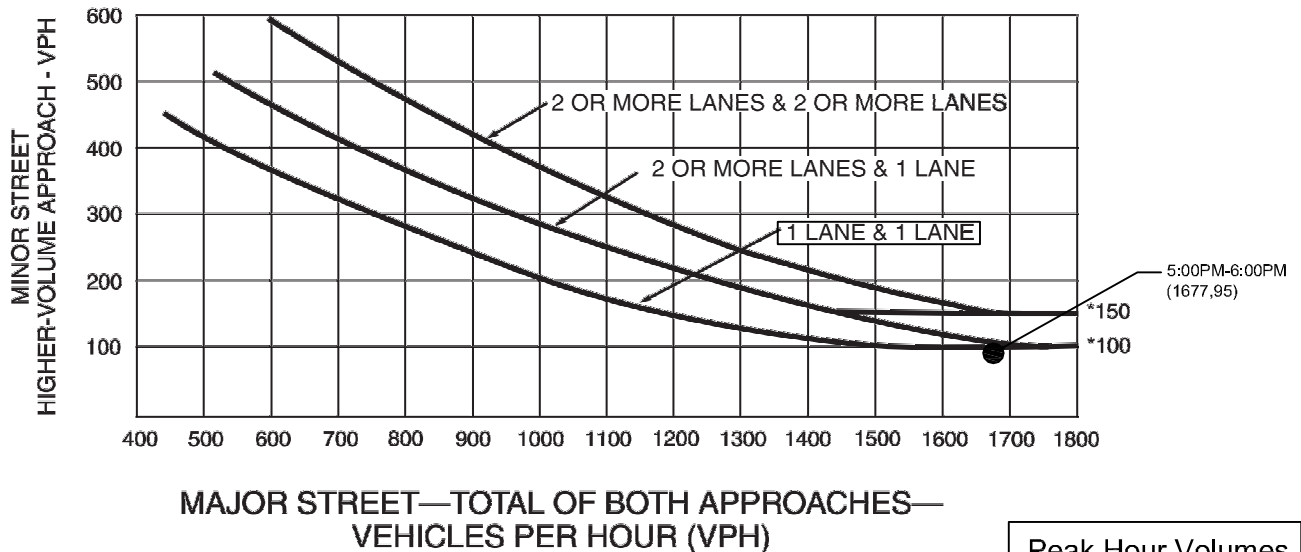
(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

Washington Street at Green Street/Exchange Street

Figure 4C-3. Warrant 3, Peak Hour

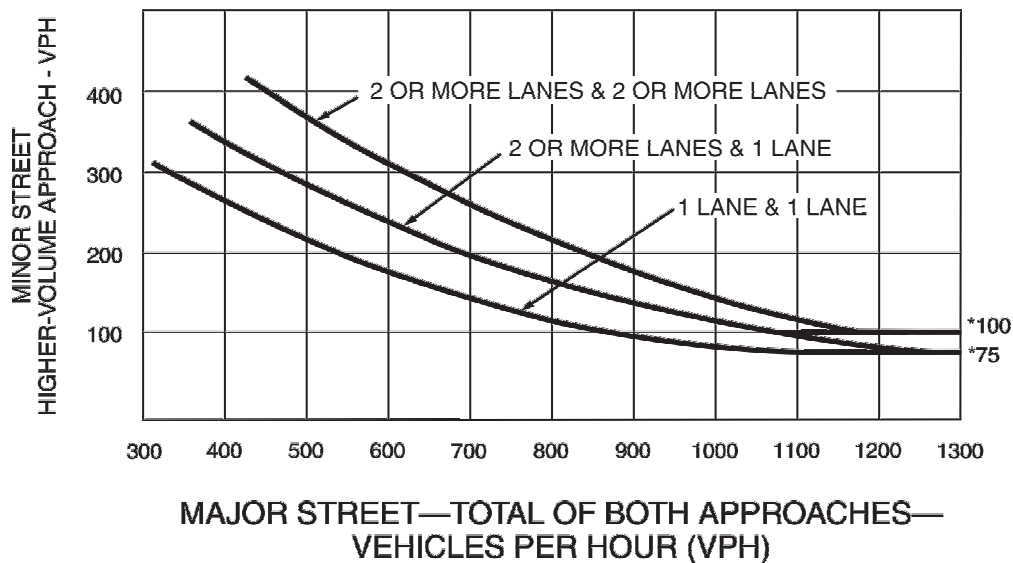


*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Peak Hour Volumes does not meet warrant requirements for 1 Lane & 1 Lane

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 70 km/h OR ABOVE 40 mph ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

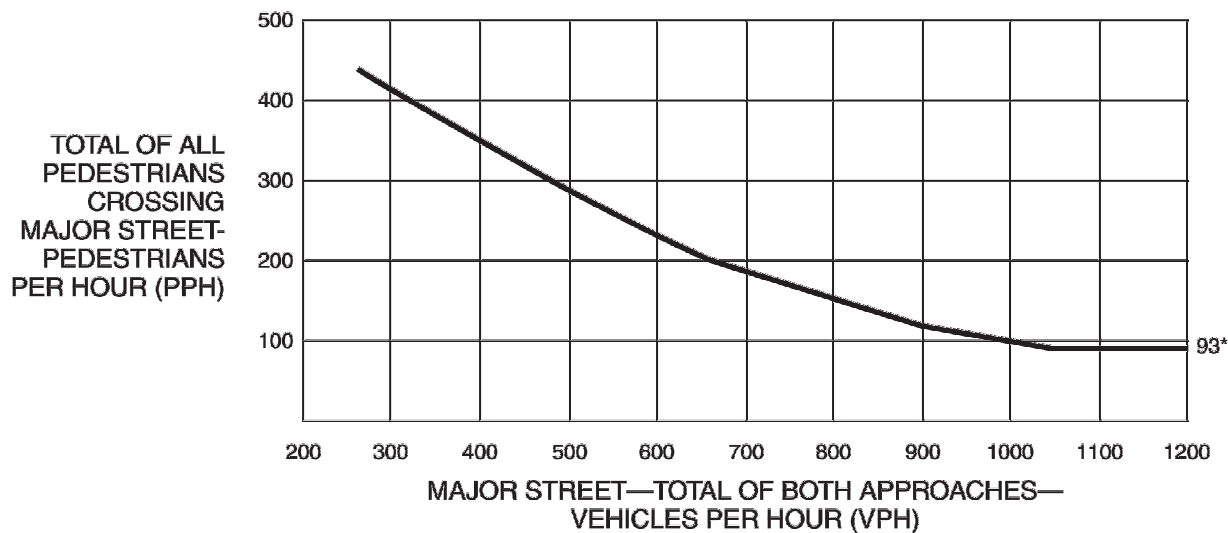
Washington Street at Hollis Street/Charles Street

Figure 4C-7. Warrant 4, Pedestrian Peak Hour

Peak Hour: 5:00-6:00 PM
 Major Volume: 1810
 Ped. Volume: 0
 **Exceeds Limits of Graph

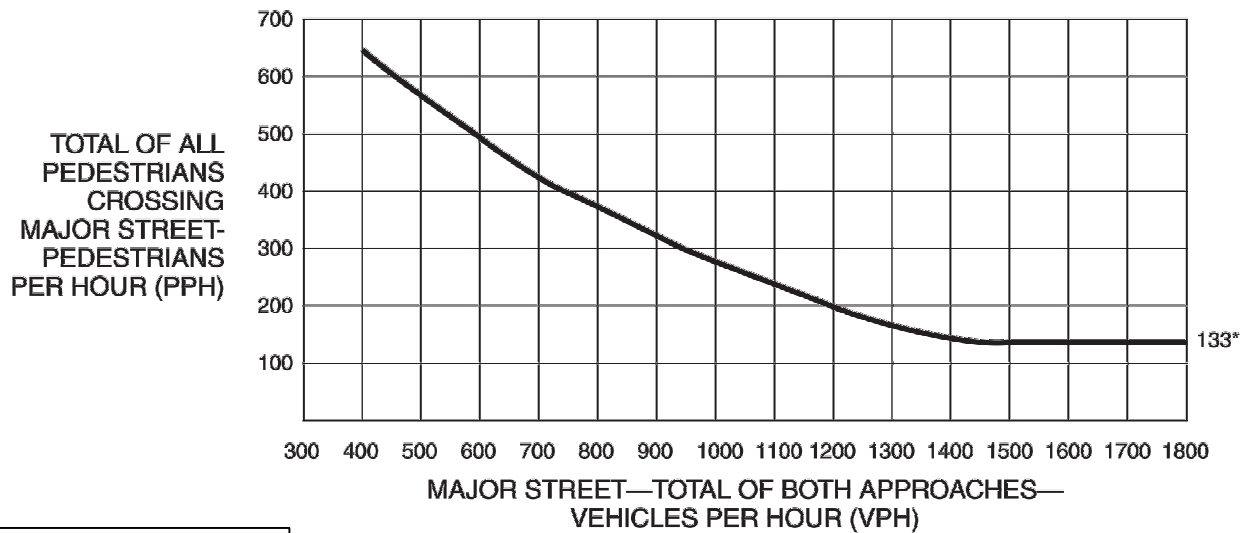
*Note: 133 pph applies as the lower threshold volume.

Peak Hour
 Pedestrian
 Volumes do not
 meet warrant
 requirements

Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)

*Note: 93 pph applies as the lower threshold volume.

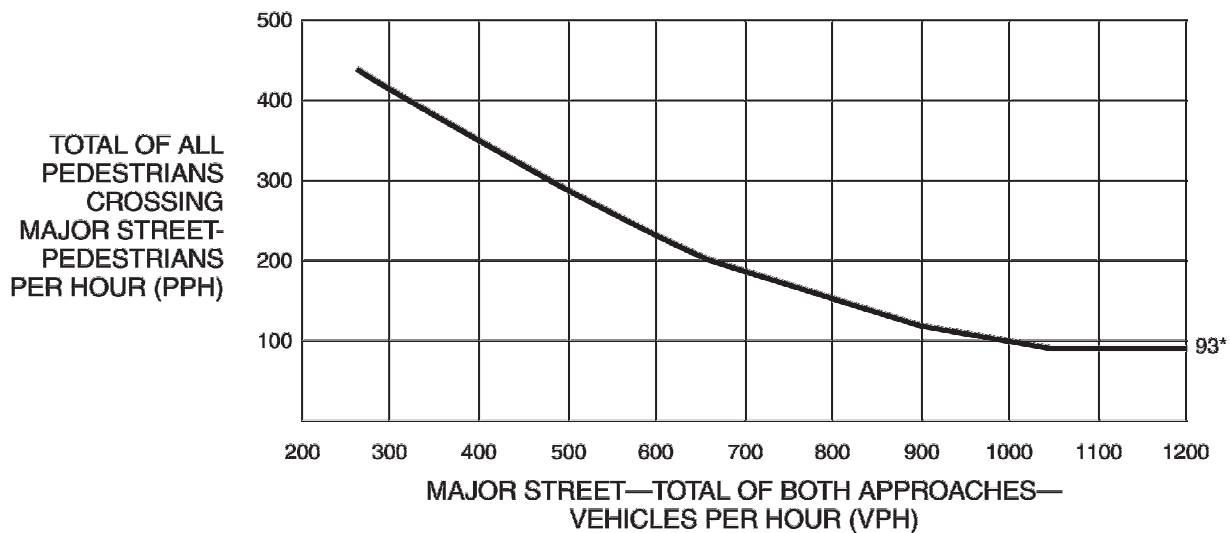
Washington Street at Central Street

Figure 4C-7. Warrant 4, Pedestrian Peak Hour

Peak Hour: 5:00-6:00 PM
 Major Volume: 1896
 Ped. Volume: 29
 **Exceeds Limits of Graph

*Note: 133 pph applies as the lower threshold volume.

Peak Hour
 Pedestrian
 Volumes do not
 meet warrant
 requirements

Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)

*Note: 93 pph applies as the lower threshold volume.

Washington Street at Green Street/Exchange Street

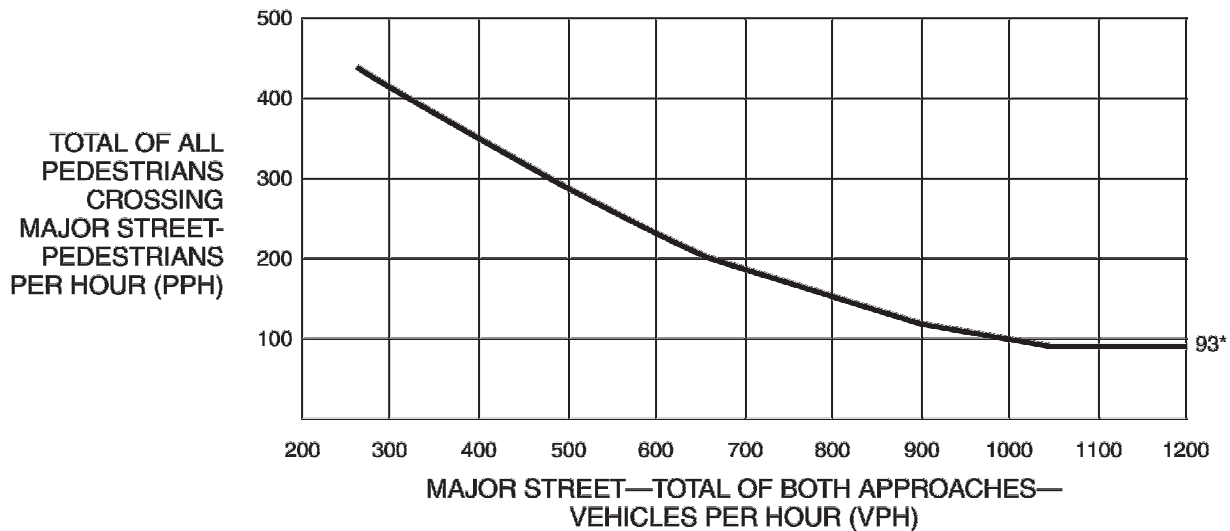
Figure 4C-7. Warrant 4, Pedestrian Peak Hour



*Note: 133 pph applies as the lower threshold volume.

Peak Hour
Pedestrian
Volumes do not
meet warrant
requirements

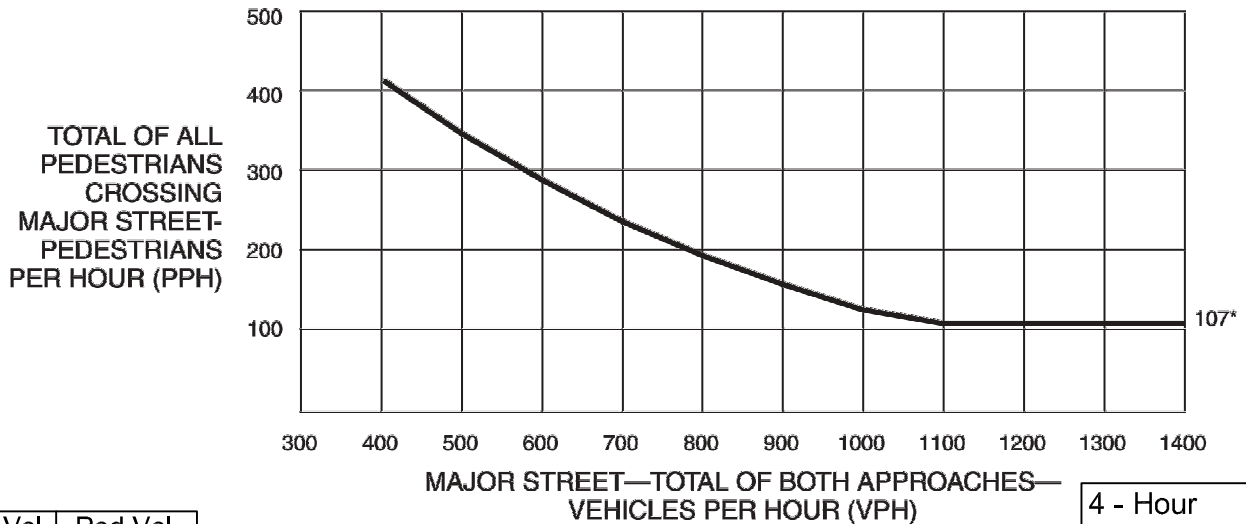
Figure 4C-8. Warrant 4, Pedestrian Peak Hour (70% Factor)



*Note: 93 pph applies as the lower threshold volume.

Washington Street at Hollis Street/Charles Street

Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume

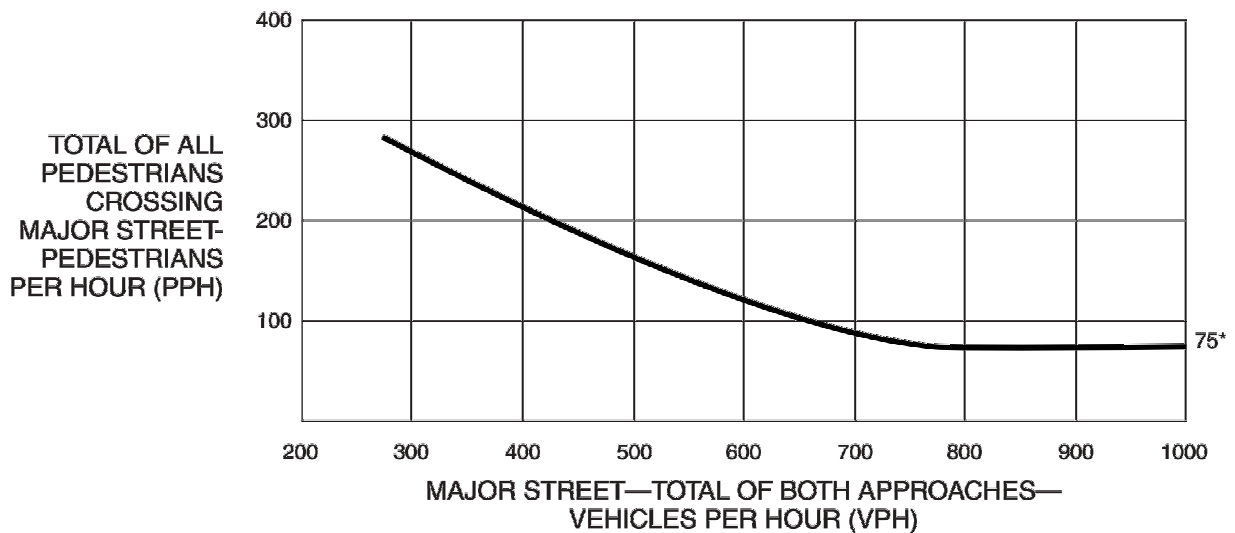


*Note: 107 pph applies as the lower threshold volume.

4 - Hour
Pedestrian
Volumes do not
meet warrant
requirements

Time	Major Vol	Ped Vol
7a-8a	1786	0
8a-9a	1559	0
4p-5p	1698	0
5p-6p	1810	0

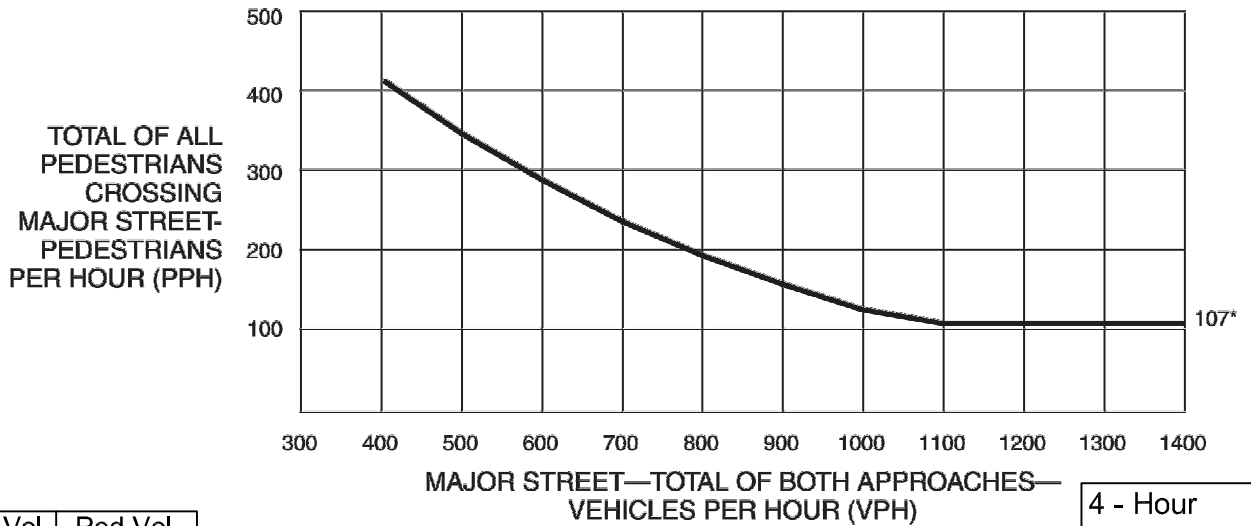
Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)



*Note: 75 pph applies as the lower threshold volume.

Washington Street at Central Street

Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume

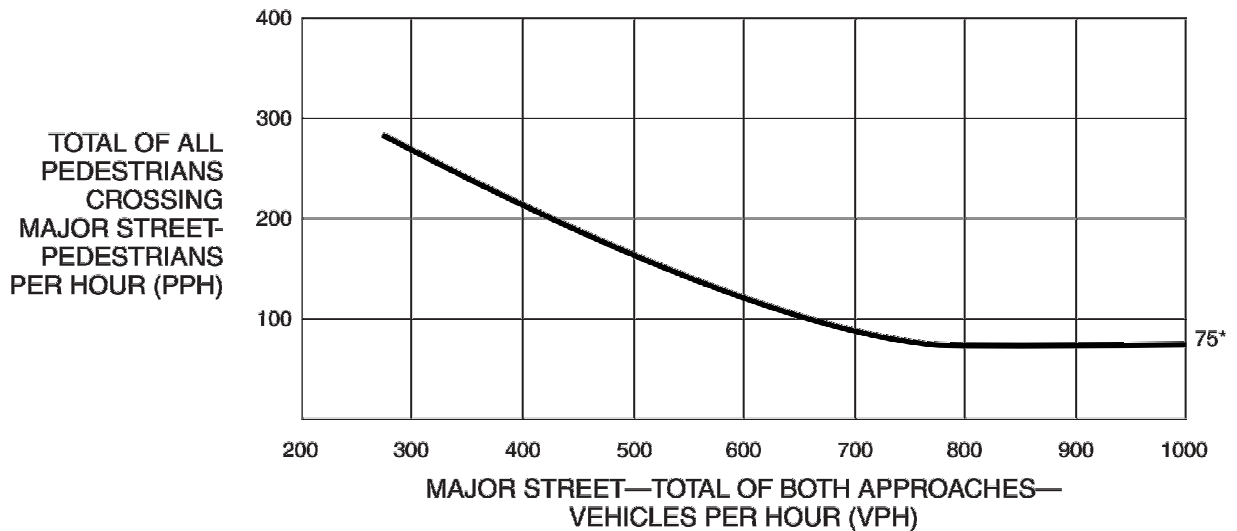


*Note: 107 pph applies as the lower threshold volume.

4 - Hour
Pedestrian
Volumes do not
meet warrant
requirements

Time	Major Vol	Ped Vol
7a-8a	1855	3
8a-9a	1637	7
4p-5p	1614	22
5p-6p	1896	29

Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)



*Note: 75 pph applies as the lower threshold volume.

Washington Street at Green Street/Exchange Street

Figure 4C-5. Warrant 4, Pedestrian Four-Hour Volume

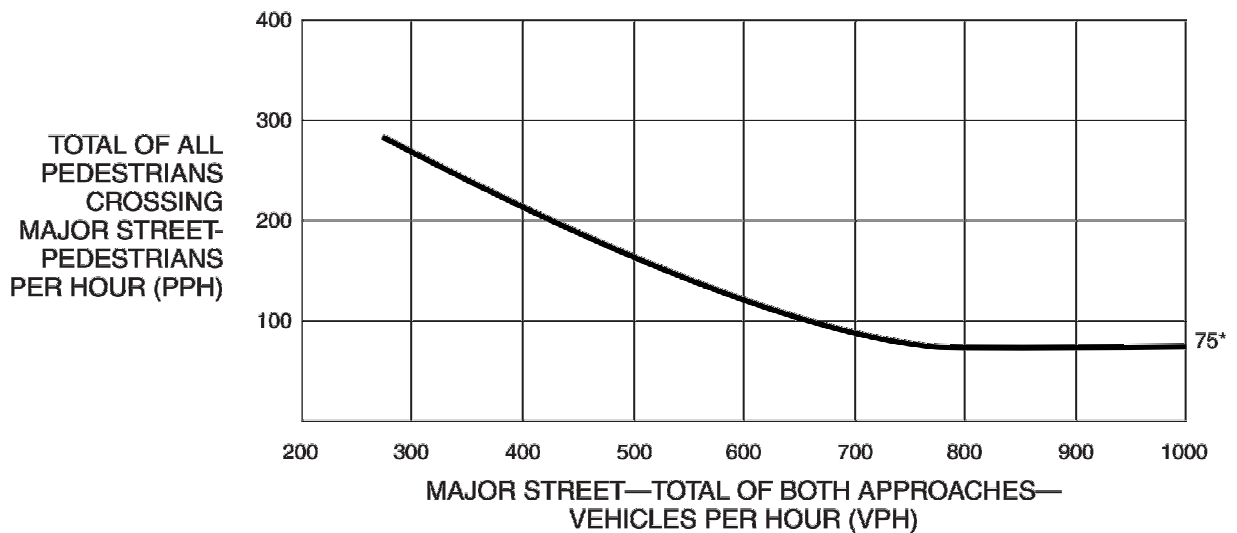


Time	Major Vol	Minor Vol
7a-8a	1626	7
3p-4p	1415	21
5p-6p	1677	5

*Note: 107 pph applies as the lower threshold volume.

4 - Hour
Pedestrian
Volumes do not
meet warrant
requirements

Figure 4C-6. Warrant 4, Pedestrian Four-Hour Volume (70% Factor)



*Note: 75 pph applies as the lower threshold volume.