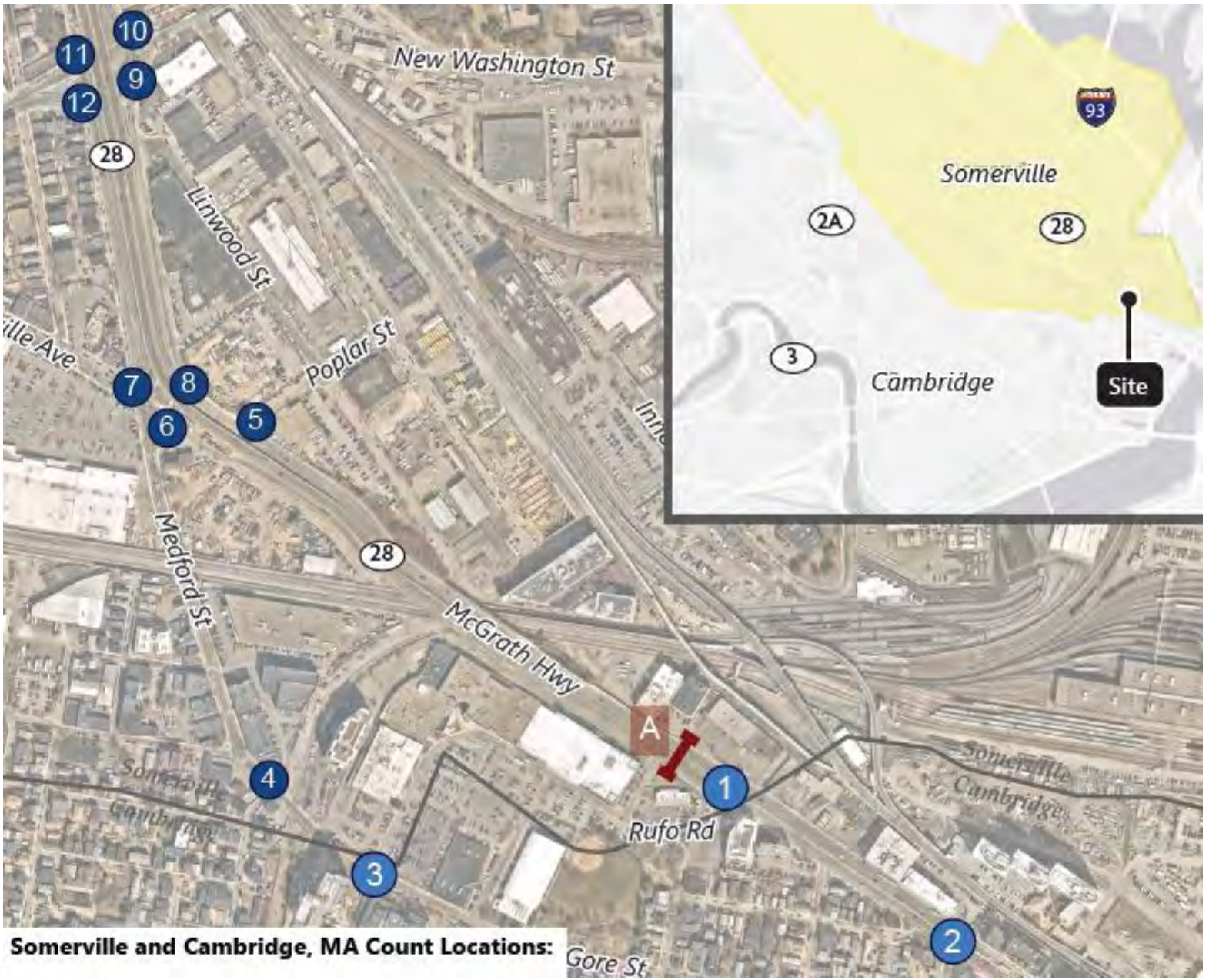
Appendix

- Traffic Count Data
- Crash Data
- Trip Generation
- Mode Share Data
- Background Developments for Future Conditions
- Synchro Capacity Analysis

Traffic Count Data



Somerville and Cambridge, MA Count Locations:

BOSTON TRAFFIC DATA	BTD ID: 917_003_VHB	Somerville & Cambridge, MA	# of TMC's: 12	Client: Vanasse Hangen Brustlin, Inc.
		Collected on May 24 to 25, 2022	# of ATR's: 01	Contact: Matt Burmeister, Project Consultant

Volume Report

Job 917_003_VHB_ATR A
Area Somerville, MA
Location McGrath Highway / MA 28, west of Rufo Road

BOSTON TRAFFIC DATA

Tuesday, May 24, 2022

Time	EB Bike	EB Motorcycle	EB Automobile	EB Bus	EB Single-Unit Truck	EB Multi-Unit Truck	EB Total Volume	WB Bike	WB Motorcycle	WB Automobile	WB Bus	WB Single-Unit Truck	WB Multi-Unit Truck	WB Total Volume
0000	0	0	33	2	0	0	35	0	1	43	2	0	0	46
0015	0	1	34	1	2	1	39	0	0	27	1	2	1	31
0030	0	0	19	1	0	0	20	0	0	21	1	0	0	22
0045	0	0	15	2	1	0	18	0	0	18	1	0	0	19
0100	0	0	15	1	0	1	17	0	0	31	2	0	0	33
0115	0	0	19	1	1	0	21	0	0	16	3	0	0	19
0130	0	0	10	0	0	0	10	0	0	14	0	0	0	14
0145	0	0	16	0	0	1	17	0	0	13	0	1	0	14
0200	0	0	10	0	0	0	10	0	0	12	0	1	0	13
0215	0	0	7	0	0	0	7	0	0	4	0	0	0	4
0230	0	1	12	0	0	0	13	0	1	9	0	0	1	11
0245	0	0	11	0	0	0	11	0	0	7	0	1	0	8
0300	0	0	6	0	1	0	7	0	0	5	0	0	0	5
0315	0	0	5	0	0	0	5	0	0	7	0	0	0	7
0330	0	0	13	0	1	0	14	0	0	2	0	0	0	2
0345	0	0	15	0	3	1	19	0	0	9	0	0	0	9
0400	0	0	8	0	1	0	9	0	0	5	0	0	0	5
0415	0	1	18	0	1	0	20	0	0	11	0	1	0	12
0430	0	0	34	0	2	0	36	0	0	6	1	1	0	8
0445	0	0	29	1	2	0	32	0	0	9	0	0	0	9
0500	0	0	45	0	2	1	48	0	0	9	0	1	0	10
0515	0	1	91	2	1	0	95	0	0	19	1	1	0	21
0530	0	3	166	3	1	1	174	0	0	26	2	1	0	29
0545	0	3	199	3	2	0	207	0	0	23	1	0	0	24
0600	0	1	242	1	2	0	246	0	1	25	3	1	1	31
0615	0	5	278	4	7	0	294	0	0	40	3	2	0	45
0630	0	4	361	5	16	2	388	1	0	49	3	2	0	55
0645	0	0	358	6	7	2	373	0	0	60	3	3	0	66
0700	0	0	347	7	12	2	368	0	0	58	5	8	1	72
0715	0	3	401	4	8	0	416	0	0	63	4	3	0	70
0730	1	1	328	6	10	0	346	0	2	81	3	6	1	93
0745	0	2	316	2	5	0	325	0	0	93	4	4	1	102
0800	1	3	426	4	6	0	440	1	0	83	3	2	0	89
0815	0	3	474	4	7	0	488	0	0	117	4	4	0	125
0830	0	1	461	4	7	0	473	0	0	96	5	6	0	107
0845	0	1	478	3	8	0	490	0	0	104	5	6	0	115
0900	0	3	455	4	9	1	472	0	0	95	5	5	0	105
0915	0	2	381	7	5	3	398	0	0	81	5	5	0	91
0930	2	1	369	5	12	2	391	0	0	72	4	2	1	79
0945	0	1	379	3	14	2	399	0	1	91	2	5	1	100
1000	0	2	268	4	13	2	289	0	0	88	8	6	1	103
1015	0	3	264	1	10	0	278	0	0	103	5	8	0	116
1030	0	1	209	3	9	1	223	1	0	104	0	8	0	113
1045	1	1	216	1	8	0	227	0	1	110	3	6	0	120
1100	0	0	150	4	9	1	164	0	0	102	3	5	1	111
1115	0	0	164	1	6	0	171	1	1	119	2	8	1	132
1130	1	3	155	3	7	1	170	0	1	113	1	8	2	125
1145	0	0	165	1	6	0	172	1	0	110	2	5	0	118
1200	0	0	152	4	7	1	164	0	0	128	3	4	0	135
1215	0	1	178	2	6	2	189	0	0	125	2	9	1	137
1230	0	1	157	5	1	0	164	2	1	130	1	3	0	137
1245	0	2	155	3	5	1	166	1	1	136	2	4	2	146
1300	0	0	138	2	5	0	145	2	0	148	1	2	0	153
1315	0	0	162	2	3	1	168	0	0	162	4	3	1	170
1330	0	1	139	1	3	1	145	1	0	208	2	5	0	216
1345	0	0	153	3	7	1	164	0	7	199	1	9	2	218
1400	0	0	165	2	3	0	170	1	1	195	4	4	1	206
1415	0	0	225	1	4	0	230	0	2	212	5	3	3	225
1430	0	0	227	3	2	0	232	1	2	235	3	1	1	243
1445	0	0	233	2	3	0	238	0	1	224	2	7	0	234
1500	0	3	252	3	1	0	259	0	5	272	4	6	0	287
1515	0	1	239	3	0	0	243	1	2	344	6	6	0	359
1530	0	0	248	3	3	0	254	0	3	280	5	4	0	292
1545	0	1	239	2	2	0	244	1	4	278	6	8	0	297
1600	0	0	196	3	1	0	200	0	1	325	5	4	3	338
1615	0	0	208	2	2	0	212	2	1	339	8	0	0	350
1630	0	1	270	6	3	0	280	1	2	360	5	2	0	370
1645	0	0	291	2	3	0	296	0	2	351	3	3	0	359
1700	0	1	259	3	2	1	266	1	1	316	4	3	0	325
1715	0	0	249	3	1	0	253	1	3	356	5	3	0	368
1730	1	0	239	4	2	0	246	1	0	330	4	1	0	336
1745	1	0	267	2	0	0	270	2	1	340	7	3	0	353
1800	0	0	279	2	1	0	282	2	0	284	4	2	0	292
1815	0	1	268	1	4	0	274	0	0	281	2	4	1	288
1830	0	0	222	3	1	0	226	0	1	235	2	0	0	238
1845	0	1	187	2	3	0	193	1	2	204	4	3	0	214
1900	0	2	138	2	1	0	143	0	1	204	5	1	0	211
1915	0	0	138	1	0	0	139	0	1	142	3	2	0	148
1930	0	1	145	3	0	0	149	1	1	122	3	6	0	133
1945	0	0	108	3	0	0	111	0	0	102	3	0	0	105
2000	0	0	111	1	1	0	113	2	0	112	3	0	0	117
2015	0	0	97	1	1	0	99	0	0	106	2	1	0	109
2030	0	1	99	2	1	0	103	0	1	77	1	1	0	80
2045	2	0	105	2	1	0	110	0	0	73	3	2	0	78
2100	0	0	85	3	0	0	88	0	0	71	3	0	0	74
2115	0	0	94	0	0	0	94	0	0	89	3	2	0	94
2130	0	0	84	2	0	0	86	0	0	86	1	0	0	87
2145	0	0	101	1	0	0	102	0	0	50	2	0	0	52
2200	0	1	78	3	1	0	83	0	0	80	2	1	0	83
2215	0	0	63	1	1	0	65	1	0	57	2	0	0	60
2230	0	0	68	3	1	0	72	0	0	36	1	1	1	39
2245	0	0	50	0	0	0	50	0	0	46	0	0	0	46
2300	0	1	53	2	1	0	57	0	0	67	2	1	0	70
2315	0	0	43	2	0	0	45	0	0	65	1	0	0	66
2330	0	0	25	0	0	0	25	0	1	50	1	1	0	53
2345	0	0	34	1	1	0	36	0	0	29	1	0	0	30
Total	**10**	**71**	**16191**	**211**	**312**	**33**	**16828**	**30**	**57**	**11064**	**246**	**253**	**29**	**11679**

Volume Report

Job 917_003_VHB_ATR A
Area Somerville, MA
Location McGrath Highway / MA 28, west of Rufo Road

BOSTON TRAFFIC DATA

Wednesday, May 25, 2022

Time	EB Bike	EB Motorcycle	EB Automobile	EB Bus	EB Single-Unit Truck	EB Multi-Unit Truck	EB Total Volume	WB Bike	WB Motorcycle	WB Automobile	WB Bus	WB Single-Unit Truck	WB Multi-Unit Truck	WB Total Volume
0000	0	0	26	1	1	1	29	0	0	42	2	0	0	44
0015	0	0	24	1	1	0	26	0	0	32	1	1	0	34
0030	0	0	16	1	1	1	19	0	1	30	1	0	0	32
0045	0	0	16	1	0	0	17	0	0	23	1	0	0	24
0100	0	0	12	2	0	0	14	0	0	13	0	3	0	16
0115	0	0	18	1	0	0	19	0	0	8	3	2	0	13
0130	0	0	9	0	0	1	10	0	0	17	0	1	0	18
0145	0	0	5	0	2	0	7	0	0	18	0	1	0	19
0200	0	0	10	0	0	0	10	0	0	10	0	1	0	11
0215	0	0	10	0	0	0	10	0	0	11	0	0	0	11
0230	0	0	7	0	1	0	8	0	0	5	0	0	0	5
0245	0	0	6	0	1	0	7	0	0	10	0	1	0	11
0300	0	0	8	0	0	0	8	0	0	8	0	0	0	8
0315	0	0	6	0	1	0	7	0	0	3	0	0	0	3
0330	0	0	6	0	0	0	6	0	0	4	0	1	0	5
0345	0	0	10	0	0	0	10	0	0	10	0	0	0	10
0400	0	0	13	0	0	0	13	0	0	13	0	0	0	13
0415	0	0	23	0	0	0	23	0	0	13	0	0	0	13
0430	0	0	27	0	0	1	28	0	0	8	0	0	0	8
0445	0	0	32	0	3	0	35	0	0	11	0	3	0	14
0500	0	0	51	0	1	0	52	0	0	12	0	1	0	13
0515	0	0	87	2	1	0	90	0	0	15	0	0	0	15
0530	0	0	191	2	3	1	197	0	0	19	3	0	0	22
0545	0	1	192	4	2	1	200	0	0	45	1	3	0	49
0600	0	2	221	2	4	0	229	0	1	40	2	0	2	45
0615	1	7	260	7	6	3	284	0	0	39	4	1	0	44
0630	1	6	345	4	8	0	364	0	0	57	2	3	0	62
0645	0	0	335	5	9	0	349	0	0	55	2	5	0	62
0700	0	2	350	7	6	0	365	0	0	55	5	3	0	63
0715	0	0	346	4	7	2	359	0	0	68	3	11	0	82
0730	2	0	347	5	1	1	356	0	0	82	4	2	0	88
0745	0	2	349	3	12	0	366	0	0	74	4	3	1	82
0800	0	1	405	3	6	0	415	0	0	65	5	6	0	76
0815	1	3	430	2	9	2	447	0	1	109	4	4	0	118
0830	1	3	438	2	4	1	449	0	0	88	5	7	1	101
0845	1	2	429	3	11	0	446	0	1	74	6	8	0	89
0900	0	0	420	3	5	1	429	0	2	95	3	4	0	104
0915	0	1	395	4	9	1	410	0	0	75	6	3	0	84
0930	0	1	393	4	8	0	406	1	0	77	5	3	0	86
0945	1	2	367	3	7	1	381	0	0	95	1	5	1	102
1000	0	0	258	4	4	3	269	1	1	101	6	2	0	111
1015	1	1	227	0	9	1	239	0	0	92	2	6	2	102
1030	0	1	215	4	5	0	225	0	0	94	2	6	0	102
1045	1	1	187	1	4	0	194	0	0	89	2	3	1	95
1100	1	1	167	3	8	1	181	0	0	120	2	4	1	127
1115	2	2	198	2	7	2	213	4	0	104	5	4	4	121
1130	0	0	192	4	5	0	201	0	0	127	0	5	1	133
1145	0	1	188	1	6	1	197	0	0	132	2	9	2	145
1200	0	2	170	2	3	0	177	0	0	137	2	2	2	143
1215	0	0	168	2	4	0	174	1	0	123	2	0	0	126
1230	0	0	174	3	9	2	188	0	0	137	1	5	4	147
1245	1	1	157	0	3	1	163	0	1	152	2	4	0	159
1300	0	1	156	3	4	1	165	1	2	154	1	0	0	158
1315	0	0	160	3	2	0	165	1	1	167	2	3	0	174
1330	0	1	171	2	9	0	183	0	2	170	1	4	1	178
1345	1	0	190	3	5	0	199	0	4	218	2	9	2	235
1400	0	0	166	2	3	0	171	3	2	235	5	4	0	249
1415	0	2	172	2	0	0	176	1	2	217	2	4	2	228
1430	0	0	203	3	3	0	209	0	2	232	4	5	0	243
1445	0	0	207	1	2	0	210	2	0	243	2	10	0	257
1500	0	0	219	4	5	0	228	0	2	266	0	6	0	274
1515	0	2	200	3	6	0	211	3	3	332	3	2	0	343
1530	0	0	214	2	8	1	225	0	2	331	7	7	0	347
1545	0	0	232	4	4	0	240	1	2	340	8	7	1	359
1600	0	1	255	3	4	0	263	1	5	295	5	5	2	313
1615	1	1	263	2	3	0	270	1	3	306	6	5	0	321
1630	0	0	265	5	3	0	273	0	2	308	3	3	0	316
1645	0	1	295	1	3	0	300	4	1	314	2	2	1	324
1700	0	1	259	2	1	1	264	0	4	293	8	3	0	308
1715	0	2	258	4	4	0	268	1	1	344	5	3	1	355
1730	1	1	270	3	2	0	277	2	3	326	4	3	0	338
1745	1	1	296	3	1	1	303	3	1	321	2	1	0	328
1800	0	0	255	2	1	0	258	0	1	284	4	3	0	292
1815	0	1	247	2	1	0	251	2	2	203	2	6	0	215
1830	1	1	225	3	0	0	230	1	1	195	3	5	1	206
1845	0	1	178	1	2	0	182	4	3	190	3	4	0	204
1900	1	2	167	3	0	0	173	2	0	195	5	1	0	203
1915	1	2	144	0	0	1	148	3	3	159	3	1	0	169
1930	0	0	119	4	3	0	126	1	1	149	6	0	0	157
1945	0	0	112	2	0	0	114	2	2	138	1	0	0	143
2000	0	0	96	1	2	0	99	2	0	138	2	2	0	144
2015	0	0	114	1	1	0	116	0	1	108	1	1	0	111
2030	1	0	109	2	0	0	112	0	0	99	0	1	0	100
2045	0	0	116	2	0	0	118	1	0	93	5	0	0	99
2100	0	0	71	2	2	0	75	0	1	82	6	2	0	91
2115	0	1	84	0	1	0	86	0	0	83	1	1	0	85
2130	0	0	100	2	1	0	103	1	2	86	2	1	0	92
2145	0	0	81	1	0	0	82	1	0	69	1	2	0	73
2200	0	0	78	2	0	0	80	0	2	66	2	1	0	71
2215	0	0	78	1	0	0	79	0	0	81	2	1	0	84
2230	0	0	65	2	0	0	67	0	0	57	1	0	1	59
2245	0	0	63	1	0	0	64	0	0	42	1	0	0	43
2300	0	1	69	2	1	0	73	0	0	52	2	1	0	55
2315	0	1	55	1	1	0	58	0	1	60	1	0	0	62
2330	0	0	29	1	0	0	30	0	0	62	1	0	0	63
2345	0	0	40	1	1	0	42	0	0	36	1	1	0	38
Total	**22**	**67**	**16082**	**196**	**286**	**34**	**16687**	**51**	**72**	**11075**	**229**	**256**	**34**	**11717**

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 1
Location:	Somerville, MA
Street 1:	McGrath Highway / MA 28
Street 2:	Rufo Road
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

BOSTON TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
DataRequest@BostonTrafficData.com
www.BostonTrafficData.com

PASSENGER CARS & HEAVY VEHICLES COMBINED

	Rufo Road Northbound				Driveway Southbound				McGrath Highway / MA 28 Eastbound				McGrath Highway / MA 28 Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
6:00 AM	0	2	0	11	0	0	0	0	1	0	194	28	4	14	42	0
6:15 AM	0	9	0	10	0	0	0	0	0	0	258	24	10	11	33	1
6:30 AM	0	3	0	17	0	1	0	0	0	0	332	27	9	10	56	1
6:45 AM	0	10	0	15	0	0	0	0	0	0	300	44	6	8	49	0
7:00 AM	0	2	0	8	0	0	0	0	0	0	324	46	10	15	59	0
7:15 AM	0	10	0	14	0	0	0	0	0	0	310	45	10	18	71	1
7:30 AM	0	9	0	8	0	0	0	0	0	0	303	48	11	16	79	0
7:45 AM	0	14	1	15	0	1	3	0	0	0	295	62	4	13	66	0
8:00 AM	0	11	0	10	0	3	0	1	0	0	374	50	15	17	60	0
8:15 AM	0	13	0	12	0	0	0	0	0	0	380	66	11	19	105	1
8:30 AM	0	11	0	13	0	0	0	0	1	0	400	47	8	21	89	1
8:45 AM	0	9	0	12	0	0	1	0	0	0	382	63	6	22	80	0
9:00 AM	0	15	0	21	0	0	0	0	0	0	365	64	11	20	90	0
9:15 AM	0	21	0	17	0	0	0	0	0	0	351	59	9	21	63	0
9:30 AM	0	13	0	15	0	1	0	0	1	0	357	52	11	19	72	1
9:45 AM	0	14	0	12	0	0	0	0	2	0	338	50	10	18	86	0
10:00 AM	0	14	0	18	0	0	1	0	1	0	227	49	6	24	94	0
10:15 AM	0	16	0	15	0	0	0	0	2	0	206	38	5	27	83	0
10:30 AM	0	24	0	25	0	0	2	0	0	0	200	30	19	26	78	1
10:45 AM	0	16	0	20	0	0	1	0	0	0	168	32	6	25	79	1
11:00 AM	0	23	0	18	0	0	1	0	1	0	144	33	7	21	103	1
11:15 AM	0	22	0	23	0	0	0	0	3	0	170	46	13	33	92	0
11:30 AM	0	32	0	34	0	0	0	0	1	0	155	41	13	32	101	0
11:45 AM	0	20	0	23	0	1	0	0	2	0	149	45	15	23	122	0
12:00 PM	0	36	0	27	0	1	1	0	0	0	136	41	10	29	109	2
12:15 PM	0	32	0	25	0	0	0	0	0	0	150	30	14	16	97	0
12:30 PM	0	28	0	18	0	1	0	0	0	0	148	41	13	21	112	0
12:45 PM	0	21	0	27	0	0	0	0	0	0	133	34	10	21	136	1
1:00 PM	0	21	0	23	0	1	0	0	1	0	135	30	14	27	135	0
1:15 PM	0	28	0	25	0	0	0	0	1	0	128	36	5	28	146	1
1:30 PM	0	22	0	37	0	1	0	0	1	0	148	34	17	28	154	1
1:45 PM	0	30	0	26	0	1	0	0	3	0	143	52	13	25	202	0
2:00 PM	0	33	0	25	0	0	0	0	0	0	143	27	9	23	213	1
2:15 PM	0	42	0	23	0	0	0	0	1	0	137	39	13	20	184	0
2:30 PM	0	43	0	22	0	0	0	0	1	0	170	36	6	15	199	1
2:45 PM	0	42	0	29	0	0	0	0	0	0	169	39	13	19	208	0
3:00 PM	0	44	0	27	0	0	0	0	0	0	188	39	13	17	224	0
3:15 PM	0	41	0	30	0	0	0	0	1	0	181	29	7	19	292	0
3:30 PM	0	49	0	28	0	0	0	0	1	0	187	32	8	20	295	1
3:45 PM	0	53	0	24	0	1	0	0	0	0	192	45	16	29	297	1
4:00 PM	0	49	0	27	0	2	0	0	0	0	220	34	16	23	262	1
4:15 PM	0	60	1	33	0	0	0	0	0	0	223	41	11	28	258	0
4:30 PM	0	54	0	26	0	1	0	0	1	0	227	43	13	23	258	0
4:45 PM	0	49	0	23	0	1	0	0	1	0	257	44	14	23	270	1
5:00 PM	0	57	0	23	0	0	0	0	0	0	216	48	14	25	255	0
5:15 PM	0	75	0	31	0	0	0	0	1	0	243	24	12	28	278	0
5:30 PM	0	55	0	29	0	0	1	0	1	0	232	43	10	16	279	1
5:45 PM	0	54	0	19	0	1	0	0	0	0	263	39	6	17	271	1
6:00 PM	0	60	0	35	0	3	0	0	0	0	210	39	14	34	228	0
6:15 PM	0	29	0	38	0	0	0	0	0	0	218	33	11	24	178	0
6:30 PM	0	31	0	24	0	0	0	0	0	0	206	22	13	34	168	0
6:45 PM	0	34	0	25	0	0	0	0	0	0	154	19	11	19	168	0
7:00 PM	0	24	0	20	0	0	0	0	1	0	137	31	11	23	168	0
7:15 PM	0	33	0	19	0	0	0	0	0	0	121	22	13	23	131	1
7:30 PM	0	24	0	28	0	2	0	0	0	0	99	22	10	24	124	0
7:45 PM	0	31	0	25	0	0	0	0	0	0	86	23	6	29	107	0

AM PEAK HOUR	Rufo Road Northbound				Driveway Southbound				McGrath Highway / MA 28 Eastbound				McGrath Highway / MA 28 Westbound			
8:15 AM																
to	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
9:15 AM	**0**	**48**	**0**	**58**	**0**	**0**	**1**	**0**	**1**	**0**	**1527**	**240**	**36**	**82**	**364**	**2**
PHF	**0.74**				**0.25**				**0.99**				**0.89**			
HV %	**0.0%**	**12.5%**	**0.0%**	**6.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**2.8%**	**0.8%**	**2.8%**	**3.7%**	**10.2%**	**50.0%**

MID PEAK HOUR	Rufo Road Northbound				Driveway Southbound				McGrath Highway / MA 28 Eastbound				McGrath Highway / MA 28 Westbound			
1:00 PM																
to	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
2:00 PM	**0**	**101**	**0**	**111**	**0**	**3**	**0**	**0**	**6**	**0**	**554**	**152**	**49**	**108**	**637**	**2**
PHF	**0.90**				**0.75**				**0.90**				**0.83**			
HV %	**0.0%**	**3.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**5.6%**	**1.3%**	**2.0%**	**0.9%**	**4.1%**	**0.0%**

PM PEAK HOUR	Rufo Road Northbound				Driveway Southbound				McGrath Highway / MA 28 Eastbound				McGrath Highway / MA 28 Westbound			
4:45 PM																
to	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
5:45 PM	**0**	**236**	**0**	**106**	**0**	**1**	**1**	**0**	**3**	**0**	**948**	**159**	**50**	**92**	**1082**	**2**
PHF	**0.81**				**0.50**				**0.92**				**0.96**			
HV %	**0.0%**	**1.3%**	**0.0%**	**0.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.5%**	**0.0%**	**0.0%**	**3.3%**	**3.0%**	**0.0%**

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 1
Location:	Somerville, MA
Street 1:	McGrath Highway / MA 28
Street 2:	Rufo Road
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

BOSTON TRAFFIC DATA
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HEAVY VEHICLES

	Rufo Road Northbound				Driveway Southbound				McGrath Highway / MA 28 Eastbound				McGrath Highway / MA 28 Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
6:00 AM	0	0	0	1	0	0	0	0	0	0	5	1	0	2	4	0
6:15 AM	0	0	0	1	0	0	0	0	0	0	12	1	0	0	6	1
6:30 AM	0	0	0	0	0	1	0	0	0	0	12	0	0	0	5	0
6:45 AM	0	1	0	1	0	0	0	0	0	0	15	0	0	1	6	0
7:00 AM	0	1	0	0	0	0	0	0	0	0	16	0	0	1	8	0
7:15 AM	0	4	0	1	0	0	0	0	0	0	17	0	0	2	11	0
7:30 AM	0	1	0	2	0	0	0	0	0	0	7	0	0	1	5	0
7:45 AM	0	3	0	1	0	0	3	0	0	0	11	1	0	0	4	0
8:00 AM	0	1	0	0	0	2	0	0	0	0	9	0	0	1	10	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	13	0	0	0	9	0
8:30 AM	0	4	0	0	0	0	0	0	0	0	6	1	1	1	8	1
8:45 AM	0	2	0	0	0	0	0	0	0	0	14	1	0	0	13	0
9:00 AM	0	0	0	4	0	0	0	0	0	0	9	0	0	2	7	0
9:15 AM	0	1	0	0	0	0	0	0	0	0	13	1	0	1	9	0
9:30 AM	0	0	0	0	0	1	0	0	0	0	10	1	0	0	8	0
9:45 AM	0	0	0	0	0	0	0	0	0	0	7	3	1	1	8	0
10:00 AM	0	0	0	0	0	0	0	0	0	0	9	2	0	0	8	0
10:15 AM	0	1	0	0	0	0	0	0	0	0	10	1	0	2	11	0
10:30 AM	0	2	0	3	0	0	0	0	0	0	9	0	0	1	8	0
10:45 AM	0	1	0	2	0	0	1	0	0	0	4	0	1	0	6	1
11:00 AM	0	0	0	1	0	0	0	0	0	0	11	2	0	1	7	0
11:15 AM	0	0	0	2	0	0	0	0	1	0	11	0	0	1	9	0
11:30 AM	0	0	0	3	0	0	0	0	0	0	9	2	0	0	6	0
11:45 AM	0	1	0	0	0	0	0	0	0	0	7	0	0	0	14	0
12:00 PM	0	0	0	0	0	1	0	0	0	0	5	0	0	0	6	0
12:15 PM	0	0	0	0	0	0	0	0	0	0	6	1	2	0	3	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	12	1	0	1	9	0
12:45 PM	0	1	0	0	0	0	0	0	0	0	3	3	0	0	4	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	7	1	1	0	3	0
1:15 PM	0	1	0	0	0	0	0	0	0	0	5	0	0	0	5	0
1:30 PM	0	1	0	0	0	0	0	0	0	0	11	1	0	1	6	0
1:45 PM	0	1	0	0	0	0	0	0	0	0	8	0	0	0	12	0
2:00 PM	0	1	0	0	0	0	0	0	0	0	5	2	1	0	9	0
2:15 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	2	8	0
2:30 PM	0	1	0	0	0	0	0	0	1	0	4	1	0	0	9	0
2:45 PM	0	2	0	0	0	0	0	0	0	0	3	0	0	0	9	0
3:00 PM	0	1	0	0	0	0	0	0	0	0	7	1	1	1	9	0
3:15 PM	0	1	0	0	0	0	0	0	0	0	10	1	0	0	6	0
3:30 PM	0	3	0	4	0	0	0	0	0	0	8	3	0	2	10	0
3:45 PM	0	1	0	0	0	0	0	0	0	0	8	0	0	5	15	0
4:00 PM	0	3	0	2	0	0	0	0	0	0	8	0	1	0	10	0
4:15 PM	0	0	1	0	0	0	0	0	0	0	4	1	1	0	11	0
4:30 PM	0	0	0	0	0	1	0	0	0	0	7	1	0	0	6	0
4:45 PM	0	0	0	1	0	0	0	0	0	0	5	0	0	0	6	0
5:00 PM	0	2	0	0	0	0	0	0	0	0	4	0	0	1	10	0
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	8	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	5	0	0	2	8	0
5:45 PM	0	1	0	1	0	0	0	0	0	0	4	1	0	0	2	0
6:00 PM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	7	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	1	8	0
6:30 PM	0	1	0	0	0	0	0	0	0	0	4	0	0	0	8	0
6:45 PM	0	0	0	1	0	0	0	0	0	0	3	0	0	0	7	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	1	6	0
7:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	4	0
7:30 PM	0	0	0	0	0	0	0	0	0	0	7	0	0	1	6	0
7:45 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	1	1	0

AM PEAK HOUR 7:00 AM to 8:00 AM	Rufo Road Northbound				Driveway Southbound				McGrath Highway / MA 28 Eastbound				McGrath Highway / MA 28 Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**9**	**0**	**4**	**0**	**0**	**3**	**0**	**0**	**0**	**51**	**1**	**0**	**4**	**28**	**0**
PHF	**0.65**				**0.25**				**0.76**				**0.62**			

MID PEAK HOUR 11:00 AM to 12:00 PM	Rufo Road Northbound				Driveway Southbound				McGrath Highway / MA 28 Eastbound				McGrath Highway / MA 28 Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**1**	**0**	**6**	**0**	**0**	**0**	**0**	**1**	**0**	**38**	**4**	**0**	**2**	**36**	**0**
PHF	**0.58**				**0.00**				**0.83**				**0.68**			

PM PEAK HOUR 3:15 PM to 4:15 PM	Rufo Road Northbound				Driveway Southbound				McGrath Highway / MA 28 Eastbound				McGrath Highway / MA 28 Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**8**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**34**	**4**	**1**	**7**	**41**	**0**
PHF	**0.50**				**0.00**				**0.86**				**0.61**			

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 1
Location:	Somerville, MA
Street 1:	McGrath Highway / MA 28
Street 2:	Rufo Road
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

BOSTON TRAFFIC DATA
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PEDESTRIANS & BICYCLES

	Rufo Road Northbound				Driveway Southbound				McGrath Highway / MA 28 Eastbound				McGrath Highway / MA 28 Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
6:00 AM	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
6:45 AM	0	0	0	2	0	0	0	0	0	1	0	0	0	0	0	0
7:00 AM	0	0	0	3	0	0	0	1	0	0	0	3	0	0	0	0
7:15 AM	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0
7:30 AM	0	0	0	1	0	0	0	2	0	1	0	2	1	0	0	0
7:45 AM	0	0	0	1	0	0	0	4	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	1	0	0	0	7	0	0	0	2	0	0	0	0
8:15 AM	0	0	0	4	0	0	0	2	0	0	0	2	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	3	0	0	0	1
9:00 AM	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0
9:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
9:30 AM	0	0	0	4	0	0	0	3	0	1	0	2	0	1	0	0
9:45 AM	0	0	0	5	0	0	0	2	0	0	0	3	1	0	0	0
10:00 AM	0	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0
10:15 AM	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0
10:30 AM	0	0	0	0	0	0	0	3	0	0	0	2	0	0	0	0
10:45 AM	0	0	0	1	0	0	0	2	0	1	0	1	0	0	0	0
11:00 AM	0	0	0	1	0	0	0	2	0	1	0	1	0	0	0	0
11:15 AM	0	0	0	1	0	0	0	3	0	2	0	6	0	4	0	0
11:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
11:45 AM	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0
12:00 PM	0	0	0	4	0	0	0	2	0	0	0	4	1	0	0	1
12:15 PM	0	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0
12:30 PM	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	1
12:45 PM	0	0	0	1	0	0	0	5	0	1	0	1	0	0	0	0
1:00 PM	0	0	0	2	0	0	0	4	0	0	0	7	0	3	0	0
1:15 PM	0	0	0	3	0	0	0	5	0	0	0	4	0	1	0	2
1:30 PM	0	0	0	1	0	0	0	3	0	0	0	2	0	2	0	0
1:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
2:00 PM	0	0	0	0	0	0	0	2	0	0	0	2	0	1	0	0
2:15 PM	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0
2:30 PM	0	0	0	3	0	0	0	1	0	0	0	2	0	1	0	0
2:45 PM	0	0	0	2	0	0	0	1	0	0	0	1	0	2	0	0
3:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
3:15 PM	0	0	0	2	0	0	0	0	0	0	0	1	0	1	0	1
3:30 PM	0	0	0	3	0	0	0	4	0	0	0	2	2	1	0	0
3:45 PM	0	0	0	2	0	0	0	0	0	0	0	0	0	1	0	0
4:00 PM	0	0	0	3	0	0	0	3	0	0	0	2	0	1	0	0
4:15 PM	0	0	0	0	0	1	0	13	0	0	0	3	0	1	0	0
4:30 PM	0	0	0	5	0	0	0	5	0	1	0	10	1	0	0	0
4:45 PM	0	0	0	3	0	0	0	2	0	0	0	2	0	4	0	0
5:00 PM	0	0	0	4	0	0	0	3	0	0	0	2	0	0	0	0
5:15 PM	0	0	1	1	0	0	0	4	0	0	0	2	0	1	0	0
5:30 PM	0	0	1	3	0	0	0	5	0	1	0	2	0	4	0	2
5:45 PM	0	0	4	4	0	0	0	0	0	1	0	1	0	3	0	0
6:00 PM	0	0	0	4	0	0	0	4	0	0	0	3	0	0	0	0
6:15 PM	0	0	0	3	0	0	0	6	0	0	0	4	0	2	0	0
6:30 PM	0	0	0	2	0	0	0	8	0	0	0	6	2	1	0	0
6:45 PM	0	0	1	1	0	0	0	4	0	0	0	4	1	3	0	0
7:00 PM	0	0	0	1	0	0	0	1	0	0	0	2	1	2	0	0
7:15 PM	0	0	1	0	0	0	0	8	0	0	0	4	0	3	0	0
7:30 PM	0	0	0	1	0	0	0	4	0	0	0	3	0	4	0	0
7:45 PM	0	0	0	0	0	0	0	5	0	0	0	2	1	2	0	0

AM PEAK HOUR 8:15 AM to 9:15 AM	Rufo Road Northbound				Driveway Southbound				McGrath Highway / MA 28 Eastbound				McGrath Highway / MA 28 Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	0	0	4	0	0	0	5	0	0	0	7	0	0	0	1

MID PEAK HOUR 1:00 PM to 2:00 PM	Rufo Road Northbound				Driveway Southbound				McGrath Highway / MA 28 Eastbound				McGrath Highway / MA 28 Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	0	0	6	0	0	0	13	0	0	0	13	0	6	0	2

PM PEAK HOUR 4:45 PM to 5:45 PM	Rufo Road Northbound				Driveway Southbound				McGrath Highway / MA 28 Eastbound				McGrath Highway / MA 28 Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	0	2	11	0	0	0	14	0	1	0	8	0	9	0	2

NOTE: Peak hour summaries here correspond to peak hours identified for passenger car and heavy vehicles combined.

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 2
Location:	Cambridge, MA
Street 1:	O'Brien Highway / MA 28
Street 2:	Third Street
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

BOSTON TRAFFIC DATA
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PASSENGER CARS & HEAVY VEHICLES COMBINED

	Third Street Northbound				Hotel Driveway Southbound				O'Brien Highway / MA 28 Eastbound				O'Brien Highway / MA 28 Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
6:00 AM	0	12	0	6	0	0	0	0	2	0	128	84	0	3	49	1
6:15 AM	0	8	0	6	0	0	0	0	2	0	172	104	0	1	46	1
6:30 AM	0	13	1	4	0	0	0	0	8	0	246	120	0	2	62	0
6:45 AM	0	17	2	9	0	2	0	0	3	0	198	124	0	0	51	0
7:00 AM	0	23	2	4	0	1	0	1	7	0	212	118	0	2	57	1
7:15 AM	0	23	1	11	0	1	0	0	5	0	213	115	0	0	74	1
7:30 AM	0	22	1	3	0	0	2	0	0	0	213	110	0	0	85	2
7:45 AM	0	22	1	6	0	6	3	1	2	0	206	111	0	0	57	7
8:00 AM	0	27	1	6	0	1	3	2	4	0	242	127	0	2	65	2
8:15 AM	0	32	1	7	0	2	0	2	0	0	283	126	0	0	102	1
8:30 AM	0	33	1	6	0	4	1	0	0	0	298	114	0	0	76	3
8:45 AM	0	30	2	5	0	2	1	1	2	1	270	116	0	0	71	1
9:00 AM	0	38	1	7	0	3	1	1	5	0	263	103	0	0	79	4
9:15 AM	0	18	1	10	0	4	1	1	1	0	251	113	0	0	71	5
9:30 AM	0	30	0	5	0	4	0	0	2	0	259	111	0	1	75	1
9:45 AM	0	25	1	8	0	0	1	1	3	0	270	110	0	0	85	0
10:00 AM	0	40	1	6	0	1	0	2	1	1	163	89	0	0	86	1
10:15 AM	0	22	2	6	0	2	1	1	7	1	147	74	0	1	77	2
10:30 AM	0	42	0	8	0	0	1	0	0	0	180	66	0	1	93	3
10:45 AM	0	30	0	5	0	3	1	0	4	2	132	69	1	1	67	2
11:00 AM	0	38	0	9	0	1	3	1	5	1	111	59	0	0	97	0
11:15 AM	0	29	1	2	0	0	0	1	1	1	130	70	1	0	102	0
11:30 AM	0	34	0	8	0	0	1	0	3	1	144	64	0	2	105	0
11:45 AM	0	49	0	7	0	1	1	2	2	1	136	52	1	0	103	2
12:00 PM	0	40	0	5	0	1	3	2	2	0	120	49	0	0	104	5
12:15 PM	0	39	1	9	0	3	0	0	3	0	131	56	0	2	88	2
12:30 PM	0	50	1	8	0	2	1	1	2	1	145	50	1	6	98	3
12:45 PM	0	51	1	8	0	3	2	1	2	2	117	61	1	1	109	4
1:00 PM	0	72	1	7	0	2	0	2	1	0	125	48	1	1	101	3
1:15 PM	0	69	1	8	0	1	0	1	5	0	127	42	1	2	111	2
1:30 PM	0	89	1	10	0	1	0	5	1	3	161	43	3	0	106	1
1:45 PM	0	105	1	5	0	1	0	2	3	1	137	47	0	1	139	4
2:00 PM	0	106	0	8	0	1	1	1	5	0	131	54	0	0	138	3
2:15 PM	0	106	1	10	0	2	0	0	1	0	117	64	2	3	105	0
2:30 PM	0	110	1	7	0	1	1	0	4	0	153	54	2	2	119	4
2:45 PM	0	97	1	9	0	1	1	1	0	1	162	61	1	0	133	4
3:00 PM	0	119	0	8	0	2	2	1	5	0	177	57	1	0	149	4
3:15 PM	0	151	0	3	0	2	0	0	2	0	177	45	0	1	165	2
3:30 PM	0	157	0	5	0	2	0	0	5	0	174	42	1	0	181	3
3:45 PM	0	143	0	8	0	0	3	1	0	0	183	71	0	1	187	6
4:00 PM	0	125	2	6	0	2	2	2	1	1	205	50	0	0	150	3
4:15 PM	0	156	0	8	0	1	1	0	3	1	209	78	0	0	161	0
4:30 PM	0	139	1	2	0	2	3	2	4	1	192	75	0	0	132	3
4:45 PM	0	136	0	6	0	3	1	2	3	1	186	81	1	0	165	3
5:00 PM	0	129	0	6	0	1	2	2	4	2	176	97	1	1	160	2
5:15 PM	0	141	0	4	0	6	3	0	7	4	191	80	2	1	171	2
5:30 PM	0	130	0	10	0	1	1	2	2	1	218	68	0	2	173	2
5:45 PM	0	143	0	4	0	3	2	0	4	1	196	76	0	0	174	5
6:00 PM	0	140	1	10	0	2	1	5	5	2	216	62	0	0	131	4
6:15 PM	0	82	0	7	0	2	0	0	1	3	204	54	0	0	129	1
6:30 PM	0	71	1	7	0	0	2	1	7	0	197	74	0	0	160	1
6:45 PM	0	69	0	10	0	4	1	1	4	1	137	46	0	0	103	3
7:00 PM	0	66	2	4	0	2	2	0	4	0	112	50	0	1	143	1
7:15 PM	0	59	2	6	0	0	2	2	1	0	126	37	1	1	118	1
7:30 PM	0	43	2	5	0	2	0	0	3	0	109	35	0	2	106	2
7:45 PM	0	37	1	2	0	1	3	1	1	0	97	35	0	2	110	1

AM PEAK HOUR 8:15 AM to 9:15 AM	Third Street Northbound				Hotel Driveway Southbound				O'Brien Highway / MA 28 Eastbound				O'Brien Highway / MA 28 Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**133**	**5**	**25**	**0**	**11**	**3**	**4**	**7**	**1**	**1114**	**459**	**0**	**0**	**328**	**9**
PHF		**0.89**				**0.90**				**0.96**				**0.82**		
HV %	**0.0%**	**6.8%**	**0.0%**	**20.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**3.2%**	**2.0%**	**0.0%**	**0.0%**	**8.8%**	**0.0%**

MID PEAK HOUR 1:00 PM to 2:00 PM	Third Street Northbound				Hotel Driveway Southbound				O'Brien Highway / MA 28 Eastbound				O'Brien Highway / MA 28 Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**335**	**4**	**30**	**0**	**5**	**0**	**10**	**10**	**4**	**550**	**180**	**5**	**4**	**457**	**10**
PHF		**0.83**				**0.63**				**0.89**				**0.83**		
HV %	**0.0%**	**1.5%**	**0.0%**	**13.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**5.5%**	**1.1%**	**0.0%**	**0.0%**	**4.4%**	**10.0%**

PM PEAK HOUR 5:00 PM to 6:00 PM	Third Street Northbound				Hotel Driveway Southbound				O'Brien Highway / MA 28 Eastbound				O'Brien Highway / MA 28 Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**543**	**0**	**24**	**0**	**11**	**8**	**4**	**17**	**8**	**781**	**321**	**3**	**4**	**678**	**11**
PHF		**0.96**				**0.64**				**0.97**				**0.97**		
HV %	**0.0%**	**1.7%**	**0.0%**	**12.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**2.6%**	**1.2%**	**0.0%**	**0.0%**	**3.1%**	**0.0%**

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 2
Location:	Cambridge, MA
Street 1:	O'Brien Highway / MA 28
Street 2:	Third Street
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

BOSTON TRAFFIC DATA
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HEAVY VEHICLES

	Third Street Northbound				Hotel Driveway Southbound				O'Brien Highway / MA 28 Eastbound				O'Brien Highway / MA 28 Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
6:00 AM	0	0	0	1	0	0	0	0	0	0	5	0	0	0	7	0
6:15 AM	0	0	0	1	0	0	0	0	0	0	12	5	0	0	6	0
6:30 AM	0	1	0	0	0	0	0	0	0	0	10	4	0	0	4	0
6:45 AM	0	1	0	2	0	0	0	0	0	0	12	2	0	0	5	0
7:00 AM	0	1	0	1	0	0	0	0	0	0	12	5	0	1	7	0
7:15 AM	0	0	0	2	0	0	0	0	0	0	11	3	0	0	0	0
7:30 AM	0	1	0	1	0	0	0	0	0	0	5	3	0	0	6	0
7:45 AM	0	1	0	1	0	0	0	0	0	0	14	2	0	0	2	0
8:00 AM	0	1	0	3	0	0	0	0	0	0	6	4	0	0	10	0
8:15 AM	0	3	0	1	0	0	0	0	0	0	9	2	0	0	7	0
8:30 AM	0	1	0	1	0	0	0	0	0	0	7	2	0	0	8	0
8:45 AM	0	4	0	1	0	0	0	0	0	0	15	0	0	0	6	0
9:00 AM	0	1	0	2	0	0	0	0	0	0	5	5	0	0	8	0
9:15 AM	0	1	0	2	0	0	0	0	0	0	13	3	0	0	8	0
9:30 AM	0	3	0	1	0	0	0	0	0	0	10	1	0	0	5	0
9:45 AM	0	1	0	3	0	0	0	0	0	0	8	1	0	0	8	0
10:00 AM	0	2	0	2	0	0	0	0	0	0	9	4	0	0	6	0
10:15 AM	0	0	0	2	0	0	0	0	0	0	8	0	0	0	11	0
10:30 AM	0	2	0	2	0	0	0	0	0	0	11	1	0	0	6	0
10:45 AM	0	2	0	0	0	1	0	0	0	1	5	2	0	0	5	0
11:00 AM	0	0	0	0	0	0	0	0	0	0	11	1	0	0	8	0
11:15 AM	0	0	0	0	0	0	0	0	0	0	10	1	0	0	9	0
11:30 AM	0	2	0	3	0	0	0	0	0	0	10	2	0	0	4	0
11:45 AM	0	4	0	1	0	0	0	0	0	0	7	3	0	0	8	0
12:00 PM	0	2	0	1	0	0	0	0	0	0	6	2	0	0	6	0
12:15 PM	0	0	0	3	0	0	0	0	0	0	6	2	0	0	3	0
12:30 PM	0	1	0	2	0	0	0	0	0	0	11	3	0	0	8	0
12:45 PM	0	2	0	1	0	0	0	0	0	0	2	1	0	0	2	0
1:00 PM	0	0	0	0	0	0	0	0	0	0	6	1	0	0	2	0
1:15 PM	0	2	0	2	0	0	0	0	0	0	6	1	0	0	3	0
1:30 PM	0	1	0	1	0	0	0	0	0	0	10	0	0	0	5	0
1:45 PM	0	2	0	1	0	0	0	0	0	0	8	0	0	0	10	1
2:00 PM	0	3	0	4	0	1	0	0	0	0	5	1	0	0	8	0
2:15 PM	0	1	0	2	0	0	0	0	0	0	3	0	0	1	6	0
2:30 PM	0	0	0	1	0	1	0	0	0	0	6	0	0	0	7	1
2:45 PM	0	4	0	1	0	0	0	0	0	0	2	1	0	0	6	0
3:00 PM	0	2	0	2	0	0	0	0	0	0	7	1	0	0	5	0
3:15 PM	0	2	0	2	0	0	0	0	0	0	9	2	0	0	4	0
3:30 PM	0	6	0	2	0	0	0	0	0	0	8	3	0	0	9	0
3:45 PM	0	4	0	0	0	0	0	1	0	0	7	1	0	0	12	1
4:00 PM	0	1	0	3	0	0	0	0	0	0	9	0	0	0	12	0
4:15 PM	0	4	0	1	0	0	0	0	0	0	5	3	0	0	6	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	8	1	0	0	5	0
4:45 PM	0	1	0	0	0	0	0	0	0	0	5	0	0	0	3	0
5:00 PM	0	4	0	2	0	0	0	0	0	0	4	1	0	0	7	0
5:15 PM	0	1	0	0	0	0	0	0	0	0	8	1	0	0	7	0
5:30 PM	0	3	0	1	0	0	0	0	0	0	4	1	0	0	5	0
5:45 PM	0	1	0	0	0	0	0	0	0	0	4	1	0	0	2	0
6:00 PM	0	2	0	2	0	0	0	0	0	0	4	0	0	0	4	0
6:15 PM	0	1	0	0	0	0	0	0	0	0	3	0	0	0	8	0
6:30 PM	0	2	0	1	0	0	0	0	0	0	4	0	0	0	3	0
6:45 PM	0	1	0	3	0	0	0	0	0	0	4	0	0	0	6	0
7:00 PM	0	4	0	0	0	0	0	0	0	0	3	0	0	0	4	0
7:15 PM	0	0	0	2	0	0	0	0	0	0	1	0	0	0	3	0
7:30 PM	0	0	0	1	0	0	0	0	0	0	6	0	0	0	7	1
7:45 PM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	1	0

AM PEAK HOUR 8:45 AM to 9:45 AM	Third Street Northbound				Hotel Driveway Southbound				O'Brien Highway / MA 28 Eastbound				O'Brien Highway / MA 28 Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**9**	**0**	**6**	**0**	**0**	**0**	**0**	**0**	**0**	**43**	**9**	**0**	**0**	**27**	**0**
PHF	**0.75**				**0.00**				**0.81**				**0.84**			

MID PEAK HOUR 11:00 AM to 12:00 PM	Third Street Northbound				Hotel Driveway Southbound				O'Brien Highway / MA 28 Eastbound				O'Brien Highway / MA 28 Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**6**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**38**	**7**	**0**	**0**	**29**	**0**
PHF	**0.50**				**0.00**				**0.94**				**0.81**			

PM PEAK HOUR 3:15 PM to 4:15 PM	Third Street Northbound				Hotel Driveway Southbound				O'Brien Highway / MA 28 Eastbound				O'Brien Highway / MA 28 Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**13**	**0**	**7**	**0**	**0**	**0**	**1**	**0**	**0**	**33**	**6**	**0**	**0**	**37**	**1**
PHF	**0.63**				**0.25**				**0.89**				**0.73**			

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 2
Location:	Cambridge, MA
Street 1:	O'Brien Highway / MA 28
Street 2:	Third Street
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

BOSTON TRAFFIC DATA
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PEDESTRIANS & BICYCLES

	Third Street Northbound				Hotel Driveway Southbound				O'Brien Highway / MA 28 Eastbound				O'Brien Highway / MA 28 Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
6:00 AM	0	0	0	3	0	0	0	7	0	1	0	1	0	0	0	1
6:15 AM	0	0	0	2	0	0	0	5	0	2	0	0	0	0	0	2
6:30 AM	0	0	0	5	0	0	0	11	0	0	0	0	0	0	0	4
6:45 AM	0	0	1	1	0	0	0	10	0	1	0	0	0	0	0	1
7:00 AM	0	0	0	5	0	0	0	8	0	0	0	0	0	0	0	7
7:15 AM	0	0	0	5	0	0	0	16	0	0	0	0	0	0	0	17
7:30 AM	0	0	0	10	0	0	0	10	0	2	1	1	0	1	0	9
7:45 AM	0	0	0	15	0	0	0	12	0	1	0	1	1	0	0	8
8:00 AM	0	0	0	18	0	0	0	14	0	2	0	0	0	0	0	18
8:15 AM	0	0	0	21	0	0	0	14	0	1	1	0	1	0	0	12
8:30 AM	0	0	1	10	0	0	0	4	0	1	0	0	1	0	0	10
8:45 AM	0	0	0	10	0	0	0	5	0	1	0	0	1	0	0	12
9:00 AM	0	0	2	6	0	0	0	7	0	0	0	0	0	0	0	8
9:15 AM	0	0	0	14	0	0	0	16	0	0	0	2	0	0	0	14
9:30 AM	0	0	0	10	0	0	0	10	0	0	0	0	0	1	0	8
9:45 AM	0	0	0	14	0	0	0	4	0	2	0	0	0	1	0	9
10:00 AM	0	0	0	13	0	0	0	9	0	0	0	0	0	1	0	9
10:15 AM	0	0	1	9	0	0	0	8	0	0	0	0	0	0	0	5
10:30 AM	0	0	2	16	0	0	0	9	0	0	1	0	0	0	0	7
10:45 AM	0	0	0	11	0	0	0	8	0	2	0	0	0	0	0	5
11:00 AM	0	0	0	7	0	0	0	10	0	2	0	0	1	0	0	7
11:15 AM	0	0	0	9	0	0	0	7	0	2	0	0	0	4	0	13
11:30 AM	0	0	0	15	0	0	0	19	0	2	0	0	2	0	0	13
11:45 AM	0	0	3	9	0	0	0	9	0	3	0	1	0	0	0	8
12:00 PM	0	0	1	14	0	0	0	23	0	0	0	1	1	1	0	10
12:15 PM	0	0	0	8	0	0	0	7	0	0	0	0	1	1	0	10
12:30 PM	1	0	0	11	0	0	0	12	0	1	0	0	0	0	0	10
12:45 PM	0	0	1	8	0	0	0	9	0	3	0	0	1	1	0	9
1:00 PM	1	0	0	7	0	0	0	10	0	1	0	0	1	3	0	12
1:15 PM	0	1	0	7	0	0	1	6	0	1	0	0	1	0	0	9
1:30 PM	0	0	1	9	0	0	0	3	0	1	0	0	0	3	0	11
1:45 PM	0	0	0	8	0	0	0	2	0	1	0	0	0	0	0	3
2:00 PM	0	0	0	9	0	0	0	7	0	0	0	0	1	2	0	7
2:15 PM	0	0	1	8	0	0	0	6	0	0	0	1	1	0	0	8
2:30 PM	0	0	0	11	0	0	0	4	0	0	0	0	0	3	0	9
2:45 PM	0	0	1	13	0	0	0	5	0	0	0	0	0	2	0	11
3:00 PM	0	0	0	15	0	0	0	6	0	1	0	0	0	0	0	5
3:15 PM	0	0	1	5	0	0	0	12	0	0	0	1	1	2	0	7
3:30 PM	0	0	0	12	0	0	0	8	0	0	0	0	0	2	0	9
3:45 PM	0	0	0	9	0	0	0	2	0	0	0	0	0	2	0	7
4:00 PM	0	0	0	17	0	0	0	7	0	0	0	0	0	2	2	9
4:15 PM	1	0	0	13	0	0	0	18	0	1	0	1	0	2	1	9
4:30 PM	0	0	0	15	1	0	0	17	0	1	0	0	0	1	0	9
4:45 PM	3	0	1	9	0	0	0	16	0	0	0	0	3	1	0	11
5:00 PM	0	0	0	17	0	0	0	8	0	0	0	0	3	1	0	9
5:15 PM	0	0	1	29	0	0	0	9	0	0	0	0	3	1	0	19
5:30 PM	0	0	1	20	0	0	0	6	0	2	0	0	0	7	0	16
5:45 PM	0	0	1	26	0	0	0	9	0	4	0	0	0	3	0	14
6:00 PM	1	0	0	10	0	0	0	12	0	1	0	0	1	4	0	14
6:15 PM	0	0	3	12	0	0	0	11	0	1	0	0	0	2	0	5
6:30 PM	0	0	1	24	0	0	0	16	0	2	0	1	1	4	0	12
6:45 PM	1	0	0	20	1	0	0	7	0	0	0	0	0	5	1	19
7:00 PM	1	0	0	16	0	0	0	4	0	2	0	0	2	2	0	10
7:15 PM	0	0	0	7	0	0	0	16	0	4	0	0	0	3	0	12
7:30 PM	0	0	0	10	0	0	0	12	0	1	0	1	1	1	0	7
7:45 PM	0	0	0	12	0	0	0	12	0	0	0	0	1	4	0	14

AM PEAK HOUR 8:15 AM to 9:15 AM	Third Street Northbound				Hotel Driveway Southbound				O'Brien Highway / MA 28 Eastbound				O'Brien Highway / MA 28 Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	0	3	47	0	0	0	30	0	3	1	0	3	0	0	42

MID PEAK HOUR 1:00 PM to 2:00 PM	Third Street Northbound				Hotel Driveway Southbound				O'Brien Highway / MA 28 Eastbound				O'Brien Highway / MA 28 Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	1	1	1	31	0	0	1	21	0	4	0	0	2	6	0	35

PM PEAK HOUR 5:00 PM to 6:00 PM	Third Street Northbound				Hotel Driveway Southbound				O'Brien Highway / MA 28 Eastbound				O'Brien Highway / MA 28 Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	0	3	92	0	0	0	32	0	6	0	0	6	12	0	58

NOTE: Peak hour summaries here correspond to peak hours identified for passenger car and heavy vehicles combined.

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 3
Location:	Cambridge, MA
Street 1:	Gore Street
Street 2:	Lambert Street
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

BOSTON TRAFFIC DATA
PO BOX 1723, Framingham, MA 01701
Office: 978-746-1259
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PASSENGER CARS & HEAVY VEHICLES COMBINED

	Lambert Street Northbound				Parking Lot Driveway Southbound				Gore Street Eastbound				Gore Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
6:00 AM	0	0	0	0	0	1	16	2	0	3	10	39	0	2	4	0
6:15 AM	0	0	0	0	0	1	14	6	0	3	4	47	0	0	1	2
6:30 AM	0	0	0	0	0	1	18	6	0	3	8	39	0	1	3	0
6:45 AM	0	0	0	0	0	2	24	0	0	0	7	60	0	3	5	2
7:00 AM	0	0	0	0	0	0	24	3	0	2	13	47	0	1	8	1
7:15 AM	0	0	0	0	0	3	24	8	0	0	13	35	0	2	8	0
7:30 AM	0	0	0	0	0	3	30	3	0	1	9	35	0	0	5	2
7:45 AM	0	0	0	0	0	4	20	10	0	2	22	47	0	2	11	7
8:00 AM	0	0	0	0	0	1	21	1	0	3	11	41	0	1	11	2
8:15 AM	0	0	0	0	0	11	23	7	0	2	22	44	0	1	16	6
8:30 AM	0	0	0	0	0	4	17	2	0	8	32	29	0	0	17	0
8:45 AM	0	0	0	0	0	23	10	9	0	3	49	13	0	1	26	0
9:00 AM	0	0	0	0	0	24	3	10	0	5	82	1	0	0	14	5
9:15 AM	0	0	0	0	0	8	21	4	0	2	23	37	0	0	6	3
9:30 AM	0	0	0	0	0	10	12	6	0	0	18	50	0	1	14	7
9:45 AM	0	0	0	0	0	2	19	10	0	8	12	46	0	1	9	7
10:00 AM	0	0	0	0	0	4	19	11	0	7	14	47	0	3	11	2
10:15 AM	0	0	0	0	0	5	22	9	0	12	11	30	0	0	12	8
10:30 AM	0	0	0	0	0	8	19	4	0	7	26	31	0	1	14	5
10:45 AM	0	0	0	0	0	3	12	4	0	14	19	36	0	1	15	5
11:00 AM	0	0	0	0	0	3	21	6	0	6	25	35	0	1	11	3
11:15 AM	0	0	0	0	0	3	17	10	0	4	20	33	0	2	15	5
11:30 AM	0	0	0	0	0	7	14	13	0	10	25	29	0	7	10	7
11:45 AM	0	0	0	0	0	4	17	15	0	11	19	24	0	0	15	6
12:00 PM	0	0	0	0	0	5	22	10	0	6	30	18	0	5	19	4
12:15 PM	0	0	0	0	0	2	25	10	0	6	23	27	0	0	26	2
12:30 PM	0	0	0	0	0	2	27	10	0	3	23	18	0	1	18	3
12:45 PM	0	0	0	0	0	7	20	13	0	8	17	24	0	0	19	4
1:00 PM	0	0	0	0	0	7	16	10	0	8	30	20	0	4	18	4
1:15 PM	0	0	0	0	0	3	20	7	0	16	23	37	0	2	11	7
1:30 PM	0	0	0	0	0	11	26	9	0	7	15	30	0	2	23	3
1:45 PM	0	0	0	0	0	2	17	7	0	12	9	29	0	3	20	1
2:00 PM	0	0	0	0	0	5	17	21	0	8	16	24	0	2	15	6
2:15 PM	0	0	0	0	0	5	26	7	0	9	13	18	0	2	25	7
2:30 PM	0	0	0	0	0	1	15	7	0	14	18	30	0	1	15	8
2:45 PM	0	0	0	0	0	5	33	7	0	15	14	29	0	1	18	6
3:00 PM	0	0	0	0	0	5	25	10	0	4	14	30	0	1	19	11
3:15 PM	0	0	0	0	0	1	25	5	0	11	18	22	0	4	21	5
3:30 PM	0	0	0	0	0	4	21	10	0	9	21	27	0	3	25	10
3:45 PM	0	0	0	0	0	3	19	14	0	13	21	24	0	1	22	7
4:00 PM	0	0	0	0	0	4	20	7	0	7	18	29	0	1	25	6
4:15 PM	0	0	0	0	0	3	23	10	0	12	16	36	0	7	22	5
4:30 PM	0	0	0	0	0	3	28	10	0	13	14	28	0	1	32	6
4:45 PM	0	0	0	0	0	4	23	8	0	11	26	21	0	3	30	6
5:00 PM	0	0	0	0	0	5	32	16	0	16	11	24	0	2	23	8
5:15 PM	0	0	0	0	0	5	26	14	0	11	26	22	0	1	37	7
5:30 PM	0	0	0	0	0	5	30	16	0	9	19	28	0	4	24	4
5:45 PM	0	0	0	0	0	2	22	11	0	14	14	22	0	1	19	9
6:00 PM	0	0	0	0	0	6	13	16	0	12	19	16	0	2	26	4
6:15 PM	0	0	0	0	0	5	18	8	0	5	14	24	0	2	17	7
6:30 PM	0	0	0	0	0	2	31	11	0	8	17	20	0	1	14	3
6:45 PM	0	0	0	0	0	3	20	6	0	17	17	23	0	2	19	5
7:00 PM	0	0	0	0	0	2	15	8	0	11	16	19	0	1	17	5
7:15 PM	0	0	0	0	0	4	29	12	0	4	12	34	0	7	16	1
7:30 PM	0	0	0	0	0	3	19	3	0	14	11	13	0	0	13	3
7:45 PM	0	0	0	0	0	1	12	11	0	15	16	25	0	0	13	4

AM PEAK HOUR 8:15 AM to 9:15 AM	Lambert Street Northbound				Parking Lot Driveway Southbound				Gore Street Eastbound				Gore Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**0**	**0**	**0**	**62**	**53**	**28**	**0**	**18**	**185**	**87**	**0**	**2**	**73**	**11**
PHF	**0.00**				**0.85**				**0.82**				**0.80**			
HV %	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.6%**	**3.8%**	**3.6%**	**0.0%**	**5.6%**	**3.8%**	**4.6%**	**0.0%**	**0.0%**	**5.5%**	**18.2%**

MID PEAK HOUR 12:45 PM to 1:45 PM	Lambert Street Northbound				Parking Lot Driveway Southbound				Gore Street Eastbound				Gore Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**0**	**0**	**0**	**28**	**82**	**39**	**0**	**39**	**85**	**111**	**0**	**8**	**71**	**18**
PHF	**0.00**				**0.81**				**0.77**				**0.87**			
HV %	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**7.1%**	**2.4%**	**0.0%**	**0.0%**	**5.1%**	**3.5%**	**9.0%**	**0.0%**	**12.5%**	**5.6%**	**5.6%**

PM PEAK HOUR 4:45 PM to 5:45 PM	Lambert Street Northbound				Parking Lot Driveway Southbound				Gore Street Eastbound				Gore Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**0**	**0**	**0**	**19**	**111**	**54**	**0**	**47**	**82**	**95**	**0**	**10**	**114**	**25**
PHF	**0.00**				**0.87**				**0.95**				**0.83**			
HV %	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.8%**	**0.0%**	**0.0%**	**2.1%**	**0.0%**	**1.1%**	**0.0%**	**10.0%**	**0.0%**	**4.0%**

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 3
Location:	Cambridge, MA
Street 1:	Gore Street
Street 2:	Lambert Street
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

BOSTON TRAFFIC DATA
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HEAVY VEHICLES

	Lambert Street Northbound				Parking Lot Driveway Southbound				Gore Street Eastbound				Gore Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
6:00 AM	0	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0
6:15 AM	0	0	0	0	0	0	0	1	0	0	0	2	0	0	0	0
6:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 AM	0	0	0	0	0	1	0	0	0	0	0	1	0	0	0	0
7:00 AM	0	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0
7:15 AM	0	0	0	0	0	0	2	0	0	0	0	3	0	0	0	0
7:30 AM	0	0	0	0	0	0	2	0	0	0	0	3	0	0	0	1
7:45 AM	0	0	0	0	0	1	3	1	0	0	2	2	0	0	0	0
8:00 AM	0	0	0	0	0	0	1	0	0	0	3	3	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	1	4	0	0	1	1
8:30 AM	0	0	0	0	0	0	0	1	0	0	1	0	0	0	3	0
8:45 AM	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0
9:00 AM	0	0	0	0	0	1	0	0	0	1	4	0	0	0	0	1
9:15 AM	0	0	0	0	0	1	2	0	0	0	3	3	0	0	0	2
9:30 AM	0	0	0	0	0	2	0	1	0	0	2	4	0	1	1	2
9:45 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	2
10:00 AM	0	0	0	0	0	1	1	0	0	0	1	3	0	0	1	0
10:15 AM	0	0	0	0	0	1	2	2	0	1	0	1	0	0	0	1
10:30 AM	0	0	0	0	0	2	1	0	0	1	2	2	0	0	0	0
10:45 AM	0	0	0	0	0	1	1	0	0	3	0	2	0	0	1	1
11:00 AM	0	0	0	0	0	1	0	0	0	0	2	1	0	0	1	0
11:15 AM	0	0	0	0	0	0	1	0	0	0	0	2	0	0	0	1
11:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1	0
11:45 AM	0	0	0	0	0	0	1	1	0	1	0	3	0	0	0	0
12:00 PM	0	0	0	0	0	0	0	0	0	0	2	1	0	1	0	1
12:15 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0
12:30 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
12:45 PM	0	0	0	0	0	1	0	0	0	2	0	1	0	0	1	0
1:00 PM	0	0	0	0	0	1	1	0	0	0	1	1	0	1	1	1
1:15 PM	0	0	0	0	0	0	0	0	0	0	2	3	0	0	1	0
1:30 PM	0	0	0	0	0	0	1	0	0	0	0	5	0	0	1	0
1:45 PM	0	0	0	0	0	0	0	0	0	0	0	3	0	0	1	0
2:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0
2:15 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0
2:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
2:45 PM	0	0	0	0	0	0	0	0	0	0	2	4	0	0	1	1
3:00 PM	0	0	0	0	0	0	1	0	0	0	1	1	0	0	0	0
3:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0
3:30 PM	0	0	0	0	0	0	1	0	0	1	1	0	0	0	0	0
3:45 PM	0	0	0	0	0	0	2	2	0	0	0	2	0	0	2	0
4:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	2	1	0	1	1	0
4:30 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	2	0	0	0	0	1	0	1	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
5:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
6:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
6:15 PM	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0
6:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0

AM PEAK HOUR	Lambert Street Northbound				Parking Lot Driveway Southbound				Gore Street Eastbound				Gore Street Westbound			
9:00 AM																
to	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
10:00 AM	**0**	**0**	**0**	**0**	**0**	**4**	**2**	**1**	**0**	**1**	**9**	**8**	**0**	**1**	**2**	**7**
PHF	**0.00**				**0.58**				**0.75**				**0.63**			

MID PEAK HOUR	Lambert Street Northbound				Parking Lot Driveway Southbound				Gore Street Eastbound				Gore Street Westbound			
10:00 AM																
to	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
11:00 AM	**0**	**0**	**0**	**0**	**0**	**5**	**5**	**2**	**0**	**5**	**3**	**8**	**0**	**0**	**2**	**2**
PHF	**0.00**				**0.60**				**0.80**				**0.50**			

PM PEAK HOUR	Lambert Street Northbound				Parking Lot Driveway Southbound				Gore Street Eastbound				Gore Street Westbound			
3:30 PM																
to	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:30 PM	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**2**	**0**	**2**	**3**	**4**	**0**	**1**	**3**	**0**
PHF	**0.00**				**0.31**				**0.75**				**0.50**			

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 3
Location:	Cambridge, MA
Street 1:	Gore Street
Street 2:	Lambert Street
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

BOSTON TRAFFIC DATA
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PEDESTRIANS & BICYCLES

	Lambert Street Northbound				Parking Lot Driveway Southbound				Gore Street Eastbound				Gore Street Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
6:00 AM	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	2
6:15 AM	0	0	0	7	0	0	0	1	0	2	1	1	0	0	0	0
6:30 AM	0	0	0	13	0	0	0	2	0	2	0	1	0	1	0	0
6:45 AM	0	0	0	7	0	0	0	2	0	6	2	2	0	0	0	2
7:00 AM	0	0	0	10	0	0	0	3	0	2	2	9	0	0	0	2
7:15 AM	0	0	0	18	0	0	0	2	0	2	1	5	0	2	0	3
7:30 AM	0	0	0	5	0	2	0	2	0	2	4	3	0	0	0	1
7:45 AM	0	0	0	16	0	0	0	8	0	7	1	6	0	2	0	3
8:00 AM	0	0	0	16	0	0	0	9	0	14	4	7	0	0	0	2
8:15 AM	0	0	0	11	0	0	0	11	0	4	4	5	0	1	0	6
8:30 AM	0	0	0	11	0	0	0	11	0	16	3	1	0	1	0	14
8:45 AM	0	0	0	16	0	0	0	13	0	11	5	11	0	0	0	4
9:00 AM	0	0	0	9	0	0	0	7	0	8	2	9	0	1	0	4
9:15 AM	0	0	0	12	0	0	0	10	0	6	3	10	0	0	0	2
9:30 AM	0	0	0	8	0	0	0	9	0	5	5	8	0	3	0	5
9:45 AM	0	0	0	10	0	1	0	6	0	2	1	6	1	1	0	4
10:00 AM	0	0	0	9	0	0	0	8	0	1	1	5	0	0	0	10
10:15 AM	1	0	0	5	0	1	0	4	0	1	1	4	0	0	0	5
10:30 AM	0	0	0	7	0	1	0	21	0	0	2	8	0	0	0	8
10:45 AM	0	0	0	8	0	1	0	17	0	3	2	8	0	0	0	5
11:00 AM	0	0	0	13	0	0	0	11	0	2	0	12	0	2	0	11
11:15 AM	1	0	0	4	0	0	0	14	0	0	3	2	0	0	0	20
11:30 AM	0	0	0	5	0	0	0	9	0	1	2	6	0	1	0	11
11:45 AM	1	0	0	13	0	0	0	5	0	5	2	8	0	3	1	10
12:00 PM	0	0	0	10	0	0	0	11	0	4	1	6	0	0	2	5
12:15 PM	0	0	0	12	0	0	2	17	0	1	0	11	0	1	0	18
12:30 PM	0	0	0	33	0	0	0	8	0	2	2	23	0	2	0	7
12:45 PM	0	0	0	8	0	0	0	9	0	0	1	7	0	1	0	15
1:00 PM	0	0	0	6	0	1	2	12	0	2	0	5	0	0	0	7
1:15 PM	0	0	0	7	0	2	0	23	0	1	0	3	0	1	0	15
1:30 PM	0	1	0	12	0	0	0	15	0	2	1	11	0	1	0	4
1:45 PM	0	0	0	10	0	1	0	9	0	0	1	8	0	0	0	10
2:00 PM	1	0	0	5	0	0	0	7	0	5	2	5	0	0	1	8
2:15 PM	0	0	0	11	0	0	0	8	0	1	1	16	0	2	0	9
2:30 PM	0	0	0	14	1	0	0	5	0	3	1	8	0	1	0	10
2:45 PM	0	0	0	8	0	2	0	3	0	0	1	10	0	1	0	4
3:00 PM	0	0	0	16	0	0	0	2	0	1	2	13	0	1	0	7
3:15 PM	0	0	0	8	0	1	0	2	0	2	1	4	0	3	0	5
3:30 PM	0	1	0	12	0	1	1	1	0	1	0	9	0	0	0	3
3:45 PM	0	0	0	9	0	1	1	1	3	1	1	9	0	2	1	9
4:00 PM	0	0	0	12	0	0	1	2	0	0	1	9	0	2	0	8
4:15 PM	1	0	0	20	0	0	1	7	0	1	2	17	0	4	0	6
4:30 PM	0	0	0	13	0	1	2	11	0	3	2	4	0	3	0	8
4:45 PM	0	0	0	13	0	2	1	9	0	3	0	9	0	3	0	11
5:00 PM	0	0	0	19	0	0	0	7	1	2	1	16	0	6	0	7
5:15 PM	0	0	0	23	0	0	1	7	2	4	1	8	0	7	0	4
5:30 PM	0	0	0	21	1	1	1	7	0	6	1	15	1	5	1	12
5:45 PM	0	0	0	20	0	1	0	2	1	1	0	18	0	8	0	7
6:00 PM	0	0	0	21	0	2	0	4	0	2	3	12	0	9	1	10
6:15 PM	0	1	0	23	0	2	0	4	0	3	3	16	0	3	0	8
6:30 PM	0	0	0	18	0	0	0	4	1	2	0	11	0	4	0	10
6:45 PM	0	1	0	13	0	1	1	6	0	1	1	8	0	5	0	12
7:00 PM	0	1	0	10	0	3	0	7	0	2	2	12	0	3	0	9
7:15 PM	0	0	0	23	0	2	0	4	0	2	1	9	0	3	0	11
7:30 PM	1	1	0	24	0	1	1	4	0	1	0	16	0	7	0	7
7:45 PM	0	0	0	14	0	2	0	5	0	1	0	8	1	1	0	6

AM PEAK HOUR 8:15 AM to 9:15 AM	Lambert Street Northbound				Parking Lot Driveway Southbound				Gore Street Eastbound				Gore Street Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	0	0	47	0	0	0	42	0	39	14	26	0	3	0	28

MID PEAK HOUR 12:45 PM to 1:45 PM	Lambert Street Northbound				Parking Lot Driveway Southbound				Gore Street Eastbound				Gore Street Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	1	0	33	0	3	2	59	0	5	2	26	0	3	0	41

PM PEAK HOUR 4:45 PM to 5:45 PM	Lambert Street Northbound				Parking Lot Driveway Southbound				Gore Street Eastbound				Gore Street Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	0	0	76	1	3	3	30	3	15	3	48	1	21	1	34

NOTE: Peak hour summaries here correspond to peak hours identified for passenger car and heavy vehicles combined.

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 4
Location:	Somerville, MA
Street 1:	Medford Street
Street 2:	Warren Street
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

BOSTON TRAFFIC DATA
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PASSENGER CARS & HEAVY VEHICLES COMBINED

	Warren Street Northbound				Driveway Southbound				Medford Street Eastbound				Medford Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	38	0	11	0	0	0	0	0	0	58	0	0	0	32	1
7:15 AM	0	39	1	9	0	0	0	0	0	0	49	0	0	0	33	1
7:30 AM	0	51	1	11	0	0	0	0	0	0	46	0	0	0	21	0
7:45 AM	0	51	0	14	0	1	0	1	0	0	68	0	0	0	37	0
8:00 AM	0	49	2	13	0	1	0	0	0	1	58	0	0	0	21	2
8:15 AM	0	25	4	21	0	0	0	0	0	0	73	0	0	0	42	0
8:30 AM	0	38	2	12	0	0	0	0	0	0	69	0	0	0	40	0
8:45 AM	0	49	2	18	0	1	0	0	0	0	72	0	0	0	56	1

	Warren Street Northbound				Driveway Southbound				Medford Street Eastbound				Medford Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	69	0	29	0	2	0	1	0	0	53	0	0	0	49	1
4:15 PM	0	77	0	31	0	2	0	0	0	0	55	0	0	0	48	0
4:30 PM	0	74	0	30	0	4	0	0	0	0	51	0	0	0	62	0
4:45 PM	0	86	2	23	0	4	0	1	0	0	61	0	0	0	53	1
5:00 PM	0	70	1	41	0	7	0	1	0	0	36	0	0	0	58	1
5:15 PM	0	73	0	34	0	5	0	0	0	1	52	0	0	0	60	2
5:30 PM	0	78	1	19	0	4	0	1	0	0	46	0	0	0	58	1
5:45 PM	0	75	2	42	0	0	0	2	0	1	42	0	0	0	45	0

AM PEAK HOUR 8:00 AM to 9:00 AM	Warren Street Northbound				Driveway Southbound				Medford Street Eastbound				Medford Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**161**	**10**	**64**	**0**	**2**	**0**	**0**	**0**	**1**	**272**	**0**	**0**	**0**	**159**	**3**
PHF	**0.85**				**0.50**				**0.93**				**0.71**			
HV %	**0.0%**	**6.8%**	**0.0%**	**7.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**6.3%**	**0.0%**	**0.0%**	**0.0%**	**5.0%**	**0.0%**

PM PEAK HOUR 4:30 PM to 5:30 PM	Warren Street Northbound				Driveway Southbound				Medford Street Eastbound				Medford Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**303**	**3**	**128**	**0**	**20**	**0**	**2**	**0**	**1**	**200**	**0**	**0**	**0**	**233**	**4**
PHF	**0.97**				**0.69**				**0.82**				**0.96**			
HV %	**0.0%**	**1.0%**	**33.3%**	**2.3%**	**0.0%**	**5.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.5%**	**0.0%**	**0.0%**	**0.0%**	**0.9%**	**0.0%**

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 4
Location:	Somerville, MA
Street 1:	Medford Street
Street 2:	Warren Street
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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HEAVY VEHICLES

	Warren Street Northbound				Driveway Southbound				Medford Street Eastbound				Medford Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	1	0	5	0	0	0	0	0	0	4	0	0	0	0	0
7:15 AM	0	2	0	2	0	0	0	0	0	0	3	0	0	0	0	0
7:30 AM	0	0	0	4	0	0	0	0	0	0	4	0	0	0	0	0
7:45 AM	0	2	0	1	0	0	0	0	0	0	3	0	0	0	3	0
8:00 AM	0	2	0	1	0	0	0	0	0	0	8	0	0	0	2	0
8:15 AM	0	1	0	2	0	0	0	0	0	0	6	0	0	0	2	0
8:30 AM	0	1	0	0	0	0	0	0	0	0	1	0	0	0	4	0
8:45 AM	0	7	0	2	0	0	0	0	0	0	2	0	0	0	0	0

	Warren Street Northbound				Driveway Southbound				Medford Street Eastbound				Medford Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	1	0	1	0	0	0	0	0	0	2	0	0	0	1	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0
4:45 PM	0	0	1	1	0	1	0	0	0	0	1	0	0	0	0	0
5:00 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	0
5:15 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	1	0	2	0	0	0	0	0	0	0	0	0	0	1	0
5:45 PM	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	0

AM PEAK HOUR 7:30 AM to 8:30 AM	Warren Street Northbound				Driveway Southbound				Medford Street Eastbound				Medford Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**5**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**21**	**0**	**0**	**0**	**7**	**0**
PHF	**0.81**				**0.00**				**0.66**				**0.58**			

PM PEAK HOUR 4:45 PM to 5:45 PM	Warren Street Northbound				Driveway Southbound				Medford Street Eastbound				Medford Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**4**	**1**	**5**	**0**	**1**	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**2**	**0**
PHF	**0.63**				**0.25**				**0.25**				**0.50**			

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 4
Location:	Somerville, MA
Street 1:	Medford Street
Street 2:	Warren Street
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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PEDESTRIANS & BICYCLES

	Warren Street Northbound				Driveway Southbound				Medford Street Eastbound				Medford Street Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
7:00 AM	0	0	1	5	0	0	0	5	0	2	0	0	0	0	0	0
7:15 AM	0	0	0	5	0	0	0	4	0	4	0	0	0	2	0	0
7:30 AM	0	1	0	2	0	0	0	7	1	7	0	0	0	1	0	0
7:45 AM	0	1	0	8	0	0	0	12	1	7	1	1	0	1	0	1
8:00 AM	0	2	1	12	0	0	0	7	1	15	0	0	0	1	0	0
8:15 AM	1	0	0	4	0	0	0	12	0	9	0	0	0	1	0	0
8:30 AM	1	0	0	13	0	0	0	6	0	20	0	0	0	2	0	2
8:45 AM	1	0	2	11	0	0	0	16	2	11	0	2	0	0	0	3

	Warren Street Northbound				Driveway Southbound				Medford Street Eastbound				Medford Street Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
4:00 PM	1	0	1	12	0	0	0	8	0	1	0	0	0	4	0	1
4:15 PM	1	1	0	18	0	0	1	10	0	3	0	1	0	7	0	0
4:30 PM	0	0	0	12	1	0	1	24	0	8	0	0	1	6	0	0
4:45 PM	3	0	0	6	0	0	1	15	0	4	0	2	0	3	0	0
5:00 PM	6	0	0	12	1	0	2	14	0	4	0	1	0	6	0	3
5:15 PM	6	0	4	20	2	0	0	16	0	7	0	0	1	8	0	5
5:30 PM	4	0	2	20	0	0	0	15	0	3	0	0	0	7	0	2
5:45 PM	3	0	1	16	1	0	0	25	0	1	0	0	0	7	0	5

AM PEAK HOUR[1] 8:00 AM to 9:00 AM	Warren Street Northbound				Driveway Southbound				Medford Street Eastbound				Medford Street Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	3	2	3	40	0	0	0	41	3	55	0	2	0	4	0	5

PM PEAK HOUR[1] 4:30 PM to 5:30 PM	Warren Street Northbound				Driveway Southbound				Medford Street Eastbound				Medford Street Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	15	0	4	50	4	0	4	69	0	23	0	3	2	23	0	8

[1] *NOTE: Peak hour summaries here correspond to peak hours identified for passenger cars and heavy vehicles combined.*

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 5
Location:	Somerville, MA
Street 1:	McGrath Highway / MA 28
Street 2:	Poplar Street
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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PASSENGER CARS & HEAVY VEHICLES COMBINED

	Poplar Street								McGrath Highway / MA 28							
	Northbound				Southbound				Eastbound				Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	0	0	0	0	0	0	5	0	0	0	0	0	0	51	9
7:15 AM	0	0	0	0	0	0	0	5	0	0	0	0	0	0	78	3
7:30 AM	0	0	0	0	0	0	0	8	0	0	0	0	0	0	89	6
7:45 AM	0	0	0	0	0	0	0	6	0	0	0	0	0	0	75	11
8:00 AM	0	0	0	0	0	0	0	7	0	0	0	0	0	0	65	12
8:15 AM	0	0	0	0	0	0	0	11	0	0	0	0	0	0	109	8
8:30 AM	0	0	0	0	0	0	0	7	0	0	0	0	0	0	88	8
8:45 AM	0	0	0	0	0	0	0	7	0	0	0	0	0	0	83	11

	Poplar Street								McGrath Highway / MA 28							
	Northbound				Southbound				Eastbound				Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	296	17
4:15 PM	0	0	0	0	0	0	0	8	0	0	0	0	0	0	310	27
4:30 PM	0	0	0	0	0	0	0	3	0	0	0	0	0	0	287	22
4:45 PM	0	0	0	0	0	0	0	4	0	0	0	0	0	0	323	8
5:00 PM	0	0	0	0	0	0	0	8	0	0	0	0	0	0	292	17
5:15 PM	0	0	0	0	0	0	0	8	0	0	0	0	0	0	344	22
5:30 PM	0	0	0	0	0	0	0	5	0	0	0	0	0	0	289	30
5:45 PM	0	0	0	0	0	0	0	5	0	0	0	0	0	0	345	16

AM PEAK HOUR	Poplar Street								McGrath Highway / MA 28							
8:00 AM	Northbound				Southbound				Eastbound				Westbound			
to	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
9:00 AM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**32**	**0**	**0**	**0**	**0**	**0**	**0**	**345**	**39**
PHF	**0.00**				**0.73**				**0.00**				**0.82**			
HV %	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**25.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**9.6%**	**25.6%**

PM PEAK HOUR	Poplar Street								McGrath Highway / MA 28							
5:00 PM	Northbound				Southbound				Eastbound				Westbound			
to	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
6:00 PM	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**26**	**0**	**0**	**0**	**0**	**0**	**0**	**1270**	**85**
PHF	**0.00**				**0.81**				**0.00**				**0.93**			
HV %	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**15.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**2.2%**	**7.1%**

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 5
Location:	Somerville, MA
Street 1:	McGrath Highway / MA 28
Street 2:	Poplar Street
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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HEAVY VEHICLES

	Northbound				Poplar Street Southbound				Eastbound				McGrath Highway / MA 28 Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	7	1
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	15	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	1
7:45 AM	0	0	0	0	0	0	0	3	0	0	0	0	0	0	8	0
8:00 AM	0	0	0	0	0	0	0	3	0	0	0	0	0	0	8	1
8:15 AM	0	0	0	0	0	0	0	3	0	0	0	0	0	0	5	1
8:30 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	10	4
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	4

	Northbound				Poplar Street Southbound				Eastbound				McGrath Highway / MA 28 Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	2
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	1
4:45 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	9	2
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	8	3
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	1
5:45 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	5	0

AM PEAK HOUR 8:00 AM to 9:00 AM	Northbound				Poplar Street Southbound				Eastbound				McGrath Highway / MA 28 Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**0**	**0**	**0**	**33**	**10**
PHF	**0.00**				**0.67**				**0.00**				**0.77**			

PM PEAK HOUR 5:00 PM to 6:00 PM	Northbound				Poplar Street Southbound				Eastbound				McGrath Highway / MA 28 Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**0**	**0**	**0**	**0**	**0**	**4**	**0**	**0**	**0**	**0**	**0**	**0**	**28**	**6**
PHF	**0.00**				**0.50**				**0.00**				**0.77**			

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 5
Location:	Somerville, MA
Street 1:	McGrath Highway / MA 28
Street 2:	Poplar Street
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

BOSTON TRAFFIC DATA
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PEDESTRIANS & BICYCLES

	Poplar Street								McGrath Highway / MA 28							
	Northbound				Southbound				Eastbound				Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
7:00 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
8:30 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0

	Poplar Street								McGrath Highway / MA 28							
	Northbound				Southbound				Eastbound				Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
4:00 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	9	0	0	0	0	0	1	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0
5:00 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0
5:15 PM	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	2	0	0	0	0	0	2	0	0
5:45 PM	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0

AM PEAK HOUR[1]	Poplar Street								McGrath Highway / MA 28							
8:00 AM	Northbound				Southbound				Eastbound				Westbound			
to	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
9:00 AM	0	0	0	0	0	0	0	4	0	0	0	0	0	1	0	0

PM PEAK HOUR[1]	Poplar Street								McGrath Highway / MA 28							
5:00 PM	Northbound				Southbound				Eastbound				Westbound			
to	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
6:00 PM	0	0	0	0	0	0	2	4	0	0	0	0	0	3	2	0

[1] *NOTE: Peak hour summaries here correspond to peak hours identified for passenger cars and heavy vehicles combined.*

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 6
Location:	Somerville, MA
Street 1:	Medford Street
Street 2:	Somerville Avenue Ext
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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PASSENGER CARS & HEAVY VEHICLES COMBINED

	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Ext Eastbound				Somerville Avenue Ext Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	0	44	1	0	0	0	0	0	17	36	0	0	0	0	0
7:15 AM	0	0	34	0	0	0	0	0	0	14	44	0	0	0	0	0
7:30 AM	0	0	49	4	0	0	0	0	0	15	35	0	0	0	0	0
7:45 AM	0	0	41	3	0	0	0	0	0	17	63	0	0	0	0	0
8:00 AM	0	0	56	3	0	0	0	0	0	16	42	0	0	0	0	0
8:15 AM	0	0	40	0	0	0	0	0	0	14	56	0	0	0	0	0
8:30 AM	0	0	52	2	0	0	0	0	0	15	59	0	0	0	0	0
8:45 AM	0	0	45	2	0	0	0	0	0	4	50	0	0	0	0	0

	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Ext Eastbound				Somerville Avenue Ext Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	0	99	0	0	0	0	0	0	37	51	0	0	0	0	0
4:15 PM	0	0	100	0	0	0	0	0	0	26	49	0	0	0	0	0
4:30 PM	0	0	113	1	0	0	0	0	0	24	50	0	0	0	0	0
4:45 PM	0	0	101	3	0	0	0	0	0	22	46	0	0	0	0	0
5:00 PM	0	0	108	2	0	0	0	0	0	29	54	0	0	0	0	0
5:15 PM	0	0	93	1	0	0	0	0	0	22	62	0	0	0	0	0
5:30 PM	0	0	113	2	0	0	0	0	0	22	62	0	0	0	0	0
5:45 PM	0	0	99	1	0	0	0	0	0	29	61	0	0	0	0	0

AM PEAK HOUR 7:45 AM to 8:45 AM	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Ext Eastbound				Somerville Avenue Ext Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**189**	**8**	**0**	**0**	**0**	**0**	**0**	**62**	**220**	**0**	**0**	**0**	**0**	**0**
PHF	**0.83**				**0.00**				**0.88**				**0.00**			
HV %	**0.0%**	**0.0%**	**5.8%**	**12.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**8.1%**	**11.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**

PM PEAK HOUR 5:00 PM to 6:00 PM	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Ext Eastbound				Somerville Avenue Ext Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**413**	**6**	**0**	**0**	**0**	**0**	**0**	**102**	**239**	**0**	**0**	**0**	**0**	**0**
PHF	**0.91**				**0.00**				**0.95**				**0.00**			
HV %	**0.0%**	**0.0%**	**1.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**3.9%**	**8.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 6
Location:	Somerville, MA
Street 1:	Medford Street
Street 2:	Somerville Avenue Ext
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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HEAVY VEHICLES

	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Ext Eastbound				Somerville Avenue Ext Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	0	2	0	0	0	0	0	0	2	7	0	0	0	0	0
7:15 AM	0	0	1	0	0	0	0	0	0	0	12	0	0	0	0	0
7:30 AM	0	0	0	1	0	0	0	0	0	1	5	0	0	0	0	0
7:45 AM	0	0	1	1	0	0	0	0	0	0	10	0	0	0	0	0
8:00 AM	0	0	3	0	0	0	0	0	0	3	5	0	0	0	0	0
8:15 AM	0	0	3	0	0	0	0	0	0	2	5	0	0	0	0	0
8:30 AM	0	0	4	0	0	0	0	0	0	0	5	0	0	0	0	0
8:45 AM	0	0	6	2	0	0	0	0	0	1	6	0	0	0	0	0

	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Ext Eastbound				Somerville Avenue Ext Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	0	5	0	0	0	0	0	0	3	6	0	0	0	0	0
4:15 PM	0	0	3	0	0	0	0	0	0	0	3	0	0	0	0	0
4:30 PM	0	0	1	0	0	0	0	0	0	0	8	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0
5:00 PM	0	0	3	0	0	0	0	0	0	0	4	0	0	0	0	0
5:15 PM	0	0	2	0	0	0	0	0	0	2	7	0	0	0	0	0
5:30 PM	0	0	1	0	0	0	0	0	0	1	6	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	1	4	0	0	0	0	0

AM PEAK HOUR 8:00 AM to 9:00 AM	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Ext Eastbound				Somerville Avenue Ext Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**16**	**2**	**0**	**0**	**0**	**0**	**0**	**6**	**21**	**0**	**0**	**0**	**0**	**0**
PHF	**0.56**				**0.00**				**0.84**				**0.00**			

PM PEAK HOUR 4:00 PM to 5:00 PM	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Ext Eastbound				Somerville Avenue Ext Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**9**	**0**	**0**	**0**	**0**	**0**	**0**	**5**	**18**	**0**	**0**	**0**	**0**	**0**
PHF	**0.45**				**0.00**				**0.64**				**0.00**			

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 6
Location:	Somerville, MA
Street 1:	Medford Street
Street 2:	Somerville Avenue Ext
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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PEDESTRIANS & BICYCLES

	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Ext Eastbound				Somerville Avenue Ext Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
7:15 AM	0	1	0	6	0	0	0	0	0	0	0	4	0	0	0	0
7:30 AM	0	0	0	1	0	0	0	1	0	2	0	2	0	0	0	0
7:45 AM	0	0	0	3	0	0	0	0	0	0	0	3	0	0	0	1
8:00 AM	0	0	0	3	0	0	0	0	0	1	0	4	0	0	0	1
8:15 AM	0	1	0	6	0	0	0	1	0	1	0	1	0	0	0	1
8:30 AM	0	1	0	6	0	0	0	1	1	1	0	3	0	0	0	0
8:45 AM	0	1	0	17	0	0	0	2	0	1	0	15	0	0	0	0

	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Ext Eastbound				Somerville Avenue Ext Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
4:00 PM	0	2	0	11	0	0	0	0	0	1	0	2	0	0	0	0
4:15 PM	0	4	0	3	0	0	0	0	0	3	0	1	0	0	0	1
4:30 PM	0	2	0	2	0	0	0	0	0	0	0	11	0	0	0	0
4:45 PM	0	2	0	3	0	0	0	0	0	0	0	1	0	0	0	1
5:00 PM	0	9	1	3	0	0	0	0	0	0	0	2	0	0	0	3
5:15 PM	0	8	0	4	0	0	0	0	0	0	0	2	0	0	0	0
5:30 PM	0	6	0	3	0	0	0	0	0	0	0	9	0	0	0	1
5:45 PM	0	4	0	7	0	0	0	0	3	1	0	7	0	0	0	0

AM PEAK HOUR[1] 7:45 AM to 8:45 AM	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Ext Eastbound				Somerville Avenue Ext Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	2	0	18	0	0	0	2	1	3	0	11	0	0	0	3

PM PEAK HOUR[1] 5:00 PM to 6:00 PM	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Ext Eastbound				Somerville Avenue Ext Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	27	1	17	0	0	0	0	3	1	0	20	0	0	0	4

[1] *NOTE: Peak hour summaries here correspond to peak hours identified for passenger cars and heavy vehicles combined.*

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 7
Location:	Somerville, MA
Street 1:	Medford Street
Street 2:	Somerville Avenue
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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PASSENGER CARS & HEAVY VEHICLES COMBINED

	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Eastbound				Somerville Avenue Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	4	0	0	0	23	103	27	0	0	30	5	0	0	0	0
7:15 AM	0	7	0	0	0	28	102	20	0	0	30	4	0	0	0	0
7:30 AM	0	4	0	0	0	22	130	41	0	0	28	7	0	0	0	0
7:45 AM	0	8	0	0	0	39	140	26	0	0	41	14	0	0	0	0
8:00 AM	0	5	0	0	0	28	130	21	0	0	30	9	0	0	0	0
8:15 AM	0	6	0	0	0	34	152	32	0	0	35	17	0	0	0	0
8:30 AM	0	8	0	0	0	33	141	17	0	0	42	11	0	0	0	0
8:45 AM	0	16	0	0	0	28	164	19	0	0	26	17	0	0	0	0

	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Eastbound				Somerville Avenue Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	14	0	0	0	32	82	26	0	0	56	5	0	0	0	0
4:15 PM	0	4	0	0	0	36	91	27	0	0	39	8	0	0	0	0
4:30 PM	0	8	0	0	0	28	60	22	0	0	46	15	0	0	0	0
4:45 PM	0	7	0	0	0	24	79	31	0	0	45	7	0	0	0	0
5:00 PM	0	5	0	0	0	39	69	23	0	0	43	5	0	0	0	0
5:15 PM	0	9	0	0	0	24	90	26	0	0	60	14	0	0	0	0
5:30 PM	0	9	0	0	0	29	71	29	0	0	55	11	0	0	0	0
5:45 PM	0	8	0	0	0	35	85	28	0	0	55	7	0	0	0	0

AM PEAK HOUR 8:00 AM to 9:00 AM	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Eastbound				Somerville Avenue Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**35**	**0**	**0**	**0**	**123**	**587**	**89**	**0**	**0**	**133**	**54**	**0**	**0**	**0**	**0**
PHF	**0.55**				**0.92**				**0.88**				**0.00**			
HV %	**0.0%**	**2.9%**	**0.0%**	**0.0%**	**0.0%**	**10.6%**	**5.1%**	**13.5%**	**0.0%**	**0.0%**	**11.3%**	**9.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**

PM PEAK HOUR 5:00 PM to 6:00 PM	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Eastbound				Somerville Avenue Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**31**	**0**	**0**	**0**	**127**	**315**	**106**	**0**	**0**	**213**	**37**	**0**	**0**	**0**	**0**
PHF	**0.86**				**0.93**				**0.84**				**0.00**			
HV %	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**8.7%**	**0.0%**	**3.8%**	**0.0%**	**0.0%**	**6.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 7
Location:	Somerville, MA
Street 1:	Medford Street
Street 2:	Somerville Avenue
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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HEAVY VEHICLES

	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Eastbound				Somerville Avenue Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	0	0	0	0	5	11	5	0	0	4	0	0	0	0	0
7:15 AM	0	1	0	0	0	9	5	1	0	0	3	0	0	0	0	0
7:30 AM	0	0	0	0	0	4	6	5	0	0	2	1	0	0	0	0
7:45 AM	0	1	0	0	0	8	5	6	0	0	2	1	0	0	0	0
8:00 AM	0	1	0	0	0	4	6	3	0	0	4	1	0	0	0	0
8:15 AM	0	0	0	0	0	3	13	2	0	0	4	1	0	0	0	0
8:30 AM	0	0	0	0	0	3	5	3	0	0	2	1	0	0	0	0
8:45 AM	0	0	0	0	0	3	6	4	0	0	5	2	0	0	0	0

	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Eastbound				Somerville Avenue Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	0	0	0	0	2	4	2	0	0	7	0	0	0	0	0
4:15 PM	0	1	0	0	0	1	6	0	0	0	2	0	0	0	0	0
4:30 PM	0	0	0	0	0	6	2	1	0	0	2	1	0	0	0	0
4:45 PM	0	0	0	0	0	0	3	3	0	0	3	0	0	0	0	0
5:00 PM	0	0	0	0	0	2	0	0	0	0	2	0	0	0	0	0
5:15 PM	0	0	0	0	0	4	0	2	0	0	5	0	0	0	0	0
5:30 PM	0	0	0	0	0	2	0	1	0	0	5	0	0	0	0	0
5:45 PM	0	0	0	0	0	3	0	1	0	0	2	0	0	0	0	0

AM PEAK HOUR 7:00 AM to 8:00 AM	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Eastbound				Somerville Avenue Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**2**	**0**	**0**	**0**	**26**	**27**	**17**	**0**	**0**	**11**	**2**	**0**	**0**	**0**	**0**
PHF	**0.50**				**0.83**				**0.81**				**0.00**			

PM PEAK HOUR 4:00 PM to 5:00 PM	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Eastbound				Somerville Avenue Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**1**	**0**	**0**	**0**	**9**	**15**	**6**	**0**	**0**	**14**	**1**	**0**	**0**	**0**	**0**
PHF	**0.25**				**0.83**				**0.54**				**0.00**			

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 7
Location:	Somerville, MA
Street 1:	Medford Street
Street 2:	Somerville Avenue
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

BOSTON TRAFFIC DATA
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PEDESTRIANS & BICYCLES

	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Eastbound				Somerville Avenue Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
7:00 AM	0	0	0	0	0	1	0	0	0	0	0	9	0	0	0	0
7:15 AM	0	0	0	0	0	3	0	5	0	0	1	6	0	0	0	0
7:30 AM	0	0	0	3	2	6	0	1	0	0	3	4	0	0	0	0
7:45 AM	1	0	0	1	0	8	0	0	0	0	2	5	0	0	0	1
8:00 AM	1	0	0	5	0	8	1	0	0	1	8	6	0	0	0	0
8:15 AM	1	0	0	4	0	9	0	2	0	0	4	8	0	0	0	0
8:30 AM	1	0	0	5	0	17	0	2	0	1	6	8	0	0	0	0
8:45 AM	0	0	0	3	1	13	0	1	0	0	4	13	0	0	0	0

	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Eastbound				Somerville Avenue Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
4:00 PM	0	0	0	11	0	1	0	0	0	0	1	4	0	0	0	0
4:15 PM	1	0	0	2	2	3	0	0	0	0	1	10	0	0	0	0
4:30 PM	3	0	0	10	0	4	0	0	0	0	4	7	0	0	0	0
4:45 PM	2	0	0	2	0	2	1	0	0	0	2	14	0	0	0	0
5:00 PM	3	0	0	2	0	4	0	0	0	0	0	11	0	0	0	0
5:15 PM	5	0	0	3	0	3	2	0	0	0	3	18	0	0	0	0
5:30 PM	6	0	0	9	0	1	0	2	0	0	2	9	0	0	0	0
5:45 PM	8	0	0	4	0	1	1	0	0	3	1	12	0	0	0	0

AM PEAK HOUR[1] 8:00 AM to 9:00 AM	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Eastbound				Somerville Avenue Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	3	0	0	17	1	47	1	5	0	2	22	35	0	0	0	0

PM PEAK HOUR[1] 5:00 PM to 6:00 PM	Medford Street Northbound				Medford Street Southbound				Somerville Avenue Eastbound				Somerville Avenue Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	22	0	0	18	0	9	3	2	0	3	6	50	0	0	0	0

[1] *NOTE: Peak hour summaries here correspond to peak hours identified for passenger cars and heavy vehicles combined.*

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 8
Location:	Somerville, MA
Street 1:	McGrath Highway
Street 2:	Medford Street Ext
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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PASSENGER CARS & HEAVY VEHICLES COMBINED

	Medford Street Ext Northbound				Southbound				McGrath Highway Eastbound				McGrath Highway Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	57	0	0	0	0	0	0	0	0	0	0	0	0	56	0
7:15 AM	0	52	0	0	0	0	0	0	0	0	0	0	0	0	83	0
7:30 AM	0	64	0	0	0	0	0	0	0	0	0	0	0	0	97	0
7:45 AM	0	58	0	0	0	0	0	0	0	0	0	0	0	0	81	0
8:00 AM	0	72	0	0	0	0	0	0	0	0	0	0	0	0	72	0
8:15 AM	0	51	0	0	0	0	0	0	0	0	0	0	0	0	120	0
8:30 AM	0	70	0	0	0	0	0	0	0	0	0	0	0	0	95	0
8:45 AM	0	50	0	0	0	0	0	0	0	0	0	0	0	0	90	0

	Medford Street Ext Northbound				Southbound				McGrath Highway Eastbound				McGrath Highway Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	132	0	0	0	0	0	0	0	0	0	0	0	0	298	0
4:15 PM	0	131	0	0	0	0	0	0	0	0	0	0	0	0	318	0
4:30 PM	0	136	0	0	0	0	0	0	0	0	0	0	0	0	290	0
4:45 PM	0	123	0	0	0	0	0	0	0	0	0	0	0	0	327	0
5:00 PM	0	136	0	0	0	0	0	0	0	0	0	0	0	0	300	0
5:15 PM	0	115	0	0	0	0	0	0	0	0	0	0	0	0	352	0
5:30 PM	0	134	0	0	0	0	0	0	0	0	0	0	0	0	294	0
5:45 PM	0	130	0	0	0	0	0	0	0	0	0	0	0	0	350	0

AM PEAK HOUR 8:00 AM to 9:00 AM	Medford Street Ext Northbound				Southbound				McGrath Highway Eastbound				McGrath Highway Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**243**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**377**	**0**
PHF	**0.84**				**0.00**				**0.00**				**0.79**			
HV %	**0.0%**	**9.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**10.9%**	**0.0%**

PM PEAK HOUR 5:00 PM to 6:00 PM	Medford Street Ext Northbound				Southbound				McGrath Highway Eastbound				McGrath Highway Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**515**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1296**	**0**
PHF	**0.95**				**0.00**				**0.00**				**0.92**			
HV %	**0.0%**	**2.5%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**2.5%**	**0.0%**

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 8
Location:	Somerville, MA
Street 1:	McGrath Highway
Street 2:	Medford Street Ext
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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HEAVY VEHICLES

	Medford Street Ext Northbound				Southbound				McGrath Highway Eastbound				McGrath Highway Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	4	0	0	0	0	0	0	0	0	0	0	0	0	9	0
7:15 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	16	0
7:30 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	6	0
7:45 AM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	11	0
8:00 AM	0	6	0	0	0	0	0	0	0	0	0	0	0	0	11	0
8:15 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	8	0
8:30 AM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	12	0
8:45 AM	0	7	0	0	0	0	0	0	0	0	0	0	0	0	10	0

	Medford Street Ext Northbound				Southbound				McGrath Highway Eastbound				McGrath Highway Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	8	0	0	0	0	0	0	0	0	0	0	0	0	13	0
4:15 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	11	0
4:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4	0
4:45 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	3	0
5:00 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	10	0
5:15 PM	0	5	0	0	0	0	0	0	0	0	0	0	0	0	9	0
5:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	6	0
5:45 PM	0	3	0	0	0	0	0	0	0	0	0	0	0	0	7	0

AM PEAK HOUR 8:00 AM to 9:00 AM	Medford Street Ext Northbound				Southbound				McGrath Highway Eastbound				McGrath Highway Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**23**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**41**	**0**
PHF	**0.82**				**0.00**				**0.00**				**0.85**			

PM PEAK HOUR 4:00 PM to 5:00 PM	Medford Street Ext Northbound				Southbound				McGrath Highway Eastbound				McGrath Highway Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**16**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**31**	**0**
PHF	**0.50**				**0.00**				**0.00**				**0.60**			

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 8
Location:	Somerville, MA
Street 1:	McGrath Highway
Street 2:	Medford Street Ext
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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PEDESTRIANS & BICYCLES

	Medford Street Ext Northbound				Southbound				McGrath Highway Eastbound				McGrath Highway Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
7:15 AM	1	0	0	2	0	0	0	0	0	0	0	2	0	0	0	1
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
7:45 AM	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	2
8:00 AM	0	0	0	2	0	0	0	0	0	0	0	1	0	0	0	0
8:15 AM	1	0	0	2	0	0	0	0	0	0	0	0	0	1	0	2
8:30 AM	1	0	0	1	0	0	0	0	0	0	0	2	0	0	0	1
8:45 AM	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2

	Medford Street Ext Northbound				Southbound				McGrath Highway Eastbound				McGrath Highway Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
4:00 PM	2	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0
4:15 PM	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
4:30 PM	2	0	0	11	0	0	0	0	0	0	0	1	0	1	0	8
4:45 PM	2	0	0	0	0	0	0	0	0	0	0	1	0	2	0	1
5:00 PM	9	0	0	1	0	0	0	0	0	0	0	1	0	1	0	3
5:15 PM	7	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1
5:30 PM	8	0	0	9	0	0	0	0	0	0	0	1	0	2	0	1
5:45 PM	7	0	0	6	0	0	0	0	0	0	0	1	0	2	0	2

AM PEAK HOUR[1] 8:00 AM to 9:00 AM	Medford Street Ext Northbound				Southbound				McGrath Highway Eastbound				McGrath Highway Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	3	0	0	7	0	0	0	0	0	0	0	3	0	1	0	5

PM PEAK HOUR[1] 5:00 PM to 6:00 PM	Medford Street Ext Northbound				Southbound				McGrath Highway Eastbound				McGrath Highway Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	31	0	0	18	0	0	0	0	0	0	0	3	0	5	0	7

[1] *NOTE: Peak hour summaries here correspond to peak hours identified for passenger cars and heavy vehicles combined.*

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 9
Location:	Somerville, MA
Street 1:	McGrath Highway NB
Street 2:	Washington Street EB
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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PASSENGER CARS & HEAVY VEHICLES COMBINED

	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street EB Eastbound				Washington Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	0	10	18	0	0	0	0	0	66	39	0	0	0	0	0
7:15 AM	0	0	18	25	0	0	0	0	0	78	48	0	0	0	0	0
7:30 AM	0	0	19	11	0	0	0	0	0	102	53	0	0	0	0	0
7:45 AM	0	0	19	22	0	0	0	0	0	93	57	0	0	0	0	0
8:00 AM	0	0	14	23	0	0	0	0	0	101	44	0	0	0	0	0
8:15 AM	0	0	18	25	0	0	0	0	0	86	48	0	0	0	0	0
8:30 AM	0	0	18	21	0	0	0	0	0	79	54	0	0	0	0	0
8:45 AM	0	0	17	30	0	0	0	0	0	82	71	0	0	0	0	0

	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street EB Eastbound				Washington Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	0	64	56	0	0	0	0	0	102	90	0	0	0	0	0
4:15 PM	0	0	57	33	0	0	0	0	0	109	89	0	0	0	0	0
4:30 PM	0	0	62	42	0	0	0	0	0	117	104	0	0	0	0	0
4:45 PM	0	0	64	44	0	0	0	0	0	102	90	0	0	0	0	0
5:00 PM	0	0	60	34	0	0	0	0	0	108	101	0	0	0	0	0
5:15 PM	0	0	67	48	0	0	0	0	0	113	91	0	0	0	0	0
5:30 PM	0	0	68	29	0	0	0	0	0	118	90	0	0	0	0	0
5:45 PM	0	0	58	54	0	0	0	0	0	114	86	0	0	0	0	0

AM PEAK HOUR 7:30 AM to 8:30 AM	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street EB Eastbound				Washington Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**70**	**81**	**0**	**0**	**0**	**0**	**0**	**382**	**202**	**0**	**0**	**0**	**0**	**0**
PHF	**0.88**				**0.00**				**0.94**				**0.00**			
HV %	**0.0%**	**0.0%**	**14.3%**	**16.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**3.7%**	**13.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**

PM PEAK HOUR 4:30 PM to 5:30 PM	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street EB Eastbound				Washington Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**253**	**168**	**0**	**0**	**0**	**0**	**0**	**440**	**386**	**0**	**0**	**0**	**0**	**0**
PHF	**0.92**				**0.00**				**0.93**				**0.00**			
HV %	**0.0%**	**0.0%**	**4.0%**	**4.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**2.0%**	**4.7%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 9
Location:	Somerville, MA
Street 1:	McGrath Highway NB
Street 2:	Washington Street EB
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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HEAVY VEHICLES

	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street EB Eastbound				Washington Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	0	3	1	0	0	0	0	0	2	6	0	0	0	0	0
7:15 AM	0	0	2	1	0	0	0	0	0	4	9	0	0	0	0	0
7:30 AM	0	0	3	3	0	0	0	0	0	3	6	0	0	0	0	0
7:45 AM	0	0	1	3	0	0	0	0	0	4	10	0	0	0	0	0
8:00 AM	0	0	3	1	0	0	0	0	0	5	5	0	0	0	0	0
8:15 AM	0	0	3	6	0	0	0	0	0	2	6	0	0	0	0	0
8:30 AM	0	0	1	2	0	0	0	0	0	9	9	0	0	0	0	0
8:45 AM	0	0	2	6	0	0	0	0	0	7	12	0	0	0	0	0

	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street EB Eastbound				Washington Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	0	4	2	0	0	0	0	0	0	7	0	0	0	0	0
4:15 PM	0	0	3	2	0	0	0	0	0	5	8	0	0	0	0	0
4:30 PM	0	0	1	1	0	0	0	0	0	1	10	0	0	0	0	0
4:45 PM	0	0	2	1	0	0	0	0	0	4	3	0	0	0	0	0
5:00 PM	0	0	3	5	0	0	0	0	0	1	2	0	0	0	0	0
5:15 PM	0	0	4	1	0	0	0	0	0	3	3	0	0	0	0	0
5:30 PM	0	0	2	1	0	0	0	0	0	1	5	0	0	0	0	0
5:45 PM	0	0	2	3	0	0	0	0	0	2	3	0	0	0	0	0

AM PEAK HOUR 8:00 AM to 9:00 AM	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street EB Eastbound				Washington Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**9**	**15**	**0**	**0**	**0**	**0**	**0**	**23**	**32**	**0**	**0**	**0**	**0**	**0**
PHF	**0.67**				**0.00**				**0.72**				**0.00**			

PM PEAK HOUR 4:00 PM to 5:00 PM	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street EB Eastbound				Washington Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**10**	**6**	**0**	**0**	**0**	**0**	**0**	**10**	**28**	**0**	**0**	**0**	**0**	**0**
PHF	**0.67**				**0.00**				**0.73**				**0.00**			

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 9
Location:	Somerville, MA
Street 1:	McGrath Highway NB
Street 2:	Washington Street EB
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

BOSTON TRAFFIC DATA
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PEDESTRIANS & BICYCLES

	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street EB Eastbound				Washington Street Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
7:00 AM	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0
7:15 AM	0	1	0	1	0	0	0	0	0	5	0	3	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	1	0	4	0	0	0	0	0	1
7:45 AM	0	0	0	1	0	0	0	0	1	4	0	0	0	0	0	0
8:00 AM	0	0	0	4	0	0	0	0	0	4	0	2	0	0	0	0
8:15 AM	0	0	1	3	0	0	0	0	0	10	0	0	0	0	0	0
8:30 AM	0	0	1	2	0	0	0	0	0	7	0	1	0	0	0	0
8:45 AM	0	0	0	7	0	0	0	0	0	7	0	0	0	0	0	0

	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street EB Eastbound				Washington Street Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
4:00 PM	0	2	1	5	0	0	0	0	0	5	0	0	0	0	0	0
4:15 PM	0	1	2	4	0	0	0	0	0	6	0	0	0	0	0	0
4:30 PM	0	2	2	2	0	0	0	0	0	4	0	0	0	0	0	0
4:45 PM	0	2	0	2	0	0	0	0	1	5	0	0	0	0	0	0
5:00 PM	0	5	4	3	0	0	0	0	0	7	0	0	0	0	0	0
5:15 PM	0	2	4	4	0	0	0	0	3	8	0	0	0	0	0	0
5:30 PM	0	1	3	3	0	0	0	0	1	10	0	0	0	0	0	0
5:45 PM	0	3	4	6	0	0	0	0	1	15	0	0	0	0	0	0

AM PEAK HOUR[1] 7:30 AM to 8:30 AM	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street EB Eastbound				Washington Street Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	0	1	8	0	0	0	1	1	22	0	2	0	0	0	1

PM PEAK HOUR[1] 4:30 PM to 5:30 PM	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street EB Eastbound				Washington Street Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	11	10	11	0	0	0	0	4	24	0	0	0	0	0	0

[1] *NOTE: Peak hour summaries here correspond to peak hours identified for passenger cars and heavy vehicles combined.*

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 10
Location:	Somerville, MA
Street 1:	McGrath Highway NB
Street 2:	Washington Street WB
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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PASSENGER CARS & HEAVY VEHICLES COMBINED

	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street Eastbound				Washington Street WB Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	2	74	0	0	0	0	0	0	0	0	0	0	0	130	28
7:15 AM	0	6	88	0	0	0	0	0	0	0	0	0	0	0	147	18
7:30 AM	0	3	118	0	0	0	0	0	0	0	0	0	0	0	149	15
7:45 AM	0	4	108	0	0	0	0	0	0	0	0	0	0	0	169	9
8:00 AM	0	3	110	0	0	0	0	0	0	0	0	0	0	0	170	10
8:15 AM	0	9	94	0	0	0	0	0	0	0	0	0	0	0	155	14
8:30 AM	0	7	90	0	0	0	0	0	0	0	0	0	0	0	127	15
8:45 AM	0	9	95	0	0	0	0	0	0	0	0	0	0	0	146	19

	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street Eastbound				Washington Street WB Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	19	149	0	0	0	0	0	0	0	0	0	0	0	141	25
4:15 PM	0	7	161	0	0	0	0	0	0	0	0	0	0	0	133	20
4:30 PM	0	11	168	0	0	0	0	0	0	0	0	0	0	0	114	19
4:45 PM	0	21	145	0	0	0	0	0	0	0	0	0	0	0	132	24
5:00 PM	0	12	156	0	0	0	0	0	0	0	0	0	0	0	126	17
5:15 PM	0	26	155	0	0	0	0	0	0	0	0	0	0	0	131	18
5:30 PM	0	14	172	0	0	0	0	0	0	0	0	0	0	0	149	16
5:45 PM	0	7	165	0	0	0	0	0	0	0	0	0	0	0	147	8

AM PEAK HOUR 7:30 AM to 8:30 AM	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street Eastbound				Washington Street WB Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**19**	**430**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**643**	**48**
PHF	**0.93**				**0.00**				**0.00**				**0.96**			
HV %	**0.0%**	**26.3%**	**4.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**7.6%**	**16.7%**

PM PEAK HOUR 5:00 PM to 6:00 PM	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street Eastbound				Washington Street WB Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**59**	**648**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**553**	**59**
PHF	**0.95**				**0.00**				**0.00**				**0.93**			
HV %	**0.0%**	**5.1%**	**2.3%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**2.0%**	**0.0%**

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 10
Location:	Somerville, MA
Street 1:	McGrath Highway NB
Street 2:	Washington Street WB
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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HEAVY VEHICLES

	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street Eastbound				Washington Street WB Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	0	6	0	0	0	0	0	0	0	0	0	0	0	20	1
7:15 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	18	5
7:30 AM	0	2	5	0	0	0	0	0	0	0	0	0	0	0	8	3
7:45 AM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	17	0
8:00 AM	0	2	5	0	0	0	0	0	0	0	0	0	0	0	16	2
8:15 AM	0	1	4	0	0	0	0	0	0	0	0	0	0	0	8	3
8:30 AM	0	2	8	0	0	0	0	0	0	0	0	0	0	0	12	1
8:45 AM	0	0	8	0	0	0	0	0	0	0	0	0	0	0	7	2

	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street Eastbound				Washington Street WB Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	1	4	0	0	0	0	0	0	0	0	0	0	0	8	0
4:15 PM	0	0	8	0	0	0	0	0	0	0	0	0	0	0	3	0
4:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	7	1
4:45 PM	0	0	6	0	0	0	0	0	0	0	0	0	0	0	7	0
5:00 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	2	0
5:15 PM	0	1	7	0	0	0	0	0	0	0	0	0	0	0	3	0
5:30 PM	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0
5:45 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	0

AM PEAK HOUR 7:00 AM to 8:00 AM	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street Eastbound				Washington Street WB Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**2**	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**63**	**9**
PHF	**0.75**				**0.00**				**0.00**				**0.78**			

PM PEAK HOUR 4:00 PM to 5:00 PM	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street Eastbound				Washington Street WB Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**1**	**19**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**25**	**1**
PHF	**0.63**				**0.00**				**0.00**				**0.81**			

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 10
Location:	Somerville, MA
Street 1:	McGrath Highway NB
Street 2:	Washington Street WB
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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PEDESTRIANS & BICYCLES

	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street Eastbound				Washington Street WB Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
7:00 AM	0	0	0	0	0	0	0	4	0	0	0	0	0	6	0	0
7:15 AM	0	2	0	0	0	0	0	6	0	0	0	0	0	4	0	0
7:30 AM	0	0	0	0	0	0	0	8	0	0	0	0	0	5	0	3
7:45 AM	0	1	0	1	0	0	0	23	0	0	0	0	0	9	0	3
8:00 AM	0	0	0	1	0	0	0	18	0	0	0	0	0	11	0	2
8:15 AM	0	0	0	0	0	0	0	10	0	0	0	0	0	17	0	2
8:30 AM	0	0	0	0	0	0	0	18	0	0	0	0	0	15	0	0
8:45 AM	0	0	0	0	0	0	0	19	0	0	0	0	0	15	0	4

	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street Eastbound				Washington Street WB Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
4:00 PM	0	1	0	0	0	0	0	14	0	0	0	0	0	5	0	1
4:15 PM	0	1	0	1	0	0	0	12	0	0	0	0	0	10	0	0
4:30 PM	0	4	0	0	0	0	0	24	0	0	0	0	0	7	1	0
4:45 PM	0	3	0	0	0	0	0	25	0	0	0	0	0	2	0	0
5:00 PM	0	6	0	0	0	0	0	26	0	0	0	0	0	8	0	0
5:15 PM	0	5	0	0	0	0	0	24	0	0	0	0	0	10	3	1
5:30 PM	1	3	0	0	0	0	0	20	0	0	0	0	0	8	1	0
5:45 PM	2	6	0	0	0	0	0	23	0	0	0	0	0	11	1	0

AM PEAK HOUR[1] 7:30 AM to 8:30 AM	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street Eastbound				Washington Street WB Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	1	0	2	0	0	0	59	0	0	0	0	0	42	0	10

PM PEAK HOUR[1] 5:00 PM to 6:00 PM	McGrath Highway NB Northbound				McGrath Highway Southbound				Washington Street Eastbound				Washington Street WB Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	3	20	0	0	0	0	0	93	0	0	0	0	0	37	5	1

[1] *NOTE: Peak hour summaries here correspond to peak hours identified for passenger cars and heavy vehicles combined.*

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 11
Location:	Somerville, MA
Street 1:	McGrath Highway SB
Street 2:	Washington Street WB
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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PASSENGER CARS & HEAVY VEHICLES COMBINED

	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street Eastbound				Washington Street WB Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	0	0	0	0	0	114	75	0	0	0	0	0	49	84	0
7:15 AM	0	0	0	0	0	0	124	90	0	0	0	0	0	61	91	0
7:30 AM	0	0	0	0	0	0	110	97	0	0	0	0	0	71	81	0
7:45 AM	0	0	0	0	0	0	106	87	0	0	0	0	0	87	85	0
8:00 AM	0	0	0	0	0	0	107	88	0	0	0	0	0	83	94	0
8:15 AM	0	0	0	0	0	0	114	94	0	0	0	0	0	78	81	0
8:30 AM	0	0	0	0	0	0	127	82	0	0	0	0	0	57	77	0
8:45 AM	0	0	0	0	0	0	124	79	0	0	0	0	0	78	79	0

	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street Eastbound				Washington Street WB Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	0	0	0	0	0	83	61	0	0	0	0	0	59	101	0
4:15 PM	0	0	0	0	0	0	86	62	0	0	0	0	0	61	82	0
4:30 PM	0	0	0	0	0	0	69	62	0	0	0	0	0	47	80	0
4:45 PM	0	0	0	0	0	0	86	58	0	0	0	0	0	48	105	0
5:00 PM	0	0	0	0	0	0	81	59	0	0	0	0	0	53	86	0
5:15 PM	0	0	0	0	0	0	75	65	0	0	0	0	0	53	101	0
5:30 PM	0	0	0	0	0	0	77	71	0	0	0	0	0	64	102	0
5:45 PM	0	0	0	0	0	0	69	61	0	0	0	0	0	57	94	0

AM PEAK HOUR 7:30 AM to 8:30 AM	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street Eastbound				Washington Street WB Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**0**	**0**	**0**	**0**	**437**	**366**	**0**	**0**	**0**	**0**	**0**	**319**	**341**	**0**
PHF	**0.00**				**0.97**				**0.00**				**0.93**			
HV %	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**5.0%**	**4.9%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**6.0%**	**11.4%**	**0.0%**

PM PEAK HOUR 4:45 PM to 5:45 PM	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street Eastbound				Washington Street WB Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**0**	**0**	**0**	**0**	**319**	**253**	**0**	**0**	**0**	**0**	**0**	**218**	**394**	**0**
PHF	**0.00**				**0.97**				**0.00**				**0.92**			
HV %	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**5.3%**	**1.6%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**1.8%**	**4.3%**	**0.0%**

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 11
Location:	Somerville, MA
Street 1:	McGrath Highway SB
Street 2:	Washington Street WB
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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HEAVY VEHICLES

	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street Eastbound				Washington Street WB Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	0	0	0	0	0	7	4	0	0	0	0	0	7	14	0
7:15 AM	0	0	0	0	0	0	6	6	0	0	0	0	0	9	10	0
7:30 AM	0	0	0	0	0	0	8	5	0	0	0	0	0	4	7	0
7:45 AM	0	0	0	0	0	0	6	3	0	0	0	0	0	7	12	0
8:00 AM	0	0	0	0	0	0	5	7	0	0	0	0	0	4	15	0
8:15 AM	0	0	0	0	0	0	3	3	0	0	0	0	0	4	5	0
8:30 AM	0	0	0	0	0	0	9	5	0	0	0	0	0	5	8	0
8:45 AM	0	0	0	0	0	0	9	6	0	0	0	0	0	7	2	0

	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street Eastbound				Washington Street WB Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	0	0	0	0	0	7	1	0	0	0	0	0	4	7	0
4:15 PM	0	0	0	0	0	0	8	0	0	0	0	0	0	0	3	0
4:30 PM	0	0	0	0	0	0	3	2	0	0	0	0	0	5	3	0
4:45 PM	0	0	0	0	0	0	7	1	0	0	0	0	0	2	7	0
5:00 PM	0	0	0	0	0	0	3	1	0	0	0	0	0	1	2	0
5:15 PM	0	0	0	0	0	0	3	1	0	0	0	0	0	1	4	0
5:30 PM	0	0	0	0	0	0	4	1	0	0	0	0	0	0	4	0
5:45 PM	0	0	0	0	0	0	1	1	0	0	0	0	0	1	2	0

AM PEAK HOUR 7:00 AM to 8:00 AM	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street Eastbound				Washington Street WB Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**0**	**0**	**0**	**0**	**27**	**18**	**0**	**0**	**0**	**0**	**0**	**27**	**43**	**0**
PHF	**0.00**				**0.87**				**0.00**				**0.83**			

PM PEAK HOUR 4:00 PM to 5:00 PM	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street Eastbound				Washington Street WB Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**0**	**0**	**0**	**0**	**25**	**4**	**0**	**0**	**0**	**0**	**0**	**11**	**20**	**0**
PHF	**0.00**				**0.91**				**0.00**				**0.70**			

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 11
Location:	Somerville, MA
Street 1:	McGrath Highway SB
Street 2:	Washington Street WB
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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PEDESTRIANS & BICYCLES

	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street Eastbound				Washington Street WB Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
7:00 AM	0	0	0	0	0	0	0	10	0	0	0	8	2	4	0	0
7:15 AM	0	0	0	0	0	2	0	13	0	0	0	6	1	4	0	0
7:30 AM	0	0	0	0	0	4	0	14	0	0	0	8	3	6	0	0
7:45 AM	0	0	0	0	0	2	1	40	0	0	0	7	2	8	0	0
8:00 AM	0	0	0	0	0	4	1	31	0	0	0	7	4	9	0	2
8:15 AM	0	0	0	0	0	1	1	13	0	0	0	4	6	15	0	1
8:30 AM	0	0	0	0	0	9	1	26	0	0	0	7	4	11	0	0
8:45 AM	0	0	0	0	0	8	1	20	0	0	0	11	7	9	0	0

	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street Eastbound				Washington Street WB Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
4:00 PM	0	0	0	1	0	0	0	15	0	0	0	3	0	3	0	0
4:15 PM	0	0	0	0	0	1	0	27	0	0	0	12	2	9	0	0
4:30 PM	0	0	0	0	0	0	2	33	0	0	0	12	3	4	0	0
4:45 PM	0	0	0	0	0	1	0	41	0	0	0	19	2	13	0	0
5:00 PM	0	0	0	0	0	0	1	36	0	0	0	18	2	6	0	0
5:15 PM	0	0	0	0	0	1	0	39	0	0	0	11	4	8	0	0
5:30 PM	0	0	0	0	0	0	1	36	0	0	0	24	2	7	0	0
5:45 PM	0	0	0	0	0	0	0	24	0	0	0	5	2	13	0	0

AM PEAK HOUR[1] 7:30 AM to 8:30 AM	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street Eastbound				Washington Street WB Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	0	0	0	0	11	3	98	0	0	0	26	15	38	0	3

PM PEAK HOUR[1] 4:45 PM to 5:45 PM	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street Eastbound				Washington Street WB Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	0	0	0	0	2	2	152	0	0	0	72	10	34	0	0

[1] *NOTE: Peak hour summaries here correspond to peak hours identified for passenger cars and heavy vehicles combined.*

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 12
Location:	Somerville, MA
Street 1:	McGrath Highway SB
Street 2:	Washington Street EB
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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PASSENGER CARS & HEAVY VEHICLES COMBINED

	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street EB Eastbound				Washington Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	0	0	0	0	19	146	0	0	0	86	5	0	0	0	0
7:15 AM	0	0	0	0	0	19	161	0	0	0	107	3	0	0	0	0
7:30 AM	0	0	0	0	0	12	168	0	0	0	143	6	0	0	0	0
7:45 AM	0	0	0	0	0	22	171	0	0	0	130	17	0	0	0	0
8:00 AM	0	0	0	0	0	13	176	0	0	0	132	13	0	0	0	0
8:15 AM	0	0	0	0	0	11	181	0	0	0	123	18	0	0	0	0
8:30 AM	0	0	0	0	0	18	166	0	0	0	117	11	0	0	0	0
8:45 AM	0	0	0	0	0	13	189	0	0	0	140	8	0	0	0	0

	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street EB Eastbound				Washington Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	0	0	0	0	16	126	0	0	0	177	4	0	0	0	0
4:15 PM	0	0	0	0	0	23	126	0	0	0	176	10	0	0	0	0
4:30 PM	0	0	0	0	0	24	92	0	0	0	197	7	0	0	0	0
4:45 PM	0	0	0	0	0	19	119	0	0	0	174	7	0	0	0	0
5:00 PM	0	0	0	0	0	15	113	0	0	0	194	14	0	0	0	0
5:15 PM	0	0	0	0	0	18	110	0	0	0	187	11	0	0	0	0
5:30 PM	0	0	0	0	0	27	113	0	0	0	182	9	0	0	0	0
5:45 PM	0	0	0	0	0	12	114	0	0	0	188	7	0	0	0	0

AM PEAK HOUR 7:30 AM to 8:30 AM	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street EB Eastbound				Washington Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**0**	**0**	**0**	**58**	**696**	**0**	**0**	**0**	**528**	**54**	**0**	**0**	**0**	**0**
PHF	**0.00**				**0.98**				**0.98**				**0.00**			
HV %	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**3.4%**	**5.6%**	**0.0%**	**0.0%**	**0.0%**	**6.8%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**

PM PEAK HOUR 5:00 PM to 6:00 PM	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street EB Eastbound				Washington Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**0**	**0**	**0**	**72**	**450**	**0**	**0**	**0**	**751**	**41**	**0**	**0**	**0**	**0**
PHF	**0.00**				**0.93**				**0.95**				**0.00**			
HV %	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**	**2.8%**	**2.0%**	**0.0%**	**0.0%**	**0.0%**	**2.3%**	**2.4%**	**0.0%**	**0.0%**	**0.0%**	**0.0%**

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 12
Location:	Somerville, MA
Street 1:	McGrath Highway SB
Street 2:	Washington Street EB
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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HEAVY VEHICLES

	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street EB Eastbound				Washington Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
7:00 AM	0	0	0	0	0	0	11	0	0	0	7	0	0	0	0	0
7:15 AM	0	0	0	0	0	3	10	0	0	0	8	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	12	0	0	0	10	0	0	0	0	0
7:45 AM	0	0	0	0	0	1	12	0	0	0	11	0	0	0	0	0
8:00 AM	0	0	0	0	0	1	8	0	0	0	8	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0
8:30 AM	0	0	0	0	0	4	9	0	0	0	14	1	0	0	0	0
8:45 AM	0	0	0	0	0	2	11	0	0	0	16	0	0	0	0	0

	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street EB Eastbound				Washington Street Westbound			
Start Time	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
4:00 PM	0	0	0	0	0	3	8	0	0	0	5	1	0	0	0	0
4:15 PM	0	0	0	0	0	3	5	0	0	0	11	0	0	0	0	0
4:30 PM	0	0	0	0	0	1	7	0	0	0	9	0	0	0	0	0
4:45 PM	0	0	0	0	0	3	5	0	0	0	6	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	2	0	0	0	3	0	0	0	0	0
5:15 PM	0	0	0	0	0	2	2	0	0	0	5	1	0	0	0	0
5:30 PM	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	1	0	0	0	5	0	0	0	0	0

AM PEAK HOUR 8:00 AM to 9:00 AM	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street EB Eastbound				Washington Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**0**	**0**	**0**	**7**	**35**	**0**	**0**	**0**	**45**	**1**	**0**	**0**	**0**	**0**
PHF	**0.00**				**0.81**				**0.72**				**0.00**			

PM PEAK HOUR 4:00 PM to 5:00 PM	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street EB Eastbound				Washington Street Westbound			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right
	0	**0**	**0**	**0**	**0**	**10**	**25**	**0**	**0**	**0**	**31**	**1**	**0**	**0**	**0**	**0**
PHF	**0.00**				**0.80**				**0.73**				**0.00**			

Client:	Matt Burmeister
Project #:	917_003_VHB
BTD #:	Location 12
Location:	Somerville, MA
Street 1:	McGrath Highway SB
Street 2:	Washington Street EB
Count Date:	5/25/2022
Day of Week:	Wednesday
Weather:	Mostly Sunny, 70°F

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PEDESTRIANS & BICYCLES

	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street EB Eastbound				Washington Street Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
7:00 AM	0	0	0	3	0	2	0	0	0	1	0	7	0	0	0	1
7:15 AM	0	0	0	0	0	2	0	0	0	5	1	9	0	0	0	1
7:30 AM	0	0	0	0	0	8	0	0	0	4	1	11	0	0	0	0
7:45 AM	0	0	0	1	0	5	0	0	0	6	2	6	0	0	0	0
8:00 AM	0	0	0	3	0	7	0	0	0	5	2	9	0	0	0	0
8:15 AM	0	0	0	2	0	10	0	0	0	11	0	6	0	0	0	0
8:30 AM	0	0	0	2	0	17	0	0	0	8	2	12	0	0	0	0
8:45 AM	0	0	0	5	0	14	0	0	0	9	3	12	0	0	0	0

	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street EB Eastbound				Washington Street Westbound			
Start Time	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
4:00 PM	0	0	0	6	0	1	0	0	0	6	0	7	0	0	0	0
4:15 PM	0	0	0	4	0	5	0	0	0	6	0	16	0	0	0	0
4:30 PM	0	0	0	4	0	3	0	0	0	5	1	13	0	0	0	0
4:45 PM	0	0	0	2	0	2	0	0	0	7	1	24	0	0	0	0
5:00 PM	0	0	0	3	0	3	0	0	0	6	1	15	0	0	0	0
5:15 PM	0	0	0	9	0	5	0	0	0	14	0	10	0	0	0	3
5:30 PM	0	0	0	2	0	2	0	0	0	10	0	20	0	0	0	0
5:45 PM	0	0	0	8	0	1	0	0	0	16	0	12	0	0	0	0

AM PEAK HOUR[1] 7:30 AM to 8:30 AM	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street EB Eastbound				Washington Street Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	0	0	6	0	30	0	0	0	26	5	32	0	0	0	0

PM PEAK HOUR[1] 5:00 PM to 6:00 PM	McGrath Highway Northbound				McGrath Highway SB Southbound				Washington Street EB Eastbound				Washington Street Westbound			
	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED	Left	Thru	Right	PED
	0	0	0	22	0	11	0	0	0	46	1	57	0	0	0	3

[1] *NOTE: Peak hour summaries here correspond to peak hours identified for passenger cars and heavy vehicles combined.*

Crash Data

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Somerville, MA COUNT DATE : May-22

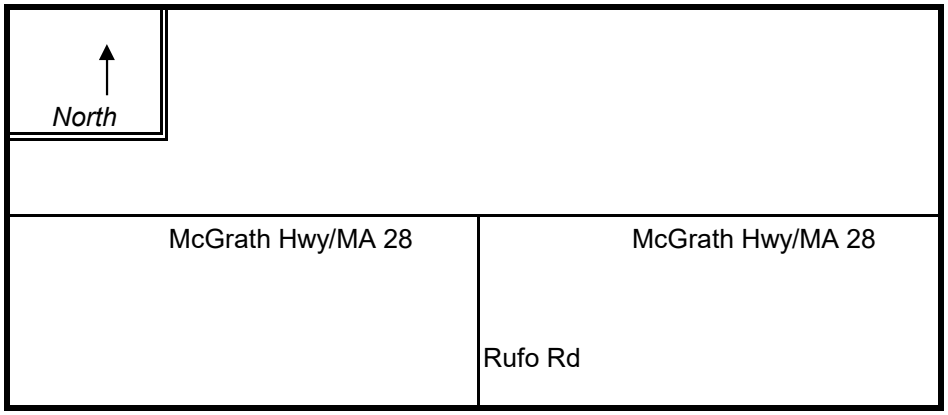
DISTRICT : 4 UNSIGNALIZED : [ ] SIGNALIZED : [X]

~ INTERSECTION DATA ~

MAJOR STREET : McGrath Highway / MA 28

MINOR STREET(S) : Rufo Road

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

approach:	NB	SB	EB	WB		Total Peak Hourly Approach Volume
PEAK HOURLY VOLUMES (AM/PM) :	343	2	1,108	1,171		**2,624**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **29,156**

TOTAL # OF CRASHES : 10

OF YEARS : 5

AVERAGE # OF CRASHES PER YEAR (**A**) : **2.00**

CRASH RATE CALCULATION : **0.19**

RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : PM

Project Title & Date: 1 McGrath Highway

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge, MA COUNT DATE : May-22

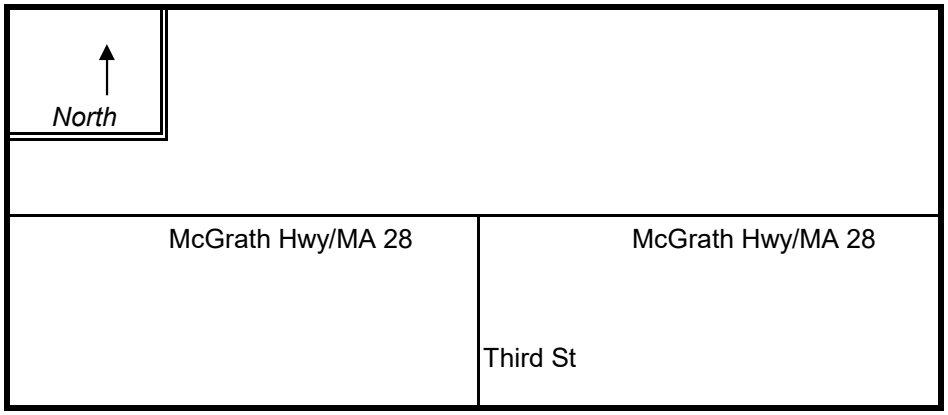
DISTRICT : 6 UNSIGNALIZED : ☐ SIGNALIZED : ☒

~ INTERSECTION DATA ~

MAJOR STREET : McGrath Highway / MA 28

MINOR STREET(S) : Third Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

approach:	NB	SB	EB	WB		Total Peak Hourly Approach Volume
PEAK HOURLY VOLUMES (AM/PM) :	567	23	1,110	693		**2,393**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **26,589**

TOTAL # OF CRASHES : 29 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (**A**) : **5.80**

CRASH RATE CALCULATION : **0.60** RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : PM

Project Title & Date: 1 McGrath Highway

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Cambridge, MA COUNT DATE : May-22

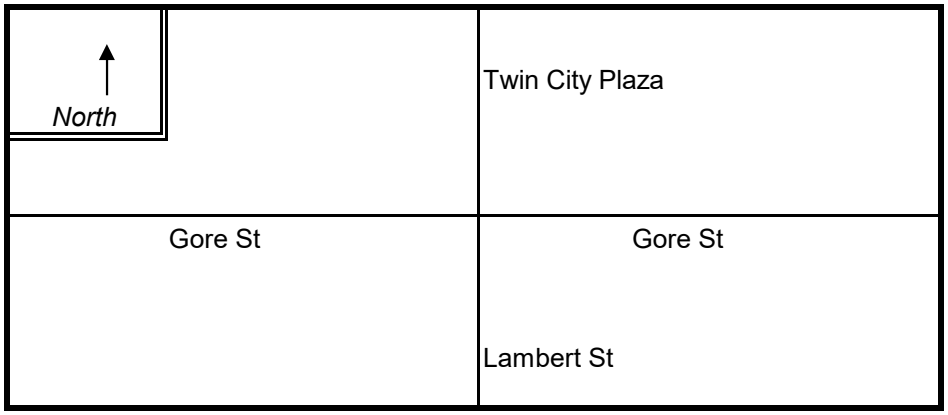
DISTRICT : 6 UNSIGNALIZED : [ ] SIGNALIZED : [X]

~ INTERSECTION DATA ~

MAJOR STREET : Gore Street

MINOR STREET(S) : Lambert Street/Twin City Plaza

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

approach:	NB	SB	EB	WB		**Total Peak Hourly Approach Volume**
PEAK HOURLY VOLUMES (AM/PM) :	0	184	216	139		**539**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **5,989**

TOTAL # OF CRASHES : 12 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (**A**) : **2.40**

CRASH RATE CALCULATION : **1.10** RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : PM

Project Title & Date: 1 McGrath Highway

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Somerville, MA COUNT DATE : May-22

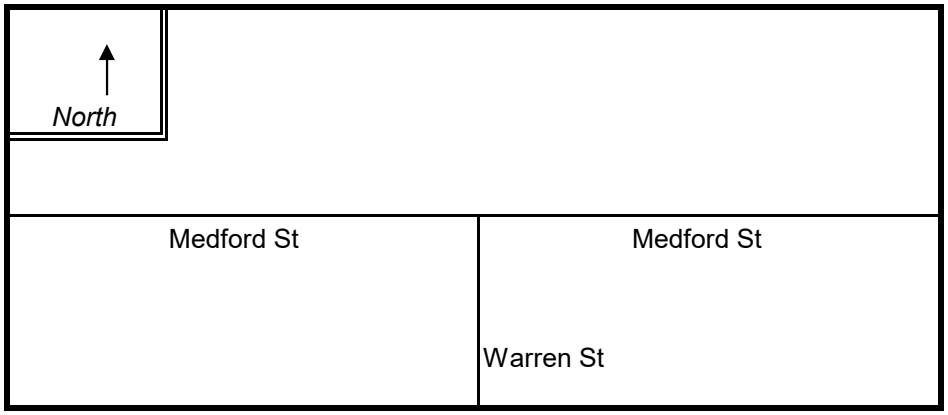
DISTRICT : 4 UNSIGNALIZED : [X] SIGNALIZED : [ ]

~ INTERSECTION DATA ~

MAJOR STREET : Medford Street

MINOR STREET(S) : Warren Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

approach:	NB	SB	EB	WB		**Total Peak Hourly Approach Volume**
PEAK HOURLY VOLUMES (AM/PM) :	436	20	178	225		**859**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **9,544**

TOTAL # OF CRASHES : 8

OF YEARS : 5

AVERAGE # OF CRASHES PER YEAR (**A**) : **1.60**

CRASH RATE CALCULATION : **0.46**

RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : PM

Project Title & Date: 1 McGrath Highway

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Somerville, MA COUNT DATE : May-22

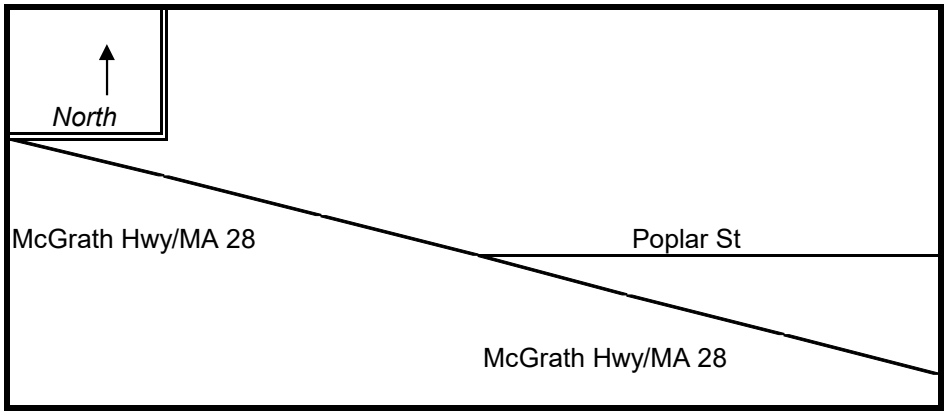
DISTRICT : 4 UNSIGNALIZED : [X] SIGNALIZED : [ ]

~ INTERSECTION DATA ~

MAJOR STREET : McGrath Highway / MA 28

MINOR STREET(S) : Poplar Street

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

approach:	NWB	SB	EB	WB		**Total Peak Hourly Approach Volume**
PEAK HOURLY VOLUMES (AM/PM) :	1,355	0	0	26		**1,381**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **15,344**

TOTAL # OF CRASHES : 2

OF YEARS : 5

AVERAGE # OF CRASHES PER YEAR (**A**) : **0.40**

CRASH RATE CALCULATION : **0.07**

RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : PM

Project Title & Date: 1 McGrath Highway

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Somerville, MA COUNT DATE : May-22

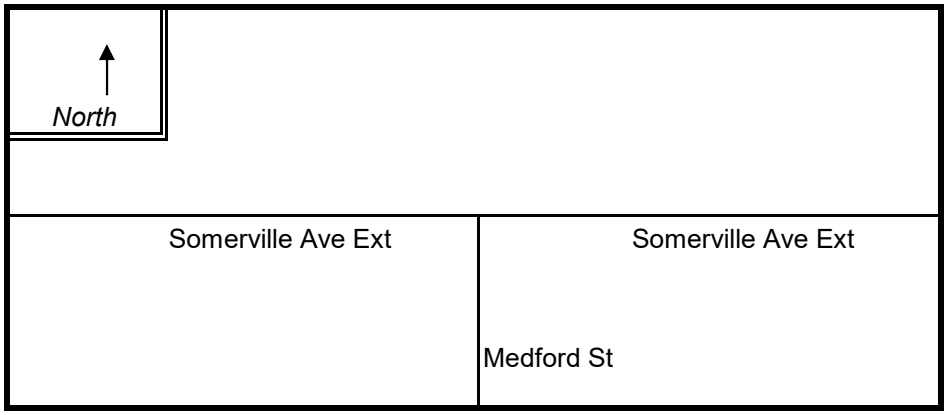
DISTRICT : 4 UNSIGNALIZED : ☐ SIGNALIZED : ☒

~ INTERSECTION DATA ~

MAJOR STREET : Medford Street

MINOR STREET(S) : Somerville Ave Extension

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

approach:	NB	SB	EB	WB		Total Peak Hourly Approach Volume
PEAK HOURLY VOLUMES (AM/PM) :	419	0	341	0		**760**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **8,444**

TOTAL # OF CRASHES : 1 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (**A**) : **0.20**

CRASH RATE CALCULATION : **0.06** RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : PM

Project Title & Date: 1 McGrath Highway

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Somerville, MA COUNT DATE : May-22

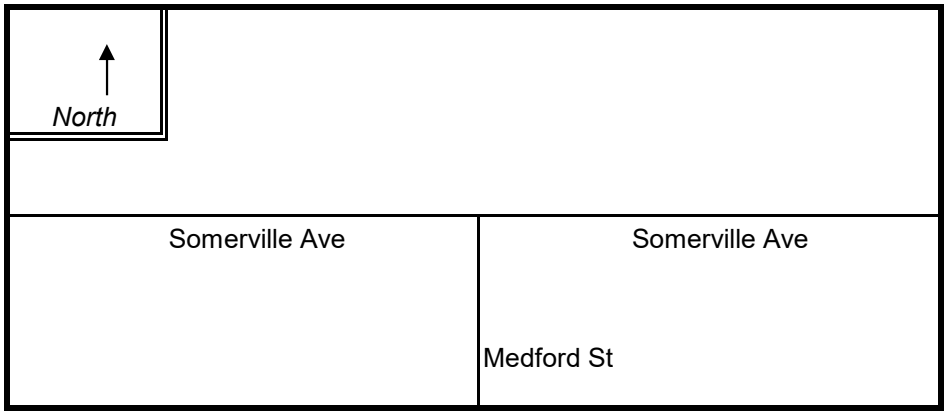
DISTRICT : 4 UNSIGNALIZED : [ ] SIGNALIZED : [X]

~ INTERSECTION DATA ~

MAJOR STREET : Medford Street

MINOR STREET(S) : Somerville Ave

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

approach:	NB	SB	EB	WB		**Total Peak Hourly Approach Volume**
PEAK HOURLY VOLUMES (AM/PM) :	31	548	250	0		**829**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **9,211**

TOTAL # OF CRASHES : 21 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (**A**) : **4.20**

CRASH RATE CALCULATION : **1.25** RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : PM

Project Title & Date: 1 McGrath Highway

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Somerville, MA COUNT DATE : May-22

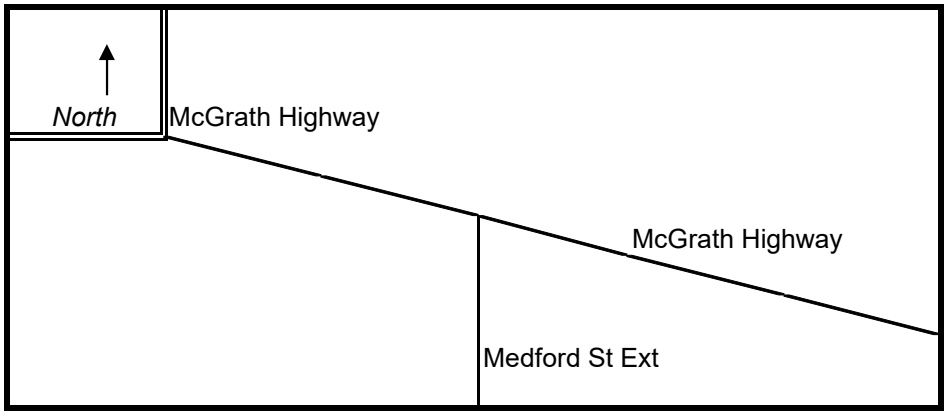
DISTRICT : 4 UNSIGNALIZED : [ ] SIGNALIZED : [X]

~ INTERSECTION DATA ~

MAJOR STREET : McGrath Highway

MINOR STREET(S) : Medford Street Extension

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

approach:	NB	NWB	EB	WB		Total Peak Hourly Approach Volume
PEAK HOURLY VOLUMES (AM/PM) :	515	1,296	0	0		**1,811**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **20,122**

TOTAL # OF CRASHES : 3 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (**A**) : **0.60**

CRASH RATE CALCULATION : **0.08** RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : PM

Project Title & Date: 1 McGrath Highway

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Somerville, MA COUNT DATE : May-22

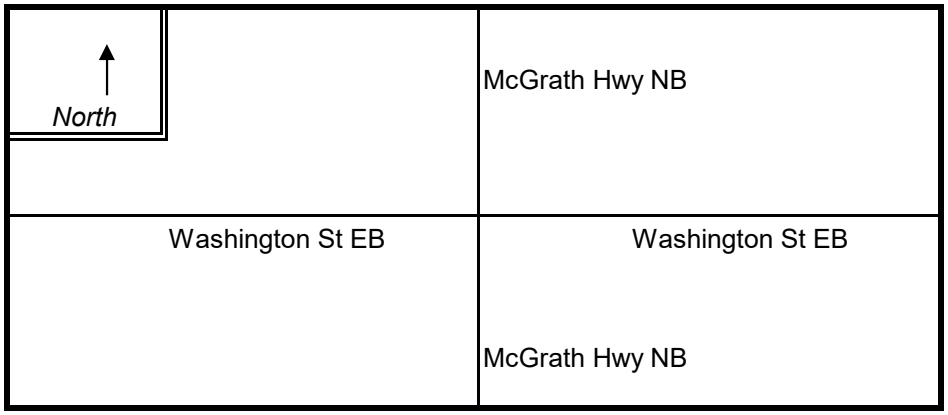
DISTRICT : 4 UNSIGNALIZED : ☐ SIGNALIZED : ☒

~ INTERSECTION DATA ~

MAJOR STREET : McGrath Highway NB

MINOR STREET(S) : Washington St EB

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

approach:	NB	SB	EB	WB		**Total Peak Hourly Approach Volume**
PEAK HOURLY VOLUMES (AM/PM) :	418	0	821	0		**1,239**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **13,767**

TOTAL # OF CRASHES : 3

OF YEARS : 5

AVERAGE # OF CRASHES PER YEAR (**A**) : **0.60**

CRASH RATE CALCULATION : **0.12**

RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : PM

Project Title & Date: 1 McGrath Highway

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Somerville, MA COUNT DATE : May-22

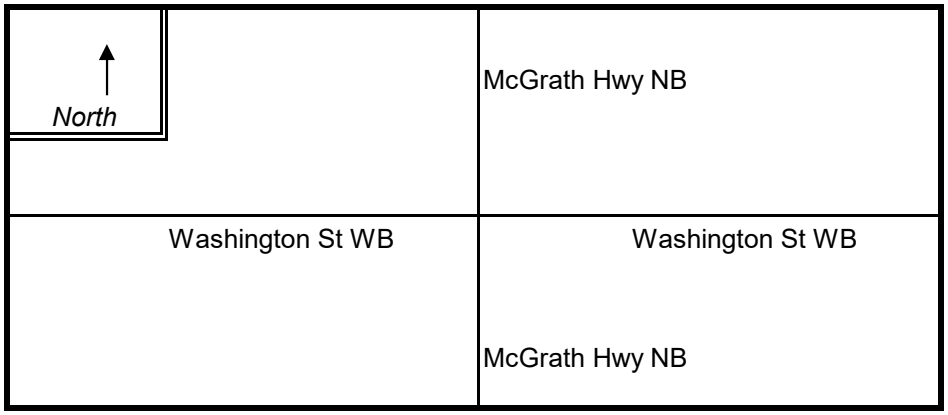
DISTRICT : 4 UNSIGNALIZED : ☐ SIGNALIZED : ☒

~ INTERSECTION DATA ~

MAJOR STREET : McGrath Highway NB

MINOR STREET(S) : Washington St WB

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

approach:	NB	SB	EB	WB		**Total Peak Hourly Approach Volume**
PEAK HOURLY VOLUMES (AM/PM) :	707	0	0	612		**1,319**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **14,656**

TOTAL # OF CRASHES : 6

OF YEARS : 5

AVERAGE # OF CRASHES PER YEAR (**A**) : **1.20**

CRASH RATE CALCULATION : **0.22**

$$\text{RATE} = \frac{(A * 1{,}000{,}000)}{(V * 365)}$$

Comments : PM

Project Title & Date: 1 McGrath Highway

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Somerville, MA COUNT DATE : May-22

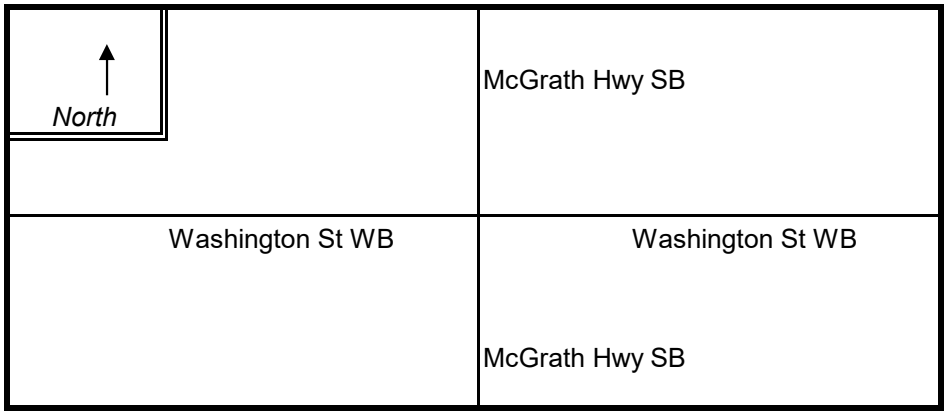
DISTRICT : 4 UNSIGNALIZED : ☐ SIGNALIZED : ☒

~ INTERSECTION DATA ~

MAJOR STREET : McGrath Highway SB

MINOR STREET(S) : Washington St WB

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

approach:	NB	SB	EB	WB		**Total Peak Hourly Approach Volume**
PEAK HOURLY VOLUMES (AM/PM) :	0	558	0	610		**1,168**

" K " FACTOR : **0.090**

INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **12,978**

TOTAL # OF CRASHES : 43

OF YEARS : 5

AVERAGE # OF CRASHES PER YEAR (**A**) : **8.60**

CRASH RATE CALCULATION : **1.82**

RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : PM

Project Title & Date: 1 McGrath Highway

INTERSECTION CRASH RATE WORKSHEET

CITY/TOWN : Somerville, MA COUNT DATE : May-22

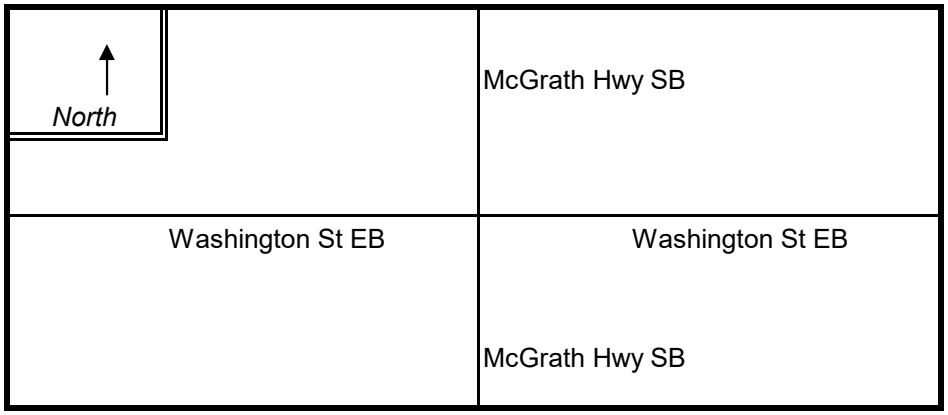
DISTRICT : 4 UNSIGNALIZED : ☐ SIGNALIZED : ☒

~ INTERSECTION DATA ~

MAJOR STREET : McGrath Highway SB

MINOR STREET(S) : Washington St EB

INTERSECTION DIAGRAM (Label Approaches)



PEAK HOUR VOLUMES

approach:	NB	SB	EB	WB		**Total Peak Hourly Approach Volume**
PEAK HOURLY VOLUMES (AM/PM) :	0	522	792	0		**1,314**

" K " FACTOR : **0.090** INTERSECTION ADT (**V**) = TOTAL DAILY APPROACH VOLUME : **14,600**

TOTAL # OF CRASHES : 12 # OF YEARS : 5 AVERAGE # OF CRASHES PER YEAR (**A**) : **2.40**

CRASH RATE CALCULATION : **0.45** RATE = $\frac{(A * 1{,}000{,}000)}{(V * 365)}$

Comments : PM

Project Title & Date: 1 McGrath Highway

Trip Generation

ITE TRIP GENERATION WORKSHEET
(11th Edition, Updated 2021)

LANDUSE: Hotel
LANDUSE CODE: 310
SETTING/LOCATION: General Urban/Suburban
JOB NAME:
JOB NUMBER:

Independent Variable --- Number of Rooms

199 rooms

WEEKDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	7	0.85	7.99	5.31	9.53	148	100	260	50%	50%
AM PEAK OF GENERATOR	33	0.64	0.53	0.25	1.42	282	86	575	53%	47%
PM PEAK OF GENERATOR	32	0.69	0.60	0.22	0.97	285	86	575	58%	42%
AM PEAK (ADJACENT ST)	28	0.84	0.46	0.20	0.84	182	74	426	56%	44%
PM PEAK (ADJACENT ST)	31	0.78	0.59	0.26	1.06	186	74	426	51%	49%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	1,590	795	795	1,734	867	867
AM PEAK OF GENERATOR	105	56	50	107	57	50
PM PEAK OF GENERATOR	119	69	50	117	68	49
AM PEAK (ADJACENT ST)	92	51	40	92	52	41
PM PEAK (ADJACENT ST)	117	60	58	119	61	58

SATURDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	9	0.93	8.07	6.35	9.79	202	100	355	50%	50%
PEAK OF GENERATOR	10	0.80	0.72	0.49	1.23	192	100	355	56%	44%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	1,606	803	803	1,602	801	801
PEAK OF GENERATOR	143	80	63	143	80	63

SUNDAY

RATES:

	# Studies	R^2	Total Trip Ends			Independent Variable Range			Directional Distribution	
			Average	Low	High	Average	Low	High	Enter	Exit
DAILY	9	0.90	5.94	4.01	8.48	202	100	355	50%	50%
PEAK OF GENERATOR	9	0.86	0.57	0.39	0.72	202	100	355	48%	52%

TRIPS:

	BY AVERAGE			BY REGRESSION		
	Total	Enter	Exit	Total	Enter	Exit
DAILY	1,182	591	591	1173	587	587
PEAK OF GENERATOR	113	54	59	114	54	59

Mode Share Data

Table 4: *Mode Split Data – Somerville & Cambridge*

Total Workers - Cambridge	113584		
Drove	40460	36%	113584
Drove Alone	*36225*	*32%*	113584
Carpooled	*4235*	*4%*	113584
Public Transportation	33443	29%	113584
Bus	*9008*	*8%*	113584
Subway / Elevated Rail	*23338*	*21%*	113584
Commuter Rail / Long-Distance Rail	*766*	*1%*	113584
Light Rail / Streetcar / Trolley	*315*	*0%*	113584
Ferry Boat	*16*	*0%*	113584
Taxicab	685	1%	113584
Motorcycle	36	0%	113584
Bicycle	7875	7%	113584
Walk	22533	20%	113584
Other	1066	1%	113584
Work from Home	7486	7%	113584

Total Workers - Somerville	95269		
Drove	42668	45%	95269
Drove Alone	*37636*	*40%*	95269
Carpooled	*5032*	*5%*	95269
Public Transportation	28820	30%	95269
Bus	*7522*	*8%*	95269
Subway / Elevated Rail	*20614*	*22%*	95269
Commuter Rail / Long-Distance Rail	*473*	*0%*	95269
Light Rail / Streetcar / Trolley	*195*	*0%*	95269
Ferry Boat	*16*	*0%*	95269
Taxicab	396	0%	95269
Motorcycle	90	0%	95269
Bicycle	5834	6%	95269
Walk	11888	12%	95269
Other	605	1%	95269
Work from Home	4968	5%	95269

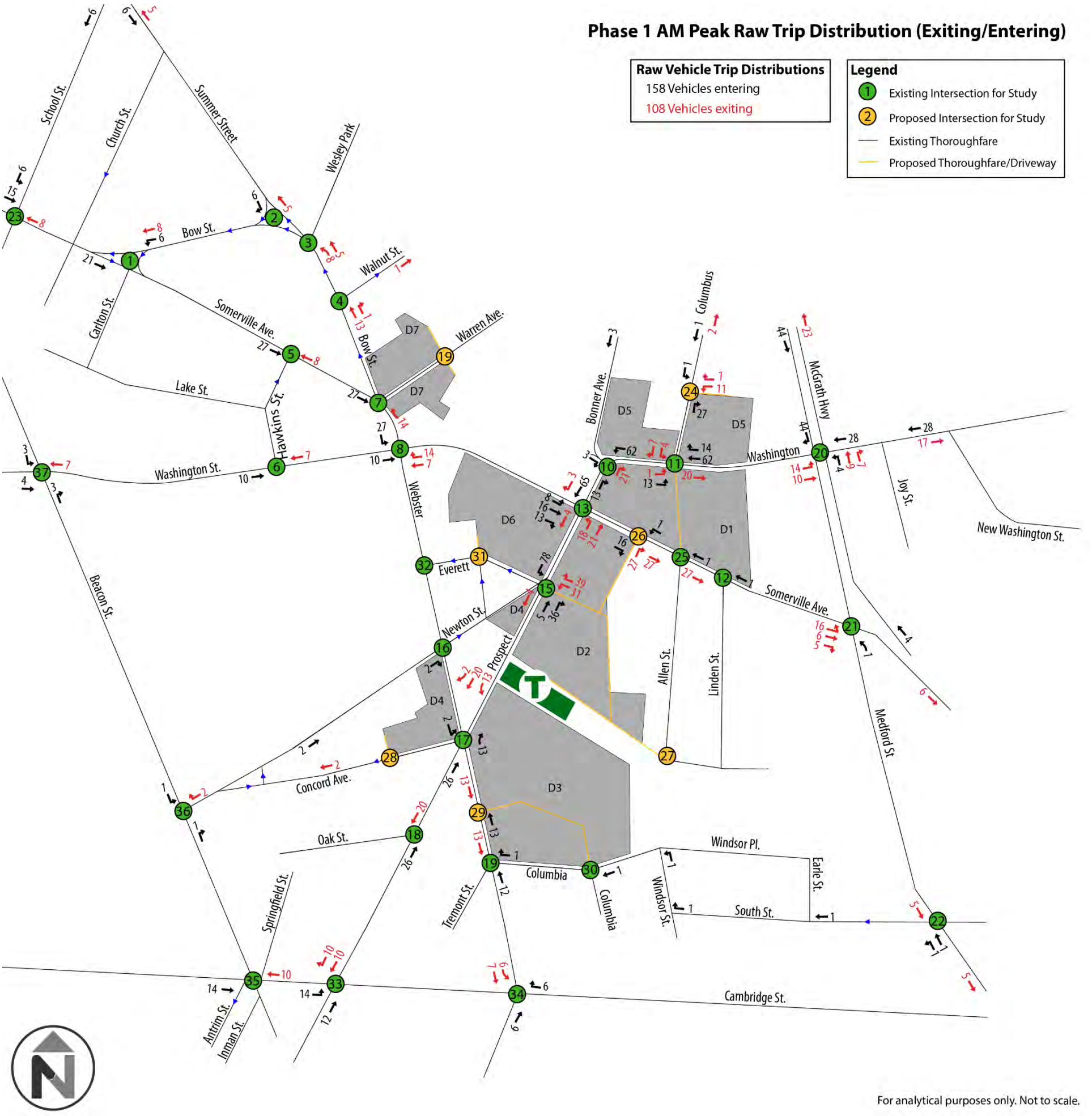
Table 5: *Adjusted Mode Split Data*

Total Workers	208853		
Drove	83128	40%	208853
Drove Alone	*73861*	*35%*	*208853*
Carpooled	*9267*	*4%*	*208853*
Public Transportation	62263	30%	208853
Bus	*16530*	*8%*	*208853*
Subway / Elevated Rail	*43952*	*21%*	*208853*
Commuter Rail / Long-Distance Rail	*1239*	*1%*	*208853*
Light Rail / Streetcar / Trolley	*510*	*0%*	*208853*
Ferry Boat	*32*	*0%*	*208853*
Taxicab	1081	1%	208853
Motorcycle	126	0%	208853
Bicycle	13709	7%	208853
Walk	34421	16%	208853
Other	1671	1%	208853
Work from Home	12454	6%	208853

Background Project Traffic Volumes for Future Conditions

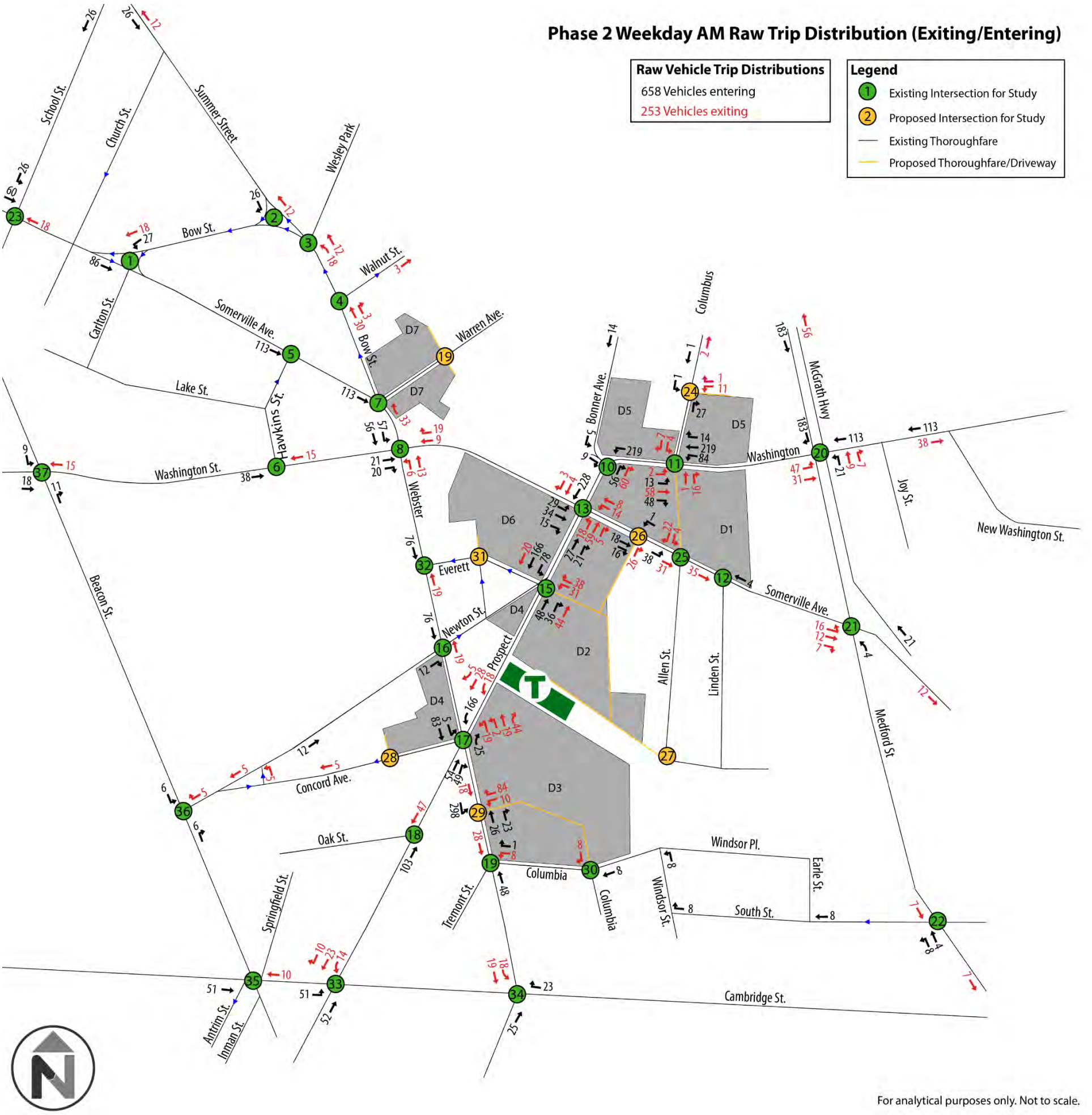
Union Square Revitalization – Phase 1 & 2 Combined

Figure 6: Phase 1 AM Peak Trip Distribution



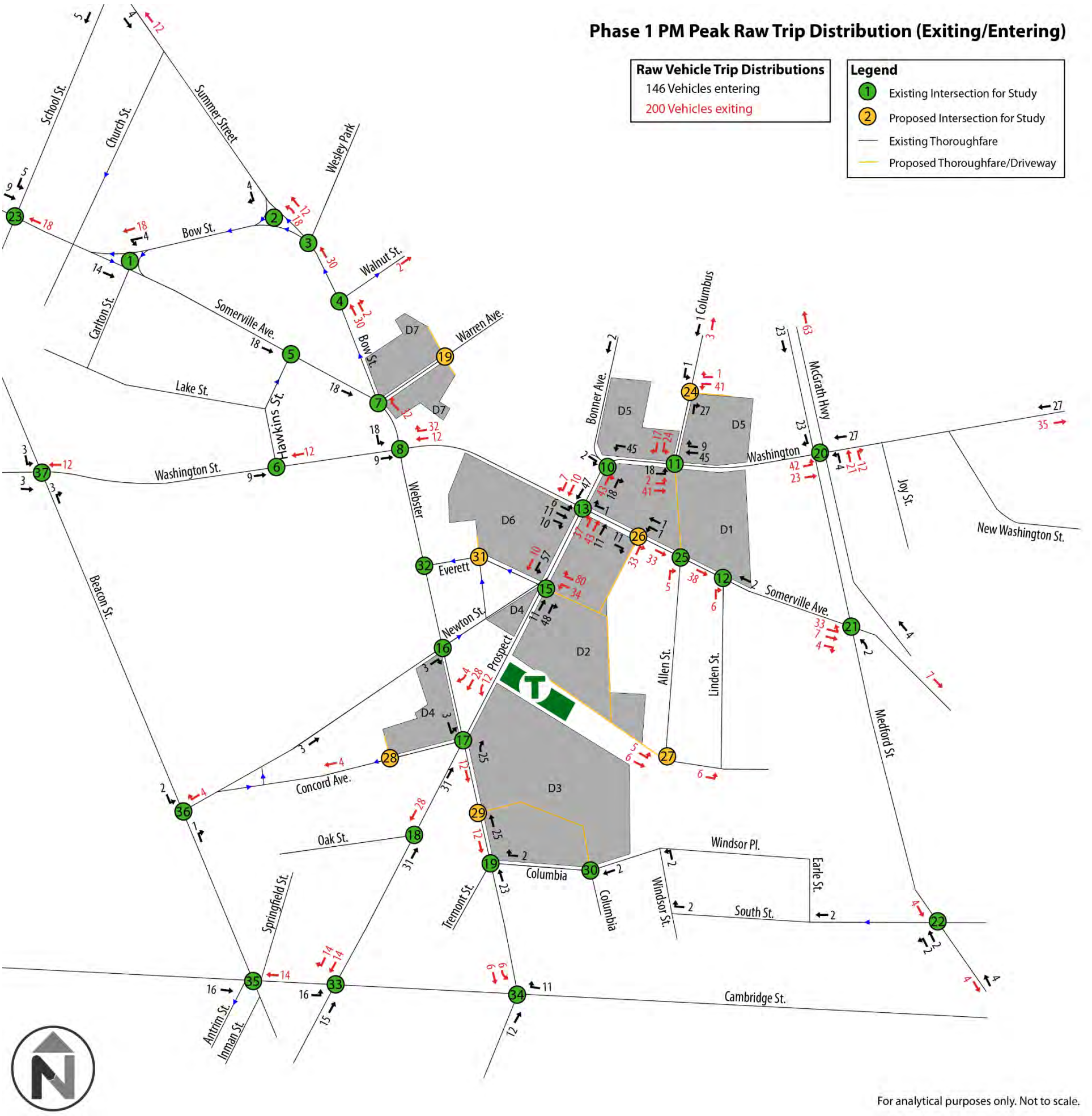
For analytical purposes only. Not to scale.

Figure 7: Phase 2 AM Peak Trip Distribution



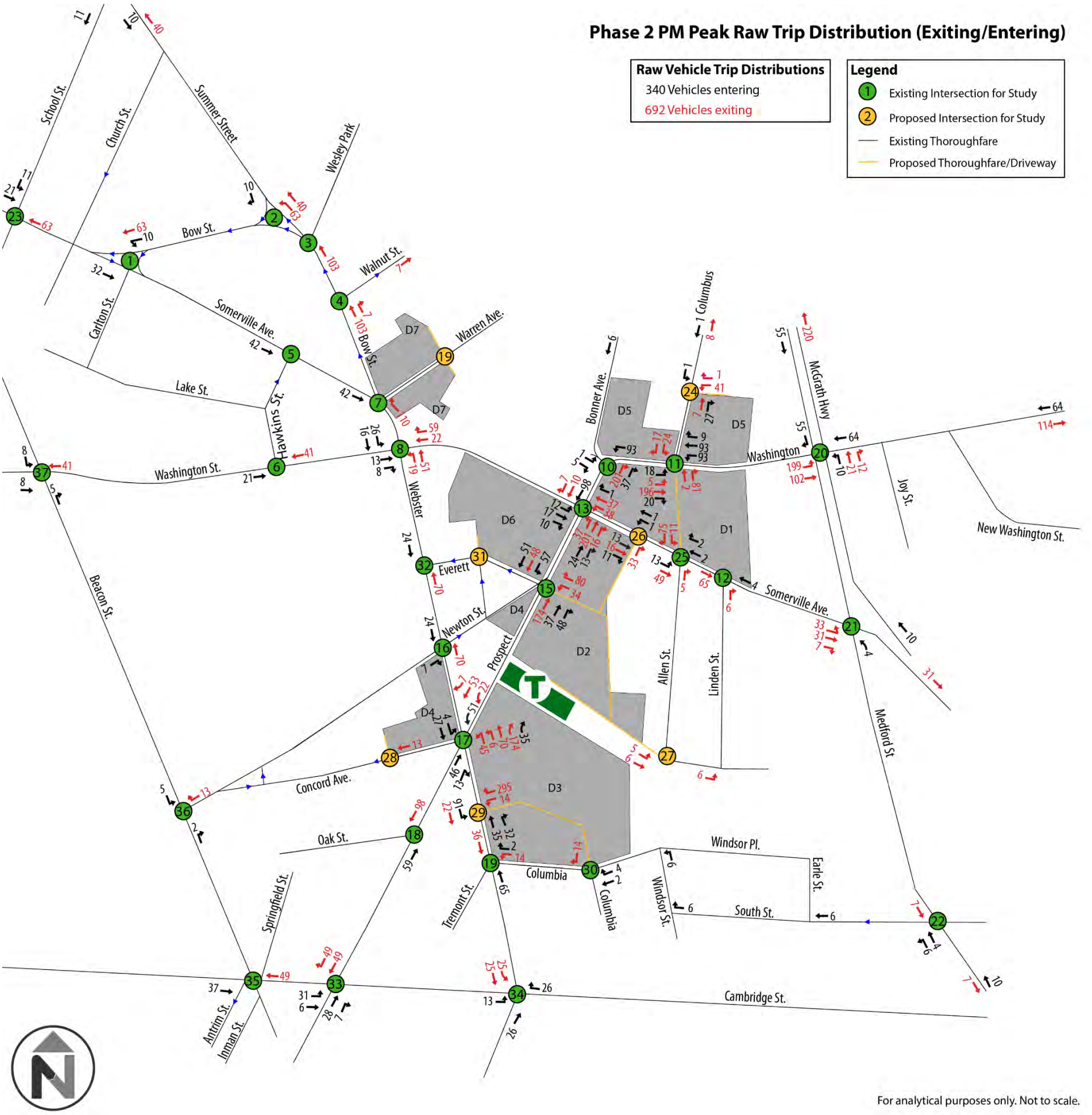
For analytical purposes only. Not to scale.

Figure 9: Phase 1 PM Peak Trip Distribution



For analytical purposes only. Not to scale.

Figure 10: Phase 2 PM Peak Trip Distribution



For analytical purposes only. Not to scale.

Boynton Yards

Signalized Intersection

neg = Negligible
xx = Entering Trips
(xx) = Exiting Trips
[xx] = Pass-by

Somerville Avenue
Concord Avenue
Columbia Street
Windsor Place
Driveway
Boynton Way
Harding Street Dwy
Medford Street
McGrath Highway (Route 28)
Somerville Avenue Extension
Prospect Street
Tremont Street
Webster Avenue
Cambridge Street
Columbia Street
Windsor Street
Willow Street
Hunting Street
Harding Street
South Street
Ward Street
Driveway
Driveway
Warren Street
SITE
SITE

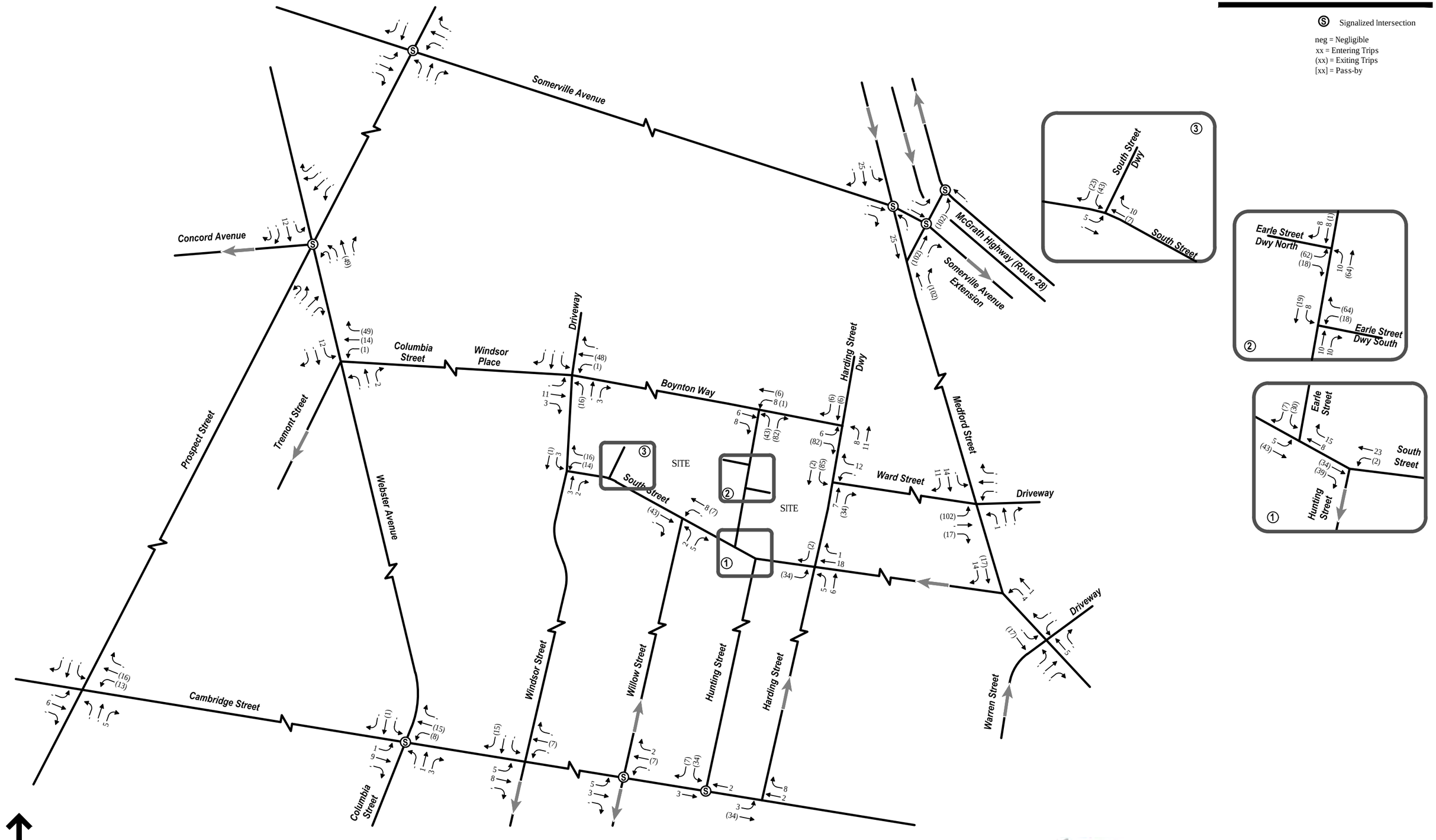
South Street Dwy
South Street

Earle Street Dwy North
Earle Street Dwy South

Earle Street
South Street
Hunting Street

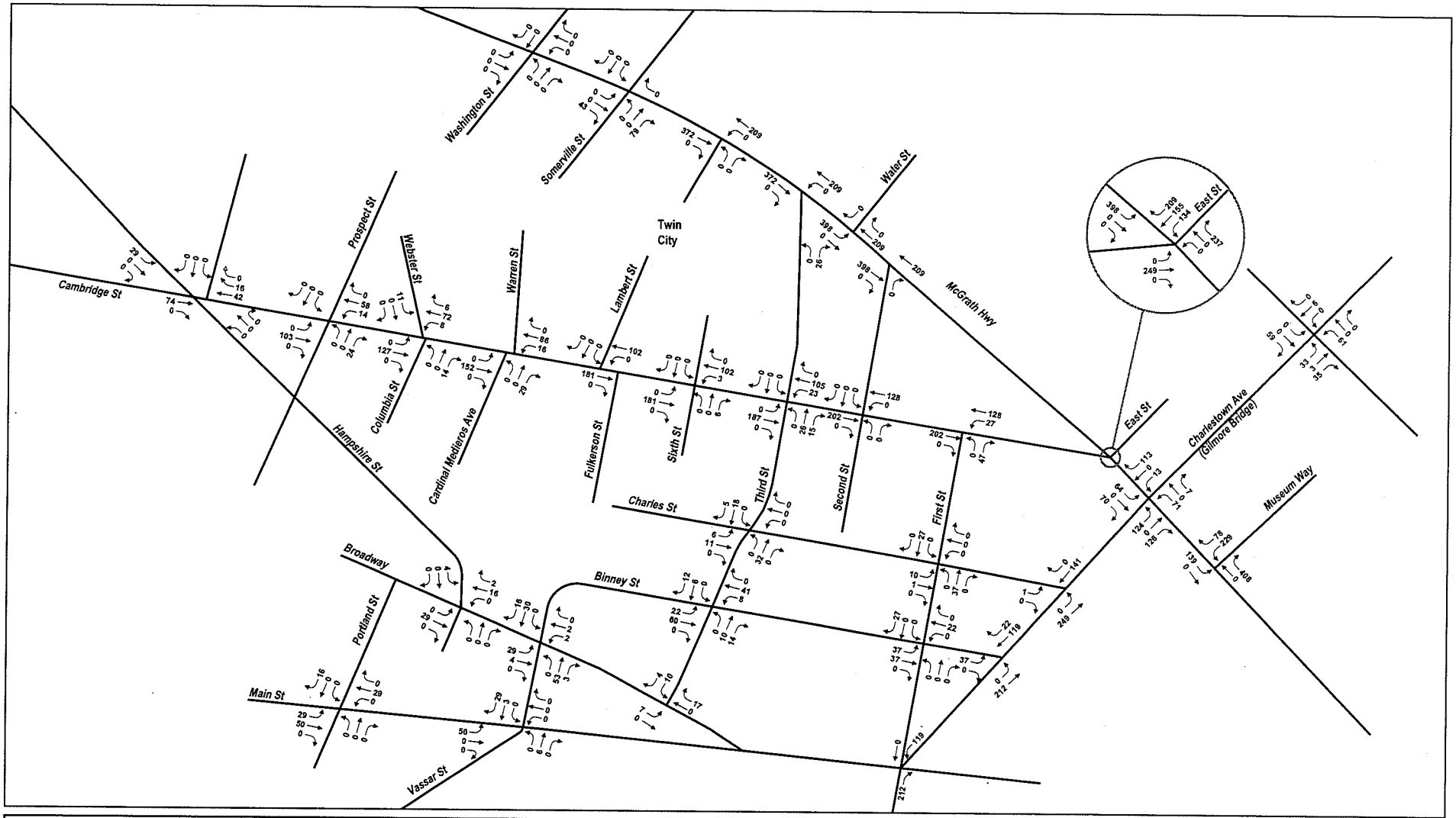
Not to Scale

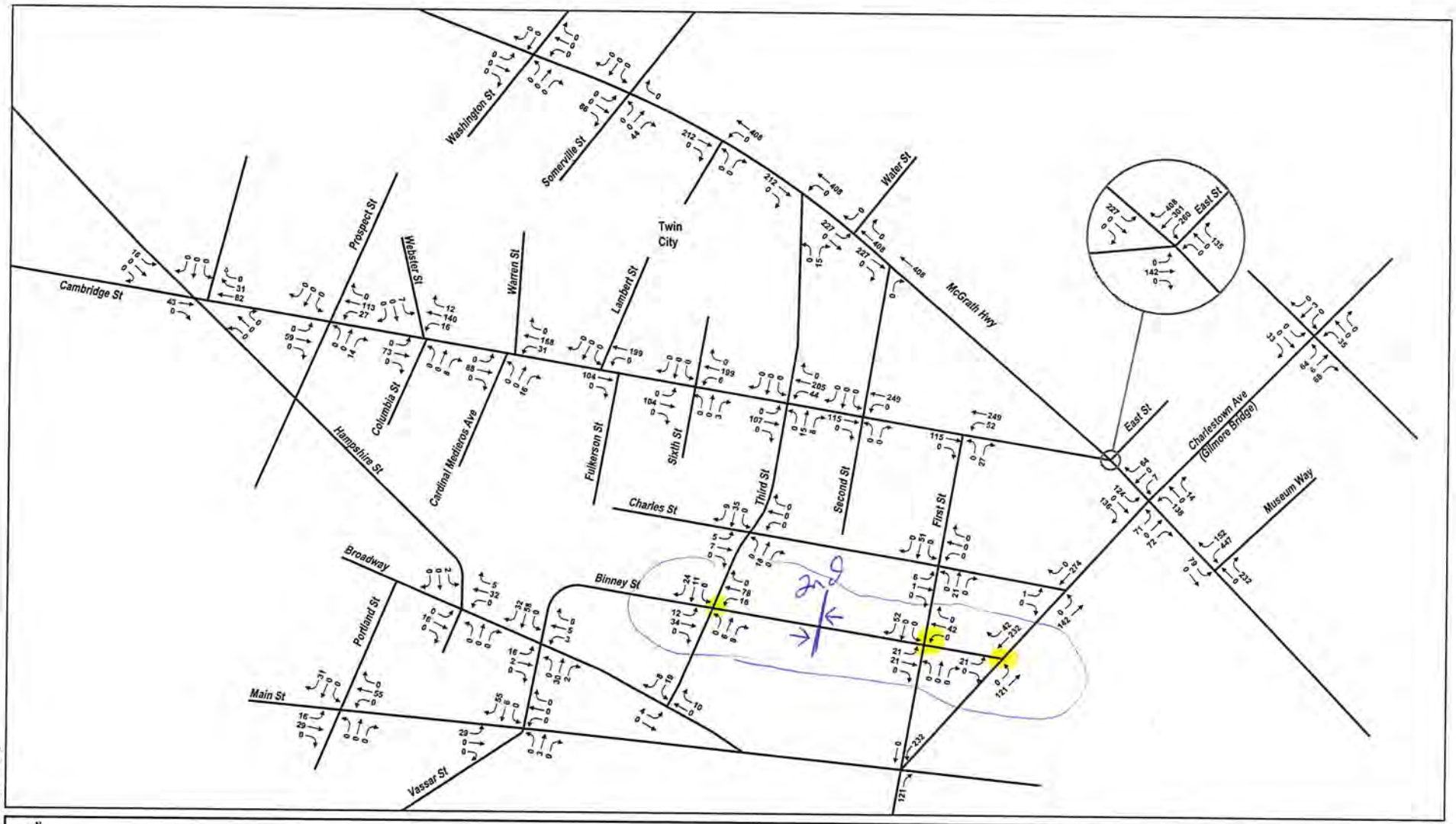
Site-Generated Traffic Volumes
Weekday Morning Peak Hour
Boynton Yards
Somerville, Massachusetts



Site-Generated Traffic Volumes
Weekday Evening Peak Hour
Boynton Yards
Somerville, Massachusetts

Cambridge Crossing (formerly North Point)

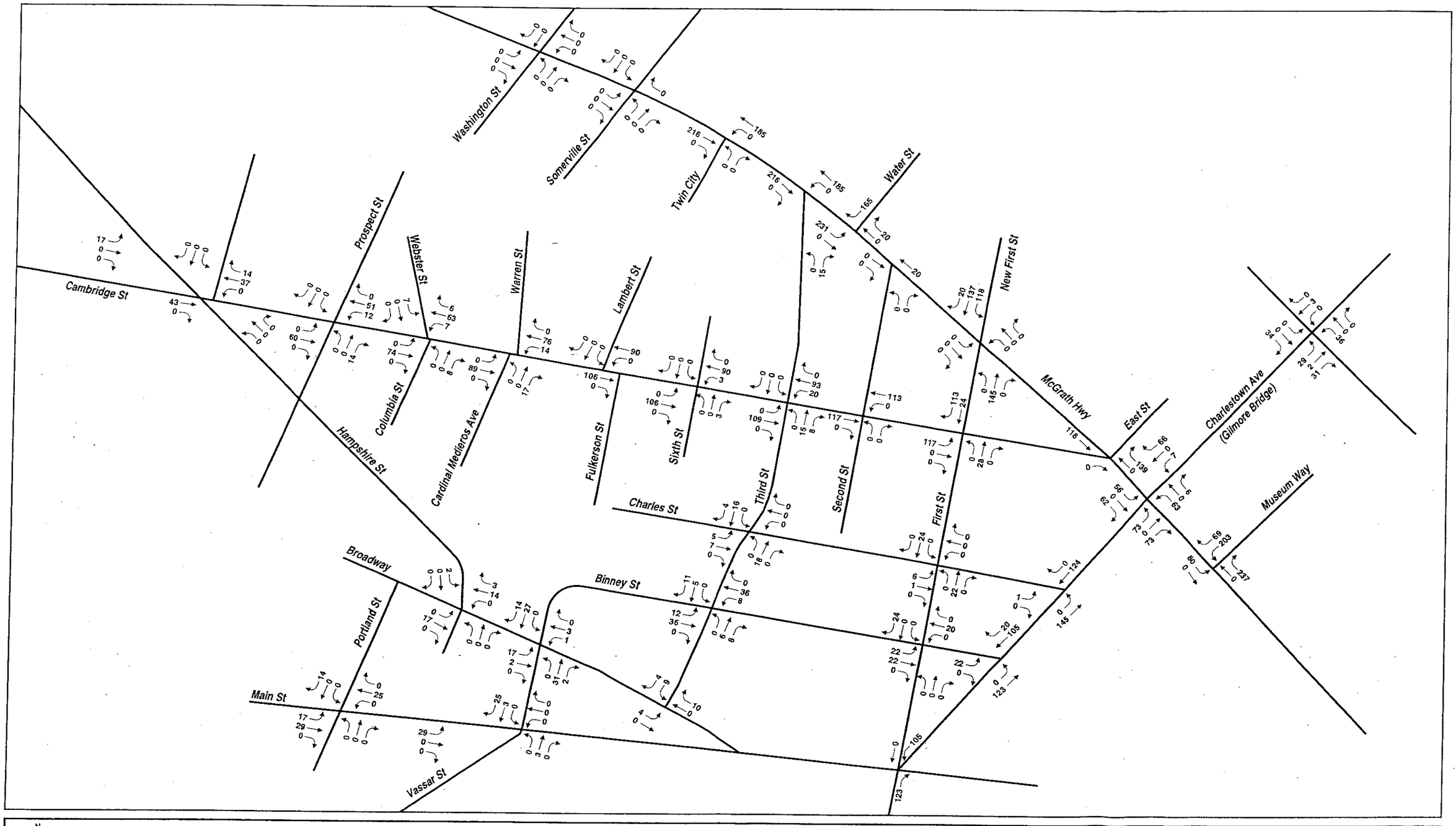

Washington St
Somerville St
Water St
Twin City
McGrath Hwy
East St
Prospect St
Webster St
Warren St
Lambert St
Cambridge St
Columbia St
Cardinal Medieros Ave
Fulkerson St
Sixth St
Third St
Second St
First St
Hampshire St
Charles St
Charlestown Ave (Gilmore Bridge)
Museum Way
Broadway
Portland St
Binney St
Main St
Vassar St
N
Not to Scale
North Point
Site Genereated
Mornng Peak Hour
Traffic Volumes
Figure x-x



Site Genereated
Evening Peak Hour
Traffic Volumes

Figure x-x

Mitigation Rev.
Future Save As
Future 10year



N

Not to Scale

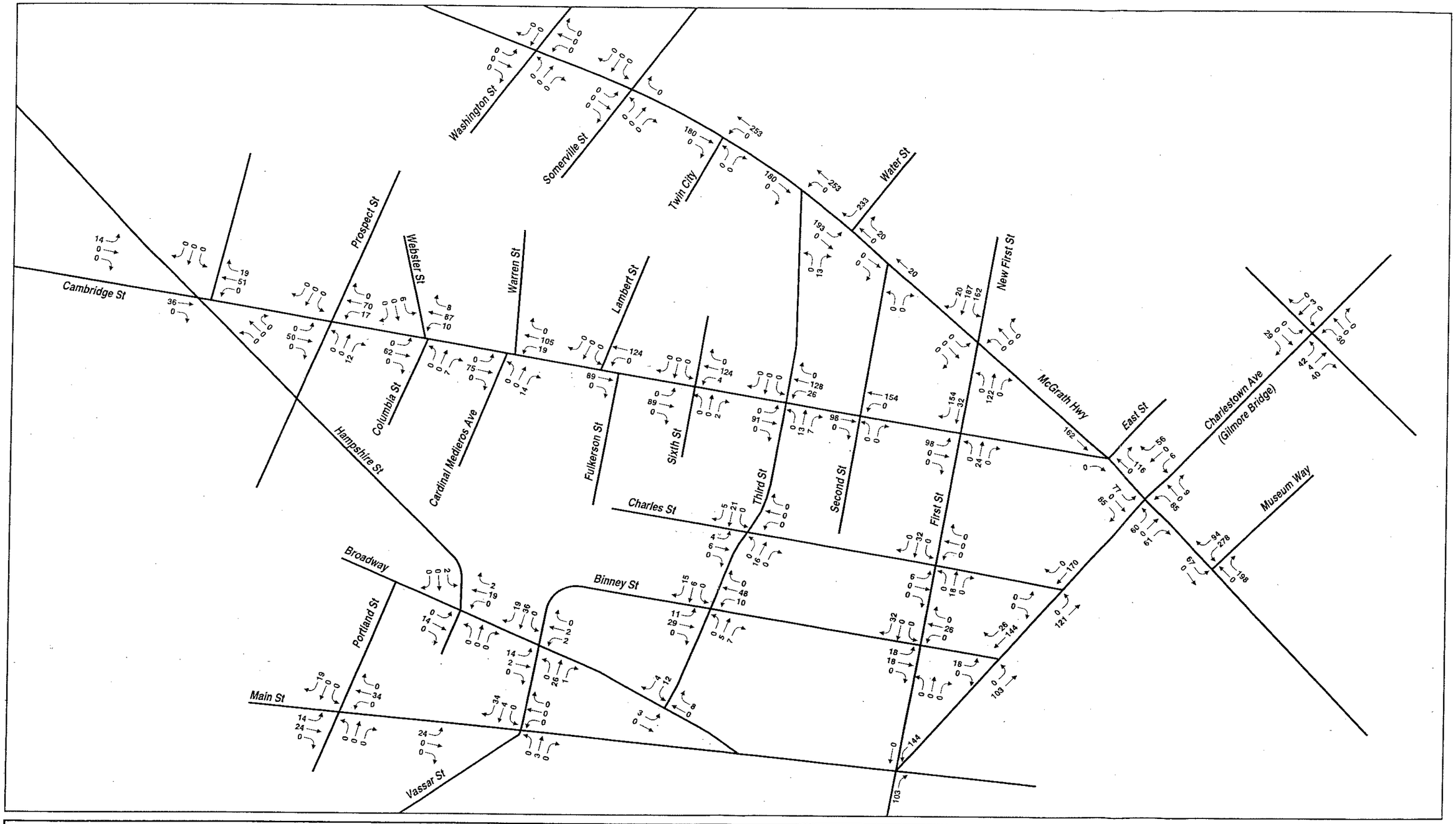
North Point

Proposed Conditions
Morning Peak Hour
Site Generated Traffic Volumes

Figure x-x

checkin MAWALD 07712 Graphics Figures 7712-PN.dwg

FULL BUILD MITIGATED



N

Not to Scale

North Point

Proposed Conditions
Evening Peak Hour
Site Generated Traffic Volumes

Figure x-x

checkin MAWALD 07712 Graphics Figures 7712-PN.dwg

FULL BUILD MITIGATED

Ascend Dispensary

Exhibit A: Traffic Impact Statement

Traffic Impact Statement

Hayes Engineering, Inc

603 Salem Street
Wakefield, MA 01880
Tel: (781) 246-2800
Fax: (781) 246-7596

Nantucket, MA 02554
Tel: (508) 228-7909

Refer to File No. **CAM-0042**

TO: City of Cambridge Planning Board

FROM: Tony Capachietti, *Project Manager*

DATE: September 6, 2018

SUBJECT: Ascend Mass, LLC
Proposed Registered Marijuana Dispensary
200 Monsignor O'Brien Highway
Cambridge, MA

Hayes Engineering, Inc. (HEI) has prepared the following Traffic Impact Statement in support of the proposed Registered Marijuana Dispensary (RMD) at the above address in accordance with section 11.803(c) of the City's Zoning Ordinance. This statement was prepared on behalf of the project proponent, Ascend Mass, LLC. The purpose of this Impact Statement is two-fold:

- To estimate the intensity, frequency and mode of transportation for client and employee trips to the proposed RMD; and
- To identify the frequency and scale of deliveries to and from the site.

The existing building located at the southeasterly corner of the intersection between Monsignor O'Brien Highway (Route 28) and Third Street in East Cambridge. The existing two-story, approximately 5,100-sf., brick structure is currently occupied by Lechmere Rug, a carpet retailer and installer.

Site Accessibility

The proposed RMD is located on the southerly side of Monsignor O'Brien Highway at its intersection with Third Street in the neighborhood of East Cambridge. Off-street parking is available adjacent to the building in an existing seven (7) space parking lot on the property. On-street parking is limited in the vicinity of the building. Public parking is available at the nearby pay lots on First Street and Canal Park.

The proposed RMD is readily accessible via the MBTA subway and is within 700-feet of the Lechmere Green Line stop.

The site is also located conveniently to four (4) MBTA bus routes and is within 500-feet of stops for the 69, 80, 87 and 88 routes.

The proponent intends to encourage both patients and employees to utilize alternative modes of transportation to minimize project impacts on both parking and traffic.

Trip Generation

Average Daily Vehicle Trips and Peak Hour Trips for the project are calculated using data published by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition, supplemented with survey data from an existing RMD operating in the City of Cambridge.

Existing Condition:

The previous use at the facility is best classified by ITE Land Use Code (LUC) 180 – Specialty Trade Contractor:

> *A specialty trade contractor is a business primarily involved in providing contract repairs and services to meet industrial or residential needs. This land use includes businesses that provide the following services: plumbing, heating and cooling, machine repair, electrical and mechanical repair, industrial supply, roofing, locksmith, weed and pest control, and cleaning.*

Estimated Trip Generation rates for the existing 5,100± square foot (sf.) facility under its prior use are summarized in Table 1, below. ITE Trip Generation Graphs for the above Land Use Code accompanies this report as Appendix A.

TABLE 1
Trip Generation, *Prior Use*

Time Period/Direction	LUC 180 – Specialty Trade Contractor Vehicle Trip Ends[(1)]
Weekday Daily	52
Weekday AM Peak Hour	10
Weekday PM Peak Hour	11
Saturday Daily	Not Published

[(1)] Based on 5,100± sf of floor area

Proposed Condition:

The proposed RMD use is best classified as Institute of Transportation Engineers (ITE) Land Use Code (LUC) 882, Marijuana Dispensary, defined in the ITE Trip Generation Manual, 10th Edition as being:

> *... a standalone facility where cannabis is sold to patients or consumers in a legal manner.*

Trip Generation rates for the proposed 5,100± sf. RMD are summarized in Table 2, below. ITE Trip Generation Graphs for Land Use Code 882 accompany this report as Appendix B. It should be noted that the ITE cautions the use of this data as it is from a small sample set and the proposed RMD size is outside of the ITE study range.

TABLE 2
Trip Generation, *Prior Use*

Time Period/Direction	LUC 180 – Specialty Trade Contractor Vehicle Trip Ends[1]
Weekday Daily	1,289
Weekday AM Peak Hour	106
Weekday PM Peak Hour	153
Saturday Daily	1,322

[1] Based on 5,100± sf of floor area

The ITE numbers resulted in excessive and unbelievable trip estimates and were checked against real data from point of sales for customer counts from an existing and operating 1,600-sf. RMD in the Harvard Square section of Cambridge. The facility was surveyed during the month of February 2018 and averaged 21 customers per day, an average rate of 13.13 customers per 1,000-sf. Using this observed data, the proposed 5,100-sf. Ascend dispensary is anticipated to serve approximately 67 medical customers daily with an additional 3 employees at the site.

A previous survey of 796 customers in December 2016 at a restaurant in Harvard Square identified the following mode splits for patrons:

- Automobile 12.5%
- Bicycle 10.4%
- Pedestrian 16.0%
- Public Transit 61.1%

It is anticipated that most customers to the facility will be pass-by, pedestrian or public transit riders and the facility will have minimal impacts to vehicle traffic conditions in the area.

Deliveries

Ascend anticipates approximately eleven (11) deliveries to and/or from the RMD per week. Deliveries to the site will consist of marijuana and marijuana containing products every other day, up to four (4) times per week. This includes the delivery of product and removal of marijuana containing waste for disposal at Ascend's cultivation and processing facility. Cash will be picked up daily from the facility or upon reaching a monetary threshold up to seven (7) times per week.

Deliveries will be conducted in accordance with provisions of the Security Plan on file with the Department of Public Healthy and shall occur at random times outside of normal business hours (between the hours of 9pm and 11am). Deliveries will use off-street parking adjacent to the facility.

Mitigation:

Ascend Mass, LLC will encourage alternative transportation modes with a primary focus on:

- Public Transit;
- Bicycle/Pedestrian Commuting; and
- Carsharing

To actively promote the use of alternative, sustainable modes of transportation Ascend will appoint a Transportation Coordinator and implement the following programs to help change travel habits from SOVs:

- Cost Savings

  Education on the cost of SOV commuting vs. sustainable modes will be provided to all employees by the Transportation Coordinator upon hiring. Information regarding tax benefits and other incentives will be discussed and educational materials will be provided in employee areas by the Transportation Coordinator.

- Public Transportation

  The following services will be provided to encourage the use of public transportation:

  - Hiring preference will be given to those potential employees that indicate they will use public transportation for their commute;
  - Information on MBTA schedules and route maps will be provided in employee break areas by the on-site Transportation Coordinator;
  - Employee subsidies up to the Federal fringe limit will be provided for the procurement of MBTA monthly passes;
  - Ascend will allow employees to set aside pre-tax funds as allowable under the Commuter Choice provision of the Federal Tax Code.

- Transportation Benefit

  Ascend will offer all non-SOV employees a monthly transportation benefit up to the Federal fringe limit (see IRS Publication 15B). Employees may use the benefit for:

  - Purchase of an unlimited bus/subway pass;
  - Bicycle maintenance;
  - Walking shoes;
  - BLUEbikes membership; or
  - Zipcar membership

- Bicycle/Pedestrian Options

  To encourage the use of bicycle and pedestrian commuting Ascend will provide the following measures:

- Ascend will distribute bicycle and pedestrian information via transportation packets to new hires. The packets will explain all commuting options as part of employee orientation. Updated information will be continually provided to all employees in the employee break area(s). The Transportation Coordinator will be responsible for distribution and compilation of this information;
- Sheltered Bicycle Parking for six (6) bicycles will be provided within the facility to accommodate in excess of 20% bicycle mode share for the anticipated 25 employees;
- Additional visitor/customer bicycle racks will be provided proximate the site entrance in accordance with the approved site plan;
- All indoor/outdoor bicycle parking will meet design requirements of the City of Cambridge Zoning Ordinance;
- Lockers and changing areas will be made available for all employees.

- Guaranteed Ride Home

  To encourage employee use of alternative transportation, Ascend is committed to the following measures:

  - Establish a "Guaranteed Ride Home" program for all employees who commute by non-SOV modes a minimum of 3 days per week. Ascend will provide rides internally or cover the cost of taxi, Uber, Lyft or other mode of transportation for employee emergencies; up to one (1) emergency per employee per quarter will be covered by the program.

- ZipCar

  The Transportation Coordinator will provide information on ZipCar memberships in a central location with other information on alternative transportation. Ascend will make ZipCar membership an allowable transportation expense under the previously mentioned Transportation Benefit.

- Office of Workforce Development

  To encourage the use of alternative modes of transportation, Ascend will work with the Office of Workforce Development to extend employment opportunities to Cambridge residents.

- Customer Education

  Patients and customers of Ascend will receive transportation information during their initial patient consultations. This information will be similar to the information provided employees highlighting bus routes, bicycle routes and pedestrian routes to the facility. In addition to this information Ascend will schedule patient consultations during off-peak hours.

13-21 McGrath Highway

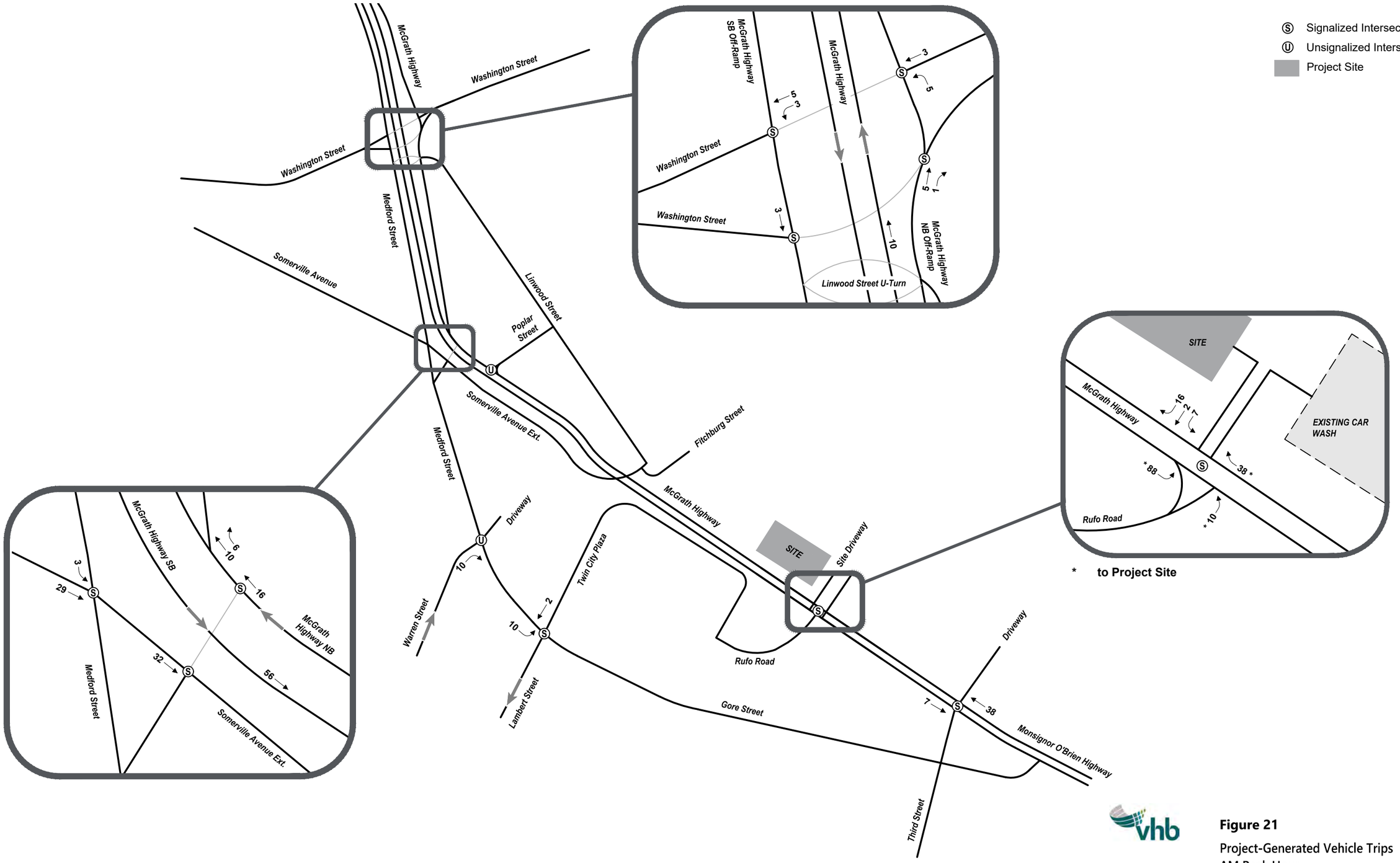


Figure 21

Project-Generated Vehicle Trips
AM Peak Hour
13-21 McGrath Highway
Somerville, MA

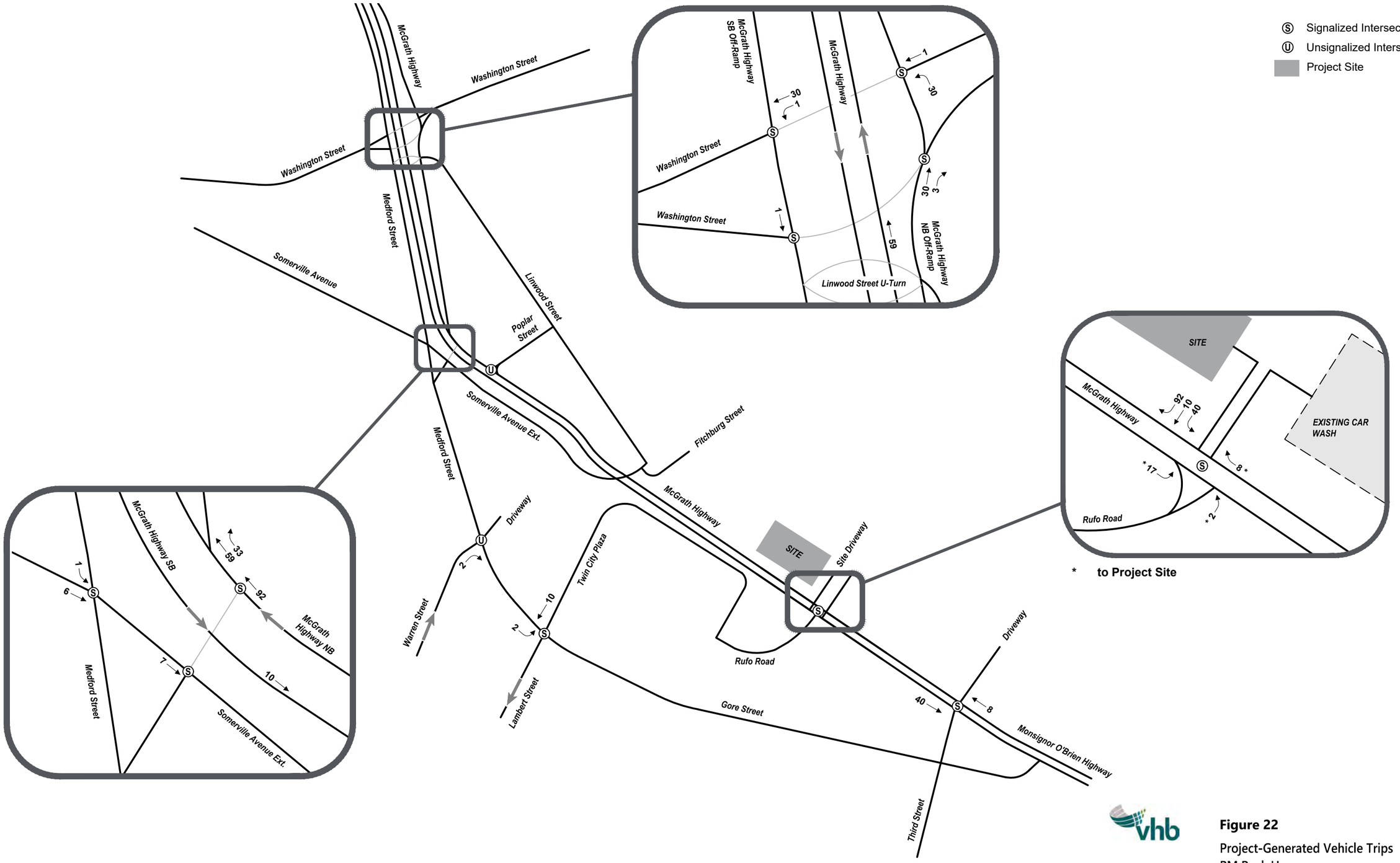


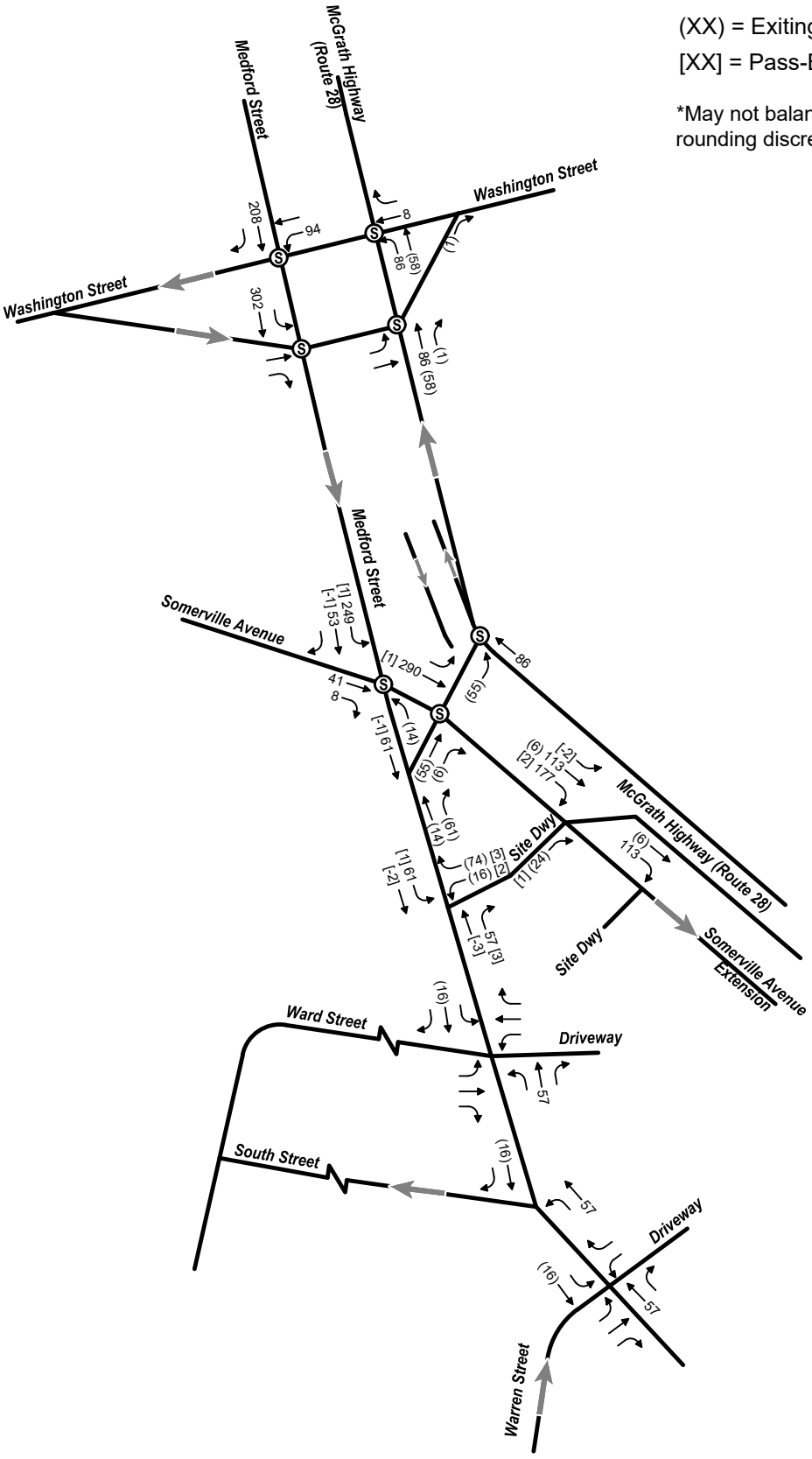
Figure 22

Project-Generated Vehicle Trips
PM Peak Hour
13-21 McGrath Highway
Somerville, MA

Gateway Innovation Center

XX = Entering Vehicles
(XX) = Exiting Vehicles
[XX] = Pass-By Trips

May not balance due to rounding discrepancies

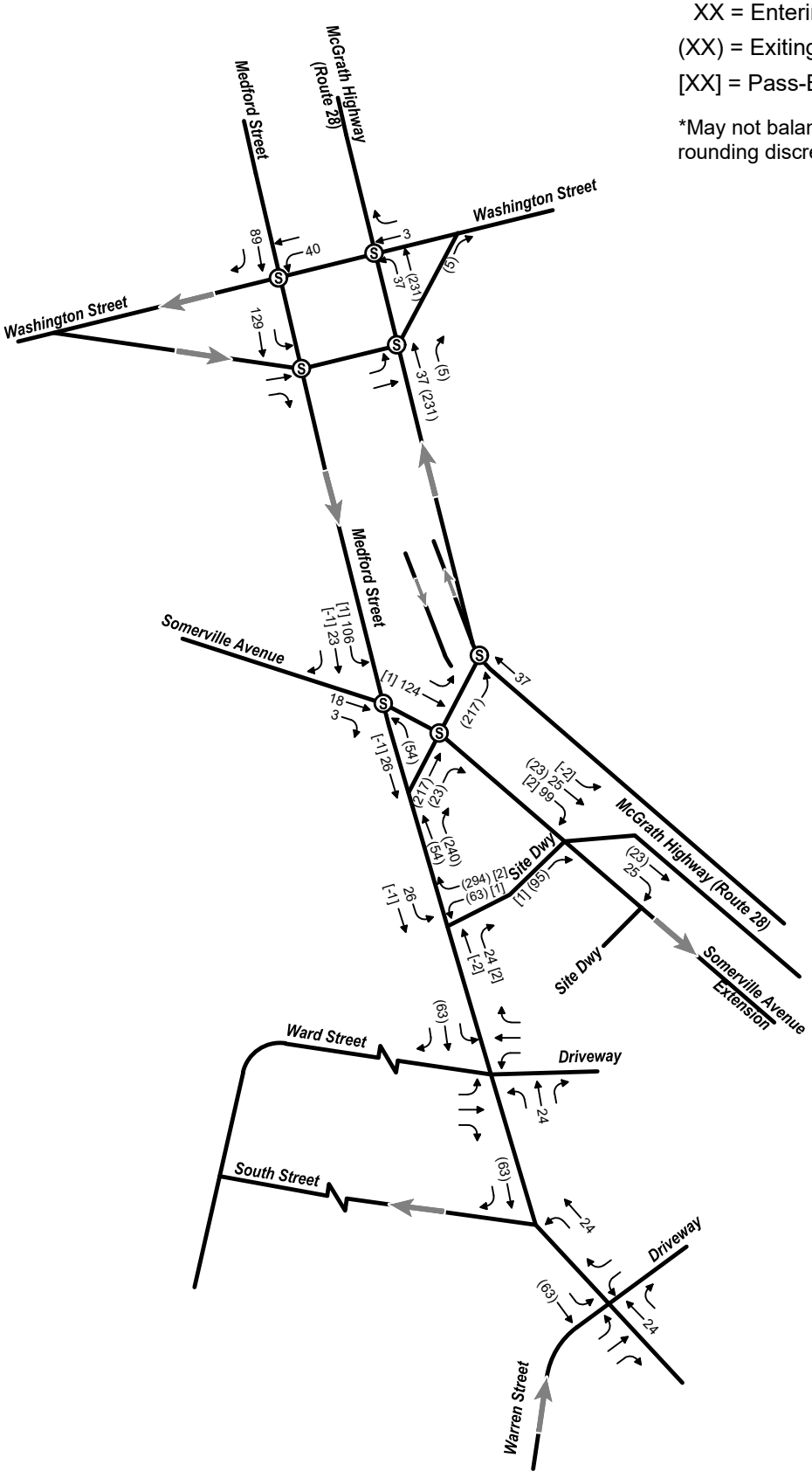


Not to Scale

Trip Assignment
Weekday Morning Peak Hour
Gateway Innovation Center
Somerville, Massachusetts

XX = Entering Vehicles
(XX) = Exiting Vehicles
[XX] = Pass-By Trips

May not balance due to rounding discrepancies



Not to Scale

Trip Assignment
Weekday Evening Peak Hour
Gateway Innovation Center
Somerville, Massachusetts

Synchro Capacity Analysis

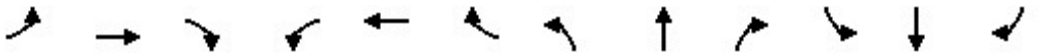
Lane Group	WBT	WBR	NBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations									
Traffic Volume (vph)	600	60	390						
Future Volume (vph)	600	60	390						
Turn Type	NA	Perm	NA						
Protected Phases	5 6		1 2 4 8	1	2	4	5	6	8
Permitted Phases		5 6							
Detector Phase	5 6	5 6	1 2 4 8						
Switch Phase									
Minimum Initial (s)				5.0	12.0	5.5	6.0	12.0	5.0
Minimum Split (s)				10.0	22.0	10.0	18.0	30.0	10.0
Total Split (s)				10.0	22.0	10.0	18.0	30.0	10.0
Total Split (%)				10%	22%	10%	18%	30%	10%
Yellow Time (s)				4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)				1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag				Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode				Max	Max	Max	Max	Max	Max
Act Effct Green (s)	44.0	44.0	47.0						
Actuated g/C Ratio	0.44	0.44	0.47						
v/c Ratio	0.49	0.12	0.31						
Control Delay	21.6	17.4	4.9						
Queue Delay	0.9	0.0	1.0						
Total Delay	22.6	17.4	5.9						
LOS	C	B	A						
Approach Delay	22.1		5.9						
Approach LOS	C		A						

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 100	
Control Type: Pretimed	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 15.8	Intersection LOS: B
Intersection Capacity Utilization 38.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Route 28 Frontage Rd. & Washington St.

Lane Group	WBT	WBR	NBT
Lane Group Flow (vph)	659	66	457
v/c Ratio	0.49	0.12	0.31
Control Delay	21.6	17.4	4.9
Queue Delay	0.9	0.0	1.0
Total Delay	22.6	17.4	5.9
Queue Length 50th (ft)	154	24	26
Queue Length 95th (ft)	205	51	39
Internal Link Dist (ft)	78		100
Turn Bay Length (ft)			
Base Capacity (vph)	1335	561	1463
Starvation Cap Reductn	0	0	723
Spillback Cap Reductn	395	0	4
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.70	0.12	0.62

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	600	60	30	390	0	0	0	0
Future Volume (vph)	0	0	0	0	600	60	30	390	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		5.0				
Lane Util. Factor					0.95	1.00		0.95				
Frt					1.00	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3036	1275		3029				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3036	1275		3029				
Peak-hour factor, PHF	0.92	0.92	0.92	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	659	66	33	424	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	45	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	659	66	0	412	0	0	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	7%	14%	18%	6%	2%	2%	2%	2%
Turn Type					NA	Perm	Perm	NA				
Protected Phases					5 6			1 2 4 8				
Permitted Phases						5 6	1 2 4 8					
Actuated Green, G (s)					42.0	42.0		48.0				
Effective Green, g (s)					42.0	42.0		41.0				
Actuated g/C Ratio					0.42	0.42		0.41				
Clearance Time (s)												
Lane Grp Cap (vph)					1275	535		1241				
v/s Ratio Prot					c0.22							
v/s Ratio Perm						0.05		0.14				
v/c Ratio					0.52	0.12		0.33				
Uniform Delay, d1					21.5	17.7		20.1				
Progression Factor					1.00	1.00		0.32				
Incremental Delay, d2					1.5	0.5		0.7				
Delay (s)					23.0	18.2		7.1				
Level of Service					C	B		A				
Approach Delay (s)		0.0			22.5			7.1			0.0	
Approach LOS		A			C			A			A	

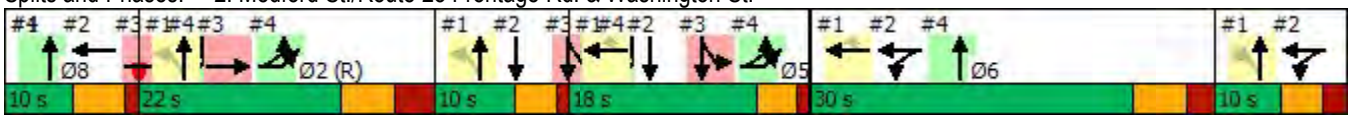
Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	38.9%	ICU Level of Service	A
Analysis Period (min)	15		

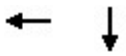
c Critical Lane Group

Lane Group	WBT	SBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations								
Traffic Volume (vph)	330	470						
Future Volume (vph)	330	470						
Turn Type	NA	NA						
Protected Phases	1 6 8	4 5	1	2	4	5	6	8
Permitted Phases								
Detector Phase	1 6 8	4 5						
Switch Phase								
Minimum Initial (s)			5.0	12.0	5.5	6.0	12.0	5.0
Minimum Split (s)			10.0	22.0	10.0	18.0	30.0	10.0
Total Split (s)			10.0	22.0	10.0	18.0	30.0	10.0
Total Split (%)			10%	22%	10%	18%	30%	10%
Yellow Time (s)			4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)			1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)								
Total Lost Time (s)								
Lead/Lag			Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode			Max	Max	Max	Max	Max	Max
Act Effct Green (s)	40.0	24.0						
Actuated g/C Ratio	0.40	0.24						
v/c Ratio	0.57	1.04						
Control Delay	11.4	73.7						
Queue Delay	1.3	18.4						
Total Delay	12.7	92.1						
LOS	B	F						
Approach Delay	12.7	92.1						
Approach LOS	B	F						

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 100	
Control Type: Pretimed	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 55.8	Intersection LOS: E
Intersection Capacity Utilization 54.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: Medford St./Route 28 Frontage Rd. & Washington St.



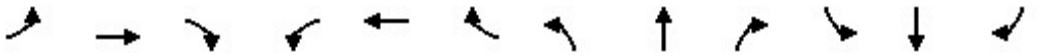


Lane Group	WBT	SBT
Lane Group Flow (vph)	708	841
v/c Ratio	0.57	1.04
Control Delay	11.4	73.7
Queue Delay	1.3	18.4
Total Delay	12.7	92.1
Queue Length 50th (ft)	184	~258
Queue Length 95th (ft)	244	#383
Internal Link Dist (ft)	99	61
Turn Bay Length (ft)		
Base Capacity (vph)	1237	807
Starvation Cap Reductn	185	0
Spillback Cap Reductn	313	36
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.77	1.09

Intersection Summary

~ 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.



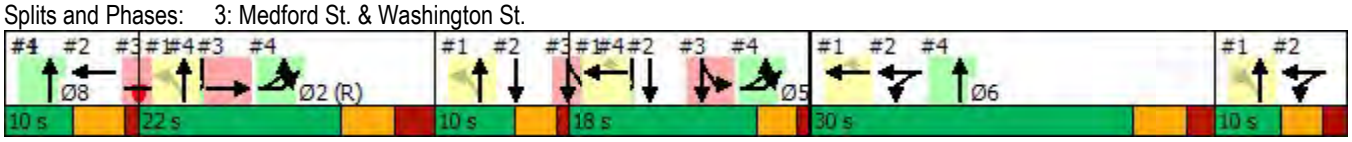
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	300	330	0	0	0	0	0	470	345
Future Volume (vph)	0	0	0	300	330	0	0	0	0	0	470	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.0						4.0	
Lane Util. Factor					0.95						0.95	
Frpb, ped/bikes					1.00						0.98	
Flpb, ped/bikes					1.00						1.00	
Frt					1.00						0.94	
Flt Protected					0.98						1.00	
Satd. Flow (prot)					2908						2814	
Flt Permitted					0.98						1.00	
Satd. Flow (perm)					2908						2814	
Peak-hour factor, PHF	0.92	0.92	0.92	0.89	0.89	0.89	0.92	0.92	0.92	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	337	371	0	0	0	0	0	485	356
RTOR Reduction (vph)	0	0	0	0	180	0	0	0	0	0	132	0
Lane Group Flow (vph)	0	0	0	0	528	0	0	0	0	0	709	0
Confl. Peds. (#/hr)	90					90	29		3	29		3
Confl. Bikes (#/hr)						44						22
Heavy Vehicles (%)	2%	2%	2%	7%	9%	2%	2%	2%	2%	2%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	5	5	0	0	0	0	0	0
Turn Type				Prot	NA						NA	
Protected Phases				6 8	1 6 8						4 5	
Permitted Phases												
Actuated Green, G (s)					40.0						24.0	
Effective Green, g (s)					34.0						24.0	
Actuated g/C Ratio					0.34						0.24	
Clearance Time (s)												
Lane Grp Cap (vph)					1134						675	
v/s Ratio Prot					c0.13						c0.25	
v/s Ratio Perm					0.05							
v/c Ratio					0.47						1.05	
Uniform Delay, d1					25.9						38.0	
Progression Factor					0.79						1.00	
Incremental Delay, d2					1.2						48.5	
Delay (s)					21.7						86.5	
Level of Service					C						F	
Approach Delay (s)		0.0			21.7			0.0			86.5	
Approach LOS		A			C			A			F	

Intersection Summary			
HCM 2000 Control Delay	56.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	SBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations								
Traffic Volume (vph)	515	715						
Future Volume (vph)	515	715						
Turn Type	NA	NA						
Protected Phases	1 2	4 5	1	2	4	5	6	8
Permitted Phases								
Detector Phase	1 2	4 5						
Switch Phase								
Minimum Initial (s)			5.0	12.0	5.5	6.0	12.0	5.0
Minimum Split (s)			10.0	22.0	10.0	18.0	30.0	10.0
Total Split (s)			10.0	22.0	10.0	18.0	30.0	10.0
Total Split (%)			10%	22%	10%	18%	30%	10%
Yellow Time (s)			4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)			1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)								
Total Lost Time (s)								
Lead/Lag			Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode			Max	Max	Max	Max	Max	Max
Act Effct Green (s)	27.0	24.0						
Actuated g/C Ratio	0.27	0.24						
v/c Ratio	0.53	0.90						
Control Delay	32.2	32.9						
Queue Delay	0.0	48.0						
Total Delay	32.2	80.9						
LOS	C	F						
Approach Delay	32.2	80.9						
Approach LOS	C	F						

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 100	
Control Type: Pretimed	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 60.3	Intersection LOS: E
Intersection Capacity Utilization 43.6%	ICU Level of Service A
Analysis Period (min) 15	

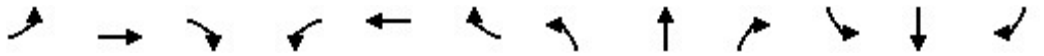
Splits and Phases: 3: Medford St. & Washington St.



Lane Group	EBT	SBT
Lane Group Flow (vph)	595	811
v/c Ratio	0.53	0.90
Control Delay	32.2	32.9
Queue Delay	0.0	48.0
Total Delay	32.2	80.9
Queue Length 50th (ft)	115	116
Queue Length 95th (ft)	152	m127
Internal Link Dist (ft)	130	63
Turn Bay Length (ft)		
Base Capacity (vph)	1133	901
Starvation Cap Reductn	0	257
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.53	1.26

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	515	50	0	0	0	0	0	0	55	715	0
Future Volume (vph)	0	515	50	0	0	0	0	0	0	55	715	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0									4.0	
Lane Util. Factor		0.91									0.95	
Frpb, ped/bikes		0.99									1.00	
Flpb, ped/bikes		1.00									1.00	
Frt		0.99									1.00	
Flt Protected		1.00									1.00	
Satd. Flow (prot)		4153									3067	
Flt Permitted		1.00									1.00	
Satd. Flow (perm)		4153									3067	
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	0	542	53	0	0	0	0	0	0	58	753	0
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	166	0
Lane Group Flow (vph)	0	583	0	0	0	0	0	0	0	0	645	0
Confl. Peds. (#/hr)			12	12			39					39
Confl. Bikes (#/hr)			33									48
Heavy Vehicles (%)	2%	9%	2%	2%	2%	2%	2%	2%	2%	13%	5%	2%
Bus Blockages (#/hr)	0	10	10	0	0	0	0	0	0	0	0	0
Turn Type		NA								Split	NA	
Protected Phases		1 2								4 5	4 5	
Permitted Phases												
Actuated Green, G (s)		25.0									24.0	
Effective Green, g (s)		25.0									24.0	
Actuated g/C Ratio		0.25									0.24	
Clearance Time (s)												
Lane Grp Cap (vph)		1038									736	
v/s Ratio Prot		c0.14									c0.21	
v/s Ratio Perm												
v/c Ratio		0.56									0.88	
Uniform Delay, d1		32.7									36.6	
Progression Factor		1.00									0.91	
Incremental Delay, d2		2.2									7.6	
Delay (s)		34.9									41.0	
Level of Service		C									D	
Approach Delay (s)		34.9			0.0			0.0			41.0	
Approach LOS		C			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	38.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL2	EBL	NBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations									
Traffic Volume (vph)	350	215	70						
Future Volume (vph)	350	215	70						
Turn Type	Prot	Prot	NA						
Protected Phases	1 2 4 5	1 2 4 5	6 8	1	2	4	5	6	8
Permitted Phases									
Detector Phase	1 2 4 5	1 2 4 5	6 8						
Switch Phase									
Minimum Initial (s)				5.0	12.0	5.5	6.0	12.0	5.0
Minimum Split (s)				10.0	22.0	10.0	18.0	30.0	10.0
Total Split (s)				10.0	22.0	10.0	18.0	30.0	10.0
Total Split (%)				10%	22%	10%	18%	30%	10%
Yellow Time (s)				4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)				1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag				Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode				Max	Max	Max	Max	Max	Max
Act Effct Green (s)	55.0	55.0	34.0						
Actuated g/C Ratio	0.55	0.55	0.34						
v/c Ratio	0.24	0.27	0.22						
Control Delay	0.7	0.4	24.4						
Queue Delay	0.9	0.4	0.0						
Total Delay	1.6	0.8	24.4						
LOS	A	A	C						
Approach Delay		1.1	24.4						
Approach LOS		A	C						

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 100	
Control Type: Pretimed	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 6.7	Intersection LOS: A
Intersection Capacity Utilization 38.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Route 28 Frontage Rd. & Washington St.

Lane Group	EBL2	EBL	NBT
Lane Group Flow (vph)	205	409	194
v/c Ratio	0.24	0.27	0.22
Control Delay	0.7	0.4	24.4
Queue Delay	0.9	0.4	0.0
Total Delay	1.6	0.8	24.4
Queue Length 50th (ft)	0	0	45
Queue Length 95th (ft)	m4	m0	72
Internal Link Dist (ft)		98	768
Turn Bay Length (ft)			
Base Capacity (vph)	852	1536	882
Starvation Cap Reductn	411	676	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.46	0.48	0.22

Intersection Summary

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

Movement	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations											
Traffic Volume (vph)	350	215	0	0	70	100	0	0	0	0	0
Future Volume (vph)	350	215	0	0	70	100	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			6.0						
Lane Util. Factor	0.91	0.91			0.95						
Frpb, ped/bikes	1.00	1.00			1.00						
Flpb, ped/bikes	1.00	1.00			1.00						
Frt	1.00	1.00			0.91						
Flt Protected	0.95	0.95			1.00						
Satd. Flow (prot)	1382	2650			2595						
Flt Permitted	0.95	0.95			1.00						
Satd. Flow (perm)	1382	2650			2595						
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	380	234	0	0	80	114	0	0	0	0	0
RTOR Reduction (vph)	113	96	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	92	313	0	0	194	0	0	0	0	0	0
Confl. Peds. (#/hr)		5	16	3					3	16	2
Confl. Bikes (#/hr)			28								
Heavy Vehicles (%)	7%	15%	2%	2%	13%	15%	2%	2%	2%	2%	2%
Turn Type	Prot	Prot			NA						
Protected Phases	1 2 4 5	1 2 4 5			6 8						
Permitted Phases											
Actuated Green, G (s)	56.0	56.0			35.0						
Effective Green, g (s)	45.0	45.0			35.0						
Actuated g/C Ratio	0.45	0.45			0.35						
Clearance Time (s)											
Lane Grp Cap (vph)	621	1192			908						
v/s Ratio Prot	0.07	c0.12			c0.07						
v/s Ratio Perm											
v/c Ratio	0.15	0.26			0.21						
Uniform Delay, d1	16.2	17.1			22.8						
Progression Factor	0.10	0.00			1.00						
Incremental Delay, d2	0.4	0.5			0.5						
Delay (s)	2.0	0.5			23.4						
Level of Service	A	A			C						
Approach Delay (s)		1.0			23.4			0.0		0.0	
Approach LOS		A			C			A		A	

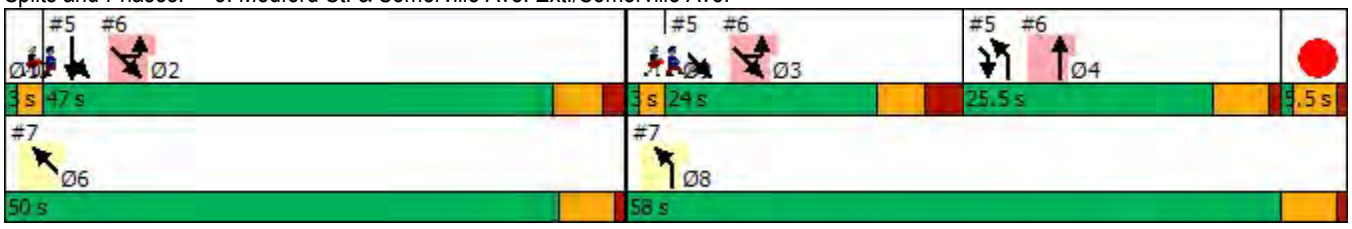
Intersection Summary			
HCM 2000 Control Delay	6.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	38.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	NBL	SBL	SBT	SET	SER	Ø1	Ø6	Ø8	Ø9	Ø10
Lane Configurations										
Traffic Volume (vph)	35	125	585	135	55					
Future Volume (vph)	35	125	585	135	55					
Turn Type	Prot	Split	NA	NA	pm+ov					
Protected Phases	4	2	2	3	4	1	6	8	9	10
Permitted Phases					3					
Detector Phase	4	2	2	3	4					
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	1.0	10.0	10.0	1.0	1.0
Minimum Split (s)	25.5	30.0	30.0	24.0	25.5	3.0	28.5	21.0	3.0	5.5
Total Split (s)	25.5	47.0	47.0	24.0	25.5	3.0	50.0	58.0	3.0	5.5
Total Split (%)	23.6%	43.5%	43.5%	22.2%	23.6%	3%	46%	54%	3%	5%
Yellow Time (s)	4.5	4.0	4.0	4.0	4.5	2.0	4.5	4.5	2.0	3.5
All-Red Time (s)	1.0	2.0	2.0	3.0	1.0	0.0	1.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0					
Total Lost Time (s)	5.5	6.0	6.0	7.0	5.5					
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead			Lead	Lag
Lead-Lag Optimize?										
Recall Mode	None	Max	Max	None	None	None	Max	None	None	None
Act Effct Green (s)	13.2	43.8	43.8	13.5	28.3					
Actuated g/C Ratio	0.15	0.49	0.49	0.15	0.31					
v/c Ratio	0.28	0.19	0.51	0.66	0.15					
Control Delay	38.3	16.4	18.6	51.4	19.2					
Queue Delay	0.0	0.0	0.0	0.0	0.0					
Total Delay	38.3	16.4	18.6	51.4	19.2					
LOS	D	B	B	D	B					
Approach Delay			18.2	42.0						
Approach LOS			B	D						

Intersection Summary	
Cycle Length: 108	
Actuated Cycle Length: 90.2	
Natural Cycle: 95	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 23.8	Intersection LOS: C
Intersection Capacity Utilization 49.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Medford St. & Somerville Ave. Ext./Somerville Ave.



Lane Group	NBL	SBL	SBT	SET	SER
Lane Group Flow (vph)	64	136	734	153	63
v/c Ratio	0.28	0.19	0.51	0.66	0.15
Control Delay	38.3	16.4	18.6	51.4	19.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	38.3	16.4	18.6	51.4	19.2
Queue Length 50th (ft)	33	41	135	81	23
Queue Length 95th (ft)	44	102	256	158	49
Internal Link Dist (ft)			894	143	
Turn Bay Length (ft)		50			100
Base Capacity (vph)	351	710	1436	292	511
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.18	0.19	0.51	0.52	0.12

Intersection Summary

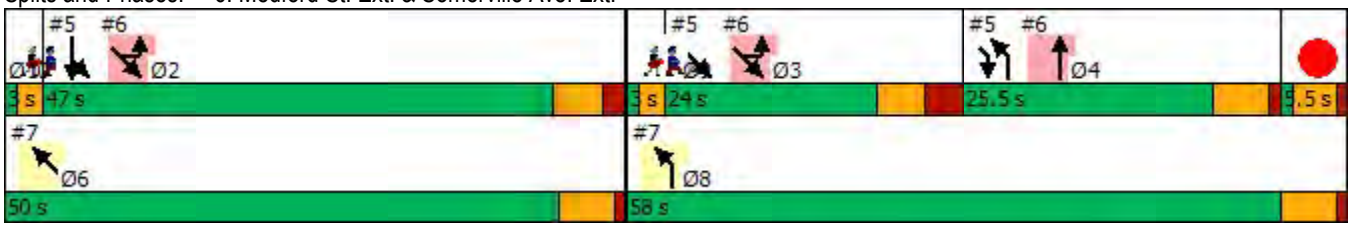
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	35	0	0	125	585	90	0	135	55	0	0	0
Future Volume (vph)	35	0	0	125	585	90	0	135	55	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5			6.0	6.0			7.0	5.5			
Lane Util. Factor	1.00			1.00	0.95			1.00	1.00			
Frpb, ped/bikes	1.00			1.00	0.98			1.00	0.98			
Flpb, ped/bikes	1.00			1.00	1.00			1.00	1.00			
Frt	1.00			1.00	0.98			1.00	0.85			
Flt Protected	0.95			0.95	1.00			1.00	1.00			
Satd. Flow (prot)	1577			1464	2951			1541	1310			
Flt Permitted	0.95			0.95	1.00			1.00	1.00			
Satd. Flow (perm)	1577			1464	2951			1541	1310			
Peak-hour factor, PHF	0.55	0.55	0.55	0.92	0.92	0.92	0.88	0.88	0.88	0.92	0.92	0.92
Adj. Flow (vph)	64	0	0	136	636	98	0	153	62	0	0	0
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	0	0	0	0
Lane Group Flow (vph)	64	0	0	136	725	0	0	153	63	0	0	0
Confl. Peds. (#/hr)	35					35	5		17	17		5
Confl. Bikes (#/hr)						47			2			
Heavy Vehicles (%)	3%	0%	0%	11%	5%	13%	0%	11%	9%	2%	2%	2%
Turn Type	Prot			Split	NA			NA	pm+ov			
Protected Phases	4			2	2			3	4			
Permitted Phases									3			
Actuated Green, G (s)	13.8			44.3	44.3			13.5	27.3			
Effective Green, g (s)	13.8			44.3	44.3			13.5	27.3			
Actuated g/C Ratio	0.15			0.49	0.49			0.15	0.30			
Clearance Time (s)	5.5			6.0	6.0			7.0	5.5			
Vehicle Extension (s)	3.0			3.0	3.0			3.0	3.0			
Lane Grp Cap (vph)	241			719	1450			230	396			
v/s Ratio Prot	c0.04			0.09	c0.25			c0.10	0.02			
v/s Ratio Perm									0.02			
v/c Ratio	0.27			0.19	0.50			0.67	0.16			
Uniform Delay, d1	33.7			12.8	15.4			36.2	23.0			
Progression Factor	1.00			1.00	1.00			1.00	1.00			
Incremental Delay, d2	0.6			0.6	1.2			7.1	0.2			
Delay (s)	34.3			13.4	16.7			43.2	23.2			
Level of Service	C			B	B			D	C			
Approach Delay (s)		34.3			16.2			37.4			0.0	
Approach LOS		C			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	90.1	Sum of lost time (s)	27.0
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBT	SET	Ø1	Ø2	Ø3	Ø6	Ø8	Ø9	Ø10
Lane Configurations									
Traffic Volume (vph)	195	205							
Future Volume (vph)	195	205							
Turn Type	NA	NA							
Protected Phases	4	2 3	1	2	3	6	8	9	10
Permitted Phases									
Detector Phase	4	2 3							
Switch Phase									
Minimum Initial (s)	10.0		1.0	10.0	6.0	10.0	10.0	1.0	1.0
Minimum Split (s)	25.5		3.0	30.0	24.0	28.5	21.0	3.0	5.5
Total Split (s)	25.5		3.0	47.0	24.0	50.0	58.0	3.0	5.5
Total Split (%)	23.6%		3%	44%	22%	46%	54%	3%	5%
Yellow Time (s)	4.5		2.0	4.0	4.0	4.5	4.5	2.0	3.5
All-Red Time (s)	1.0		0.0	2.0	3.0	1.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0								
Total Lost Time (s)	5.5								
Lead/Lag	Lead		Lead	Lag	Lag			Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None		None	Max	None	Max	None	None	None
Act Effct Green (s)	13.2	63.3							
Actuated g/C Ratio	0.15	0.70							
v/c Ratio	0.54	0.27							
Control Delay	40.9	1.3							
Queue Delay	0.0	0.4							
Total Delay	40.9	1.7							
LOS	D	A							
Approach Delay	40.9	1.7							
Approach LOS	D	A							

Intersection Summary	
Cycle Length: 108	
Actuated Cycle Length: 90.2	
Natural Cycle: 95	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 19.1	Intersection LOS: B
Intersection Capacity Utilization 43.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Medford St. Ext. & Somerville Ave. Ext.



Lane Group	NBT	SET
Lane Group Flow (vph)	235	296
v/c Ratio	0.54	0.27
Control Delay	40.9	1.3
Queue Delay	0.0	0.4
Total Delay	40.9	1.7
Queue Length 50th (ft)	65	0
Queue Length 95th (ft)	102	0
Internal Link Dist (ft)	128	100
Turn Bay Length (ft)		
Base Capacity (vph)	664	1153
Starvation Cap Reductn	0	467
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.35	0.43

Intersection Summary

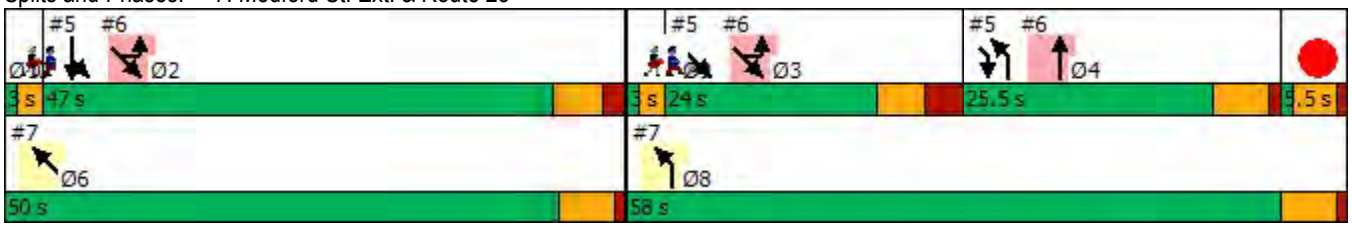
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	195	5	0	0	0	50	205	0	0	0	0
Future Volume (vph)	0	195	5	0	0	0	50	205	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5						6.0				
Lane Util. Factor		0.95						1.00				
Frpb, ped/bikes		1.00						1.00				
Flpb, ped/bikes		1.00						1.00				
Frt		1.00						1.00				
Flt Protected		1.00						0.99				
Satd. Flow (prot)		2980						1534				
Flt Permitted		1.00						0.99				
Satd. Flow (perm)		2980						1534				
Peak-hour factor, PHF	0.85	0.85	0.85	0.92	0.92	0.92	0.86	0.86	0.86	0.92	0.92	0.92
Adj. Flow (vph)	0	229	6	0	0	0	58	238	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	19	0	0	0	0
Lane Group Flow (vph)	0	235	0	0	0	0	0	277	0	0	0	0
Confl. Peds. (#/hr)	23		2	2		23	4		32	32		4
Confl. Bikes (#/hr)			3						4			
Heavy Vehicles (%)	0%	8%	29%	2%	2%	2%	12%	10%	0%	2%	2%	2%
Turn Type		NA					Split	NA				
Protected Phases		4					2 3	2 3				
Permitted Phases												
Actuated Green, G (s)		13.8						63.8				
Effective Green, g (s)		13.8						63.8				
Actuated g/C Ratio		0.15						0.71				
Clearance Time (s)		5.5										
Vehicle Extension (s)		3.0										
Lane Grp Cap (vph)		456						1086				
v/s Ratio Prot		c0.08						c0.18				
v/s Ratio Perm												
v/c Ratio		0.52						0.25				
Uniform Delay, d1		35.1						4.7				
Progression Factor		1.00						0.17				
Incremental Delay, d2		1.0						0.1				
Delay (s)		36.1						0.9				
Level of Service		D						A				
Approach Delay (s)		36.1			0.0			0.9			0.0	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	90.1	Sum of lost time (s)	27.0
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBL	NWT	Ø1	Ø2	Ø3	Ø4	Ø9	Ø10
Lane Configurations								
Traffic Volume (vph)	245	375						
Future Volume (vph)	245	375						
Turn Type	Prot	NA						
Protected Phases	8	6	1	2	3	4	9	10
Permitted Phases								
Detector Phase	8	6						
Switch Phase								
Minimum Initial (s)	10.0	10.0	1.0	10.0	6.0	10.0	1.0	1.0
Minimum Split (s)	21.0	28.5	3.0	30.0	24.0	25.5	3.0	5.5
Total Split (s)	58.0	50.0	3.0	47.0	24.0	25.5	3.0	5.5
Total Split (%)	53.7%	46.3%	3%	44%	22%	24%	3%	5%
Yellow Time (s)	4.5	4.5	2.0	4.0	4.0	4.5	2.0	3.5
All-Red Time (s)	1.0	1.0	0.0	2.0	3.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0	0.0						
Total Lost Time (s)	5.5	5.5						
Lead/Lag			Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?								
Recall Mode	None	Max	None	Max	None	None	None	None
Act Effct Green (s)	34.3	44.8						
Actuated g/C Ratio	0.38	0.50						
v/c Ratio	0.21	0.23						
Control Delay	0.4	14.4						
Queue Delay	0.1	0.0						
Total Delay	0.5	14.4						
LOS	A	B						
Approach Delay	0.5	14.4						
Approach LOS	A	B						

Intersection Summary			
Cycle Length: 108			
Actuated Cycle Length: 90.2			
Natural Cycle: 95			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.66			
Intersection Signal Delay: 9.1		Intersection LOS: A	
Intersection Capacity Utilization 55.1%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 7: Medford St. Ext. & Route 28



Lane Group	NBL	NWT
Lane Group Flow (vph)	292	475
v/c Ratio	0.21	0.23
Control Delay	0.4	14.4
Queue Delay	0.1	0.0
Total Delay	0.5	14.4
Queue Length 50th (ft)	0	52
Queue Length 95th (ft)	0	82
Internal Link Dist (ft)	56	187
Turn Bay Length (ft)		
Base Capacity (vph)	1880	2066
Starvation Cap Reductn	824	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.28	0.23

Intersection Summary

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	245	0	0	0	0	375
Future Volume (vph)	245	0	0	0	0	375
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5					5.5
Lane Util. Factor	0.97					0.91
Frpb, ped/bikes	1.00					1.00
Flpb, ped/bikes	1.00					1.00
Frt	1.00					1.00
Flt Protected	0.95					1.00
Satd. Flow (prot)	2891					4161
Flt Permitted	0.95					1.00
Satd. Flow (perm)	2891					4161
Peak-hour factor, PHF	0.84	0.84	0.92	0.92	0.79	0.79
Adj. Flow (vph)	292	0	0	0	0	475
RTOR Reduction (vph)	181	0	0	0	0	0
Lane Group Flow (vph)	111	0	0	0	0	475
Confl. Peds. (#/hr)	3	5		7	7	
Heavy Vehicles (%)	9%	0%	2%	2%	0%	11%
Bus Blockages (#/hr)	0	0	0	0	0	8
Turn Type	Prot					NA
Protected Phases	8					6
Permitted Phases						
Actuated Green, G (s)	34.3					44.8
Effective Green, g (s)	34.3					44.8
Actuated g/C Ratio	0.38					0.50
Clearance Time (s)	5.5					5.5
Vehicle Extension (s)	3.0					3.0
Lane Grp Cap (vph)	1100					2068
v/s Ratio Prot	c0.04					c0.11
v/s Ratio Perm						
v/c Ratio	0.10					0.23
Uniform Delay, d1	18.0					12.9
Progression Factor	1.00					1.00
Incremental Delay, d2	0.0					0.3
Delay (s)	18.0					13.1
Level of Service	B					B
Approach Delay (s)	18.0		0.0			13.1
Approach LOS	B		A			B

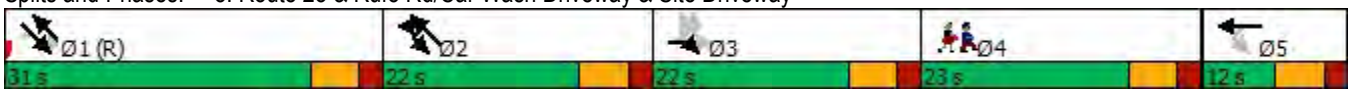
Intersection Summary			
HCM 2000 Control Delay	15.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	90.1	Sum of lost time (s)	27.0
Intersection Capacity Utilization	55.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL2	EBT	EBR	SBL	SET	SER	NWL	NWT	Ø4	Ø5
Lane Configurations										
Traffic Volume (vph)	45	0	45	5	1535	225	80	335		
Future Volume (vph)	45	0	45	5	1535	225	80	335		
Turn Type	custom	NA	custom	D.Pm	NA	Perm	Prot	NA		
Protected Phases			3!		1		2	1 2	4	5
Permitted Phases	3	3!		3!		1				
Detector Phase	3	3	3	3	1	1	2	1 2		
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	4.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0	21.0	21.0		21.0	10.0
Total Split (s)	22.0	22.0	22.0	22.0	31.0	31.0	22.0		23.0	12.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	28.2%	28.2%	20.0%		21%	11%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)		6.0	6.0	6.0	6.0	6.0	6.0			
Lead/Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag		Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	
Recall Mode	None	None	None	None	C-Min	C-Min	None		None	None
Act Effct Green (s)		9.4	9.4	9.4	66.6	66.6	12.1	85.9		
Actuated g/C Ratio		0.09	0.09	0.09	0.61	0.61	0.11	0.78		
v/c Ratio		0.46	0.16	0.04	0.57	0.25	0.59	0.13		
Control Delay		60.1	1.1	0.3	18.9	4.1	60.8	6.3		
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay		60.1	1.1	0.3	18.9	4.1	60.8	6.3		
LOS		E	A	A	B	A	E	A		
Approach Delay		30.6		0.3	17.0			16.8		
Approach LOS		C		A	B			B		

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 89 (81%), Referenced to phase 1:NWSE, Start of Green	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 17.4	Intersection LOS: B
Intersection Capacity Utilization 77.5%	ICU Level of Service D
Analysis Period (min) 15	

! Phase conflict between lane groups.

Splits and Phases: 8: Route 28 & Rufo Rd/Car Wash Driveway & Site Driveway



Lane Group	EBT	EBR	SBL	SET	SER	NWL	NWT
Lane Group Flow (vph)	49	49	14	1566	230	95	401
v/c Ratio	0.46	0.16	0.04	0.57	0.25	0.59	0.13
Control Delay	60.1	1.1	0.3	18.9	4.1	60.8	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.1	1.1	0.3	18.9	4.1	60.8	6.3
Queue Length 50th (ft)	34	0	0	201	0	65	16
Queue Length 95th (ft)	70	0	0	#613	60	107	75
Internal Link Dist (ft)	290		55	1866			743
Turn Bay Length (ft)					500	500	
Base Capacity (vph)	183	382	400	2744	926	214	3215
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.13	0.04	0.57	0.25	0.44	0.12

Intersection Summary

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

Movement	EBL2	EBT	EBR	WBT	SBL	SBR	SBR2	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	45	0	45	0	5	1	1	1535	225	80	335	2
Future Volume (vph)	45	0	45	0	5	1	1	1535	225	80	335	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	11	10	12	12	12	12	12	10	11	11
Total Lost time (s)		6.0	6.0		6.0			6.0	6.0	6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00			0.91	1.00	1.00	0.91	
Frpb, ped/bikes		1.00	1.00		0.99			1.00	0.96	1.00	1.00	
Flpb, ped/bikes		0.93	1.00		1.00			1.00	1.00	1.00	1.00	
Frt		1.00	0.85		0.96			1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00		0.97			1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1264	1405		1530			4532	1382	1472	4018	
Flt Permitted		0.95	1.00		0.97			1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1264	1405		1530			4532	1382	1472	4018	
Peak-hour factor, PHF	0.91	0.91	0.91	0.31	0.50	0.50	0.50	0.98	0.98	0.84	0.84	0.84
Adj. Flow (vph)	49	0	49	0	10	2	2	1566	230	95	399	2
RTOR Reduction (vph)	0	0	45	0	13	0	0	0	113	0	0	0
Lane Group Flow (vph)	0	49	4	0	1	0	0	1566	117	95	401	0
Confl. Peds. (#/hr)	8		1		1	5	8		5	5		11
Confl. Bikes (#/hr)									2			8
Heavy Vehicles (%)	16%	0%	0%	0%	0%	17%	0%	3%	1%	3%	12%	50%
Turn Type	custom	NA	custom		D.Pm			NA	Perm	Prot	NA	
Protected Phases			3!	5				1		2	1 2	
Permitted Phases	3	3!			3!				1			
Actuated Green, G (s)		8.2	8.2		8.2			55.8	55.8	12.1	73.9	
Effective Green, g (s)		8.2	8.2		8.2			55.8	55.8	12.1	73.9	
Actuated g/C Ratio		0.07	0.07		0.07			0.51	0.51	0.11	0.67	
Clearance Time (s)		6.0	6.0		6.0			6.0	6.0	6.0		
Vehicle Extension (s)		2.0	2.0		2.0			3.0	3.0	3.0		
Lane Grp Cap (vph)		94	104		114			2298	701	161	2699	
v/s Ratio Prot			0.00					c0.35		c0.06	0.10	
v/s Ratio Perm		c0.04			0.00				0.08			
v/c Ratio		0.52	0.04		0.01			0.68	0.17	0.59	0.15	
Uniform Delay, d1		49.0	47.2		47.1			20.4	14.6	46.6	6.6	
Progression Factor		1.00	1.00		1.00			1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.4	0.1		0.0			1.7	0.5	5.7	0.0	
Delay (s)		51.4	47.3		47.1			22.1	15.1	52.3	6.6	
Level of Service		D	D		D			C	B	D	A	
Approach Delay (s)		49.3		0.0	47.1			21.2			15.4	
Approach LOS		D		A	D			C			B	

Intersection Summary			
HCM 2000 Control Delay	21.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	30.0
Intersection Capacity Utilization	77.5%	ICU Level of Service	D
Analysis Period (min)	15		

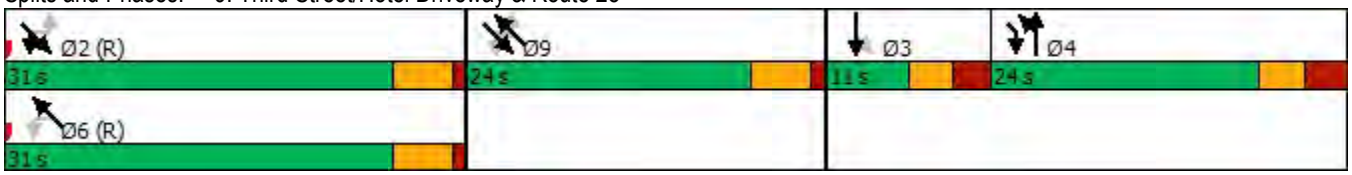
! Phase conflict between lane groups.

c Critical Lane Group

Lane Group	NBL	NBT	SBL	SBT	SEL	SET	SER	NWL	NWT	Ø2	Ø6	Ø9
Lane Configurations												
Traffic Volume (vph)	120	5	10	5	1	1095	485	2	315			
Future Volume (vph)	120	5	10	5	1	1095	485	2	315			
Turn Type	Split	NA	Perm	NA	Perm	NA	custom	Perm	NA			
Protected Phases	4	4		3		2 9	2 4		6 9	2	6	9
Permitted Phases			3		2 9			6 9				
Detector Phase	4	4	3	3	2 9	2 9	2 4	6 9	6 9			
Switch Phase												
Minimum Initial (s)	6.0	6.0	5.0	5.0						10.0	17.0	1.0
Minimum Split (s)	24.0	24.0	11.0	11.0						23.0	23.0	23.0
Total Split (s)	24.0	24.0	11.0	11.0						31.0	31.0	24.0
Total Split (%)	26.7%	26.7%	12.2%	12.2%						34%	34%	27%
Yellow Time (s)	3.0	3.0	3.0	3.0						4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	2.5	2.5						1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0								
Total Lost Time (s)	6.0	6.0		5.5								
Lead/Lag	Lag	Lag	Lead	Lead								
Lead-Lag Optimize?												
Recall Mode	Ped	Ped	None	None						C-Min	C-Min	Min
Act Effct Green (s)	18.0	18.0		5.5		54.2	57.4		54.2			
Actuated g/C Ratio	0.20	0.20		0.06		0.60	0.64		0.60			
v/c Ratio	0.30	0.30		0.28		0.65	0.46		0.25			
Control Delay	34.3	25.3		41.4		15.0	2.5		9.7			
Queue Delay	0.0	0.0		0.0		0.0	0.0		0.0			
Total Delay	34.3	25.3		41.4		15.0	2.5		9.7			
LOS	C	C		D		B	A		A			
Approach Delay		30.0		41.4		11.2			9.7			
Approach LOS		C		D		B			A			

Intersection Summary		
Cycle Length: 90		
Actuated Cycle Length: 90		
Offset: 17 (19%), Referenced to phase 2:SETL and 6:NWTL, Start of Green		
Natural Cycle: 85		
Control Type: Actuated-Coordinated		
Maximum v/c Ratio: 0.65		
Intersection Signal Delay: 12.6	Intersection LOS: B	
Intersection Capacity Utilization 69.1%	ICU Level of Service C	
Analysis Period (min) 15		

Splits and Phases: 9: Third Street/Hotel Driveway & Route 28



Lane Group	NBL	NBT	SBT	SET	SER	NWT
Lane Group Flow (vph)	82	78	25	1142	505	413
v/c Ratio	0.30	0.30	0.28	0.65	0.46	0.25
Control Delay	34.3	25.3	41.4	15.0	2.5	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.3	25.3	41.4	15.0	2.5	9.7
Queue Length 50th (ft)	42	26	10	240	0	61
Queue Length 95th (ft)	86	69	31	311	43	73
Internal Link Dist (ft)		395	64	743		192
Turn Bay Length (ft)	110					
Base Capacity (vph)	269	260	93	1855	1091	1724
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	0.30	0.30	0.27	0.62	0.46	0.24

Intersection Summary

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	120	5	25	10	5	5	1	1095	485	2	315	5
Future Volume (vph)	120	5	25	10	5	5	1	1095	485	2	315	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	8	12	12	12	12	11	12	12	11	11
Total Lost time (s)	6.0	6.0			5.5			5.0	5.0		5.0	
Lane Util. Factor	0.95	0.95			1.00			0.95	1.00		0.95	
Frpb, ped/bikes	1.00	0.97			1.00			1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00			0.97			1.00	1.00		1.00	
Frt	1.00	0.95			0.97			1.00	0.85		1.00	
Flt Protected	0.95	0.97			0.97			1.00	1.00		1.00	
Satd. Flow (prot)	1346	1200			1560			3049	1425		2848	
Flt Permitted	0.95	0.97			0.87			0.95	1.00		0.95	
Satd. Flow (perm)	1346	1200			1390			2911	1425		2704	
Peak-hour factor, PHF	0.94	0.94	0.94	0.79	0.79	0.79	0.96	0.96	0.96	0.78	0.78	0.78
Adj. Flow (vph)	128	5	27	13	6	6	1	1141	505	3	404	6
RTOR Reduction (vph)	0	21	0	0	6	0	0	0	229	0	1	0
Lane Group Flow (vph)	82	57	0	0	19	0	0	1142	276	0	412	0
Confl. Peds. (#/hr)			52	52			37		59	59		37
Confl. Bikes (#/hr)									5			
Heavy Vehicles (%)	7%	0%	25%	0%	0%	0%	0%	3%	2%	0%	10%	0%
Turn Type	Split	NA		Perm	NA		Perm	NA	custom	Perm	NA	
Protected Phases	4	4			3			2 9	2 4		6 9	
Permitted Phases				3			2 9			6 9		
Actuated Green, G (s)	18.0	18.0			3.5			52.0	55.2		52.0	
Effective Green, g (s)	18.0	18.0			3.5			52.0	49.2		52.0	
Actuated g/C Ratio	0.20	0.20			0.04			0.58	0.55		0.58	
Clearance Time (s)	6.0	6.0			5.5							
Vehicle Extension (s)	2.0	2.0			2.0							
Lane Grp Cap (vph)	269	240			54			1681	779		1562	
v/s Ratio Prot	0.06	0.05							c0.19			
v/s Ratio Perm					c0.01			c0.39			0.15	
v/c Ratio	0.30	0.24			0.36			0.68	0.35		0.26	
Uniform Delay, d1	30.7	30.2			42.2			13.2	11.5		9.5	
Progression Factor	1.00	1.00			1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.2	0.2			1.5			0.9	0.1		0.0	
Delay (s)	30.9	30.4			43.6			14.1	11.6		9.5	
Level of Service	C	C			D			B	B		A	
Approach Delay (s)		30.7			43.6			13.3			9.5	
Approach LOS		C			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	21.5
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	0	0	345	40	0	30
Future Volume (Veh/h)	0	0	345	40	0	30
Sign Control		Stop	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.82	0.82	0.73	0.73
Hourly flow rate (vph)	0	0	421	49	0	41
Pedestrians					4	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type			None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	846	0	0		870	870
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	846	0	0		870	870
tC, single (s)	6.5	6.2	4.2		7.1	6.8
tC, 2 stage (s)						
tF (s)	4.0	3.3	2.3		3.5	4.2
p0 queue free %	100	100	73		100	79
cM capacity (veh/h)	218	1085	1572		214	194

Direction, Lane #	NW 1	NW 2	NW 3	SW 1
Volume Total	168	168	133	41
Volume Left	168	168	84	0
Volume Right	0	0	49	0
cSH	1572	1572	1572	194
Volume to Capacity	0.27	0.27	0.27	0.21
Queue Length 95th (ft)	27	27	27	19
Control Delay (s)	8.1	8.1	6.0	28.5
Lane LOS	A	A	A	D
Approach Delay (s)	7.5			28.5
Approach LOS				D

Intersection Summary			
Average Delay	9.2		
Intersection Capacity Utilization	18.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SBL	SBR	SEL	SET	SER	NWL	NWT	NWR	NEL2	NEL	NER
Lane Configurations											
Traffic Volume (veh/h)	2	0	1	270	0	0	160	5	160	10	65
Future Volume (Veh/h)	2	0	1	270	0	0	160	5	160	10	65
Sign Control	Stop			Free			Free			Stop	
Grade	0%			0%			0%			0%	
Peak Hour Factor	0.50	0.50	0.93	0.93	0.93	0.71	0.71	0.71	0.85	0.85	0.85
Hourly flow rate (vph)	4	0	1	290	0	0	225	7	188	12	76
Pedestrians	41			2			5			40	
Lane Width (ft)	12.0			12.0			12.0			12.0	
Walking Speed (ft/s)	3.5			3.5			3.5			3.5	
Percent Blockage	4			0			0			4	
Right turn flare (veh)											
Median type				None			None				
Median storage veh)											
Upstream signal (ft)							420				
pX, platoon unblocked											
vC, conflicting volume	648	602	273			330			562	605	335
vC1, stage 1 conf vol											
vC2, stage 2 conf vol											
vCu, unblocked vol	648	602	273			330			562	605	335
tC, single (s)	7.1	6.5	4.1			4.1			7.2	6.5	6.3
tC, 2 stage (s)											
tF (s)	3.5	4.0	2.2			2.2			3.6	4.0	3.4
p0 queue free %	99	100	100			100			52	97	89
cM capacity (veh/h)	300	385	1251			1183			389	383	664

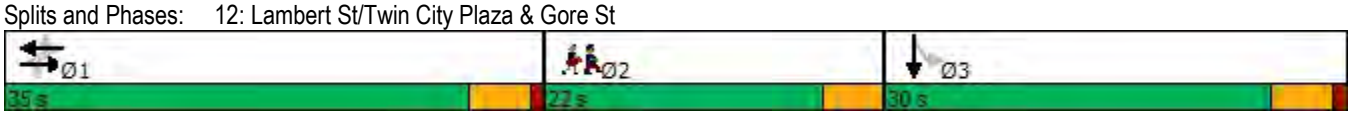
Direction, Lane #	SB 1	SE 1	NW 1	NE 1
Volume Total	4	291	232	276
Volume Left	4	1	0	188
Volume Right	0	0	7	76
cSH	300	1251	1700	438
Volume to Capacity	0.01	0.00	0.14	0.63
Queue Length 95th (ft)	1	0	0	106
Control Delay (s)	17.1	0.0	0.0	26.2
Lane LOS	C	A		D
Approach Delay (s)	17.1	0.0	0.0	26.2
Approach LOS	C			D

Intersection Summary			
Average Delay	9.1		
Intersection Capacity Utilization	49.2%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	SBT	Ø2
Lane Configurations						
Traffic Volume (vph)	15	115	5	70	70	
Future Volume (vph)	15	115	5	70	70	
Turn Type	Perm	NA	Perm	NA	NA	
Protected Phases		1		1	3	2
Permitted Phases	1		1			
Detector Phase	1	1	1	1	3	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0
Minimum Split (s)	12.0	12.0	12.0	12.0	12.0	22.0
Total Split (s)	35.0	35.0	35.0	35.0	30.0	22.0
Total Split (%)	40.2%	40.2%	40.2%	40.2%	34.5%	25%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)		0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	Max	Max	None	Ped
Act Effct Green (s)		30.1		30.1	13.0	
Actuated g/C Ratio		0.40		0.40	0.17	
v/c Ratio		0.42		0.16	0.55	
Control Delay		15.5		15.2	33.2	
Queue Delay		0.0		0.0	0.0	
Total Delay		15.5		15.2	33.2	
LOS		B		B	C	
Approach Delay		15.5		15.2	33.2	
Approach LOS		B		B	C	

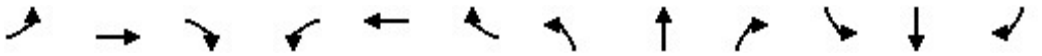
Intersection Summary	
Cycle Length: 87	
Actuated Cycle Length: 75.1	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 20.8	Intersection LOS: C
Intersection Capacity Utilization 43.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Lambert St/Twin City Plaza & Gore St



Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	274	113	169
v/c Ratio	0.42	0.16	0.55
Control Delay	15.5	15.2	33.2
Queue Delay	0.0	0.0	0.0
Total Delay	15.5	15.2	33.2
Queue Length 50th (ft)	67	30	68
Queue Length 95th (ft)	143	56	103
Internal Link Dist (ft)	73	445	291
Turn Bay Length (ft)			
Base Capacity (vph)	652	686	587
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.42	0.16	0.29

Intersection Summary



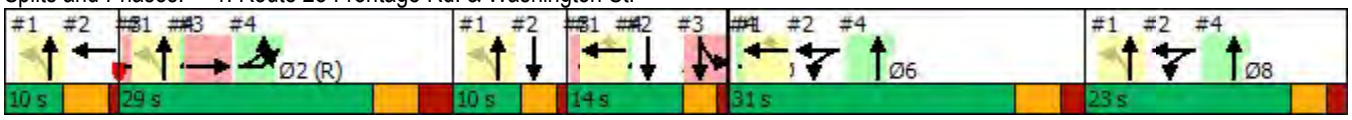
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	115	125	5	70	10	0	0	0	40	70	20
Future Volume (vph)	15	115	125	5	70	10	0	0	0	40	70	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		0.94			0.99						0.99	
Flpb, ped/bikes		1.00			1.00						0.98	
Frt		0.93			0.98						0.98	
Flt Protected		1.00			1.00						0.98	
Satd. Flow (prot)		1575			1732						1716	
Flt Permitted		0.98			0.98						0.98	
Satd. Flow (perm)		1554			1704						1716	
Peak-hour factor, PHF	0.93	0.93	0.93	0.75	0.75	0.75	0.92	0.92	0.92	0.77	0.77	0.77
Adj. Flow (vph)	16	124	134	7	93	13	0	0	0	52	91	26
RTOR Reduction (vph)	0	36	0	0	5	0	0	0	0	0	9	0
Lane Group Flow (vph)	0	238	0	0	108	0	0	0	0	0	160	0
Confl. Peds. (#/hr)	44		54	54		44	24		26	26		24
Confl. Bikes (#/hr)			45			2						
Heavy Vehicles (%)	0%	5%	6%	0%	6%	13%	2%	2%	2%	0%	4%	5%
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		1			1						3	
Permitted Phases	1			1						3		
Actuated Green, G (s)		30.1			30.1						13.0	
Effective Green, g (s)		30.1			30.1						13.0	
Actuated g/C Ratio		0.40			0.40						0.17	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		4.0			4.0						4.0	
Lane Grp Cap (vph)		622			682						297	
v/s Ratio Prot												
v/s Ratio Perm		c0.15			0.06						0.09	
v/c Ratio		0.38			0.16						0.54	
Uniform Delay, d1		15.9			14.4						28.3	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		1.8			0.5						2.4	
Delay (s)		17.7			14.9						30.7	
Level of Service		B			B						C	
Approach Delay (s)		17.7			14.9			0.0			30.7	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	21.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	75.1	Sum of lost time (s)	14.0
Intersection Capacity Utilization	43.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBT	WBR	NBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations									
Traffic Volume (vph)	550	60	650						
Future Volume (vph)	550	60	650						
Turn Type	NA	Perm	NA						
Protected Phases	5 6		1 2 4 8	1	2	4	5	6	8
Permitted Phases		5 6							
Detector Phase	5 6	5 6	1 2 4 8						
Switch Phase									
Minimum Initial (s)				5.0	12.0	6.0	6.0	12.0	5.0
Minimum Split (s)				10.0	29.0	10.0	14.0	31.0	23.0
Total Split (s)				10.0	29.0	10.0	14.0	31.0	23.0
Total Split (%)				9%	25%	9%	12%	26%	20%
Yellow Time (s)				4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)				1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag				Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode				Max	Max	Max	Max	Max	Max
Act Effct Green (s)	41.0	41.0	67.0						
Actuated g/C Ratio	0.35	0.35	0.57						
v/c Ratio	0.53	0.13	0.41						
Control Delay	32.4	26.9	8.8						
Queue Delay	0.9	0.0	1.4						
Total Delay	33.3	26.9	10.2						
LOS	C	C	B						
Approach Delay	32.7		10.2						
Approach LOS	C		B						

Intersection Summary	
Cycle Length: 117	
Actuated Cycle Length: 117	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 120	
Control Type: Pretimed	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 20.7	Intersection LOS: C
Intersection Capacity Utilization 46.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Route 28 Frontage Rd. & Washington St.



Lane Group	WBT	WBR	NBT
Lane Group Flow (vph)	591	65	747
v/c Ratio	0.53	0.13	0.41
Control Delay	32.4	26.9	8.8
Queue Delay	0.9	0.0	1.4
Total Delay	33.3	26.9	10.2
Queue Length 50th (ft)	185	33	106
Queue Length 95th (ft)	243	67	133
Internal Link Dist (ft)	78		100
Turn Bay Length (ft)			
Base Capacity (vph)	1116	487	1840
Starvation Cap Reductn	0	0	844
Spillback Cap Reductn	266	0	2
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.70	0.13	0.75

Intersection Summary

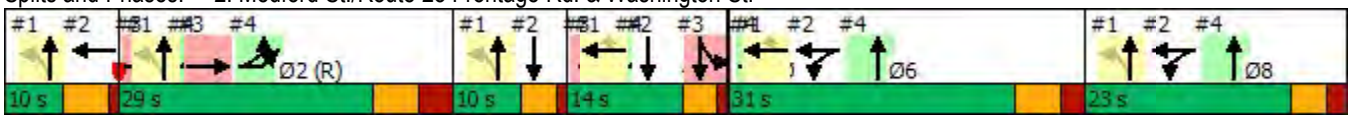
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	550	60	60	650	0	0	0	0
Future Volume (vph)	0	0	0	0	550	60	60	650	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		5.0				
Lane Util. Factor					0.95	1.00		0.95				
Frpb, ped/bikes					1.00	0.96		1.00				
Flpb, ped/bikes					1.00	1.00		1.00				
Frt					1.00	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3185	1391		3164				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3185	1391		3164				
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	591	65	63	684	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	31	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	591	65	0	716	0	0	0	0
Confl. Peds. (#/hr)						9						
Heavy Vehicles (%)	2%	2%	2%	2%	2%	0%	5%	2%	2%	2%	2%	2%
Turn Type					NA	Perm	Perm	NA				
Protected Phases					5 6			1 2 4 8				
Permitted Phases						5 6	1 2 4 8					
Actuated Green, G (s)					39.0	39.0		68.0				
Effective Green, g (s)					39.0	39.0		61.0				
Actuated g/C Ratio					0.33	0.33		0.52				
Clearance Time (s)												
Lane Grp Cap (vph)					1061	463		1649				
v/s Ratio Prot					c0.19							
v/s Ratio Perm						0.05		0.23				
v/c Ratio					0.56	0.14		0.43				
Uniform Delay, d1					31.9	27.3		17.3				
Progression Factor					1.00	1.00		0.64				
Incremental Delay, d2					2.1	0.6		0.8				
Delay (s)					34.0	27.9		11.9				
Level of Service					C	C		B				
Approach Delay (s)		0.0			33.4			11.9			0.0	
Approach LOS		A			C			B			A	

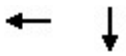
Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	117.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBT	SBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations								
Traffic Volume (vph)	385	300						
Future Volume (vph)	385	300						
Turn Type	NA	NA						
Protected Phases	1 6 8	4 5	1	2	4	5	6	8
Permitted Phases								
Detector Phase	1 6 8	4 5						
Switch Phase								
Minimum Initial (s)			5.0	12.0	6.0	6.0	12.0	5.0
Minimum Split (s)			10.0	29.0	10.0	14.0	31.0	23.0
Total Split (s)			10.0	29.0	10.0	14.0	31.0	23.0
Total Split (%)			9%	25%	9%	12%	26%	20%
Yellow Time (s)			4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)			1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)								
Total Lost Time (s)								
Lead/Lag			Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode			Max	Max	Max	Max	Max	Max
Act Effct Green (s)	54.0	20.0						
Actuated g/C Ratio	0.46	0.17						
v/c Ratio	0.47	1.05						
Control Delay	8.8	86.7						
Queue Delay	0.9	18.3						
Total Delay	9.6	105.0						
LOS	A	F						
Approach Delay	9.6	105.0						
Approach LOS	A	F						

Intersection Summary	
Cycle Length: 117	
Actuated Cycle Length: 117	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 120	
Control Type: Pretimed	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 54.5	Intersection LOS: D
Intersection Capacity Utilization 46.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: Medford St./Route 28 Frontage Rd. & Washington St.



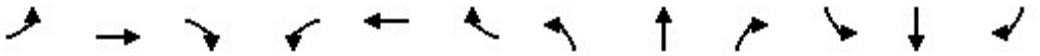


Lane Group	WBT	SBT
Lane Group Flow (vph)	663	590
v/c Ratio	0.47	1.05
Control Delay	8.8	86.7
Queue Delay	0.9	18.3
Total Delay	9.6	105.0
Queue Length 50th (ft)	208	~198
Queue Length 95th (ft)	270	#317
Internal Link Dist (ft)	99	61
Turn Bay Length (ft)		
Base Capacity (vph)	1421	561
Starvation Cap Reductn	449	0
Spillback Cap Reductn	242	28
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.68	1.11

Intersection Summary

~ 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.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	225	385	0	0	0	0	0	300	255
Future Volume (vph)	0	0	0	225	385	0	0	0	0	0	300	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.0						4.0	
Lane Util. Factor					0.95						0.95	
Frpb, ped/bikes					1.00						0.86	
Flpb, ped/bikes					1.00						1.00	
Frt					1.00						0.93	
Flt Protected					0.98						1.00	
Satd. Flow (prot)					3088						2511	
Flt Permitted					0.98						1.00	
Satd. Flow (perm)					3088						2511	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	245	418	0	0	0	0	0	319	271
RTOR Reduction (vph)	0	0	0	0	80	0	0	0	0	0	133	0
Lane Group Flow (vph)	0	0	0	0	583	0	0	0	0	0	457	0
Confl. Peds. (#/hr)	135					135	58					58
Confl. Bikes (#/hr)						34						1
Heavy Vehicles (%)	2%	2%	2%	1%	3%	2%	2%	2%	2%	2%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	5	5	0	0	0	0	0	0
Turn Type				Prot	NA						NA	
Protected Phases				6 8	1 6 8						4 5	
Permitted Phases												
Actuated Green, G (s)					54.0						20.0	
Effective Green, g (s)					48.0						20.0	
Actuated g/C Ratio					0.41						0.17	
Clearance Time (s)												
Lane Grp Cap (vph)					1398						429	
v/s Ratio Prot					c0.15						c0.18	
v/s Ratio Perm					0.04							
v/c Ratio					0.42						1.07	
Uniform Delay, d1					24.5						48.5	
Progression Factor					0.53						1.00	
Incremental Delay, d2					0.8						62.1	
Delay (s)					13.9						110.6	
Level of Service					B						F	
Approach Delay (s)		0.0			13.9			0.0			110.6	
Approach LOS		A			B			A			F	

Intersection Summary			
HCM 2000 Control Delay	59.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	117.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	46.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	SBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations								
Traffic Volume (vph)	750	450						
Future Volume (vph)	750	450						
Turn Type	NA	NA						
Protected Phases	1 2	4 5	1	2	4	5	6	8
Permitted Phases								
Detector Phase	1 2	4 5						
Switch Phase								
Minimum Initial (s)			5.0	12.0	6.0	6.0	12.0	5.0
Minimum Split (s)			10.0	29.0	10.0	14.0	31.0	23.0
Total Split (s)			10.0	29.0	10.0	14.0	31.0	23.0
Total Split (%)			9%	25%	9%	12%	26%	20%
Yellow Time (s)			4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)			1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)								
Total Lost Time (s)								
Lead/Lag			Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode			Max	Max	Max	Max	Max	Max
Act Effct Green (s)	34.0	20.0						
Actuated g/C Ratio	0.29	0.17						
v/c Ratio	0.64	0.81						
Control Delay	38.6	38.3						
Queue Delay	0.0	52.5						
Total Delay	38.6	90.8						
LOS	D	F						
Approach Delay	38.6	90.8						
Approach LOS	D	F						

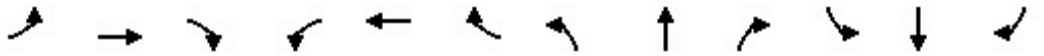
Intersection Summary	
Cycle Length: 117	
Actuated Cycle Length: 117	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 120	
Control Type: Pretimed	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 59.7	Intersection LOS: E
Intersection Capacity Utilization 40.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Medford St. & Washington St.

Lane Group	EBT	SBT
Lane Group Flow (vph)	831	565
v/c Ratio	0.64	0.81
Control Delay	38.6	38.3
Queue Delay	0.0	52.5
Total Delay	38.6	90.8
Queue Length 50th (ft)	198	97
Queue Length 95th (ft)	246	m108
Internal Link Dist (ft)	130	63
Turn Bay Length (ft)		
Base Capacity (vph)	1294	694
Starvation Cap Reductn	0	248
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.64	1.27

Intersection Summary

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



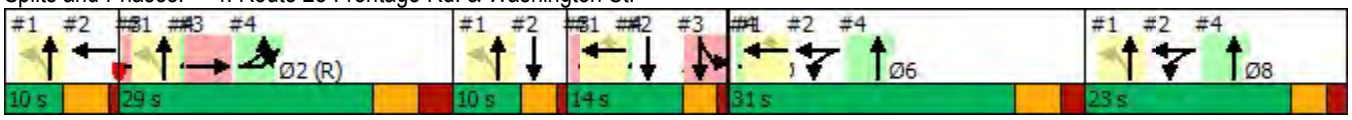
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	750	40	0	0	0	0	0	0	75	450	0
Future Volume (vph)	0	750	40	0	0	0	0	0	0	75	450	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0									4.0	
Lane Util. Factor		0.91									0.95	
Frpb, ped/bikes		0.99									1.00	
Flpb, ped/bikes		1.00									1.00	
Frt		0.99									1.00	
Flt Protected		1.00									0.99	
Satd. Flow (prot)		4438									3158	
Flt Permitted		1.00									0.99	
Satd. Flow (perm)		4438									3158	
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	0	789	42	0	0	0	0	0	0	81	484	0
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0	0	154	0
Lane Group Flow (vph)	0	826	0	0	0	0	0	0	0	0	411	0
Confl. Peds. (#/hr)			22	22			39					39
Confl. Bikes (#/hr)			46									11
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%
Bus Blockages (#/hr)	0	10	10	0	0	0	0	0	0	0	0	0
Turn Type		NA								Split	NA	
Protected Phases		1 2								4 5	4 5	
Permitted Phases												
Actuated Green, G (s)		32.0									20.0	
Effective Green, g (s)		32.0									20.0	
Actuated g/C Ratio		0.27									0.17	
Clearance Time (s)												
Lane Grp Cap (vph)		1213									539	
v/s Ratio Prot		c0.19									c0.13	
v/s Ratio Perm												
v/c Ratio		0.68									0.76	
Uniform Delay, d1		37.9									46.2	
Progression Factor		1.00									1.03	
Incremental Delay, d2		3.1									5.9	
Delay (s)		41.0									53.3	
Level of Service		D									D	
Approach Delay (s)		41.0			0.0			0.0			53.3	
Approach LOS		D			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	46.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	117.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	40.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL2	EBL	NBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations									
Traffic Volume (vph)	455	370	255						
Future Volume (vph)	455	370	255						
Turn Type	Prot	Prot	NA						
Protected Phases	1 2 4 5	1 2 4 5	6 8	1	2	4	5	6	8
Permitted Phases									
Detector Phase	1 2 4 5	1 2 4 5	6 8						
Switch Phase									
Minimum Initial (s)				5.0	12.0	6.0	6.0	12.0	5.0
Minimum Split (s)				10.0	29.0	10.0	14.0	31.0	23.0
Total Split (s)				10.0	29.0	10.0	14.0	31.0	23.0
Total Split (%)				9%	25%	9%	12%	26%	20%
Yellow Time (s)				4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)				1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag				Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode				Max	Max	Max	Max	Max	Max
Act Effct Green (s)	58.0	58.0	48.0						
Actuated g/C Ratio	0.50	0.50	0.41						
v/c Ratio	0.32	0.39	0.39						
Control Delay	1.0	0.6	25.4						
Queue Delay	1.2	0.6	0.3						
Total Delay	2.2	1.2	25.7						
LOS	A	A	C						
Approach Delay		1.5	25.7						
Approach LOS		A	C						

Intersection Summary	
Cycle Length: 117	
Actuated Cycle Length: 117	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 120	
Control Type: Pretimed	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 10.1	Intersection LOS: B
Intersection Capacity Utilization 51.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Route 28 Frontage Rd. & Washington St.



Lane Group	EBL2	EBL	NBT
Lane Group Flow (vph)	278	564	461
v/c Ratio	0.32	0.39	0.39
Control Delay	1.0	0.6	25.4
Queue Delay	1.2	0.6	0.3
Total Delay	2.2	1.2	25.7
Queue Length 50th (ft)	0	1	126
Queue Length 95th (ft)	m7	m0	171
Internal Link Dist (ft)		98	768
Turn Bay Length (ft)			
Base Capacity (vph)	858	1464	1188
Starvation Cap Reductn	373	503	0
Spillback Cap Reductn	25	3	273
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.57	0.59	0.50

Intersection Summary

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

Movement	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations											
Traffic Volume (vph)	455	370	0	0	255	165	0	0	0	0	0
Future Volume (vph)	455	370	0	0	255	165	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			6.0						
Lane Util. Factor	0.91	0.91			0.95						
Frpb, ped/bikes	1.00	1.00			0.99						
Flpb, ped/bikes	1.00	1.00			1.00						
Frt	1.00	1.00			0.94						
Flt Protected	0.95	0.95			1.00						
Satd. Flow (prot)	1449	2861			2898						
Flt Permitted	0.95	0.95			1.00						
Satd. Flow (perm)	1449	2861			2898						
Peak-hour factor, PHF	0.98	0.98	0.98	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	464	378	0	0	280	181	0	0	0	0	0
RTOR Reduction (vph)	164	54	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	114	510	0	0	461	0	0	0	0	0	0
Confl. Peds. (#/hr)			16	3					3		3
Confl. Bikes (#/hr)			40			11					
Heavy Vehicles (%)	2%	4%	2%	2%	4%	6%	2%	2%	2%	2%	2%
Turn Type	Prot	Prot			NA						
Protected Phases	1 2 4 5	1 2 4 5			6 8						
Permitted Phases											
Actuated Green, G (s)	59.0	59.0			49.0						
Effective Green, g (s)	48.0	48.0			49.0						
Actuated g/C Ratio	0.41	0.41			0.42						
Clearance Time (s)											
Lane Grp Cap (vph)	594	1173			1213						
v/s Ratio Prot	0.08	c0.18			c0.16						
v/s Ratio Perm											
v/c Ratio	0.19	0.43			0.38						
Uniform Delay, d1	22.1	24.8			23.5						
Progression Factor	0.11	0.00			1.00						
Incremental Delay, d2	0.5	0.9			0.9						
Delay (s)	3.0	1.0			24.4						
Level of Service	A	A			C						
Approach Delay (s)		1.6			24.4			0.0		0.0	
Approach LOS		A			C			A		A	

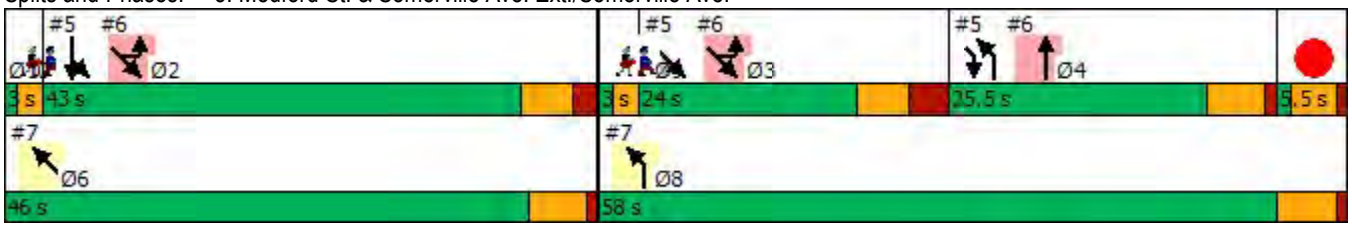
Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	117.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	51.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	NBL	SBL	SBT	SET	SER	Ø1	Ø6	Ø8	Ø9	Ø10
Lane Configurations										
Traffic Volume (vph)	30	125	315	215	35					
Future Volume (vph)	30	125	315	215	35					
Turn Type	Prot	Split	NA	NA	pm+ov					
Protected Phases	4	2	2	3	4	1	6	8	9	10
Permitted Phases					3					
Detector Phase	4	2	2	3	4					
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	1.0	10.0	10.0	1.0	1.0
Minimum Split (s)	25.5	30.0	30.0	24.0	25.5	3.0	28.5	21.0	3.0	5.5
Total Split (s)	25.5	43.0	43.0	24.0	25.5	3.0	46.0	58.0	3.0	5.5
Total Split (%)	24.5%	41.3%	41.3%	23.1%	24.5%	3%	44%	56%	3%	5%
Yellow Time (s)	4.5	4.0	4.0	4.0	4.5	2.0	4.5	4.5	2.0	3.5
All-Red Time (s)	1.0	2.0	2.0	3.0	1.0	0.0	1.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0					
Total Lost Time (s)	5.5	6.0	6.0	7.0	5.5					
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead			Lead	Lag
Lead-Lag Optimize?										
Recall Mode	None	Max	Max	None	None	None	Max	None	None	None
Act Effct Green (s)	17.0	39.5	39.5	17.0	35.6					
Actuated g/C Ratio	0.18	0.42	0.42	0.18	0.38					
v/c Ratio	0.12	0.21	0.35	0.88	0.08					
Control Delay	32.7	19.4	17.8	68.9	15.7					
Queue Delay	0.0	0.0	0.0	0.0	0.0					
Total Delay	32.7	19.4	17.8	68.9	15.7					
LOS	C	B	B	E	B					
Approach Delay			18.1	61.4						
Approach LOS			B	E						

Intersection Summary	
Cycle Length: 104	
Actuated Cycle Length: 93.2	
Natural Cycle: 95	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.88	
Intersection Signal Delay: 32.7	Intersection LOS: C
Intersection Capacity Utilization 48.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Medford St. & Somerville Ave. Ext./Somerville Ave.



Lane Group	NBL	SBL	SBT	SET	SER
Lane Group Flow (vph)	35	134	452	256	42
v/c Ratio	0.12	0.21	0.35	0.88	0.08
Control Delay	32.7	19.4	17.8	68.9	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	19.4	17.8	68.9	15.7
Queue Length 50th (ft)	17	48	80	149	14
Queue Length 95th (ft)	43	102	137	#277	32
Internal Link Dist (ft)			894	143	
Turn Bay Length (ft)		50			100
Base Capacity (vph)	348	631	1290	291	589
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.10	0.21	0.35	0.88	0.07

Intersection Summary

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

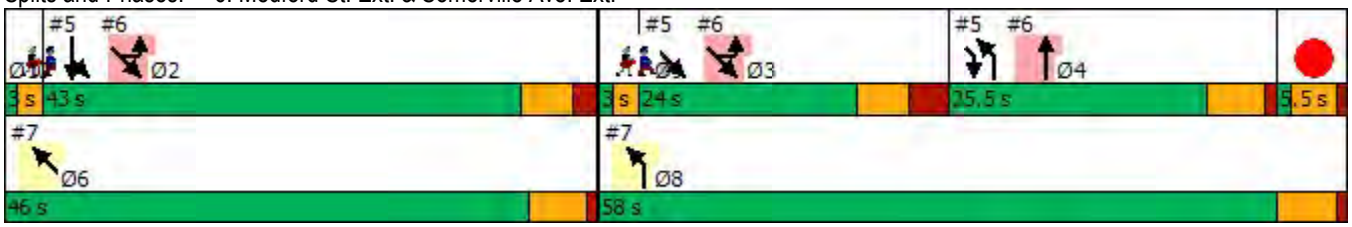
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	30	0	0	125	315	105	0	215	35	0	0	0
Future Volume (vph)	30	0	0	125	315	105	0	215	35	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5			6.0	6.0			7.0	5.5			
Lane Util. Factor	1.00			1.00	0.95			1.00	1.00			
Frpb, ped/bikes	1.00			1.00	0.97			1.00	0.98			
Flpb, ped/bikes	1.00			1.00	1.00			1.00	1.00			
Frt	1.00			1.00	0.96			1.00	0.85			
Flt Protected	0.95			0.95	1.00			1.00	1.00			
Satd. Flow (prot)	1624			1490	2991			1598	1426			
Flt Permitted	0.95			0.95	1.00			1.00	1.00			
Satd. Flow (perm)	1624			1490	2991			1598	1426			
Peak-hour factor, PHF	0.86	0.86	0.86	0.93	0.93	0.93	0.84	0.84	0.84	0.92	0.92	0.92
Adj. Flow (vph)	35	0	0	134	339	113	0	256	42	0	0	0
RTOR Reduction (vph)	0	0	0	0	28	0	0	0	0	0	0	0
Lane Group Flow (vph)	35	0	0	134	424	0	0	256	42	0	0	0
Confl. Peds. (#/hr)	50					50	2		18	18		2
Confl. Bikes (#/hr)						9			3			
Heavy Vehicles (%)	0%	0%	0%	9%	0%	4%	0%	7%	0%	0%	0%	0%
Turn Type	Prot			Split	NA			NA	pm+ov			
Protected Phases	4			2	2			3	4			
Permitted Phases									3			
Actuated Green, G (s)	17.6			40.1	40.1			17.0	34.6			
Effective Green, g (s)	17.6			40.1	40.1			17.0	34.6			
Actuated g/C Ratio	0.19			0.43	0.43			0.18	0.37			
Clearance Time (s)	5.5			6.0	6.0			7.0	5.5			
Vehicle Extension (s)	2.0			2.0	2.0			2.0	2.0			
Lane Grp Cap (vph)	306			641	1286			291	529			
v/s Ratio Prot	c0.02			0.09	c0.14			c0.16	0.01			
v/s Ratio Perm									0.01			
v/c Ratio	0.11			0.21	0.33			0.88	0.08			
Uniform Delay, d1	31.3			16.6	17.6			37.1	19.0			
Progression Factor	1.00			1.00	1.00			1.00	1.00			
Incremental Delay, d2	0.1			0.7	0.7			24.0	0.0			
Delay (s)	31.4			17.4	18.3			61.1	19.0			
Level of Service	C			B	B			E	B			
Approach Delay (s)		31.4			18.1			55.2			0.0	
Approach LOS		C			B			E			A	

Intersection Summary			
HCM 2000 Control Delay	30.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	93.2	Sum of lost time (s)	27.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBT	SET	Ø1	Ø2	Ø3	Ø6	Ø8	Ø9	Ø10
Lane Configurations									
Traffic Volume (vph)	415	240							
Future Volume (vph)	415	240							
Turn Type	NA	NA							
Protected Phases	4	2 3	1	2	3	6	8	9	10
Permitted Phases									
Detector Phase	4	2 3							
Switch Phase									
Minimum Initial (s)	10.0		1.0	10.0	6.0	10.0	10.0	1.0	1.0
Minimum Split (s)	25.5		3.0	30.0	24.0	28.5	21.0	3.0	5.5
Total Split (s)	25.5		3.0	43.0	24.0	46.0	58.0	3.0	5.5
Total Split (%)	24.5%		3%	41%	23%	44%	56%	3%	5%
Yellow Time (s)	4.5		2.0	4.0	4.0	4.5	4.5	2.0	3.5
All-Red Time (s)	1.0		0.0	2.0	3.0	1.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0								
Total Lost Time (s)	5.5								
Lead/Lag	Lead		Lead	Lag	Lag			Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None		None	Max	None	Max	None	None	None
Act Effct Green (s)	17.0	62.4							
Actuated g/C Ratio	0.18	0.67							
v/c Ratio	0.79	0.33							
Control Delay	46.8	3.6							
Queue Delay	0.0	0.9							
Total Delay	46.8	4.5							
LOS	D	A							
Approach Delay	46.8	4.5							
Approach LOS	D	A							

Intersection Summary			
Cycle Length: 104			
Actuated Cycle Length: 93.2			
Natural Cycle: 95			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 28.3		Intersection LOS: C	
Intersection Capacity Utilization 70.4%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 6: Medford St. Ext. & Somerville Ave. Ext.



Lane Group	NBT	SET
Lane Group Flow (vph)	461	358
v/c Ratio	0.79	0.33
Control Delay	46.8	3.6
Queue Delay	0.0	0.9
Total Delay	46.8	4.5
Queue Length 50th (ft)	136	0
Queue Length 95th (ft)	198	m8
Internal Link Dist (ft)	128	100
Turn Bay Length (ft)		
Base Capacity (vph)	689	1071
Starvation Cap Reductn	0	447
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.67	0.57

Intersection Summary

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

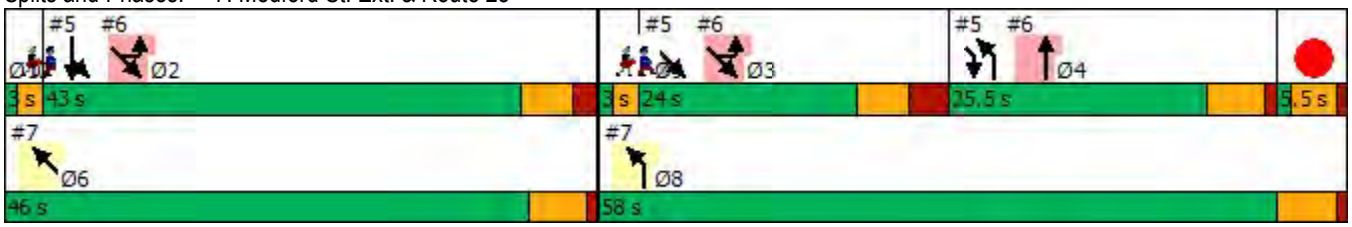
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	415	5	0	0	0	100	240	0	0	0	0
Future Volume (vph)	0	415	5	0	0	0	100	240	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5						6.0				
Lane Util. Factor		0.95						1.00				
Frpb, ped/bikes		1.00						1.00				
Flpb, ped/bikes		1.00						1.00				
Frt		1.00						1.00				
Flt Protected		1.00						0.99				
Satd. Flow (prot)		3209						1567				
Flt Permitted		1.00						0.99				
Satd. Flow (perm)		3209						1567				
Peak-hour factor, PHF	0.91	0.91	0.91	0.92	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	0	456	5	0	0	0	105	253	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	22	0	0	0	0
Lane Group Flow (vph)	0	461	0	0	0	0	0	336	0	0	0	0
Confl. Peds. (#/hr)	20		4	4		20			17	17		
Confl. Bikes (#/hr)			27						1			
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	4%	9%	0%	0%	0%	0%
Turn Type		NA					Split	NA				
Protected Phases		4					2 3	2 3				
Permitted Phases												
Actuated Green, G (s)		17.6						63.1				
Effective Green, g (s)		17.6						63.1				
Actuated g/C Ratio		0.19						0.68				
Clearance Time (s)		5.5										
Vehicle Extension (s)		2.0										
Lane Grp Cap (vph)		605						1060				
v/s Ratio Prot		c0.14						c0.21				
v/s Ratio Perm												
v/c Ratio		0.76						0.32				
Uniform Delay, d1		35.8						6.2				
Progression Factor		1.00						0.56				
Incremental Delay, d2		5.1						0.0				
Delay (s)		40.9						3.5				
Level of Service		D						A				
Approach Delay (s)		40.9			0.0			3.5			0.0	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	24.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	93.2	Sum of lost time (s)	27.0
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBL	NWT	Ø1	Ø2	Ø3	Ø4	Ø9	Ø10
Lane Configurations								
Traffic Volume (vph)	515	1295						
Future Volume (vph)	515	1295						
Turn Type	Prot	NA						
Protected Phases	8	6	1	2	3	4	9	10
Permitted Phases								
Detector Phase	8	6						
Switch Phase								
Minimum Initial (s)	10.0	10.0	1.0	10.0	6.0	10.0	1.0	1.0
Minimum Split (s)	21.0	28.5	3.0	30.0	24.0	25.5	3.0	5.5
Total Split (s)	58.0	46.0	3.0	43.0	24.0	25.5	3.0	5.5
Total Split (%)	55.8%	44.2%	3%	41%	23%	25%	3%	5%
Yellow Time (s)	4.5	4.5	2.0	4.0	4.0	4.5	2.0	3.5
All-Red Time (s)	1.0	1.0	0.0	2.0	3.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0	0.0						
Total Lost Time (s)	5.5	5.5						
Lead/Lag			Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?								
Recall Mode	None	Max	None	Max	None	None	None	None
Act Effct Green (s)	41.6	40.6						
Actuated g/C Ratio	0.45	0.44						
v/c Ratio	0.39	0.71						
Control Delay	5.1	24.6						
Queue Delay	0.4	0.0						
Total Delay	5.6	24.6						
LOS	A	C						
Approach Delay	5.6	24.6						
Approach LOS	A	C						

Intersection Summary			
Cycle Length: 104			
Actuated Cycle Length: 93.2			
Natural Cycle: 95			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 19.3		Intersection LOS: B	
Intersection Capacity Utilization 89.8%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 7: Medford St. Ext. & Route 28



Lane Group	NBL	NWT
Lane Group Flow (vph)	542	1408
v/c Ratio	0.39	0.71
Control Delay	5.1	24.6
Queue Delay	0.4	0.0
Total Delay	5.6	24.6
Queue Length 50th (ft)	13	242
Queue Length 95th (ft)	45	328
Internal Link Dist (ft)	56	187
Turn Bay Length (ft)		
Base Capacity (vph)	1731	1970
Starvation Cap Reductn	701	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.53	0.71

Intersection Summary

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	515	0	0	0	0	1295
Future Volume (vph)	515	0	0	0	0	1295
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5					5.5
Lane Util. Factor	0.97					0.91
Frpb, ped/bikes	1.00					1.00
Flpb, ped/bikes	1.00					1.00
Frt	1.00					1.00
Flt Protected	0.95					1.00
Satd. Flow (prot)	3060					4528
Flt Permitted	0.95					1.00
Satd. Flow (perm)	3060					4528
Peak-hour factor, PHF	0.95	0.95	0.92	0.92	0.92	0.92
Adj. Flow (vph)	542	0	0	0	0	1408
RTOR Reduction (vph)	7	0	0	0	0	0
Lane Group Flow (vph)	535	0	0	0	0	1408
Confl. Peds. (#/hr)	3	7		18	18	
Heavy Vehicles (%)	3%	0%	0%	0%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	8
Turn Type	Prot					NA
Protected Phases	8					6
Permitted Phases						
Actuated Green, G (s)	41.6					40.6
Effective Green, g (s)	41.6					40.6
Actuated g/C Ratio	0.45					0.44
Clearance Time (s)	5.5					5.5
Vehicle Extension (s)	2.0					2.0
Lane Grp Cap (vph)	1365					1972
v/s Ratio Prot	c0.17					c0.31
v/s Ratio Perm						
v/c Ratio	0.39					0.71
Uniform Delay, d1	17.3					21.5
Progression Factor	0.26					1.00
Incremental Delay, d2	0.1					2.2
Delay (s)	4.6					23.8
Level of Service	A					C
Approach Delay (s)	4.6		0.0			23.8
Approach LOS	A		A			C

Intersection Summary			
HCM 2000 Control Delay	18.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	93.2	Sum of lost time (s)	27.0
Intersection Capacity Utilization	89.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL2	EBT	EBR	SBL	SET	SER	NWL	NWT	Ø4	Ø5
Lane Configurations										
Traffic Volume (vph)	240	0	100	1	955	155	85	1085		
Future Volume (vph)	240	0	100	1	955	155	85	1085		
Turn Type	custom	NA	custom	D.Pm	NA	Perm	Prot	NA		
Protected Phases			3!		1		2	1 2	4	5
Permitted Phases	3	3!		3!		1				
Detector Phase	3	3	3	3	1	1	2	1 2		
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	4.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0	21.0	21.0		21.0	10.0
Total Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0		22.0	12.0
Total Split (%)	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%		22%	12%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0			
Total Lost Time (s)		6.0	6.0	6.0	6.0	6.0	6.0			
Lead/Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lag		Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	
Recall Mode	None	None	None	None	C-Min	C-Min	None		None	None
Act Effct Green (s)		17.2	17.2	17.2	43.7	43.7	14.8	64.5		
Actuated g/C Ratio		0.17	0.17	0.17	0.44	0.44	0.15	0.64		
v/c Ratio		1.18	0.29	0.02	0.51	0.23	0.41	0.41		
Control Delay		152.7	1.7	35.5	24.6	2.4	44.3	11.1		
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay		152.7	1.7	35.5	24.6	2.4	44.3	11.1		
LOS		F	A	D	C	A	D	B		
Approach Delay		108.4		35.5	21.5			13.5		
Approach LOS		F		D	C			B		

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 84 (84%), Referenced to phase 1:NWSE, Start of Green	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay: 30.8	Intersection LOS: C
Intersection Capacity Utilization 92.8%	ICU Level of Service F
Analysis Period (min) 15	

! Phase conflict between lane groups.

Splits and Phases: 8: Route 28 & Rufo Rd/Car Wash Driveway & Site Driveway

Lane Group	EBT	EBR	SBL	SET	SER	NWL	NWT
Lane Group Flow (vph)	296	123	4	1038	168	89	1144
v/c Ratio	1.18	0.29	0.02	0.51	0.23	0.41	0.41
Control Delay	152.7	1.7	35.5	24.6	2.4	44.3	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	152.7	1.7	35.5	24.6	2.4	44.3	11.1
Queue Length 50th (ft)	~239	0	2	149	0	51	86
Queue Length 95th (ft)	#347	0	7	#387	20	100	260
Internal Link Dist (ft)	290		55	1866			743
Turn Bay Length (ft)					500	500	
Base Capacity (vph)	251	429	259	2020	719	235	2878
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.18	0.29	0.02	0.51	0.23	0.38	0.40

Intersection Summary

~ 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.

Movement	EBL2	EBT	EBR	WBT	SBL	SBR	SET	SER	NWL	NWT	NWR
Lane Configurations											
Traffic Volume (vph)	240	0	100	0	1	1	955	155	85	1085	2
Future Volume (vph)	240	0	100	0	1	1	955	155	85	1085	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	11	10	12	12	12	12	10	11	11
Total Lost time (s)		6.0	6.0		6.0		6.0	6.0	6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00		0.91	1.00	1.00	0.91	
Frpb, ped/bikes		1.00	1.00		0.97		1.00	0.94	1.00	1.00	
Flpb, ped/bikes		0.95	1.00		1.00		1.00	1.00	1.00	1.00	
Frt		1.00	0.85		0.93		1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00		0.98		1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1459	1391		1507		4622	1352	1472	4380	
Flt Permitted		0.95	1.00		0.98		1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1459	1391		1507		4622	1352	1472	4380	
Peak-hour factor, PHF	0.81	0.81	0.81	0.92	0.50	0.50	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	296	0	123	0	2	2	1038	168	89	1142	2
RTOR Reduction (vph)	0	0	102	0	0	0	0	111	0	0	0
Lane Group Flow (vph)	0	296	21	0	4	0	1038	57	89	1144	0
Confl. Peds. (#/hr)	7		2		2	12		12	12		12
Confl. Bikes (#/hr)								1			4
Heavy Vehicles (%)	2%	2%	1%	2%	0%	0%	1%	1%	3%	3%	0%
Turn Type	custom	NA	custom		D.Pm		NA	Perm	Prot	NA	
Protected Phases			3!	5			1		2	1 2	
Permitted Phases	3	3!			3!			1			
Actuated Green, G (s)		17.2	17.2		17.2		34.1	34.1	14.8	54.9	
Effective Green, g (s)		17.2	17.2		17.2		34.1	34.1	14.8	54.9	
Actuated g/C Ratio		0.17	0.17		0.17		0.34	0.34	0.15	0.55	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0	6.0		
Vehicle Extension (s)		2.0	2.0		2.0		3.0	3.0	3.0		
Lane Grp Cap (vph)		250	239		259		1576	461	217	2404	
v/s Ratio Prot			0.02				c0.22		0.06	c0.26	
v/s Ratio Perm		c0.20			0.00			0.04			
v/c Ratio		1.18	0.09		0.02		0.66	0.12	0.41	0.48	
Uniform Delay, d1		41.4	34.8		34.4		28.0	22.7	38.6	13.8	
Progression Factor		1.00	1.00		1.00		1.00	1.00	1.00	1.00	
Incremental Delay, d2		115.9	0.1		0.0		2.2	0.6	1.3	0.1	
Delay (s)		157.3	34.9		34.4		30.2	23.2	39.9	13.9	
Level of Service		F	C		C		C	C	D	B	
Approach Delay (s)		121.4		0.0	34.4		29.2			15.8	
Approach LOS		F		A	C		C			B	

Intersection Summary			
HCM 2000 Control Delay	36.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	30.0
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		

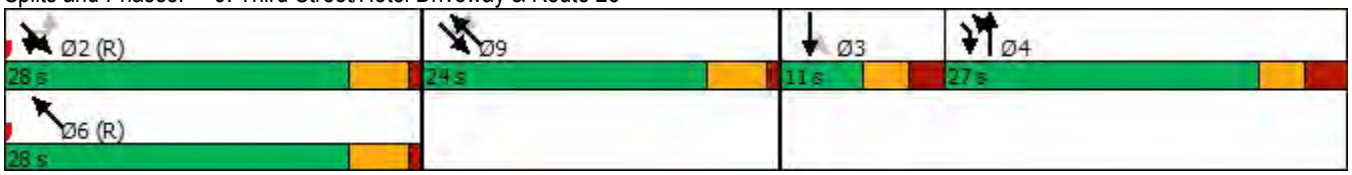
! Phase conflict between lane groups.

c Critical Lane Group

Lane Group	NBL	NBT	SBL	SBT	SEL	SET	SER	NWT	Ø2	Ø6	Ø9
Lane Configurations											
Traffic Volume (vph)	545	0	10	10	10	780	320	680			
Future Volume (vph)	545	0	10	10	10	780	320	680			
Turn Type	Split	NA	Perm	NA	Perm	NA	custom	NA			
Protected Phases	4	4		3		2 9	2 4	6 9	2	6	9
Permitted Phases			3		2 9						
Detector Phase	4	4	3	3	2 9	2 9	2 4	6 9			
Switch Phase											
Minimum Initial (s)	6.0	6.0	5.0	5.0					10.0	17.0	1.0
Minimum Split (s)	24.0	24.0	11.0	11.0					23.0	23.0	23.0
Total Split (s)	27.0	27.0	11.0	11.0					28.0	28.0	24.0
Total Split (%)	30.0%	30.0%	12.2%	12.2%					31%	31%	27%
Yellow Time (s)	3.0	3.0	3.0	3.0					4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	2.5	2.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0							
Total Lost Time (s)	6.0	6.0		5.5							
Lead/Lag	Lag	Lag	Lead	Lead							
Lead-Lag Optimize?											
Recall Mode	Ped	Ped	None	None					C-Min	C-Min	Min
Act Effct Green (s)	21.4	21.4		6.8		47.6	55.9	47.6			
Actuated g/C Ratio	0.24	0.24		0.08		0.53	0.62	0.53			
v/c Ratio	0.90	0.66		0.59		0.53	0.32	0.44			
Control Delay	64.3	22.6		69.3		16.4	2.1	14.9			
Queue Delay	0.0	0.0		0.0		0.0	0.0	0.0			
Total Delay	64.3	22.6		69.3		16.4	2.1	14.9			
LOS	E	C		E		B	A	B			
Approach Delay		43.7		69.3		12.3		14.9			
Approach LOS		D		E		B		B			

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 17 (19%), Referenced to phase 2:SETL and 6:NWT, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 21.5	Intersection LOS: C
Intersection Capacity Utilization 65.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Third Street/Hotel Driveway & Route 28



Lane Group	NBL	NBT	SBT	SET	SER	NWT
Lane Group Flow (vph)	301	293	40	814	330	711
v/c Ratio	0.90	0.66	0.59	0.53	0.32	0.44
Control Delay	64.3	22.6	69.3	16.4	2.1	14.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.3	22.6	69.3	16.4	2.1	14.9
Queue Length 50th (ft)	170	71	17	176	0	144
Queue Length 95th (ft)	#338	171	#43	206	36	170
Internal Link Dist (ft)		395	52	743		192
Turn Bay Length (ft)	110					
Base Capacity (vph)	344	450	68	1682	1014	1774
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	0.88	0.65	0.59	0.48	0.33	0.40

Intersection Summary

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

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	545	0	25	10	10	5	10	780	320	0	680	10
Future Volume (vph)	545	0	25	10	10	5	10	780	320	0	680	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	12	12	12	12	11	12	12	11	11
Total Lost time (s)	6.0	6.0			5.5			5.0	5.0		5.0	
Lane Util. Factor	0.95	0.95			1.00			0.95	1.00		0.95	
Frpb, ped/bikes	1.00	0.99			1.00			1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00			0.98			1.00	1.00		1.00	
Frt	1.00	0.99			0.97			1.00	0.85		1.00	
Flt Protected	0.95	0.96			0.98			1.00	1.00		1.00	
Satd. Flow (prot)	1412	1377			1599			3047	1439		3039	
Flt Permitted	0.95	0.96			0.50			0.95	1.00		1.00	
Satd. Flow (perm)	1412	1377			816			2883	1439		3039	
Peak-hour factor, PHF	0.96	0.96	0.96	0.64	0.64	0.64	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	568	0	26	16	16	8	10	804	330	0	701	10
RTOR Reduction (vph)	0	116	0	0	8	0	0	0	151	0	1	0
Lane Group Flow (vph)	301	177	0	0	32	0	0	814	179	0	710	0
Confl. Peds. (#/hr)			58	58			32		92	92		32
Confl. Bikes (#/hr)									6			12
Heavy Vehicles (%)	2%	2%	13%	0%	0%	0%	0%	3%	1%	6%	3%	0%
Turn Type	Split	NA		Perm	NA		Perm	NA	custom		NA	
Protected Phases	4	4			3			2 9	2 4		6 9	
Permitted Phases				3			2 9					
Actuated Green, G (s)	21.4	21.4			5.6			46.5	54.9		46.5	
Effective Green, g (s)	21.4	21.4			5.6			46.5	48.9		46.5	
Actuated g/C Ratio	0.24	0.24			0.06			0.52	0.54		0.52	
Clearance Time (s)	6.0	6.0			5.5							
Vehicle Extension (s)	2.0	2.0			2.0							
Lane Grp Cap (vph)	335	327			50			1489	781		1570	
v/s Ratio Prot	c0.21	0.13							0.12		0.23	
v/s Ratio Perm					c0.04			c0.28				
v/c Ratio	0.90	0.54			0.65			0.55	0.23		0.45	
Uniform Delay, d1	33.2	30.0			41.2			14.7	10.7		13.7	
Progression Factor	1.00	1.00			1.00			1.00	1.00		1.00	
Incremental Delay, d2	24.7	1.0			19.7			0.2	0.1		0.1	
Delay (s)	58.0	31.0			61.0			14.9	10.8		13.8	
Level of Service	E	C			E			B	B		B	
Approach Delay (s)		44.7			61.0			13.7			13.8	
Approach LOS		D			E			B			B	

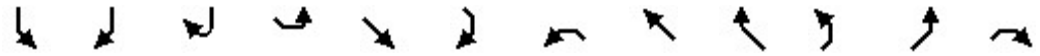
Intersection Summary			
HCM 2000 Control Delay	21.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	21.5
Intersection Capacity Utilization	65.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	0	0	1270	85	0	25
Future Volume (Veh/h)	0	0	1270	85	0	25
Sign Control		Stop	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.93	0.93	0.81	0.81
Hourly flow rate (vph)	0	0	1366	91	0	31
Pedestrians					4	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type			None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2736	0	0		2782	2782
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2736	0	0		2782	2782
tC, single (s)	6.5	6.2	4.1		7.2	6.7
tC, 2 stage (s)						
tF (s)	4.0	3.3	2.2		3.6	4.1
p0 queue free %	100	100	16		100	0
cM capacity (veh/h)	3	1085	1623		3	3

Direction, Lane #	NW 1	NW 2	NW 3	SW 1
Volume Total	546	546	364	31
Volume Left	546	546	273	0
Volume Right	0	0	91	0
cSH	1623	1623	1623	3
Volume to Capacity	0.84	0.84	0.84	11.54
Queue Length 95th (ft)	292	292	292	Err
Control Delay (s)	17.5	17.5	17.0	Err
Lane LOS	C	C	C	F
Approach Delay (s)	17.4			Err
Approach LOS				F

Intersection Summary			
Average Delay	225.3		
Intersection Capacity Utilization	36.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	SBL	SBR	SBR2	SEL	SET	SER	NWL	NWT	NWR	NEL2	NEL	NER
Lane Configurations												
Traffic Volume (veh/h)	15	0	5	2	175	0	0	220	5	295	5	135
Future Volume (Veh/h)	15	0	5	2	175	0	0	220	5	295	5	135
Sign Control	Stop				Free			Free			Stop	
Grade	0%				0%			0%			0%	
Peak Hour Factor	0.63	0.63	0.63	0.84	0.84	0.84	0.91	0.91	0.91	0.92	0.92	0.92
Hourly flow rate (vph)	24	0	8	2	208	0	0	242	5	321	5	147
Pedestrians	70				1			15			68	
Lane Width (ft)	12.0				12.0			12.0			12.0	
Walking Speed (ft/s)	3.5				3.5			3.5			3.5	
Percent Blockage	7				0			1			6	
Right turn flare (veh)												
Median type					None			None				
Median storage veh)												
Upstream signal (ft)								420				
pX, platoon unblocked	0.99	0.99	0.99	0.99						0.99	0.99	
vC, conflicting volume	691	594	316	317			276			534	597	291
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	682	584	302	303			276			522	587	291
tC, single (s)	7.1	6.5	6.2	4.1			4.1			7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	2.2			2.2			3.5	4.0	3.3
p0 queue free %	90	100	99	100			100			16	99	79
cM capacity (veh/h)	234	367	684	1171			1215			384	366	685

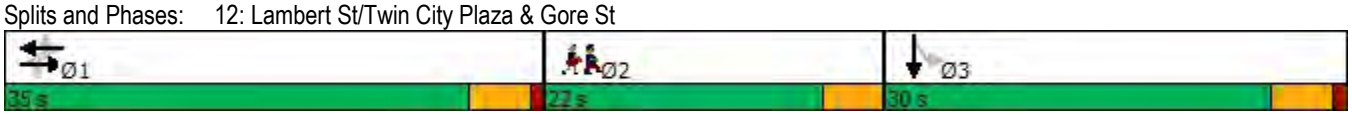
Direction, Lane #	SB 1	SE 1	NW 1	NE 1
Volume Total	32	210	247	473
Volume Left	24	2	0	321
Volume Right	8	0	5	147
cSH	280	1171	1700	444
Volume to Capacity	0.11	0.00	0.15	1.06
Queue Length 95th (ft)	10	0	0	380
Control Delay (s)	19.5	0.1	0.0	91.5
Lane LOS	C	A		F
Approach Delay (s)	19.5	0.1	0.0	91.5
Approach LOS	C			F

Intersection Summary				
Average Delay	45.6			
Intersection Capacity Utilization	60.8%	ICU Level of Service	B	
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBL	WBT	SBT	Ø2
Lane Configurations						
Traffic Volume (vph)	50	70	10	105	110	
Future Volume (vph)	50	70	10	105	110	
Turn Type	Perm	NA	Perm	NA	NA	
Protected Phases		1		1	3	2
Permitted Phases	1		1			
Detector Phase	1	1	1	1	3	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0
Minimum Split (s)	12.0	12.0	12.0	12.0	12.0	22.0
Total Split (s)	35.0	35.0	35.0	35.0	30.0	22.0
Total Split (%)	40.2%	40.2%	40.2%	40.2%	34.5%	25%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)		0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	Max	Max	None	Ped
Act Effct Green (s)		30.1		30.1	14.1	
Actuated g/C Ratio		0.39		0.39	0.18	
v/c Ratio		0.38		0.27	0.60	
Control Delay		15.8		16.4	32.4	
Queue Delay		0.0		0.0	0.0	
Total Delay		15.8		16.4	32.4	
LOS		B		B	C	
Approach Delay		15.8		16.4	32.4	
Approach LOS		B		B	C	

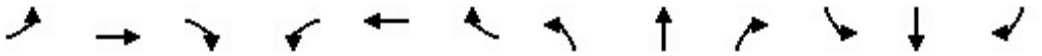
Intersection Summary	
Cycle Length: 87	
Actuated Cycle Length: 76.3	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 21.4	Intersection LOS: C
Intersection Capacity Utilization 53.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Lambert St/Twin City Plaza & Gore St



Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	233	188	206
v/c Ratio	0.38	0.27	0.60
Control Delay	15.8	16.4	32.4
Queue Delay	0.0	0.0	0.0
Total Delay	15.8	16.4	32.4
Queue Length 50th (ft)	58	53	78
Queue Length 95th (ft)	128	90	136
Internal Link Dist (ft)	73	445	291
Turn Bay Length (ft)			
Base Capacity (vph)	612	699	585
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.38	0.27	0.35

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	70	95	10	105	30	0	0	0	15	110	55
Future Volume (vph)	50	70	95	10	105	30	0	0	0	15	110	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		0.94			0.99						0.95	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		0.94			0.97						0.96	
Flt Protected		0.99			1.00						1.00	
Satd. Flow (prot)		1646			1789						1695	
Flt Permitted		0.90			0.98						1.00	
Satd. Flow (perm)		1490			1752						1695	
Peak-hour factor, PHF	0.92	0.92	0.92	0.77	0.77	0.77	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	54	76	103	13	136	39	0	0	0	17	126	63
RTOR Reduction (vph)	0	30	0	0	10	0	0	0	0	0	21	0
Lane Group Flow (vph)	0	203	0	0	178	0	0	0	0	0	185	0
Confl. Peds. (#/hr)	23		83	83		23	57		30	30		57
Confl. Bikes (#/hr)			13			26						2
Heavy Vehicles (%)	2%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	2%
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		1			1						3	
Permitted Phases	1			1						3		
Actuated Green, G (s)		30.1			30.1						14.1	
Effective Green, g (s)		30.1			30.1						14.1	
Actuated g/C Ratio		0.40			0.40						0.19	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		4.0			4.0						4.0	
Lane Grp Cap (vph)		588			692						313	
v/s Ratio Prot												
v/s Ratio Perm		c0.14			0.10						0.11	
v/c Ratio		0.34			0.26						0.59	
Uniform Delay, d1		16.1			15.5						28.4	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		1.6			0.9						3.5	
Delay (s)		17.7			16.4						31.9	
Level of Service		B			B						C	
Approach Delay (s)		17.7			16.4			0.0			31.9	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	76.2	Sum of lost time (s)	14.0
Intersection Capacity Utilization	53.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

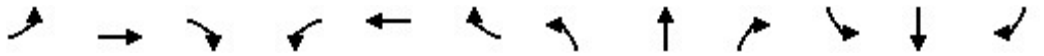
Lane Group	WBT	WBR	NBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations									
Traffic Volume (vph)	600	60	390						
Future Volume (vph)	600	60	390						
Turn Type	NA	Perm	NA						
Protected Phases	5 6		1 2 4 8	1	2	4	5	6	8
Permitted Phases		5 6							
Detector Phase	5 6	5 6	1 2 4 8						
Switch Phase									
Minimum Initial (s)				5.0	12.0	5.5	6.0	12.0	5.0
Minimum Split (s)				10.0	22.0	10.0	18.0	30.0	10.0
Total Split (s)				10.0	22.0	10.0	18.0	30.0	10.0
Total Split (%)				10%	22%	10%	18%	30%	10%
Yellow Time (s)				4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)				1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag				Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode				Max	Max	Max	Max	Max	Max
Act Effct Green (s)	44.0	44.0	47.0						
Actuated g/C Ratio	0.44	0.44	0.47						
v/c Ratio	0.49	0.12	0.32						
Control Delay	21.6	17.4	5.1						
Queue Delay	0.9	0.0	1.0						
Total Delay	22.6	17.4	6.1						
LOS	C	B	A						
Approach Delay	22.1		6.1						
Approach LOS	C		A						

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 100	
Control Type: Pretimed	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 15.9	Intersection LOS: B
Intersection Capacity Utilization 39.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Route 28 Frontage Rd. & Washington St.

Lane Group	WBT	WBR	NBT
Lane Group Flow (vph)	659	66	462
v/c Ratio	0.49	0.12	0.32
Control Delay	21.6	17.4	5.1
Queue Delay	0.9	0.0	1.0
Total Delay	22.6	17.4	6.1
Queue Length 50th (ft)	154	24	28
Queue Length 95th (ft)	205	51	41
Internal Link Dist (ft)	78		100
Turn Bay Length (ft)			
Base Capacity (vph)	1335	561	1462
Starvation Cap Reductn	0	0	723
Spillback Cap Reductn	395	0	4
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.70	0.12	0.63

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	600	60	35	390	0	0	0	0
Future Volume (vph)	0	0	0	0	600	60	35	390	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		5.0				
Lane Util. Factor					0.95	1.00		0.95				
Frt					1.00	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3036	1275		3024				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3036	1275		3024				
Peak-hour factor, PHF	0.92	0.92	0.92	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	659	66	38	424	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	45	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	659	66	0	417	0	0	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	7%	14%	18%	6%	2%	2%	2%	2%
Turn Type					NA	Perm	Perm	NA				
Protected Phases					5 6			1 2 4 8				
Permitted Phases						5 6	1 2 4 8					
Actuated Green, G (s)					42.0	42.0		48.0				
Effective Green, g (s)					42.0	42.0		41.0				
Actuated g/C Ratio					0.42	0.42		0.41				
Clearance Time (s)												
Lane Grp Cap (vph)					1275	535		1239				
v/s Ratio Prot					c0.22							
v/s Ratio Perm						0.05		0.14				
v/c Ratio					0.52	0.12		0.34				
Uniform Delay, d1					21.5	17.7		20.2				
Progression Factor					1.00	1.00		0.33				
Incremental Delay, d2					1.5	0.5		0.7				
Delay (s)					23.0	18.2		7.4				
Level of Service					C	B		A				
Approach Delay (s)		0.0			22.5			7.4			0.0	
Approach LOS		A			C			A			A	

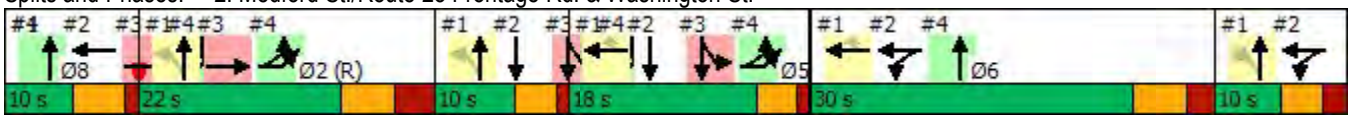
Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	39.0%	ICU Level of Service	A
Analysis Period (min)	15		

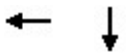
c Critical Lane Group

Lane Group	WBT	SBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations								
Traffic Volume (vph)	335	470						
Future Volume (vph)	335	470						
Turn Type	NA	NA						
Protected Phases	1 6 8	4 5	1	2	4	5	6	8
Permitted Phases								
Detector Phase	1 6 8	4 5						
Switch Phase								
Minimum Initial (s)			5.0	12.0	5.5	6.0	12.0	5.0
Minimum Split (s)			10.0	22.0	10.0	18.0	30.0	10.0
Total Split (s)			10.0	22.0	10.0	18.0	30.0	10.0
Total Split (%)			10%	22%	10%	18%	30%	10%
Yellow Time (s)			4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)			1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)								
Total Lost Time (s)								
Lead/Lag			Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode			Max	Max	Max	Max	Max	Max
Act Effct Green (s)	40.0	24.0						
Actuated g/C Ratio	0.40	0.24						
v/c Ratio	0.58	1.04						
Control Delay	11.4	73.7						
Queue Delay	1.5	22.2						
Total Delay	12.9	95.9						
LOS	B	F						
Approach Delay	12.9	95.9						
Approach LOS	B	F						

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 100	
Control Type: Pretimed	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 57.8	Intersection LOS: E
Intersection Capacity Utilization 54.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: Medford St./Route 28 Frontage Rd. & Washington St.



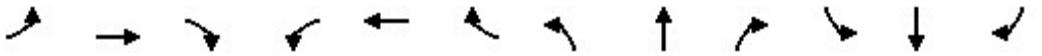


Lane Group	WBT	SBT
Lane Group Flow (vph)	713	841
v/c Ratio	0.58	1.04
Control Delay	11.4	73.7
Queue Delay	1.5	22.2
Total Delay	12.9	95.9
Queue Length 50th (ft)	184	~258
Queue Length 95th (ft)	244	#383
Internal Link Dist (ft)	99	61
Turn Bay Length (ft)		
Base Capacity (vph)	1235	807
Starvation Cap Reductn	178	0
Spillback Cap Reductn	327	45
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.79	1.10

Intersection Summary

~ 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.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	300	335	0	0	0	0	0	470	345
Future Volume (vph)	0	0	0	300	335	0	0	0	0	0	470	345
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.0						4.0	
Lane Util. Factor					0.95						0.95	
Frpb, ped/bikes					1.00						0.98	
Flpb, ped/bikes					1.00						1.00	
Frt					1.00						0.94	
Flt Protected					0.98						1.00	
Satd. Flow (prot)					2908						2814	
Flt Permitted					0.98						1.00	
Satd. Flow (perm)					2908						2814	
Peak-hour factor, PHF	0.92	0.92	0.92	0.89	0.89	0.89	0.92	0.92	0.92	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	337	376	0	0	0	0	0	485	356
RTOR Reduction (vph)	0	0	0	0	178	0	0	0	0	0	132	0
Lane Group Flow (vph)	0	0	0	0	535	0	0	0	0	0	709	0
Confl. Peds. (#/hr)	90					90	29		3	29		3
Confl. Bikes (#/hr)						44						22
Heavy Vehicles (%)	2%	2%	2%	7%	9%	2%	2%	2%	2%	2%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	5	5	0	0	0	0	0	0
Turn Type				Prot	NA						NA	
Protected Phases				6 8	1 6 8						4 5	
Permitted Phases												
Actuated Green, G (s)					40.0						24.0	
Effective Green, g (s)					34.0						24.0	
Actuated g/C Ratio					0.34						0.24	
Clearance Time (s)												
Lane Grp Cap (vph)					1134						675	
v/s Ratio Prot					c0.14						c0.25	
v/s Ratio Perm					0.05							
v/c Ratio					0.47						1.05	
Uniform Delay, d1					25.9						38.0	
Progression Factor					0.77						1.00	
Incremental Delay, d2					1.3						48.5	
Delay (s)					21.3						86.5	
Level of Service					C						F	
Approach Delay (s)		0.0			21.3			0.0			86.5	
Approach LOS		A			C			A			F	

Intersection Summary			
HCM 2000 Control Delay	56.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	54.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	SBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations								
Traffic Volume (vph)	515	715						
Future Volume (vph)	515	715						
Turn Type	NA	NA						
Protected Phases	1 2	4 5	1	2	4	5	6	8
Permitted Phases								
Detector Phase	1 2	4 5						
Switch Phase								
Minimum Initial (s)			5.0	12.0	5.5	6.0	12.0	5.0
Minimum Split (s)			10.0	22.0	10.0	18.0	30.0	10.0
Total Split (s)			10.0	22.0	10.0	18.0	30.0	10.0
Total Split (%)			10%	22%	10%	18%	30%	10%
Yellow Time (s)			4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)			1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)								
Total Lost Time (s)								
Lead/Lag			Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode			Max	Max	Max	Max	Max	Max
Act Effct Green (s)	27.0	24.0						
Actuated g/C Ratio	0.27	0.24						
v/c Ratio	0.53	0.90						
Control Delay	32.2	32.8						
Queue Delay	0.0	48.0						
Total Delay	32.2	80.7						
LOS	C	F						
Approach Delay	32.2	80.7						
Approach LOS	C	F						

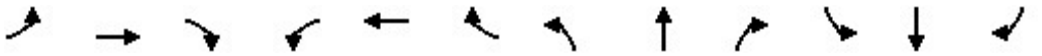
Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 100	
Control Type: Pretimed	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 60.2	Intersection LOS: E
Intersection Capacity Utilization 43.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Medford St. & Washington St.

Lane Group	EBT	SBT
Lane Group Flow (vph)	595	811
v/c Ratio	0.53	0.90
Control Delay	32.2	32.8
Queue Delay	0.0	48.0
Total Delay	32.2	80.7
Queue Length 50th (ft)	115	116
Queue Length 95th (ft)	152	m126
Internal Link Dist (ft)	130	63
Turn Bay Length (ft)		
Base Capacity (vph)	1133	901
Starvation Cap Reductn	0	258
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.53	1.26

Intersection Summary

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	515	50	0	0	0	0	0	0	55	715	0
Future Volume (vph)	0	515	50	0	0	0	0	0	0	55	715	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0									4.0	
Lane Util. Factor		0.91									0.95	
Frpb, ped/bikes		0.99									1.00	
Flpb, ped/bikes		1.00									1.00	
Frt		0.99									1.00	
Flt Protected		1.00									1.00	
Satd. Flow (prot)		4153									3067	
Flt Permitted		1.00									1.00	
Satd. Flow (perm)		4153									3067	
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	0	542	53	0	0	0	0	0	0	58	753	0
RTOR Reduction (vph)	0	12	0	0	0	0	0	0	0	0	166	0
Lane Group Flow (vph)	0	583	0	0	0	0	0	0	0	0	645	0
Confl. Peds. (#/hr)			12	12			39					39
Confl. Bikes (#/hr)			33									48
Heavy Vehicles (%)	2%	9%	2%	2%	2%	2%	2%	2%	2%	13%	5%	2%
Bus Blockages (#/hr)	0	10	10	0	0	0	0	0	0	0	0	0
Turn Type		NA								Split	NA	
Protected Phases		1 2								4 5	4 5	
Permitted Phases												
Actuated Green, G (s)		25.0									24.0	
Effective Green, g (s)		25.0									24.0	
Actuated g/C Ratio		0.25									0.24	
Clearance Time (s)												
Lane Grp Cap (vph)		1038									736	
v/s Ratio Prot		c0.14									c0.21	
v/s Ratio Perm												
v/c Ratio		0.56									0.88	
Uniform Delay, d1		32.7									36.6	
Progression Factor		1.00									0.91	
Incremental Delay, d2		2.2									7.6	
Delay (s)		34.9									40.8	
Level of Service		C									D	
Approach Delay (s)		34.9			0.0			0.0			40.8	
Approach LOS		C			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	38.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	43.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL2	EBL	NBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations									
Traffic Volume (vph)	350	215	75						
Future Volume (vph)	350	215	75						
Turn Type	Prot	Prot	NA						
Protected Phases	1 2 4 5	1 2 4 5	6 8	1	2	4	5	6	8
Permitted Phases									
Detector Phase	1 2 4 5	1 2 4 5	6 8						
Switch Phase									
Minimum Initial (s)				5.0	12.0	5.5	6.0	12.0	5.0
Minimum Split (s)				10.0	22.0	10.0	18.0	30.0	10.0
Total Split (s)				10.0	22.0	10.0	18.0	30.0	10.0
Total Split (%)				10%	22%	10%	18%	30%	10%
Yellow Time (s)				4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)				1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag				Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode				Max	Max	Max	Max	Max	Max
Act Effct Green (s)	55.0	55.0	34.0						
Actuated g/C Ratio	0.55	0.55	0.34						
v/c Ratio	0.24	0.27	0.23						
Control Delay	0.7	0.4	24.4						
Queue Delay	0.9	0.4	0.0						
Total Delay	1.6	0.8	24.4						
LOS	A	A	C						
Approach Delay		1.1	24.4						
Approach LOS		A	C						

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 100	
Control Type: Pretimed	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 6.8	Intersection LOS: A
Intersection Capacity Utilization 38.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Route 28 Frontage Rd. & Washington St.

Lane Group	EBL2	EBL	NBT
Lane Group Flow (vph)	205	409	199
v/c Ratio	0.24	0.27	0.23
Control Delay	0.7	0.4	24.4
Queue Delay	0.9	0.4	0.0
Total Delay	1.6	0.8	24.4
Queue Length 50th (ft)	0	0	47
Queue Length 95th (ft)	m4	m0	73
Internal Link Dist (ft)		98	768
Turn Bay Length (ft)			
Base Capacity (vph)	852	1536	884
Starvation Cap Reductn	411	676	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.46	0.48	0.23

Intersection Summary

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

Movement	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations											
Traffic Volume (vph)	350	215	0	0	75	100	0	0	0	0	0
Future Volume (vph)	350	215	0	0	75	100	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			6.0						
Lane Util. Factor	0.91	0.91			0.95						
Frpb, ped/bikes	1.00	1.00			1.00						
Flpb, ped/bikes	1.00	1.00			1.00						
Frt	1.00	1.00			0.91						
Flt Protected	0.95	0.95			1.00						
Satd. Flow (prot)	1382	2650			2602						
Flt Permitted	0.95	0.95			1.00						
Satd. Flow (perm)	1382	2650			2602						
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	380	234	0	0	85	114	0	0	0	0	0
RTOR Reduction (vph)	113	96	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	92	313	0	0	199	0	0	0	0	0	0
Confl. Peds. (#/hr)		5	16	3					3	16	2
Confl. Bikes (#/hr)			28								
Heavy Vehicles (%)	7%	15%	2%	2%	13%	15%	2%	2%	2%	2%	2%
Turn Type	Prot	Prot			NA						
Protected Phases	1 2 4 5	1 2 4 5			6 8						
Permitted Phases											
Actuated Green, G (s)	56.0	56.0			35.0						
Effective Green, g (s)	45.0	45.0			35.0						
Actuated g/C Ratio	0.45	0.45			0.35						
Clearance Time (s)											
Lane Grp Cap (vph)	621	1192			910						
v/s Ratio Prot	0.07	c0.12			c0.08						
v/s Ratio Perm											
v/c Ratio	0.15	0.26			0.22						
Uniform Delay, d1	16.2	17.1			22.9						
Progression Factor	0.10	0.00			1.00						
Incremental Delay, d2	0.4	0.5			0.6						
Delay (s)	2.0	0.5			23.4						
Level of Service	A	A			C						
Approach Delay (s)		1.0			23.4			0.0		0.0	
Approach LOS		A			C			A		A	

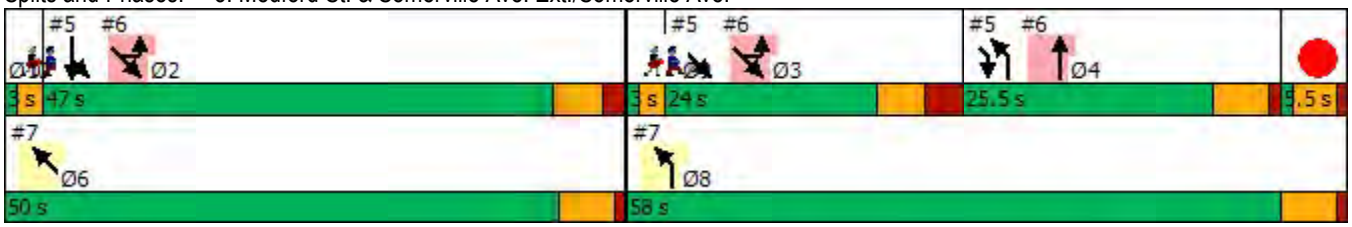
Intersection Summary			
HCM 2000 Control Delay	6.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	38.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	NBL	SBL	SBT	SET	SER	Ø1	Ø6	Ø8	Ø9	Ø10
Lane Configurations										
Traffic Volume (vph)	35	125	585	145	55					
Future Volume (vph)	35	125	585	145	55					
Turn Type	Prot	Split	NA	NA	pm+ov					
Protected Phases	4	2	2	3	4	1	6	8	9	10
Permitted Phases					3					
Detector Phase	4	2	2	3	4					
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	1.0	10.0	10.0	1.0	1.0
Minimum Split (s)	25.5	30.0	30.0	24.0	25.5	3.0	28.5	21.0	3.0	5.5
Total Split (s)	25.5	47.0	47.0	24.0	25.5	3.0	50.0	58.0	3.0	5.5
Total Split (%)	23.6%	43.5%	43.5%	22.2%	23.6%	3%	46%	54%	3%	5%
Yellow Time (s)	4.5	4.0	4.0	4.0	4.5	2.0	4.5	4.5	2.0	3.5
All-Red Time (s)	1.0	2.0	2.0	3.0	1.0	0.0	1.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0					
Total Lost Time (s)	5.5	6.0	6.0	7.0	5.5					
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead			Lead	Lag
Lead-Lag Optimize?										
Recall Mode	None	Max	Max	None	None	None	Max	None	None	None
Act Effct Green (s)	13.4	43.7	43.7	14.4	29.3					
Actuated g/C Ratio	0.14	0.47	0.47	0.15	0.32					
v/c Ratio	0.28	0.20	0.53	0.69	0.15					
Control Delay	39.5	17.5	20.1	54.0	19.8					
Queue Delay	0.0	0.0	0.0	0.0	0.0					
Total Delay	39.5	17.5	20.1	54.0	19.8					
LOS	D	B	C	D	B					
Approach Delay			19.7	44.5						
Approach LOS			B	D						

Intersection Summary	
Cycle Length: 108	
Actuated Cycle Length: 93	
Natural Cycle: 95	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 25.6	Intersection LOS: C
Intersection Capacity Utilization 50.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Medford St. & Somerville Ave. Ext./Somerville Ave.



Lane Group	NBL	SBL	SBT	SET	SER
Lane Group Flow (vph)	64	136	734	165	63
v/c Ratio	0.28	0.20	0.53	0.69	0.15
Control Delay	39.5	17.5	20.1	54.0	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	39.5	17.5	20.1	54.0	19.8
Queue Length 50th (ft)	35	47	155	93	24
Queue Length 95th (ft)	44	102	256	169	49
Internal Link Dist (ft)			894	143	
Turn Bay Length (ft)		50			100
Base Capacity (vph)	340	687	1391	283	507
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.19	0.20	0.53	0.58	0.12

Intersection Summary

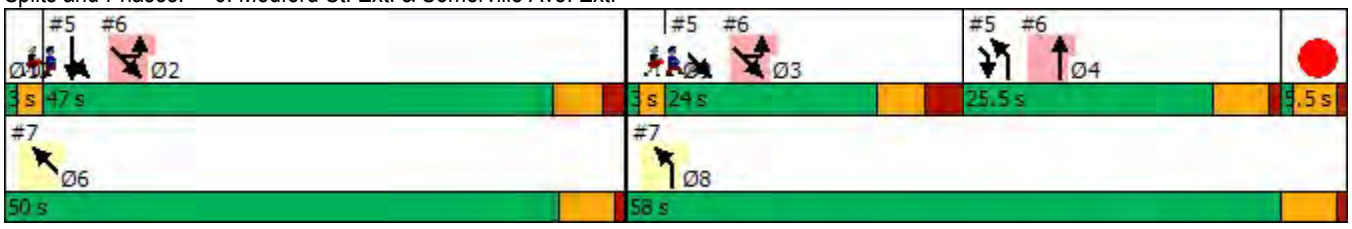
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	35	0	0	125	585	90	0	145	55	0	0	0
Future Volume (vph)	35	0	0	125	585	90	0	145	55	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5			6.0	6.0			7.0	5.5			
Lane Util. Factor	1.00			1.00	0.95			1.00	1.00			
Frpb, ped/bikes	1.00			1.00	0.98			1.00	0.98			
Flpb, ped/bikes	1.00			1.00	1.00			1.00	1.00			
Frt	1.00			1.00	0.98			1.00	0.85			
Flt Protected	0.95			0.95	1.00			1.00	1.00			
Satd. Flow (prot)	1577			1464	2950			1541	1308			
Flt Permitted	0.95			0.95	1.00			1.00	1.00			
Satd. Flow (perm)	1577			1464	2950			1541	1308			
Peak-hour factor, PHF	0.55	0.55	0.55	0.92	0.92	0.92	0.88	0.88	0.88	0.92	0.92	0.92
Adj. Flow (vph)	64	0	0	136	636	98	0	165	62	0	0	0
RTOR Reduction (vph)	0	0	0	0	9	0	0	0	0	0	0	0
Lane Group Flow (vph)	64	0	0	136	725	0	0	165	63	0	0	0
Confl. Peds. (#/hr)	35					35	5		17	17		5
Confl. Bikes (#/hr)						47			2			
Heavy Vehicles (%)	3%	0%	0%	11%	5%	13%	0%	11%	9%	2%	2%	2%
Turn Type	Prot			Split	NA			NA	pm+ov			
Protected Phases	4			2	2			3	4			
Permitted Phases									3			
Actuated Green, G (s)	13.4			44.3	44.3			14.4	27.8			
Effective Green, g (s)	13.4			44.3	44.3			14.4	27.8			
Actuated g/C Ratio	0.14			0.47	0.47			0.15	0.30			
Clearance Time (s)	5.5			6.0	6.0			7.0	5.5			
Vehicle Extension (s)	3.0			3.0	3.0			3.0	3.0			
Lane Grp Cap (vph)	226			694	1399			237	389			
v/s Ratio Prot	c0.04			0.09	c0.25			c0.11	0.02			
v/s Ratio Perm									0.02			
v/c Ratio	0.28			0.20	0.52			0.70	0.16			
Uniform Delay, d1	35.7			14.2	17.1			37.4	24.2			
Progression Factor	1.00			1.00	1.00			1.00	1.00			
Incremental Delay, d2	0.7			0.6	1.4			8.6	0.2			
Delay (s)	36.4			14.9	18.5			46.0	24.4			
Level of Service	D			B	B			D	C			
Approach Delay (s)		36.4			17.9			40.0			0.0	
Approach LOS		D			B			D			A	

Intersection Summary			
HCM 2000 Control Delay	23.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	93.4	Sum of lost time (s)	27.0
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBT	SET	Ø1	Ø2	Ø3	Ø6	Ø8	Ø9	Ø10
Lane Configurations									
Traffic Volume (vph)	195	215							
Future Volume (vph)	195	215							
Turn Type	NA	NA							
Protected Phases	4	2 3	1	2	3	6	8	9	10
Permitted Phases									
Detector Phase	4	2 3							
Switch Phase									
Minimum Initial (s)	10.0		1.0	10.0	6.0	10.0	10.0	1.0	1.0
Minimum Split (s)	25.5		3.0	30.0	24.0	28.5	21.0	3.0	5.5
Total Split (s)	25.5		3.0	47.0	24.0	50.0	58.0	3.0	5.5
Total Split (%)	23.6%		3%	44%	22%	46%	54%	3%	5%
Yellow Time (s)	4.5		2.0	4.0	4.0	4.5	4.5	2.0	3.5
All-Red Time (s)	1.0		0.0	2.0	3.0	1.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0								
Total Lost Time (s)	5.5								
Lead/Lag	Lead		Lead	Lag	Lag			Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None		None	Max	None	Max	None	None	None
Act Effct Green (s)	13.4	60.5							
Actuated g/C Ratio	0.14	0.65							
v/c Ratio	0.55	0.30							
Control Delay	42.4	1.6							
Queue Delay	0.0	0.4							
Total Delay	42.4	2.0							
LOS	D	A							
Approach Delay	42.4	2.0							
Approach LOS	D	A							

Intersection Summary	
Cycle Length: 108	
Actuated Cycle Length: 93	
Natural Cycle: 95	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 19.5	Intersection LOS: B
Intersection Capacity Utilization 43.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 6: Medford St. Ext. & Somerville Ave. Ext.



Lane Group	NBT	SET
Lane Group Flow (vph)	235	308
v/c Ratio	0.55	0.30
Control Delay	42.4	1.6
Queue Delay	0.0	0.4
Total Delay	42.4	2.0
Queue Length 50th (ft)	71	1
Queue Length 95th (ft)	102	0
Internal Link Dist (ft)	128	100
Turn Bay Length (ft)		
Base Capacity (vph)	644	1063
Starvation Cap Reductn	0	347
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.36	0.43

Intersection Summary

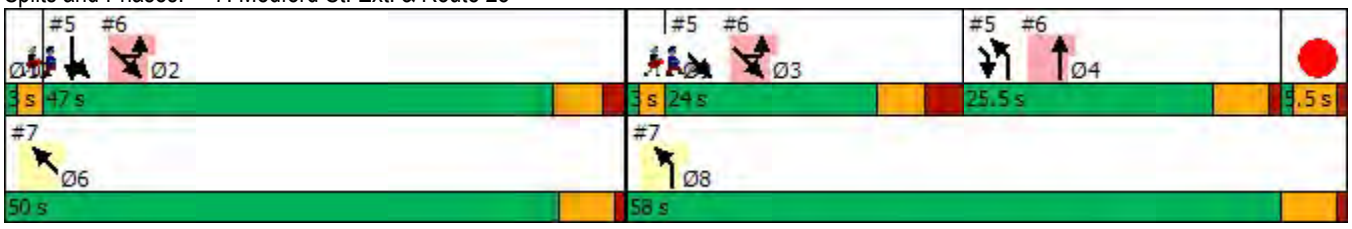
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	195	5	0	0	0	50	215	0	0	0	0
Future Volume (vph)	0	195	5	0	0	0	50	215	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5						6.0				
Lane Util. Factor		0.95						1.00				
Frpb, ped/bikes		1.00						1.00				
Flpb, ped/bikes		1.00						1.00				
Frt		1.00						1.00				
Flt Protected		1.00						0.99				
Satd. Flow (prot)		2980						1535				
Flt Permitted		1.00						0.99				
Satd. Flow (perm)		2980						1535				
Peak-hour factor, PHF	0.85	0.85	0.85	0.92	0.92	0.92	0.86	0.86	0.86	0.92	0.92	0.92
Adj. Flow (vph)	0	229	6	0	0	0	58	250	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	235	0	0	0	0	0	283	0	0	0	0
Confl. Peds. (#/hr)	23		2	2		23	4		32	32		4
Confl. Bikes (#/hr)			3						4			
Heavy Vehicles (%)	0%	8%	29%	2%	2%	2%	12%	10%	0%	2%	2%	2%
Turn Type		NA					Split	NA				
Protected Phases		4					2 3	2 3				
Permitted Phases												
Actuated Green, G (s)		13.4						58.7				
Effective Green, g (s)		13.4						58.7				
Actuated g/C Ratio		0.14						0.63				
Clearance Time (s)		5.5										
Vehicle Extension (s)		3.0										
Lane Grp Cap (vph)		427						964				
v/s Ratio Prot		c0.08						c0.18				
v/s Ratio Perm												
v/c Ratio		0.55						0.29				
Uniform Delay, d1		37.2						7.9				
Progression Factor		1.00						0.21				
Incremental Delay, d2		1.5						0.2				
Delay (s)		38.7						1.8				
Level of Service		D						A				
Approach Delay (s)		38.7			0.0			1.8			0.0	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	93.4	Sum of lost time (s)	27.0
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBL	NWT	Ø1	Ø2	Ø3	Ø4	Ø9	Ø10
Lane Configurations								
Traffic Volume (vph)	245	390						
Future Volume (vph)	245	390						
Turn Type	Prot	NA						
Protected Phases	8	6	1	2	3	4	9	10
Permitted Phases								
Detector Phase	8	6						
Switch Phase								
Minimum Initial (s)	10.0	10.0	1.0	10.0	6.0	10.0	1.0	1.0
Minimum Split (s)	21.0	28.5	3.0	30.0	24.0	25.5	3.0	5.5
Total Split (s)	58.0	50.0	3.0	47.0	24.0	25.5	3.0	5.5
Total Split (%)	53.7%	46.3%	3%	44%	22%	24%	3%	5%
Yellow Time (s)	4.5	4.5	2.0	4.0	4.0	4.5	2.0	3.5
All-Red Time (s)	1.0	1.0	0.0	2.0	3.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0	0.0						
Total Lost Time (s)	5.5	5.5						
Lead/Lag			Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?								
Recall Mode	None	Max	None	Max	None	None	None	None
Act Effct Green (s)	37.2	44.7						
Actuated g/C Ratio	0.40	0.48						
v/c Ratio	0.21	0.25						
Control Delay	0.4	15.7						
Queue Delay	0.2	0.0						
Total Delay	0.6	15.7						
LOS	A	B						
Approach Delay	0.6	15.7						
Approach LOS	A	B						

Intersection Summary			
Cycle Length: 108			
Actuated Cycle Length: 93			
Natural Cycle: 95			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 10.1		Intersection LOS: B	
Intersection Capacity Utilization 55.2%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 7: Medford St. Ext. & Route 28



Lane Group	NBL	NWT
Lane Group Flow (vph)	292	494
v/c Ratio	0.21	0.25
Control Delay	0.4	15.7
Queue Delay	0.2	0.0
Total Delay	0.6	15.7
Queue Length 50th (ft)	0	63
Queue Length 95th (ft)	0	86
Internal Link Dist (ft)	56	187
Turn Bay Length (ft)		
Base Capacity (vph)	1823	2001
Starvation Cap Reductn	878	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.31	0.25

Intersection Summary

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	245	0	0	0	0	390
Future Volume (vph)	245	0	0	0	0	390
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5					5.5
Lane Util. Factor	0.97					0.91
Frpb, ped/bikes	1.00					1.00
Flpb, ped/bikes	1.00					1.00
Frt	1.00					1.00
Flt Protected	0.95					1.00
Satd. Flow (prot)	2891					4161
Flt Permitted	0.95					1.00
Satd. Flow (perm)	2891					4161
Peak-hour factor, PHF	0.84	0.84	0.92	0.92	0.79	0.79
Adj. Flow (vph)	292	0	0	0	0	494
RTOR Reduction (vph)	174	0	0	0	0	0
Lane Group Flow (vph)	118	0	0	0	0	494
Confl. Peds. (#/hr)	3	5		7	7	
Heavy Vehicles (%)	9%	0%	2%	2%	0%	11%
Bus Blockages (#/hr)	0	0	0	0	0	8
Turn Type	Prot					NA
Protected Phases	8					6
Permitted Phases						
Actuated Green, G (s)	37.6					44.8
Effective Green, g (s)	37.6					44.8
Actuated g/C Ratio	0.40					0.48
Clearance Time (s)	5.5					5.5
Vehicle Extension (s)	3.0					3.0
Lane Grp Cap (vph)	1163					1995
v/s Ratio Prot	c0.04					c0.12
v/s Ratio Perm						
v/c Ratio	0.10					0.25
Uniform Delay, d1	17.4					14.3
Progression Factor	1.00					1.00
Incremental Delay, d2	0.0					0.3
Delay (s)	17.4					14.6
Level of Service	B					B
Approach Delay (s)	17.4		0.0			14.6
Approach LOS	B		A			B

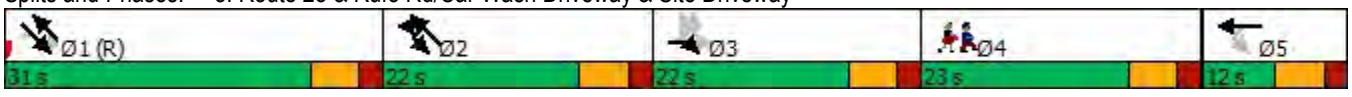
Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	93.4	Sum of lost time (s)	27.0
Intersection Capacity Utilization	55.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL2	EBT	EBR	SBL	SEL	SET	SER	NWL	NWT	Ø4	Ø5
Lane Configurations											
Traffic Volume (vph)	45	3	45	10	25	1535	225	80	335		
Future Volume (vph)	45	3	45	10	25	1535	225	80	335		
Turn Type	custom	NA	custom	D.Pm	Perm	NA	Perm	Prot	NA		
Protected Phases			3!			1		2	1 2	4	5
Permitted Phases	3	3!		3!	1		1				
Detector Phase	3	3	3	3	1	1	1	2	1 2		
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	4.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0		21.0	10.0
Total Split (s)	22.0	22.0	22.0	22.0	31.0	31.0	31.0	22.0		23.0	12.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	28.2%	28.2%	28.2%	20.0%		21%	11%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0	0.0	0.0			
Total Lost Time (s)		6.0	6.0	6.0		6.0	6.0	6.0			
Lead/Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lag		Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	None		None	None
Act Effct Green (s)		9.5	9.5	9.5		66.5	66.5	12.1	85.8		
Actuated g/C Ratio		0.09	0.09	0.09		0.60	0.60	0.11	0.78		
v/c Ratio		0.47	0.16	0.21		0.63	0.25	0.59	0.13		
Control Delay		60.5	1.1	1.5		19.9	4.1	60.8	4.4		
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total Delay		60.5	1.1	1.5		19.9	4.1	60.8	4.4		
LOS		E	A	A		B	A	E	A		
Approach Delay		31.7		1.5		18.0			15.0		
Approach LOS		C		A		B			B		

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 89 (81%), Referenced to phase 1:NWSE, Start of Green	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 17.5	Intersection LOS: B
Intersection Capacity Utilization 78.0%	ICU Level of Service D
Analysis Period (min) 15	

! Phase conflict between lane groups.

Splits and Phases: 8: Route 28 & Rufo Rd/Car Wash Driveway & Site Driveway



Lane Group	EBT	EBR	SBL	SET	SER	NWL	NWT
Lane Group Flow (vph)	52	49	66	1592	230	95	411
v/c Ratio	0.47	0.16	0.21	0.63	0.25	0.59	0.13
Control Delay	60.5	1.1	1.5	19.9	4.1	60.8	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	60.5	1.1	1.5	19.9	4.1	60.8	4.4
Queue Length 50th (ft)	36	0	0	217	0	65	10
Queue Length 95th (ft)	73	0	0	#651	60	107	52
Internal Link Dist (ft)	290		55	1866			743
Turn Bay Length (ft)					500	500	
Base Capacity (vph)	186	382	390	2537	925	214	3242
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.13	0.17	0.63	0.25	0.44	0.13

Intersection Summary

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

Movement	EBL2	EBT	EBR	WBT	SBL	SBR	SBR2	SEL	SET	SER	NWL	NWT
Lane Configurations												
Traffic Volume (vph)	45	3	45	0	10	3	20	25	1535	225	80	335
Future Volume (vph)	45	3	45	0	10	3	20	25	1535	225	80	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	11	10	12	12	12	12	12	12	10	11
Total Lost time (s)		6.0	6.0		6.0				6.0	6.0	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00				0.91	1.00	1.00	0.91
Frpb, ped/bikes		1.00	1.00		0.97				1.00	0.96	1.00	1.00
Flpb, ped/bikes		0.94	1.00		1.00				1.00	1.00	1.00	1.00
Frt		1.00	0.85		0.91				1.00	0.85	1.00	1.00
Flt Protected		0.96	1.00		0.99				1.00	1.00	0.95	1.00
Satd. Flow (prot)		1286	1405		1460				4529	1382	1472	4017
Flt Permitted		0.95	1.00		0.99				0.93	1.00	0.95	1.00
Satd. Flow (perm)		1280	1405		1460				4196	1382	1472	4017
Peak-hour factor, PHF	0.91	0.91	0.91	0.31	0.50	0.50	0.50	0.98	0.98	0.98	0.84	0.84
Adj. Flow (vph)	49	3	49	0	20	6	40	26	1566	230	95	399
RTOR Reduction (vph)	0	0	45	0	61	0	0	0	0	114	0	49
Lane Group Flow (vph)	0	52	4	0	5	0	0	0	1592	116	95	362
Confl. Peds. (#/hr)	8		1		1	5	8	11		5	5	
Confl. Bikes (#/hr)										2		
Heavy Vehicles (%)	16%	0%	0%	0%	0%	17%	0%	0%	3%	1%	3%	12%
Turn Type	custom	NA	custom		D.Pm			Perm	NA	Perm	Prot	NA
Protected Phases			3!	5					1		2	1 2
Permitted Phases	3	3!			3!			1		1		
Actuated Green, G (s)		8.3	8.3		8.3				55.7	55.7	12.1	73.8
Effective Green, g (s)		8.3	8.3		8.3				55.7	55.7	12.1	73.8
Actuated g/C Ratio		0.08	0.08		0.08				0.51	0.51	0.11	0.67
Clearance Time (s)		6.0	6.0		6.0				6.0	6.0	6.0	
Vehicle Extension (s)		2.0	2.0		2.0				3.0	3.0	3.0	
Lane Grp Cap (vph)		96	106		110				2124	699	161	2695
v/s Ratio Prot			0.00								c0.06	0.09
v/s Ratio Perm		c0.04			0.00				c0.38	0.08		
v/c Ratio		0.54	0.03		0.05				0.75	0.17	0.59	0.13
Uniform Delay, d1		49.0	47.1		47.2				21.6	14.6	46.6	6.5
Progression Factor		1.00	1.00		1.00				1.00	1.00	1.00	1.00
Incremental Delay, d2		3.3	0.0		0.1				2.5	0.5	5.7	0.0
Delay (s)		52.3	47.2		47.2				24.1	15.2	52.3	6.6
Level of Service		D	D		D				C	B	D	A
Approach Delay (s)		49.8		0.0	47.2				23.0			15.1
Approach LOS		D		A	D				C			B

Intersection Summary			
HCM 2000 Control Delay	23.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	30.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

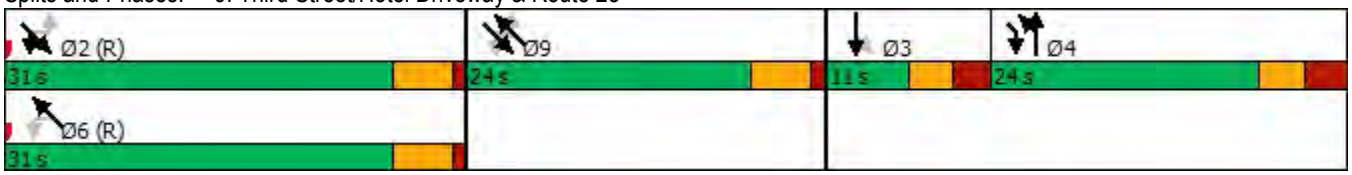
! Phase conflict between lane groups.
c Critical Lane Group

Movement	NWR2
Lane Configurations	
Traffic Volume (vph)	10
Future Volume (vph)	10
Ideal Flow (vphpl)	1900
Lane Width	11
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.84
Adj. Flow (vph)	12
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	11
Confl. Bikes (#/hr)	8
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Lane Group	NBL	NBT	SBL	SBT	SEL	SET	SER	NWL	NWT	Ø2	Ø6	Ø9
Lane Configurations												
Traffic Volume (vph)	120	5	10	5	1	1100	485	2	325			
Future Volume (vph)	120	5	10	5	1	1100	485	2	325			
Turn Type	Split	NA	Perm	NA	Perm	NA	custom	Perm	NA			
Protected Phases	4	4		3		2 9	2 4		6 9	2	6	9
Permitted Phases			3		2 9			6 9				
Detector Phase	4	4	3	3	2 9	2 9	2 4	6 9	6 9			
Switch Phase												
Minimum Initial (s)	6.0	6.0	5.0	5.0						10.0	17.0	1.0
Minimum Split (s)	24.0	24.0	11.0	11.0						23.0	23.0	23.0
Total Split (s)	24.0	24.0	11.0	11.0						31.0	31.0	24.0
Total Split (%)	26.7%	26.7%	12.2%	12.2%						34%	34%	27%
Yellow Time (s)	3.0	3.0	3.0	3.0						4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	2.5	2.5						1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0								
Total Lost Time (s)	6.0	6.0		5.5								
Lead/Lag	Lag	Lag	Lead	Lead								
Lead-Lag Optimize?												
Recall Mode	Ped	Ped	None	None						C-Min	C-Min	Min
Act Effct Green (s)	18.0	18.0		5.4		54.3	57.1		54.3			
Actuated g/C Ratio	0.20	0.20		0.06		0.60	0.63		0.60			
v/c Ratio	0.30	0.30		0.27		0.65	0.46		0.26			
Control Delay	34.3	25.3		41.1		15.0	2.5		9.7			
Queue Delay	0.0	0.0		0.0		0.0	0.0		0.0			
Total Delay	34.3	25.3		41.1		15.0	2.5		9.7			
LOS	C	C		D		B	A		A			
Approach Delay		30.0		41.1		11.2			9.7			
Approach LOS		C		D		B			A			

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 17 (19%), Referenced to phase 2:SETL and 6:NWTL, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 12.6	Intersection LOS: B
Intersection Capacity Utilization 69.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Third Street/Hotel Driveway & Route 28



Lane Group	NBL	NBT	SBT	SET	SER	NWT
Lane Group Flow (vph)	82	78	25	1147	505	426
v/c Ratio	0.30	0.30	0.27	0.65	0.46	0.26
Control Delay	34.3	25.3	41.1	15.0	2.5	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.3	25.3	41.1	15.0	2.5	9.7
Queue Length 50th (ft)	42	26	10	239	0	63
Queue Length 95th (ft)	86	69	31	312	43	75
Internal Link Dist (ft)		395	64	743		192
Turn Bay Length (ft)	110					
Base Capacity (vph)	269	260	95	1847	1089	1717
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	0.30	0.30	0.26	0.62	0.46	0.25

Intersection Summary

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	120	5	25	10	5	5	1	1100	485	2	325	5
Future Volume (vph)	120	5	25	10	5	5	1	1100	485	2	325	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	8	12	12	12	12	11	12	12	11	11
Total Lost time (s)	6.0	6.0			5.5			5.0	5.0		5.0	
Lane Util. Factor	0.95	0.95			1.00			0.95	1.00		0.95	
Frpb, ped/bikes	1.00	0.97			1.00			1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00			0.97			1.00	1.00		1.00	
Frt	1.00	0.95			0.97			1.00	0.85		1.00	
Flt Protected	0.95	0.97			0.97			1.00	1.00		1.00	
Satd. Flow (prot)	1346	1200			1560			3049	1425		2848	
Flt Permitted	0.95	0.97			0.89			0.95	1.00		0.95	
Satd. Flow (perm)	1346	1200			1431			2911	1425		2705	
Peak-hour factor, PHF	0.94	0.94	0.94	0.79	0.79	0.79	0.96	0.96	0.96	0.78	0.78	0.78
Adj. Flow (vph)	128	5	27	13	6	6	1	1146	505	3	417	6
RTOR Reduction (vph)	0	21	0	0	6	0	0	0	231	0	1	0
Lane Group Flow (vph)	82	57	0	0	19	0	0	1147	274	0	425	0
Confl. Peds. (#/hr)			52	52			37		59	59		37
Confl. Bikes (#/hr)									5			
Heavy Vehicles (%)	7%	0%	25%	0%	0%	0%	0%	3%	2%	0%	10%	0%
Turn Type	Split	NA		Perm	NA		Perm	NA	custom	Perm	NA	
Protected Phases	4	4			3			2 9	2 4		6 9	
Permitted Phases				3			2 9			6 9		
Actuated Green, G (s)	18.0	18.0			3.4			52.1	54.9		52.1	
Effective Green, g (s)	18.0	18.0			3.4			52.1	48.9		52.1	
Actuated g/C Ratio	0.20	0.20			0.04			0.58	0.54		0.58	
Clearance Time (s)	6.0	6.0			5.5							
Vehicle Extension (s)	2.0	2.0			2.0							
Lane Grp Cap (vph)	269	240			54			1685	774		1565	
v/s Ratio Prot	0.06	0.05							c0.19			
v/s Ratio Perm					c0.01			c0.39			0.16	
v/c Ratio	0.30	0.24			0.36			0.68	0.35		0.27	
Uniform Delay, d1	30.7	30.2			42.2			13.2	11.6		9.5	
Progression Factor	1.00	1.00			1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.2	0.2			1.5			0.9	0.1		0.0	
Delay (s)	30.9	30.4			43.7			14.1	11.7		9.5	
Level of Service	C	C			D			B	B		A	
Approach Delay (s)		30.7			43.7			13.4			9.5	
Approach LOS		C			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	21.5
Intersection Capacity Utilization	69.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	0	0	360	40	0	30
Future Volume (Veh/h)	0	0	360	40	0	30
Sign Control		Stop	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.82	0.82	0.73	0.73
Hourly flow rate (vph)	0	0	439	49	0	41
Pedestrians					4	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type			None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	882	0	0		906	906
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	882	0	0		906	906
tC, single (s)	6.5	6.2	4.2		7.1	6.8
tC, 2 stage (s)						
tF (s)	4.0	3.3	2.3		3.5	4.2
p0 queue free %	100	100	72		100	77
cM capacity (veh/h)	205	1085	1572		200	182

Direction, Lane #	NW 1	NW 2	NW 3	SW 1
Volume Total	176	176	137	41
Volume Left	176	176	88	0
Volume Right	0	0	49	0
cSH	1572	1572	1572	182
Volume to Capacity	0.28	0.28	0.28	0.23
Queue Length 95th (ft)	29	29	29	21
Control Delay (s)	8.2	8.2	6.1	30.5
Lane LOS	A	A	A	D
Approach Delay (s)	7.6			30.5
Approach LOS				D

Intersection Summary			
Average Delay	9.4		
Intersection Capacity Utilization	18.6%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SBL	SBR	SEL	SET	SER	NWL	NWT	NWR	NEL2	NEL	NER
Lane Configurations											
Traffic Volume (veh/h)	2	0	1	270	0	0	160	5	160	10	70
Future Volume (Veh/h)	2	0	1	270	0	0	160	5	160	10	70
Sign Control	Stop			Free			Free			Stop	
Grade	0%			0%			0%			0%	
Peak Hour Factor	0.50	0.50	0.93	0.93	0.93	0.71	0.71	0.71	0.85	0.85	0.85
Hourly flow rate (vph)	4	0	1	290	0	0	225	7	188	12	82
Pedestrians	41			2			5			40	
Lane Width (ft)	12.0			12.0			12.0			12.0	
Walking Speed (ft/s)	3.5			3.5			3.5			3.5	
Percent Blockage	4			0			0			4	
Right turn flare (veh)											
Median type				None			None				
Median storage veh)											
Upstream signal (ft)							420				
pX, platoon unblocked											
vC, conflicting volume	654	602	273			330			562	605	335
vC1, stage 1 conf vol											
vC2, stage 2 conf vol											
vCu, unblocked vol	654	602	273			330			562	605	335
tC, single (s)	7.1	6.5	4.1			4.1			7.2	6.5	6.3
tC, 2 stage (s)											
tF (s)	3.5	4.0	2.2			2.2			3.6	4.0	3.4
p0 queue free %	99	100	100			100			52	97	88
cM capacity (veh/h)	295	385	1251			1183			389	383	664

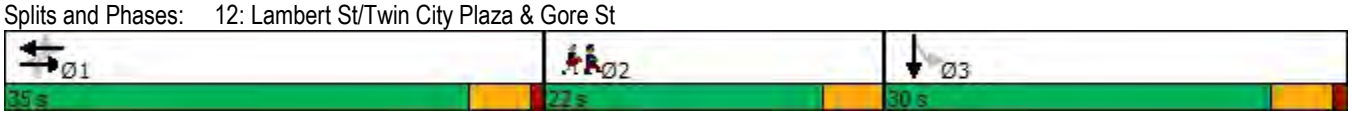
Direction, Lane #	SB 1	SE 1	NW 1	NE 1
Volume Total	4	291	232	282
Volume Left	4	1	0	188
Volume Right	0	0	7	82
cSH	295	1251	1700	441
Volume to Capacity	0.01	0.00	0.14	0.64
Queue Length 95th (ft)	1	0	0	109
Control Delay (s)	17.4	0.0	0.0	26.5
Lane LOS	C	A		D
Approach Delay (s)	17.4	0.0	0.0	26.5
Approach LOS	C			D

Intersection Summary			
Average Delay	9.3		
Intersection Capacity Utilization	49.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	SBT	Ø2
Lane Configurations						
Traffic Volume (vph)	20	115	5	70	70	
Future Volume (vph)	20	115	5	70	70	
Turn Type	Perm	NA	Perm	NA	NA	
Protected Phases		1		1	3	2
Permitted Phases	1		1			
Detector Phase	1	1	1	1	3	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0
Minimum Split (s)	12.0	12.0	12.0	12.0	12.0	22.0
Total Split (s)	35.0	35.0	35.0	35.0	30.0	22.0
Total Split (%)	40.2%	40.2%	40.2%	40.2%	34.5%	25%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)		0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	Max	Max	None	Ped
Act Effct Green (s)		30.1		30.1	13.0	
Actuated g/C Ratio		0.40		0.40	0.17	
v/c Ratio		0.43		0.17	0.55	
Control Delay		16.0		15.2	33.2	
Queue Delay		0.0		0.0	0.0	
Total Delay		16.0		15.2	33.2	
LOS		B		B	C	
Approach Delay		16.0		15.2	33.2	
Approach LOS		B		B	C	

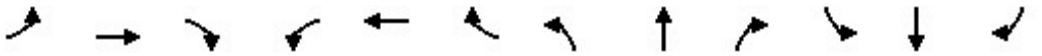
Intersection Summary	
Cycle Length: 87	
Actuated Cycle Length: 75.1	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 21.0	Intersection LOS: C
Intersection Capacity Utilization 44.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Lambert St/Twin City Plaza & Gore St



Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	280	113	169
v/c Ratio	0.43	0.17	0.55
Control Delay	16.0	15.2	33.2
Queue Delay	0.0	0.0	0.0
Total Delay	16.0	15.2	33.2
Queue Length 50th (ft)	70	30	68
Queue Length 95th (ft)	149	56	103
Internal Link Dist (ft)	73	445	291
Turn Bay Length (ft)			
Base Capacity (vph)	648	684	587
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.43	0.17	0.29

Intersection Summary



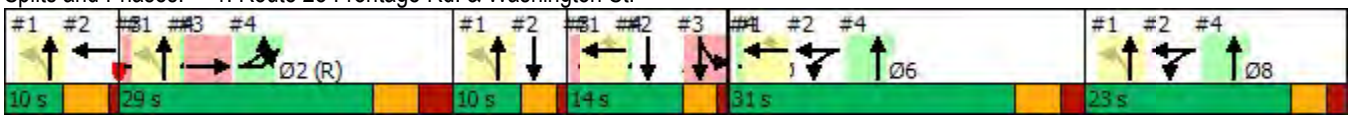
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	115	125	5	70	10	0	0	0	40	70	20
Future Volume (vph)	20	115	125	5	70	10	0	0	0	40	70	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		0.94			0.99						0.99	
Flpb, ped/bikes		1.00			1.00						0.98	
Frt		0.94			0.98						0.98	
Flt Protected		1.00			1.00						0.98	
Satd. Flow (prot)		1578			1730						1716	
Flt Permitted		0.98			0.98						0.98	
Satd. Flow (perm)		1547			1701						1716	
Peak-hour factor, PHF	0.93	0.93	0.93	0.75	0.75	0.75	0.92	0.92	0.92	0.77	0.77	0.77
Adj. Flow (vph)	22	124	134	7	93	13	0	0	0	52	91	26
RTOR Reduction (vph)	0	35	0	0	5	0	0	0	0	0	9	0
Lane Group Flow (vph)	0	245	0	0	108	0	0	0	0	0	160	0
Confl. Peds. (#/hr)	44		54	54		55	24		26	26		24
Confl. Bikes (#/hr)			45			2						
Heavy Vehicles (%)	0%	5%	6%	0%	6%	13%	2%	2%	2%	0%	4%	5%
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		1			1						3	
Permitted Phases	1			1						3		
Actuated Green, G (s)		30.1			30.1						13.0	
Effective Green, g (s)		30.1			30.1						13.0	
Actuated g/C Ratio		0.40			0.40						0.17	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		4.0			4.0						4.0	
Lane Grp Cap (vph)		620			681						297	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.06						0.09	
v/c Ratio		0.40			0.16						0.54	
Uniform Delay, d1		16.0			14.4						28.3	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		1.9			0.5						2.4	
Delay (s)		17.9			14.9						30.7	
Level of Service		B			B						C	
Approach Delay (s)		17.9			14.9			0.0			30.7	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	75.1	Sum of lost time (s)	14.0
Intersection Capacity Utilization	44.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBT	WBR	NBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations									
Traffic Volume (vph)	550	60	650						
Future Volume (vph)	550	60	650						
Turn Type	NA	Perm	NA						
Protected Phases	5 6		1 2 4 8	1	2	4	5	6	8
Permitted Phases		5 6							
Detector Phase	5 6	5 6	1 2 4 8						
Switch Phase									
Minimum Initial (s)				5.0	12.0	6.0	6.0	12.0	5.0
Minimum Split (s)				10.0	29.0	10.0	14.0	31.0	23.0
Total Split (s)				10.0	29.0	10.0	14.0	31.0	23.0
Total Split (%)				9%	25%	9%	12%	26%	20%
Yellow Time (s)				4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)				1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag				Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode				Max	Max	Max	Max	Max	Max
Act Effct Green (s)	41.0	41.0	67.0						
Actuated g/C Ratio	0.35	0.35	0.57						
v/c Ratio	0.53	0.13	0.41						
Control Delay	32.4	26.9	9.0						
Queue Delay	0.9	0.0	1.5						
Total Delay	33.3	26.9	10.4						
LOS	C	C	B						
Approach Delay	32.7		10.4						
Approach LOS	C		B						

Intersection Summary	
Cycle Length: 117	
Actuated Cycle Length: 117	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 120	
Control Type: Pretimed	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 20.8	Intersection LOS: C
Intersection Capacity Utilization 46.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Route 28 Frontage Rd. & Washington St.



Lane Group	WBT	WBR	NBT
Lane Group Flow (vph)	591	65	758
v/c Ratio	0.53	0.13	0.41
Control Delay	32.4	26.9	9.0
Queue Delay	0.9	0.0	1.5
Total Delay	33.3	26.9	10.4
Queue Length 50th (ft)	185	33	111
Queue Length 95th (ft)	243	67	138
Internal Link Dist (ft)	78		100
Turn Bay Length (ft)			
Base Capacity (vph)	1116	487	1837
Starvation Cap Reductn	0	0	836
Spillback Cap Reductn	267	0	2
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.70	0.13	0.76

Intersection Summary

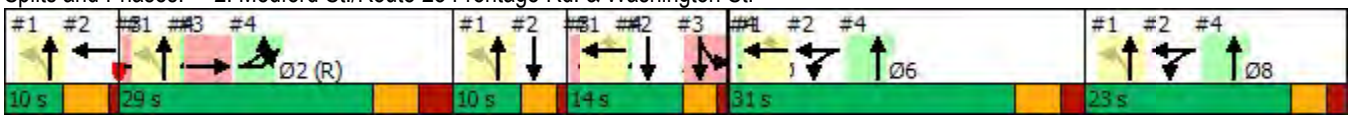
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	550	60	70	650	0	0	0	0
Future Volume (vph)	0	0	0	0	550	60	70	650	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		5.0				
Lane Util. Factor					0.95	1.00		0.95				
Frpb, ped/bikes					1.00	0.96		1.00				
Flpb, ped/bikes					1.00	1.00		1.00				
Frt					1.00	0.85		1.00				
Flt Protected					1.00	1.00		1.00				
Satd. Flow (prot)					3185	1391		3161				
Flt Permitted					1.00	1.00		1.00				
Satd. Flow (perm)					3185	1391		3161				
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	591	65	74	684	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	31	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	591	65	0	727	0	0	0	0
Confl. Peds. (#/hr)						9						
Heavy Vehicles (%)	2%	2%	2%	2%	2%	0%	5%	2%	2%	2%	2%	2%
Turn Type					NA	Perm	Perm	NA				
Protected Phases					5 6			1 2 4 8				
Permitted Phases						5 6	1 2 4 8					
Actuated Green, G (s)					39.0	39.0		68.0				
Effective Green, g (s)					39.0	39.0		61.0				
Actuated g/C Ratio					0.33	0.33		0.52				
Clearance Time (s)												
Lane Grp Cap (vph)					1061	463		1648				
v/s Ratio Prot					c0.19							
v/s Ratio Perm						0.05		0.23				
v/c Ratio					0.56	0.14		0.44				
Uniform Delay, d1					31.9	27.3		17.4				
Progression Factor					1.00	1.00		0.65				
Incremental Delay, d2					2.1	0.6		0.8				
Delay (s)					34.0	27.9		12.2				
Level of Service					C	C		B				
Approach Delay (s)		0.0			33.4			12.2			0.0	
Approach LOS		A			C			B			A	

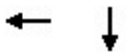
Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	117.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	46.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBT	SBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations								
Traffic Volume (vph)	395	300						
Future Volume (vph)	395	300						
Turn Type	NA	NA						
Protected Phases	1 6 8	4 5	1	2	4	5	6	8
Permitted Phases								
Detector Phase	1 6 8	4 5						
Switch Phase								
Minimum Initial (s)			5.0	12.0	6.0	6.0	12.0	5.0
Minimum Split (s)			10.0	29.0	10.0	14.0	31.0	23.0
Total Split (s)			10.0	29.0	10.0	14.0	31.0	23.0
Total Split (%)			9%	25%	9%	12%	26%	20%
Yellow Time (s)			4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)			1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)								
Total Lost Time (s)								
Lead/Lag			Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode			Max	Max	Max	Max	Max	Max
Act Effct Green (s)	54.0	20.0						
Actuated g/C Ratio	0.46	0.17						
v/c Ratio	0.48	1.05						
Control Delay	9.1	86.7						
Queue Delay	0.9	18.4						
Total Delay	10.0	105.1						
LOS	B	F						
Approach Delay	10.0	105.1						
Approach LOS	B	F						

Intersection Summary	
Cycle Length: 117	
Actuated Cycle Length: 117	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 120	
Control Type: Pretimed	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 54.4	Intersection LOS: D
Intersection Capacity Utilization 47.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: Medford St./Route 28 Frontage Rd. & Washington St.



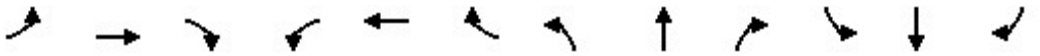


Lane Group	WBT	SBT
Lane Group Flow (vph)	674	590
v/c Ratio	0.48	1.05
Control Delay	9.1	86.7
Queue Delay	0.9	18.4
Total Delay	10.0	105.1
Queue Length 50th (ft)	209	~198
Queue Length 95th (ft)	275	#317
Internal Link Dist (ft)	99	61
Turn Bay Length (ft)		
Base Capacity (vph)	1416	561
Starvation Cap Reductn	445	0
Spillback Cap Reductn	257	31
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.69	1.11

Intersection Summary

~ 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.



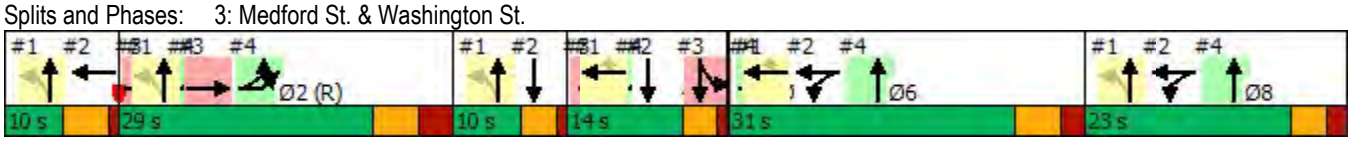
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	225	395	0	0	0	0	0	300	255
Future Volume (vph)	0	0	0	225	395	0	0	0	0	0	300	255
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.0						4.0	
Lane Util. Factor					0.95						0.95	
Frpb, ped/bikes					1.00						0.86	
Flpb, ped/bikes					1.00						1.00	
Frt					1.00						0.93	
Flt Protected					0.98						1.00	
Satd. Flow (prot)					3089						2511	
Flt Permitted					0.98						1.00	
Satd. Flow (perm)					3089						2511	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	245	429	0	0	0	0	0	319	271
RTOR Reduction (vph)	0	0	0	0	75	0	0	0	0	0	133	0
Lane Group Flow (vph)	0	0	0	0	599	0	0	0	0	0	457	0
Confl. Peds. (#/hr)	135					135	58					58
Confl. Bikes (#/hr)						34						1
Heavy Vehicles (%)	2%	2%	2%	1%	3%	2%	2%	2%	2%	2%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	5	5	0	0	0	0	0	0
Turn Type				Prot	NA						NA	
Protected Phases				6 8	1 6 8						4 5	
Permitted Phases												
Actuated Green, G (s)					54.0						20.0	
Effective Green, g (s)					48.0						20.0	
Actuated g/C Ratio					0.41						0.17	
Clearance Time (s)												
Lane Grp Cap (vph)					1399						429	
v/s Ratio Prot					c0.16						c0.18	
v/s Ratio Perm					0.04							
v/c Ratio					0.43						1.07	
Uniform Delay, d1					24.7						48.5	
Progression Factor					0.54						1.00	
Incremental Delay, d2					0.8						62.1	
Delay (s)					14.2						110.6	
Level of Service					B						F	
Approach Delay (s)		0.0			14.2			0.0			110.6	
Approach LOS		A			B			A			F	

Intersection Summary			
HCM 2000 Control Delay	59.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	117.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	SBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations								
Traffic Volume (vph)	750	450						
Future Volume (vph)	750	450						
Turn Type	NA	NA						
Protected Phases	1 2	4 5	1	2	4	5	6	8
Permitted Phases								
Detector Phase	1 2	4 5						
Switch Phase								
Minimum Initial (s)			5.0	12.0	6.0	6.0	12.0	5.0
Minimum Split (s)			10.0	29.0	10.0	14.0	31.0	23.0
Total Split (s)			10.0	29.0	10.0	14.0	31.0	23.0
Total Split (%)			9%	25%	9%	12%	26%	20%
Yellow Time (s)			4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)			1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)								
Total Lost Time (s)								
Lead/Lag			Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode			Max	Max	Max	Max	Max	Max
Act Effct Green (s)	34.0	20.0						
Actuated g/C Ratio	0.29	0.17						
v/c Ratio	0.64	0.81						
Control Delay	38.6	38.0						
Queue Delay	0.0	52.5						
Total Delay	38.6	90.5						
LOS	D	F						
Approach Delay	38.6	90.5						
Approach LOS	D	F						

Intersection Summary	
Cycle Length: 117	
Actuated Cycle Length: 117	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 120	
Control Type: Pretimed	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 59.6	Intersection LOS: E
Intersection Capacity Utilization 40.9%	ICU Level of Service A
Analysis Period (min) 15	

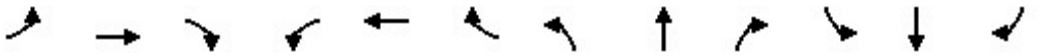
Splits and Phases: 3: Medford St. & Washington St.



Lane Group	EBT	SBT
Lane Group Flow (vph)	831	565
v/c Ratio	0.64	0.81
Control Delay	38.6	38.0
Queue Delay	0.0	52.5
Total Delay	38.6	90.5
Queue Length 50th (ft)	198	96
Queue Length 95th (ft)	246	m107
Internal Link Dist (ft)	130	63
Turn Bay Length (ft)		
Base Capacity (vph)	1294	694
Starvation Cap Reductn	0	249
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.64	1.27

Intersection Summary

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



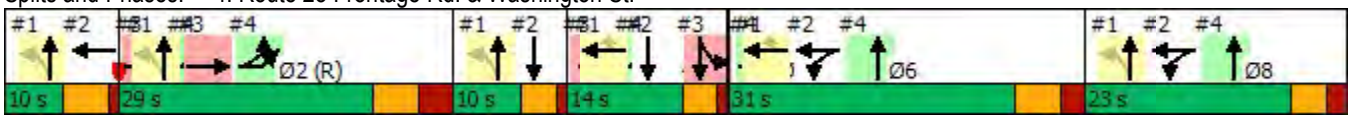
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	750	40	0	0	0	0	0	0	75	450	0
Future Volume (vph)	0	750	40	0	0	0	0	0	0	75	450	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0									4.0	
Lane Util. Factor		0.91									0.95	
Frpb, ped/bikes		0.99									1.00	
Flpb, ped/bikes		1.00									1.00	
Frt		0.99									1.00	
Flt Protected		1.00									0.99	
Satd. Flow (prot)		4438									3158	
Flt Permitted		1.00									0.99	
Satd. Flow (perm)		4438									3158	
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	0	789	42	0	0	0	0	0	0	81	484	0
RTOR Reduction (vph)	0	5	0	0	0	0	0	0	0	0	154	0
Lane Group Flow (vph)	0	826	0	0	0	0	0	0	0	0	411	0
Confl. Peds. (#/hr)			22	22			39					39
Confl. Bikes (#/hr)			46									11
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%
Bus Blockages (#/hr)	0	10	10	0	0	0	0	0	0	0	0	0
Turn Type		NA								Split	NA	
Protected Phases		1 2								4 5	4 5	
Permitted Phases												
Actuated Green, G (s)		32.0									20.0	
Effective Green, g (s)		32.0									20.0	
Actuated g/C Ratio		0.27									0.17	
Clearance Time (s)												
Lane Grp Cap (vph)		1213									539	
v/s Ratio Prot		c0.19									c0.13	
v/s Ratio Perm												
v/c Ratio		0.68									0.76	
Uniform Delay, d1		37.9									46.2	
Progression Factor		1.00									1.02	
Incremental Delay, d2		3.1									5.8	
Delay (s)		41.0									52.9	
Level of Service		D									D	
Approach Delay (s)		41.0			0.0			0.0			52.9	
Approach LOS		D			A			A			D	

Intersection Summary			
HCM 2000 Control Delay	45.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	117.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	40.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL2	EBL	NBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations									
Traffic Volume (vph)	455	370	265						
Future Volume (vph)	455	370	265						
Turn Type	Prot	Prot	NA						
Protected Phases	1 2 4 5	1 2 4 5	6 8	1	2	4	5	6	8
Permitted Phases									
Detector Phase	1 2 4 5	1 2 4 5	6 8						
Switch Phase									
Minimum Initial (s)				5.0	12.0	6.0	6.0	12.0	5.0
Minimum Split (s)				10.0	29.0	10.0	14.0	31.0	23.0
Total Split (s)				10.0	29.0	10.0	14.0	31.0	23.0
Total Split (%)				9%	25%	9%	12%	26%	20%
Yellow Time (s)				4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)				1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag				Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode				Max	Max	Max	Max	Max	Max
Act Effct Green (s)	58.0	58.0	48.0						
Actuated g/C Ratio	0.50	0.50	0.41						
v/c Ratio	0.32	0.39	0.40						
Control Delay	1.0	0.6	25.6						
Queue Delay	1.2	0.6	0.5						
Total Delay	2.2	1.2	26.0						
LOS	A	A	C						
Approach Delay		1.5	26.0						
Approach LOS		A	C						

Intersection Summary	
Cycle Length: 117	
Actuated Cycle Length: 117	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 120	
Control Type: Pretimed	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 10.3	Intersection LOS: B
Intersection Capacity Utilization 51.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Route 28 Frontage Rd. & Washington St.



Lane Group	EBL2	EBL	NBT
Lane Group Flow (vph)	278	564	472
v/c Ratio	0.32	0.39	0.40
Control Delay	1.0	0.6	25.6
Queue Delay	1.2	0.6	0.5
Total Delay	2.2	1.2	26.0
Queue Length 50th (ft)	0	1	130
Queue Length 95th (ft)	m7	m0	175
Internal Link Dist (ft)		98	768
Turn Bay Length (ft)			
Base Capacity (vph)	858	1464	1190
Starvation Cap Reductn	373	503	0
Spillback Cap Reductn	31	5	333
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.57	0.59	0.55

Intersection Summary

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

Movement	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations											
Traffic Volume (vph)	455	370	0	0	265	165	0	0	0	0	0
Future Volume (vph)	455	370	0	0	265	165	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			6.0						
Lane Util. Factor	0.91	0.91			0.95						
Frpb, ped/bikes	1.00	1.00			0.99						
Flpb, ped/bikes	1.00	1.00			1.00						
Frt	1.00	1.00			0.94						
Flt Protected	0.95	0.95			1.00						
Satd. Flow (prot)	1449	2861			2903						
Flt Permitted	0.95	0.95			1.00						
Satd. Flow (perm)	1449	2861			2903						
Peak-hour factor, PHF	0.98	0.98	0.98	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	464	378	0	0	291	181	0	0	0	0	0
RTOR Reduction (vph)	164	54	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	114	510	0	0	472	0	0	0	0	0	0
Confl. Peds. (#/hr)			16	3					3		3
Confl. Bikes (#/hr)			40			11					
Heavy Vehicles (%)	2%	4%	2%	2%	4%	6%	2%	2%	2%	2%	2%
Turn Type	Prot	Prot			NA						
Protected Phases	1 2 4 5	1 2 4 5			6 8						
Permitted Phases											
Actuated Green, G (s)	59.0	59.0			49.0						
Effective Green, g (s)	48.0	48.0			49.0						
Actuated g/C Ratio	0.41	0.41			0.42						
Clearance Time (s)											
Lane Grp Cap (vph)	594	1173			1215						
v/s Ratio Prot	0.08	c0.18			c0.16						
v/s Ratio Perm											
v/c Ratio	0.19	0.43			0.39						
Uniform Delay, d1	22.1	24.8			23.6						
Progression Factor	0.11	0.00			1.00						
Incremental Delay, d2	0.5	0.9			0.9						
Delay (s)	3.0	1.0			24.5						
Level of Service	A	A			C						
Approach Delay (s)		1.6			24.5			0.0		0.0	
Approach LOS		A			C			A		A	

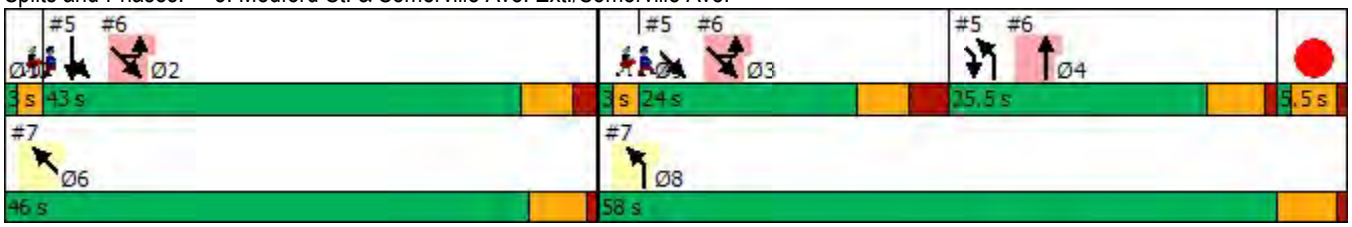
Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	117.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	NBL	SBL	SBT	SET	SER	Ø1	Ø6	Ø8	Ø9	Ø10
Lane Configurations										
Traffic Volume (vph)	30	125	315	225	35					
Future Volume (vph)	30	125	315	225	35					
Turn Type	Prot	Split	NA	NA	pm+ov					
Protected Phases	4	2	2	3	4	1	6	8	9	10
Permitted Phases					3					
Detector Phase	4	2	2	3	4					
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	1.0	10.0	10.0	1.0	1.0
Minimum Split (s)	25.5	30.0	30.0	24.0	25.5	3.0	28.5	21.0	3.0	5.5
Total Split (s)	25.5	43.0	43.0	24.0	25.5	3.0	46.0	58.0	3.0	5.5
Total Split (%)	24.5%	41.3%	41.3%	23.1%	24.5%	3%	44%	56%	3%	5%
Yellow Time (s)	4.5	4.0	4.0	4.0	4.5	2.0	4.5	4.5	2.0	3.5
All-Red Time (s)	1.0	2.0	2.0	3.0	1.0	0.0	1.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0					
Total Lost Time (s)	5.5	6.0	6.0	7.0	5.5					
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead			Lead	Lag
Lead-Lag Optimize?										
Recall Mode	None	Max	Max	None	None	None	Max	None	None	None
Act Effct Green (s)	17.0	39.5	39.5	17.0	35.6					
Actuated g/C Ratio	0.18	0.42	0.42	0.18	0.38					
v/c Ratio	0.12	0.21	0.35	0.92	0.08					
Control Delay	32.7	19.4	17.8	75.8	15.7					
Queue Delay	0.0	0.0	0.0	0.0	0.0					
Total Delay	32.7	19.4	17.8	75.8	15.7					
LOS	C	B	B	E	B					
Approach Delay			18.1	67.7						
Approach LOS			B	E						

Intersection Summary	
Cycle Length: 104	
Actuated Cycle Length: 93.2	
Natural Cycle: 95	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 35.2	Intersection LOS: D
Intersection Capacity Utilization 48.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Medford St. & Somerville Ave. Ext./Somerville Ave.



Lane Group	NBL	SBL	SBT	SET	SER
Lane Group Flow (vph)	35	134	452	268	42
v/c Ratio	0.12	0.21	0.35	0.92	0.08
Control Delay	32.7	19.4	17.8	75.8	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	32.7	19.4	17.8	75.8	15.7
Queue Length 50th (ft)	17	48	80	157	14
Queue Length 95th (ft)	43	102	137	#294	32
Internal Link Dist (ft)			894	143	
Turn Bay Length (ft)		50			100
Base Capacity (vph)	348	631	1290	291	589
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.10	0.21	0.35	0.92	0.07

Intersection Summary

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

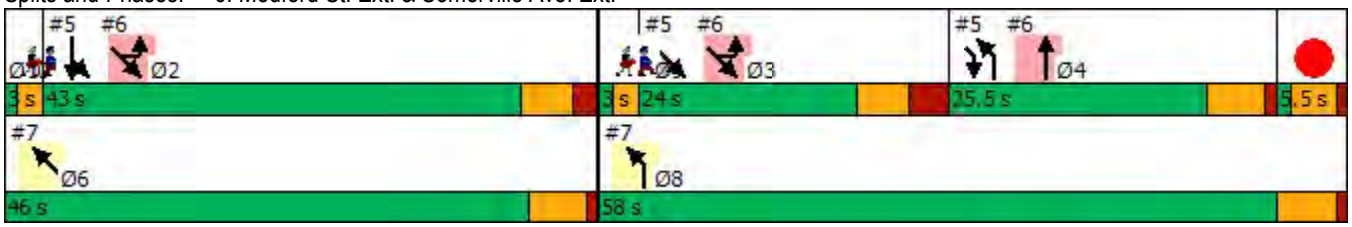
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	30	0	0	125	315	105	0	225	35	0	0	0
Future Volume (vph)	30	0	0	125	315	105	0	225	35	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5			6.0	6.0			7.0	5.5			
Lane Util. Factor	1.00			1.00	0.95			1.00	1.00			
Frpb, ped/bikes	1.00			1.00	0.97			1.00	0.98			
Flpb, ped/bikes	1.00			1.00	1.00			1.00	1.00			
Frt	1.00			1.00	0.96			1.00	0.85			
Flt Protected	0.95			0.95	1.00			1.00	1.00			
Satd. Flow (prot)	1624			1490	2991			1598	1426			
Flt Permitted	0.95			0.95	1.00			1.00	1.00			
Satd. Flow (perm)	1624			1490	2991			1598	1426			
Peak-hour factor, PHF	0.86	0.86	0.86	0.93	0.93	0.93	0.84	0.84	0.84	0.92	0.92	0.92
Adj. Flow (vph)	35	0	0	134	339	113	0	268	42	0	0	0
RTOR Reduction (vph)	0	0	0	0	28	0	0	0	0	0	0	0
Lane Group Flow (vph)	35	0	0	134	424	0	0	268	42	0	0	0
Confl. Peds. (#/hr)	50					50	2		18	18		2
Confl. Bikes (#/hr)						9			3			
Heavy Vehicles (%)	0%	0%	0%	9%	0%	4%	0%	7%	0%	0%	0%	0%
Turn Type	Prot			Split	NA			NA	pm+ov			
Protected Phases	4			2	2			3	4			
Permitted Phases									3			
Actuated Green, G (s)	17.6			40.1	40.1			17.0	34.6			
Effective Green, g (s)	17.6			40.1	40.1			17.0	34.6			
Actuated g/C Ratio	0.19			0.43	0.43			0.18	0.37			
Clearance Time (s)	5.5			6.0	6.0			7.0	5.5			
Vehicle Extension (s)	2.0			2.0	2.0			2.0	2.0			
Lane Grp Cap (vph)	306			641	1286			291	529			
v/s Ratio Prot	c0.02			0.09	c0.14			c0.17	0.01			
v/s Ratio Perm									0.01			
v/c Ratio	0.11			0.21	0.33			0.92	0.08			
Uniform Delay, d1	31.3			16.6	17.6			37.4	19.0			
Progression Factor	1.00			1.00	1.00			1.00	1.00			
Incremental Delay, d2	0.1			0.7	0.7			32.3	0.0			
Delay (s)	31.4			17.4	18.3			69.8	19.0			
Level of Service	C			B	B			E	B			
Approach Delay (s)		31.4			18.1			62.9			0.0	
Approach LOS		C			B			E			A	

Intersection Summary			
HCM 2000 Control Delay	33.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	93.2	Sum of lost time (s)	27.0
Intersection Capacity Utilization	48.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBT	SET	Ø1	Ø2	Ø3	Ø6	Ø8	Ø9	Ø10
Lane Configurations									
Traffic Volume (vph)	415	250							
Future Volume (vph)	415	250							
Turn Type	NA	NA							
Protected Phases	4	2 3	1	2	3	6	8	9	10
Permitted Phases									
Detector Phase	4	2 3							
Switch Phase									
Minimum Initial (s)	10.0		1.0	10.0	6.0	10.0	10.0	1.0	1.0
Minimum Split (s)	25.5		3.0	30.0	24.0	28.5	21.0	3.0	5.5
Total Split (s)	25.5		3.0	43.0	24.0	46.0	58.0	3.0	5.5
Total Split (%)	24.5%		3%	41%	23%	44%	56%	3%	5%
Yellow Time (s)	4.5		2.0	4.0	4.0	4.5	4.5	2.0	3.5
All-Red Time (s)	1.0		0.0	2.0	3.0	1.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0								
Total Lost Time (s)	5.5								
Lead/Lag	Lead		Lead	Lag	Lag			Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None		None	Max	None	Max	None	None	None
Act Effct Green (s)	17.0	62.4							
Actuated g/C Ratio	0.18	0.67							
v/c Ratio	0.79	0.34							
Control Delay	46.8	4.3							
Queue Delay	0.0	1.0							
Total Delay	46.8	5.3							
LOS	D	A							
Approach Delay	46.8	5.3							
Approach LOS	D	A							

Intersection Summary			
Cycle Length: 104			
Actuated Cycle Length: 93.2			
Natural Cycle: 95			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.92			
Intersection Signal Delay: 28.4		Intersection LOS: C	
Intersection Capacity Utilization 71.5%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 6: Medford St. Ext. & Somerville Ave. Ext.



Lane Group	NBT	SET
Lane Group Flow (vph)	461	368
v/c Ratio	0.79	0.34
Control Delay	46.8	4.3
Queue Delay	0.0	1.0
Total Delay	46.8	5.3
Queue Length 50th (ft)	136	0
Queue Length 95th (ft)	198	m10
Internal Link Dist (ft)	128	100
Turn Bay Length (ft)		
Base Capacity (vph)	689	1071
Starvation Cap Reductn	0	448
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.67	0.59

Intersection Summary

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

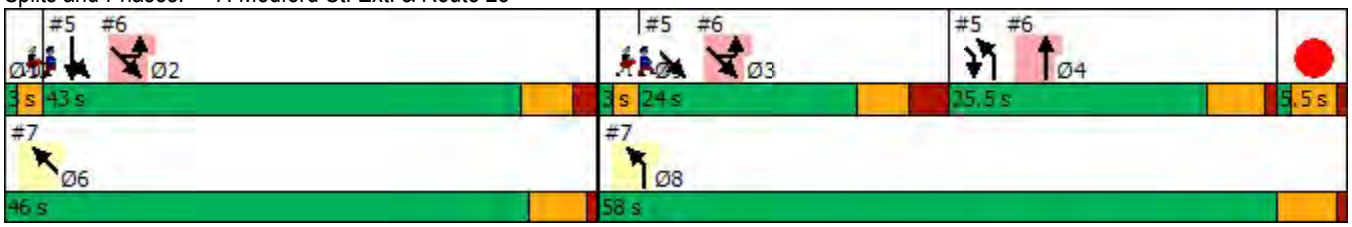
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	415	5	0	0	0	100	250	0	0	0	0
Future Volume (vph)	0	415	5	0	0	0	100	250	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5						6.0				
Lane Util. Factor		0.95						1.00				
Frpb, ped/bikes		1.00						1.00				
Flpb, ped/bikes		1.00						1.00				
Frt		1.00						1.00				
Flt Protected		1.00						0.99				
Satd. Flow (prot)		3209						1567				
Flt Permitted		1.00						0.99				
Satd. Flow (perm)		3209						1567				
Peak-hour factor, PHF	0.91	0.91	0.91	0.92	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	0	456	5	0	0	0	105	263	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	22	0	0	0	0
Lane Group Flow (vph)	0	461	0	0	0	0	0	346	0	0	0	0
Confl. Peds. (#/hr)	20		4	4		20			17	17		
Confl. Bikes (#/hr)			27						1			
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	4%	9%	0%	0%	0%	0%
Turn Type		NA					Split	NA				
Protected Phases		4					2 3	2 3				
Permitted Phases												
Actuated Green, G (s)		17.6						63.1				
Effective Green, g (s)		17.6						63.1				
Actuated g/C Ratio		0.19						0.68				
Clearance Time (s)		5.5										
Vehicle Extension (s)		2.0										
Lane Grp Cap (vph)		605						1060				
v/s Ratio Prot		c0.14						c0.22				
v/s Ratio Perm												
v/c Ratio		0.76						0.33				
Uniform Delay, d1		35.8						6.2				
Progression Factor		1.00						0.67				
Incremental Delay, d2		5.1						0.0				
Delay (s)		40.9						4.2				
Level of Service		D						A				
Approach Delay (s)		40.9			0.0			4.2			0.0	
Approach LOS		D			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	24.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	93.2	Sum of lost time (s)	27.0
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBL	NWT	Ø1	Ø2	Ø3	Ø4	Ø9	Ø10
Lane Configurations								
Traffic Volume (vph)	515	1320						
Future Volume (vph)	515	1320						
Turn Type	Prot	NA						
Protected Phases	8	6	1	2	3	4	9	10
Permitted Phases								
Detector Phase	8	6						
Switch Phase								
Minimum Initial (s)	10.0	10.0	1.0	10.0	6.0	10.0	1.0	1.0
Minimum Split (s)	21.0	28.5	3.0	30.0	24.0	25.5	3.0	5.5
Total Split (s)	58.0	46.0	3.0	43.0	24.0	25.5	3.0	5.5
Total Split (%)	55.8%	44.2%	3%	41%	23%	25%	3%	5%
Yellow Time (s)	4.5	4.5	2.0	4.0	4.0	4.5	2.0	3.5
All-Red Time (s)	1.0	1.0	0.0	2.0	3.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0	0.0						
Total Lost Time (s)	5.5	5.5						
Lead/Lag			Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?								
Recall Mode	None	Max	None	Max	None	None	None	None
Act Effct Green (s)	41.6	40.6						
Actuated g/C Ratio	0.45	0.44						
v/c Ratio	0.40	0.73						
Control Delay	5.3	25.0						
Queue Delay	0.4	0.0						
Total Delay	5.7	25.0						
LOS	A	C						
Approach Delay	5.7	25.0						
Approach LOS	A	C						

Intersection Summary	
Cycle Length: 104	
Actuated Cycle Length: 93.2	
Natural Cycle: 95	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 19.7	Intersection LOS: B
Intersection Capacity Utilization 90.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 7: Medford St. Ext. & Route 28



Lane Group	NBL	NWT
Lane Group Flow (vph)	542	1435
v/c Ratio	0.40	0.73
Control Delay	5.3	25.0
Queue Delay	0.4	0.0
Total Delay	5.7	25.0
Queue Length 50th (ft)	14	249
Queue Length 95th (ft)	46	336
Internal Link Dist (ft)	56	187
Turn Bay Length (ft)		
Base Capacity (vph)	1731	1970
Starvation Cap Reductn	700	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.53	0.73

Intersection Summary

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	515	0	0	0	0	1320
Future Volume (vph)	515	0	0	0	0	1320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5					5.5
Lane Util. Factor	0.97					0.91
Frpb, ped/bikes	1.00					1.00
Flpb, ped/bikes	1.00					1.00
Frt	1.00					1.00
Flt Protected	0.95					1.00
Satd. Flow (prot)	3060					4528
Flt Permitted	0.95					1.00
Satd. Flow (perm)	3060					4528
Peak-hour factor, PHF	0.95	0.95	0.92	0.92	0.92	0.92
Adj. Flow (vph)	542	0	0	0	0	1435
RTOR Reduction (vph)	6	0	0	0	0	0
Lane Group Flow (vph)	536	0	0	0	0	1435
Confl. Peds. (#/hr)	3	7		18	18	
Heavy Vehicles (%)	3%	0%	0%	0%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	8
Turn Type	Prot					NA
Protected Phases	8					6
Permitted Phases						
Actuated Green, G (s)	41.6					40.6
Effective Green, g (s)	41.6					40.6
Actuated g/C Ratio	0.45					0.44
Clearance Time (s)	5.5					5.5
Vehicle Extension (s)	2.0					2.0
Lane Grp Cap (vph)	1365					1972
v/s Ratio Prot	c0.18					c0.32
v/s Ratio Perm						
v/c Ratio	0.39					0.73
Uniform Delay, d1	17.3					21.7
Progression Factor	0.27					1.00
Incremental Delay, d2	0.1					2.4
Delay (s)	4.7					24.1
Level of Service	A					C
Approach Delay (s)	4.7		0.0			24.1
Approach LOS	A		A			C

Intersection Summary			
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	93.2	Sum of lost time (s)	27.0
Intersection Capacity Utilization	90.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL2	EBT	EBR	SBL	SEL	SET	SER	NWL	NWT	Ø4	Ø5
Lane Configurations											
Traffic Volume (vph)	240	3	100	10	25	955	155	85	1085		
Future Volume (vph)	240	3	100	10	25	955	155	85	1085		
Turn Type	custom	NA	custom	D.Pm	Perm	NA	Perm	Prot	NA		
Protected Phases			3!			1		2	1 2	4	5
Permitted Phases	3	3!		3!	1		1				
Detector Phase	3	3	3	3	1	1	1	2	1 2		
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0		6.0	4.0
Minimum Split (s)	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0		21.0	10.0
Total Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0		22.0	12.0
Total Split (%)	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%		22%	12%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0		2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0		0.0	0.0	0.0			
Total Lost Time (s)		6.0	6.0	6.0		6.0	6.0	6.0			
Lead/Lag	Lead	Lead	Lead	Lead	Lead	Lead	Lead	Lag		Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes		Yes	
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	None		None	None
Act Effct Green (s)		18.2	18.2	18.2		43.7	43.7	13.8	63.5		
Actuated g/C Ratio		0.18	0.18	0.18		0.44	0.44	0.14	0.64		
v/c Ratio		1.13	0.28	0.18		0.61	0.23	0.44	0.41		
Control Delay		135.2	1.6	0.8		26.3	2.4	45.8	9.8		
Queue Delay		0.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total Delay		135.2	1.6	0.8		26.3	2.4	45.8	9.8		
LOS		F	A	A		C	A	D	A		
Approach Delay		96.3		0.8		23.0			12.3		
Approach LOS		F		A		C			B		

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 84 (84%), Referenced to phase 1:NWSE, Start of Green	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay: 28.3	Intersection LOS: C
Intersection Capacity Utilization 94.1%	ICU Level of Service F
Analysis Period (min) 15	

! Phase conflict between lane groups.

Splits and Phases: 8: Route 28 & Rufo Rd/Car Wash Driveway & Site Driveway

Lane Group	EBT	EBR	SBL	SET	SER	NWL	NWT
Lane Group Flow (vph)	300	123	80	1065	168	89	1168
v/c Ratio	1.13	0.28	0.18	0.61	0.23	0.44	0.41
Control Delay	135.2	1.6	0.8	26.3	2.4	45.8	9.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	135.2	1.6	0.8	26.3	2.4	45.8	9.8
Queue Length 50th (ft)	~242	0	0	162	0	52	74
Queue Length 95th (ft)	#354	0	0	#428	20	100	231
Internal Link Dist (ft)	290		55	1866			743
Turn Bay Length (ft)					500	500	
Base Capacity (vph)	265	440	453	1758	719	235	2923
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	1.13	0.28	0.18	0.61	0.23	0.38	0.40

Intersection Summary

~ 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.

Movement	EBL2	EBT	EBR	WBT	SBL	SBR	SBR2	SEL	SET	SER	NWL	NWT
Lane Configurations												
Traffic Volume (vph)	240	3	100	0	10	5	25	25	955	155	85	1085
Future Volume (vph)	240	3	100	0	10	5	25	25	955	155	85	1085
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	11	10	12	12	12	12	12	12	10	11
Total Lost time (s)		6.0	6.0		6.0				6.0	6.0	6.0	6.0
Lane Util. Factor		1.00	1.00		1.00				0.91	1.00	1.00	0.91
Frpb, ped/bikes		1.00	1.00		0.96				1.00	0.94	1.00	1.00
Flpb, ped/bikes		0.95	1.00		1.00				1.00	1.00	1.00	1.00
Frt		1.00	0.85		0.90				1.00	0.85	1.00	1.00
Flt Protected		0.95	1.00		0.99				1.00	1.00	0.95	1.00
Satd. Flow (prot)		1464	1391		1460				4617	1352	1472	4363
Flt Permitted		0.95	1.00		0.99				0.87	1.00	0.95	1.00
Satd. Flow (perm)		1460	1391		1460				4021	1352	1472	4363
Peak-hour factor, PHF	0.81	0.81	0.81	0.92	0.50	0.50	0.50	0.92	0.92	0.92	0.95	0.95
Adj. Flow (vph)	296	4	123	0	20	10	50	27	1038	168	89	1142
RTOR Reduction (vph)	0	0	101	0	65	0	0	0	0	111	0	76
Lane Group Flow (vph)	0	300	22	0	15	0	0	0	1065	57	89	1092
Confl. Peds. (#/hr)	7		2		2	12	7	12		12	12	
Confl. Bikes (#/hr)										1		
Heavy Vehicles (%)	2%	2%	1%	2%	0%	0%	0%	0%	1%	1%	3%	3%
Turn Type	custom	NA	custom		D.Pm			Perm	NA	Perm	Prot	NA
Protected Phases			3!	5					1		2	1 2
Permitted Phases	3	3!			3!			1		1		
Actuated Green, G (s)		18.2	18.2		18.2				34.1	34.1	13.8	53.9
Effective Green, g (s)		18.2	18.2		18.2				34.1	34.1	13.8	53.9
Actuated g/C Ratio		0.18	0.18		0.18				0.34	0.34	0.14	0.54
Clearance Time (s)		6.0	6.0		6.0				6.0	6.0	6.0	
Vehicle Extension (s)		2.0	2.0		2.0				3.0	3.0	3.0	
Lane Grp Cap (vph)		265	253		265				1371	461	203	2351
v/s Ratio Prot			0.02								0.06	c0.25
v/s Ratio Perm		c0.21			0.01				c0.26	0.04		
v/c Ratio		1.13	0.09		0.05				0.78	0.12	0.44	0.46
Uniform Delay, d1		40.9	34.0		33.8				29.5	22.7	39.5	14.2
Progression Factor		1.00	1.00		1.00				1.00	1.00	1.00	1.00
Incremental Delay, d2		95.6	0.1		0.0				4.4	0.6	1.5	0.1
Delay (s)		136.5	34.1		33.8				33.9	23.2	41.1	14.3
Level of Service		F	C		C				C	C	D	B
Approach Delay (s)		106.7		0.0	33.8				32.5			16.2
Approach LOS		F		A	C				C			B

Intersection Summary			
HCM 2000 Control Delay	36.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	30.0
Intersection Capacity Utilization	94.1%	ICU Level of Service	F
Analysis Period (min)	15		

! Phase conflict between lane groups.
c Critical Lane Group

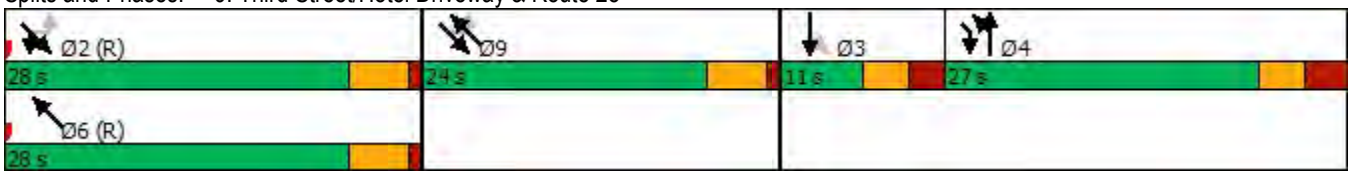
Movement	NWR2
Lane Configurations	
Traffic Volume (vph)	25
Future Volume (vph)	25
Ideal Flow (vphpl)	1900
Lane Width	11
Total Lost time (s)	
Lane Util. Factor	
Frpb, ped/bikes	
Flpb, ped/bikes	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.95
Adj. Flow (vph)	26
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Confl. Peds. (#/hr)	12
Confl. Bikes (#/hr)	4
Heavy Vehicles (%)	0%
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	

Intersection Summary

Lane Group	NBL	NBT	SBL	SBT	SEL	SET	SER	NWT	Ø2	Ø6	Ø9
Lane Configurations											
Traffic Volume (vph)	545	0	10	10	10	790	320	690			
Future Volume (vph)	545	0	10	10	10	790	320	690			
Turn Type	Split	NA	Perm	NA	Perm	NA	custom	NA			
Protected Phases	4	4		3		2 9	2 4	6 9	2	6	9
Permitted Phases			3		2 9						
Detector Phase	4	4	3	3	2 9	2 9	2 4	6 9			
Switch Phase											
Minimum Initial (s)	6.0	6.0	5.0	5.0					10.0	17.0	1.0
Minimum Split (s)	24.0	24.0	11.0	11.0					23.0	23.0	23.0
Total Split (s)	27.0	27.0	11.0	11.0					28.0	28.0	24.0
Total Split (%)	30.0%	30.0%	12.2%	12.2%					31%	31%	27%
Yellow Time (s)	3.0	3.0	3.0	3.0					4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	2.5	2.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0							
Total Lost Time (s)	6.0	6.0		5.5							
Lead/Lag	Lag	Lag	Lead	Lead							
Lead-Lag Optimize?											
Recall Mode	Ped	Ped	None	None					C-Min	C-Min	Min
Act Effct Green (s)	21.4	21.4		6.8		47.6	55.9	47.6			
Actuated g/C Ratio	0.24	0.24		0.08		0.53	0.62	0.53			
v/c Ratio	0.90	0.66		0.59		0.54	0.32	0.45			
Control Delay	64.5	22.7		69.3		16.5	2.1	15.0			
Queue Delay	0.0	0.0		0.0		0.0	0.0	0.0			
Total Delay	64.5	22.7		69.3		16.5	2.1	15.0			
LOS	E	C		E		B	A	B			
Approach Delay		43.8		69.3		12.4		15.0			
Approach LOS		D		E		B		B			

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 17 (19%), Referenced to phase 2:SETL and 6:NWT, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 21.5	Intersection LOS: C
Intersection Capacity Utilization 65.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Third Street/Hotel Driveway & Route 28



Lane Group	NBL	NBT	SBT	SET	SER	NWT
Lane Group Flow (vph)	301	293	40	824	330	721
v/c Ratio	0.90	0.66	0.59	0.54	0.32	0.45
Control Delay	64.5	22.7	69.3	16.5	2.1	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	64.5	22.7	69.3	16.5	2.1	15.0
Queue Length 50th (ft)	171	71	17	179	0	146
Queue Length 95th (ft)	#338	171	#43	211	36	172
Internal Link Dist (ft)		395	52	743		192
Turn Bay Length (ft)	110					
Base Capacity (vph)	344	450	68	1682	1014	1774
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	0.88	0.65	0.59	0.49	0.33	0.41

Intersection Summary

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

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	545	0	25	10	10	5	10	790	320	0	690	10
Future Volume (vph)	545	0	25	10	10	5	10	790	320	0	690	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	12	12	12	12	11	12	12	11	11
Total Lost time (s)	6.0	6.0			5.5			5.0	5.0		5.0	
Lane Util. Factor	0.95	0.95			1.00			0.95	1.00		0.95	
Frpb, ped/bikes	1.00	0.99			1.00			1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00			0.98			1.00	1.00		1.00	
Frt	1.00	0.99			0.97			1.00	0.85		1.00	
Flt Protected	0.95	0.96			0.98			1.00	1.00		1.00	
Satd. Flow (prot)	1412	1377			1599			3047	1439		3039	
Flt Permitted	0.95	0.96			0.50			0.95	1.00		1.00	
Satd. Flow (perm)	1412	1377			816			2883	1439		3039	
Peak-hour factor, PHF	0.96	0.96	0.96	0.64	0.64	0.64	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	568	0	26	16	16	8	10	814	330	0	711	10
RTOR Reduction (vph)	0	116	0	0	8	0	0	0	151	0	1	0
Lane Group Flow (vph)	301	177	0	0	32	0	0	824	179	0	720	0
Confl. Peds. (#/hr)			58	58			32		92	92		32
Confl. Bikes (#/hr)									6			12
Heavy Vehicles (%)	2%	2%	13%	0%	0%	0%	0%	3%	1%	6%	3%	0%
Turn Type	Split	NA		Perm	NA		Perm	NA	custom		NA	
Protected Phases	4	4			3			2 9	2 4		6 9	
Permitted Phases				3			2 9					
Actuated Green, G (s)	21.4	21.4			5.6			46.5	54.8		46.5	
Effective Green, g (s)	21.4	21.4			5.6			46.5	48.8		46.5	
Actuated g/C Ratio	0.24	0.24			0.06			0.52	0.54		0.52	
Clearance Time (s)	6.0	6.0			5.5							
Vehicle Extension (s)	2.0	2.0			2.0							
Lane Grp Cap (vph)	335	327			50			1489	780		1570	
v/s Ratio Prot	c0.21	0.13							0.12		0.24	
v/s Ratio Perm					c0.04			c0.29				
v/c Ratio	0.90	0.54			0.65			0.55	0.23		0.46	
Uniform Delay, d1	33.2	30.0			41.2			14.7	10.8		13.8	
Progression Factor	1.00	1.00			1.00			1.00	1.00		1.00	
Incremental Delay, d2	24.7	1.0			19.7			0.3	0.1		0.1	
Delay (s)	58.0	31.0			61.0			15.0	10.8		13.9	
Level of Service	E	C			E			B	B		B	
Approach Delay (s)		44.7			61.0			13.8			13.9	
Approach LOS		D			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	21.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	21.5
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	0	0	1295	85	0	25
Future Volume (Veh/h)	0	0	1295	85	0	25
Sign Control		Stop	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.93	0.93	0.81	0.81
Hourly flow rate (vph)	0	0	1392	91	0	31
Pedestrians					4	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type			None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	2788	0	0		2834	2834
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2788	0	0		2834	2834
tC, single (s)	6.5	6.2	4.1		7.2	6.7
tC, 2 stage (s)						
tF (s)	4.0	3.3	2.2		3.6	4.1
p0 queue free %	100	100	14		100	0
cM capacity (veh/h)	3	1085	1623		3	2

Direction, Lane #	NW 1	NW 2	NW 3	SW 1
Volume Total	557	557	369	31
Volume Left	557	557	278	0
Volume Right	0	0	91	0
cSH	1623	1623	1623	2
Volume to Capacity	0.86	0.86	0.86	13.91
Queue Length 95th (ft)	315	315	315	Err
Control Delay (s)	18.6	18.6	18.1	Err
Lane LOS	C	C	C	F
Approach Delay (s)	18.5			Err
Approach LOS				F

Intersection Summary			
Average Delay	222.8		
Intersection Capacity Utilization	36.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SBL	SBR	SBR2	SEL	SET	SER	NWL	NWT	NWR	NEL2	NEL	NER
Lane Configurations												
Traffic Volume (veh/h)	15	0	5	2	175	0	0	220	5	295	5	140
Future Volume (Veh/h)	15	0	5	2	175	0	0	220	5	295	5	140
Sign Control	Stop				Free			Free			Stop	
Grade	0%				0%			0%			0%	
Peak Hour Factor	0.63	0.63	0.63	0.84	0.84	0.84	0.91	0.91	0.91	0.92	0.92	0.92
Hourly flow rate (vph)	24	0	8	2	208	0	0	242	5	321	5	152
Pedestrians	70				1			15			68	
Lane Width (ft)	12.0				12.0			12.0			12.0	
Walking Speed (ft/s)	3.5				3.5			3.5			3.5	
Percent Blockage	7				0			1			6	
Right turn flare (veh)												
Median type					None			None				
Median storage veh)												
Upstream signal (ft)								420				
pX, platoon unblocked	0.99	0.99	0.99	0.99						0.99	0.99	
vC, conflicting volume	696	594	316	317			276			534	597	291
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	686	584	301	303			276			522	586	291
tC, single (s)	7.1	6.5	6.2	4.1			4.1			7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	2.2			2.2			3.5	4.0	3.3
p0 queue free %	90	100	99	100			100			16	99	78
cM capacity (veh/h)	230	367	685	1171			1215			384	366	685

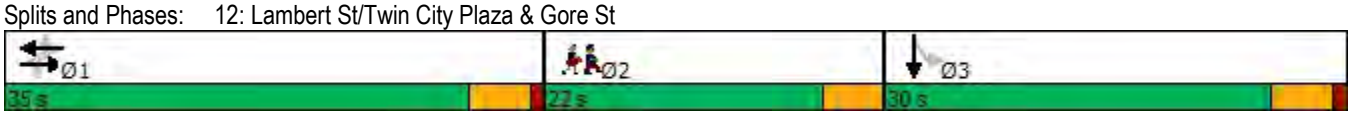
Direction, Lane #	SB 1	SE 1	NW 1	NE 1
Volume Total	32	210	247	478
Volume Left	24	2	0	321
Volume Right	8	0	5	152
cSH	276	1171	1700	446
Volume to Capacity	0.12	0.00	0.15	1.07
Queue Length 95th (ft)	10	0	0	388
Control Delay (s)	19.8	0.1	0.0	93.5
Lane LOS	C	A		F
Approach Delay (s)	19.8	0.1	0.0	93.5
Approach LOS	C			F

Intersection Summary			
Average Delay	46.9		
Intersection Capacity Utilization	61.2%	ICU Level of Service	B
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	SBT	Ø2
Lane Configurations						
Traffic Volume (vph)	55	70	10	105	115	
Future Volume (vph)	55	70	10	105	115	
Turn Type	Perm	NA	Perm	NA	NA	
Protected Phases		1		1	3	2
Permitted Phases	1		1			
Detector Phase	1	1	1	1	3	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0
Minimum Split (s)	12.0	12.0	12.0	12.0	12.0	22.0
Total Split (s)	35.0	35.0	35.0	35.0	30.0	22.0
Total Split (%)	40.2%	40.2%	40.2%	40.2%	34.5%	25%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)		0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	Max	Max	None	Ped
Act Effct Green (s)		30.1		30.1	14.4	
Actuated g/C Ratio		0.39		0.39	0.19	
v/c Ratio		0.40		0.27	0.61	
Control Delay		16.4		16.5	32.7	
Queue Delay		0.0		0.0	0.0	
Total Delay		16.4		16.5	32.7	
LOS		B		B	C	
Approach Delay		16.4		16.5	32.7	
Approach LOS		B		B	C	

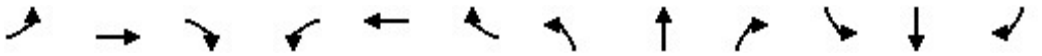
Intersection Summary	
Cycle Length: 87	
Actuated Cycle Length: 76.6	
Natural Cycle: 55	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 21.9	Intersection LOS: C
Intersection Capacity Utilization 53.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 12: Lambert St/Twin City Plaza & Gore St



Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	239	188	212
v/c Ratio	0.40	0.27	0.61
Control Delay	16.4	16.5	32.7
Queue Delay	0.0	0.0	0.0
Total Delay	16.4	16.5	32.7
Queue Length 50th (ft)	62	53	82
Queue Length 95th (ft)	135	91	141
Internal Link Dist (ft)	73	445	291
Turn Bay Length (ft)			
Base Capacity (vph)	604	697	584
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.40	0.27	0.36

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	70	95	10	105	30	0	0	0	15	115	55
Future Volume (vph)	55	70	95	10	105	30	0	0	0	15	115	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		0.94			0.98						0.95	
Flpb, ped/bikes		0.99			1.00						0.99	
Frt		0.94			0.97						0.96	
Flt Protected		0.99			1.00						1.00	
Satd. Flow (prot)		1648			1789						1703	
Flt Permitted		0.88			0.98						1.00	
Satd. Flow (perm)		1475			1752						1703	
Peak-hour factor, PHF	0.92	0.92	0.92	0.77	0.77	0.77	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	60	76	103	13	136	39	0	0	0	17	132	63
RTOR Reduction (vph)	0	29	0	0	10	0	0	0	0	0	20	0
Lane Group Flow (vph)	0	210	0	0	178	0	0	0	0	0	192	0
Confl. Peds. (#/hr)	23		83	83		23	57		30	30		57
Confl. Bikes (#/hr)			13			26						2
Heavy Vehicles (%)	2%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	2%
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		1			1						3	
Permitted Phases	1			1						3		
Actuated Green, G (s)		30.1			30.1						14.4	
Effective Green, g (s)		30.1			30.1						14.4	
Actuated g/C Ratio		0.39			0.39						0.19	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		4.0			4.0						4.0	
Lane Grp Cap (vph)		580			689						320	
v/s Ratio Prot												
v/s Ratio Perm		c0.14			0.10						0.11	
v/c Ratio		0.36			0.26						0.60	
Uniform Delay, d1		16.4			15.7						28.4	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		1.7			0.9						3.5	
Delay (s)		18.2			16.6						31.9	
Level of Service		B			B						C	
Approach Delay (s)		18.2			16.6			0.0			31.9	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	76.5	Sum of lost time (s)	14.0
Intersection Capacity Utilization	53.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

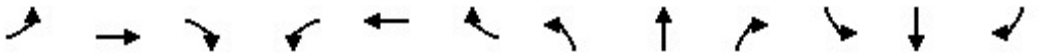
Lane Group	WBT	WBR	NBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations									
Traffic Volume (vph)	760	60	545						
Future Volume (vph)	760	60	545						
Turn Type	NA	Perm	NA						
Protected Phases	5 6		1 2 4 8	1	2	4	5	6	8
Permitted Phases		5 6							
Detector Phase	5 6	5 6	1 2 4 8						
Switch Phase									
Minimum Initial (s)				5.0	12.0	5.5	6.0	12.0	5.0
Minimum Split (s)				10.0	22.0	10.0	18.0	30.0	10.0
Total Split (s)				10.0	22.0	10.0	18.0	30.0	10.0
Total Split (%)				10%	22%	10%	18%	30%	10%
Yellow Time (s)				4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)				1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag				Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode				Max	Max	Max	Max	Max	Max
Act Effct Green (s)	44.0	44.0	47.0						
Actuated g/C Ratio	0.44	0.44	0.47						
v/c Ratio	0.63	0.12	0.53						
Control Delay	24.2	17.4	10.6						
Queue Delay	4.3	0.0	8.2						
Total Delay	28.5	17.4	18.8						
LOS	C	B	B						
Approach Delay	27.7		18.8						
Approach LOS	C		B						

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 130	
Control Type: Pretimed	
Maximum v/c Ratio: 1.67	
Intersection Signal Delay: 23.6	Intersection LOS: C
Intersection Capacity Utilization 52.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Route 28 Frontage Rd. & Washington St.

Lane Group	WBT	WBR	NBT
Lane Group Flow (vph)	835	66	755
v/c Ratio	0.63	0.12	0.53
Control Delay	24.2	17.4	10.6
Queue Delay	4.3	0.0	8.2
Total Delay	28.5	17.4	18.8
Queue Length 50th (ft)	210	24	111
Queue Length 95th (ft)	275	51	142
Internal Link Dist (ft)	78		100
Turn Bay Length (ft)			
Base Capacity (vph)	1335	561	1431
Starvation Cap Reductn	0	0	632
Spillback Cap Reductn	411	0	5
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.90	0.12	0.94

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	760	60	150	545	0	0	0	0
Future Volume (vph)	0	0	0	0	760	60	150	545	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		5.0				
Lane Util. Factor					0.95	1.00		0.95				
Frt					1.00	0.85		1.00				
Flt Protected					1.00	1.00		0.99				
Satd. Flow (prot)					3036	1275		2960				
Flt Permitted					1.00	1.00		0.99				
Satd. Flow (perm)					3036	1275		2960				
Peak-hour factor, PHF	0.92	0.92	0.92	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	835	66	163	592	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	45	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	835	66	0	710	0	0	0	0
Heavy Vehicles (%)	2%	2%	2%	2%	7%	14%	18%	6%	2%	2%	2%	2%
Turn Type					NA	Perm	Perm	NA				
Protected Phases					5 6			1 2 4 8				
Permitted Phases						5 6	1 2 4 8					
Actuated Green, G (s)					42.0	42.0		48.0				
Effective Green, g (s)					42.0	42.0		41.0				
Actuated g/C Ratio					0.42	0.42		0.41				
Clearance Time (s)												
Lane Grp Cap (vph)					1275	535		1213				
v/s Ratio Prot					c0.27							
v/s Ratio Perm						0.05		0.24				
v/c Ratio					0.65	0.12		0.59				
Uniform Delay, d1					23.2	17.7		22.9				
Progression Factor					1.00	1.00		0.55				
Incremental Delay, d2					2.6	0.5		2.0				
Delay (s)					25.8	18.2		14.6				
Level of Service					C	B		B				
Approach Delay (s)		0.0			25.3			14.6			0.0	
Approach LOS		A			C			B			A	

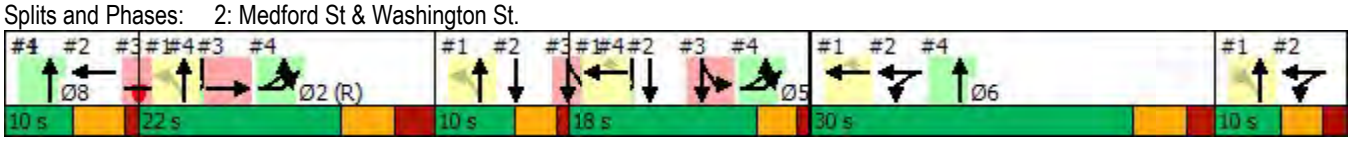
Intersection Summary			
HCM 2000 Control Delay	20.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	52.4%	ICU Level of Service	A
Analysis Period (min)	15		

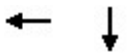
c Critical Lane Group

Lane Group	WBT	SBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations								
Traffic Volume (vph)	510	745						
Future Volume (vph)	510	745						
Turn Type	NA	NA						
Protected Phases	1 6 8	4 5	1	2	4	5	6	8
Permitted Phases								
Detector Phase	1 6 8	4 5						
Switch Phase								
Minimum Initial (s)			5.0	12.0	5.5	6.0	12.0	5.0
Minimum Split (s)			10.0	22.0	10.0	18.0	30.0	10.0
Total Split (s)			10.0	22.0	10.0	18.0	30.0	10.0
Total Split (%)			10%	22%	10%	18%	30%	10%
Yellow Time (s)			4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)			1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)								
Total Lost Time (s)								
Lead/Lag			Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode			Max	Max	Max	Max	Max	Max
Act Effct Green (s)	40.0	24.0						
Actuated g/C Ratio	0.40	0.24						
v/c Ratio	0.84	1.67						
Control Delay	17.5	333.6						
Queue Delay	49.1	0.8						
Total Delay	66.6	334.5						
LOS	E	F						
Approach Delay	66.6	334.5						
Approach LOS	E	F						

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 130	
Control Type: Pretimed	
Maximum v/c Ratio: 1.67	
Intersection Signal Delay: 219.6	Intersection LOS: F
Intersection Capacity Utilization 79.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 2: Medford St & Washington St.



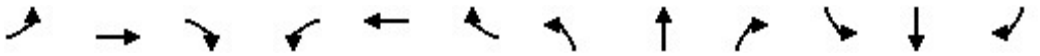


Lane Group	WBT	SBT
Lane Group Flow (vph)	1022	1361
v/c Ratio	0.84	1.67
Control Delay	17.5	333.6
Queue Delay	49.1	0.8
Total Delay	66.6	334.5
Queue Length 50th (ft)	271	~626
Queue Length 95th (ft)	352	#764
Internal Link Dist (ft)	99	61
Turn Bay Length (ft)		
Base Capacity (vph)	1216	813
Starvation Cap Reductn	145	0
Spillback Cap Reductn	398	104
Storage Cap Reductn	0	0
Reduced v/c Ratio	1.25	1.92

Intersection Summary

~ 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.



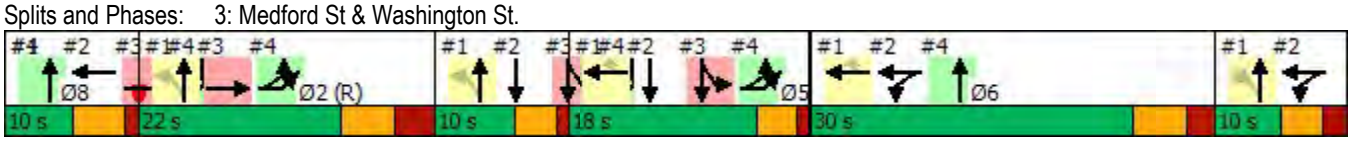
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	400	510	0	0	0	0	0	745	575
Future Volume (vph)	0	0	0	400	510	0	0	0	0	0	745	575
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.0						4.0	
Lane Util. Factor					0.95						0.95	
Frpb, ped/bikes					1.00						0.98	
Flpb, ped/bikes					1.00						1.00	
Frt					1.00						0.93	
Flt Protected					0.98						1.00	
Satd. Flow (prot)					2911						2807	
Flt Permitted					0.98						1.00	
Satd. Flow (perm)					2911						2807	
Peak-hour factor, PHF	0.92	0.92	0.92	0.89	0.89	0.89	0.92	0.92	0.92	0.97	0.97	0.97
Adj. Flow (vph)	0	0	0	449	573	0	0	0	0	0	768	593
RTOR Reduction (vph)	0	0	0	0	156	0	0	0	0	0	140	0
Lane Group Flow (vph)	0	0	0	0	866	0	0	0	0	0	1221	0
Confl. Peds. (#/hr)	90					90	29		3	29		3
Confl. Bikes (#/hr)						44						22
Heavy Vehicles (%)	2%	2%	2%	7%	9%	2%	2%	2%	2%	2%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	5	5	0	0	0	0	0	0
Turn Type				Prot	NA						NA	
Protected Phases				6 8	1 6 8						4 5	
Permitted Phases												
Actuated Green, G (s)					40.0						24.0	
Effective Green, g (s)					34.0						24.0	
Actuated g/C Ratio					0.34						0.24	
Clearance Time (s)												
Lane Grp Cap (vph)					1135						673	
v/s Ratio Prot					c0.22						c0.44	
v/s Ratio Perm					0.08							
v/c Ratio					0.76						1.81	
Uniform Delay, d1					29.4						38.0	
Progression Factor					0.57						1.00	
Incremental Delay, d2					4.0						372.4	
Delay (s)					20.7						410.4	
Level of Service					C						F	
Approach Delay (s)		0.0			20.7			0.0			410.4	
Approach LOS		A			C			A			F	

Intersection Summary			
HCM 2000 Control Delay	243.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	79.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	SBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations								
Traffic Volume (vph)	625	1090						
Future Volume (vph)	625	1090						
Turn Type	NA	NA						
Protected Phases	1 2	4 5	1	2	4	5	6	8
Permitted Phases								
Detector Phase	1 2	4 5						
Switch Phase								
Minimum Initial (s)			5.0	12.0	5.5	6.0	12.0	5.0
Minimum Split (s)			10.0	22.0	10.0	18.0	30.0	10.0
Total Split (s)			10.0	22.0	10.0	18.0	30.0	10.0
Total Split (%)			10%	22%	10%	18%	30%	10%
Yellow Time (s)			4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)			1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)								
Total Lost Time (s)								
Lead/Lag			Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode			Max	Max	Max	Max	Max	Max
Act Effct Green (s)	27.0	24.0						
Actuated g/C Ratio	0.27	0.24						
v/c Ratio	0.63	1.33						
Control Delay	34.4	174.9						
Queue Delay	0.0	2.2						
Total Delay	34.4	177.1						
LOS	C	F						
Approach Delay	34.4	177.1						
Approach LOS	C	F						

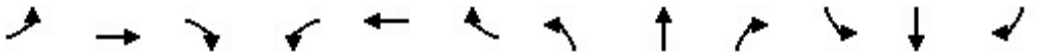
Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 130	
Control Type: Pretimed	
Maximum v/c Ratio: 1.67	
Intersection Signal Delay: 124.1	Intersection LOS: F
Intersection Capacity Utilization 57.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Medford St & Washington St.



Lane Group	EBT	SBT
Lane Group Flow (vph)	711	1205
v/c Ratio	0.63	1.33
Control Delay	34.4	174.9
Queue Delay	0.0	2.2
Total Delay	34.4	177.1
Queue Length 50th (ft)	143	~451
Queue Length 95th (ft)	186	m#155
Internal Link Dist (ft)	130	63
Turn Bay Length (ft)		
Base Capacity (vph)	1134	904
Starvation Cap Reductn	0	274
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.63	1.91

Intersection Summary
~ 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.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	625	50	0	0	0	0	0	0	55	1090	0
Future Volume (vph)	0	625	50	0	0	0	0	0	0	55	1090	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0									4.0	
Lane Util. Factor		0.91									0.95	
Frpb, ped/bikes		0.99									1.00	
Flpb, ped/bikes		1.00									1.00	
Frt		0.99									1.00	
Flt Protected		1.00									1.00	
Satd. Flow (prot)		4165									3076	
Flt Permitted		1.00									1.00	
Satd. Flow (perm)		4165									3076	
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	0	658	53	0	0	0	0	0	0	58	1147	0
RTOR Reduction (vph)	0	10	0	0	0	0	0	0	0	0	166	0
Lane Group Flow (vph)	0	701	0	0	0	0	0	0	0	0	1039	0
Confl. Peds. (#/hr)			12	12			39					39
Confl. Bikes (#/hr)			33									48
Heavy Vehicles (%)	2%	9%	2%	2%	2%	2%	2%	2%	2%	13%	5%	2%
Bus Blockages (#/hr)	0	10	10	0	0	0	0	0	0	0	0	0
Turn Type		NA								Split	NA	
Protected Phases		1 2								4 5	4 5	
Permitted Phases												
Actuated Green, G (s)		25.0									24.0	
Effective Green, g (s)		25.0									24.0	
Actuated g/C Ratio		0.25									0.24	
Clearance Time (s)												
Lane Grp Cap (vph)		1041									738	
v/s Ratio Prot		c0.17									c0.34	
v/s Ratio Perm												
v/c Ratio		0.67									1.41	
Uniform Delay, d1		33.8									38.0	
Progression Factor		1.00									0.81	
Incremental Delay, d2		3.5									184.5	
Delay (s)		37.3									215.1	
Level of Service		D									F	
Approach Delay (s)		37.3			0.0			0.0			215.1	
Approach LOS		D			A			A			F	

Intersection Summary			
HCM 2000 Control Delay	149.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	57.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL2	EBL	NBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations									
Traffic Volume (vph)	415	260	280						
Future Volume (vph)	415	260	280						
Turn Type	Prot	Prot	NA						
Protected Phases	1 2 4 5	1 2 4 5	6 8	1	2	4	5	6	8
Permitted Phases									
Detector Phase	1 2 4 5	1 2 4 5	6 8						
Switch Phase									
Minimum Initial (s)				5.0	12.0	5.5	6.0	12.0	5.0
Minimum Split (s)				10.0	22.0	10.0	18.0	30.0	10.0
Total Split (s)				10.0	22.0	10.0	18.0	30.0	10.0
Total Split (%)				10%	22%	10%	18%	30%	10%
Yellow Time (s)				4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)				1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag				Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode				Max	Max	Max	Max	Max	Max
Act Effct Green (s)	55.0	55.0	34.0						
Actuated g/C Ratio	0.55	0.55	0.34						
v/c Ratio	0.28	0.32	0.48						
Control Delay	0.8	0.5	28.2						
Queue Delay	1.3	0.7	1.8						
Total Delay	2.2	1.2	30.0						
LOS	A	A	C						
Approach Delay		1.5	30.0						
Approach LOS		A	C						

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 130	
Control Type: Pretimed	
Maximum v/c Ratio: 1.67	
Intersection Signal Delay: 12.3	Intersection LOS: B
Intersection Capacity Utilization 43.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Route 28 Frontage Rd. & Washington St.

Lane Group	EBL2	EBL	NBT
Lane Group Flow (vph)	244	490	449
v/c Ratio	0.28	0.32	0.48
Control Delay	0.8	0.5	28.2
Queue Delay	1.3	0.7	1.8
Total Delay	2.2	1.2	30.0
Queue Length 50th (ft)	0	0	117
Queue Length 95th (ft)	m4	m0	161
Internal Link Dist (ft)		98	768
Turn Bay Length (ft)			
Base Capacity (vph)	869	1550	929
Starvation Cap Reductn	434	694	0
Spillback Cap Reductn	31	13	314
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.56	0.57	0.73

Intersection Summary

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

Movement	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations											
Traffic Volume (vph)	415	260	0	0	280	115	0	0	0	0	0
Future Volume (vph)	415	260	0	0	280	115	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			6.0						
Lane Util. Factor	0.91	0.91			0.95						
Frpb, ped/bikes	1.00	1.00			1.00						
Flpb, ped/bikes	1.00	1.00			1.00						
Frt	1.00	1.00			0.96						
Flt Protected	0.95	0.95			1.00						
Satd. Flow (prot)	1382	2649			2735						
Flt Permitted	0.95	0.95			1.00						
Satd. Flow (perm)	1382	2649			2735						
Peak-hour factor, PHF	0.92	0.92	0.92	0.88	0.88	0.88	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	451	283	0	0	318	131	0	0	0	0	0
RTOR Reduction (vph)	134	114	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	110	376	0	0	449	0	0	0	0	0	0
Confl. Peds. (#/hr)		5	16	3					3	16	2
Confl. Bikes (#/hr)			28								
Heavy Vehicles (%)	7%	15%	2%	2%	13%	15%	2%	2%	2%	2%	2%
Turn Type	Prot	Prot			NA						
Protected Phases	1 2 4 5	1 2 4 5			6 8						
Permitted Phases											
Actuated Green, G (s)	56.0	56.0			35.0						
Effective Green, g (s)	45.0	45.0			35.0						
Actuated g/C Ratio	0.45	0.45			0.35						
Clearance Time (s)											
Lane Grp Cap (vph)	621	1192			957						
v/s Ratio Prot	0.08	c0.14			c0.16						
v/s Ratio Perm											
v/c Ratio	0.18	0.32			0.47						
Uniform Delay, d1	16.4	17.6			25.3						
Progression Factor	0.16	0.01			1.00						
Incremental Delay, d2	0.5	0.5			1.7						
Delay (s)	3.1	0.7			26.9						
Level of Service	A	A			C						
Approach Delay (s)		1.5			26.9			0.0		0.0	
Approach LOS		A			C			A		A	

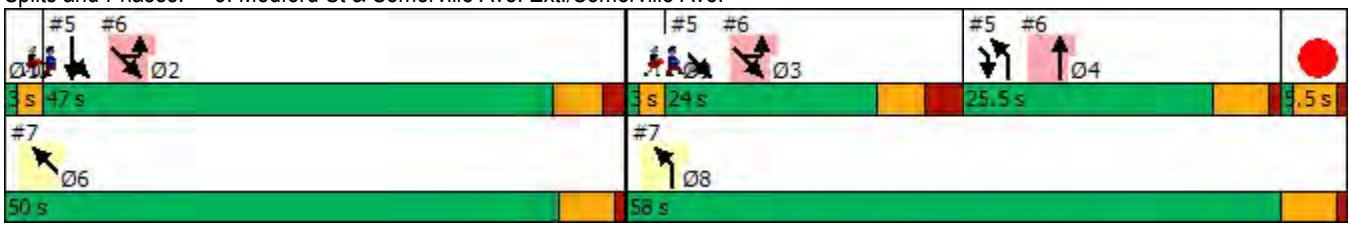
Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	43.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	NBL	SBL	SBT	SET	SER	Ø1	Ø6	Ø8	Ø9	Ø10
Lane Configurations										
Traffic Volume (vph)	55	380	705	310	75					
Future Volume (vph)	55	380	705	310	75					
Turn Type	Prot	Split	NA	NA	pm+ov					
Protected Phases	4	2	2	3	4	1	6	8	9	10
Permitted Phases					3					
Detector Phase	4	2	2	3	4					
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	1.0	10.0	10.0	1.0	1.0
Minimum Split (s)	25.5	30.0	30.0	24.0	25.5	3.0	28.5	21.0	3.0	5.5
Total Split (s)	25.5	47.0	47.0	24.0	25.5	3.0	50.0	58.0	3.0	5.5
Total Split (%)	23.6%	43.5%	43.5%	22.2%	23.6%	3%	46%	54%	3%	5%
Yellow Time (s)	4.5	4.0	4.0	4.0	4.5	2.0	4.5	4.5	2.0	3.5
All-Red Time (s)	1.0	2.0	2.0	3.0	1.0	0.0	1.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0					
Total Lost Time (s)	5.5	6.0	6.0	7.0	5.5					
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead			Lead	Lag
Lead-Lag Optimize?										
Recall Mode	None	Max	Max	None	None	None	Max	None	None	None
Act Effct Green (s)	16.1	43.5	43.5	17.0	34.6					
Actuated g/C Ratio	0.16	0.44	0.44	0.17	0.35					
v/c Ratio	0.39	0.64	0.65	1.32	0.19					
Control Delay	41.2	27.8	24.7	201.6	19.7					
Queue Delay	0.0	0.1	0.0	1.5	0.0					
Total Delay	41.2	27.9	24.7	203.2	19.7					
LOS	D	C	C	F	B					
Approach Delay			25.8	167.5						
Approach LOS			C	F						

Intersection Summary	
Cycle Length: 108	
Actuated Cycle Length: 98.1	
Natural Cycle: 95	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.32	
Intersection Signal Delay: 60.8	Intersection LOS: E
Intersection Capacity Utilization 60.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: Medford St & Somerville Ave. Ext./Somerville Ave.



Lane Group	NBL	SBL	SBT	SET	SER
Lane Group Flow (vph)	100	413	864	352	85
v/c Ratio	0.39	0.64	0.65	1.32	0.19
Control Delay	41.2	27.8	24.7	201.6	19.7
Queue Delay	0.0	0.1	0.0	1.5	0.0
Total Delay	41.2	27.9	24.7	203.2	19.7
Queue Length 50th (ft)	57	198	215	~292	33
Queue Length 95th (ft)	62	340	317	#470	64
Internal Link Dist (ft)			894	143	
Turn Bay Length (ft)		50			100
Base Capacity (vph)	322	649	1323	267	514
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	9	0	29	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	0.65	0.65	1.48	0.17

Intersection Summary

~ 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.

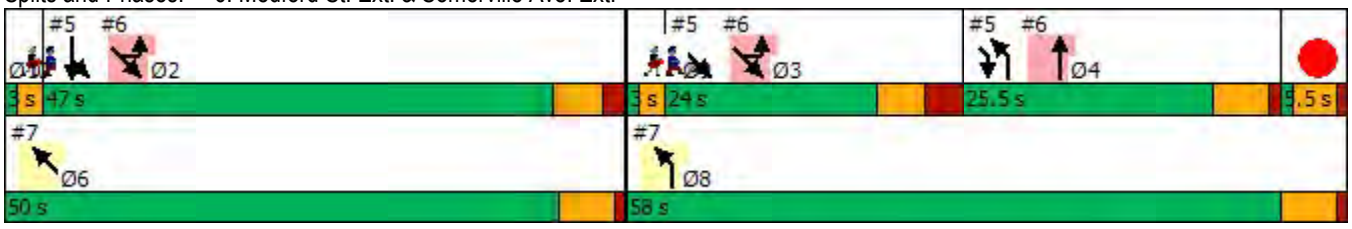
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	55	0	0	380	705	90	0	310	75	0	0	0
Future Volume (vph)	55	0	0	380	705	90	0	310	75	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5			6.0	6.0			7.0	5.5			
Lane Util. Factor	1.00			1.00	0.95			1.00	1.00			
Frpb, ped/bikes	1.00			1.00	0.98			1.00	0.98			
Flpb, ped/bikes	1.00			1.00	1.00			1.00	1.00			
Frt	1.00			1.00	0.98			1.00	0.85			
Flt Protected	0.95			0.95	1.00			1.00	1.00			
Satd. Flow (prot)	1577			1464	2969			1541	1307			
Flt Permitted	0.95			0.95	1.00			1.00	1.00			
Satd. Flow (perm)	1577			1464	2969			1541	1307			
Peak-hour factor, PHF	0.55	0.55	0.55	0.92	0.92	0.92	0.88	0.88	0.88	0.92	0.92	0.92
Adj. Flow (vph)	100	0	0	413	766	98	0	352	85	0	0	0
RTOR Reduction (vph)	0	0	0	0	8	0	0	0	0	0	0	0
Lane Group Flow (vph)	100	0	0	413	856	0	0	352	85	0	0	0
Confl. Peds. (#/hr)	35					35	5		17	17		5
Confl. Bikes (#/hr)						47			2			
Heavy Vehicles (%)	3%	0%	0%	11%	5%	13%	0%	11%	9%	2%	2%	2%
Turn Type	Prot			Split	NA			NA	pm+ov			
Protected Phases	4			2	2			3	4			
Permitted Phases									3			
Actuated Green, G (s)	16.0			44.1	44.1			17.0	33.0			
Effective Green, g (s)	16.0			44.1	44.1			17.0	33.0			
Actuated g/C Ratio	0.16			0.45	0.45			0.17	0.34			
Clearance Time (s)	5.5			6.0	6.0			7.0	5.5			
Vehicle Extension (s)	3.0			3.0	3.0			3.0	3.0			
Lane Grp Cap (vph)	256			656	1330			266	438			
v/s Ratio Prot	c0.06			0.28	c0.29			c0.23	0.03			
v/s Ratio Perm									0.03			
v/c Ratio	0.39			0.63	0.64			1.32	0.19			
Uniform Delay, d1	36.8			20.9	21.1			40.7	23.2			
Progression Factor	1.00			1.00	1.00			1.00	1.00			
Incremental Delay, d2	1.0			4.5	2.4			169.3	0.2			
Delay (s)	37.8			25.4	23.5			210.0	23.5			
Level of Service	D			C	C			F	C			
Approach Delay (s)		37.8			24.1			173.7			0.0	
Approach LOS		D			C			F			A	

Intersection Summary			
HCM 2000 Control Delay	60.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	98.4	Sum of lost time (s)	27.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBT	SET	Ø1	Ø2	Ø3	Ø6	Ø8	Ø9	Ø10
Lane Configurations									
Traffic Volume (vph)	265	600							
Future Volume (vph)	265	600							
Turn Type	NA	NA							
Protected Phases	4	2 3	1	2	3	6	8	9	10
Permitted Phases									
Detector Phase	4	2 3							
Switch Phase									
Minimum Initial (s)	10.0		1.0	10.0	6.0	10.0	10.0	1.0	1.0
Minimum Split (s)	25.5		3.0	30.0	24.0	28.5	21.0	3.0	5.5
Total Split (s)	25.5		3.0	47.0	24.0	50.0	58.0	3.0	5.5
Total Split (%)	23.6%		3%	44%	22%	46%	54%	3%	5%
Yellow Time (s)	4.5		2.0	4.0	4.0	4.5	4.5	2.0	3.5
All-Red Time (s)	1.0		0.0	2.0	3.0	1.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0								
Total Lost Time (s)	5.5								
Lead/Lag	Lead		Lead	Lag	Lag			Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None		None	Max	None	Max	None	None	None
Act Effct Green (s)	16.1	62.9							
Actuated g/C Ratio	0.16	0.64							
v/c Ratio	0.67	0.79							
Control Delay	45.7	12.1							
Queue Delay	0.0	0.5							
Total Delay	45.7	12.6							
LOS	D	B							
Approach Delay	45.7	12.6							
Approach LOS	D	B							

Intersection Summary	
Cycle Length: 108	
Actuated Cycle Length: 98.1	
Natural Cycle: 95	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.32	
Intersection Signal Delay: 22.2	Intersection LOS: C
Intersection Capacity Utilization 72.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 6: Medford St. Ext. & Somerville Ave. Ext.



Lane Group	NBT	SET
Lane Group Flow (vph)	324	797
v/c Ratio	0.67	0.79
Control Delay	45.7	12.1
Queue Delay	0.0	0.5
Total Delay	45.7	12.6
Queue Length 50th (ft)	101	98
Queue Length 95th (ft)	138	m101
Internal Link Dist (ft)	128	100
Turn Bay Length (ft)		
Base Capacity (vph)	605	1011
Starvation Cap Reductn	0	39
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.54	0.82

Intersection Summary

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

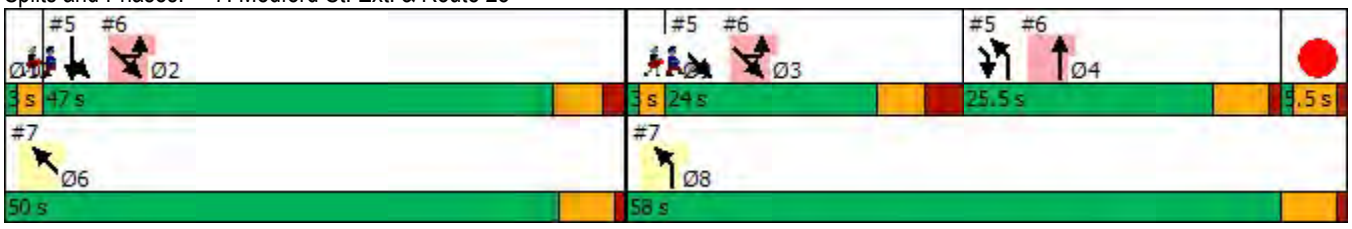
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	265	10	0	0	0	85	600	0	0	0	0
Future Volume (vph)	0	265	10	0	0	0	85	600	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5						6.0				
Lane Util. Factor		0.95						1.00				
Frpb, ped/bikes		1.00						1.00				
Flpb, ped/bikes		1.00						1.00				
Frt		0.99						1.00				
Flt Protected		1.00						0.99				
Satd. Flow (prot)		2967						1541				
Flt Permitted		1.00						0.99				
Satd. Flow (perm)		2967						1541				
Peak-hour factor, PHF	0.85	0.85	0.85	0.92	0.92	0.92	0.86	0.86	0.86	0.92	0.92	0.92
Adj. Flow (vph)	0	312	12	0	0	0	99	698	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	25	0	0	0	0
Lane Group Flow (vph)	0	324	0	0	0	0	0	772	0	0	0	0
Confl. Peds. (#/hr)	23		2	2		23	4		32	32		4
Confl. Bikes (#/hr)			3						4			
Heavy Vehicles (%)	0%	8%	29%	2%	2%	2%	12%	10%	0%	2%	2%	2%
Turn Type		NA					Split	NA				
Protected Phases		4					2 3	2 3				
Permitted Phases												
Actuated Green, G (s)		16.0						61.1				
Effective Green, g (s)		16.0						61.1				
Actuated g/C Ratio		0.16						0.62				
Clearance Time (s)		5.5										
Vehicle Extension (s)		3.0										
Lane Grp Cap (vph)		482						956				
v/s Ratio Prot		c0.11						c0.50				
v/s Ratio Perm												
v/c Ratio		0.67						0.81				
Uniform Delay, d1		38.7						14.2				
Progression Factor		1.00						0.92				
Incremental Delay, d2		3.7						2.1				
Delay (s)		42.4						15.1				
Level of Service		D						B				
Approach Delay (s)		42.4			0.0			15.1			0.0	
Approach LOS		D			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	23.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	98.4	Sum of lost time (s)	27.0
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBL	NWT	Ø1	Ø2	Ø3	Ø4	Ø9	Ø10
Lane Configurations								
Traffic Volume (vph)	350	670						
Future Volume (vph)	350	670						
Turn Type	Prot	NA						
Protected Phases	8	6	1	2	3	4	9	10
Permitted Phases								
Detector Phase	8	6						
Switch Phase								
Minimum Initial (s)	10.0	10.0	1.0	10.0	6.0	10.0	1.0	1.0
Minimum Split (s)	21.0	28.5	3.0	30.0	24.0	25.5	3.0	5.5
Total Split (s)	58.0	50.0	3.0	47.0	24.0	25.5	3.0	5.5
Total Split (%)	53.7%	46.3%	3%	44%	22%	24%	3%	5%
Yellow Time (s)	4.5	4.5	2.0	4.0	4.0	4.5	2.0	3.5
All-Red Time (s)	1.0	1.0	0.0	2.0	3.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0	0.0						
Total Lost Time (s)	5.5	5.5						
Lead/Lag			Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?								
Recall Mode	None	Max	None	Max	None	None	None	None
Act Effct Green (s)	42.5	44.6						
Actuated g/C Ratio	0.43	0.45						
v/c Ratio	0.31	0.45						
Control Delay	2.0	19.8						
Queue Delay	0.4	0.0						
Total Delay	2.4	19.8						
LOS	A	B						
Approach Delay	2.4	19.8						
Approach LOS	A	B						

Intersection Summary			
Cycle Length: 108			
Actuated Cycle Length: 98.1			
Natural Cycle: 95			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.32			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 86.9%		ICU Level of Service E	
Analysis Period (min) 15			

Splits and Phases: 7: Medford St. Ext. & Route 28



Lane Group	NBL	NWT
Lane Group Flow (vph)	417	848
v/c Ratio	0.31	0.45
Control Delay	2.0	19.8
Queue Delay	0.4	0.0
Total Delay	2.4	19.8
Queue Length 50th (ft)	6	132
Queue Length 95th (ft)	10	150
Internal Link Dist (ft)	56	187
Turn Bay Length (ft)		
Base Capacity (vph)	1610	1891
Starvation Cap Reductn	704	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.46	0.45

Intersection Summary

Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	350	0	0	0	0	670
Future Volume (vph)	350	0	0	0	0	670
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5					5.5
Lane Util. Factor	0.97					0.91
Frpb, ped/bikes	1.00					1.00
Flpb, ped/bikes	1.00					1.00
Frt	1.00					1.00
Flt Protected	0.95					1.00
Satd. Flow (prot)	2891					4161
Flt Permitted	0.95					1.00
Satd. Flow (perm)	2891					4161
Peak-hour factor, PHF	0.84	0.84	0.92	0.92	0.79	0.79
Adj. Flow (vph)	417	0	0	0	0	848
RTOR Reduction (vph)	73	0	0	0	0	0
Lane Group Flow (vph)	344	0	0	0	0	848
Confl. Peds. (#/hr)	3	5		7	7	
Heavy Vehicles (%)	9%	0%	2%	2%	0%	11%
Bus Blockages (#/hr)	0	0	0	0	0	8
Turn Type	Prot					NA
Protected Phases	8					6
Permitted Phases						
Actuated Green, G (s)	42.8					44.6
Effective Green, g (s)	42.8					44.6
Actuated g/C Ratio	0.43					0.45
Clearance Time (s)	5.5					5.5
Vehicle Extension (s)	3.0					3.0
Lane Grp Cap (vph)	1257					1885
v/s Ratio Prot	c0.12					c0.20
v/s Ratio Perm						
v/c Ratio	0.27					0.45
Uniform Delay, d1	17.8					18.5
Progression Factor	0.12					1.00
Incremental Delay, d2	0.1					0.8
Delay (s)	2.3					19.3
Level of Service	A					B
Approach Delay (s)	2.3		0.0			19.3
Approach LOS	A		A			B

Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	98.4	Sum of lost time (s)	27.0
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	SEL	SET	SER	NWL	NWT
Lane Configurations										
Traffic Volume (vph)	45	15	45	15	5	115	1715	230	80	530
Future Volume (vph)	45	15	45	15	5	115	1715	230	80	530
Turn Type	D.Pm	NA	custom	Perm	NA	Prot	NA	Perm	Prot	NA
Protected Phases			3		3	2	1		2	1
Permitted Phases	3	3		3				1		
Detector Phase	3	3	3	3	3	2	1	1	2	1
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	26.0	26.0	26.0	26.0	26.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	26.0	26.0	26.0	26.0	26.0	21.0	63.0	63.0	21.0	63.0
Total Split (%)	23.6%	23.6%	23.6%	23.6%	23.6%	19.1%	57.3%	57.3%	19.1%	57.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)		11.7	11.7		11.7	12.5	67.9	67.9	12.5	67.9
Actuated g/C Ratio		0.11	0.11		0.11	0.11	0.62	0.62	0.11	0.62
v/c Ratio		0.60	0.21		0.52	0.64	0.90	0.25	0.57	0.42
Control Delay		66.9	3.8		29.5	62.0	27.6	2.4	59.3	12.9
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		66.9	3.8		29.5	62.0	27.6	2.4	59.3	12.9
LOS		E	A		C	E	C	A	E	B
Approach Delay		39.8			29.5		26.7			18.5
Approach LOS		D			C		C			B

Intersection Summary	
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 0 (0%), Referenced to phase 1:NWSE, Start of Green	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 25.2	Intersection LOS: C
Intersection Capacity Utilization 90.8%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 8: Route 28 & Rufo Rd/Site Driveway

Lane Group	EBT	EBR	WBT	SEL	SET	SER	NWL	NWT
Lane Group Flow (vph)	65	49	100	117	1750	235	95	691
v/c Ratio	0.60	0.21	0.52	0.64	0.90	0.25	0.57	0.42
Control Delay	66.9	3.8	29.5	62.0	27.6	2.4	59.3	12.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.9	3.8	29.5	62.0	27.6	2.4	59.3	12.9
Queue Length 50th (ft)	45	0	27	80	517	0	64	120
Queue Length 95th (ft)	84	9	22	139	#862	38	109	188
Internal Link Dist (ft)	290		73		1866			743
Turn Bay Length (ft)						500	500	
Base Capacity (vph)	188	328	291	221	1946	942	200	1654
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.15	0.34	0.53	0.90	0.25	0.47	0.42

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	45	15	45	15	5	30	115	1715	230	80	530	50
Future Volume (vph)	45	15	45	15	5	30	115	1715	230	80	530	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	12	12	12	12	12	12	10	11	11
Total Lost time (s)		6.0	6.0		6.0		6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	1.00		0.99		1.00	1.00	0.96	1.00	0.99	
Flpb, ped/bikes		0.99	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85		0.92		1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.96	1.00		0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1459	1405		1499		1624	3154	1383	1472	2673	
Flt Permitted		0.68	1.00		0.88		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1035	1405		1332		1624	3154	1383	1472	2673	
Peak-hour factor, PHF	0.91	0.91	0.91	0.50	0.50	0.50	0.98	0.98	0.98	0.84	0.84	0.84
Adj. Flow (vph)	49	16	49	30	10	60	117	1750	235	95	631	60
RTOR Reduction (vph)	0	0	44	0	54	0	0	0	90	0	5	0
Lane Group Flow (vph)	0	65	5	0	46	0	117	1750	145	95	686	0
Confl. Peds. (#/hr)	8		1	1		8	11		5	5		11
Confl. Bikes (#/hr)									2			8
Heavy Vehicles (%)	16%	0%	0%	0%	17%	0%	0%	3%	1%	3%	12%	50%
Turn Type	D.Pm	NA	custom	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases			3		3		2	1		2	1	
Permitted Phases	3	3		3					1			
Actuated Green, G (s)		11.7	11.7		11.7		12.5	67.8	67.8	12.5	67.8	
Effective Green, g (s)		11.7	11.7		11.7		12.5	67.8	67.8	12.5	67.8	
Actuated g/C Ratio		0.11	0.11		0.11		0.11	0.62	0.62	0.11	0.62	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		2.0	2.0		2.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		110	149		141		184	1944	852	167	1647	
v/s Ratio Prot			0.00				c0.07	c0.55		0.06	0.26	
v/s Ratio Perm		c0.06			0.03				0.10			
v/c Ratio		0.59	0.03		0.33		0.64	0.90	0.17	0.57	0.42	
Uniform Delay, d1		46.9	44.1		45.5		46.6	18.2	9.0	46.2	10.9	
Progression Factor		1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		5.6	0.0		0.5		7.0	7.2	0.4	4.4	0.8	
Delay (s)		52.4	44.1		46.0		53.6	25.4	9.5	50.6	11.7	
Level of Service		D	D		D		D	C	A	D	B	
Approach Delay (s)		48.9			46.0			25.2			16.4	
Approach LOS		D			D			C			B	

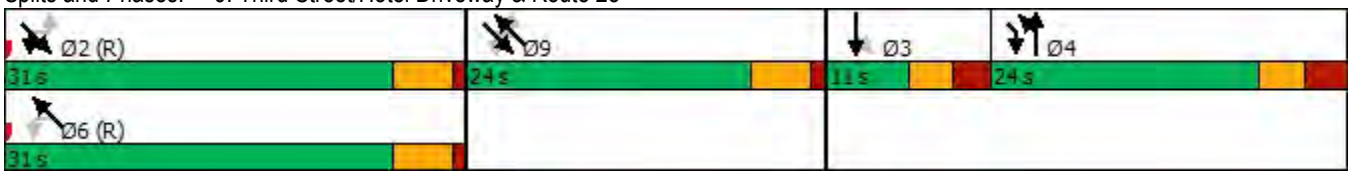
Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	90.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	NBL	NBT	SBL	SBT	SEL	SET	SER	NWL	NWT	Ø2	Ø6	Ø9
Lane Configurations												
Traffic Volume (vph)	120	5	10	5	1	1285	490	2	555			
Future Volume (vph)	120	5	10	5	1	1285	490	2	555			
Turn Type	Split	NA	Perm	NA	Perm	NA	custom	Perm	NA			
Protected Phases	4	4		3		2 9	2 4		6 9	2	6	9
Permitted Phases			3		2 9			6 9				
Detector Phase	4	4	3	3	2 9	2 9	2 4	6 9	6 9			
Switch Phase												
Minimum Initial (s)	6.0	6.0	5.0	5.0						10.0	17.0	1.0
Minimum Split (s)	24.0	24.0	11.0	11.0						23.0	23.0	23.0
Total Split (s)	24.0	24.0	11.0	11.0						31.0	31.0	24.0
Total Split (%)	26.7%	26.7%	12.2%	12.2%						34%	34%	27%
Yellow Time (s)	3.0	3.0	3.0	3.0						4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	2.5	2.5						1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0								
Total Lost Time (s)	6.0	6.0		5.5								
Lead/Lag	Lag	Lag	Lead	Lead								
Lead-Lag Optimize?												
Recall Mode	Ped	Ped	None	None						C-Min	C-Min	Min
Act Effct Green (s)	18.0	18.0		5.3		54.4	55.3		54.4			
Actuated g/C Ratio	0.20	0.20		0.06		0.60	0.61		0.60			
v/c Ratio	0.32	0.32		0.27		0.76	0.48		0.44			
Control Delay	34.8	22.6		41.1		17.9	2.6		11.5			
Queue Delay	0.0	0.0		0.0		0.0	0.0		0.0			
Total Delay	34.8	22.6		41.1		17.9	2.6		11.5			
LOS	C	C		D		B	A		B			
Approach Delay		28.8		41.1		13.7			11.5			
Approach LOS		C		D		B			B			

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 17 (19%), Referenced to phase 2:SETL and 6:NWTL, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 14.3	Intersection LOS: B
Intersection Capacity Utilization 72.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Third Street/Hotel Driveway & Route 28



Lane Group	NBL	NBT	SBT	SET	SER	NWT
Lane Group Flow (vph)	87	83	25	1340	510	721
v/c Ratio	0.32	0.32	0.27	0.76	0.48	0.44
Control Delay	34.8	22.6	41.1	17.9	2.6	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.8	22.6	41.1	17.9	2.6	11.5
Queue Length 50th (ft)	45	23	10	308	0	122
Queue Length 95th (ft)	91	67	31	412	43	135
Internal Link Dist (ft)		395	64	743		192
Turn Bay Length (ft)	110					
Base Capacity (vph)	269	261	95	1787	1071	1666
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	0.32	0.32	0.26	0.75	0.48	0.43

Intersection Summary

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	120	5	35	10	5	5	1	1285	490	2	555	5
Future Volume (vph)	120	5	35	10	5	5	1	1285	490	2	555	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	8	12	12	12	12	11	12	12	11	11
Total Lost time (s)	6.0	6.0			5.5			5.0	5.0		5.0	
Lane Util. Factor	0.95	0.95			1.00			0.95	1.00		0.95	
Frpb, ped/bikes	1.00	0.96			1.00			1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00			0.97			1.00	1.00		1.00	
Frt	1.00	0.93			0.97			1.00	0.85		1.00	
Flt Protected	0.95	0.98			0.97			1.00	1.00		1.00	
Satd. Flow (prot)	1346	1157			1560			3049	1425		2851	
Flt Permitted	0.95	0.98			0.92			0.95	1.00		0.95	
Satd. Flow (perm)	1346	1157			1474			2911	1425		2711	
Peak-hour factor, PHF	0.94	0.94	0.94	0.79	0.79	0.79	0.96	0.96	0.96	0.78	0.78	0.78
Adj. Flow (vph)	128	5	37	13	6	6	1	1339	510	3	712	6
RTOR Reduction (vph)	0	30	0	0	6	0	0	0	243	0	0	0
Lane Group Flow (vph)	87	53	0	0	19	0	0	1340	267	0	721	0
Confl. Peds. (#/hr)			52	52			37		59	59		37
Confl. Bikes (#/hr)									5			
Heavy Vehicles (%)	7%	0%	25%	0%	0%	0%	0%	3%	2%	0%	10%	0%
Turn Type	Split	NA		Perm	NA		Perm	NA	custom	Perm	NA	
Protected Phases	4	4			3			2 9	2 4		6 9	
Permitted Phases				3			2 9			6 9		
Actuated Green, G (s)	18.0	18.0			3.3			52.2	53.1		52.2	
Effective Green, g (s)	18.0	18.0			3.3			52.2	47.1		52.2	
Actuated g/C Ratio	0.20	0.20			0.04			0.58	0.52		0.58	
Clearance Time (s)	6.0	6.0			5.5							
Vehicle Extension (s)	2.0	2.0			2.0							
Lane Grp Cap (vph)	269	231			54			1688	745		1572	
v/s Ratio Prot	0.06	0.05							c0.19			
v/s Ratio Perm					c0.01			c0.46			0.27	
v/c Ratio	0.32	0.23			0.36			0.79	0.36		0.46	
Uniform Delay, d1	30.8	30.2			42.3			14.7	12.6		10.8	
Progression Factor	1.00	1.00			1.00			1.00	1.00		1.00	
Incremental Delay, d2	0.3	0.2			1.5			2.5	0.1		0.1	
Delay (s)	31.0	30.4			43.8			17.2	12.7		10.9	
Level of Service	C	C			D			B	B		B	
Approach Delay (s)		30.7			43.8			16.0			10.9	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	21.5
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	0	0	640	40	0	30
Future Volume (Veh/h)	0	0	640	40	0	30
Sign Control		Stop	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.82	0.82	0.73	0.73
Hourly flow rate (vph)	0	0	780	49	0	41
Pedestrians					4	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type			None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1564	0	0		1588	1588
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1564	0	0		1588	1588
tC, single (s)	6.5	6.2	4.2		7.1	6.8
tC, 2 stage (s)						
tF (s)	4.0	3.3	2.3		3.5	4.2
p0 queue free %	100	100	50		100	15
cM capacity (veh/h)	56	1085	1572		53	48

Direction, Lane #	NW 1	NW 2	NW 3	SW 1
Volume Total	312	312	205	41
Volume Left	312	312	156	0
Volume Right	0	0	49	0
cSH	1572	1572	1572	48
Volume to Capacity	0.50	0.50	0.50	0.85
Queue Length 95th (ft)	72	72	72	88
Control Delay (s)	9.5	9.5	8.4	220.1
Lane LOS	A	A	A	F
Approach Delay (s)	9.2			220.1
Approach LOS				F

Intersection Summary			
Average Delay	19.2		
Intersection Capacity Utilization	23.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SBL	SBR	SEL	SET	SER	NWL	NWT	NWR	NEL2	NEL	NER
Lane Configurations											
Traffic Volume (veh/h)	2	0	1	305	0	0	245	5	160	10	80
Future Volume (Veh/h)	2	0	1	305	0	0	245	5	160	10	80
Sign Control	Stop			Free			Free			Stop	
Grade	0%			0%			0%			0%	
Peak Hour Factor	0.50	0.50	0.93	0.93	0.93	0.71	0.71	0.71	0.85	0.85	0.85
Hourly flow rate (vph)	4	0	1	328	0	0	345	7	188	12	94
Pedestrians	41			2			5			40	
Lane Width (ft)	12.0			12.0			12.0			12.0	
Walking Speed (ft/s)	3.5			3.5			3.5			3.5	
Percent Blockage	4			0			0			4	
Right turn flare (veh)											
Median type				None			None				
Median storage veh)											
Upstream signal (ft)							420				
pX, platoon unblocked	0.94	0.94	0.94						0.94	0.94	
vC, conflicting volume	824	760	393			368			720	763	373
vC1, stage 1 conf vol											
vC2, stage 2 conf vol											
vCu, unblocked vol	781	712	321			368			670	715	373
tC, single (s)	7.1	6.5	4.1			4.1			7.2	6.5	6.3
tC, 2 stage (s)											
tF (s)	3.5	4.0	2.2			2.2			3.6	4.0	3.4
p0 queue free %	98	100	100			100			39	96	85
cM capacity (veh/h)	220	313	1128			1145			309	311	632

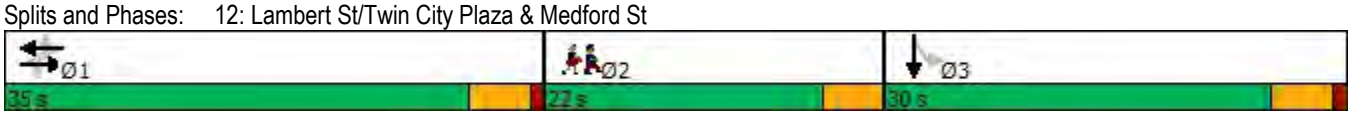
Direction, Lane #	SB 1	SE 1	NW 1	NE 1
Volume Total	4	329	352	294
Volume Left	4	1	0	188
Volume Right	0	0	7	94
cSH	220	1128	1700	369
Volume to Capacity	0.02	0.00	0.21	0.80
Queue Length 95th (ft)	1	0	0	170
Control Delay (s)	21.7	0.0	0.0	43.7
Lane LOS	C	A		E
Approach Delay (s)	21.7	0.0	0.0	43.7
Approach LOS	C			E

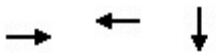
Intersection Summary			
Average Delay	13.2		
Intersection Capacity Utilization	52.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	SBT	Ø2
Lane Configurations						
Traffic Volume (vph)	30	150	5	150	75	
Future Volume (vph)	30	150	5	150	75	
Turn Type	Perm	NA	Perm	NA	NA	
Protected Phases		1		1	3	2
Permitted Phases	1		1			
Detector Phase	1	1	1	1	3	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0
Minimum Split (s)	12.0	12.0	12.0	12.0	12.0	22.0
Total Split (s)	35.0	35.0	35.0	35.0	30.0	22.0
Total Split (%)	40.2%	40.2%	40.2%	40.2%	34.5%	25%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)		0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	Max	Max	None	Ped
Act Effct Green (s)		30.1		30.1	13.3	
Actuated g/C Ratio		0.40		0.40	0.18	
v/c Ratio		0.51		0.32	0.56	
Control Delay		18.9		17.7	33.6	
Queue Delay		0.0		0.0	0.0	
Total Delay		18.9		17.7	33.6	
LOS		B		B	C	
Approach Delay		18.9		17.7	33.6	
Approach LOS		B		B	C	

Intersection Summary	
Cycle Length: 87	
Actuated Cycle Length: 75.4	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 22.1	Intersection LOS: C
Intersection Capacity Utilization 54.5%	ICU Level of Service A
Analysis Period (min) 15	

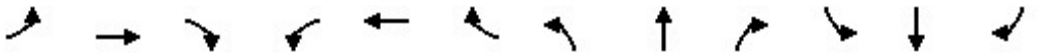
Splits and Phases: 12: Lambert St/Twin City Plaza & Medford St





Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	327	220	175
v/c Ratio	0.51	0.32	0.56
Control Delay	18.9	17.7	33.6
Queue Delay	0.0	0.0	0.0
Total Delay	18.9	17.7	33.6
Queue Length 50th (ft)	96	67	71
Queue Length 95th (ft)	190	105	106
Internal Link Dist (ft)	73	445	291
Turn Bay Length (ft)			
Base Capacity (vph)	638	696	584
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.51	0.32	0.30

Intersection Summary



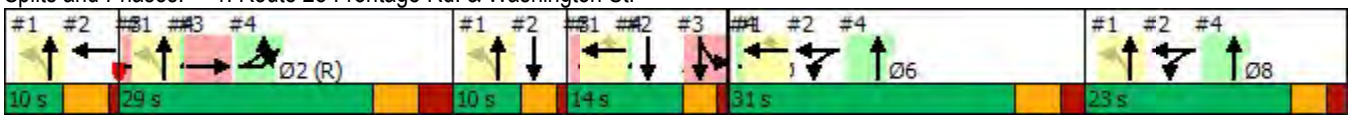
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	150	125	5	150	10	0	0	0	40	75	20
Future Volume (vph)	30	150	125	5	150	10	0	0	0	40	75	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		0.95			0.99						0.99	
Flpb, ped/bikes		1.00			1.00						0.98	
Frt		0.94			0.99						0.98	
Flt Protected		1.00			1.00						0.99	
Satd. Flow (prot)		1609			1760						1720	
Flt Permitted		0.96			0.99						0.99	
Satd. Flow (perm)		1546			1743						1720	
Peak-hour factor, PHF	0.93	0.93	0.93	0.75	0.75	0.75	0.92	0.92	0.92	0.77	0.77	0.77
Adj. Flow (vph)	32	161	134	7	200	13	0	0	0	52	97	26
RTOR Reduction (vph)	0	26	0	0	2	0	0	0	0	0	8	0
Lane Group Flow (vph)	0	301	0	0	218	0	0	0	0	0	167	0
Confl. Peds. (#/hr)	44		54	54		55	24		26	26		24
Confl. Bikes (#/hr)			45			2						
Heavy Vehicles (%)	0%	5%	6%	0%	6%	13%	2%	2%	2%	0%	4%	5%
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		1			1						3	
Permitted Phases	1			1						3		
Actuated Green, G (s)		30.1			30.1						13.3	
Effective Green, g (s)		30.1			30.1						13.3	
Actuated g/C Ratio		0.40			0.40						0.18	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		4.0			4.0						4.0	
Lane Grp Cap (vph)		617			695						303	
v/s Ratio Prot												
v/s Ratio Perm		c0.19			0.12						0.10	
v/c Ratio		0.49			0.31						0.55	
Uniform Delay, d1		16.9			15.6						28.3	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		2.7			1.2						2.7	
Delay (s)		19.6			16.7						31.0	
Level of Service		B			B						C	
Approach Delay (s)		19.6			16.7			0.0			31.0	
Approach LOS		B			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	75.4	Sum of lost time (s)	14.0
Intersection Capacity Utilization	54.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBT	WBR	NBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations									
Traffic Volume (vph)	650	60	1250						
Future Volume (vph)	650	60	1250						
Turn Type	NA	Perm	NA						
Protected Phases	5 6		1 2 4 8	1	2	4	5	6	8
Permitted Phases		5 6							
Detector Phase	5 6	5 6	1 2 4 8						
Switch Phase									
Minimum Initial (s)				5.0	12.0	6.0	6.0	12.0	5.0
Minimum Split (s)				10.0	29.0	10.0	14.0	31.0	23.0
Total Split (s)				10.0	29.0	10.0	14.0	31.0	23.0
Total Split (%)				9%	25%	9%	12%	26%	20%
Yellow Time (s)				4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)				1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag				Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode				Max	Max	Max	Max	Max	Max
Act Effct Green (s)	41.0	41.0	67.0						
Actuated g/C Ratio	0.35	0.35	0.57						
v/c Ratio	0.63	0.13	0.80						
Control Delay	34.7	26.9	15.7						
Queue Delay	2.9	0.0	42.8						
Total Delay	37.6	26.9	58.4						
LOS	D	C	E						
Approach Delay	36.6		58.4						
Approach LOS	D		E						

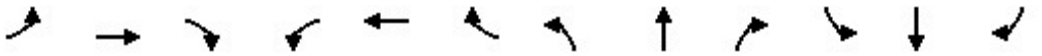
Intersection Summary	
Cycle Length: 117	
Actuated Cycle Length: 117	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 120	
Control Type: Pretimed	
Maximum v/c Ratio: 1.42	
Intersection Signal Delay: 51.0	Intersection LOS: D
Intersection Capacity Utilization 70.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Route 28 Frontage Rd. & Washington St.



Lane Group	WBT	WBR	NBT
Lane Group Flow (vph)	699	65	1474
v/c Ratio	0.63	0.13	0.80
Control Delay	34.7	26.9	15.7
Queue Delay	2.9	0.0	42.8
Total Delay	37.6	26.9	58.4
Queue Length 50th (ft)	228	33	333
Queue Length 95th (ft)	294	67	408
Internal Link Dist (ft)	78		100
Turn Bay Length (ft)			
Base Capacity (vph)	1116	487	1836
Starvation Cap Reductn	0	0	481
Spillback Cap Reductn	299	0	2
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.86	0.13	1.09

Intersection Summary



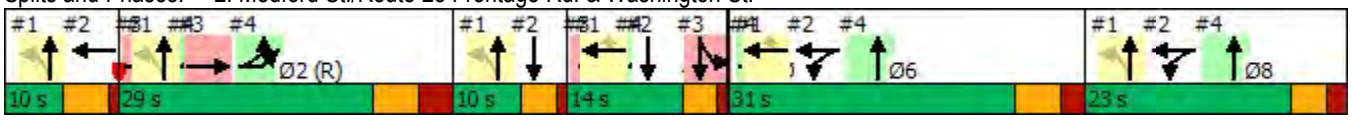
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	650	60	150	1250	0	0	0	0
Future Volume (vph)	0	0	0	0	650	60	150	1250	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					4.0	4.0		5.0				
Lane Util. Factor					0.95	1.00		0.95				
Frpb, ped/bikes					1.00	0.96		1.00				
Flpb, ped/bikes					1.00	1.00		1.00				
Frt					1.00	0.85		1.00				
Flt Protected					1.00	1.00		0.99				
Satd. Flow (prot)					3185	1391		3158				
Flt Permitted					1.00	1.00		0.99				
Satd. Flow (perm)					3185	1391		3158				
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	699	65	158	1316	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	31	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	699	65	0	1443	0	0	0	0
Confl. Peds. (#/hr)						9						
Heavy Vehicles (%)	2%	2%	2%	2%	2%	0%	5%	2%	2%	2%	2%	2%
Turn Type					NA	Perm	Perm	NA				
Protected Phases					5 6			1 2 4 8				
Permitted Phases						5 6	1 2 4 8					
Actuated Green, G (s)					39.0	39.0		68.0				
Effective Green, g (s)					39.0	39.0		61.0				
Actuated g/C Ratio					0.33	0.33		0.52				
Clearance Time (s)												
Lane Grp Cap (vph)					1061	463		1646				
v/s Ratio Prot					c0.22							
v/s Ratio Perm						0.05		0.46				
v/c Ratio					0.66	0.14		0.88				
Uniform Delay, d1					33.3	27.3		24.7				
Progression Factor					1.00	1.00		0.67				
Incremental Delay, d2					3.2	0.6		5.2				
Delay (s)					36.5	27.9		21.6				
Level of Service					D	C		C				
Approach Delay (s)		0.0			35.8			21.6			0.0	
Approach LOS		A			D			C			A	

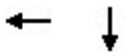
Intersection Summary			
HCM 2000 Control Delay	26.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	117.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBT	SBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations								
Traffic Volume (vph)	535	410						
Future Volume (vph)	535	410						
Turn Type	NA	NA						
Protected Phases	1 6 8	4 5	1	2	4	5	6	8
Permitted Phases								
Detector Phase	1 6 8	4 5						
Switch Phase								
Minimum Initial (s)			5.0	12.0	6.0	6.0	12.0	5.0
Minimum Split (s)			10.0	29.0	10.0	14.0	31.0	23.0
Total Split (s)			10.0	29.0	10.0	14.0	31.0	23.0
Total Split (%)			9%	25%	9%	12%	26%	20%
Yellow Time (s)			4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)			1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)								
Total Lost Time (s)								
Lead/Lag			Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode			Max	Max	Max	Max	Max	Max
Act Effct Green (s)	54.0	20.0						
Actuated g/C Ratio	0.46	0.17						
v/c Ratio	0.62	1.42						
Control Delay	12.7	230.1						
Queue Delay	3.7	0.7						
Total Delay	16.5	230.8						
LOS	B	F						
Approach Delay	16.5	230.8						
Approach LOS	B	F						

Intersection Summary	
Cycle Length: 117	
Actuated Cycle Length: 117	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 120	
Control Type: Pretimed	
Maximum v/c Ratio: 1.42	
Intersection Signal Delay: 118.3	Intersection LOS: F
Intersection Capacity Utilization 59.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 2: Medford St./Route 28 Frontage Rd. & Washington St.



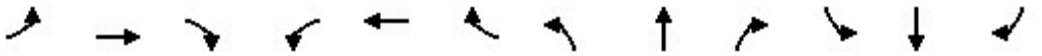


Lane Group	WBT	SBT
Lane Group Flow (vph)	875	792
v/c Ratio	0.62	1.42
Control Delay	12.7	230.1
Queue Delay	3.7	0.7
Total Delay	16.5	230.8
Queue Length 50th (ft)	288	~373
Queue Length 95th (ft)	372	#501
Internal Link Dist (ft)	99	61
Turn Bay Length (ft)		
Base Capacity (vph)	1410	557
Starvation Cap Reductn	433	0
Spillback Cap Reductn	321	47
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.90	1.55

Intersection Summary

~ 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.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	270	535	0	0	0	0	0	410	335
Future Volume (vph)	0	0	0	270	535	0	0	0	0	0	410	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)					5.0						4.0	
Lane Util. Factor					0.95						0.95	
Frpb, ped/bikes					1.00						0.86	
Flpb, ped/bikes					1.00						1.00	
Frt					1.00						0.93	
Flt Protected					0.98						1.00	
Satd. Flow (prot)					3092						2524	
Flt Permitted					0.98						1.00	
Satd. Flow (perm)					3092						2524	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.94	0.94	0.94
Adj. Flow (vph)	0	0	0	293	582	0	0	0	0	0	436	356
RTOR Reduction (vph)	0	0	0	0	66	0	0	0	0	0	126	0
Lane Group Flow (vph)	0	0	0	0	809	0	0	0	0	0	666	0
Confl. Peds. (#/hr)	135					135	58					58
Confl. Bikes (#/hr)						34						1
Heavy Vehicles (%)	2%	2%	2%	1%	3%	2%	2%	2%	2%	2%	4%	2%
Bus Blockages (#/hr)	0	0	0	0	5	5	0	0	0	0	0	0
Turn Type				Prot	NA						NA	
Protected Phases				6 8	1 6 8						4 5	
Permitted Phases												
Actuated Green, G (s)					54.0						20.0	
Effective Green, g (s)					48.0						20.0	
Actuated g/C Ratio					0.41						0.17	
Clearance Time (s)												
Lane Grp Cap (vph)					1400						431	
v/s Ratio Prot					c0.21						c0.26	
v/s Ratio Perm					0.05							
v/c Ratio					0.58						1.55	
Uniform Delay, d1					26.7						48.5	
Progression Factor					0.59						1.00	
Incremental Delay, d2					1.3						256.7	
Delay (s)					17.2						305.2	
Level of Service					B						F	
Approach Delay (s)		0.0			17.2			0.0			305.2	
Approach LOS		A			B			A			F	

Intersection Summary			
HCM 2000 Control Delay	154.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	117.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	SBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations								
Traffic Volume (vph)	1125	605						
Future Volume (vph)	1125	605						
Turn Type	NA	NA						
Protected Phases	1 2	4 5	1	2	4	5	6	8
Permitted Phases								
Detector Phase	1 2	4 5						
Switch Phase								
Minimum Initial (s)			5.0	12.0	6.0	6.0	12.0	5.0
Minimum Split (s)			10.0	29.0	10.0	14.0	31.0	23.0
Total Split (s)			10.0	29.0	10.0	14.0	31.0	23.0
Total Split (%)			9%	25%	9%	12%	26%	20%
Yellow Time (s)			4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)			1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)								
Total Lost Time (s)								
Lead/Lag			Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?								
Recall Mode			Max	Max	Max	Max	Max	Max
Act Effct Green (s)	34.0	20.0						
Actuated g/C Ratio	0.29	0.17						
v/c Ratio	0.94	1.05						
Control Delay	55.4	62.0						
Queue Delay	0.1	20.6						
Total Delay	55.4	82.6						
LOS	E	F						
Approach Delay	55.4	82.6						
Approach LOS	E	F						

Intersection Summary	
Cycle Length: 117	
Actuated Cycle Length: 117	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 120	
Control Type: Pretimed	
Maximum v/c Ratio: 1.42	
Intersection Signal Delay: 65.6	Intersection LOS: E
Intersection Capacity Utilization 53.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Medford St. & Washington St.

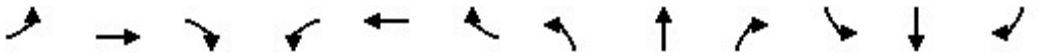
Lane Group	EBT	SBT
Lane Group Flow (vph)	1226	732
v/c Ratio	0.94	1.05
Control Delay	55.4	62.0
Queue Delay	0.1	20.6
Total Delay	55.4	82.6
Queue Length 50th (ft)	330	~145
Queue Length 95th (ft)	#426	m112
Internal Link Dist (ft)	130	63
Turn Bay Length (ft)		
Base Capacity (vph)	1300	694
Starvation Cap Reductn	0	248
Spillback Cap Reductn	1	7
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.94	1.64

Intersection Summary

~ 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.



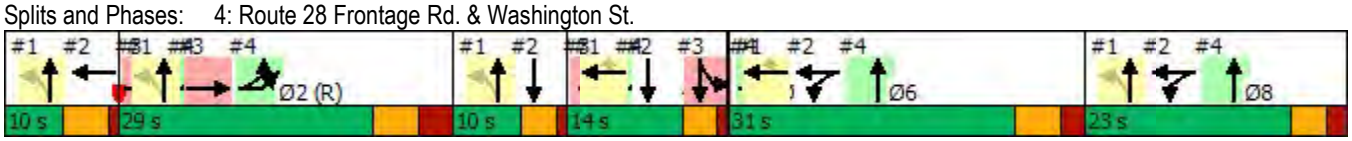
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1125	40	0	0	0	0	0	0	75	605	0
Future Volume (vph)	0	1125	40	0	0	0	0	0	0	75	605	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0									4.0	
Lane Util. Factor		0.91									0.95	
Frpb, ped/bikes		0.99									1.00	
Flpb, ped/bikes		1.00									1.00	
Frt		0.99									1.00	
Flt Protected		1.00									0.99	
Satd. Flow (prot)		4463									3164	
Flt Permitted		1.00									0.99	
Satd. Flow (perm)		4463									3164	
Peak-hour factor, PHF	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93
Adj. Flow (vph)	0	1184	42	0	0	0	0	0	0	81	651	0
RTOR Reduction (vph)	0	3	0	0	0	0	0	0	0	0	154	0
Lane Group Flow (vph)	0	1223	0	0	0	0	0	0	0	0	578	0
Confl. Peds. (#/hr)			22	22			39					39
Confl. Bikes (#/hr)			46									11
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	3%	2%	2%
Bus Blockages (#/hr)	0	10	10	0	0	0	0	0	0	0	0	0
Turn Type		NA								Split	NA	
Protected Phases		1 2								4 5	4 5	
Permitted Phases												
Actuated Green, G (s)		32.0									20.0	
Effective Green, g (s)		32.0									20.0	
Actuated g/C Ratio		0.27									0.17	
Clearance Time (s)												
Lane Grp Cap (vph)		1220									540	
v/s Ratio Prot		c0.27									c0.18	
v/s Ratio Perm												
v/c Ratio		1.00									1.07	
Uniform Delay, d1		42.5									48.5	
Progression Factor		1.00									0.95	
Incremental Delay, d2		26.4									35.6	
Delay (s)		68.9									81.5	
Level of Service		E									F	
Approach Delay (s)		68.9			0.0			0.0			81.5	
Approach LOS		E			A			A			F	

Intersection Summary			
HCM 2000 Control Delay	73.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	117.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	53.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL2	EBL	NBT	Ø1	Ø2	Ø4	Ø5	Ø6	Ø8
Lane Configurations									
Traffic Volume (vph)	700	500	700						
Future Volume (vph)	700	500	700						
Turn Type	Prot	Prot	NA						
Protected Phases	1 2 4 5	1 2 4 5	6 8	1	2	4	5	6	8
Permitted Phases									
Detector Phase	1 2 4 5	1 2 4 5	6 8						
Switch Phase									
Minimum Initial (s)				5.0	12.0	6.0	6.0	12.0	5.0
Minimum Split (s)				10.0	29.0	10.0	14.0	31.0	23.0
Total Split (s)				10.0	29.0	10.0	14.0	31.0	23.0
Total Split (%)				9%	25%	9%	12%	26%	20%
Yellow Time (s)				4.0	4.0	3.0	3.0	4.0	3.0
All-Red Time (s)				1.0	3.0	1.0	1.0	2.0	2.0
Lost Time Adjust (s)									
Total Lost Time (s)									
Lead/Lag				Lead	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode				Max	Max	Max	Max	Max	Max
Act Effct Green (s)	58.0	58.0	48.0						
Actuated g/C Ratio	0.50	0.50	0.41						
v/c Ratio	0.53	0.56	0.80						
Control Delay	2.0	1.2	36.6						
Queue Delay	4.7	2.7	51.9						
Total Delay	6.7	3.9	88.5						
LOS	A	A	F						
Approach Delay		4.8	88.5						
Approach LOS		A	F						

Intersection Summary	
Cycle Length: 117	
Actuated Cycle Length: 117	
Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green	
Natural Cycle: 120	
Control Type: Pretimed	
Maximum v/c Ratio: 1.42	
Intersection Signal Delay: 42.2	Intersection LOS: D
Intersection Capacity Utilization 73.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 4: Route 28 Frontage Rd. & Washington St.



Lane Group	EBL2	EBL	NBT
Lane Group Flow (vph)	407	817	989
v/c Ratio	0.53	0.56	0.80
Control Delay	2.0	1.2	36.6
Queue Delay	4.7	2.7	51.9
Total Delay	6.7	3.9	88.5
Queue Length 50th (ft)	0	0	340
Queue Length 95th (ft)	m0	m0	428
Internal Link Dist (ft)		98	768
Turn Bay Length (ft)			
Base Capacity (vph)	763	1464	1229
Starvation Cap Reductn	279	506	0
Spillback Cap Reductn	19	9	656
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.84	0.85	1.73

Intersection Summary

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

Movement	EBL2	EBL	EBR	NBL	NBT	NBR	SBL	SBT	SBR	SWL	SWR
Lane Configurations											
Traffic Volume (vph)	700	500	0	0	700	200	0	0	0	0	0
Future Volume (vph)	700	500	0	0	700	200	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	5.0			6.0						
Lane Util. Factor	0.91	0.91			0.95						
Frpb, ped/bikes	1.00	1.00			1.00						
Flpb, ped/bikes	1.00	1.00			1.00						
Frt	1.00	1.00			0.97						
Flt Protected	0.95	0.95			1.00						
Satd. Flow (prot)	1449	2864			2995						
Flt Permitted	0.95	0.95			1.00						
Satd. Flow (perm)	1449	2864			2995						
Peak-hour factor, PHF	0.98	0.98	0.98	0.91	0.91	0.91	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	714	510	0	0	769	220	0	0	0	0	0
RTOR Reduction (vph)	52	52	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	355	765	0	0	989	0	0	0	0	0	0
Confl. Peds. (#/hr)			16	3					3		3
Confl. Bikes (#/hr)			40			11					
Heavy Vehicles (%)	2%	4%	2%	2%	4%	6%	2%	2%	2%	2%	2%
Turn Type	Prot	Prot			NA						
Protected Phases	1 2 4 5	1 2 4 5			6 8						
Permitted Phases											
Actuated Green, G (s)	59.0	59.0			49.0						
Effective Green, g (s)	48.0	48.0			49.0						
Actuated g/C Ratio	0.41	0.41			0.42						
Clearance Time (s)											
Lane Grp Cap (vph)	594	1174			1254						
v/s Ratio Prot	0.24	c0.27			c0.33						
v/s Ratio Perm											
v/c Ratio	0.60	0.65			0.79						
Uniform Delay, d1	26.9	27.8			29.5						
Progression Factor	0.07	0.04			1.00						
Incremental Delay, d2	1.4	0.9			5.1						
Delay (s)	3.4	2.0			34.6						
Level of Service	A	A			C						
Approach Delay (s)		2.5			34.6			0.0		0.0	
Approach LOS		A			C			A		A	

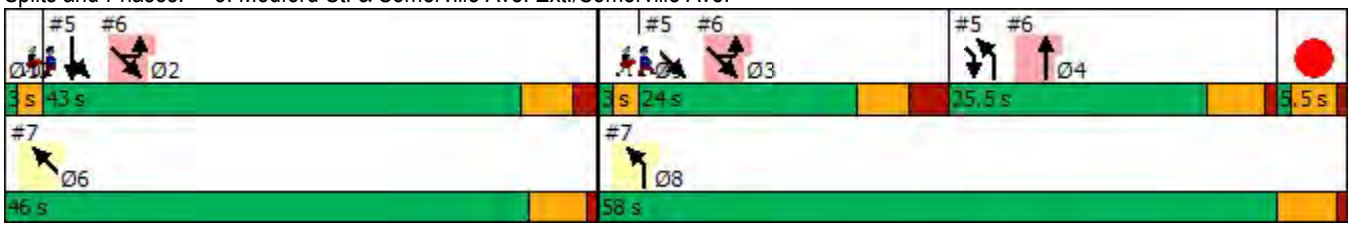
Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	117.0	Sum of lost time (s)	31.0
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	NBL	SBL	SBT	SET	SER	Ø1	Ø6	Ø8	Ø9	Ø10
Lane Configurations										
Traffic Volume (vph)	90	235	260	380	50					
Future Volume (vph)	90	235	260	380	50					
Turn Type	Prot	Split	NA	NA	pm+ov					
Protected Phases	4	2	2	3	4	1	6	8	9	10
Permitted Phases					3					
Detector Phase	4	2	2	3	4					
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	6.0	10.0	1.0	10.0	10.0	1.0	1.0
Minimum Split (s)	25.5	30.0	30.0	24.0	25.5	3.0	28.5	21.0	3.0	5.5
Total Split (s)	25.5	43.0	43.0	24.0	25.5	3.0	46.0	58.0	3.0	5.5
Total Split (%)	24.5%	41.3%	41.3%	23.1%	24.5%	3%	44%	56%	3%	5%
Yellow Time (s)	4.5	4.0	4.0	4.0	4.5	2.0	4.5	4.5	2.0	3.5
All-Red Time (s)	1.0	2.0	2.0	3.0	1.0	0.0	1.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0					
Total Lost Time (s)	5.5	6.0	6.0	7.0	5.5					
Lead/Lag	Lead	Lag	Lag	Lag	Lead	Lead			Lead	Lag
Lead-Lag Optimize?										
Recall Mode	None	Max	Max	None	None	None	Max	None	None	None
Act Effct Green (s)	20.0	39.4	39.4	17.0	38.5					
Actuated g/C Ratio	0.21	0.41	0.41	0.18	0.40					
v/c Ratio	0.31	0.41	0.32	1.60	0.11					
Control Delay	35.5	23.2	17.0	316.3	15.9					
Queue Delay	0.0	0.0	0.0	2.2	0.0					
Total Delay	35.5	23.2	17.0	318.4	15.9					
LOS	D	C	B	F	B					
Approach Delay			19.4	283.0						
Approach LOS			B	F						

Intersection Summary	
Cycle Length: 104	
Actuated Cycle Length: 96.1	
Natural Cycle: 135	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.60	
Intersection Signal Delay: 127.6	Intersection LOS: F
Intersection Capacity Utilization 59.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 5: Medford St. & Somerville Ave. Ext./Somerville Ave.



Lane Group	NBL	SBL	SBT	SET	SER
Lane Group Flow (vph)	105	253	393	452	60
v/c Ratio	0.31	0.41	0.32	1.60	0.11
Control Delay	35.5	23.2	17.0	316.3	15.9
Queue Delay	0.0	0.0	0.0	2.2	0.0
Total Delay	35.5	23.2	17.0	318.4	15.9
Queue Length 50th (ft)	54	105	66	~394	20
Queue Length 95th (ft)	101	190	113	#550	42
Internal Link Dist (ft)			894	143	
Turn Bay Length (ft)		50			100
Base Capacity (vph)	338	611	1245	282	570
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	43	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	0.41	0.32	1.89	0.11

Intersection Summary

~ 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.

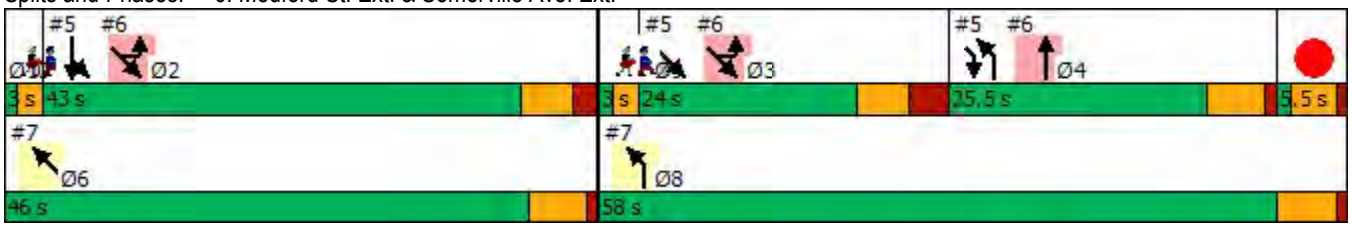
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	90	0	0	235	260	105	0	380	50	0	0	0
Future Volume (vph)	90	0	0	235	260	105	0	380	50	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5			6.0	6.0			7.0	5.5			
Lane Util. Factor	1.00			1.00	0.95			1.00	1.00			
Frpb, ped/bikes	1.00			1.00	0.96			1.00	0.98			
Flpb, ped/bikes	1.00			1.00	1.00			1.00	1.00			
Frt	1.00			1.00	0.96			1.00	0.85			
Flt Protected	0.95			0.95	1.00			1.00	1.00			
Satd. Flow (prot)	1624			1490	2950			1598	1428			
Flt Permitted	0.95			0.95	1.00			1.00	1.00			
Satd. Flow (perm)	1624			1490	2950			1598	1428			
Peak-hour factor, PHF	0.86	0.86	0.86	0.93	0.93	0.93	0.84	0.84	0.84	0.92	0.92	0.92
Adj. Flow (vph)	105	0	0	253	280	113	0	452	60	0	0	0
RTOR Reduction (vph)	0	0	0	0	38	0	0	0	0	0	0	0
Lane Group Flow (vph)	105	0	0	253	355	0	0	452	60	0	0	0
Confl. Peds. (#/hr)	50					50	2		18	18		2
Confl. Bikes (#/hr)						9			3			
Heavy Vehicles (%)	0%	0%	0%	9%	0%	4%	0%	7%	0%	0%	0%	0%
Turn Type	Prot			Split	NA			NA	pm+ov			
Protected Phases	4			2	2			3	4			
Permitted Phases									3			
Actuated Green, G (s)	20.6			40.0	40.0			17.0	37.6			
Effective Green, g (s)	20.6			40.0	40.0			17.0	37.6			
Actuated g/C Ratio	0.21			0.42	0.42			0.18	0.39			
Clearance Time (s)	5.5			6.0	6.0			7.0	5.5			
Vehicle Extension (s)	2.0			2.0	2.0			2.0	2.0			
Lane Grp Cap (vph)	348			620	1227			282	558			
v/s Ratio Prot	c0.06			c0.17	0.12			c0.28	0.02			
v/s Ratio Perm									0.02			
v/c Ratio	0.30			0.41	0.29			1.60	0.11			
Uniform Delay, d1	31.7			19.7	18.6			39.5	18.6			
Progression Factor	1.00			1.00	1.00			1.00	1.00			
Incremental Delay, d2	0.2			2.0	0.6			287.3	0.0			
Delay (s)	31.9			21.7	19.2			326.9	18.6			
Level of Service	C			C	B			F	B			
Approach Delay (s)		31.9			20.2			290.7			0.0	
Approach LOS		C			C			F			A	

Intersection Summary			
HCM 2000 Control Delay	130.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	96.1	Sum of lost time (s)	27.0
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBT	SET	Ø1	Ø2	Ø3	Ø6	Ø8	Ø9	Ø10
Lane Configurations									
Traffic Volume (vph)	715	445							
Future Volume (vph)	715	445							
Turn Type	NA	NA							
Protected Phases	4	2 3	1	2	3	6	8	9	10
Permitted Phases									
Detector Phase	4	2 3							
Switch Phase									
Minimum Initial (s)	10.0		1.0	10.0	6.0	10.0	10.0	1.0	1.0
Minimum Split (s)	25.5		3.0	30.0	24.0	28.5	21.0	3.0	5.5
Total Split (s)	25.5		3.0	43.0	24.0	46.0	58.0	3.0	5.5
Total Split (%)	24.5%		3%	41%	23%	44%	56%	3%	5%
Yellow Time (s)	4.5		2.0	4.0	4.0	4.5	4.5	2.0	3.5
All-Red Time (s)	1.0		0.0	2.0	3.0	1.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0								
Total Lost Time (s)	5.5								
Lead/Lag	Lead		Lead	Lag	Lag			Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None		None	Max	None	Max	None	None	None
Act Effct Green (s)	20.0	62.3							
Actuated g/C Ratio	0.21	0.65							
v/c Ratio	1.24	0.62							
Control Delay	152.9	13.6							
Queue Delay	1.2	57.9							
Total Delay	154.2	71.5							
LOS	F	E							
Approach Delay	154.2	71.5							
Approach LOS	F	E							

Intersection Summary			
Cycle Length: 104			
Actuated Cycle Length: 96.1			
Natural Cycle: 135			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.60			
Intersection Signal Delay: 117.8		Intersection LOS: F	
Intersection Capacity Utilization 103.2%		ICU Level of Service G	
Analysis Period (min) 15			

Splits and Phases: 6: Medford St. Ext. & Somerville Ave. Ext.



Lane Group	NBT	SET
Lane Group Flow (vph)	819	642
v/c Ratio	1.24	0.62
Control Delay	152.9	13.6
Queue Delay	1.2	57.9
Total Delay	154.2	71.5
Queue Length 50th (ft)	~324	120
Queue Length 95th (ft)	#463	m88
Internal Link Dist (ft)	128	100
Turn Bay Length (ft)		
Base Capacity (vph)	663	1039
Starvation Cap Reductn	0	264
Spillback Cap Reductn	104	709
Storage Cap Reductn	0	0
Reduced v/c Ratio	1.47	1.95

Intersection Summary
~ 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.

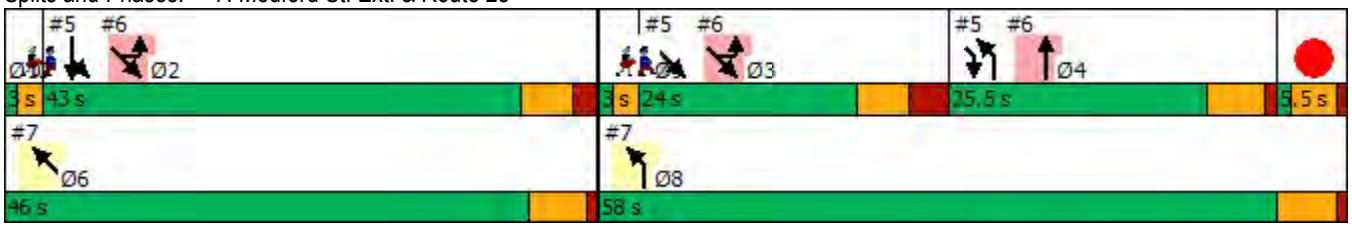
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	0	715	30	0	0	0	165	445	0	0	0	0
Future Volume (vph)	0	715	30	0	0	0	165	445	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.5						6.0				
Lane Util. Factor		0.95						1.00				
Frpb, ped/bikes		1.00						1.00				
Flpb, ped/bikes		1.00						1.00				
Frt		0.99						1.00				
Flt Protected		1.00						0.99				
Satd. Flow (prot)		3189						1567				
Flt Permitted		1.00						0.99				
Satd. Flow (perm)		3189						1567				
Peak-hour factor, PHF	0.91	0.91	0.91	0.92	0.92	0.92	0.95	0.95	0.95	0.92	0.92	0.92
Adj. Flow (vph)	0	786	33	0	0	0	174	468	0	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	23	0	0	0	0
Lane Group Flow (vph)	0	819	0	0	0	0	0	619	0	0	0	0
Confl. Peds. (#/hr)	20		4	4		20			17	17		
Confl. Bikes (#/hr)			27						1			
Heavy Vehicles (%)	0%	1%	0%	0%	0%	0%	4%	9%	0%	0%	0%	0%
Turn Type		NA					Split	NA				
Protected Phases		4					2 3	2 3				
Permitted Phases												
Actuated Green, G (s)		20.6						63.0				
Effective Green, g (s)		20.6						63.0				
Actuated g/C Ratio		0.21						0.66				
Clearance Time (s)		5.5										
Vehicle Extension (s)		2.0										
Lane Grp Cap (vph)		683						1027				
v/s Ratio Prot		c0.26						c0.39				
v/s Ratio Perm												
v/c Ratio		1.20						0.60				
Uniform Delay, d1		37.8						9.4				
Progression Factor		1.00						1.55				
Incremental Delay, d2		103.4						0.1				
Delay (s)		141.1						14.7				
Level of Service		F						B				
Approach Delay (s)		141.1			0.0			14.7			0.0	
Approach LOS		F			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	85.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	96.1	Sum of lost time (s)	27.0
Intersection Capacity Utilization	103.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	NBL	NWT	Ø1	Ø2	Ø3	Ø4	Ø9	Ø10
Lane Configurations								
Traffic Volume (vph)	880	1630						
Future Volume (vph)	880	1630						
Turn Type	Prot	NA						
Protected Phases	8	6	1	2	3	4	9	10
Permitted Phases								
Detector Phase	8	6						
Switch Phase								
Minimum Initial (s)	10.0	10.0	1.0	10.0	6.0	10.0	1.0	1.0
Minimum Split (s)	21.0	28.5	3.0	30.0	24.0	25.5	3.0	5.5
Total Split (s)	58.0	46.0	3.0	43.0	24.0	25.5	3.0	5.5
Total Split (%)	55.8%	44.2%	3%	41%	23%	25%	3%	5%
Yellow Time (s)	4.5	4.5	2.0	4.0	4.0	4.5	2.0	3.5
All-Red Time (s)	1.0	1.0	0.0	2.0	3.0	1.0	0.0	1.0
Lost Time Adjust (s)	0.0	0.0						
Total Lost Time (s)	5.5	5.5						
Lead/Lag			Lead	Lag	Lag	Lead	Lead	Lag
Lead-Lag Optimize?								
Recall Mode	None	Max	None	Max	None	None	None	None
Act Effct Green (s)	44.6	40.5						
Actuated g/C Ratio	0.46	0.42						
v/c Ratio	0.65	0.93						
Control Delay	19.0	36.6						
Queue Delay	6.4	0.0						
Total Delay	25.3	36.6						
LOS	C	D						
Approach Delay	25.3	36.6						
Approach LOS	C	D						

Intersection Summary	
Cycle Length: 104	
Actuated Cycle Length: 96.1	
Natural Cycle: 135	
Control Type: Semi Act-Uncoord	
Maximum v/c Ratio: 1.60	
Intersection Signal Delay: 32.7	Intersection LOS: C
Intersection Capacity Utilization 134.2%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 7: Medford St. Ext. & Route 28



Lane Group	NBL	NWT
Lane Group Flow (vph)	926	1772
v/c Ratio	0.65	0.93
Control Delay	19.0	36.6
Queue Delay	6.4	0.0
Total Delay	25.3	36.6
Queue Length 50th (ft)	110	363
Queue Length 95th (ft)	m87	#500
Internal Link Dist (ft)	56	187
Turn Bay Length (ft)		
Base Capacity (vph)	1673	1908
Starvation Cap Reductn	687	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.94	0.93

Intersection Summary
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.

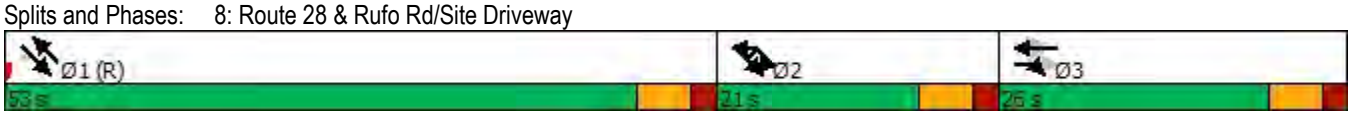
Movement	NBL	NBR	SET	SER	NWL	NWT
Lane Configurations						
Traffic Volume (vph)	880	0	0	0	0	1630
Future Volume (vph)	880	0	0	0	0	1630
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5					5.5
Lane Util. Factor	0.97					0.91
Frpb, ped/bikes	1.00					1.00
Flpb, ped/bikes	1.00					1.00
Frt	1.00					1.00
Flt Protected	0.95					1.00
Satd. Flow (prot)	3060					4528
Flt Permitted	0.95					1.00
Satd. Flow (perm)	3060					4528
Peak-hour factor, PHF	0.95	0.95	0.92	0.92	0.92	0.92
Adj. Flow (vph)	926	0	0	0	0	1772
RTOR Reduction (vph)	2	0	0	0	0	0
Lane Group Flow (vph)	924	0	0	0	0	1772
Confl. Peds. (#/hr)	3	7		18	18	
Heavy Vehicles (%)	3%	0%	0%	0%	0%	2%
Bus Blockages (#/hr)	0	0	0	0	0	8
Turn Type	Prot					NA
Protected Phases	8					6
Permitted Phases						
Actuated Green, G (s)	44.6					40.5
Effective Green, g (s)	44.6					40.5
Actuated g/C Ratio	0.46					0.42
Clearance Time (s)	5.5					5.5
Vehicle Extension (s)	2.0					2.0
Lane Grp Cap (vph)	1420					1908
v/s Ratio Prot	c0.30					c0.39
v/s Ratio Perm						
v/c Ratio	0.65					0.93
Uniform Delay, d1	19.8					26.4
Progression Factor	0.94					1.00
Incremental Delay, d2	0.1					9.5
Delay (s)	18.6					35.9
Level of Service	B					D
Approach Delay (s)	18.6		0.0			35.9
Approach LOS	B		A			D

Intersection Summary			
HCM 2000 Control Delay	30.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	96.1	Sum of lost time (s)	27.0
Intersection Capacity Utilization	134.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	SEL	SET	SER	NWL	NWT
Lane Configurations										
Traffic Volume (vph)	245	5	100	50	15	45	1080	155	85	1300
Future Volume (vph)	245	5	100	50	15	45	1080	155	85	1300
Turn Type	D.Pm	NA	custom	Perm	NA	Prot	NA	Perm	Prot	NA
Protected Phases			3		3	2	1		2	1
Permitted Phases	3	3		3				1		
Detector Phase	3	3	3	3	3	2	1	1	2	1
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Minimum Split (s)	26.0	26.0	26.0	26.0	26.0	21.0	21.0	21.0	21.0	21.0
Total Split (s)	26.0	26.0	26.0	26.0	26.0	21.0	53.0	53.0	21.0	53.0
Total Split (%)	26.0%	26.0%	26.0%	26.0%	26.0%	21.0%	53.0%	53.0%	21.0%	53.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0		6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
Act Effct Green (s)		26.4	26.4		26.4	11.1	47.0	47.0	11.1	47.0
Actuated g/C Ratio		0.26	0.26		0.26	0.11	0.47	0.47	0.11	0.47
v/c Ratio		1.76	0.27		1.33	0.27	0.78	0.23	0.55	0.97
Control Delay		393.1	8.0		198.4	43.2	26.6	3.3	54.0	44.6
Queue Delay		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		393.1	8.0		198.4	43.2	26.6	3.3	54.0	44.6
LOS		F	A		F	D	C	A	D	D
Approach Delay		283.2			198.4		24.3			45.2
Approach LOS		F			F		C			D

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 1:NWSE, Start of Green	
Natural Cycle: 150	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.76	
Intersection Signal Delay: 80.4	Intersection LOS: F
Intersection Capacity Utilization 94.3%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 8: Route 28 & Rufo Rd/Site Driveway



Lane Group	EBT	EBR	WBT	SEL	SET	SER	NWL	NWT
Lane Group Flow (vph)	308	123	360	49	1174	168	89	1389
v/c Ratio	1.76	0.27	1.33	0.27	0.78	0.23	0.55	0.97
Control Delay	393.1	8.0	198.4	43.2	26.6	3.3	54.0	44.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	393.1	8.0	198.4	43.2	26.6	3.3	54.0	44.6
Queue Length 50th (ft)	~306	0	~273	29	317	0	54	438
Queue Length 95th (ft)	#432	35	#172	62	405	34	101	#609
Internal Link Dist (ft)	290		83		1866			743
Turn Bay Length (ft)						500	500	
Base Capacity (vph)	175	457	271	243	1511	724	220	1430
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	1.76	0.27	1.33	0.20	0.78	0.23	0.40	0.97

Intersection Summary

~ 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.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	245	5	100	50	15	115	45	1080	155	85	1300	20
Future Volume (vph)	245	5	100	50	15	115	45	1080	155	85	1300	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	11	12	12	12	12	12	12	10	11	11
Total Lost time (s)		6.0	6.0		6.0		6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00	1.00		0.99		1.00	1.00	0.94	1.00	1.00	
Flpb, ped/bikes		1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Frt		1.00	0.85		0.91		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.95	1.00		0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1592	1391		1519		1624	3217	1353	1472	3041	
Flt Permitted		0.40	1.00		0.52		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		663	1391		803		1624	3217	1353	1472	3041	
Peak-hour factor, PHF	0.81	0.81	0.81	0.50	0.50	0.50	0.92	0.92	0.92	0.95	0.95	0.95
Adj. Flow (vph)	302	6	123	100	30	230	49	1174	168	89	1368	21
RTOR Reduction (vph)	0	0	91	0	59	0	0	0	91	0	1	0
Lane Group Flow (vph)	0	308	32	0	301	0	49	1174	77	89	1388	0
Confl. Peds. (#/hr)	7		2	2		7	12		12	12		12
Confl. Bikes (#/hr)									1			4
Heavy Vehicles (%)	2%	2%	1%	0%	0%	0%	0%	1%	1%	3%	3%	0%
Turn Type	D.Pm	NA	custom	Perm	NA		Prot	NA	Perm	Prot	NA	
Protected Phases			3		3		2	1		2	1	
Permitted Phases	3	3		3					1			
Actuated Green, G (s)		26.4	26.4		26.4		9.8	45.8	45.8	9.8	45.8	
Effective Green, g (s)		26.4	26.4		26.4		9.8	45.8	45.8	9.8	45.8	
Actuated g/C Ratio		0.26	0.26		0.26		0.10	0.46	0.46	0.10	0.46	
Clearance Time (s)		6.0	6.0		6.0		6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		2.0	2.0		2.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		175	367		211		159	1473	619	144	1392	
v/s Ratio Prot			0.02				0.03	0.36		c0.06	c0.46	
v/s Ratio Perm		c0.46			0.37				0.06			
v/c Ratio		1.76	0.09		1.43		0.31	0.80	0.12	0.62	1.00	
Uniform Delay, d1		36.8	27.7		36.8		41.9	23.1	15.6	43.3	27.0	
Progression Factor		1.00	1.00		1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		364.4	0.0		217.4		1.1	4.6	0.4	7.7	23.4	
Delay (s)		401.2	27.8		254.2		43.1	27.7	16.0	51.0	50.5	
Level of Service		F	C		F		D	C	B	D	D	
Approach Delay (s)		294.6			254.2			26.8			50.5	
Approach LOS		F			F			C			D	

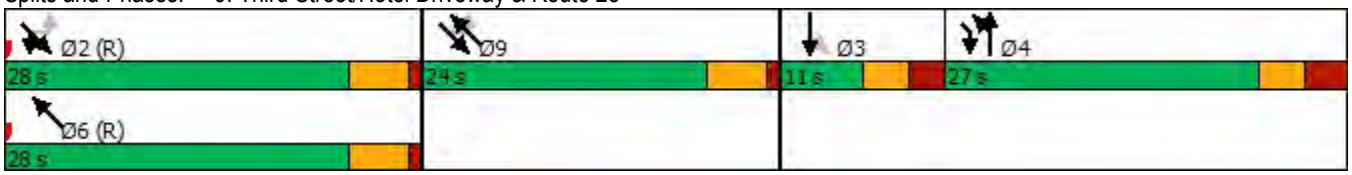
Intersection Summary			
HCM 2000 Control Delay	90.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	94.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	NBL	NBT	SBL	SBT	SEL	SET	SER	NWT	Ø2	Ø6	Ø9
Lane Configurations											
Traffic Volume (vph)	550	0	10	10	10	955	325	910			
Future Volume (vph)	550	0	10	10	10	955	325	910			
Turn Type	Split	NA	Perm	NA	Perm	NA	custom	NA			
Protected Phases	4	4		3		2 9	2 4	6 9	2	6	9
Permitted Phases			3		2 9						
Detector Phase	4	4	3	3	2 9	2 9	2 4	6 9			
Switch Phase											
Minimum Initial (s)	6.0	6.0	5.0	5.0					10.0	17.0	1.0
Minimum Split (s)	24.0	24.0	11.0	11.0					23.0	23.0	23.0
Total Split (s)	27.0	27.0	11.0	11.0					28.0	28.0	24.0
Total Split (%)	30.0%	30.0%	12.2%	12.2%					31%	31%	27%
Yellow Time (s)	3.0	3.0	3.0	3.0					4.0	4.0	4.0
All-Red Time (s)	3.0	3.0	2.5	2.5					1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0		0.0							
Total Lost Time (s)	6.0	6.0		5.5							
Lead/Lag	Lag	Lag	Lead	Lead							
Lead-Lag Optimize?											
Recall Mode	Ped	Ped	None	None					C-Min	C-Min	Min
Act Effct Green (s)	20.7	20.7		5.8		49.2	53.7	49.2			
Actuated g/C Ratio	0.23	0.23		0.06		0.55	0.60	0.55			
v/c Ratio	0.94	0.69		0.57		0.63	0.34	0.57			
Control Delay	72.4	24.8		67.5		17.2	2.2	15.9			
Queue Delay	0.0	0.0		0.0		0.0	0.0	0.0			
Total Delay	72.4	24.8		67.5		17.2	2.2	15.9			
LOS	E	C		E		B	A	B			
Approach Delay		48.7		67.5		13.4		15.9			
Approach LOS		D		E		B		B			

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 90	
Offset: 17 (19%), Referenced to phase 2:SETL and 6:NWT, Start of Green	
Natural Cycle: 85	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 22.3	Intersection LOS: C
Intersection Capacity Utilization 71.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 9: Third Street/Hotel Driveway & Route 28



Lane Group	NBL	NBT	SBT	SET	SER	NWT
Lane Group Flow (vph)	304	300	40	995	335	948
v/c Ratio	0.94	0.69	0.57	0.63	0.34	0.57
Control Delay	72.4	24.8	67.5	17.2	2.2	15.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.4	24.8	67.5	17.2	2.2	15.9
Queue Length 50th (ft)	178	78	18	205	0	185
Queue Length 95th (ft)	#342	178	#36	274	36	246
Internal Link Dist (ft)		395	52	743		192
Turn Bay Length (ft)	110					
Base Capacity (vph)	332	438	70	1632	987	1724
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	0.92	0.68	0.57	0.61	0.34	0.55

Intersection Summary

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

Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (vph)	550	0	30	10	10	5	10	955	325	0	910	10
Future Volume (vph)	550	0	30	10	10	5	10	955	325	0	910	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	11	12	12	12	12	11	12	12	11	11
Total Lost time (s)	6.0	6.0			5.5			5.0	5.0		5.0	
Lane Util. Factor	0.95	0.95			1.00			0.95	1.00		0.95	
Frpb, ped/bikes	1.00	0.99			1.00			1.00	1.00		1.00	
Flpb, ped/bikes	1.00	1.00			0.98			1.00	1.00		1.00	
Frt	1.00	0.98			0.97			1.00	0.85		1.00	
Flt Protected	0.95	0.96			0.98			1.00	1.00		1.00	
Satd. Flow (prot)	1412	1371			1599			3048	1439		3041	
Flt Permitted	0.95	0.96			0.60			0.94	1.00		1.00	
Satd. Flow (perm)	1412	1371			971			2879	1439		3041	
Peak-hour factor, PHF	0.96	0.96	0.96	0.64	0.64	0.64	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	573	0	31	16	16	8	10	985	335	0	938	10
RTOR Reduction (vph)	0	117	0	0	8	0	0	0	162	0	1	0
Lane Group Flow (vph)	304	183	0	0	32	0	0	995	173	0	947	0
Confl. Peds. (#/hr)			58	58			32		92	92		32
Confl. Bikes (#/hr)									6			12
Heavy Vehicles (%)	2%	2%	13%	0%	0%	0%	0%	3%	1%	6%	3%	0%
Turn Type	Split	NA		Perm	NA		Perm	NA	custom		NA	
Protected Phases	4	4			3			2 9	2 4		6 9	
Permitted Phases				3			2 9					
Actuated Green, G (s)	20.7	20.7			4.7			48.1	52.6		48.1	
Effective Green, g (s)	20.7	20.7			4.7			48.1	46.6		48.1	
Actuated g/C Ratio	0.23	0.23			0.05			0.53	0.52		0.53	
Clearance Time (s)	6.0	6.0			5.5							
Vehicle Extension (s)	2.0	2.0			2.0							
Lane Grp Cap (vph)	324	315			50			1538	745		1625	
v/s Ratio Prot	c0.22	0.13							0.12		0.31	
v/s Ratio Perm					c0.03			c0.35				
v/c Ratio	0.94	0.58			0.65			0.65	0.23		0.58	
Uniform Delay, d1	34.0	30.8			41.8			14.9	11.9		14.2	
Progression Factor	1.00	1.00			1.00			1.00	1.00		1.00	
Incremental Delay, d2	33.5	1.8			19.6			0.7	0.1		0.3	
Delay (s)	67.5	32.6			61.4			15.6	12.0		14.5	
Level of Service	E	C			E			B	B		B	
Approach Delay (s)		50.1			61.4			14.7			14.5	
Approach LOS		D			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	21.5
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	SEL	SET	NWT	NWR	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	0	0	1605	85	0	25
Future Volume (Veh/h)	0	0	1605	85	0	25
Sign Control		Stop	Free		Yield	
Grade		0%	0%		0%	
Peak Hour Factor	0.92	0.92	0.93	0.93	0.81	0.81
Hourly flow rate (vph)	0	0	1726	91	0	31
Pedestrians					4	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type			None			
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	3456	0	0		3502	3502
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3456	0	0		3502	3502
tC, single (s)	6.5	6.2	4.1		7.2	6.7
tC, 2 stage (s)						
tF (s)	4.0	3.3	2.2		3.6	4.1
p0 queue free %	0	100	0		0	0
cM capacity (veh/h)	0	1085	1623		0	0

Direction, Lane #	NW 1	NW 2	NW 3	SW 1
Volume Total	690	690	436	31
Volume Left	690	690	345	0
Volume Right	0	0	91	0
cSH	1623	1623	1623	0
Volume to Capacity	1.06	1.06	1.06	Err
Queue Length 95th (ft)	817	817	817	Err
Control Delay (s)	57.1	57.1	57.1	Err
Lane LOS	F	F	F	F
Approach Delay (s)	57.1			Err
Approach LOS				F

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	SBL	SBR	SBR2	SEL	SET	SER	NWL	NWT	NWR	NEL2	NEL	NER
Lane Configurations												
Traffic Volume (veh/h)	15	0	5	2	265	0	0	265	5	300	5	145
Future Volume (Veh/h)	15	0	5	2	265	0	0	265	5	300	5	145
Sign Control	Stop				Free			Free			Stop	
Grade	0%				0%			0%			0%	
Peak Hour Factor	0.63	0.63	0.63	0.84	0.84	0.84	0.91	0.91	0.91	0.92	0.92	0.92
Hourly flow rate (vph)	24	0	8	2	315	0	0	291	5	326	5	158
Pedestrians	70				1			15			68	
Lane Width (ft)	12.0				12.0			12.0			12.0	
Walking Speed (ft/s)	3.5				3.5			3.5			3.5	
Percent Blockage	7				0			1			6	
Right turn flare (veh)												
Median type					None			None				
Median storage veh)												
Upstream signal (ft)								420				
pX, platoon unblocked	0.94	0.94	0.94	0.94						0.94	0.94	
vC, conflicting volume	858	750	364	366			383			690	753	398
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	818	703	293	295			383			639	706	398
tC, single (s)	7.1	6.5	6.2	4.1			4.1			7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	2.2			2.2			3.5	4.0	3.3
p0 queue free %	86	100	99	100			100			0	98	74
cM capacity (veh/h)	168	299	659	1123			1110			306	298	597

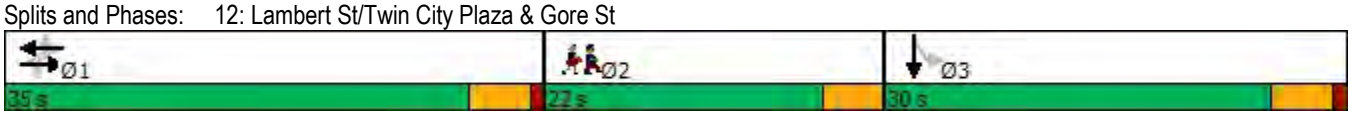
Direction, Lane #	SB 1	SE 1	NW 1	NE 1
Volume Total	32	317	296	489
Volume Left	24	2	0	326
Volume Right	8	0	5	158
cSH	207	1123	1700	363
Volume to Capacity	0.15	0.00	0.17	1.35
Queue Length 95th (ft)	13	0	0	589
Control Delay (s)	25.6	0.1	0.0	203.5
Lane LOS	D	A		F
Approach Delay (s)	25.6	0.1	0.0	203.5
Approach LOS	D			F

Intersection Summary				
Average Delay	88.5			
Intersection Capacity Utilization	64.1%	ICU Level of Service	C	
Analysis Period (min)	15			

Lane Group	EBL	EBT	WBL	WBT	SBT	Ø2
Lane Configurations						
Traffic Volume (vph)	60	160	10	150	125	
Future Volume (vph)	60	160	10	150	125	
Turn Type	Perm	NA	Perm	NA	NA	
Protected Phases		1		1	3	2
Permitted Phases	1		1			
Detector Phase	1	1	1	1	3	
Switch Phase						
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0
Minimum Split (s)	12.0	12.0	12.0	12.0	12.0	22.0
Total Split (s)	35.0	35.0	35.0	35.0	30.0	22.0
Total Split (%)	40.2%	40.2%	40.2%	40.2%	34.5%	25%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	0.0
Lost Time Adjust (s)		0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0	
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	Max	Max	Max	Max	None	Ped
Act Effct Green (s)		30.1		30.1	15.0	
Actuated g/C Ratio		0.39		0.39	0.19	
v/c Ratio		0.55		0.35	0.63	
Control Delay		21.9		18.5	33.4	
Queue Delay		0.0		0.0	0.0	
Total Delay		21.9		18.5	33.4	
LOS		C		B	C	
Approach Delay		21.9		18.5	33.4	
Approach LOS		C		B	C	

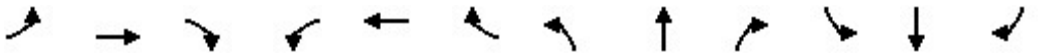
Intersection Summary	
Cycle Length: 87	
Actuated Cycle Length: 77.2	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 24.1	Intersection LOS: C
Intersection Capacity Utilization 60.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 12: Lambert St/Twin City Plaza & Gore St



Lane Group	EBT	WBT	SBT
Lane Group Flow (vph)	342	247	224
v/c Ratio	0.55	0.35	0.63
Control Delay	21.9	18.5	33.4
Queue Delay	0.0	0.0	0.0
Total Delay	21.9	18.5	33.4
Queue Length 50th (ft)	114	77	89
Queue Length 95th (ft)	220	124	150
Internal Link Dist (ft)	73	445	291
Turn Bay Length (ft)			
Base Capacity (vph)	617	699	581
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.55	0.35	0.39

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	60	160	95	10	150	30	0	0	0	15	125	55
Future Volume (vph)	60	160	95	10	150	30	0	0	0	15	125	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0						5.0	
Lane Util. Factor		1.00			1.00						1.00	
Frpb, ped/bikes		0.96			0.99						0.95	
Flpb, ped/bikes		1.00			1.00						0.99	
Frt		0.96			0.98						0.96	
Flt Protected		0.99			1.00						1.00	
Satd. Flow (prot)		1719			1816						1716	
Flt Permitted		0.89			0.98						1.00	
Satd. Flow (perm)		1551			1778						1716	
Peak-hour factor, PHF	0.92	0.92	0.92	0.77	0.77	0.77	0.92	0.92	0.92	0.87	0.87	0.87
Adj. Flow (vph)	65	174	103	13	195	39	0	0	0	17	144	63
RTOR Reduction (vph)	0	16	0	0	7	0	0	0	0	0	19	0
Lane Group Flow (vph)	0	326	0	0	240	0	0	0	0	0	205	0
Confl. Peds. (#/hr)	23		83	83		23	57		30	30		57
Confl. Bikes (#/hr)			13			26						2
Heavy Vehicles (%)	2%	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	2%
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		1			1						3	
Permitted Phases	1			1						3		
Actuated Green, G (s)		30.1			30.1						15.0	
Effective Green, g (s)		30.1			30.1						15.0	
Actuated g/C Ratio		0.39			0.39						0.19	
Clearance Time (s)		5.0			5.0						5.0	
Vehicle Extension (s)		4.0			4.0						4.0	
Lane Grp Cap (vph)		604			693						333	
v/s Ratio Prot												
v/s Ratio Perm		c0.21			0.13						0.12	
v/c Ratio		0.54			0.35						0.62	
Uniform Delay, d1		18.2			16.6						28.5	
Progression Factor		1.00			1.00						1.00	
Incremental Delay, d2		3.4			1.4						3.9	
Delay (s)		21.6			18.0						32.3	
Level of Service		C			B						C	
Approach Delay (s)		21.6			18.0			0.0			32.3	
Approach LOS		C			B			A			C	

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	77.2	Sum of lost time (s)	14.0
Intersection Capacity Utilization	60.9%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			