
Downtown One-Way to Two-Way Streets Conversion Traffic Impact Study - Appendix

**Prepared for:
City of South Bend**

DRAFT

November 18 2015



AMERICAN
STRUCTUREPOINT
INC.

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Appendix A: Smart Streets Initiative

Appendix B: Traffic Counts

Appendix C: School Traffic Adjustments

Appendix D: Origin-Destination Data

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Appendix F: Scenario 1 Capacity Analysis

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Appendix H: Scenario 3 Capacity Analysis

Appendix I: Roundabout Capacity Analysis Memorandums

Appendix J: Traffic Operations Summary

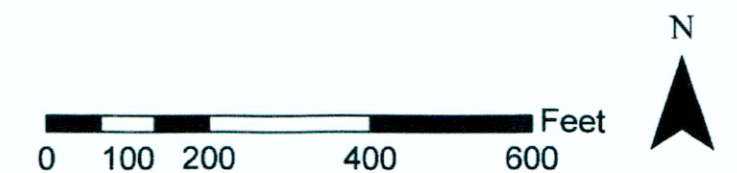


Appendix A: Smart Streets Initiative

OVERALL DOWNTOWN 2 WAY CONVERSION PLAN



South Bend, IN
Charrette 3 - Overall





Appendix B: Traffic Counts

48-Hour Tube Counts

Location: Colfax West of Williams

Start Date: 8/5/2014

Start Time: 12:15:00 PM

	Day 1	Day 2	Total
WB	1455	1750	3205
EB	1505	1788	3293
Avg	1480	1769	3249

Interval	Date	Time	WB	EB	Total
1	8/5/2014	12:15 PM	22	23	45
2	8/5/2014	12:30 PM	22	30	52
3	8/5/2014	12:45 PM	26	26	52
4	8/5/2014	01:00 PM	34	30	64
5	8/5/2014	01:15 PM	25	22	47
6	8/5/2014	01:30 PM	30	22	52
7	8/5/2014	01:45 PM	27	30	57
8	8/5/2014	02:00 PM	22	18	40
9	8/5/2014	02:15 PM	32	22	54
10	8/5/2014	02:30 PM	26	35	61
11	8/5/2014	02:45 PM	33	30	63
12	8/5/2014	03:00 PM	29	30	59
13	8/5/2014	03:15 PM	36	42	78
14	8/5/2014	03:30 PM	38	36	74
15	8/5/2014	03:45 PM	22	48	70
16	8/5/2014	04:00 PM	33	43	76
17	8/5/2014	04:15 PM	35	34	69
18	8/5/2014	04:30 PM	27	41	68
19	8/5/2014	04:45 PM	23	30	53
20	8/5/2014	05:00 PM	50	26	76
21	8/5/2014	05:15 PM	25	34	59
22	8/5/2014	05:30 PM	27	27	54
23	8/5/2014	05:45 PM	31	34	65
24	8/5/2014	06:00 PM	20	34	54
25	8/5/2014	06:15 PM	24	24	48
26	8/5/2014	06:30 PM	16	26	42
27	8/5/2014	06:45 PM	18	10	28
28	8/5/2014	07:00 PM	14	19	33
29	8/5/2014	07:15 PM	13	19	32
30	8/5/2014	07:30 PM	25	18	43
31	8/5/2014	07:45 PM	18	14	32
32	8/5/2014	08:00 PM	10	12	22
33	8/5/2014	08:15 PM	22	17	39
34	8/5/2014	08:30 PM	15	14	29
35	8/5/2014	08:45 PM	8	22	30
36	8/5/2014	09:00 PM	16	15	31
37	8/5/2014	09:15 PM	16	11	27
38	8/5/2014	09:30 PM	13	10	23
39	8/5/2014	09:45 PM	8	10	18
40	8/5/2014	10:00 PM	14	17	31
41	8/5/2014	10:15 PM	9	8	17
42	8/5/2014	10:30 PM	12	12	24
43	8/5/2014	10:45 PM	12	12	24
44	8/5/2014	11:00 PM	11	6	17
45	8/5/2014	11:15 PM	4	13	17
46	8/5/2014	11:30 PM	10	10	20

Interval	Date	Time	WB	EB	Total
47	8/5/2014	11:45 PM	10	7	17
48	8/6/2014	12:00 AM	5	7	12
49	8/6/2014	12:15 AM	3	3	6
50	8/6/2014	12:30 AM	6	4	10
51	8/6/2014	12:45 AM	4	1	5
52	8/6/2014	01:00 AM	3	3	6
53	8/6/2014	01:15 AM	3	3	6
54	8/6/2014	01:30 AM	3	4	7
55	8/6/2014	01:45 AM	4	2	6
56	8/6/2014	02:00 AM	1	1	2
57	8/6/2014	02:15 AM	2	3	5
58	8/6/2014	02:30 AM	3	0	3
59	8/6/2014	02:45 AM	1	0	1
60	8/6/2014	03:00 AM	1	4	5
61	8/6/2014	03:15 AM	1	6	7
62	8/6/2014	03:30 AM	4	3	7
63	8/6/2014	03:45 AM	1	0	1
64	8/6/2014	04:00 AM	2	5	7
65	8/6/2014	04:15 AM	3	2	5
66	8/6/2014	04:30 AM	1	4	5
67	8/6/2014	04:45 AM	2	4	6
68	8/6/2014	05:00 AM	3	11	14
69	8/6/2014	05:15 AM	1	4	5
70	8/6/2014	05:30 AM	3	4	7
71	8/6/2014	05:45 AM	5	4	9
72	8/6/2014	06:00 AM	3	3	6
73	8/6/2014	06:15 AM	6	10	16
74	8/6/2014	06:30 AM	8	12	20
75	8/6/2014	06:45 AM	8	17	25
76	8/6/2014	07:00 AM	15	13	28
77	8/6/2014	07:15 AM	9	24	33
78	8/6/2014	07:30 AM	20	35	55
79	8/6/2014	07:45 AM	12	54	66
80	8/6/2014	08:00 AM	22	23	45
81	8/6/2014	08:15 AM	18	30	48
82	8/6/2014	08:30 AM	17	28	45
83	8/6/2014	08:45 AM	11	33	44
84	8/6/2014	09:00 AM	16	21	37
85	8/6/2014	09:15 AM	14	26	40
86	8/6/2014	09:30 AM	14	22	36
87	8/6/2014	09:45 AM	19	36	55
88	8/6/2014	10:00 AM	20	20	40
89	8/6/2014	10:15 AM	20	26	46
90	8/6/2014	10:30 AM	22	11	33
91	8/6/2014	10:45 AM	13	29	42
92	8/6/2014	11:00 AM	28	33	61

South Bend Downtown 2-Way Conversion Traffic Study

Interval	Date	Time	WB	EB	Total
93	8/6/2014	11:15 AM	18	30	48
94	8/6/2014	11:30 AM	20	31	51
95	8/6/2014	11:45 AM	24	28	52
96	8/6/2014	12:00 PM	41	19	60
97	8/6/2014	12:15 PM	24	22	46
98	8/6/2014	12:30 PM	20	32	52
99	8/6/2014	12:45 PM	23	30	53
100	8/6/2014	01:00 PM	31	45	76
101	8/6/2014	01:15 PM	30	24	54
102	8/6/2014	01:30 PM	20	24	44
103	8/6/2014	01:45 PM	22	34	56
104	8/6/2014	02:00 PM	30	36	66
105	8/6/2014	02:15 PM	41	34	75
106	8/6/2014	02:30 PM	30	16	46
107	8/6/2014	02:45 PM	27	34	61
108	8/6/2014	03:00 PM	33	37	70
109	8/6/2014	03:15 PM	28	32	60
110	8/6/2014	03:30 PM	40	43	83
111	8/6/2014	03:45 PM	18	28	46
112	8/6/2014	04:00 PM	33	36	69
113	8/6/2014	04:15 PM	34	26	60
114	8/6/2014	04:30 PM	34	39	73
115	8/6/2014	04:45 PM	27	33	60
116	8/6/2014	05:00 PM	50	33	83
117	8/6/2014	05:15 PM	33	29	62
118	8/6/2014	05:30 PM	34	30	64
119	8/6/2014	05:45 PM	25	35	60
120	8/6/2014	06:00 PM	22	26	48
121	8/6/2014	06:15 PM	23	22	45
122	8/6/2014	06:30 PM	15	24	39
123	8/6/2014	06:45 PM	14	22	36
124	8/6/2014	07:00 PM	14	15	29
125	8/6/2014	07:15 PM	12	23	35
126	8/6/2014	07:30 PM	13	15	28
127	8/6/2014	07:45 PM	20	19	39
128	8/6/2014	08:00 PM	10	15	25
129	8/6/2014	08:15 PM	13	13	26
130	8/6/2014	08:30 PM	21	24	45
131	8/6/2014	08:45 PM	18	18	36
132	8/6/2014	09:00 PM	15	10	25
133	8/6/2014	09:15 PM	9	16	25
134	8/6/2014	09:30 PM	16	15	31
135	8/6/2014	09:45 PM	7	9	16
136	8/6/2014	10:00 PM	12	13	25
137	8/6/2014	10:15 PM	9	10	19
138	8/6/2014	10:30 PM	4	8	12
139	8/6/2014	10:45 PM	5	10	15
140	8/6/2014	11:00 PM	11	10	21
141	8/6/2014	11:15 PM	4	8	12
142	8/6/2014	11:30 PM	6	6	12

Interval	Date	Time	WB	EB	Total
143	8/6/2014	11:45 PM	4	5	9
144	8/7/2014	12:00 AM	6	12	18
145	8/7/2014	12:15 AM	4	7	11
146	8/7/2014	12:30 AM	7	4	11
147	8/7/2014	12:45 AM	6	7	13
148	8/7/2014	01:00 AM	3	7	10
149	8/7/2014	01:15 AM	3	2	5
150	8/7/2014	01:30 AM	4	2	6
151	8/7/2014	01:45 AM	0	0	0
152	8/7/2014	02:00 AM	2	3	5
153	8/7/2014	02:15 AM	5	2	7
154	8/7/2014	02:30 AM	2	0	2
155	8/7/2014	02:45 AM	1	1	2
156	8/7/2014	03:00 AM	1	1	2
157	8/7/2014	03:15 AM	2	3	5
158	8/7/2014	03:30 AM	0	3	3
159	8/7/2014	03:45 AM	4	0	4
160	8/7/2014	04:00 AM	2	8	10
161	8/7/2014	04:15 AM	1	5	6
162	8/7/2014	04:30 AM	2	2	4
163	8/7/2014	04:45 AM	3	3	6
164	8/7/2014	05:00 AM	3	5	8
165	8/7/2014	05:15 AM	2	6	8
166	8/7/2014	05:30 AM	2	6	8
167	8/7/2014	05:45 AM	6	5	11
168	8/7/2014	06:00 AM	2	10	12
169	8/7/2014	06:15 AM	3	12	15
170	8/7/2014	06:30 AM	12	10	22
171	8/7/2014	06:45 AM	14	12	26
172	8/7/2014	07:00 AM	10	18	28
173	8/7/2014	07:15 AM	17	30	47
174	8/7/2014	07:30 AM	18	33	51
175	8/7/2014	07:45 AM	19	40	59
176	8/7/2014	08:00 AM	23	34	57
177	8/7/2014	08:15 AM	16	39	55
178	8/7/2014	08:30 AM	14	25	39
179	8/7/2014	08:45 AM	12	20	32
180	8/7/2014	09:00 AM	11	23	34
181	8/7/2014	09:15 AM	19	13	32
182	8/7/2014	09:30 AM	14	22	36
183	8/7/2014	09:45 AM	18	25	43
184	8/7/2014	10:00 AM	23	29	52
185	8/7/2014	10:15 AM	24	39	63
186	8/7/2014	10:30 AM	23	16	39
187	8/7/2014	10:45 AM	25	22	47
188	8/7/2014	11:00 AM	30	26	56
189	8/7/2014	11:15 AM	18	30	48
190	8/7/2014	11:30 AM	20	31	51
191	8/7/2014	11:45 AM	24	28	52
192	8/7/2014	12:00 PM	41	19	60

48-Hour Tube Counts

Location: Ewing Ave east of Michigan St

Start Date: 8/5/2014

Start Time: 8:00:00 AM

	Day 1	Day 2	Total
WB	3660	4035	7695
EB	3920	3622	7542
Avg	3790	3829	7619

Interval	Date	Time	WB	EB	Total
1	8/5/2014	08:00 AM	64	31	95
2	8/5/2014	08:15 AM	42	22	64
3	8/5/2014	08:30 AM	54	38	92
4	8/5/2014	08:45 AM	36	35	71
5	8/5/2014	09:00 AM	42	34	76
6	8/5/2014	09:15 AM	42	45	87
7	8/5/2014	09:30 AM	40	43	83
8	8/5/2014	09:45 AM	38	28	66
9	8/5/2014	10:00 AM	51	34	85
10	8/5/2014	10:15 AM	50	44	94
11	8/5/2014	10:30 AM	38	38	76
12	8/5/2014	10:45 AM	48	44	92
13	8/5/2014	11:00 AM	44	46	90
14	8/5/2014	11:15 AM	54	32	86
15	8/5/2014	11:30 AM	55	45	100
16	8/5/2014	11:45 AM	53	58	111
17	8/5/2014	12:00 PM	50	60	110
18	8/5/2014	12:15 PM	64	68	132
19	8/5/2014	12:30 PM	66	58	124
20	8/5/2014	12:45 PM	65	50	115
21	8/5/2014	01:00 PM	60	54	114
22	8/5/2014	01:15 PM	60	56	116
23	8/5/2014	01:30 PM	73	50	123
24	8/5/2014	01:45 PM	58	50	108
25	8/5/2014	02:00 PM	73	60	133
26	8/5/2014	02:15 PM	56	48	104
27	8/5/2014	02:30 PM	68	53	121
28	8/5/2014	02:45 PM	59	61	120
29	8/5/2014	03:00 PM	70	65	135
30	8/5/2014	03:15 PM	55	69	124
31	8/5/2014	03:30 PM	70	81	151
32	8/5/2014	03:45 PM	80	78	158
33	8/5/2014	04:00 PM	78	82	160
34	8/5/2014	04:15 PM	70	71	141
35	8/5/2014	04:30 PM	64	98	162
36	8/5/2014	04:45 PM	61	75	136
37	8/5/2014	05:00 PM	63	102	165
38	8/5/2014	05:15 PM	62	104	166
39	8/5/2014	05:30 PM	56	77	133
40	8/5/2014	05:45 PM	62	71	133
41	8/5/2014	06:00 PM	68	64	132
42	8/5/2014	06:15 PM	47	60	107
43	8/5/2014	06:30 PM	60	61	121
44	8/5/2014	06:45 PM	42	38	80
45	8/5/2014	07:00 PM	48	52	100
46	8/5/2014	07:15 PM	48	48	96

Interval	Date	Time	WB	EB	Total
47	8/5/2014	07:30 PM	48	54	102
48	8/5/2014	07:45 PM	46	55	101
49	8/5/2014	08:00 PM	43	46	89
50	8/5/2014	08:15 PM	50	48	98
51	8/5/2014	08:30 PM	30	42	72
52	8/5/2014	08:45 PM	48	38	86
53	8/5/2014	09:00 PM	42	36	78
54	8/5/2014	09:15 PM	26	31	57
55	8/5/2014	09:30 PM	38	32	70
56	8/5/2014	09:45 PM	26	38	64
57	8/5/2014	10:00 PM	24	42	66
58	8/5/2014	10:15 PM	19	22	41
59	8/5/2014	10:30 PM	28	24	52
60	8/5/2014	10:45 PM	18	22	40
61	8/5/2014	11:00 PM	18	26	44
62	8/5/2014	11:15 PM	12	20	32
63	8/5/2014	11:30 PM	18	6	24
64	8/5/2014	11:45 PM	12	14	26
65	8/6/2014	12:00 AM	9	14	23
66	8/6/2014	12:15 AM	8	18	26
67	8/6/2014	12:30 AM	4	6	10
68	8/6/2014	12:45 AM	1	8	9
69	8/6/2014	01:00 AM	6	13	19
70	8/6/2014	01:15 AM	7	11	18
71	8/6/2014	01:30 AM	6	7	13
72	8/6/2014	01:45 AM	2	5	7
73	8/6/2014	02:00 AM	6	8	14
74	8/6/2014	02:15 AM	6	4	10
75	8/6/2014	02:30 AM	2	5	7
76	8/6/2014	02:45 AM	3	4	7
77	8/6/2014	03:00 AM	2	9	11
78	8/6/2014	03:15 AM	2	6	8
79	8/6/2014	03:30 AM	5	4	9
80	8/6/2014	03:45 AM	9	19	28
81	8/6/2014	04:00 AM	8	30	38
82	8/6/2014	04:15 AM	6	26	32
83	8/6/2014	04:30 AM	12	42	54
84	8/6/2014	04:45 AM	5	50	55
85	8/6/2014	05:00 AM	13	50	63
86	8/6/2014	05:15 AM	17	45	62
87	8/6/2014	05:30 AM	18	51	69
88	8/6/2014	05:45 AM	22	56	78
89	8/6/2014	06:00 AM	18	53	71
90	8/6/2014	06:15 AM	33	78	111
91	8/6/2014	06:30 AM	46	81	127
92	8/6/2014	06:45 AM	48	70	118

South Bend Downtown 2-Way Conversion Traffic Study

Interval	Date	Time	WB	EB	Total
93	8/6/2014	07:00 AM	43	18	61
94	8/6/2014	07:15 AM	56	29	85
95	8/6/2014	07:30 AM	84	38	122
96	8/6/2014	07:45 AM	92	42	134
97	8/6/2014	08:00 AM	55	30	85
98	8/6/2014	08:15 AM	56	34	90
99	8/6/2014	08:30 AM	60	34	94
100	8/6/2014	08:45 AM	71	37	108
101	8/6/2014	09:00 AM	48	36	84
102	8/6/2014	09:15 AM	52	32	84
103	8/6/2014	09:30 AM	43	34	77
104	8/6/2014	09:45 AM	51	34	85
105	8/6/2014	10:00 AM	50	42	92
106	8/6/2014	10:15 AM	40	38	78
107	8/6/2014	10:30 AM	48	30	78
108	8/6/2014	10:45 AM	48	36	84
109	8/6/2014	11:00 AM	48	36	84
110	8/6/2014	11:15 AM	29	47	76
111	8/6/2014	11:30 AM	38	56	94
112	8/6/2014	11:45 AM	50	44	94
113	8/6/2014	12:00 PM	46	70	116
114	8/6/2014	12:15 PM	50	46	96
115	8/6/2014	12:30 PM	60	54	114
116	8/6/2014	12:45 PM	70	62	132
117	8/6/2014	01:00 PM	56	57	113
118	8/6/2014	01:15 PM	53	52	105
119	8/6/2014	01:30 PM	66	46	112
120	8/6/2014	01:45 PM	51	64	115
121	8/6/2014	02:00 PM	60	60	120
122	8/6/2014	02:15 PM	78	65	143
123	8/6/2014	02:30 PM	87	56	143
124	8/6/2014	02:45 PM	82	62	144
125	8/6/2014	03:00 PM	79	72	151
126	8/6/2014	03:15 PM	64	82	146
127	8/6/2014	03:30 PM	78	92	170
128	8/6/2014	03:45 PM	72	67	139
129	8/6/2014	04:00 PM	75	90	165
130	8/6/2014	04:15 PM	68	68	136
131	8/6/2014	04:30 PM	96	93	189
132	8/6/2014	04:45 PM	64	82	146
133	8/6/2014	05:00 PM	68	100	168
134	8/6/2014	05:15 PM	58	88	146
135	8/6/2014	05:30 PM	72	72	144
136	8/6/2014	05:45 PM	72	92	164
137	8/6/2014	06:00 PM	66	76	142
138	8/6/2014	06:15 PM	60	67	127
139	8/6/2014	06:30 PM	72	46	118
140	8/6/2014	06:45 PM	52	58	110
141	8/6/2014	07:00 PM	43	58	101
142	8/6/2014	07:15 PM	38	46	84

Interval	Date	Time	WB	EB	Total
143	8/6/2014	07:30 PM	49	52	101
144	8/6/2014	07:45 PM	50	46	96
145	8/6/2014	08:00 PM	33	52	85
146	8/6/2014	08:15 PM	49	43	92
147	8/6/2014	08:30 PM	38	40	78
148	8/6/2014	08:45 PM	42	46	88
149	8/6/2014	09:00 PM	46	56	102
150	8/6/2014	09:15 PM	34	50	84
151	8/6/2014	09:30 PM	41	34	75
152	8/6/2014	09:45 PM	31	30	61
153	8/6/2014	10:00 PM	26	32	58
154	8/6/2014	10:15 PM	26	20	46
155	8/6/2014	10:30 PM	30	17	47
156	8/6/2014	10:45 PM	12	27	39
157	8/6/2014	11:00 PM	19	17	36
158	8/6/2014	11:15 PM	14	26	40
159	8/6/2014	11:30 PM	15	12	27
160	8/6/2014	11:45 PM	20	8	28
161	8/7/2014	12:00 AM	10	13	23
162	8/7/2014	12:15 AM	13	18	31
163	8/7/2014	12:30 AM	9	10	19
164	8/7/2014	12:45 AM	10	8	18
165	8/7/2014	01:00 AM	8	7	15
166	8/7/2014	01:15 AM	10	8	18
167	8/7/2014	01:30 AM	3	6	9
168	8/7/2014	01:45 AM	5	7	12
169	8/7/2014	02:00 AM	8	4	12
170	8/7/2014	02:15 AM	3	7	10
171	8/7/2014	02:30 AM	7	4	11
172	8/7/2014	02:45 AM	6	4	10
173	8/7/2014	03:00 AM	6	3	9
174	8/7/2014	03:15 AM	6	13	19
175	8/7/2014	03:30 AM	4	4	8
176	8/7/2014	03:45 AM	6	6	12
177	8/7/2014	04:00 AM	3	6	9
178	8/7/2014	04:15 AM	8	2	10
179	8/7/2014	04:30 AM	14	8	22
180	8/7/2014	04:45 AM	10	12	22
181	8/7/2014	05:00 AM	8	7	15
182	8/7/2014	05:15 AM	18	7	25
183	8/7/2014	05:30 AM	18	14	32
184	8/7/2014	05:45 AM	20	12	32
185	8/7/2014	06:00 AM	22	14	36
186	8/7/2014	06:15 AM	39	14	53
187	8/7/2014	06:30 AM	39	23	62
188	8/7/2014	06:45 AM	47	24	71
189	8/7/2014	07:00 AM	32	14	46
190	8/7/2014	07:15 AM	54	16	70
191	8/7/2014	07:30 AM	66	31	97
192	8/7/2014	07:45 AM	90	45	135

South Bend Downtown 2-Way Conversion Traffic Study

48-Hour Tube Counts

Location: Ewing Ave west of Main St

Start Date: 8/5/2014

Start Time: 8:30:00 AM

	Day 1	Day 2	Total
WB	3340	3540	6880
EB	3428	3724	7152
Avg	3384	3632	7016

Interval	Date	Time	WB	EB	Total
1	8/5/2014	08:30 AM	29	50	79
2	8/5/2014	08:45 AM	26	55	81
3	8/5/2014	09:00 AM	30	36	66
4	8/5/2014	09:15 AM	30	46	76
5	8/5/2014	09:30 AM	32	44	76
6	8/5/2014	09:45 AM	40	34	74
7	8/5/2014	10:00 AM	32	36	68
8	8/5/2014	10:15 AM	31	30	61
9	8/5/2014	10:30 AM	40	44	84
10	8/5/2014	10:45 AM	38	42	80
11	8/5/2014	11:00 AM	37	47	84
12	8/5/2014	11:15 AM	44	40	84
13	8/5/2014	11:30 AM	46	48	94
14	8/5/2014	11:45 AM	52	60	112
15	8/5/2014	12:00 PM	42	52	94
16	8/5/2014	12:15 PM	68	56	124
17	8/5/2014	12:30 PM	46	56	102
18	8/5/2014	12:45 PM	52	52	104
19	8/5/2014	01:00 PM	42	54	96
20	8/5/2014	01:15 PM	40	56	96
21	8/5/2014	01:30 PM	46	59	105
22	8/5/2014	01:45 PM	49	49	98
23	8/5/2014	02:00 PM	56	58	114
24	8/5/2014	02:15 PM	66	58	124
25	8/5/2014	02:30 PM	52	68	120
26	8/5/2014	02:45 PM	38	51	89
27	8/5/2014	03:00 PM	62	74	136
28	8/5/2014	03:15 PM	53	70	123
29	8/5/2014	03:30 PM	80	76	156
30	8/5/2014	03:45 PM	74	68	142
31	8/5/2014	04:00 PM	58	77	135
32	8/5/2014	04:15 PM	81	61	142
33	8/5/2014	04:30 PM	61	76	137
34	8/5/2014	04:45 PM	56	67	123
35	8/5/2014	05:00 PM	59	80	139
36	8/5/2014	05:15 PM	70	76	146
37	8/5/2014	05:30 PM	55	62	117
38	8/5/2014	05:45 PM	55	65	120
39	8/5/2014	06:00 PM	60	42	102
40	8/5/2014	06:15 PM	49	44	93
41	8/5/2014	06:30 PM	53	56	109
42	8/5/2014	06:45 PM	36	44	80
43	8/5/2014	07:00 PM	50	40	90
44	8/5/2014	07:15 PM	50	48	98
45	8/5/2014	07:30 PM	47	47	94
46	8/5/2014	07:45 PM	40	54	94

Interval	Date	Time	WB	EB	Total
47	8/5/2014	08:00 PM	36	26	62
48	8/5/2014	08:15 PM	45	36	81
49	8/5/2014	08:30 PM	29	41	70
50	8/5/2014	08:45 PM	41	44	85
51	8/5/2014	09:00 PM	41	42	83
52	8/5/2014	09:15 PM	26	27	53
53	8/5/2014	09:30 PM	39	40	79
54	8/5/2014	09:45 PM	35	37	72
55	8/5/2014	10:00 PM	33	41	74
56	8/5/2014	10:15 PM	28	28	56
57	8/5/2014	10:30 PM	23	23	46
58	8/5/2014	10:45 PM	16	23	39
59	8/5/2014	11:00 PM	23	31	54
60	8/5/2014	11:15 PM	20	25	45
61	8/5/2014	11:30 PM	22	6	28
62	8/5/2014	11:45 PM	12	9	21
63	8/6/2014	12:00 AM	7	14	21
64	8/6/2014	12:15 AM	9	15	24
65	8/6/2014	12:30 AM	10	3	13
66	8/6/2014	12:45 AM	1	11	12
67	8/6/2014	01:00 AM	6	10	16
68	8/6/2014	01:15 AM	7	8	15
69	8/6/2014	01:30 AM	11	2	13
70	8/6/2014	01:45 AM	3	4	7
71	8/6/2014	02:00 AM	3	2	5
72	8/6/2014	02:15 AM	6	3	9
73	8/6/2014	02:30 AM	2	3	5
74	8/6/2014	02:45 AM	2	1	3
75	8/6/2014	03:00 AM	1	7	8
76	8/6/2014	03:15 AM	6	10	16
77	8/6/2014	03:30 AM	6	5	11
78	8/6/2014	03:45 AM	8	9	17
79	8/6/2014	04:00 AM	2	9	11
80	8/6/2014	04:15 AM	13	4	17
81	8/6/2014	04:30 AM	22	20	42
82	8/6/2014	04:45 AM	16	12	28
83	8/6/2014	05:00 AM	28	24	52
84	8/6/2014	05:15 AM	22	18	40
85	8/6/2014	05:30 AM	21	23	44
86	8/6/2014	05:45 AM	24	16	40
87	8/6/2014	06:00 AM	34	14	48
88	8/6/2014	06:15 AM	35	28	63
89	8/6/2014	06:30 AM	63	30	93
90	8/6/2014	06:45 AM	66	27	93
91	8/6/2014	07:00 AM	34	24	58
92	8/6/2014	07:15 AM	28	50	78

South Bend Downtown 2-Way Conversion Traffic Study

Interval	Date	Time	WB	EB	Total
93	8/6/2014	07:30 AM	34	55	89
94	8/6/2014	07:45 AM	50	58	108
95	8/6/2014	08:00 AM	38	34	72
96	8/6/2014	08:15 AM	32	41	73
97	8/6/2014	08:30 AM	39	40	79
98	8/6/2014	08:45 AM	34	38	72
99	8/6/2014	09:00 AM	38	40	78
100	8/6/2014	09:15 AM	36	52	88
101	8/6/2014	09:30 AM	32	38	70
102	8/6/2014	09:45 AM	51	46	97
103	8/6/2014	10:00 AM	40	54	94
104	8/6/2014	10:15 AM	35	48	83
105	8/6/2014	10:30 AM	33	52	85
106	8/6/2014	10:45 AM	61	53	114
107	8/6/2014	11:00 AM	43	36	79
108	8/6/2014	11:15 AM	40	44	84
109	8/6/2014	11:30 AM	51	58	109
110	8/6/2014	11:45 AM	46	55	101
111	8/6/2014	12:00 PM	42	58	100
112	8/6/2014	12:15 PM	52	58	110
113	8/6/2014	12:30 PM	61	44	105
114	8/6/2014	12:45 PM	46	57	103
115	8/6/2014	01:00 PM	52	60	112
116	8/6/2014	01:15 PM	54	48	102
117	8/6/2014	01:30 PM	53	50	103
118	8/6/2014	01:45 PM	46	70	116
119	8/6/2014	02:00 PM	66	60	126
120	8/6/2014	02:15 PM	59	60	119
121	8/6/2014	02:30 PM	61	66	127
122	8/6/2014	02:45 PM	66	67	133
123	8/6/2014	03:00 PM	62	80	142
124	8/6/2014	03:15 PM	56	82	138
125	8/6/2014	03:30 PM	76	96	172
126	8/6/2014	03:45 PM	64	72	136
127	8/6/2014	04:00 PM	73	81	154
128	8/6/2014	04:15 PM	86	68	154
129	8/6/2014	04:30 PM	74	73	147
130	8/6/2014	04:45 PM	68	74	142
131	8/6/2014	05:00 PM	67	84	151
132	8/6/2014	05:15 PM	57	78	135
133	8/6/2014	05:30 PM	68	76	144
134	8/6/2014	05:45 PM	68	67	135
135	8/6/2014	06:00 PM	65	68	133
136	8/6/2014	06:15 PM	57	58	115
137	8/6/2014	06:30 PM	54	51	105
138	8/6/2014	06:45 PM	48	46	94
139	8/6/2014	07:00 PM	66	53	119
140	8/6/2014	07:15 PM	48	52	100
141	8/6/2014	07:30 PM	38	36	74
142	8/6/2014	07:45 PM	38	33	71

Interval	Date	Time	WB	EB	Total
143	8/6/2014	08:00 PM	41	37	78
144	8/6/2014	08:15 PM	43	42	85
145	8/6/2014	08:30 PM	52	34	86
146	8/6/2014	08:45 PM	43	44	87
147	8/6/2014	09:00 PM	43	54	97
148	8/6/2014	09:15 PM	32	35	67
149	8/6/2014	09:30 PM	41	34	75
150	8/6/2014	09:45 PM	32	28	60
151	8/6/2014	10:00 PM	30	26	56
152	8/6/2014	10:15 PM	28	19	47
153	8/6/2014	10:30 PM	33	22	55
154	8/6/2014	10:45 PM	14	28	42
155	8/6/2014	11:00 PM	15	24	39
156	8/6/2014	11:15 PM	15	22	37
157	8/6/2014	11:30 PM	22	16	38
158	8/6/2014	11:45 PM	10	10	20
159	8/7/2014	12:00 AM	14	20	34
160	8/7/2014	12:15 AM	8	11	19
161	8/7/2014	12:30 AM	12	8	20
162	8/7/2014	12:45 AM	11	8	19
163	8/7/2014	01:00 AM	4	10	14
164	8/7/2014	01:15 AM	5	5	10
165	8/7/2014	01:30 AM	6	6	12
166	8/7/2014	01:45 AM	5	8	13
167	8/7/2014	02:00 AM	6	6	12
168	8/7/2014	02:15 AM	5	5	10
169	8/7/2014	02:30 AM	3	2	5
170	8/7/2014	02:45 AM	5	3	8
171	8/7/2014	03:00 AM	2	3	5
172	8/7/2014	03:15 AM	4	14	18
173	8/7/2014	03:30 AM	2	8	10
174	8/7/2014	03:45 AM	3	9	12
175	8/7/2014	04:00 AM	3	8	11
176	8/7/2014	04:15 AM	7	8	15
177	8/7/2014	04:30 AM	11	19	30
178	8/7/2014	04:45 AM	7	12	19
179	8/7/2014	05:00 AM	9	16	25
180	8/7/2014	05:15 AM	7	12	19
181	8/7/2014	05:30 AM	12	19	31
182	8/7/2014	05:45 AM	22	12	34
183	8/7/2014	06:00 AM	16	16	32
184	8/7/2014	06:15 AM	20	22	42
185	8/7/2014	06:30 AM	41	30	71
186	8/7/2014	06:45 AM	38	30	68
187	8/7/2014	07:00 AM	16	20	36
188	8/7/2014	07:15 AM	18	34	52
189	8/7/2014	07:30 AM	43	44	87
190	8/7/2014	07:45 AM	27	61	88
191	8/7/2014	08:00 AM	40	46	86
192	8/7/2014	08:15 AM	32	34	66

48-Hour Tube Counts

Location: Indiana Ave west of Main St

Start Date: 8/5/2014

Start Time: 12:15:00 PM

	Day 1	Day 2	Total
EB	2656	556	3212
WB	2751	567	3318
Avg	2704	561.5	3265

Interval	Date	Time	EB	WB	Total
1	8/5/2014	10:00 AM	37	9	46
2	8/5/2014	10:15 AM	29	14	43
3	8/5/2014	10:30 AM	40	8	48
4	8/5/2014	10:45 AM	46	10	56
5	8/5/2014	11:00 AM	45	13	58
6	8/5/2014	11:15 AM	30	5	35
7	8/5/2014	11:30 AM	42	8	50
8	8/5/2014	11:45 AM	51	10	61
9	8/5/2014	12:00 PM	43	10	53
10	8/5/2014	12:15 PM	42	10	52
11	8/5/2014	12:30 PM	40	13	53
12	8/5/2014	12:45 PM	51	10	61
13	8/5/2014	01:00 PM	50	7	57
14	8/5/2014	01:15 PM	42	13	55
15	8/5/2014	01:30 PM	39	10	49
16	8/5/2014	01:45 PM	41	14	55
17	8/5/2014	02:00 PM	25	6	31
18	8/5/2014	02:15 PM	49	14	63
19	8/5/2014	02:30 PM	56	12	68
20	8/5/2014	02:45 PM	36	9	45
21	8/5/2014	03:00 PM	42	14	56
22	8/5/2014	03:15 PM	46	12	58
23	8/5/2014	03:30 PM	54	14	68
24	8/5/2014	03:45 PM	51	12	63
25	8/5/2014	04:00 PM	53	9	62
26	8/5/2014	04:15 PM	44	8	52
27	8/5/2014	04:30 PM	64	7	71
28	8/5/2014	04:45 PM	63	14	77
29	8/5/2014	05:00 PM	44	6	50
30	8/5/2014	05:15 PM	56	8	64
31	8/5/2014	05:30 PM	47	11	58
32	8/5/2014	05:45 PM	38	4	42
33	8/5/2014	06:00 PM	38	7	45
34	8/5/2014	06:15 PM	34	3	37
35	8/5/2014	06:30 PM	32	8	40
36	8/5/2014	06:45 PM	44	5	49
37	8/5/2014	07:00 PM	26	8	34
38	8/5/2014	07:15 PM	31	9	40
39	8/5/2014	07:30 PM	20	6	26
40	8/5/2014	07:45 PM	28	4	32
41	8/5/2014	08:00 PM	32	2	34
42	8/5/2014	08:15 PM	23	8	31
43	8/5/2014	08:30 PM	25	4	29
44	8/5/2014	08:45 PM	26	6	32
45	8/5/2014	09:00 PM	23	6	29
46	8/5/2014	09:15 PM	14	2	16

Interval	Date	Time	EB	WB	Total
47	8/5/2014	09:30 PM	26	5	31
48	8/5/2014	09:45 PM	14	8	22
49	8/5/2014	10:00 PM	17	7	24
50	8/5/2014	10:15 PM	17	6	23
51	8/5/2014	10:30 PM	10	2	12
52	8/5/2014	10:45 PM	6	2	8
53	8/5/2014	11:00 PM	12	0	12
54	8/5/2014	11:15 PM	12	4	16
55	8/5/2014	11:30 PM	7	3	10
56	8/5/2014	11:45 PM	14	0	14
57	8/6/2014	12:00 AM	10	2	12
58	8/6/2014	12:15 AM	10	2	12
59	8/6/2014	12:30 AM	7	4	11
60	8/6/2014	12:45 AM	2	1	3
61	8/6/2014	01:00 AM	2	2	4
62	8/6/2014	01:15 AM	1	1	2
63	8/6/2014	01:30 AM	5	0	5
64	8/6/2014	01:45 AM	6	1	7
65	8/6/2014	02:00 AM	3	2	5
66	8/6/2014	02:15 AM	9	1	10
67	8/6/2014	02:30 AM	4	1	5
68	8/6/2014	02:45 AM	3	0	3
69	8/6/2014	03:00 AM	9	2	11
70	8/6/2014	03:15 AM	5	2	7
71	8/6/2014	03:30 AM	6	0	6
72	8/6/2014	03:45 AM	9	2	11
73	8/6/2014	04:00 AM	8	2	10
74	8/6/2014	04:15 AM	9	2	11
75	8/6/2014	04:30 AM	5	1	6
76	8/6/2014	04:45 AM	7	2	9
77	8/6/2014	05:00 AM	13	0	13
78	8/6/2014	05:15 AM	16	1	17
79	8/6/2014	05:30 AM	23	4	27
80	8/6/2014	05:45 AM	17	4	21
81	8/6/2014	06:00 AM	26	2	28
82	8/6/2014	06:15 AM	17	3	20
83	8/6/2014	06:30 AM	15	4	19
84	8/6/2014	06:45 AM	40	5	45
85	8/6/2014	07:00 AM	22	4	26
86	8/6/2014	07:15 AM	38	4	42
87	8/6/2014	07:30 AM	40	5	45
88	8/6/2014	07:45 AM	57	6	63
89	8/6/2014	08:00 AM	26	8	34
90	8/6/2014	08:15 AM	44	3	47
91	8/6/2014	08:30 AM	39	11	50
92	8/6/2014	08:45 AM	32	4	36

South Bend Downtown 2-Way Conversion Traffic Study

Interval	Date	Time	EB	WB	Total
93	8/6/2014	09:00 AM	35	2	37
94	8/6/2014	09:15 AM	34	5	39
95	8/6/2014	09:30 AM	35	12	47
96	8/6/2014	09:45 AM	42	8	50
97	8/6/2014	10:00 AM	25	6	31
98	8/6/2014	10:15 AM	31	13	44
99	8/6/2014	10:30 AM	36	12	48
100	8/6/2014	10:45 AM	44	10	54
101	8/6/2014	11:00 AM	48	8	56
102	8/6/2014	11:15 AM	32	20	52
103	8/6/2014	11:30 AM	35	12	47
104	8/6/2014	11:45 AM	54	20	74
105	8/6/2014	12:00 PM	45	10	55
106	8/6/2014	12:15 PM	37	10	47
107	8/6/2014	12:30 PM	41	7	48
108	8/6/2014	12:45 PM	48	4	52
109	8/6/2014	01:00 PM	38	10	48
110	8/6/2014	01:15 PM	46	4	50
111	8/6/2014	01:30 PM	42	7	49
112	8/6/2014	01:45 PM	46	8	54
113	8/6/2014	02:00 PM	52	12	64
114	8/6/2014	02:15 PM	46	12	58
115	8/6/2014	02:30 PM	38	10	48
116	8/6/2014	02:45 PM	38	9	47
117	8/6/2014	03:00 PM	50	9	59
118	8/6/2014	03:15 PM	48	6	54
119	8/6/2014	03:30 PM	51	10	61
120	8/6/2014	03:45 PM	46	9	55
121	8/6/2014	04:00 PM	66	7	73
122	8/6/2014	04:15 PM	42	13	55
123	8/6/2014	04:30 PM	59	7	66
124	8/6/2014	04:45 PM	60	14	74
125	8/6/2014	05:00 PM	50	7	57
126	8/6/2014	05:15 PM	54	8	62
127	8/6/2014	05:30 PM	40	5	45
128	8/6/2014	05:45 PM	40	7	47
129	8/6/2014	06:00 PM	42	9	51
130	8/6/2014	06:15 PM	35	2	37
131	8/6/2014	06:30 PM	40	6	46
132	8/6/2014	06:45 PM	34	6	40
133	8/6/2014	07:00 PM	28	10	38
134	8/6/2014	07:15 PM	23	10	33
135	8/6/2014	07:30 PM	26	3	29
136	8/6/2014	07:45 PM	32	2	34
137	8/6/2014	08:00 PM	27	7	34
138	8/6/2014	08:15 PM	32	8	40
139	8/6/2014	08:30 PM	24	3	27
140	8/6/2014	08:45 PM	22	4	26
141	8/6/2014	09:00 PM	26	4	30
142	8/6/2014	09:15 PM	30	3	33

Interval	Date	Time	EB	WB	Total
143	8/6/2014	09:30 PM	19	6	25
144	8/6/2014	09:45 PM	14	8	22
145	8/6/2014	10:00 PM	28	5	33
146	8/6/2014	10:15 PM	16	4	20
147	8/6/2014	10:30 PM	15	6	21
148	8/6/2014	10:45 PM	18	2	20
149	8/6/2014	11:00 PM	11	4	15
150	8/6/2014	11:15 PM	8	3	11
151	8/6/2014	11:30 PM	12	2	14
152	8/6/2014	11:45 PM	13	4	17
153	8/7/2014	12:00 AM	9	3	12
154	8/7/2014	12:15 AM	5	2	7
155	8/7/2014	12:30 AM	7	2	9
156	8/7/2014	12:45 AM	4	0	4
157	8/7/2014	01:00 AM	8	2	10
158	8/7/2014	01:15 AM	3	2	5
159	8/7/2014	01:30 AM	7	0	7
160	8/7/2014	01:45 AM	6	0	6
161	8/7/2014	02:00 AM	3	1	4
162	8/7/2014	02:15 AM	1	0	1
163	8/7/2014	02:30 AM	1	0	1
164	8/7/2014	02:45 AM	7	2	9
165	8/7/2014	03:00 AM	3	0	3
166	8/7/2014	03:15 AM	8	0	8
167	8/7/2014	03:30 AM	7	0	7
168	8/7/2014	03:45 AM	8	2	10
169	8/7/2014	04:00 AM	10	2	12
170	8/7/2014	04:15 AM	4	1	5
171	8/7/2014	04:30 AM	8	2	10
172	8/7/2014	04:45 AM	8	2	10
173	8/7/2014	05:00 AM	9	0	9
174	8/7/2014	05:15 AM	22	1	23
175	8/7/2014	05:30 AM	22	2	24
176	8/7/2014	05:45 AM	25	2	27
177	8/7/2014	06:00 AM	24	4	28
178	8/7/2014	06:15 AM	12	2	14
179	8/7/2014	06:30 AM	28	4	32
180	8/7/2014	06:45 AM	36	3	39
181	8/7/2014	07:00 AM	38	8	46
182	8/7/2014	07:15 AM	32	4	36
183	8/7/2014	07:30 AM	36	4	40
184	8/7/2014	07:45 AM	76	6	82
185	8/7/2014	08:00 AM	40	6	46
186	8/7/2014	08:15 AM	37	8	45
187	8/7/2014	08:30 AM	32	6	38
188	8/7/2014	08:45 AM	39	14	53
189	8/7/2014	09:00 AM	30	18	48
190	8/7/2014	09:15 AM	16	5	21
191	8/7/2014	09:30 AM	35	12	47
192	8/7/2014	09:45 AM	42	8	50

South Bend Downtown 2-Way Conversion Traffic Study

48-Hour Tube Counts

Location: Indiana Avenue east of Michigan St

Start Date: 8/5/2014

Start Time: 10:15:00 AM

	Day 1	Day 2	Total
WB	2544	1975	4519
EB	2219	1901	4120
Avg	2382	1938	4320

Interval	Date	Time	WB	EB	Total
1	8/5/2014	10:15 AM	34	16	50
2	8/5/2014	10:30 AM	28	24	52
3	8/5/2014	10:45 AM	40	20	60
4	8/5/2014	11:00 AM	45	32	77
5	8/5/2014	11:15 AM	30	24	54
6	8/5/2014	11:30 AM	36	32	68
7	8/5/2014	11:45 AM	42	35	77
8	8/5/2014	12:00 PM	34	29	63
9	8/5/2014	12:15 PM	42	24	66
10	8/5/2014	12:30 PM	29	38	67
11	8/5/2014	12:45 PM	37	34	71
12	8/5/2014	01:00 PM	47	28	75
13	8/5/2014	01:15 PM	36	24	60
14	8/5/2014	01:30 PM	38	34	72
15	8/5/2014	01:45 PM	37	30	67
16	8/5/2014	02:00 PM	42	26	68
17	8/5/2014	02:15 PM	44	34	78
18	8/5/2014	02:30 PM	66	50	116
19	8/5/2014	02:45 PM	54	36	90
20	8/5/2014	03:00 PM	54	38	92
21	8/5/2014	03:15 PM	40	34	74
22	8/5/2014	03:30 PM	44	40	84
23	8/5/2014	03:45 PM	46	36	82
24	8/5/2014	04:00 PM	44	39	83
25	8/5/2014	04:15 PM	54	44	98
26	8/5/2014	04:30 PM	50	54	104
27	8/5/2014	04:45 PM	52	54	106
28	8/5/2014	05:00 PM	35	39	74
29	8/5/2014	05:15 PM	57	44	101
30	8/5/2014	05:30 PM	51	44	95
31	8/5/2014	05:45 PM	51	44	95
32	8/5/2014	06:00 PM	46	31	77
33	8/5/2014	06:15 PM	36	24	60
34	8/5/2014	06:30 PM	27	24	51
35	8/5/2014	06:45 PM	23	38	61
36	8/5/2014	07:00 PM	34	34	68
37	8/5/2014	07:15 PM	27	29	56
38	8/5/2014	07:30 PM	29	20	49
39	8/5/2014	07:45 PM	35	28	63
40	8/5/2014	08:00 PM	28	30	58
41	8/5/2014	08:15 PM	37	28	65
42	8/5/2014	08:30 PM	34	28	62
43	8/5/2014	08:45 PM	31	28	59
44	8/5/2014	09:00 PM	28	20	48
45	8/5/2014	09:15 PM	24	14	38
46	8/5/2014	09:30 PM	35	24	59

Interval	Date	Time	WB	EB	Total
47	8/5/2014	09:45 PM	28	13	41
48	8/5/2014	10:00 PM	30	12	42
49	8/5/2014	10:15 PM	21	18	39
50	8/5/2014	10:30 PM	17	12	29
51	8/5/2014	10:45 PM	14	6	20
52	8/5/2014	11:00 PM	15	12	27
53	8/5/2014	11:15 PM	22	17	39
54	8/5/2014	11:30 PM	15	7	22
55	8/5/2014	11:45 PM	19	11	30
56	8/6/2014	12:00 AM	6	4	10
57	8/6/2014	12:15 AM	14	10	24
58	8/6/2014	12:30 AM	17	11	28
59	8/6/2014	12:45 AM	5	5	10
60	8/6/2014	01:00 AM	4	4	8
61	8/6/2014	01:15 AM	5	5	10
62	8/6/2014	01:30 AM	7	6	13
63	8/6/2014	01:45 AM	9	5	14
64	8/6/2014	02:00 AM	5	2	7
65	8/6/2014	02:15 AM	8	3	11
66	8/6/2014	02:30 AM	3	2	5
67	8/6/2014	02:45 AM	5	4	9
68	8/6/2014	03:00 AM	8	7	15
69	8/6/2014	03:15 AM	6	3	9
70	8/6/2014	03:30 AM	5	6	11
71	8/6/2014	03:45 AM	6	5	11
72	8/6/2014	04:00 AM	5	0	5
73	8/6/2014	04:15 AM	6	4	10
74	8/6/2014	04:30 AM	10	3	13
75	8/6/2014	04:45 AM	11	5	16
76	8/6/2014	05:00 AM	5	5	10
77	8/6/2014	05:15 AM	18	10	28
78	8/6/2014	05:30 AM	16	9	25
79	8/6/2014	05:45 AM	16	4	20
80	8/6/2014	06:00 AM	12	8	20
81	8/6/2014	06:15 AM	20	14	34
82	8/6/2014	06:30 AM	15	11	26
83	8/6/2014	06:45 AM	25	20	45
84	8/6/2014	07:00 AM	22	16	38
85	8/6/2014	07:15 AM	22	10	32
86	8/6/2014	07:30 AM	18	12	30
87	8/6/2014	07:45 AM	24	18	42
88	8/6/2014	08:00 AM	24	10	34
89	8/6/2014	08:15 AM	20	18	38
90	8/6/2014	08:30 AM	26	21	47
91	8/6/2014	08:45 AM	27	18	45
92	8/6/2014	09:00 AM	23	20	43

South Bend Downtown 2-Way Conversion Traffic Study

Interval	Date	Time	WB	EB	Total
93	8/6/2014	09:15 AM	23	20	43
94	8/6/2014	09:30 AM	28	20	48
95	8/6/2014	09:45 AM	21	29	50
96	8/6/2014	10:00 AM	30	20	50
97	8/6/2014	10:15 AM	30	24	54
98	8/6/2014	10:30 AM	28	20	48
99	8/6/2014	10:45 AM	26	23	49
100	8/6/2014	11:00 AM	37	26	63
101	8/6/2014	11:15 AM	24	24	48
102	8/6/2014	11:30 AM	28	22	50
103	8/6/2014	11:45 AM	27	37	64
104	8/6/2014	12:00 PM	25	36	61
105	8/6/2014	12:15 PM	36	24	60
106	8/6/2014	12:30 PM	26	28	54
107	8/6/2014	12:45 PM	33	28	61
108	8/6/2014	01:00 PM	34	30	64
109	8/6/2014	01:15 PM	28	23	51
110	8/6/2014	01:30 PM	35	26	61
111	8/6/2014	01:45 PM	24	24	48
112	8/6/2014	02:00 PM	30	20	50
113	8/6/2014	02:15 PM	32	34	66
114	8/6/2014	02:30 PM	44	40	84
115	8/6/2014	02:45 PM	34	22	56
116	8/6/2014	03:00 PM	32	28	60
117	8/6/2014	03:15 PM	42	28	70
118	8/6/2014	03:30 PM	52	31	83
119	8/6/2014	03:45 PM	48	32	80
120	8/6/2014	04:00 PM	42	53	95
121	8/6/2014	04:15 PM	50	44	94
122	8/6/2014	04:30 PM	34	42	76
123	8/6/2014	04:45 PM	44	44	88
124	8/6/2014	05:00 PM	33	46	79
125	8/6/2014	05:15 PM	35	39	74
126	8/6/2014	05:30 PM	40	42	82
127	8/6/2014	05:45 PM	46	40	86
128	8/6/2014	06:00 PM	38	28	66
129	8/6/2014	06:15 PM	35	45	80
130	8/6/2014	06:30 PM	38	33	71
131	8/6/2014	06:45 PM	27	28	55
132	8/6/2014	07:00 PM	30	24	54
133	8/6/2014	07:15 PM	25	28	53
134	8/6/2014	07:30 PM	26	18	44
135	8/6/2014	07:45 PM	22	31	53
136	8/6/2014	08:00 PM	29	30	59
137	8/6/2014	08:15 PM	28	26	54
138	8/6/2014	08:30 PM	25	19	44
139	8/6/2014	08:45 PM	28	24	52
140	8/6/2014	09:00 PM	30	18	48
141	8/6/2014	09:15 PM	34	28	62
142	8/6/2014	09:30 PM	30	18	48

Interval	Date	Time	WB	EB	Total
143	8/6/2014	09:45 PM	24	10	34
144	8/6/2014	10:00 PM	30	22	52
145	8/6/2014	10:15 PM	18	16	34
146	8/6/2014	10:30 PM	20	12	32
147	8/6/2014	10:45 PM	20	17	37
148	8/6/2014	11:00 PM	12	13	25
149	8/6/2014	11:15 PM	19	16	35
150	8/6/2014	11:30 PM	18	21	39
151	8/6/2014	11:45 PM	20	14	34
152	8/7/2014	12:00 AM	9	6	15
153	8/7/2014	12:15 AM	11	9	20
154	8/7/2014	12:30 AM	7	4	11
155	8/7/2014	12:45 AM	15	6	21
156	8/7/2014	01:00 AM	7	8	15
157	8/7/2014	01:15 AM	6	8	14
158	8/7/2014	01:30 AM	9	7	16
159	8/7/2014	01:45 AM	4	5	9
160	8/7/2014	02:00 AM	8	4	12
161	8/7/2014	02:15 AM	2	0	2
162	8/7/2014	02:30 AM	5	6	11
163	8/7/2014	02:45 AM	3	3	6
164	8/7/2014	03:00 AM	3	1	4
165	8/7/2014	03:15 AM	7	10	17
166	8/7/2014	03:30 AM	4	2	6
167	8/7/2014	03:45 AM	6	4	10
168	8/7/2014	04:00 AM	1	2	3
169	8/7/2014	04:15 AM	4	2	6
170	8/7/2014	04:30 AM	13	4	17
171	8/7/2014	04:45 AM	4	4	8
172	8/7/2014	05:00 AM	8	8	16
173	8/7/2014	05:15 AM	12	7	19
174	8/7/2014	05:30 AM	12	8	20
175	8/7/2014	05:45 AM	14	8	22
176	8/7/2014	06:00 AM	10	6	16
177	8/7/2014	06:15 AM	14	6	20
178	8/7/2014	06:30 AM	14	11	25
179	8/7/2014	06:45 AM	21	10	31
180	8/7/2014	07:00 AM	14	19	33
181	8/7/2014	07:15 AM	18	10	28
182	8/7/2014	07:30 AM	18	17	35
183	8/7/2014	07:45 AM	33	22	55
184	8/7/2014	08:00 AM	19	11	30
185	8/7/2014	08:15 AM	20	20	40
186	8/7/2014	08:30 AM	30	18	48
187	8/7/2014	08:45 AM	24	18	42
188	8/7/2014	09:00 AM	24	19	43
189	8/7/2014	09:15 AM	20	16	36
190	8/7/2014	09:30 AM	10	4	14
191	8/7/2014	09:45 AM	21	29	50
192	8/7/2014	10:00 AM	30	20	50

South Bend Downtown 2-Way Conversion Traffic Study

48-Hour Tube Counts

Location: Lafayette Blvd north of Jefferson Blvd

Start Date: 8/5/2014

Start Time: 11:15:00 AM

	Day 1	Day 2	Total
NB	5395	0	5395
SB	5647	0	5647
Avg	5521	0	5521

Interval	Date	Time	NB	SB	Total
1	8/5/2014	11:15 AM	68		68
2	8/5/2014	11:30 AM	94		94
3	8/5/2014	11:45 AM	104		104
4	8/5/2014	12:00 PM	108		108
5	8/5/2014	12:15 PM	92		92
6	8/5/2014	12:30 PM	120		120
7	8/5/2014	12:45 PM	129		129
8	8/5/2014	01:00 PM	124		124
9	8/5/2014	01:15 PM	129		129
10	8/5/2014	01:30 PM	98		98
11	8/5/2014	01:45 PM	104		104
12	8/5/2014	02:00 PM	90		90
13	8/5/2014	02:15 PM	99		99
14	8/5/2014	02:30 PM	113		113
15	8/5/2014	02:45 PM	118		118
16	8/5/2014	03:00 PM	105		105
17	8/5/2014	03:15 PM	111		111
18	8/5/2014	03:30 PM	83		83
19	8/5/2014	03:45 PM	0		0
20	8/5/2014	04:00 PM	118		118
21	8/5/2014	04:15 PM	106		106
22	8/5/2014	04:30 PM	150		150
23	8/5/2014	04:45 PM	110		110
24	8/5/2014	05:00 PM	130		130
25	8/5/2014	05:15 PM	104		104
26	8/5/2014	05:30 PM	87		87
27	8/5/2014	05:45 PM	79		79
28	8/5/2014	06:00 PM	60		60
29	8/5/2014	06:15 PM	66		66
30	8/5/2014	06:30 PM	76		76
31	8/5/2014	06:45 PM	54		54
32	8/5/2014	07:00 PM	44		44
33	8/5/2014	07:15 PM	44		44
34	8/5/2014	07:30 PM	38		38
35	8/5/2014	07:45 PM	40		40
36	8/5/2014	08:00 PM	48		48
37	8/5/2014	08:15 PM	33		33
38	8/5/2014	08:30 PM	34		34
39	8/5/2014	08:45 PM	33		33
40	8/5/2014	09:00 PM	31		31
41	8/5/2014	09:15 PM	31		31
42	8/5/2014	09:30 PM	20		20
43	8/5/2014	09:45 PM	35		35
44	8/5/2014	10:00 PM	27		27
45	8/5/2014	10:15 PM	36		36
46	8/5/2014	10:30 PM	30		30

Interval	Date	Time	NB	SB	Total
47	8/5/2014	10:45 PM	13		13
48	8/5/2014	11:00 PM	22		22
49	8/5/2014	11:15 PM	10		10
50	8/5/2014	11:30 PM	12		12
51	8/5/2014	11:45 PM	11		11
52	8/6/2014	12:00 AM	11		11
53	8/6/2014	12:15 AM	8		8
54	8/6/2014	12:30 AM	6		6
55	8/6/2014	12:45 AM	5		5
56	8/6/2014	01:00 AM	6		6
57	8/6/2014	01:15 AM	4		4
58	8/6/2014	01:30 AM	8		8
59	8/6/2014	01:45 AM	2		2
60	8/6/2014	02:00 AM	4		4
61	8/6/2014	02:15 AM	2		2
62	8/6/2014	02:30 AM	3		3
63	8/6/2014	02:45 AM	6		6
64	8/6/2014	03:00 AM	6		6
65	8/6/2014	03:15 AM	6		6
66	8/6/2014	03:30 AM	0		0
67	8/6/2014	03:45 AM	8		8
68	8/6/2014	04:00 AM	3		3
69	8/6/2014	04:15 AM	9		9
70	8/6/2014	04:30 AM	13		13
71	8/6/2014	04:45 AM	17		17
72	8/6/2014	05:00 AM	9		9
73	8/6/2014	05:15 AM	18		18
74	8/6/2014	05:30 AM	22		22
75	8/6/2014	05:45 AM	26		26
76	8/6/2014	06:00 AM	30		30
77	8/6/2014	06:15 AM	40		40
78	8/6/2014	06:30 AM	67		67
79	8/6/2014	06:45 AM	74		74
80	8/6/2014	07:00 AM	38		38
81	8/6/2014	07:15 AM	74		74
82	8/6/2014	07:30 AM	114		114
83	8/6/2014	07:45 AM	136		136
84	8/6/2014	08:00 AM	52		52
85	8/6/2014	08:15 AM	80		80
86	8/6/2014	08:30 AM	87		87
87	8/6/2014	08:45 AM	98		98
88	8/6/2014	09:00 AM	82		82
89	8/6/2014	09:15 AM	83		83
90	8/6/2014	09:30 AM	104		104
91	8/6/2014	09:45 AM	100		100
92	8/6/2014	10:00 AM	73		73

South Bend Downtown 2-Way Conversion Traffic Study

Interval	Date	Time	NB	SB	Total
93	8/6/2014	10:15 AM	69		69
94	8/6/2014	10:30 AM	84		84
95	8/6/2014	10:45 AM	87		87
96	8/6/2014	11:00 AM	96		96
97	8/6/2014	11:15 AM	90		90
98	8/6/2014	11:30 AM	98		98
99	8/6/2014	11:45 AM	92		92
100	8/6/2014	12:00 PM	104		104
101	8/6/2014	12:15 PM	84		84
102	8/6/2014	12:30 PM	106		106
103	8/6/2014	12:45 PM	104		104
104	8/6/2014	01:00 PM	112		112
105	8/6/2014	01:15 PM	108		108
106	8/6/2014	01:30 PM	102		102
107	8/6/2014	01:45 PM	125		125
108	8/6/2014	02:00 PM	106		106
109	8/6/2014	02:15 PM	102		102
110	8/6/2014	02:30 PM	111		111
111	8/6/2014	02:45 PM	100		100
112	8/6/2014	03:00 PM	90		90
113	8/6/2014	03:15 PM	96		96
114	8/6/2014	03:30 PM	111		111
115	8/6/2014	03:45 PM	110		110
116	8/6/2014	04:00 PM	122		122
117	8/6/2014	04:15 PM	110		110
118	8/6/2014	04:30 PM	175		175
119	8/6/2014	04:45 PM	121		121
120	8/6/2014	05:00 PM	138		138
121	8/6/2014	05:15 PM	92		92
122	8/6/2014	05:30 PM	81		81
123	8/6/2014	05:45 PM	72		72
124	8/6/2014	06:00 PM	50		50
125	8/6/2014	06:15 PM	64		64
126	8/6/2014	06:30 PM	70		70
127	8/6/2014	06:45 PM	62		62
128	8/6/2014	07:00 PM	48		48
129	8/6/2014	07:15 PM	35		35
130	8/6/2014	07:30 PM	46		46
131	8/6/2014	07:45 PM	35		35
132	8/6/2014	08:00 PM	44		44
133	8/6/2014	08:15 PM	28		28
134	8/6/2014	08:30 PM	36		36
135	8/6/2014	08:45 PM	34		34
136	8/6/2014	09:00 PM	40		40
137	8/6/2014	09:15 PM	36		36
138	8/6/2014	09:30 PM	39		39
139	8/6/2014	09:45 PM	36		36
140	8/6/2014	10:00 PM	28		28
141	8/6/2014	10:15 PM	30		30
142	8/6/2014	10:30 PM	26		26

Interval	Date	Time	NB	SB	Total
143	8/6/2014	10:45 PM	22		22
144	8/6/2014	11:00 PM	11		11
145	8/6/2014	11:15 PM	16		16
146	8/6/2014	11:30 PM	12		12
147	8/6/2014	11:45 PM	7		7
148	8/7/2014	12:00 AM	11		11
149	8/7/2014	12:15 AM	8		8
150	8/7/2014	12:30 AM	6		6
151	8/7/2014	12:45 AM	14		14
152	8/7/2014	01:00 AM	7		7
153	8/7/2014	01:15 AM	6		6
154	8/7/2014	01:30 AM	6		6
155	8/7/2014	01:45 AM	7		7
156	8/7/2014	02:00 AM	6		6
157	8/7/2014	02:15 AM	3		3
158	8/7/2014	02:30 AM	1		1
159	8/7/2014	02:45 AM	5		5
160	8/7/2014	03:00 AM	6		6
161	8/7/2014	03:15 AM	6		6
162	8/7/2014	03:30 AM	5		5
163	8/7/2014	03:45 AM	5		5
164	8/7/2014	04:00 AM	2		2
165	8/7/2014	04:15 AM	12		12
166	8/7/2014	04:30 AM	16		16
167	8/7/2014	04:45 AM	11		11
168	8/7/2014	05:00 AM	12		12
169	8/7/2014	05:15 AM	20		20
170	8/7/2014	05:30 AM	18		18
171	8/7/2014	05:45 AM	28		28
172	8/7/2014	06:00 AM	29		29
173	8/7/2014	06:15 AM	34		34
174	8/7/2014	06:30 AM	50		50
175	8/7/2014	06:45 AM	60		60
176	8/7/2014	07:00 AM	55		55
177	8/7/2014	07:15 AM	84		84
178	8/7/2014	07:30 AM	96		96
179	8/7/2014	07:45 AM	156		156
180	8/7/2014	08:00 AM	104		104
181	8/7/2014	08:15 AM	78		78
182	8/7/2014	08:30 AM	77		77
183	8/7/2014	08:45 AM	84		84
184	8/7/2014	09:00 AM	80		80
185	8/7/2014	09:15 AM	78		78
186	8/7/2014	09:30 AM	78		78
187	8/7/2014	09:45 AM	104		104
188	8/7/2014	10:00 AM	74		74
189	8/7/2014	10:15 AM	100		100
190	8/7/2014	10:30 AM	100		100
191	8/7/2014	10:45 AM	92		92
192	8/7/2014	11:00 AM	96		96

South Bend Downtown 2-Way Conversion Traffic Study

48-Hour Tube Counts

Location: William Street north of Jefferson Blvd

Start Date: 8/5/2014

Start Time: 12:30:00 PM

	Day 1	Day 2	Total
SB	3736	0	3736
NB	3760	0	3760
Avg	3748	0	3748

Interval	Date	Time	SB	NB	Total
1	8/5/2014	12:30 PM	62		62
2	8/5/2014	12:45 PM	66		66
3	8/5/2014	01:00 PM	72		72
4	8/5/2014	01:15 PM	69		69
5	8/5/2014	01:30 PM	54		54
6	8/5/2014	01:45 PM	66		66
7	8/5/2014	02:00 PM	70		70
8	8/5/2014	02:15 PM	54		54
9	8/5/2014	02:30 PM	71		71
10	8/5/2014	02:45 PM	74		74
11	8/5/2014	03:00 PM	58		58
12	8/5/2014	03:15 PM	86		86
13	8/5/2014	03:30 PM	69		69
14	8/5/2014	03:45 PM	66		66
15	8/5/2014	04:00 PM	78		78
16	8/5/2014	04:15 PM	66		66
17	8/5/2014	04:30 PM	89		89
18	8/5/2014	04:45 PM	66		66
19	8/5/2014	05:00 PM	76		76
20	8/5/2014	05:15 PM	92		92
21	8/5/2014	05:30 PM	64		64
22	8/5/2014	05:45 PM	56		56
23	8/5/2014	06:00 PM	40		40
24	8/5/2014	06:15 PM	50		50
25	8/5/2014	06:30 PM	37		37
26	8/5/2014	06:45 PM	46		46
27	8/5/2014	07:00 PM	37		37
28	8/5/2014	07:15 PM	35		35
29	8/5/2014	07:30 PM	40		40
30	8/5/2014	07:45 PM	22		22
31	8/5/2014	08:00 PM	29		29
32	8/5/2014	08:15 PM	32		32
33	8/5/2014	08:30 PM	24		24
34	8/5/2014	08:45 PM	30		30
35	8/5/2014	09:00 PM	36		36
36	8/5/2014	09:15 PM	28		28
37	8/5/2014	09:30 PM	23		23
38	8/5/2014	09:45 PM	30		30
39	8/5/2014	10:00 PM	25		25
40	8/5/2014	10:15 PM	32		32
41	8/5/2014	10:30 PM	29		29
42	8/5/2014	10:45 PM	17		17
43	8/5/2014	11:00 PM	11		11
44	8/5/2014	11:15 PM	13		13
45	8/5/2014	11:30 PM	8		8
46	8/5/2014	11:45 PM	13		13

Interval	Date	Time	SB	NB	Total
47	8/6/2014	12:00 AM	4		4
48	8/6/2014	12:15 AM	10		10
49	8/6/2014	12:30 AM	11		11
50	8/6/2014	12:45 AM	6		6
51	8/6/2014	01:00 AM	10		10
52	8/6/2014	01:15 AM	1		1
53	8/6/2014	01:30 AM	5		5
54	8/6/2014	01:45 AM	1		1
55	8/6/2014	02:00 AM	4		4
56	8/6/2014	02:15 AM	3		3
57	8/6/2014	02:30 AM	1		1
58	8/6/2014	02:45 AM	5		5
59	8/6/2014	03:00 AM	10		10
60	8/6/2014	03:15 AM	3		3
61	8/6/2014	03:30 AM	4		4
62	8/6/2014	03:45 AM	5		5
63	8/6/2014	04:00 AM	9		9
64	8/6/2014	04:15 AM	4		4
65	8/6/2014	04:30 AM	12		12
66	8/6/2014	04:45 AM	7		7
67	8/6/2014	05:00 AM	6		6
68	8/6/2014	05:15 AM	24		24
69	8/6/2014	05:30 AM	23		23
70	8/6/2014	05:45 AM	24		24
71	8/6/2014	06:00 AM	20		20
72	8/6/2014	06:15 AM	24		24
73	8/6/2014	06:30 AM	39		39
74	8/6/2014	06:45 AM	48		48
75	8/6/2014	07:00 AM	54		54
76	8/6/2014	07:15 AM	58		58
77	8/6/2014	07:30 AM	78		78
78	8/6/2014	07:45 AM	97		97
79	8/6/2014	08:00 AM	74		74
80	8/6/2014	08:15 AM	64		64
81	8/6/2014	08:30 AM	48		48
82	8/6/2014	08:45 AM	54		54
83	8/6/2014	09:00 AM	57		57
84	8/6/2014	09:15 AM	55		55
85	8/6/2014	09:30 AM	59		59
86	8/6/2014	09:45 AM	55		55
87	8/6/2014	10:00 AM	58		58
88	8/6/2014	10:15 AM	50		50
89	8/6/2014	10:30 AM	45		45
90	8/6/2014	10:45 AM	37		37
91	8/6/2014	11:00 AM	52		52
92	8/6/2014	11:15 AM	40		40

South Bend Downtown 2-Way Conversion Traffic Study

Interval	Date	Time	SB	NB	Total
93	8/6/2014	11:30 AM	48		48
94	8/6/2014	11:45 AM	59		59
95	8/6/2014	12:00 PM	60		60
96	8/6/2014	12:15 PM	62		62
97	8/6/2014	12:30 PM	56		56
98	8/6/2014	12:45 PM	84		84
99	8/6/2014	01:00 PM	71		71
100	8/6/2014	01:15 PM	62		62
101	8/6/2014	01:30 PM	47		47
102	8/6/2014	01:45 PM	52		52
103	8/6/2014	02:00 PM	57		57
104	8/6/2014	02:15 PM	70		70
105	8/6/2014	02:30 PM	60		60
106	8/6/2014	02:45 PM	62		62
107	8/6/2014	03:00 PM	70		70
108	8/6/2014	03:15 PM	94		94
109	8/6/2014	03:30 PM	72		72
110	8/6/2014	03:45 PM	81		81
111	8/6/2014	04:00 PM	88		88
112	8/6/2014	04:15 PM	80		80
113	8/6/2014	04:30 PM	88		88
114	8/6/2014	04:45 PM	58		58
115	8/6/2014	05:00 PM	70		70
116	8/6/2014	05:15 PM	65		65
117	8/6/2014	05:30 PM	73		73
118	8/6/2014	05:45 PM	67		67
119	8/6/2014	06:00 PM	52		52
120	8/6/2014	06:15 PM	53		53
121	8/6/2014	06:30 PM	40		40
122	8/6/2014	06:45 PM	46		46
123	8/6/2014	07:00 PM	42		42
124	8/6/2014	07:15 PM	39		39
125	8/6/2014	07:30 PM	26		26
126	8/6/2014	07:45 PM	34		34
127	8/6/2014	08:00 PM	28		28
128	8/6/2014	08:15 PM	37		37
129	8/6/2014	08:30 PM	28		28
130	8/6/2014	08:45 PM	24		24
131	8/6/2014	09:00 PM	36		36
132	8/6/2014	09:15 PM	22		22
133	8/6/2014	09:30 PM	24		24
134	8/6/2014	09:45 PM	21		21
135	8/6/2014	10:00 PM	23		23
136	8/6/2014	10:15 PM	22		22
137	8/6/2014	10:30 PM	18		18
138	8/6/2014	10:45 PM	13		13
139	8/6/2014	11:00 PM	12		12
140	8/6/2014	11:15 PM	26		26
141	8/6/2014	11:30 PM	10		10
142	8/6/2014	11:45 PM	7		7

Interval	Date	Time	SB	NB	Total
143	8/7/2014	12:00 AM	11		11
144	8/7/2014	12:15 AM	11		11
145	8/7/2014	12:30 AM	8		8
146	8/7/2014	12:45 AM	5		5
147	8/7/2014	01:00 AM	13		13
148	8/7/2014	01:15 AM	7		7
149	8/7/2014	01:30 AM	5		5
150	8/7/2014	01:45 AM	2		2
151	8/7/2014	02:00 AM	3		3
152	8/7/2014	02:15 AM	3		3
153	8/7/2014	02:30 AM	4		4
154	8/7/2014	02:45 AM	2		2
155	8/7/2014	03:00 AM	3		3
156	8/7/2014	03:15 AM	3		3
157	8/7/2014	03:30 AM	4		4
158	8/7/2014	03:45 AM	5		5
159	8/7/2014	04:00 AM	9		9
160	8/7/2014	04:15 AM	3		3
161	8/7/2014	04:30 AM	6		6
162	8/7/2014	04:45 AM	7		7
163	8/7/2014	05:00 AM	6		6
164	8/7/2014	05:15 AM	14		14
165	8/7/2014	05:30 AM	22		22
166	8/7/2014	05:45 AM	25		25
167	8/7/2014	06:00 AM	12		12
168	8/7/2014	06:15 AM	20		20
169	8/7/2014	06:30 AM	44		44
170	8/7/2014	06:45 AM	56		56
171	8/7/2014	07:00 AM	46		46
172	8/7/2014	07:15 AM	63		63
173	8/7/2014	07:30 AM	60		60
174	8/7/2014	07:45 AM	116		116
175	8/7/2014	08:00 AM	67		67
176	8/7/2014	08:15 AM	59		59
177	8/7/2014	08:30 AM	51		51
178	8/7/2014	08:45 AM	66		66
179	8/7/2014	09:00 AM	56		56
180	8/7/2014	09:15 AM	52		52
181	8/7/2014	09:30 AM	58		58
182	8/7/2014	09:45 AM	53		53
183	8/7/2014	10:00 AM	44		44
184	8/7/2014	10:15 AM	60		60
185	8/7/2014	10:30 AM	45		45
186	8/7/2014	10:45 AM	56		56
187	8/7/2014	11:00 AM	16		16
188	8/7/2014	11:15 AM	40		40
189	8/7/2014	11:30 AM	48		48
190	8/7/2014	11:45 AM	59		59
191	8/7/2014	12:00 PM	60		60
192	8/7/2014	12:15 PM	62		62

48-Hour Tube Counts

Location: LaSalle St east of Michigan St

Start Date: 8/5/2014

Start Time: 11:45:00 AM

	Day 1	Day 2	Total
WB	3500	13032	16532
EB	894	14858	15752
Avg	2197	13945	16142

Interval	Date	Time	WB	EB	Total
1	8/5/2014	11:45 AM	112	109	221
2	8/5/2014	12:00 PM	136	112	248
3	8/5/2014	12:15 PM	138	146	284
4	8/5/2014	12:30 PM	116	168	284
5	8/5/2014	12:45 PM	169	160	329
6	8/5/2014	01:00 PM	142	146	288
7	8/5/2014	01:15 PM	151	148	299
8	8/5/2014	01:30 PM	148	111	259
9	8/5/2014	01:45 PM	135	133	268
10	8/5/2014	02:00 PM	128	140	268
11	8/5/2014	02:15 PM	122	122	244
12	8/5/2014	02:30 PM	148	162	310
13	8/5/2014	02:45 PM	160	158	318
14	8/5/2014	03:00 PM	148	164	312
15	8/5/2014	03:15 PM	140	166	306
16	8/5/2014	03:30 PM	133	180	313
17	8/5/2014	03:45 PM	160	158	318
18	8/5/2014	04:00 PM	136	196	332
19	8/5/2014	04:15 PM	142	182	324
20	8/5/2014	04:30 PM	97	226	323
21	8/5/2014	04:45 PM	136	186	322
22	8/5/2014	05:00 PM	133	280	413
23	8/5/2014	05:15 PM	66	274	340
24	8/5/2014	05:30 PM	32	258	290
25	8/5/2014	05:45 PM	32	238	270
26	8/5/2014	06:00 PM	18	262	280
27	8/5/2014	06:15 PM	18	228	246
28	8/5/2014	06:30 PM	16	204	220
29	8/5/2014	06:45 PM	24	204	228
30	8/5/2014	07:00 PM	8	174	182
31	8/5/2014	07:15 PM	3	149	152
32	8/5/2014	07:30 PM	10	164	174
33	8/5/2014	07:45 PM	4	148	152
34	8/5/2014	08:00 PM	4	173	177
35	8/5/2014	08:15 PM	4	148	152
36	8/5/2014	08:30 PM	9	152	161
37	8/5/2014	08:45 PM	8	150	158
38	8/5/2014	09:00 PM	6	132	138
39	8/5/2014	09:15 PM	5	142	147
40	8/5/2014	09:30 PM	6	133	139
41	8/5/2014	09:45 PM	6	126	132
42	8/5/2014	10:00 PM	2	100	102
43	8/5/2014	10:15 PM	1	98	99
44	8/5/2014	10:30 PM	4	99	103
45	8/5/2014	10:45 PM	1	66	67
46	8/5/2014	11:00 PM	2	94	96

Interval	Date	Time	WB	EB	Total
47	8/5/2014	11:15 PM	4	69	73
48	8/5/2014	11:30 PM	2	50	52
49	8/5/2014	11:45 PM	2	37	39
50	8/6/2014	12:00 AM	0	47	47
51	8/6/2014	12:15 AM	0	58	58
52	8/6/2014	12:30 AM	1	39	40
53	8/6/2014	12:45 AM	1	33	34
54	8/6/2014	01:00 AM	0	27	27
55	8/6/2014	01:15 AM	0	34	34
56	8/6/2014	01:30 AM	0	35	35
57	8/6/2014	01:45 AM	0	23	23
58	8/6/2014	02:00 AM	0	17	17
59	8/6/2014	02:15 AM	2	16	18
60	8/6/2014	02:30 AM	0	18	18
61	8/6/2014	02:45 AM	0	13	13
62	8/6/2014	03:00 AM	0	24	24
63	8/6/2014	03:15 AM	0	10	10
64	8/6/2014	03:30 AM	1	24	25
65	8/6/2014	03:45 AM	0	16	16
66	8/6/2014	04:00 AM	0	22	22
67	8/6/2014	04:15 AM	0	28	28
68	8/6/2014	04:30 AM	0	36	36
69	8/6/2014	04:45 AM	0	30	30
70	8/6/2014	05:00 AM	0	37	37
71	8/6/2014	05:15 AM	2	44	46
72	8/6/2014	05:30 AM	0	76	76
73	8/6/2014	05:45 AM	4	70	74
74	8/6/2014	06:00 AM	2	82	84
75	8/6/2014	06:15 AM	4	128	132
76	8/6/2014	06:30 AM	15	163	178
77	8/6/2014	06:45 AM	4	160	164
78	8/6/2014	07:00 AM	2	156	158
79	8/6/2014	07:15 AM	6	214	220
80	8/6/2014	07:30 AM	14	242	256
81	8/6/2014	07:45 AM	16	311	327
82	8/6/2014	08:00 AM	18	234	252
83	8/6/2014	08:15 AM	18	201	219
84	8/6/2014	08:30 AM	12	226	238
85	8/6/2014	08:45 AM	14	257	271
86	8/6/2014	09:00 AM	14	215	229
87	8/6/2014	09:15 AM	3	198	201
88	8/6/2014	09:30 AM	2	208	210
89	8/6/2014	09:45 AM	5	280	285
90	8/6/2014	10:00 AM	6	228	234
91	8/6/2014	10:15 AM	3	224	227
92	8/6/2014	10:30 AM	1	222	223

South Bend Downtown 2-Way Conversion Traffic Study

Interval	Date	Time	WB	EB	Total
93	8/6/2014	10:45 AM	1	226	227
94	8/6/2014	11:00 AM	0	219	219
95	8/6/2014	11:15 AM	2	236	238
96	8/6/2014	11:30 AM	2	256	258
97	8/6/2014	11:45 AM	0	280	280
98	8/6/2014	12:00 PM	8	277	285
99	8/6/2014	12:15 PM	4	266	270
100	8/6/2014	12:30 PM	3	266	269
101	8/6/2014	12:45 PM	4	299	303
102	8/6/2014	01:00 PM	4	300	304
103	8/6/2014	01:15 PM	6	268	274
104	8/6/2014	01:30 PM	4	253	257
105	8/6/2014	01:45 PM	2	261	263
106	8/6/2014	02:00 PM	2	258	260
107	8/6/2014	02:15 PM	0	234	234
108	8/6/2014	02:30 PM	2	288	290
109	8/6/2014	02:45 PM	3	291	294
110	8/6/2014	03:00 PM	2	263	265
111	8/6/2014	03:15 PM	3	282	285
112	8/6/2014	03:30 PM	2	318	320
113	8/6/2014	03:45 PM	2	306	308
114	8/6/2014	04:00 PM	4	336	340
115	8/6/2014	04:15 PM	0	323	323
116	8/6/2014	04:30 PM	6	346	352
117	8/6/2014	04:45 PM	12	333	345
118	8/6/2014	05:00 PM	44	366	410
119	8/6/2014	05:15 PM	11	300	311
120	8/6/2014	05:30 PM	8	278	286
121	8/6/2014	05:45 PM	26	264	290
122	8/6/2014	06:00 PM	8	232	240
123	8/6/2014	06:15 PM	16	248	264
124	8/6/2014	06:30 PM	18	206	224
125	8/6/2014	06:45 PM	12	200	212
126	8/6/2014	07:00 PM	20	186	206
127	8/6/2014	07:15 PM	8	176	184
128	8/6/2014	07:30 PM	3	132	135
129	8/6/2014	07:45 PM	4	162	166
130	8/6/2014	08:00 PM	6	138	144
131	8/6/2014	08:15 PM	2	120	122
132	8/6/2014	08:30 PM	5	140	145
133	8/6/2014	08:45 PM	2	112	114
134	8/6/2014	09:00 PM	8	127	135
135	8/6/2014	09:15 PM	6	100	106
136	8/6/2014	09:30 PM	16	104	120
137	8/6/2014	09:45 PM	6	96	102
138	8/6/2014	10:00 PM	8	106	114
139	8/6/2014	10:15 PM	10	83	93
140	8/6/2014	10:30 PM	2	98	100
141	8/6/2014	10:45 PM	4	84	88
142	8/6/2014	11:00 PM	2	74	76

Interval	Date	Time	WB	EB	Total
143	8/6/2014	11:15 PM	8	68	76
144	8/6/2014	11:30 PM	4	66	70
145	8/6/2014	11:45 PM	2	48	50
146	8/7/2014	12:00 AM	8	45	53
147	8/7/2014	12:15 AM	2	41	43
148	8/7/2014	12:30 AM	3	36	39
149	8/7/2014	12:45 AM	2	23	25
150	8/7/2014	01:00 AM	0	31	31
151	8/7/2014	01:15 AM	2	28	30
152	8/7/2014	01:30 AM	0	21	21
153	8/7/2014	01:45 AM	2	15	17
154	8/7/2014	02:00 AM	0	19	19
155	8/7/2014	02:15 AM	0	27	27
156	8/7/2014	02:30 AM	2	26	28
157	8/7/2014	02:45 AM	0	19	19
158	8/7/2014	03:00 AM	2	22	24
159	8/7/2014	03:15 AM	1	21	22
160	8/7/2014	03:30 AM	0	22	22
161	8/7/2014	03:45 AM	4	20	24
162	8/7/2014	04:00 AM	0	24	24
163	8/7/2014	04:15 AM	2	31	33
164	8/7/2014	04:30 AM	0	34	34
165	8/7/2014	04:45 AM	0	34	34
166	8/7/2014	05:00 AM	0	30	30
167	8/7/2014	05:15 AM	1	46	47
168	8/7/2014	05:30 AM	1	70	71
169	8/7/2014	05:45 AM	4	64	68
170	8/7/2014	06:00 AM	6	73	79
171	8/7/2014	06:15 AM	7	108	115
172	8/7/2014	06:30 AM	30	131	161
173	8/7/2014	06:45 AM	28	146	174
174	8/7/2014	07:00 AM	13	104	117
175	8/7/2014	07:15 AM	18	164	182
176	8/7/2014	07:30 AM	24	188	212
177	8/7/2014	07:45 AM	40	191	231
178	8/7/2014	08:00 AM	29	188	217
179	8/7/2014	08:15 AM	6	216	222
180	8/7/2014	08:30 AM	27	155	182
181	8/7/2014	08:45 AM	28	193	221
182	8/7/2014	09:00 AM	37	167	204
183	8/7/2014	09:15 AM	14	138	152
184	8/7/2014	09:30 AM	30	160	190
185	8/7/2014	09:45 AM	23	188	211
186	8/7/2014	10:00 AM	28	158	186
187	8/7/2014	10:15 AM	33	161	194
188	8/7/2014	10:30 AM	32	166	198
189	8/7/2014	10:45 AM	11	181	192
190	8/7/2014	11:00 AM	32	187	219
191	8/7/2014	11:15 AM	18	128	146
192	8/7/2014	11:30 AM	2	256	258

48-Hour Tube Counts

Location: Michigan St north of Jefferson Blvd

Start Date: 8/5/2014

Start Time: 1:30:00 PM

	Day 1	Day 2	Total
SB	1034	1712	2746
NB	1087	1668	2755
Avg	1061	1690	2751

Interval	Date	Time	SB	NB	Total
1	8/5/2014	01:30 PM	20	46	66
2	8/5/2014	01:45 PM	29	43	72
3	8/5/2014	02:00 PM	37	28	65
4	8/5/2014	02:15 PM	27	30	57
5	8/5/2014	02:30 PM	23	24	47
6	8/5/2014	02:45 PM	34	34	68
7	8/5/2014	03:00 PM	22	38	60
8	8/5/2014	03:15 PM	28	32	60
9	8/5/2014	03:30 PM	27	33	60
10	8/5/2014	03:45 PM	14	22	36
11	8/5/2014	04:00 PM	32	36	68
12	8/5/2014	04:15 PM	17	26	43
13	8/5/2014	04:30 PM	18	30	48
14	8/5/2014	04:45 PM	24	28	52
15	8/5/2014	05:00 PM	26	24	50
16	8/5/2014	05:15 PM	24	30	54
17	8/5/2014	05:30 PM	24	26	50
18	8/5/2014	05:45 PM	12	14	26
19	8/5/2014	06:00 PM	2	32	34
20	8/5/2014	06:15 PM	6	30	36
21	8/5/2014	06:30 PM	12	18	30
22	8/5/2014	06:45 PM	9	4	13
23	8/5/2014	07:00 PM	16	0	16
24	8/5/2014	07:15 PM	8	0	8
25	8/5/2014	07:30 PM	11	0	11
26	8/5/2014	07:45 PM	14	0	14
27	8/5/2014	08:00 PM	16	0	16
28	8/5/2014	08:15 PM	14	0	14
29	8/5/2014	08:30 PM	11	0	11
30	8/5/2014	08:45 PM	10	0	10
31	8/5/2014	09:00 PM	12	12	24
32	8/5/2014	09:15 PM	4	13	17
33	8/5/2014	09:30 PM	10	11	21
34	8/5/2014	09:45 PM	4	5	9
35	8/5/2014	10:00 PM	2	3	5
36	8/5/2014	10:15 PM	12	8	20
37	8/5/2014	10:30 PM	2	5	7
38	8/5/2014	10:45 PM	4	8	12
39	8/5/2014	11:00 PM	3	5	8
40	8/5/2014	11:15 PM	0	5	5
41	8/5/2014	11:30 PM	0	4	4
42	8/5/2014	11:45 PM	4	2	6
43	8/6/2014	12:00 AM	0	1	1
44	8/6/2014	12:15 AM	6	4	10
45	8/6/2014	12:30 AM	0	1	1
46	8/6/2014	12:45 AM	0	1	1

Interval	Date	Time	SB	NB	Total
47	8/6/2014	01:00 AM	4	3	7
48	8/6/2014	01:15 AM	4	3	7
49	8/6/2014	01:30 AM	1	0	1
50	8/6/2014	01:45 AM	0	2	2
51	8/6/2014	02:00 AM	2	2	4
52	8/6/2014	02:15 AM	2	4	6
53	8/6/2014	02:30 AM	2	0	2
54	8/6/2014	02:45 AM	2	1	3
55	8/6/2014	03:00 AM	2	0	2
56	8/6/2014	03:15 AM	0	0	0
57	8/6/2014	03:30 AM	0	1	1
58	8/6/2014	03:45 AM	2	2	4
59	8/6/2014	04:00 AM	1	1	2
60	8/6/2014	04:15 AM	0	0	0
61	8/6/2014	04:30 AM	1	0	1
62	8/6/2014	04:45 AM	0	0	0
63	8/6/2014	05:00 AM	3	0	3
64	8/6/2014	05:15 AM	4	0	4
65	8/6/2014	05:30 AM	0	0	0
66	8/6/2014	05:45 AM	1	1	2
67	8/6/2014	06:00 AM	2	3	5
68	8/6/2014	06:15 AM	1	3	4
69	8/6/2014	06:30 AM	8	6	14
70	8/6/2014	06:45 AM	0	14	14
71	8/6/2014	07:00 AM	0	18	18
72	8/6/2014	07:15 AM	0	28	28
73	8/6/2014	07:30 AM	10	26	36
74	8/6/2014	07:45 AM	13	40	53
75	8/6/2014	08:00 AM	0	38	38
76	8/6/2014	08:15 AM	14	20	34
77	8/6/2014	08:30 AM	24	22	46
78	8/6/2014	08:45 AM	25	28	53
79	8/6/2014	09:00 AM	28	22	50
80	8/6/2014	09:15 AM	21	28	49
81	8/6/2014	09:30 AM	33	24	57
82	8/6/2014	09:45 AM	18	22	40
83	8/6/2014	10:00 AM	17	20	37
84	8/6/2014	10:15 AM	19	20	39
85	8/6/2014	10:30 AM	28	35	63
86	8/6/2014	10:45 AM	33	36	69
87	8/6/2014	11:00 AM	25	24	49
88	8/6/2014	11:15 AM	38	44	82
89	8/6/2014	11:30 AM	12	62	74
90	8/6/2014	11:45 AM	0	74	74
91	8/6/2014	12:00 PM	0	81	81
92	8/6/2014	12:15 PM	4	50	54

South Bend Downtown 2-Way Conversion Traffic Study

Interval	Date	Time	SB	NB	Total
93	8/6/2014	12:30 PM	0	62	62
94	8/6/2014	12:45 PM	0	54	54
95	8/6/2014	01:00 PM	0	72	72
96	8/6/2014	01:15 PM	7	48	55
97	8/6/2014	01:30 PM	0	60	60
98	8/6/2014	01:45 PM	32	40	72
99	8/6/2014	02:00 PM	27	28	55
100	8/6/2014	02:15 PM	13	20	33
101	8/6/2014	02:30 PM	22	22	44
102	8/6/2014	02:45 PM	22	28	50
103	8/6/2014	03:00 PM	20	28	48
104	8/6/2014	03:15 PM	20	22	42
105	8/6/2014	03:30 PM	19	18	37
106	8/6/2014	03:45 PM	28	20	48
107	8/6/2014	04:00 PM	22	28	50
108	8/6/2014	04:15 PM	15	18	33
109	8/6/2014	04:30 PM	28	24	52
110	8/6/2014	04:45 PM	9	28	37
111	8/6/2014	05:00 PM	22	36	58
112	8/6/2014	05:15 PM	38	22	60
113	8/6/2014	05:30 PM	21	30	51
114	8/6/2014	05:45 PM	23	22	45
115	8/6/2014	06:00 PM	9	16	25
116	8/6/2014	06:15 PM	12	14	26
117	8/6/2014	06:30 PM	20	22	42
118	8/6/2014	06:45 PM	26	20	46
119	8/6/2014	07:00 PM	20	20	40
120	8/6/2014	07:15 PM	16	14	30
121	8/6/2014	07:30 PM	22	16	38
122	8/6/2014	07:45 PM	16	12	28
123	8/6/2014	08:00 PM	8	13	21
124	8/6/2014	08:15 PM	8	17	25
125	8/6/2014	08:30 PM	8	16	24
126	8/6/2014	08:45 PM	8	10	18
127	8/6/2014	09:00 PM	10	14	24
128	8/6/2014	09:15 PM	3	8	11
129	8/6/2014	09:30 PM	12	19	31
130	8/6/2014	09:45 PM	4	7	11
131	8/6/2014	10:00 PM	5	7	12
132	8/6/2014	10:15 PM	5	6	11
133	8/6/2014	10:30 PM	7	8	15
134	8/6/2014	10:45 PM	2	4	6
135	8/6/2014	11:00 PM	1	6	7
136	8/6/2014	11:15 PM	2	4	6
137	8/6/2014	11:30 PM	1	4	5
138	8/6/2014	11:45 PM	3	0	3
139	8/7/2014	12:00 AM	3	1	4
140	8/7/2014	12:15 AM	1	1	2
141	8/7/2014	12:30 AM	3	2	5
142	8/7/2014	12:45 AM	0	1	1

Interval	Date	Time	SB	NB	Total
143	8/7/2014	01:00 AM	1	1	2
144	8/7/2014	01:15 AM	2	3	5
145	8/7/2014	01:30 AM	1	0	1
146	8/7/2014	01:45 AM	0	0	0
147	8/7/2014	02:00 AM	2	0	2
148	8/7/2014	02:15 AM	4	3	7
149	8/7/2014	02:30 AM	0	1	1
150	8/7/2014	02:45 AM	0	3	3
151	8/7/2014	03:00 AM	0	1	1
152	8/7/2014	03:15 AM	1	0	1
153	8/7/2014	03:30 AM	0	0	0
154	8/7/2014	03:45 AM	2	2	4
155	8/7/2014	04:00 AM	0	0	0
156	8/7/2014	04:15 AM	2	0	2
157	8/7/2014	04:30 AM	0	0	0
158	8/7/2014	04:45 AM	1	0	1
159	8/7/2014	05:00 AM	2	1	3
160	8/7/2014	05:15 AM	5	1	6
161	8/7/2014	05:30 AM	0	0	0
162	8/7/2014	05:45 AM	3	1	4
163	8/7/2014	06:00 AM	3	4	7
164	8/7/2014	06:15 AM	6	5	11
165	8/7/2014	06:30 AM	5	4	9
166	8/7/2014	06:45 AM	12	12	24
167	8/7/2014	07:00 AM	14	12	26
168	8/7/2014	07:15 AM	16	7	23
169	8/7/2014	07:30 AM	24	12	36
170	8/7/2014	07:45 AM	25	26	51
171	8/7/2014	08:00 AM	26	24	50
172	8/7/2014	08:15 AM	19	10	29
173	8/7/2014	08:30 AM	30	20	50
174	8/7/2014	08:45 AM	30	22	52
175	8/7/2014	09:00 AM	20	20	40
176	8/7/2014	09:15 AM	24	30	54
177	8/7/2014	09:30 AM	20	15	35
178	8/7/2014	09:45 AM	19	20	39
179	8/7/2014	10:00 AM	32	29	61
180	8/7/2014	10:15 AM	34	32	66
181	8/7/2014	10:30 AM	0	0	0
182	8/7/2014	10:45 AM	0	0	0
183	8/7/2014	11:00 AM	25	24	49
184	8/7/2014	11:15 AM	38	44	82
185	8/7/2014	11:30 AM	12	62	74
186	8/7/2014	11:45 AM	0	74	74
187	8/7/2014	12:00 PM	0	81	81
188	8/7/2014	12:15 PM	4	50	54
189	8/7/2014	12:30 PM	0	62	62
190	8/7/2014	12:45 PM	0	54	54
191	8/7/2014	01:00 PM	0	72	72
192	8/7/2014	01:15 PM	7	48	55

48-Hour Tube Counts

Location: Wayne St east of St Joseph St

Start Date: 8/5/2014

Start Time: 10:30:00 AM

	Day 1	Day 2	Total
EB	3127	2958	6085
WB	3019	2764	5783
Avg	3073	2861	5934

Interval	Date	Time	EB	WB	Total
1	8/5/2014	10:30 AM	41	33	74
2	8/5/2014	10:45 AM	49	54	103
3	8/5/2014	11:00 AM	49	44	93
4	8/5/2014	11:15 AM	42	52	94
5	8/5/2014	11:30 AM	58	43	101
6	8/5/2014	11:45 AM	65	47	112
7	8/5/2014	12:00 PM	60	46	106
8	8/5/2014	12:15 PM	71	41	112
9	8/5/2014	12:30 PM	50	60	110
10	8/5/2014	12:45 PM	53	60	113
11	8/5/2014	01:00 PM	70	63	133
12	8/5/2014	01:15 PM	68	48	116
13	8/5/2014	01:30 PM	39	62	101
14	8/5/2014	01:45 PM	53	54	107
15	8/5/2014	02:00 PM	74	42	116
16	8/5/2014	02:15 PM	34	50	84
17	8/5/2014	02:30 PM	46	49	95
18	8/5/2014	02:45 PM	64	62	126
19	8/5/2014	03:00 PM	54	54	108
20	8/5/2014	03:15 PM	54	50	104
21	8/5/2014	03:30 PM	60	49	109
22	8/5/2014	03:45 PM	58	53	111
23	8/5/2014	04:00 PM	70	46	116
24	8/5/2014	04:15 PM	78	42	120
25	8/5/2014	04:30 PM	92	44	136
26	8/5/2014	04:45 PM	82	55	137
27	8/5/2014	05:00 PM	90	66	156
28	8/5/2014	05:15 PM	76	58	134
29	8/5/2014	05:30 PM	74	60	134
30	8/5/2014	05:45 PM	62	53	115
31	8/5/2014	06:00 PM	47	37	84
32	8/5/2014	06:15 PM	42	41	83
33	8/5/2014	06:30 PM	43	40	83
34	8/5/2014	06:45 PM	46	32	78
35	8/5/2014	07:00 PM	32	33	65
36	8/5/2014	07:15 PM	27	28	55
37	8/5/2014	07:30 PM	29	31	60
38	8/5/2014	07:45 PM	30	22	52
39	8/5/2014	08:00 PM	33	20	53
40	8/5/2014	08:15 PM	28	32	60
41	8/5/2014	08:30 PM	22	27	49
42	8/5/2014	08:45 PM	26	22	48
43	8/5/2014	09:00 PM	30	22	52
44	8/5/2014	09:15 PM	12	19	31
45	8/5/2014	09:30 PM	20	12	32
46	8/5/2014	09:45 PM	14	22	36

Interval	Date	Time	EB	WB	Total
47	8/5/2014	10:00 PM	10	14	24
48	8/5/2014	10:15 PM	12	11	23
49	8/5/2014	10:30 PM	14	9	23
50	8/5/2014	10:45 PM	10	11	21
51	8/5/2014	11:00 PM	12	7	19
52	8/5/2014	11:15 PM	14	9	23
53	8/5/2014	11:30 PM	10	5	15
54	8/5/2014	11:45 PM	6	3	9
55	8/6/2014	12:00 AM	3	4	7
56	8/6/2014	12:15 AM	7	7	14
57	8/6/2014	12:30 AM	8	9	17
58	8/6/2014	12:45 AM	7	2	9
59	8/6/2014	01:00 AM	2	2	4
60	8/6/2014	01:15 AM	5	4	9
61	8/6/2014	01:30 AM	3	11	14
62	8/6/2014	01:45 AM	0	3	3
63	8/6/2014	02:00 AM	0	1	1
64	8/6/2014	02:15 AM	2	4	6
65	8/6/2014	02:30 AM	3	0	3
66	8/6/2014	02:45 AM	4	3	7
67	8/6/2014	03:00 AM	4	1	5
68	8/6/2014	03:15 AM	2	1	3
69	8/6/2014	03:30 AM	0	0	0
70	8/6/2014	03:45 AM	6	0	6
71	8/6/2014	04:00 AM	8	3	11
72	8/6/2014	04:15 AM	10	2	12
73	8/6/2014	04:30 AM	5	4	9
74	8/6/2014	04:45 AM	6	3	9
75	8/6/2014	05:00 AM	2	5	7
76	8/6/2014	05:15 AM	8	6	14
77	8/6/2014	05:30 AM	9	8	17
78	8/6/2014	05:45 AM	10	14	24
79	8/6/2014	06:00 AM	9	6	15
80	8/6/2014	06:15 AM	12	4	16
81	8/6/2014	06:30 AM	15	26	41
82	8/6/2014	06:45 AM	22	28	50
83	8/6/2014	07:00 AM	32	49	81
84	8/6/2014	07:15 AM	35	44	79
85	8/6/2014	07:30 AM	48	62	110
86	8/6/2014	07:45 AM	72	88	160
87	8/6/2014	08:00 AM	51	78	129
88	8/6/2014	08:15 AM	40	55	95
89	8/6/2014	08:30 AM	45	58	103
90	8/6/2014	08:45 AM	42	65	107
91	8/6/2014	09:00 AM	33	50	83
92	8/6/2014	09:15 AM	40	46	86

South Bend Downtown 2-Way Conversion Traffic Study

Interval	Date	Time	EB	WB	Total
93	8/6/2014	09:30 AM	38	49	87
94	8/6/2014	09:45 AM	42	50	92
95	8/6/2014	10:00 AM	32	54	86
96	8/6/2014	10:15 AM	53	42	95
97	8/6/2014	10:30 AM	40	39	79
98	8/6/2014	10:45 AM	30	38	68
99	8/6/2014	11:00 AM	38	42	80
100	8/6/2014	11:15 AM	50	51	101
101	8/6/2014	11:30 AM	58	59	117
102	8/6/2014	11:45 AM	54	52	106
103	8/6/2014	12:00 PM	60	78	138
104	8/6/2014	12:15 PM	57	49	106
105	8/6/2014	12:30 PM	70	54	124
106	8/6/2014	12:45 PM	54	56	110
107	8/6/2014	01:00 PM	57	50	107
108	8/6/2014	01:15 PM	69	50	119
109	8/6/2014	01:30 PM	60	40	100
110	8/6/2014	01:45 PM	52	53	105
111	8/6/2014	02:00 PM	50	31	81
112	8/6/2014	02:15 PM	60	50	110
113	8/6/2014	02:30 PM	42	47	89
114	8/6/2014	02:45 PM	42	50	92
115	8/6/2014	03:00 PM	58	46	104
116	8/6/2014	03:15 PM	54	45	99
117	8/6/2014	03:30 PM	55	49	104
118	8/6/2014	03:45 PM	58	45	103
119	8/6/2014	04:00 PM	88	52	140
120	8/6/2014	04:15 PM	60	54	114
121	8/6/2014	04:30 PM	108	53	161
122	8/6/2014	04:45 PM	64	49	113
123	8/6/2014	05:00 PM	91	51	142
124	8/6/2014	05:15 PM	74	58	132
125	8/6/2014	05:30 PM	66	48	114
126	8/6/2014	05:45 PM	56	46	102
127	8/6/2014	06:00 PM	46	46	92
128	8/6/2014	06:15 PM	43	52	95
129	8/6/2014	06:30 PM	33	36	69
130	8/6/2014	06:45 PM	42	38	80
131	8/6/2014	07:00 PM	26	37	63
132	8/6/2014	07:15 PM	28	27	55
133	8/6/2014	07:30 PM	28	30	58
134	8/6/2014	07:45 PM	26	27	53
135	8/6/2014	08:00 PM	31	20	51
136	8/6/2014	08:15 PM	25	16	41
137	8/6/2014	08:30 PM	38	30	68
138	8/6/2014	08:45 PM	29	26	55
139	8/6/2014	09:00 PM	26	18	44
140	8/6/2014	09:15 PM	24	19	43
141	8/6/2014	09:30 PM	14	19	33
142	8/6/2014	09:45 PM	10	17	27

Interval	Date	Time	EB	WB	Total
143	8/6/2014	10:00 PM	17	8	25
144	8/6/2014	10:15 PM	16	22	38
145	8/6/2014	10:30 PM	16	9	25
146	8/6/2014	10:45 PM	7	12	19
147	8/6/2014	11:00 PM	6	10	16
148	8/6/2014	11:15 PM	17	1	18
149	8/6/2014	11:30 PM	12	3	15
150	8/6/2014	11:45 PM	12	4	16
151	8/7/2014	12:00 AM	3	5	8
152	8/7/2014	12:15 AM	4	8	12
153	8/7/2014	12:30 AM	5	5	10
154	8/7/2014	12:45 AM	2	4	6
155	8/7/2014	01:00 AM	3	3	6
156	8/7/2014	01:15 AM	2	3	5
157	8/7/2014	01:30 AM	4	2	6
158	8/7/2014	01:45 AM	1	2	3
159	8/7/2014	02:00 AM	1	2	3
160	8/7/2014	02:15 AM	0	2	2
161	8/7/2014	02:30 AM	3	1	4
162	8/7/2014	02:45 AM	0	0	0
163	8/7/2014	03:00 AM	4	0	4
164	8/7/2014	03:15 AM	1	1	2
165	8/7/2014	03:30 AM	0	2	2
166	8/7/2014	03:45 AM	7	2	9
167	8/7/2014	04:00 AM	4	4	8
168	8/7/2014	04:15 AM	8	1	9
169	8/7/2014	04:30 AM	5	2	7
170	8/7/2014	04:45 AM	1	4	5
171	8/7/2014	05:00 AM	4	3	7
172	8/7/2014	05:15 AM	8	4	12
173	8/7/2014	05:30 AM	9	8	17
174	8/7/2014	05:45 AM	16	3	19
175	8/7/2014	06:00 AM	4	15	19
176	8/7/2014	06:15 AM	16	6	22
177	8/7/2014	06:30 AM	20	20	40
178	8/7/2014	06:45 AM	25	32	57
179	8/7/2014	07:00 AM	20	35	55
180	8/7/2014	07:15 AM	27	39	66
181	8/7/2014	07:30 AM	42	38	80
182	8/7/2014	07:45 AM	36	60	96
183	8/7/2014	08:00 AM	52	54	106
184	8/7/2014	08:15 AM	38	54	92
185	8/7/2014	08:30 AM	40	48	88
186	8/7/2014	08:45 AM	41	42	83
187	8/7/2014	09:00 AM	42	38	80
188	8/7/2014	09:15 AM	32	32	64
189	8/7/2014	09:30 AM	34	46	80
190	8/7/2014	09:45 AM	32	53	85
191	8/7/2014	10:00 AM	32	34	66
192	8/7/2014	10:15 AM	44	35	79

TRAFFIC VOLUMES

INTERSECTION: William & Marion

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	William			William			Marion			Marion				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	0	10	0	0	19	0	0	0	0	0	2	6	37	264
06:15AM	0	22	0	0	26	1	0	0	0	1	0	5	55	311
06:30AM	0	16	0	0	47	6	0	0	0	0	1	16	86	374
06:45AM	0	21	0	0	45	6	0	0	0	0	2	12	86	439
07:00AM	0	12	0	0	48	8	0	0	0	1	3	12	84	507
07:15AM	0	20	0	0	64	4	0	0	0	1	5	24	118	543
07:30AM	0	30	0	0	87	4	0	0	0	3	15	12	151	548
07:45AM	0	24	0	0	102	11	0	0	0	3	5	9	154	525
08:00AM	0	15	0	0	79	3	0	0	0	7	6	10	120	534
08:15AM	0	24	0	0	75	6	0	0	0	4	8	6	123	523
08:30AM	0	33	0	0	70	3	0	0	0	2	5	15	128	492
08:45AM	1	46	0	0	86	5	0	0	0	1	9	15	163	484
09:00AM	0	25	0	0	58	3	0	0	0	0	8	15	109	452
09:15AM	0	25	0	0	46	4	0	0	0	2	3	12	92	--
09:30AM	0	24	0	0	64	3	0	0	0	3	8	18	120	--
09:45AM	0	31	0	0	65	4	0	0	0	3	12	16	131	--

NB			SB			EB			WB			TOTAL
William			William			Marion			Marion			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

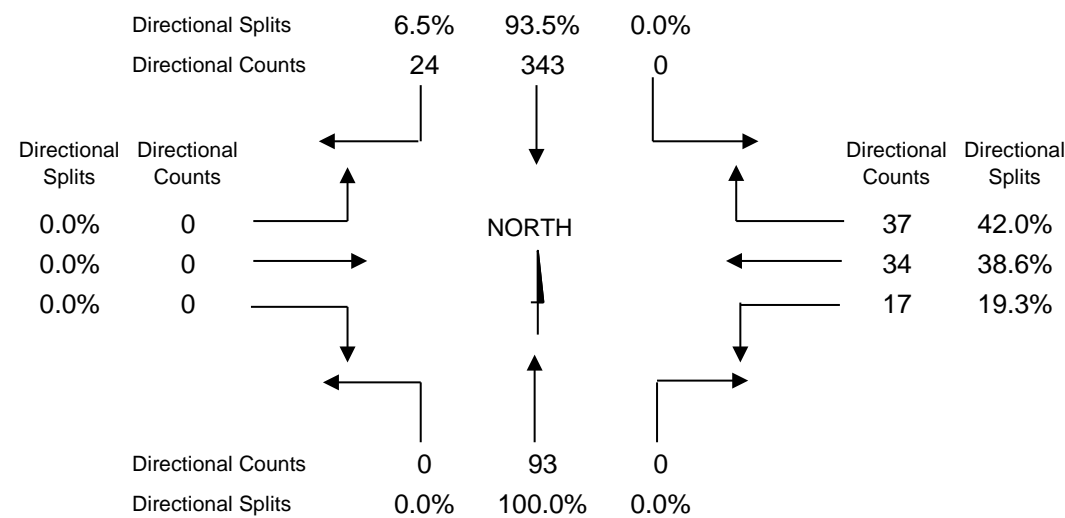
0	93	0	0	343	24	0	0	0	17	34	37	548
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TRUCK PERCENTAGES

0%	3%	0%	0%	3%	4%	0%	0%	0%	0%	3%	14%
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YEAR 2014 PEAK HOUR TRAFFIC

William & Marion
7:30 - 8:30 AM



OVERALL PHF = 0.89

TRAFFIC VOLUMES

INTERSECTION: **William & Marion**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL	
	William			William			Marion			Marion					
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT			
	↶	↱	↷	↵	↴	↶	↷	→	↶	↵	↷	↶	↷		
03:00PM	2	41	0	0	66	7	0	0	0	7	21	32	176	756	
03:15PM	3	44	0	0	69	10	0	0	0	5	12	29	172	793	
03:30PM	1	51	0	0	79	17	0	0	0	4	24	33	209	792	
03:45PM	1	47	0	0	84	15	0	0	0	4	14	34	199	812	
04:00PM	1	56	0	0	90	5	0	0	0	8	20	33	213	827	
04:15PM	0	44	0	0	71	8	0	0	0	5	14	29	171	849	
04:30PM	2	64	0	0	83	10	0	0	0	6	21	43	229	900	
04:45PM	0	61	0	0	78	9	0	0	0	6	18	42	214	868	
05:00PM	1	65	0	0	78	10	0	0	0	4	23	54	235	823	
05:15PM	1	75	0	0	60	10	0	0	0	10	18	48	222	750	
05:30PM	2	59	0	0	82	7	0	0	0	5	10	32	197	689	
05:45PM	0	55	0	0	66	7	0	0	0	5	6	30	169	633	
06:00PM	1	44	0	0	74	6	0	0	0	8	14	15	162	611	
06:15PM	1	52	0	0	63	9	0	0	0	7	8	21	161	--	
06:30PM	1	41	0	0	67	7	0	0	0	2	5	18	141	--	
06:45PM	1	44	0	0	60	3	0	0	0	4	14	21	147	--	

NB			SB			EB			WB			TOTAL
William			William			Marion			Marion			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

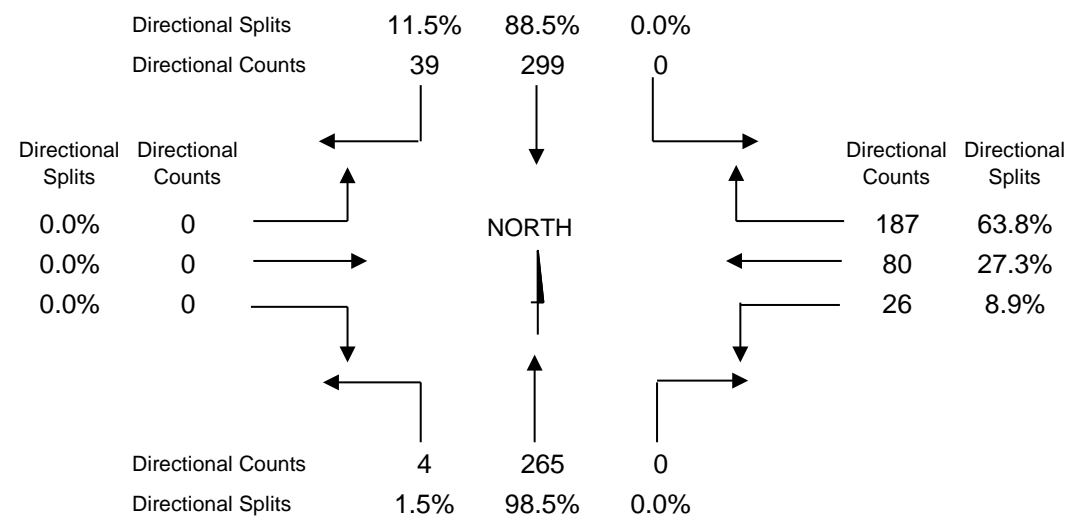
4	265	0	0	299	39	0	0	0	26	80	187	900
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TRUCK PERCENTAGES

0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	3%	1%
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YEAR 2014 PEAK HOUR TRAFFIC

**William & Marion
4:30 - 5:30 PM**



OVERALL PHF = 0.96



TRAFFIC VOLUMES

INTERSECTION: **William & Madison**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	William			William			Madison			Madison				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↑	↷	↵	↓	↶	↷	→	↶	←	↷			
06:00AM	0	12	0	0	17	0	0	4	0	0	0	0	33	231
06:15AM	0	10	1	5	21	0	10	3	1	0	0	0	51	265
06:30AM	0	9	0	2	44	0	7	9	0	0	0	0	71	317
06:45AM	0	12	1	2	43	0	9	9	0	0	0	0	76	378
07:00AM	0	8	1	6	42	0	3	7	0	0	0	0	67	451
07:15AM	0	14	1	6	66	0	8	8	0	0	0	0	103	500
07:30AM	0	19	3	5	84	0	9	11	1	0	0	0	132	509
07:45AM	0	14	2	10	90	0	11	22	0	0	0	0	149	491
08:00AM	0	12	0	9	82	0	5	7	1	0	0	0	116	485
08:15AM	0	15	0	4	78	0	11	4	0	0	0	0	112	454
08:30AM	0	23	1	4	72	0	7	7	0	0	0	0	114	426
08:45AM	0	35	0	8	79	0	11	10	0	0	0	0	143	402
09:00AM	0	17	1	3	53	0	6	3	2	0	0	0	85	374
09:15AM	0	21	1	1	50	0	5	6	0	0	0	0	84	--
09:30AM	0	15	0	3	60	0	5	6	1	0	0	0	90	--
09:45AM	0	23	0	11	60	0	12	9	0	0	0	0	115	--

NB			SB			EB			WB			TOTAL
William			William			Madison			Madison			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

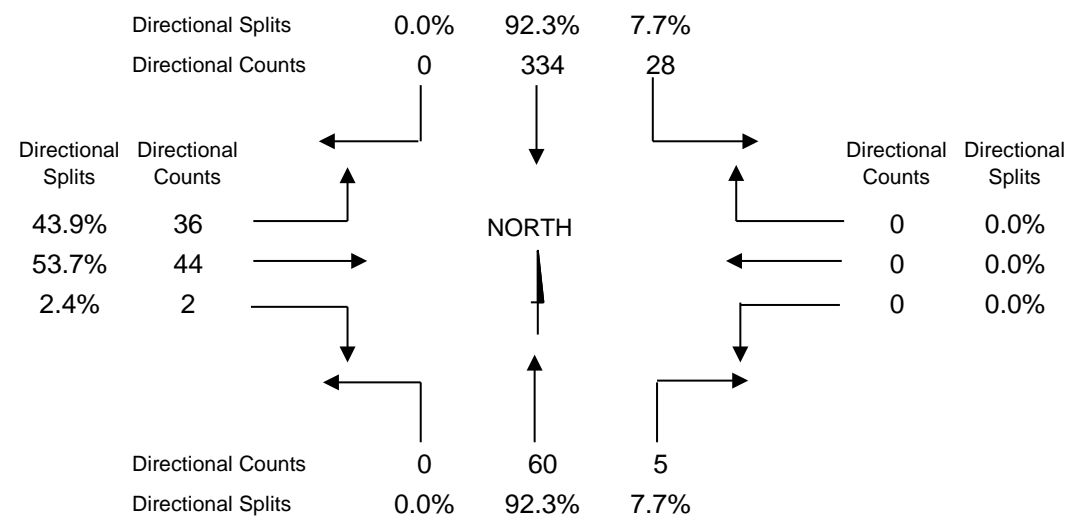
0	60	5	28	334	0	36	44	2	0	0	0	509
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TRUCK PERCENTAGES

0%	2%	0%	4%	4%	0%	6%	3%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

William & Madison
7:30 - 8:30 AM



OVERALL PHF = 0.85



TRAFFIC VOLUMES

INTERSECTION: **William & Madison**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	William			William			Madison			Madison				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	0	30	1	6	67	0	15	3	0	0	0	0	122	534
03:15PM	0	38	1	5	72	0	10	8	0	0	0	0	134	575
03:30PM	0	28	1	5	74	0	22	6	0	0	0	0	136	574
03:45PM	0	43	3	8	75	0	7	5	1	0	0	0	142	596
04:00PM	0	46	1	8	91	0	9	7	1	0	0	0	163	605
04:15PM	0	44	0	3	72	0	8	4	2	0	0	0	133	610
04:30PM	0	54	3	4	82	0	8	4	3	0	0	0	158	626
04:45PM	0	42	2	6	77	0	16	7	1	0	0	0	151	623
05:00PM	0	58	2	5	85	0	13	5	0	0	0	0	168	606
05:15PM	0	54	0	4	70	0	18	3	0	0	0	0	149	582
05:30PM	0	47	0	1	89	0	14	4	0	0	0	0	155	570
05:45PM	0	33	1	6	66	0	21	7	0	0	0	0	134	533
06:00PM	0	36	1	3	84	0	13	5	2	0	0	0	144	513
06:15PM	0	32	2	4	66	0	19	9	5	0	0	0	137	--
06:30PM	0	26	0	4	66	0	15	5	2	0	0	0	118	--
06:45PM	0	26	2	7	56	0	17	6	0	0	0	0	114	--

NB			SB			EB			WB			TOTAL
William			William			Madison			Madison			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

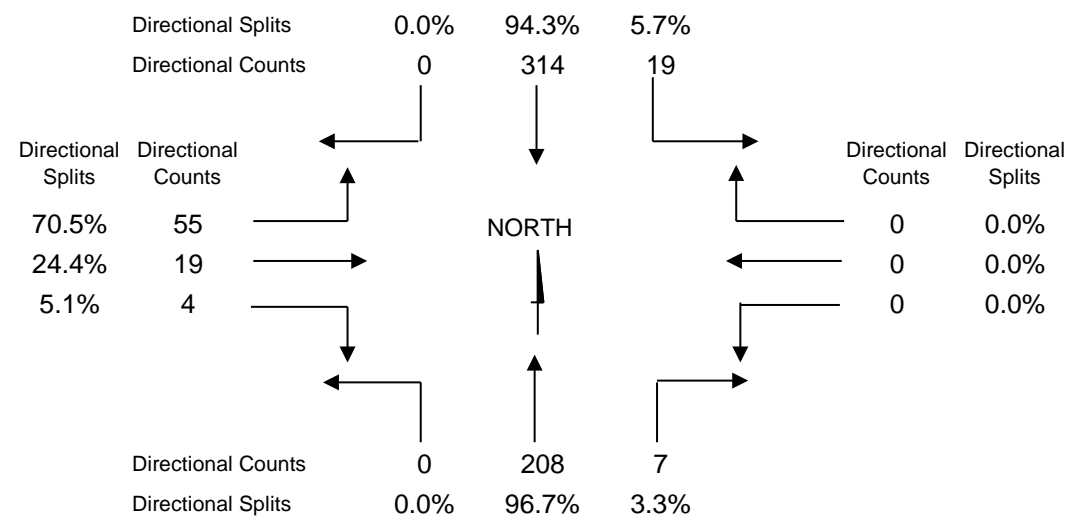
0	208	7	19	314	0	55	19	4	0	0	0	626
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TRUCK PERCENTAGES

0%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**William & Madison
4:30 - 5:30 PM**



OVERALL PHF = 0.93

TRAFFIC VOLUMES

INTERSECTION: **William & Washington**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL	
	William			William			Washington			Washington					
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT			
	↶	↱	↷	↵	↴	↶	↷	→	↶	↷	↶	←	↷		
06:00AM	0	0	0	1	16	1	7	3	1	0	2	0	31	223	
06:15AM	0	0	0	1	21	2	3	4	2	0	17	0	50	267	
06:30AM	0	0	0	3	37	1	3	4	2	2	11	1	64	327	
06:45AM	0	0	0	1	46	3	4	3	1	2	18	0	78	414	
07:00AM	0	0	0	3	40	3	1	14	2	1	10	1	75	524	
07:15AM	0	0	0	5	56	8	2	14	4	5	14	2	110	591	
07:30AM	0	0	0	10	66	6	8	17	8	10	24	2	151	596	
07:45AM	0	0	0	20	79	11	3	27	16	7	24	1	188	547	
08:00AM	0	0	0	7	81	7	6	8	5	6	19	3	142	486	
08:15AM	0	0	0	4	54	5	4	17	10	6	13	2	115	447	
08:30AM	0	0	0	8	52	2	4	11	2	4	16	3	102	424	
08:45AM	0	0	0	7	64	9	3	16	2	3	22	1	127	426	
09:00AM	0	0	0	3	62	2	4	11	5	2	14	0	103	419	
09:15AM	0	0	0	4	36	5	3	21	1	3	10	9	92	--	
09:30AM	0	0	0	7	48	2	3	18	1	6	17	2	104	--	
09:45AM	0	0	0	6	51	5	7	23	3	3	19	3	120	--	

NB			SB			EB			WB			TOTAL
William			William			Washington			Washington			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

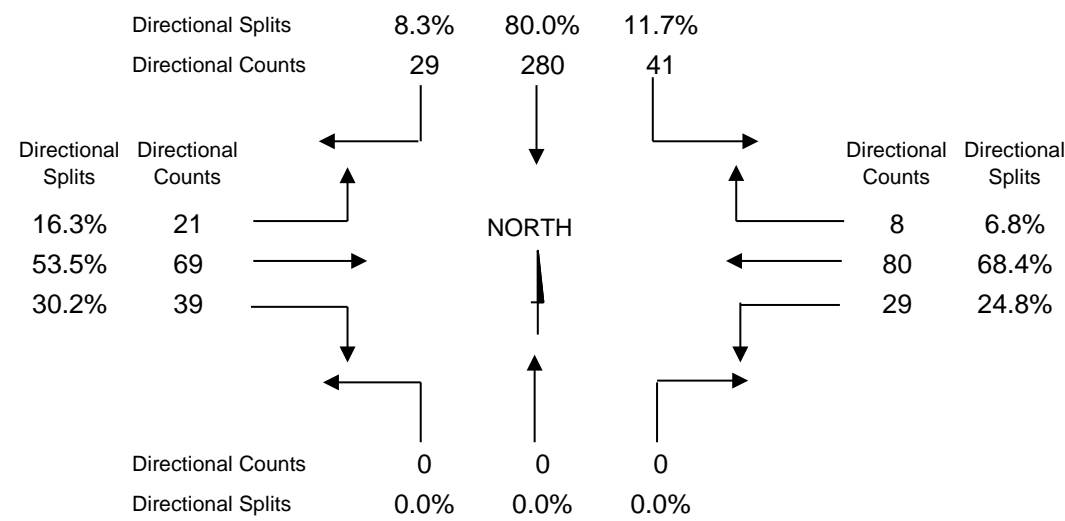
0	0	0	41	280	29	21	69	39	29	80	8	596
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TRUCK PERCENTAGES

0%	0%	0%	0%	5%	11%	0%	2%	3%	0%	4%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**William & Washington
7:30 - 8:30 AM**



OVERALL PHF = 0.79



TRAFFIC VOLUMES

INTERSECTION: **William & Washington**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	William			William			Washington			Washington				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↱	↷	↵	↴	↶	↷	→	↶	↷	↶	↷		
03:00PM	0	0	0	5	50	2	6	19	6	5	22	2	117	526
03:15PM	0	0	0	5	52	5	5	18	10	11	26	2	134	554
03:30PM	0	0	0	7	52	9	5	26	13	5	20	1	138	561
03:45PM	0	0	0	7	54	6	6	24	6	4	26	4	137	607
04:00PM	0	0	0	8	68	5	2	27	4	3	26	2	145	610
04:15PM	0	0	0	3	56	3	6	30	8	4	25	6	141	649
04:30PM	0	0	0	7	72	6	12	26	4	7	38	12	184	636
04:45PM	0	0	0	2	63	6	13	17	5	3	25	6	140	574
05:00PM	0	0	0	1	82	9	9	40	3	7	26	7	184	555
05:15PM	0	0	0	2	57	4	8	14	11	2	27	3	128	508
05:30PM	0	0	0	2	62	5	7	17	6	2	16	5	122	480
05:45PM	0	0	0	2	60	9	11	10	3	5	19	2	121	470
06:00PM	0	0	0	1	78	6	5	18	0	5	22	2	137	430
06:15PM	0	0	0	3	60	3	3	9	0	5	16	1	100	--
06:30PM	0	0	0	2	58	3	3	20	6	1	17	2	112	--
06:45PM	0	0	0	2	50	6	1	13	1	0	6	2	81	--

NB			SB			EB			WB			TOTAL
William			William			Washington			Washington			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

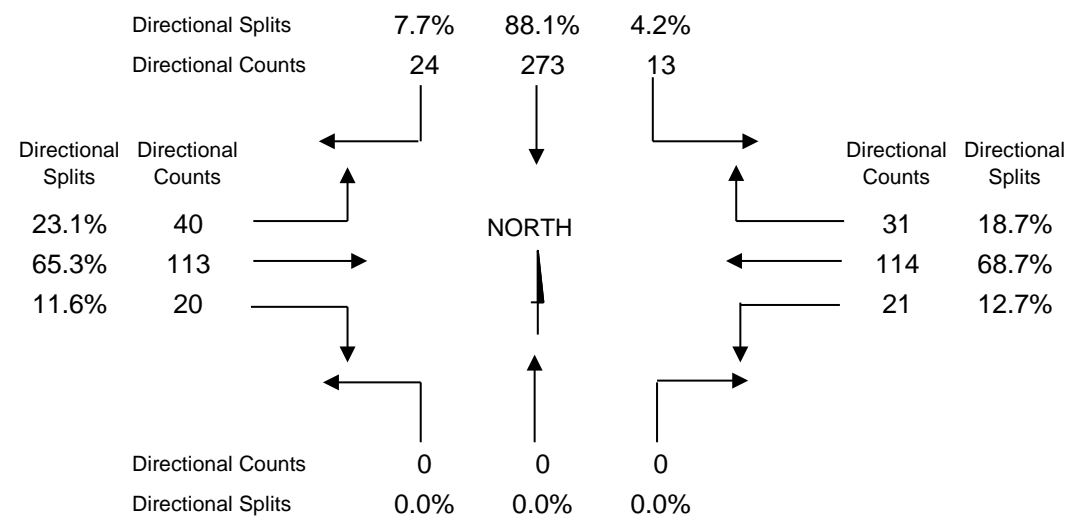
0	0	0	13	273	24	40	113	20	21	114	31	649
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TRUCK PERCENTAGES

0%	0%	0%	0%	3%	0%	0%	3%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**William & Washington
4:15 - 5:15 PM**



OVERALL PHF = 0.88



TRAFFIC VOLUMES

INTERSECTION: William & Western

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	William			William			Western			Western				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↶	↷	↓	↵	↷	→	↶	↶	←	↷		
06:00AM	0	0	0	16	0	2	0	22	0	0	17	0	57	420
06:15AM	0	0	0	14	0	8	0	42	0	0	31	0	95	503
06:30AM	0	0	0	28	0	4	0	69	0	0	36	0	137	573
06:45AM	0	0	0	34	0	3	0	54	1	0	39	0	131	645
07:00AM	0	0	0	32	0	8	0	57	0	0	43	0	140	744
07:15AM	0	0	0	42	0	8	0	74	0	0	41	0	165	792
07:30AM	0	0	0	44	0	11	0	105	0	0	49	0	209	795
07:45AM	0	0	0	54	0	14	0	107	0	0	55	0	230	765
08:00AM	0	0	0	50	0	8	0	87	0	0	43	0	188	762
08:15AM	0	0	1	50	0	3	0	69	0	0	45	0	168	781
08:30AM	0	0	0	36	0	11	0	71	0	0	61	0	179	777
08:45AM	0	0	0	54	0	13	0	90	0	0	70	0	227	788
09:00AM	0	0	0	53	0	11	0	73	0	0	70	0	207	748
09:15AM	0	0	2	26	2	6	0	67	0	0	61	0	164	--
09:30AM	0	0	0	44	1	8	0	85	0	0	52	0	190	--
09:45AM	0	0	0	41	0	8	0	74	0	1	63	0	187	--

NB			SB			EB			WB			TOTAL
William			William			Western			Western			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

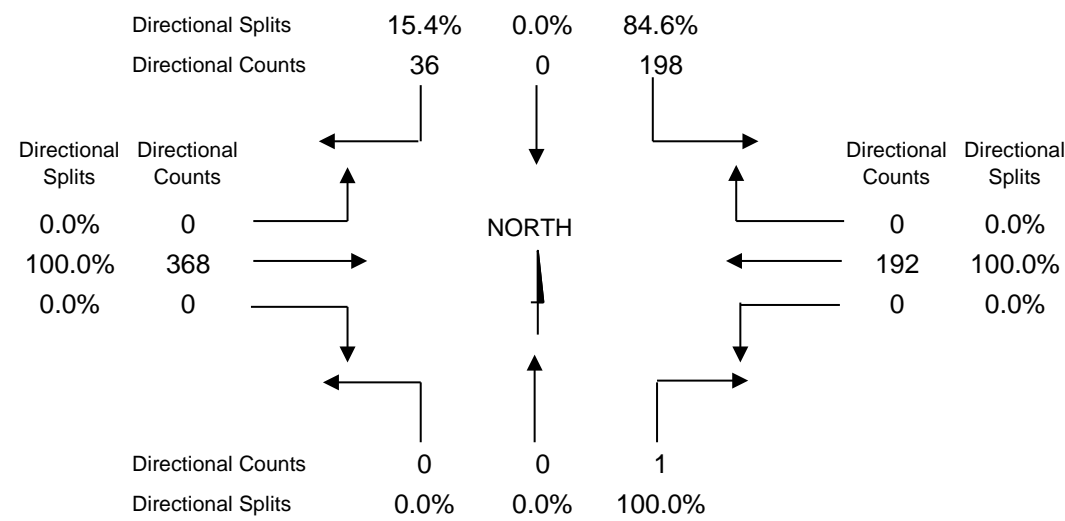
0	0	1	198	0	36	0	368	0	0	192	0	795
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TRUCK PERCENTAGES

0%	0%	0%	8%	0%	6%	0%	3%	0%	0%	4%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**William & Western
7:30 - 8:30 AM**



OVERALL PHF = 0.86

TRAFFIC VOLUMES

INTERSECTION: William & Western

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	William			William			Western			Western				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↘	↙	↓	↘	↙	→	↘	↙	←	↘		
03:00PM	0	0	0	41	0	17	0	86	0	0	80	0	224	1049
03:15PM	0	0	0	61	0	21	0	105	0	1	90	0	278	1139
03:30PM	2	0	1	54	0	16	0	100	3	1	88	0	265	1142
03:45PM	0	0	0	42	0	16	0	124	0	1	99	0	282	1221
04:00PM	0	0	0	62	0	21	0	113	0	0	118	0	314	1212
04:15PM	1	0	1	52	0	19	0	113	1	1	93	0	281	1216
04:30PM	0	0	1	74	0	32	0	113	1	0	123	0	344	1279
04:45PM	0	0	0	50	0	31	0	91	1	1	99	0	273	1227
05:00PM	0	0	0	62	2	25	0	102	0	2	125	0	318	1216
05:15PM	1	0	0	60	2	20	0	120	0	6	135	0	344	1204
05:30PM	0	0	4	51	1	11	0	111	2	2	110	0	292	1184
05:45PM	4	0	3	45	7	23	0	75	4	2	99	0	262	1241
06:00PM	5	0	4	69	9	24	0	100	3	4	88	0	306	1248
06:15PM	4	0	10	66	13	36	0	103	10	2	80	0	324	--
06:30PM	4	0	4	64	12	22	0	148	6	1	88	0	349	--
06:45PM	1	0	5	57	9	17	0	100	4	3	73	0	269	--

NB			SB			EB			WB			TOTAL
William			William			Western			Western			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

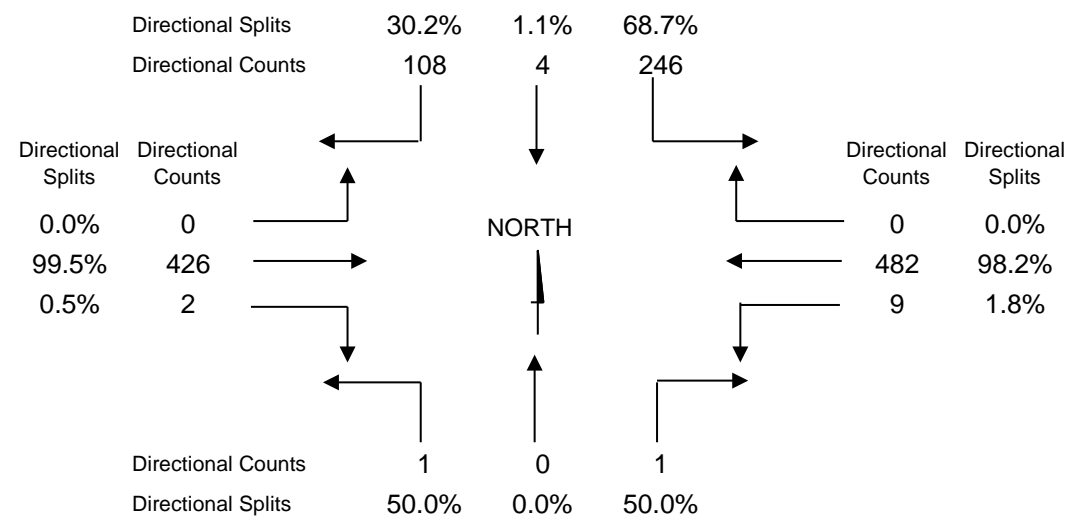
1	0	1	246	4	108	0	426	2	9	482	0	1279
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TRUCK PERCENTAGES

0%	0%	0%	3%	0%	0%	0%	2%	0%	0%	2%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**William & Western
4:30 - 5:30 PM**



OVERALL PHF = 0.93

TRAFFIC VOLUMES

INTERSECTION: Lafayette & Marion

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Marion			Marion				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	1	4	0	0	0	1	0	0	0	0	3	0	9	140
06:15AM	3	22	0	0	3	1	0	0	0	0	2	0	31	170
06:30AM	14	23	0	0	3	1	0	0	0	0	2	0	43	211
06:45AM	4	34	0	0	7	1	0	0	0	0	9	2	57	257
07:00AM	9	14	0	0	5	2	0	0	0	0	5	4	39	293
07:15AM	10	26	0	0	13	5	0	0	0	0	15	3	72	324
07:30AM	9	34	0	0	21	17	0	0	0	0	6	2	89	311
07:45AM	6	41	0	0	30	6	0	0	0	0	5	5	93	291
08:00AM	9	26	0	0	16	6	0	0	0	0	7	6	70	276
08:15AM	3	24	0	0	9	9	0	0	0	0	8	6	59	274
08:30AM	14	26	0	0	13	6	0	0	0	1	2	7	69	266
08:45AM	11	32	0	0	19	5	0	0	0	0	9	2	78	273
09:00AM	9	23	0	0	16	6	0	0	0	1	6	7	68	276
09:15AM	6	18	0	0	12	2	0	0	0	0	10	3	51	--
09:30AM	9	23	0	0	17	7	0	0	0	0	13	7	76	--
09:45AM	11	23	0	0	17	3	0	0	0	2	17	8	81	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Marion			Marion			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

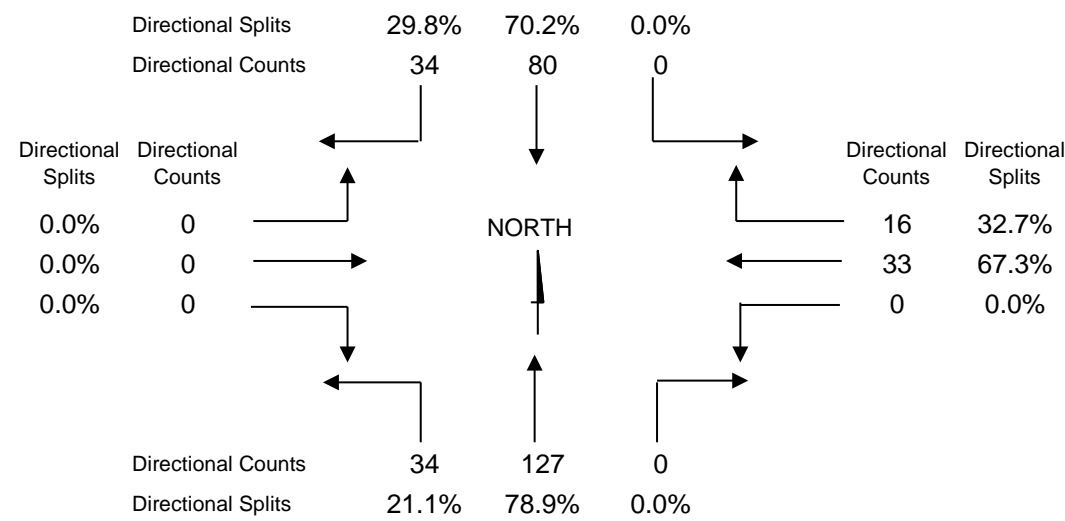
34	127	0	0	80	34	0	0	0	0	33	16	324
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TRUCK PERCENTAGES

9%	1%	0%	0%	0%	3%	0%	0%	0%	0%	15%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Lafayette & Marion
7:15 - 8:15 AM



OVERALL PHF = 0.87



TRAFFIC VOLUMES

INTERSECTION: Lafayette & Marion

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB Lafayette			SB Lafayette			EB Marion			WB Marion			INTERVAL TOTAL	HOUR TOTAL
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	19	34	0	0	26	16	0	0	0	0	22	12	129	471
03:15PM	23	36	0	0	21	10	0	0	0	0	11	4	105	480
03:30PM	22	36	0	0	22	16	0	0	0	0	21	9	126	477
03:45PM	18	35	0	0	17	10	0	0	0	1	23	7	111	504
04:00PM	20	45	0	0	29	12	0	0	0	1	27	4	138	539
04:15PM	20	23	0	0	20	7	0	0	0	0	22	10	102	559
04:30PM	39	48	0	0	30	11	0	0	0	0	15	10	153	606
04:45PM	38	42	0	0	20	13	0	0	0	0	23	10	146	558
05:00PM	37	58	0	0	18	10	0	0	0	0	25	10	158	510
05:15PM	36	46	0	0	18	5	0	0	0	0	34	10	149	425
05:30PM	23	36	0	0	15	8	0	0	0	0	13	10	105	347
05:45PM	23	31	0	0	17	4	0	0	0	0	13	10	98	316
06:00PM	15	23	0	0	9	10	0	0	0	0	12	4	73	299
06:15PM	18	22	0	0	10	4	0	0	0	1	14	2	71	--
06:30PM	12	26	0	0	16	3	0	0	0	0	12	5	74	--
06:45PM	15	22	0	0	15	11	0	0	0	0	12	6	81	--

NB Lafayette			SB Lafayette			EB Marion			WB Marion			TOTAL
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

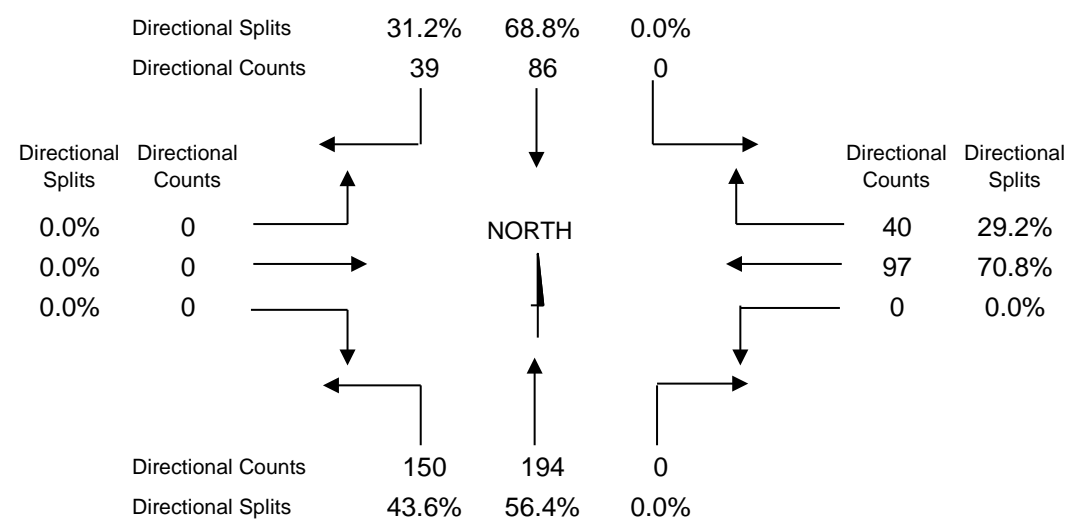
150	194	0	0	86	39	0	0	0	0	97	40	606
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TRUCK PERCENTAGES

0%	0%	0%	0%	1%	3%	0%	0%	0%	0%	3%	3%
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YEAR 2014 PEAK HOUR TRAFFIC

Lafayette & Marion
4:30 - 5:30 PM



OVERALL PHF = 0.96



TRAFFIC VOLUMES

INTERSECTION: Lafayette & Madison

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Madison			Madison				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↷	↷	↶	↷	↷	↷	→	↶	↶	←	↷		
06:00AM	0	6	2	0	0	0	2	3	0	0	0	0	13	165
06:15AM	0	20	3	3	0	0	3	5	0	0	0	2	36	200
06:30AM	0	28	5	3	0	0	7	6	0	0	0	3	52	238
06:45AM	0	34	11	6	0	0	3	9	0	0	0	1	64	268
07:00AM	0	17	8	7	0	0	4	10	0	0	0	2	48	331
07:15AM	0	35	10	12	0	0	3	11	0	0	0	3	74	363
07:30AM	0	35	9	18	0	0	5	10	0	0	0	5	82	340
07:45AM	0	40	23	27	0	0	5	30	0	0	0	2	127	322
08:00AM	0	30	13	19	0	0	5	11	0	0	0	2	80	272
08:15AM	0	25	9	9	0	0	3	4	0	0	0	1	51	260
08:30AM	0	31	4	13	0	0	5	8	0	0	0	3	64	257
08:45AM	0	30	6	20	0	0	10	10	0	0	0	1	77	261
09:00AM	0	30	8	17	0	0	2	9	0	0	0	2	68	259
09:15AM	0	21	9	12	0	0	2	3	0	0	0	1	48	--
09:30AM	0	28	11	16	0	0	3	8	0	0	0	2	68	--
09:45AM	0	26	7	20	0	0	7	14	0	0	0	1	75	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Madison			Madison			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

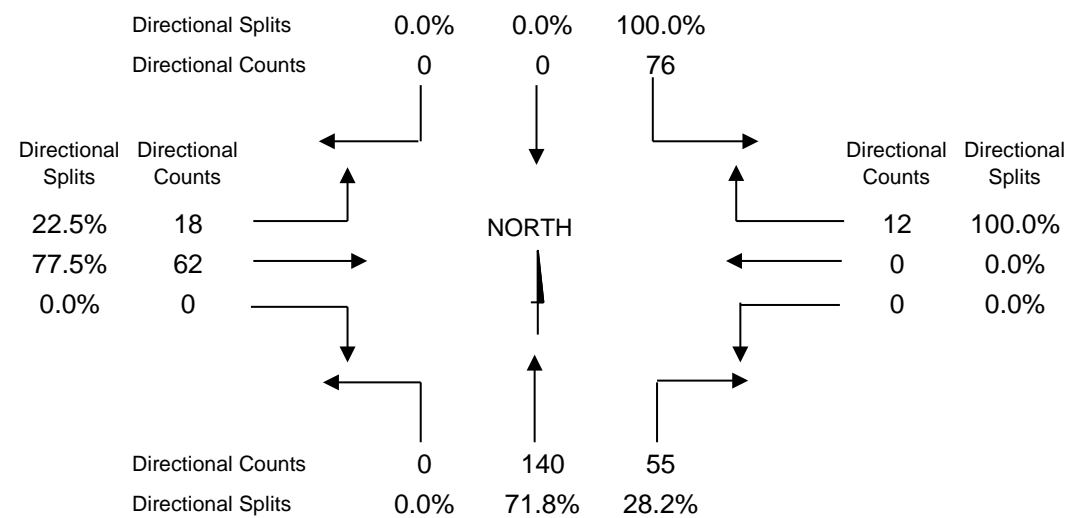
0	140	55	76	0	0	18	62	0	0	0	12	363
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TRUCK PERCENTAGES

0%	3%	0%	0%	0%	0%	0%	3%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Lafayette & Madison
7:15 - 8:15 AM**



OVERALL PHF = 0.71



TRAFFIC VOLUMES

INTERSECTION: Lafayette & Madison

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Madison			Madison				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	0	46	7	29	0	0	4	7	0	0	0	4	97	393
03:15PM	0	51	14	20	0	0	7	7	0	0	0	2	101	415
03:30PM	0	55	16	22	0	0	3	9	0	0	0	2	107	393
03:45PM	0	42	5	17	0	0	7	13	0	0	0	4	88	435
04:00PM	0	54	12	32	0	0	6	11	0	0	0	4	119	467
04:15PM	0	40	9	20	0	0	4	4	0	0	0	2	79	498
04:30PM	0	73	21	27	0	0	2	13	0	0	0	13	149	538
04:45PM	0	66	11	22	0	0	4	12	0	0	0	5	120	472
05:00PM	0	86	22	25	0	0	1	10	0	0	0	6	150	440
05:15PM	0	75	8	20	0	0	1	9	0	0	0	6	119	348
05:30PM	0	52	9	15	0	0	1	4	0	0	0	2	83	301
05:45PM	0	49	6	18	0	0	3	11	0	0	0	1	88	282
06:00PM	0	31	4	10	0	0	3	6	0	0	0	4	58	265
06:15PM	0	36	6	11	0	0	3	12	0	0	0	4	72	--
06:30PM	0	31	7	16	0	0	4	5	0	0	0	1	64	--
06:45PM	0	33	6	15	0	0	2	12	0	0	0	3	71	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Madison			Madison			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

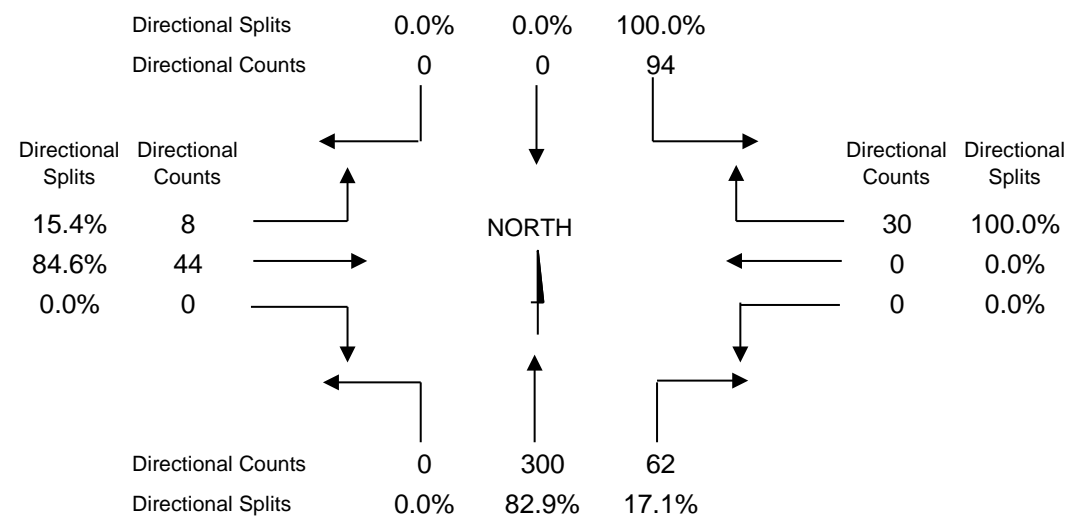
0	300	62	94	0	0	8	44	0	0	0	30	538
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TRUCK PERCENTAGES

0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Lafayette & Madison
4:30 - 5:30 PM



OVERALL PHF = 0.90



TRAFFIC VOLUMES

INTERSECTION: Lafayette & La Salle

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB Lafayette			SB Lafayette			EB La Salle			WB La Salle			INTERVAL TOTAL	HOUR TOTAL
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↷	↸	↵	↶	↷	↶	→	↷	↶	←	↷		
06:00AM	9	10	6	0	0	0	3	64	0	0	54	0	146	781
06:15AM	9	22	5	0	0	0	1	60	0	0	58	5	160	837
06:30AM	23	31	12	0	0	0	3	83	0	0	93	7	252	945
06:45AM	11	31	9	0	0	0	3	75	0	0	86	8	223	1064
07:00AM	13	21	8	0	0	0	1	89	0	0	66	4	202	1232
07:15AM	20	29	10	0	0	0	8	110	0	0	84	7	268	1334
07:30AM	25	37	12	0	0	0	5	165	0	0	122	5	371	1340
07:45AM	36	42	29	0	0	0	7	157	0	0	106	14	391	1297
08:00AM	27	26	14	0	0	0	3	145	0	0	76	13	304	1219
08:15AM	31	19	14	0	0	0	5	126	0	0	65	14	274	1182
08:30AM	16	36	11	0	0	0	3	152	0	0	106	4	328	1190
08:45AM	30	24	20	0	0	0	4	133	0	0	92	10	313	1152
09:00AM	22	30	17	0	0	0	5	104	0	0	80	9	267	1132
09:15AM	33	19	16	0	0	0	3	106	0	0	96	9	282	--
09:30AM	21	26	13	0	0	0	9	116	0	0	91	14	290	--
09:45AM	20	26	14	0	0	0	5	126	0	0	87	15	293	--

NB Lafayette			SB Lafayette			EB La Salle			WB La Salle			TOTAL
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

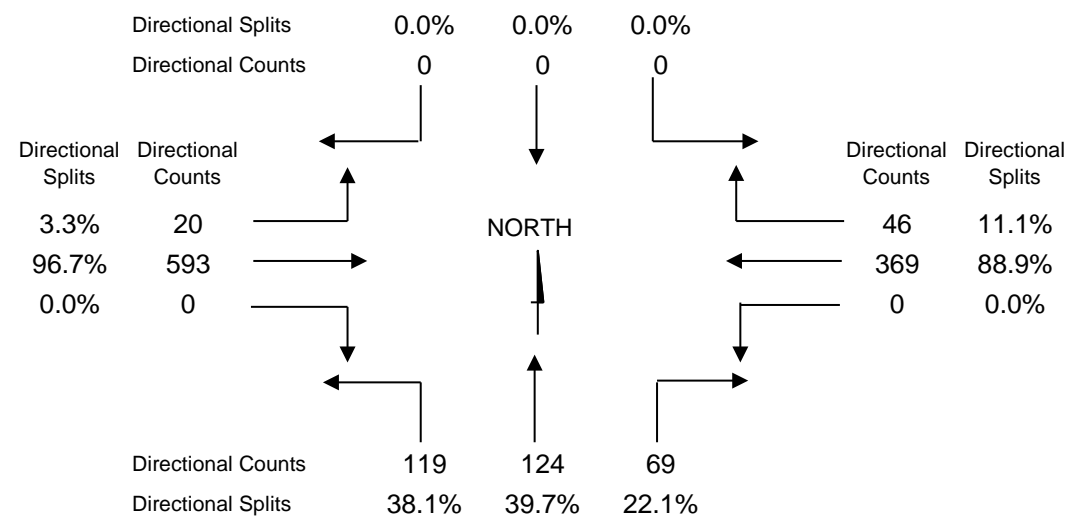
119	124	69	0	0	0	20	593	0	0	369	46	1340
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TRUCK PERCENTAGES

7%	4%	2%	0%	0%	0%	5%	4%	0%	0%	2%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Lafayette & La Salle
7:30 - 8:30 AM



OVERALL PHF = 0.86



TRAFFIC VOLUMES

INTERSECTION: Lafayette & La Salle

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB Lafayette			SB Lafayette			EB La Salle			WB La Salle			INTERVAL TOTAL	HOUR TOTAL
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↷	↷	↶	↷	↷	↷	→	↶	↶	←	↷		
03:00PM	36	39	18	0	0	0	7	171	0	0	155	19	445	1821
03:15PM	37	40	19	0	0	0	4	156	0	0	147	16	419	1857
03:30PM	36	57	31	0	0	0	9	197	0	0	158	6	494	1860
03:45PM	37	33	24	0	0	0	9	182	0	0	166	12	463	1868
04:00PM	43	50	32	0	0	0	3	177	0	0	156	20	481	1832
04:15PM	46	36	29	0	0	0	5	149	0	0	145	12	422	1904
04:30PM	53	72	39	0	0	0	6	165	0	0	152	15	502	1960
04:45PM	46	56	18	0	0	0	4	164	0	0	130	9	427	1925
05:00PM	70	82	31	0	0	0	9	163	0	0	174	24	553	1870
05:15PM	33	70	21	0	0	0	5	142	0	0	197	10	478	1681
05:30PM	50	44	25	0	0	0	3	171	0	0	165	9	467	1526
05:45PM	23	44	18	0	0	0	4	122	0	0	149	12	372	1377
06:00PM	33	30	24	0	0	0	3	135	0	0	131	8	364	1281
06:15PM	36	27	11	0	0	0	1	122	0	0	120	6	323	--
06:30PM	27	39	7	0	0	0	1	110	0	0	126	8	318	--
06:45PM	20	34	16	0	0	0	4	86	0	0	113	3	276	--

NB Lafayette			SB Lafayette			EB La Salle			WB La Salle			TOTAL
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

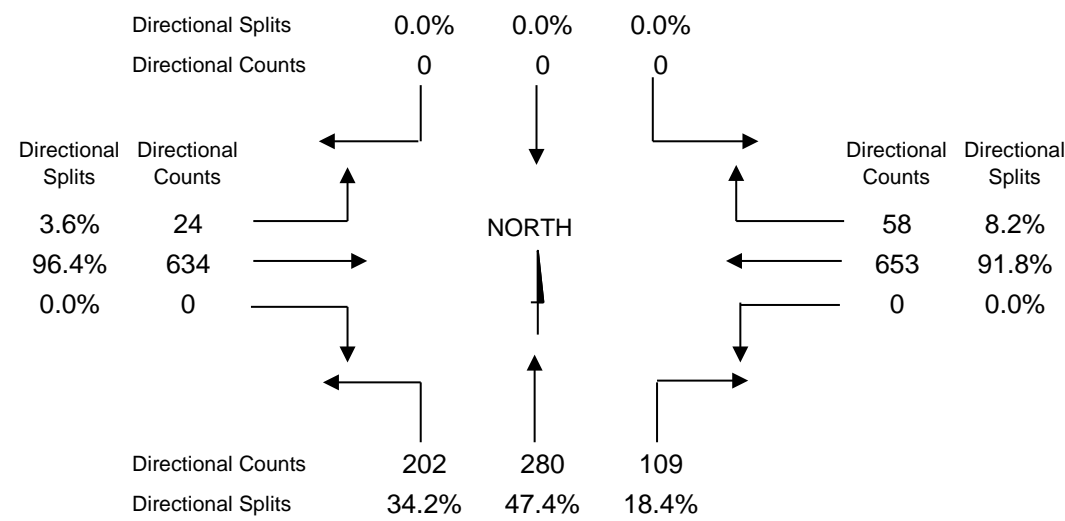
202	280	109	0	0	0	24	634	0	0	653	58	1960
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TRUCK PERCENTAGES

3%	0%	0%	0%	0%	0%	0%	1%	0%	0%	2%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Lafayette & La Salle
4:30 - 5:30 PM



OVERALL PHF = 0.89

TRAFFIC VOLUMES

INTERSECTION: Lafayette & Colfax

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Colfax			Colfax				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	0	22	0	0	0	0	1	7	0	0	5	5	40	265
06:15AM	2	31	1	0	0	0	2	10	0	0	11	0	57	319
06:30AM	3	51	1	0	0	0	6	17	0	0	7	2	87	375
06:45AM	0	48	3	0	0	0	1	19	0	0	9	1	81	446
07:00AM	3	44	2	0	0	0	0	24	0	0	17	4	94	585
07:15AM	2	53	5	0	0	0	5	27	0	0	17	4	113	621
07:30AM	5	64	2	0	0	0	5	44	0	0	29	9	158	632
07:45AM	8	97	16	0	0	0	9	48	0	0	29	13	220	599
08:00AM	3	59	3	0	0	0	4	28	0	0	26	7	130	511
08:15AM	7	50	6	0	0	0	5	31	0	0	13	12	124	508
08:30AM	4	55	2	0	0	0	3	37	0	0	17	7	125	502
08:45AM	5	62	9	0	0	0	6	20	0	0	16	14	132	501
09:00AM	5	63	13	0	0	0	3	29	0	0	11	3	127	493
09:15AM	6	57	10	0	0	0	3	17	0	0	16	9	118	--
09:30AM	4	52	11	0	0	0	0	19	0	0	25	13	124	--
09:45AM	6	51	13	0	0	0	6	29	0	0	13	6	124	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Colfax			Colfax			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

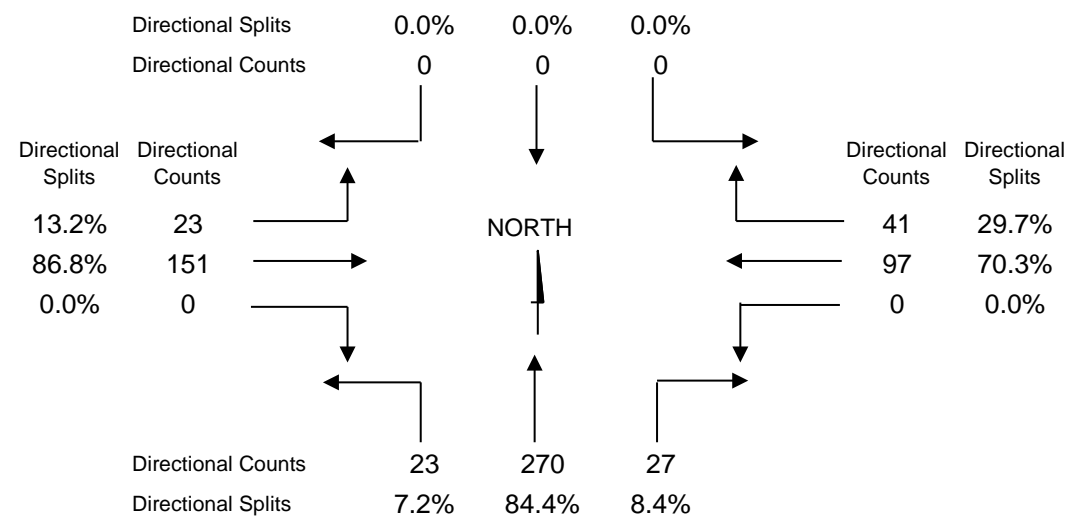
23	270	27	0	0	0	23	151	0	0	97	41	632
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TRUCK PERCENTAGES

0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	5%
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YEAR 2014 PEAK HOUR TRAFFIC

Lafayette & Colfax
7:30 - 8:30 AM



OVERALL PHF = 0.72



TRAFFIC VOLUMES

INTERSECTION: Lafayette & Colfax

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Colfax			Colfax				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	7	81	8	0	0	0	2	29	0	0	28	10	165	730
03:15PM	8	66	11	0	0	0	6	32	0	0	25	22	170	766
03:30PM	8	98	17	0	0	0	4	42	0	0	30	20	219	787
03:45PM	7	78	21	0	0	0	2	25	0	0	25	18	176	828
04:00PM	10	98	12	0	0	0	8	25	0	0	31	17	201	868
04:15PM	5	94	19	0	0	0	5	36	0	0	22	10	191	959
04:30PM	7	147	18	0	0	0	7	42	0	0	26	13	260	963
04:45PM	4	107	26	0	0	0	3	23	0	0	37	16	216	912
05:00PM	9	143	21	0	0	0	5	35	0	0	50	29	292	852
05:15PM	0	108	16	0	0	0	6	27	0	0	27	11	195	701
05:30PM	7	97	17	0	0	0	7	36	0	0	30	15	209	631
05:45PM	6	65	13	0	0	0	5	31	0	0	27	9	156	553
06:00PM	8	72	11	0	0	0	2	26	0	0	14	8	141	514
06:15PM	3	59	8	0	0	0	2	18	0	0	23	12	125	--
06:30PM	2	64	0	0	0	0	3	26	0	0	29	7	131	--
06:45PM	1	54	3	0	0	0	4	21	0	0	23	11	117	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Colfax			Colfax			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

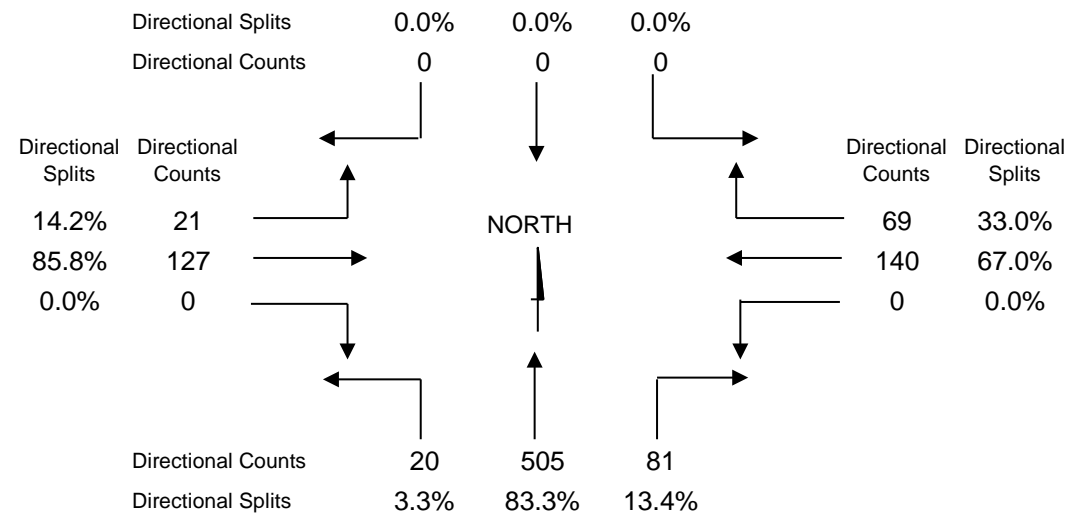
20	505	81	0	0	0	21	127	0	0	140	69	963
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TRUCK PERCENTAGES

0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Lafayette & Colfax
4:30 - 5:30 PM



OVERALL PHF = 0.82



TRAFFIC VOLUMES

INTERSECTION: Lafayette & Washington

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Washington			Washington				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↷	↷	↶	↷	↷	↷	→	↶	↶	←	↷		
06:00AM	1	19	1	0	0	0	1	3	0	0	0	0	25	248
06:15AM	5	35	1	0	0	0	0	6	0	0	10	0	57	288
06:30AM	7	52	1	0	0	0	3	2	0	0	5	3	73	337
06:45AM	12	57	5	0	0	0	1	5	0	0	12	1	93	406
07:00AM	5	36	3	0	0	0	4	8	0	0	9	0	65	535
07:15AM	5	53	8	0	0	0	4	12	0	0	20	4	106	601
07:30AM	17	63	13	0	0	0	2	18	0	0	27	2	142	612
07:45AM	19	110	18	0	0	0	5	24	0	0	37	9	222	592
08:00AM	16	60	15	0	0	0	0	11	0	0	23	6	131	525
08:15AM	6	61	12	0	0	0	1	18	0	0	17	2	117	506
08:30AM	7	58	15	0	0	0	3	17	0	0	17	5	122	522
08:45AM	14	76	16	0	0	0	2	18	0	0	21	8	155	530
09:00AM	5	55	14	0	0	0	6	13	0	0	9	10	112	510
09:15AM	5	56	16	0	0	0	5	24	0	0	17	10	133	--
09:30AM	7	44	26	0	0	0	8	16	0	0	19	10	130	--
09:45AM	6	52	19	0	0	0	6	25	0	0	17	10	135	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Washington			Washington			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

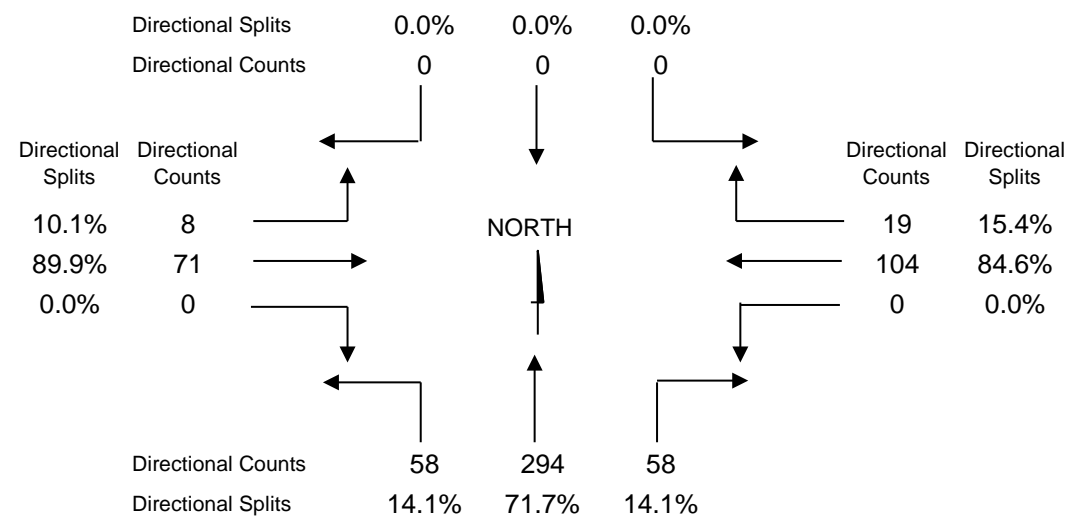
58	294	58	0	0	0	8	71	0	0	104	19	612
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TRUCK PERCENTAGES

2%	4%	2%	0%	0%	0%	0%	2%	0%	0%	1%	6%
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YEAR 2014 PEAK HOUR TRAFFIC

**Lafayette & Washington
7:30 - 8:30 AM**



OVERALL PHF = 0.69



TRAFFIC VOLUMES

INTERSECTION: Lafayette & Washington

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Washington			Washington				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	5	74	20	0	0	0	4	19	0	0	22	10	154	691
03:15PM	11	63	14	0	0	0	7	24	0	0	24	10	153	723
03:30PM	12	89	20	0	0	0	6	31	0	0	18	15	191	760
03:45PM	12	87	20	0	0	0	7	28	0	0	22	17	193	839
04:00PM	9	81	16	0	0	0	7	32	0	0	19	22	186	850
04:15PM	13	86	17	0	0	0	7	36	0	0	19	12	190	894
04:30PM	15	116	23	0	0	0	23	37	0	0	32	24	270	878
04:45PM	12	110	6	0	0	0	5	30	0	0	23	18	204	769
05:00PM	4	129	1	0	0	0	8	34	0	0	32	22	230	696
05:15PM	6	92	10	0	0	0	6	20	0	0	26	14	174	597
05:30PM	8	85	9	0	0	0	8	19	0	0	14	18	161	533
05:45PM	6	75	6	0	0	0	5	11	0	0	19	9	131	477
06:00PM	6	64	4	0	0	0	3	17	0	0	23	14	131	438
06:15PM	7	58	4	0	0	0	2	14	0	0	16	9	110	--
06:30PM	4	55	4	0	0	0	3	17	0	0	18	4	105	--
06:45PM	3	54	8	0	0	0	5	13	0	0	5	4	92	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Washington			Washington			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

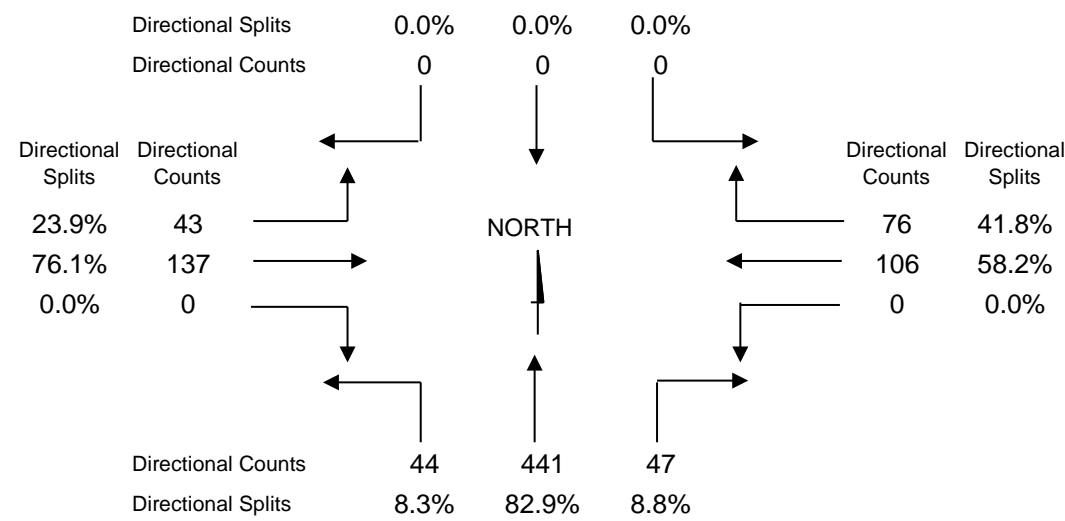
44	441	47	0	0	0	43	137	0	0	106	76	894
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TRUCK PERCENTAGES

0%	1%	0%	0%	0%	0%	3%	2%	0%	0%	1%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Lafayette & Washington
4:15 - 5:15 PM



OVERALL PHF = 0.83

TRAFFIC VOLUMES

INTERSECTION: Lafayette & Jefferson

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Jefferson			Jefferson				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	0	20	1	0	0	0	0	0	0	0	1	1	23	246
06:15AM	1	40	3	0	0	0	0	2	0	0	0	1	47	287
06:30AM	2	68	2	0	0	0	0	4	0	0	1	4	81	340
06:45AM	3	64	2	0	0	0	2	9	0	0	9	6	95	403
07:00AM	3	45	3	0	0	0	2	2	0	0	8	1	64	526
07:15AM	10	60	7	0	0	0	1	8	0	0	5	9	100	609
07:30AM	6	92	13	0	0	0	2	11	0	0	8	12	144	634
07:45AM	22	129	18	0	0	0	5	8	0	0	20	16	218	606
08:00AM	11	74	19	0	0	0	5	12	0	0	13	13	147	538
08:15AM	6	66	9	0	0	0	4	14	0	0	14	12	125	508
08:30AM	8	76	6	0	0	0	1	8	0	0	9	8	116	486
08:45AM	13	70	13	0	0	0	1	18	0	0	14	21	150	484
09:00AM	7	51	12	0	0	0	3	12	0	0	8	24	117	430
09:15AM	1	66	0	0	0	0	2	11	0	0	10	13	103	--
09:30AM	5	63	4	0	0	0	3	8	0	0	10	21	114	--
09:45AM	3	47	9	0	0	0	5	7	0	0	5	20	96	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Jefferson			Jefferson			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

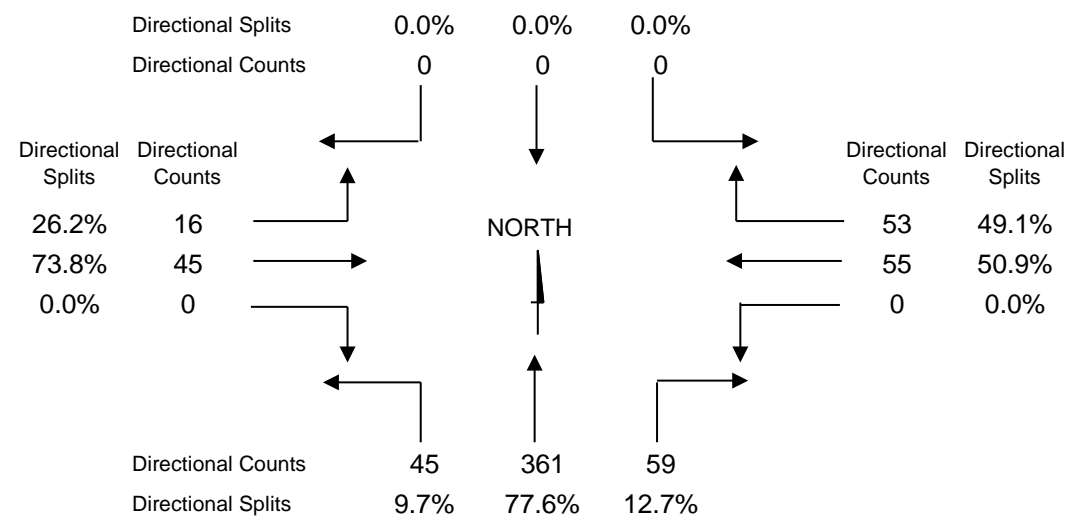
45	361	59	0	0	0	16	45	0	0	55	53	634
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TRUCK PERCENTAGES

0%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Lafayette & Jefferson
7:30 - 8:30 AM



TRAFFIC VOLUMES

INTERSECTION: Lafayette & Jefferson

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Jefferson			Jefferson				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	7	74	9	0	0	0	4	10	0	0	15	22	141	568
03:15PM	3	68	4	0	0	0	1	12	0	0	9	21	118	560
03:30PM	5	102	8	0	0	0	7	16	0	0	8	20	166	588
03:45PM	9	87	7	0	0	0	1	13	0	0	8	18	143	606
04:00PM	3	66	10	0	0	0	3	19	0	0	6	26	133	627
04:15PM	2	87	8	0	0	0	3	13	0	0	10	23	146	676
04:30PM	2	105	6	0	0	0	12	32	0	0	10	17	184	672
04:45PM	2	93	8	0	0	0	6	31	0	0	8	16	164	617
05:00PM	0	117	4	0	0	0	4	28	0	0	9	20	182	552
05:15PM	2	83	7	0	0	0	5	19	0	0	7	19	142	463
05:30PM	0	88	3	0	0	0	0	18	0	0	4	16	129	403
05:45PM	0	66	2	0	0	0	2	11	0	0	7	11	99	356
06:00PM	3	59	2	0	0	0	3	9	0	0	8	9	93	325
06:15PM	0	54	4	0	0	0	0	10	0	0	2	12	82	--
06:30PM	0	59	6	0	0	0	0	5	0	0	4	8	82	--
06:45PM	1	50	5	0	0	0	1	3	0	0	0	8	68	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Jefferson			Jefferson			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

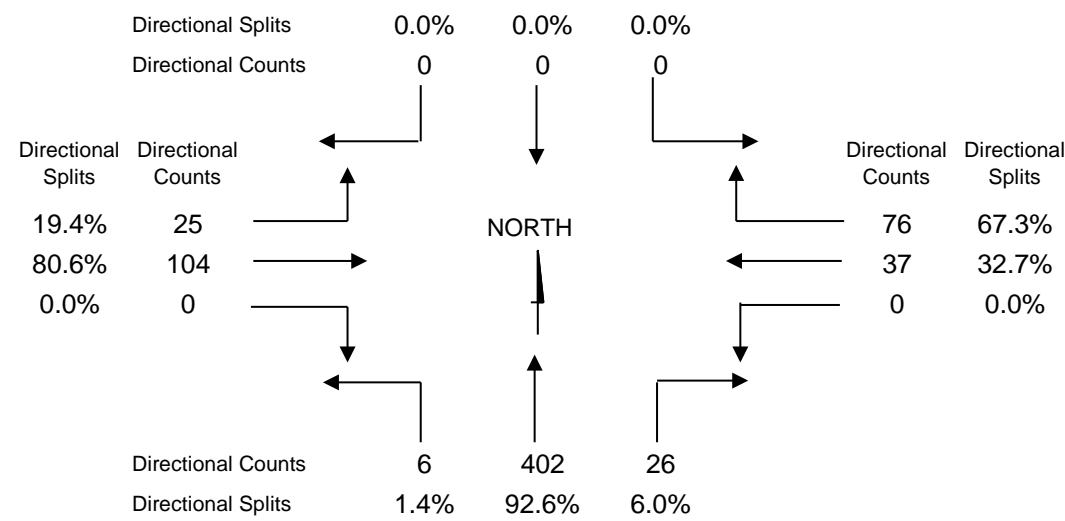
6	402	26	0	0	0	25	104	0	0	37	76	676
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TRUCK PERCENTAGES

0%	1%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Lafayette & Jefferson
4:15 - 5:15 PM



OVERALL PHF = 0.92



TRAFFIC VOLUMES

INTERSECTION: Lafayette & Wayne

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Wayne			Wayne				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	0	24	0	0	0	0	0	0	0	0	1	0	25	241
06:15AM	0	41	3	0	0	0	0	3	0	0	2	1	50	298
06:30AM	3	71	1	0	0	0	0	2	0	0	6	2	85	354
06:45AM	2	66	0	0	0	0	0	2	0	0	5	6	81	418
07:00AM	3	52	7	0	0	0	0	7	0	0	10	3	82	542
07:15AM	7	73	6	0	0	0	2	4	0	0	8	6	106	599
07:30AM	2	104	8	0	0	0	4	6	0	0	16	9	149	601
07:45AM	1	157	2	0	0	0	2	13	0	0	16	14	205	566
08:00AM	2	91	6	0	0	0	2	8	0	0	12	18	139	474
08:15AM	1	73	3	0	0	0	0	6	0	0	14	11	108	435
08:30AM	4	79	3	0	0	0	0	3	0	0	13	12	114	414
08:45AM	2	84	5	0	0	0	0	5	0	0	6	11	113	381
09:00AM	0	59	3	0	0	0	2	9	0	0	18	9	100	347
09:15AM	0	60	1	0	0	0	3	6	0	0	8	9	87	--
09:30AM	0	52	3	0	0	0	2	3	0	0	11	10	81	--
09:45AM	0	53	7	0	0	0	2	2	0	0	6	9	79	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Wayne			Wayne			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

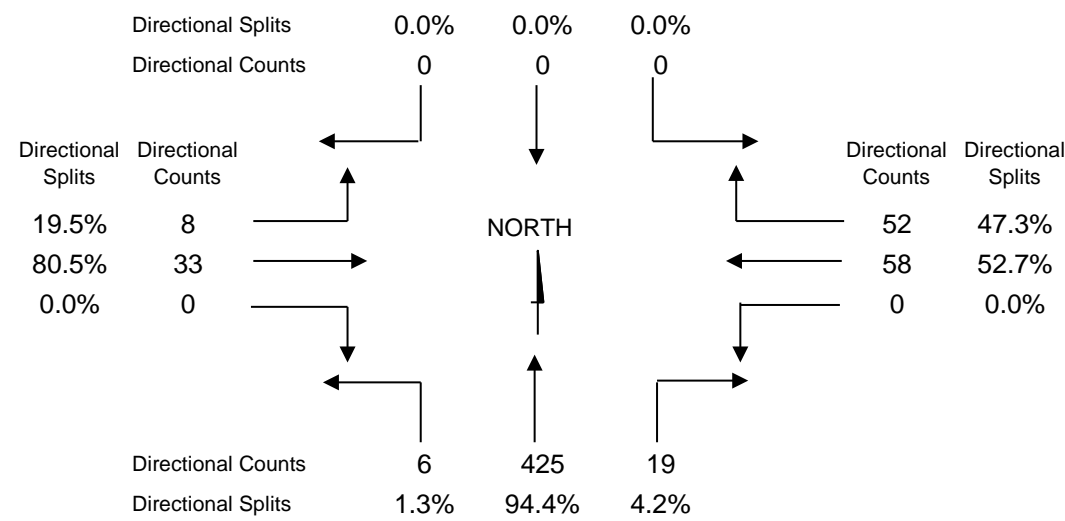
6	425	19	0	0	0	8	33	0	0	58	52	601
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TRUCK PERCENTAGES

17%	4%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Lafayette & Wayne
7:30 - 8:30 AM



OVERALL PHF = 0.73

TRAFFIC VOLUMES

INTERSECTION: Lafayette & Wayne

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Wayne			Wayne				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↙	↘	→	↖	↗	←	↖		
03:00PM	2	74	6	0	0	0	3	10	0	0	11	9	115	479
03:15PM	0	64	5	0	0	0	2	1	0	0	11	11	94	505
03:30PM	1	88	4	0	0	0	2	12	0	0	12	15	134	533
03:45PM	0	87	9	0	0	0	1	11	0	0	13	15	136	567
04:00PM	2	80	10	0	0	0	1	19	0	0	17	12	141	570
04:15PM	1	80	4	0	0	0	0	9	0	0	13	15	122	575
04:30PM	1	105	20	0	0	0	2	13	0	0	14	13	168	580
04:45PM	0	92	8	0	0	0	2	10	0	0	18	9	139	509
05:00PM	1	109	8	0	0	0	2	6	0	0	11	9	146	475
05:15PM	0	89	5	0	0	0	1	8	0	0	12	12	127	438
05:30PM	1	67	5	0	0	0	2	4	0	0	10	8	97	421
05:45PM	0	57	4	0	0	0	1	10	0	0	24	9	105	449
06:00PM	0	65	1	0	0	0	0	5	0	0	34	4	109	459
06:15PM	4	44	3	0	0	0	0	2	0	0	48	9	110	--
06:30PM	4	58	6	0	0	0	0	7	0	0	46	4	125	--
06:45PM	3	57	4	0	0	0	0	7	0	0	39	5	115	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Wayne			Wayne			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

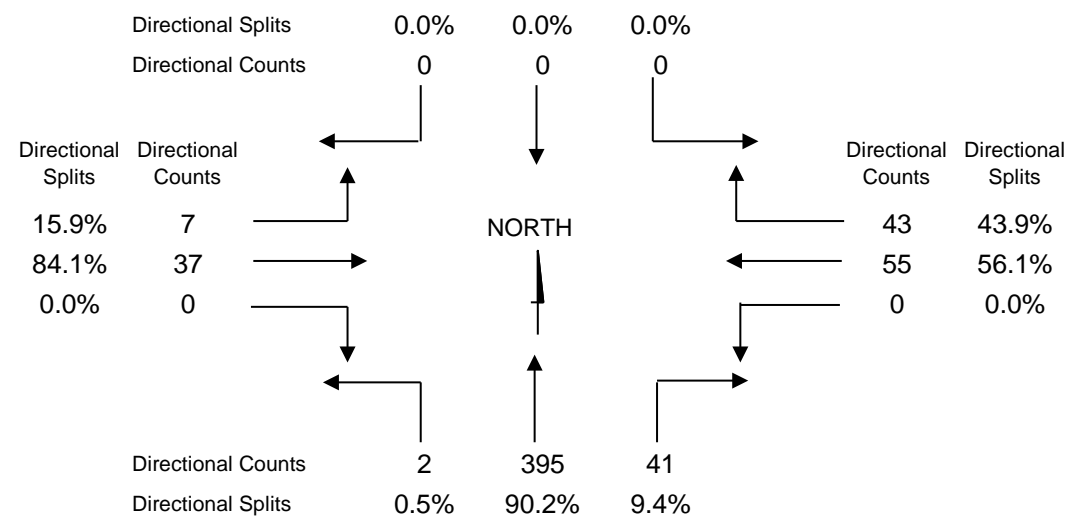
2	395	41	0	0	0	7	37	0	0	55	43	580
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TRUCK PERCENTAGES

0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%
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YEAR 2014 PEAK HOUR TRAFFIC

**Lafayette & Wayne
4:30 - 5:30 PM**



OVERALL PHF = 0.86



TRAFFIC VOLUMES

INTERSECTION: Lafayette & Western

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Western			Western				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	8	21	1	0	0	0	3	27	9	1	14	0	84	589
06:15AM	9	32	1	0	0	0	7	42	6	1	20	6	124	691
06:30AM	10	53	1	0	0	0	15	70	10	0	24	6	189	797
06:45AM	15	46	4	0	0	0	16	52	21	0	27	11	192	917
07:00AM	11	42	1	0	0	0	15	61	12	0	40	4	186	1073
07:15AM	13	65	0	0	0	0	16	70	28	0	29	9	230	1151
07:30AM	22	87	2	0	0	0	25	94	24	0	39	16	309	1156
07:45AM	16	117	2	0	0	0	32	90	35	1	38	17	348	1087
08:00AM	14	68	3	0	0	0	19	92	20	1	34	13	264	1034
08:15AM	17	56	3	0	0	0	12	74	32	0	36	5	235	1022
08:30AM	20	58	4	0	0	0	20	70	19	0	43	6	240	1000
08:45AM	23	63	4	0	0	0	18	92	29	0	56	10	295	998
09:00AM	16	45	0	0	0	0	13	81	34	3	55	5	252	949
09:15AM	16	41	4	0	0	0	15	67	19	2	43	6	213	--
09:30AM	16	33	5	0	0	0	15	91	27	1	42	8	238	--
09:45AM	18	42	2	0	0	0	13	84	25	1	58	3	246	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Western			Western			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

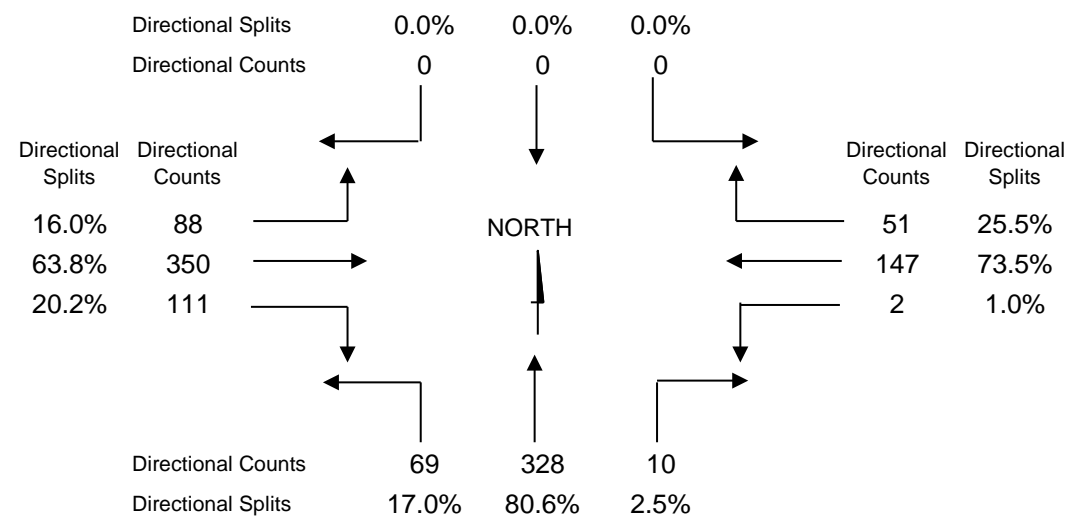
69	328	10	0	0	0	88	350	111	2	147	51	1156
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TRUCK PERCENTAGES

6%	4%	0%	0%	0%	0%	3%	6%	5%	0%	4%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Lafayette & Western
7:30 - 8:30 AM



OVERALL PHF = 0.83

TRAFFIC VOLUMES

INTERSECTION: Lafayette & Western

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Western			Western				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↙	↓	↘	↖	→	↗	↖	←	↘		
03:00PM	19	55	3	0	0	0	15	85	33	2	62	10	284	1275
03:15PM	28	47	2	0	0	0	14	121	29	2	64	8	315	1351
03:30PM	20	64	4	0	0	0	20	99	44	0	71	8	330	1352
03:45PM	34	61	3	0	0	0	29	106	34	1	71	7	346	1421
04:00PM	24	59	2	0	0	0	21	114	38	4	90	8	360	1406
04:15PM	29	49	2	0	0	0	23	113	30	2	61	7	316	1431
04:30PM	24	66	8	0	0	0	30	103	58	5	98	7	399	1520
04:45PM	28	72	0	0	0	0	14	97	37	5	70	8	331	1457
05:00PM	42	75	0	0	0	0	22	111	31	1	88	15	385	1408
05:15PM	35	64	2	0	0	0	18	124	42	1	106	13	405	1342
05:30PM	39	47	1	0	0	0	18	111	30	2	80	8	336	1234
05:45PM	25	45	3	0	0	0	10	80	27	3	85	4	282	1246
06:00PM	39	40	2	0	0	0	17	98	35	5	73	10	319	1245
06:15PM	28	32	11	0	0	0	24	81	34	11	69	7	297	--
06:30PM	37	40	9	0	0	0	23	98	32	16	81	12	348	--
06:45PM	44	42	4	0	0	0	16	70	35	3	59	8	281	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Western			Western			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

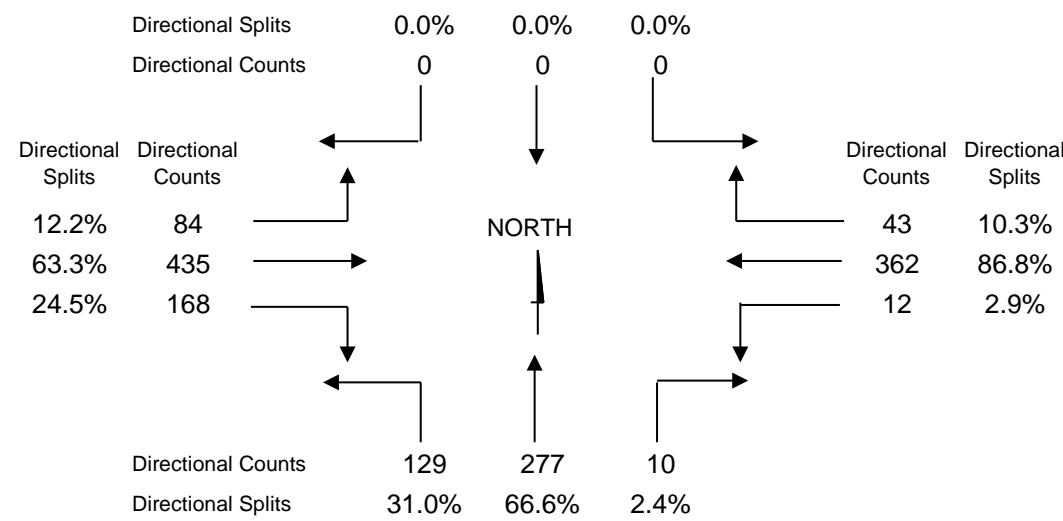
129	277	10	0	0	0	84	435	168	12	362	43	1520
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TRUCK PERCENTAGES

2%	2%	0%	0%	0%	0%	0%	3%	1%	0%	2%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Lafayette & Western
4:30 - 5:30 PM**



OVERALL PHF = 0.94



TRAFFIC VOLUMES

INTERSECTION: Lafayette & Monroe

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Monroe			Monroe				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	0	10	2	6	3	0	0	0	0	0	0	21	42	258
06:15AM	0	22	0	5	3	0	0	0	0	2	0	21	53	285
06:30AM	0	22	0	7	3	0	0	0	0	1	0	48	81	346
06:45AM	0	27	1	14	5	0	0	0	0	2	0	33	82	416
07:00AM	0	24	1	8	4	0	0	0	1	0	0	31	69	510
07:15AM	0	37	3	19	9	0	0	0	0	3	0	43	114	541
07:30AM	0	65	4	14	11	0	0	0	0	2	0	55	151	543
07:45AM	0	53	1	19	16	0	0	0	0	4	0	83	176	505
08:00AM	0	36	3	11	6	0	0	0	0	1	0	43	100	459
08:15AM	0	36	4	15	16	0	0	0	0	2	0	43	116	445
08:30AM	0	36	0	7	13	0	0	0	0	4	0	53	113	407
08:45AM	0	48	1	13	15	0	0	0	0	5	0	48	130	384
09:00AM	0	23	1	14	19	0	0	0	0	2	0	27	86	352
09:15AM	0	27	0	7	12	0	0	0	0	0	0	32	78	--
09:30AM	0	23	2	14	13	0	0	0	1	3	0	34	90	--
09:45AM	0	27	2	14	12	0	0	0	0	2	0	41	98	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Monroe			Monroe			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

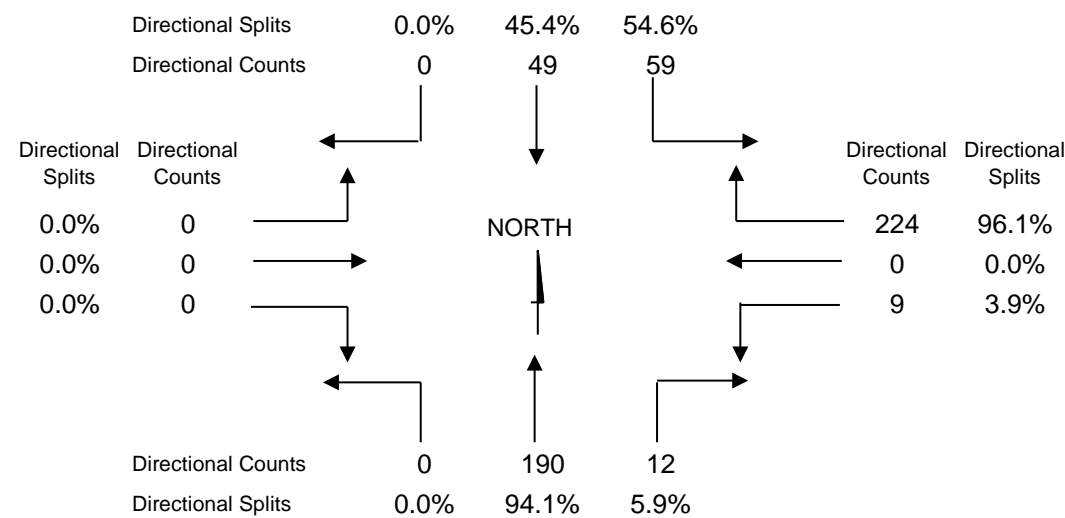
0	190	12	59	49	0	0	0	0	9	0	224	543
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TRUCK PERCENTAGES

0%	2%	0%	10%	0%	0%	0%	0%	0%	0%	0%	7%
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YEAR 2014 PEAK HOUR TRAFFIC

Lafayette & Monroe
7:30 - 8:30 AM



OVERALL PHF = 0.77



TRAFFIC VOLUMES

INTERSECTION: Lafayette & Monroe

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Monroe			Monroe				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	0	30	3	16	17	0	0	0	0	5	0	44	115	516
03:15PM	1	20	5	16	19	0	0	0	0	4	1	55	121	530
03:30PM	0	49	3	26	18	0	0	0	1	3	0	44	144	523
03:45PM	0	38	3	21	15	1	0	0	0	0	0	58	136	557
04:00PM	0	35	3	18	21	0	0	0	1	7	0	44	129	563
04:15PM	0	25	0	11	22	0	0	0	0	3	0	53	114	588
04:30PM	0	52	3	24	39	2	0	1	0	3	0	54	178	629
04:45PM	1	36	1	14	21	1	0	0	0	1	0	67	142	594
05:00PM	0	44	4	18	13	1	0	0	0	6	0	68	154	564
05:15PM	0	46	3	21	20	1	0	0	0	8	0	56	155	555
05:30PM	0	35	8	11	22	0	0	0	0	7	0	60	143	539
05:45PM	2	28	2	10	19	1	0	0	0	6	0	44	112	587
06:00PM	2	23	2	13	25	2	0	0	0	19	1	58	145	656
06:15PM	3	20	2	17	25	5	0	0	0	24	4	39	139	--
06:30PM	16	28	9	13	20	9	0	0	0	16	12	68	191	--
06:45PM	22	44	1	14	23	3	0	0	1	9	16	48	181	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Monroe			Monroe			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

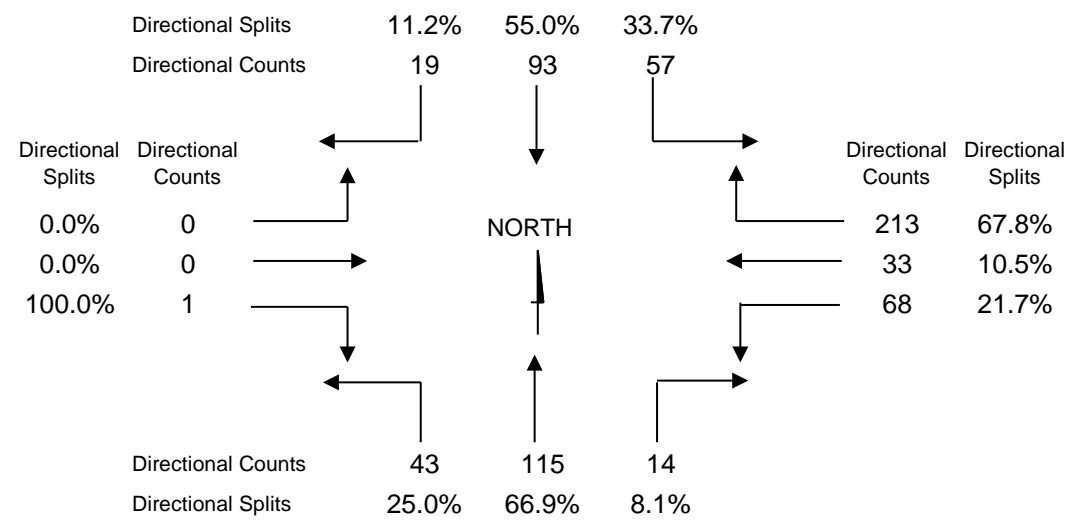
43	115	14	57	93	19	0	0	1	68	33	213	656
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TRUCK PERCENTAGES

0%	3%	0%	4%	0%	0%	0%	0%	0%	0%	0%	3%
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YEAR 2014 PEAK HOUR TRAFFIC

Lafayette & Monroe
6:00 - 7:00 PM



OVERALL PHF = 0.86



TRAFFIC VOLUMES

INTERSECTION: Lafayette & South

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			South			South				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	0	11	5	0	3	0	0	2	1	0	1	1	24	132
06:15AM	0	19	3	0	4	0	0	0	1	2	1	2	32	158
06:30AM	0	23	1	0	4	0	0	1	1	3	1	1	35	194
06:45AM	2	25	0	0	5	2	0	1	0	2	3	1	41	249
07:00AM	1	25	2	0	4	0	0	3	4	2	7	2	50	308
07:15AM	1	45	3	3	8	2	0	2	1	0	1	2	68	322
07:30AM	1	57	2	2	11	1	0	1	0	1	6	8	90	322
07:45AM	3	52	0	1	16	2	0	5	4	2	11	4	100	296
08:00AM	2	38	3	0	7	0	0	3	4	2	4	1	64	295
08:15AM	1	40	0	1	16	1	0	1	1	0	3	4	68	293
08:30AM	0	28	0	2	13	2	0	3	2	3	6	5	64	280
08:45AM	6	43	8	2	13	4	1	1	2	2	12	5	99	271
09:00AM	5	23	4	3	17	2	0	2	0	1	4	1	62	240
09:15AM	2	17	2	3	8	1	0	5	0	2	6	9	55	--
09:30AM	1	19	2	3	9	5	0	4	2	3	2	5	55	--
09:45AM	3	24	4	2	9	2	2	8	3	2	5	4	68	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			South			South			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

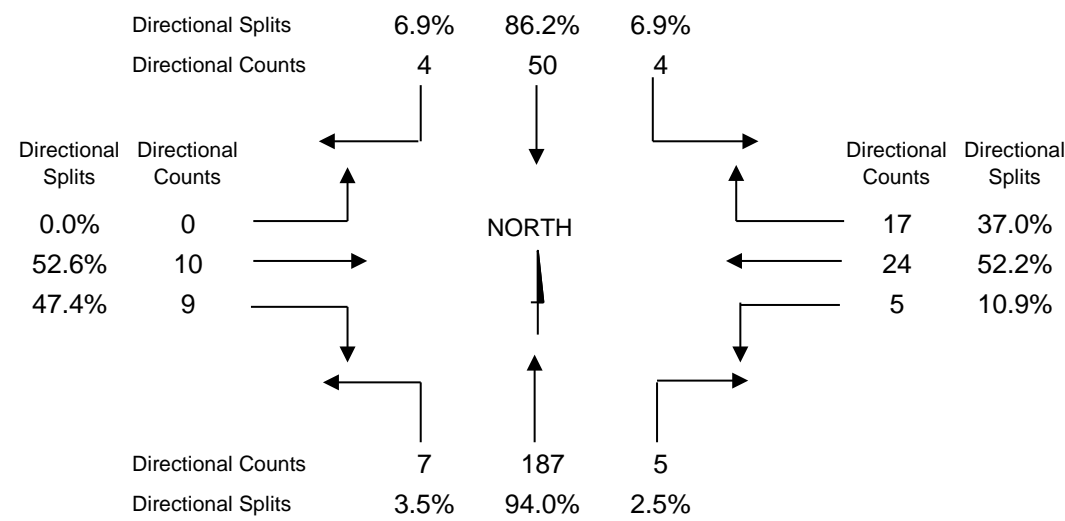
7	187	5	4	50	4	0	10	9	5	24	17	322
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TRUCK PERCENTAGES

0%	1%	40%	0%	0%	0%	0%	10%	11%	20%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Lafayette & South
7:30 - 8:30 AM



OVERALL PHF = 0.81

TRAFFIC VOLUMES

INTERSECTION: Lafayette & South

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			South			South				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	3	26	2	5	14	2	0	9	6	1	11	7	86	332
03:15PM	2	17	2	3	17	4	3	7	5	4	10	8	82	338
03:30PM	3	41	1	3	15	2	1	8	2	2	8	6	92	345
03:45PM	3	31	1	3	11	0	3	2	1	0	10	7	72	378
04:00PM	1	29	2	3	25	2	0	11	1	0	10	8	92	407
04:15PM	2	24	1	0	21	4	0	11	5	0	15	6	89	418
04:30PM	1	46	2	7	32	3	0	6	5	4	14	5	125	450
04:45PM	7	36	1	2	18	2	4	5	5	3	15	3	101	425
05:00PM	3	33	3	2	15	0	8	11	8	0	13	7	103	433
05:15PM	2	37	3	4	21	3	3	4	10	2	23	9	121	461
05:30PM	4	26	1	3	17	5	7	8	3	2	14	10	100	499
05:45PM	7	20	2	5	8	5	6	6	5	1	25	19	109	581
06:00PM	9	19	0	7	11	9	3	10	5	1	28	29	131	619
06:15PM	14	14	0	6	7	12	20	9	3	2	34	38	159	--
06:30PM	9	33	3	1	6	14	20	15	1	3	42	35	182	--
06:45PM	8	30	0	5	15	9	12	14	1	0	11	42	147	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			South			South			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

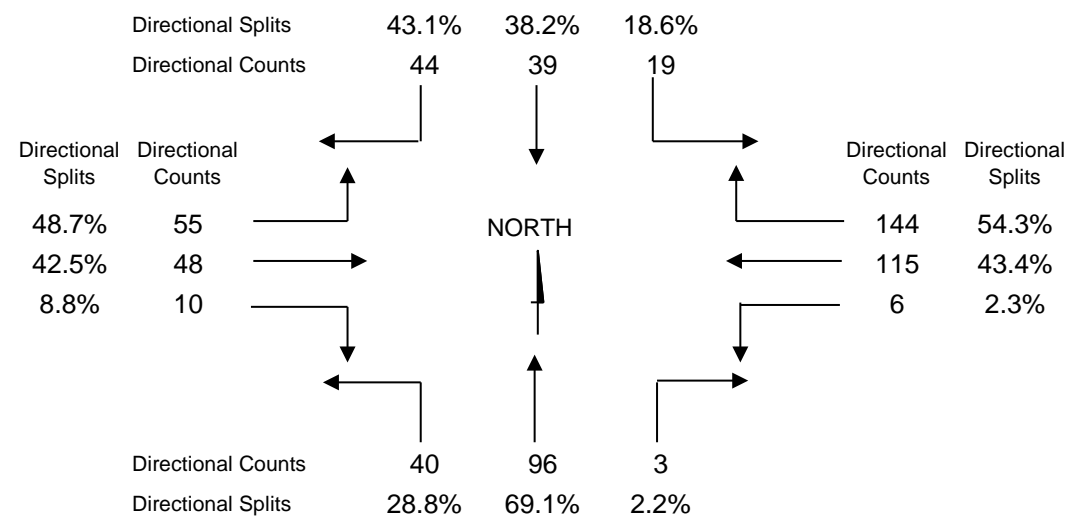
40	96	3	19	39	44	55	48	10	6	115	144	619
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TRUCK PERCENTAGES

3%	1%	0%	0%	0%	0%	2%	2%	0%	17%	2%	2%
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YEAR 2014 PEAK HOUR TRAFFIC

Lafayette & South
6:00 - 7:00 PM



OVERALL PHF = 0.85



TRAFFIC VOLUMES

INTERSECTION: Lafayette & Sample

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Sample			Sample				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	0	7	0	1	2	0	9	62	3	2	54	14	154	1002
06:15AM	0	5	5	1	3	2	8	88	6	3	73	20	214	1098
06:30AM	1	1	2	3	6	3	17	118	1	1	136	12	301	1235
06:45AM	4	6	3	12	6	2	18	131	8	2	132	9	333	1347
07:00AM	2	6	0	4	7	0	17	112	8	4	82	8	250	1442
07:15AM	2	9	1	6	6	0	27	175	4	3	102	16	351	1528
07:30AM	3	12	3	2	9	0	23	215	5	2	123	16	413	1523
07:45AM	4	12	2	3	17	2	30	206	6	5	121	20	428	1448
08:00AM	5	13	3	3	7	2	22	174	3	2	95	7	336	1389
08:15AM	2	8	4	8	6	3	23	174	4	3	101	10	346	1339
08:30AM	4	10	5	6	7	3	10	164	5	5	111	8	338	1275
08:45AM	3	17	5	7	12	6	18	167	6	3	109	16	369	1228
09:00AM	2	7	2	4	9	3	12	126	7	1	99	14	286	1169
09:15AM	3	10	2	4	8	0	11	133	4	1	100	6	282	--
09:30AM	6	7	6	5	10	2	8	117	5	3	114	8	291	--
09:45AM	6	10	6	6	7	2	8	120	10	3	121	11	310	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Sample			Sample			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

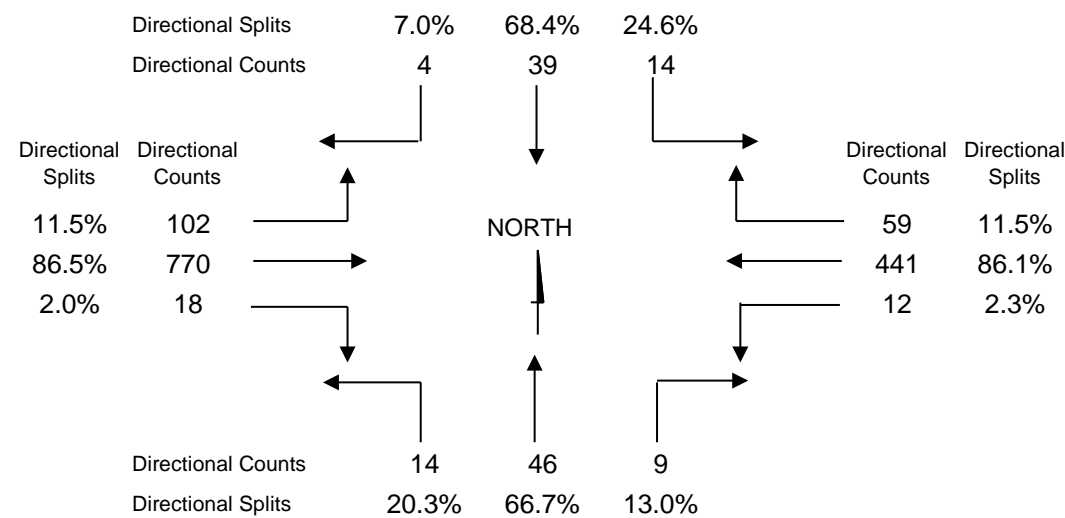
14	46	9	14	39	4	102	770	18	12	441	59	1528
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TRUCK PERCENTAGES

22%	11%	11%	7%	11%	0%	1%	6%	11%	9%	6%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Lafayette & Sample
7:15 - 8:15 AM



OVERALL PHF = 0.89



TRAFFIC VOLUMES

INTERSECTION: Lafayette & Sample

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Sample			Sample				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	6	11	8	5	14	7	13	145	7	5	181	8	410	1669
03:15PM	4	9	5	6	19	6	5	135	5	7	188	10	399	1719
03:30PM	8	15	1	4	13	5	17	162	8	2	201	17	453	1734
03:45PM	6	15	2	6	11	2	12	140	8	5	185	15	407	1783
04:00PM	10	12	5	9	9	9	8	178	10	8	193	9	460	1815
04:15PM	3	8	11	7	24	3	7	142	5	3	193	8	414	1845
04:30PM	12	21	6	26	36	9	14	154	6	2	211	5	502	1885
04:45PM	5	18	5	9	21	6	15	147	4	3	197	9	439	1787
05:00PM	9	17	9	5	12	5	10	190	7	7	211	8	490	1693
05:15PM	2	11	6	6	23	10	9	143	8	2	223	11	454	1506
05:30PM	3	16	4	4	9	2	8	156	8	6	184	4	404	1352
05:45PM	3	4	2	4	11	3	9	140	1	3	156	9	345	1229
06:00PM	1	11	2	5	13	4	6	107	1	1	144	8	303	1186
06:15PM	3	7	3	6	7	2	5	91	3	1	156	16	300	--
06:30PM	0	4	2	6	3	4	16	100	5	2	119	20	281	--
06:45PM	4	6	1	10	8	5	14	102	1	1	135	15	302	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Sample			Sample			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

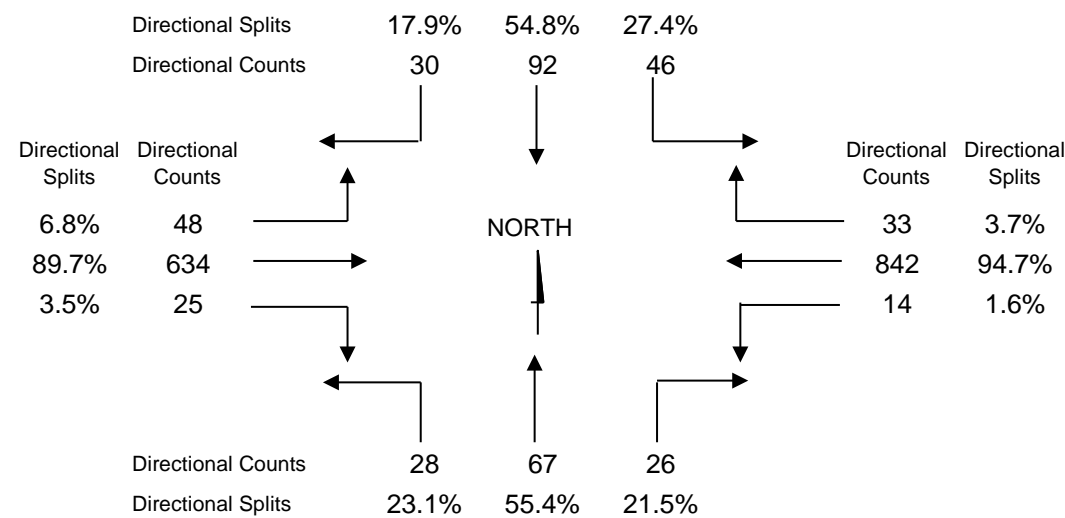
28	67	26	46	92	30	48	634	25	14	842	33	1885
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TRUCK PERCENTAGES

0%	8%	0%	0%	4%	4%	0%	3%	0%	0%	4%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Lafayette & Sample
4:30 - 5:30 PM



OVERALL PHF = 0.94

TRAFFIC VOLUMES

INTERSECTION: Main & Bartlett

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Bartlett			Bartlett				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↱	↷	↵	↴	↶	↷	→	↶	↷	↶	↷		
06:00AM	1	0	0	1	1	2	2	6	0	0	8	1	22	175
06:15AM	0	0	0	0	0	3	3	6	2	5	16	1	36	190
06:30AM	0	0	6	3	1	1	2	14	4	3	14	3	51	224
06:45AM	3	0	4	7	1	3	7	13	4	4	12	8	66	280
07:00AM	0	0	2	5	4	0	2	4	0	0	17	3	37	322
07:15AM	1	1	5	2	4	3	6	21	3	0	18	6	70	365
07:30AM	0	2	4	3	5	9	8	33	0	3	33	7	107	374
07:45AM	1	0	11	2	11	3	7	20	0	1	46	6	108	372
08:00AM	1	2	3	1	5	5	6	20	1	3	24	9	80	358
08:15AM	1	1	2	10	8	3	7	15	0	0	23	9	79	278
08:30AM	3	3	4	5	7	4	11	21	5	1	37	4	105	199
08:45AM	4	4	0	8	5	6	13	25	4	0	20	5	94	94
09:00AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15AM	0	0	0	0	0	0	0	0	0	0	0	0	0	--
09:30AM	0	0	0	0	0	0	0	0	0	0	0	0	0	--
09:45AM	0	0	0	0	0	0	0	0	0	0	0	0	0	--

NB			SB			EB			WB			TOTAL
Main			Main			Bartlett			Bartlett			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

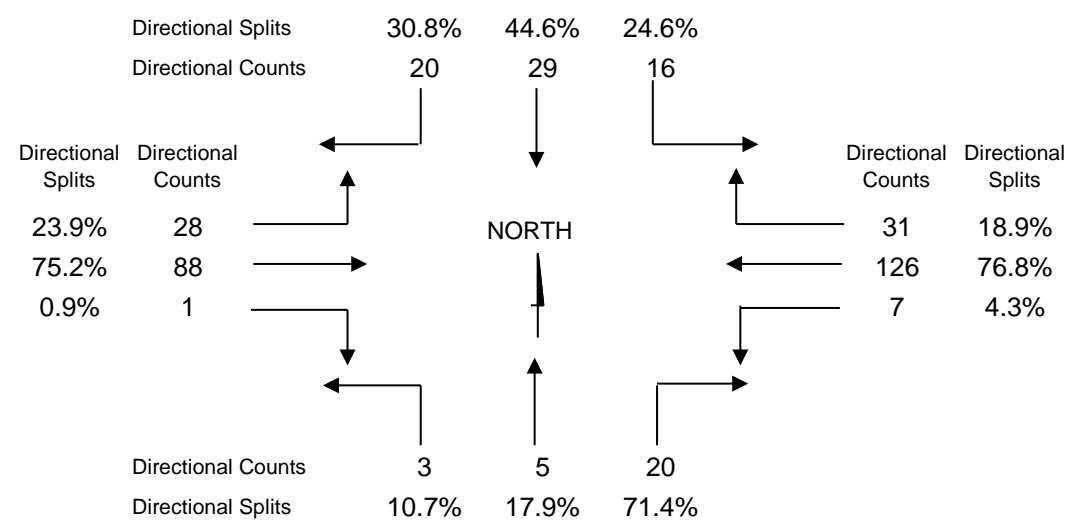
3	5	20	16	29	20	28	88	1	7	126	31	374
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TRUCK PERCENTAGES

0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Bartlett
7:30 - 8:30 AM**



OVERALL PHF = 0.87



TRAFFIC VOLUMES

INTERSECTION: Main & Bartlett

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Bartlett			Bartlett				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↱	↷	↵	↴	↶	↷	→	↶	↷	↶	↷		
03:00PM	3	17	1	2	4	12	3	22	0	0	26	4	94	390
03:15PM	0	4	2	5	0	10	6	19	0	2	39	6	93	381
03:30PM	3	14	3	5	2	11	6	27	1	0	38	4	114	368
03:45PM	1	3	1	3	1	10	6	20	1	0	40	3	89	339
04:00PM	0	2	4	4	0	6	10	17	3	1	37	1	85	336
04:15PM	2	0	5	5	0	7	5	18	2	0	34	2	80	348
04:30PM	0	7	1	2	1	7	4	20	0	2	39	2	85	355
04:45PM	0	1	5	1	0	9	5	15	5	1	38	6	86	325
05:00PM	0	4	2	5	2	4	4	19	2	3	48	4	97	288
05:15PM	3	3	4	2	1	6	3	27	1	1	33	3	87	191
05:30PM	1	0	4	0	1	3	2	9	2	1	29	3	55	104
05:45PM	1	1	2	2	2	3	3	16	2	0	16	1	49	49
06:00PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15PM	0	0	0	0	0	0	0	0	0	0	0	0	0	--
06:30PM	0	0	0	0	0	0	0	0	0	0	0	0	0	--
06:45PM	0	0	0	0	0	0	0	0	0	0	0	0	0	--

NB			SB			EB			WB			TOTAL
Main			Main			Bartlett			Bartlett			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

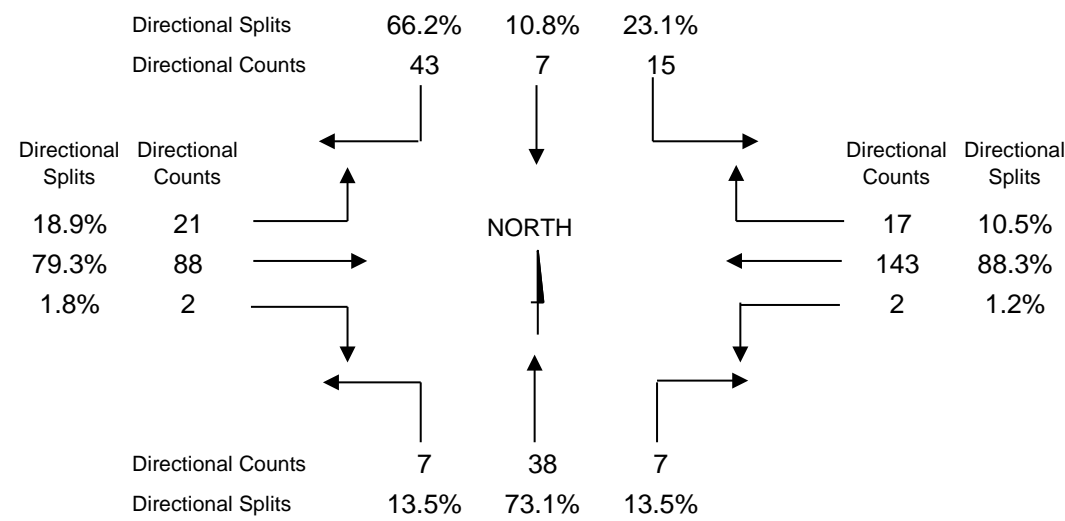
7	38	7	15	7	43	21	88	2	2	143	17	390
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TRUCK PERCENTAGES

0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Bartlett
3:00 - 4:00 PM**



OVERALL PHF = 0.86



TRAFFIC VOLUMES

INTERSECTION: **Main & Marion**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Marion			Marion				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	0	0	0	0	47	3	0	0	0	3	6	0	59	478
06:15AM	0	0	0	0	73	3	0	0	0	1	9	0	86	579
06:30AM	0	0	0	0	141	3	0	0	0	5	10	0	159	696
06:45AM	0	0	0	0	135	10	0	0	0	9	20	0	174	816
07:00AM	0	0	0	0	134	5	0	0	0	8	13	0	160	982
07:15AM	0	0	0	0	174	7	0	0	0	5	17	0	203	1050
07:30AM	0	0	0	0	241	6	0	0	0	14	18	0	279	1091
07:45AM	0	0	0	0	286	14	0	0	0	9	31	0	340	1019
08:00AM	0	0	0	0	190	7	0	0	0	13	18	0	228	947
08:15AM	0	0	0	0	196	9	0	0	0	14	25	0	244	902
08:30AM	0	0	0	0	165	9	0	0	0	11	22	0	207	821
08:45AM	0	0	0	0	225	10	0	0	0	14	19	0	268	788
09:00AM	0	0	0	0	148	3	0	0	0	13	19	0	183	743
09:15AM	0	0	0	0	134	3	0	0	0	10	16	0	163	--
09:30AM	0	0	0	0	141	4	0	0	0	7	22	0	174	--
09:45AM	0	0	0	0	175	14	0	0	0	11	23	0	223	--

NB			SB			EB			WB			TOTAL
Main			Main			Marion			Marion			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

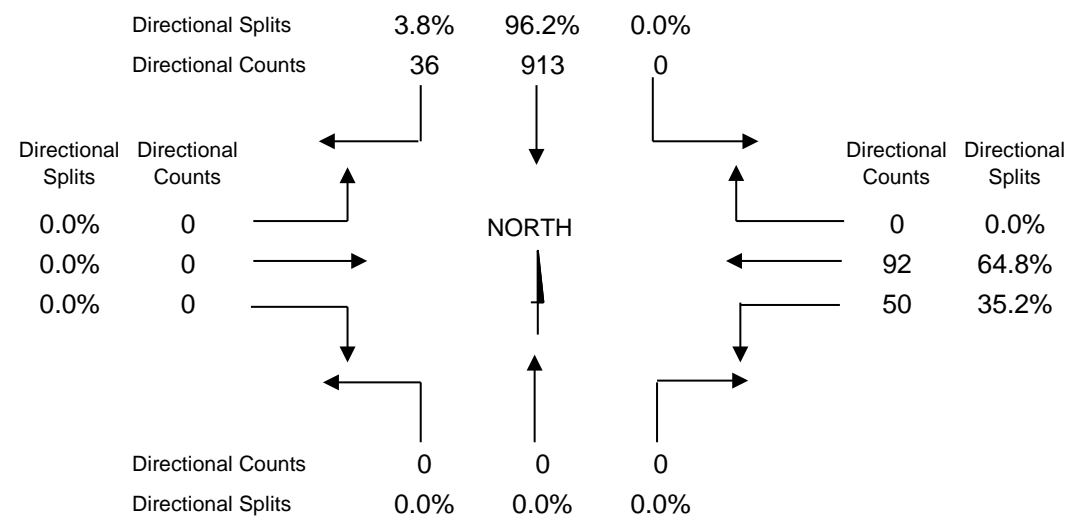
0	0	0	0	913	36	0	0	0	50	92	0	1091
---	---	---	---	-----	----	---	---	---	----	----	---	------

TRUCK PERCENTAGES

0%	0%	0%	0%	2%	3%	0%	0%	0%	0%	6%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Marion
7:30 - 8:30 AM**



OVERALL PHF = 0.80

TRAFFIC VOLUMES

INTERSECTION: Main & Marion

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Marion			Marion				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	0	0	0	0	217	10	0	0	0	7	24	0	258	1053
03:15PM	0	0	0	0	180	6	0	0	0	12	32	0	230	1044
03:30PM	0	0	0	0	270	13	0	0	0	6	29	0	318	1036
03:45PM	0	0	0	0	200	3	0	0	0	8	36	0	247	972
04:00PM	0	0	0	0	197	15	0	0	0	13	24	0	249	991
04:15PM	0	0	0	0	182	9	0	0	0	12	19	0	222	1020
04:30PM	0	0	0	0	213	6	0	0	0	7	28	0	254	1054
04:45PM	0	0	0	0	225	8	0	0	0	1	32	0	266	1036
05:00PM	0	0	0	0	236	5	0	0	0	6	31	0	278	987
05:15PM	0	0	0	0	213	5	0	0	0	8	30	0	256	879
05:30PM	0	0	0	0	196	6	0	0	0	8	26	0	236	833
05:45PM	0	0	0	0	186	6	0	0	0	5	20	0	217	773
06:00PM	0	0	0	0	137	11	0	0	0	4	18	0	170	734
06:15PM	0	0	0	0	181	3	0	0	0	8	18	0	210	--
06:30PM	0	0	0	0	142	5	0	0	0	2	27	0	176	--
06:45PM	0	0	0	0	152	3	0	0	0	7	16	0	178	--

NB			SB			EB			WB			TOTAL
Main			Main			Marion			Marion			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

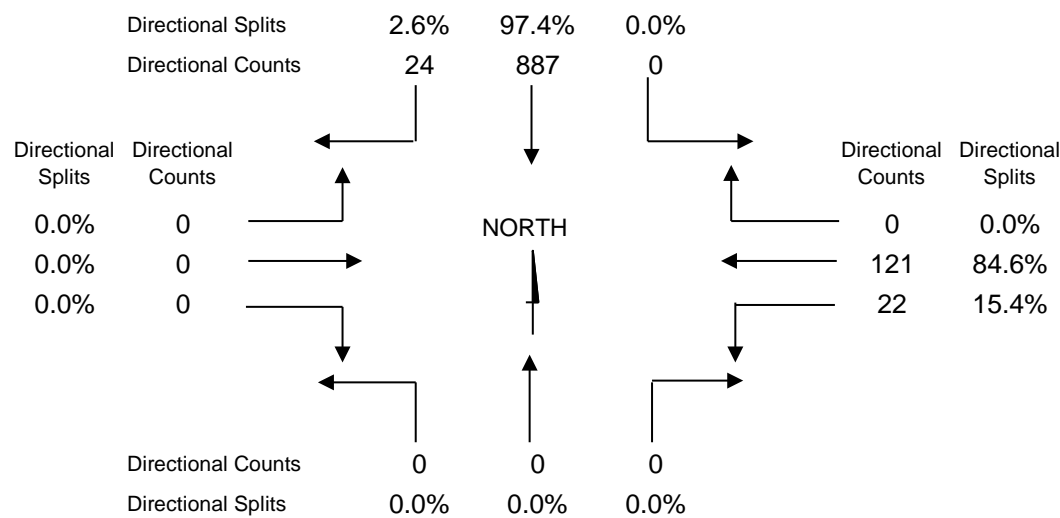
0	0	0	0	887	24	0	0	0	22	121	0	1054
---	---	---	---	-----	----	---	---	---	----	-----	---	------

TRUCK PERCENTAGES

0%	0%	0%	0%	1%	4%	0%	0%	0%	0%	2%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Marion
4:30 - 5:30 PM**



OVERALL PHF = 0.95



TRAFFIC VOLUMES

INTERSECTION: **Main & Madison**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Madison			Madison				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	0	0	0	0	55	0	0	5	0	1	2	0	63	493
06:15AM	0	0	0	2	69	0	0	8	3	0	1	0	83	612
06:30AM	0	0	0	6	152	0	0	6	6	2	5	0	177	741
06:45AM	0	0	0	6	129	1	0	16	9	5	4	0	170	869
07:00AM	0	0	0	2	153	1	0	11	11	3	1	0	182	1090
07:15AM	0	0	0	6	167	1	0	12	15	2	9	0	212	1181
07:30AM	0	0	0	8	251	1	0	14	22	2	7	0	305	1224
07:45AM	0	0	0	7	307	0	0	40	27	1	9	0	391	1144
08:00AM	0	0	0	4	220	1	0	19	21	4	4	0	273	1048
08:15AM	0	0	0	6	218	2	0	7	13	5	4	0	255	986
08:30AM	0	0	0	5	188	1	0	7	16	6	2	0	225	913
08:45AM	0	0	0	1	247	2	0	13	21	10	1	0	295	887
09:00AM	0	0	0	6	160	4	0	13	23	3	2	0	211	832
09:15AM	0	0	0	4	146	0	0	9	15	8	0	0	182	--
09:30AM	0	0	0	9	142	0	0	18	21	7	2	0	199	--
09:45AM	0	0	0	6	186	1	0	12	28	6	1	0	240	--

NB			SB			EB			WB			TOTAL
Main			Main			Madison			Madison			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

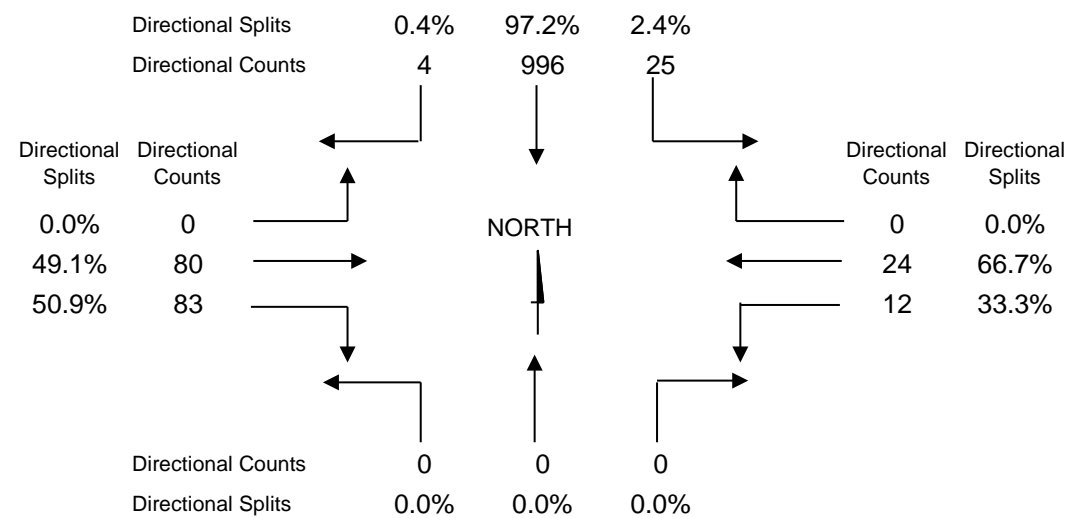
0	0	0	25	996	4	0	80	83	12	24	0	1224
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TRUCK PERCENTAGES

0%	0%	0%	0%	2%	0%	0%	2%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Madison
7:30 - 8:30 AM**



OVERALL PHF = 0.78

TRAFFIC VOLUMES

INTERSECTION: Main & Madison

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Madison			Madison				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↱	↷	↵	↴	↶	↷	→	↶	↷	↶	↷		
03:00PM	0	0	0	3	251	0	0	7	38	13	5	0	317	1219
03:15PM	0	0	0	1	211	1	0	14	30	6	1	0	264	1195
03:30PM	0	0	0	4	282	1	0	11	39	14	2	0	353	1195
03:45PM	0	0	0	5	231	2	0	5	30	10	2	0	285	1203
04:00PM	0	0	0	3	221	0	0	10	47	7	5	0	293	1223
04:15PM	0	0	0	4	209	1	0	10	27	11	2	0	264	1299
04:30PM	0	0	0	3	267	1	0	22	44	14	10	0	361	1336
04:45PM	0	0	0	9	235	2	0	18	28	10	3	0	305	1241
05:00PM	0	0	0	3	288	0	0	17	47	9	5	0	369	1198
05:15PM	0	0	0	0	246	1	0	11	34	4	5	0	301	995
05:30PM	0	0	0	3	221	0	0	10	17	12	3	0	266	930
05:45PM	0	0	0	1	216	1	0	9	28	6	1	0	262	854
06:00PM	0	0	0	2	134	2	0	7	13	5	3	0	166	805
06:15PM	0	0	0	8	190	1	0	10	20	3	4	0	236	--
06:30PM	0	0	0	2	158	1	0	6	22	1	0	0	190	--
06:45PM	0	0	0	0	177	3	0	10	20	1	2	0	213	--

NB			SB			EB			WB			TOTAL
Main			Main			Madison			Madison			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

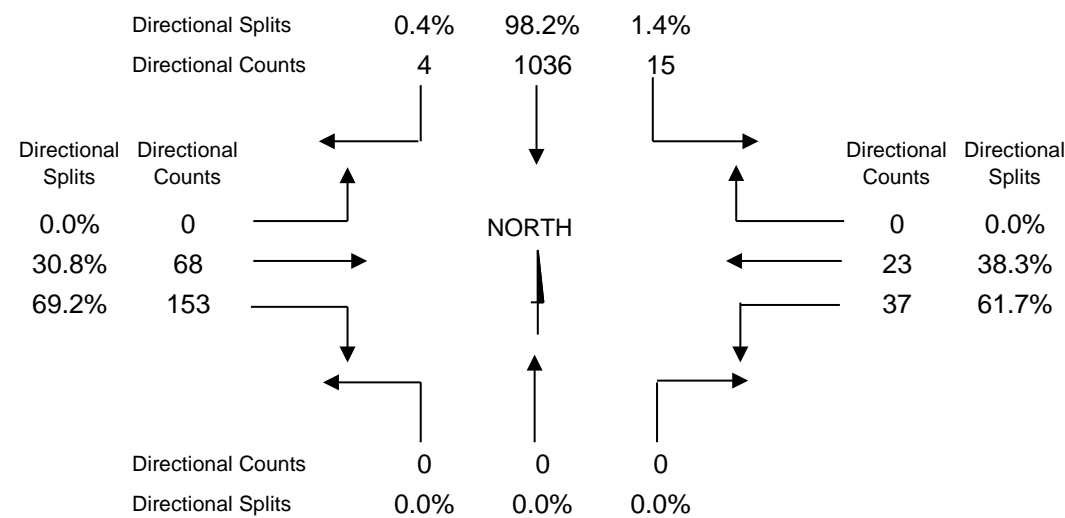
0	0	0	15	1036	4	0	68	153	37	23	0	1336
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TRUCK PERCENTAGES

0%	0%	0%	0%	1%	0%	0%	0%	1%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Madison
4:30 - 5:30 PM**



OVERALL PHF = 0.91



TRAFFIC VOLUMES

INTERSECTION: **Main & La Salle**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL	
	Main			Main			La Salle			La Salle					
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT			
	↶	↱	↷	↵	↴	↶	↷	→	↶	↷	↶	←	↷		
06:00AM	0	0	0	2	46	1	0	53	14	10	55	0	181	1072	
06:15AM	0	0	0	3	64	8	0	51	13	4	56	0	199	1254	
06:30AM	0	0	0	12	148	9	0	64	23	13	85	0	354	1469	
06:45AM	0	0	0	5	127	9	0	61	26	20	90	0	338	1719	
07:00AM	0	0	0	7	151	3	0	71	31	26	74	0	363	2094	
07:15AM	0	0	0	12	164	10	0	69	40	25	94	0	414	2274	
07:30AM	0	0	0	24	243	9	0	114	55	45	114	0	604	2341	
07:45AM	0	0	0	32	286	11	0	129	73	58	124	0	713	2237	
08:00AM	0	0	0	20	215	7	0	108	58	48	87	0	543	2089	
08:15AM	0	0	0	27	188	13	0	92	54	42	65	0	481	1974	
08:30AM	0	0	0	27	169	11	0	115	48	31	99	0	500	1921	
08:45AM	0	0	0	29	221	12	0	92	66	49	96	0	565	1827	
09:00AM	0	0	0	22	144	6	0	92	37	43	84	0	428	1764	
09:15AM	0	0	0	21	134	10	0	85	38	50	90	0	428	--	
09:30AM	0	0	0	18	150	6	0	76	35	27	94	0	406	--	
09:45AM	0	0	0	27	176	11	0	116	36	46	90	0	502	--	

NB			SB			EB			WB			TOTAL
Main			Main			La Salle			La Salle			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

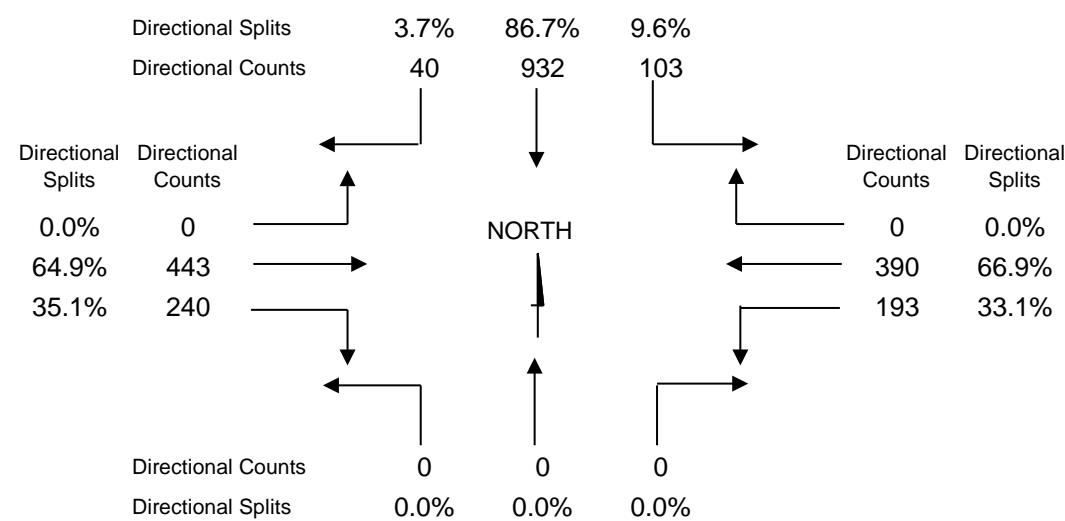
0	0	0	103	932	40	0	443	240	193	390	0	2341
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TRUCK PERCENTAGES

0%	0%	0%	0%	2%	5%	0%	2%	8%	4%	2%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & La Salle
7:30 - 8:30 AM**



OVERALL PHF = 0.82



TRAFFIC VOLUMES

INTERSECTION: **Main & La Salle**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			La Salle			La Salle				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↱	↷	↵	↴	↶	↷	→	↶	↷	↶	↷		
03:00PM	0	0	0	29	232	21	0	114	61	58	159	0	674	2704
03:15PM	0	0	0	37	182	17	0	116	73	51	152	0	628	2748
03:30PM	0	0	0	34	265	18	0	125	76	47	136	0	701	2748
03:45PM	0	0	0	42	215	19	0	134	78	58	155	0	701	2766
04:00PM	0	0	0	33	232	19	0	144	74	47	169	0	718	2739
04:15PM	0	0	0	27	183	22	0	122	71	38	165	0	628	2785
04:30PM	0	0	0	46	254	24	0	113	71	54	157	0	719	2852
04:45PM	0	0	0	35	245	10	0	120	71	47	146	0	674	2762
05:00PM	0	0	0	36	283	22	0	126	64	58	175	0	764	2646
05:15PM	0	0	0	25	232	13	0	116	64	41	204	0	695	2383
05:30PM	0	0	0	26	217	21	0	116	69	34	146	0	629	2212
05:45PM	0	0	0	28	197	20	0	77	61	45	130	0	558	2054
06:00PM	0	0	0	18	137	11	0	111	51	44	129	0	501	1927
06:15PM	0	0	0	19	170	13	0	96	46	59	121	0	524	--
06:30PM	0	0	0	19	160	17	0	80	39	39	117	0	471	--
06:45PM	0	0	0	14	158	13	0	71	40	37	98	0	431	--

NB			SB			EB			WB			TOTAL
Main			Main			La Salle			La Salle			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

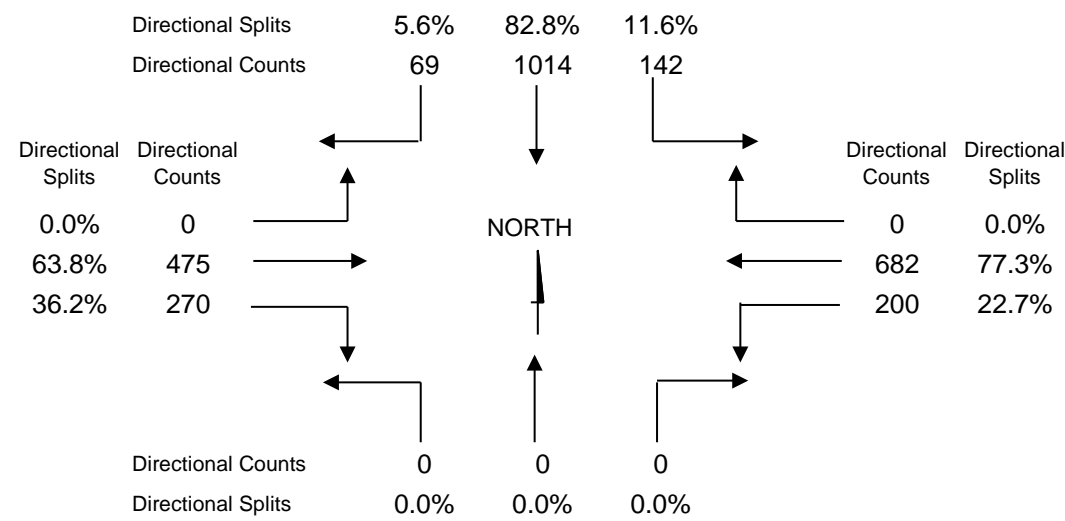
0	0	0	142	1014	69	0	475	270	200	682	0	2852
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TRUCK PERCENTAGES

0%	0%	0%	0%	1%	3%	0%	1%	1%	3%	1%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & La Salle
4:30 - 5:30 PM**



OVERALL PHF = 0.93



TRAFFIC VOLUMES

INTERSECTION: **Main & Colfax**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Colfax			Colfax				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↱	↷	↵	↴	↶	↷	→	↶	↷	↶	↷		
06:00AM	0	0	0	4	63	0	0	7	0	2	8	0	84	630
06:15AM	0	0	0	3	77	2	0	8	4	6	10	0	110	803
06:30AM	0	0	0	6	159	0	0	12	5	8	11	0	201	993
06:45AM	0	0	0	7	177	1	0	21	1	15	13	0	235	1223
07:00AM	0	0	0	13	191	2	0	16	4	16	15	0	257	1576
07:15AM	0	0	0	18	203	6	0	25	8	21	19	0	300	1741
07:30AM	0	0	0	28	273	10	0	37	12	43	28	0	431	1815
07:45AM	0	0	0	40	375	12	0	41	14	65	41	0	588	1704
08:00AM	0	0	0	25	280	8	0	22	9	43	35	0	422	1546
08:15AM	0	0	0	26	242	7	0	25	13	33	28	0	374	1441
08:30AM	0	0	0	13	210	6	0	30	6	34	21	0	320	1378
08:45AM	0	0	0	22	301	14	0	23	12	42	16	0	430	1340
09:00AM	0	0	0	18	218	1	0	18	19	26	17	0	317	1268
09:15AM	0	0	0	14	205	4	0	20	14	30	24	0	311	--
09:30AM	0	0	0	3	196	9	0	18	10	20	26	0	282	--
09:45AM	0	0	0	19	243	4	0	26	21	27	18	0	358	--

NB			SB			EB			WB			TOTAL
Main			Main			Colfax			Colfax			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

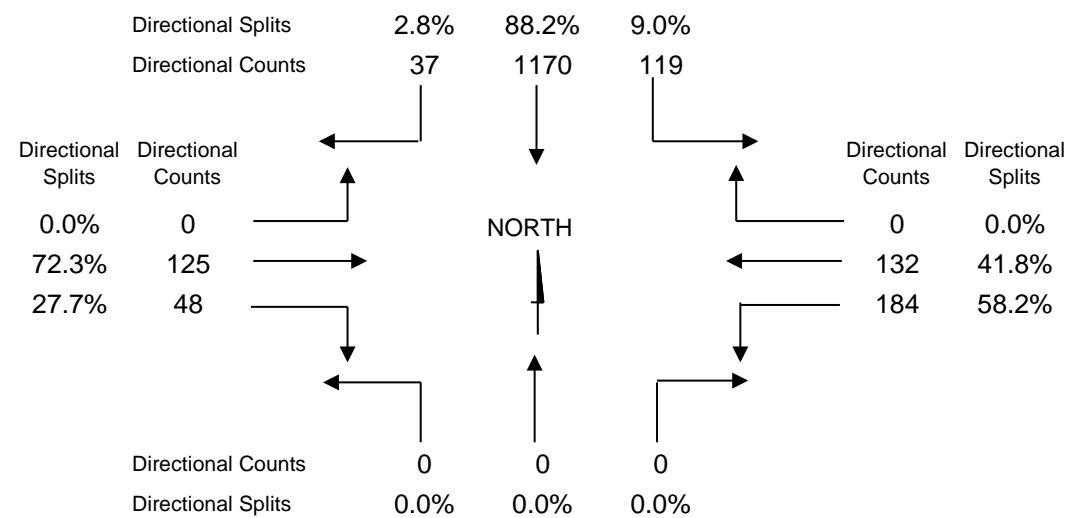
0	0	0	119	1170	37	0	125	48	184	132	0	1815
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TRUCK PERCENTAGES

0%	0%	0%	7%	3%	0%	0%	0%	0%	4%	3%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Colfax
7:30 - 8:30 AM**



OVERALL PHF = 0.77

TRAFFIC VOLUMES

INTERSECTION: **Main & Colfax**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Colfax			Colfax				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↑	↷	↶	↓	↷	↶	→	↷	↶	←	↷		
03:00PM	0	0	0	20	342	6	0	25	13	29	34	0	469	1884
03:15PM	0	0	0	17	287	7	0	31	13	22	40	0	417	1890
03:30PM	0	0	0	20	350	8	0	38	11	29	36	0	492	1865
03:45PM	0	0	0	29	354	10	0	28	21	29	35	0	506	1882
04:00PM	0	0	0	14	341	7	0	28	12	29	44	0	475	1855
04:15PM	0	0	0	17	260	5	0	30	15	35	30	0	392	1969
04:30PM	0	0	0	21	332	5	0	57	18	40	36	0	509	2038
04:45PM	0	0	0	18	330	13	0	36	15	32	35	0	479	1961
05:00PM	0	0	0	18	374	21	0	47	18	54	57	0	589	1917
05:15PM	0	0	0	17	320	3	0	33	15	30	43	0	461	1628
05:30PM	0	0	0	20	287	4	0	44	16	22	39	0	432	1528
05:45PM	0	0	0	15	311	6	0	26	23	25	29	0	435	1415
06:00PM	0	0	0	14	209	3	0	19	18	21	16	0	300	1290
06:15PM	0	0	0	12	254	6	0	23	5	26	35	0	361	--
06:30PM	0	0	0	5	216	7	0	22	8	30	31	0	319	--
06:45PM	0	0	0	12	226	4	0	16	6	15	31	0	310	--

NB			SB			EB			WB			TOTAL
Main			Main			Colfax			Colfax			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

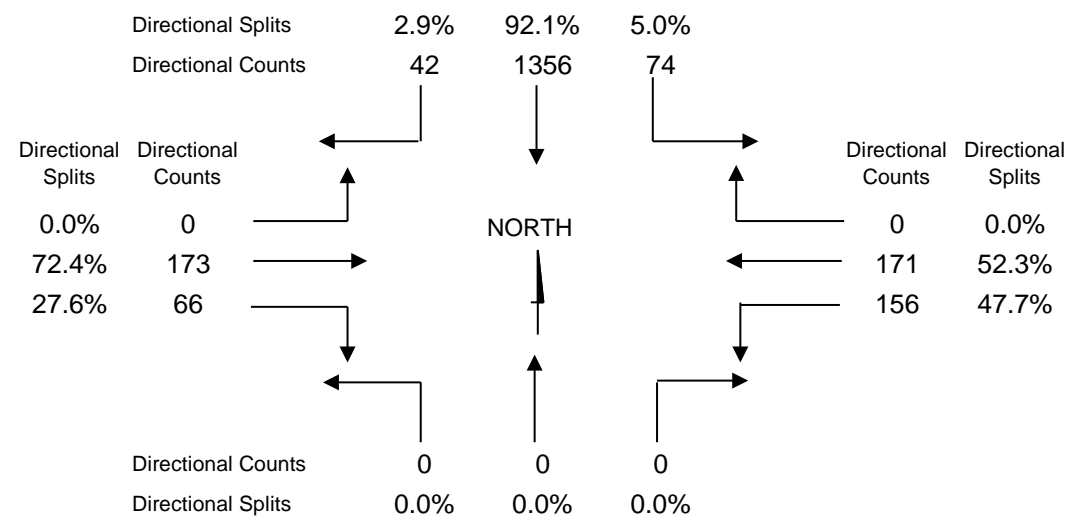
0	0	0	74	1356	42	0	173	66	156	171	0	2038
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TRUCK PERCENTAGES

0%	0%	0%	0%	2%	0%	0%	1%	0%	3%	1%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Colfax
4:30 - 5:30 PM**



OVERALL PHF = 0.87

TRAFFIC VOLUMES

INTERSECTION: **Main & Washington**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL	
	Main			Main			Washington			Washington					
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT			
	↶	↱	↷	↵	↴	↶	↷	→	↶	↷	↶	←	↷		
06:00AM	0	0	0	2	71	4	0	1	1	1	1	0	81	582	
06:15AM	0	0	0	1	98	4	0	4	4	1	5	0	117	737	
06:30AM	0	0	0	4	167	4	0	3	0	0	5	0	183	876	
06:45AM	0	0	0	8	167	9	0	6	2	2	7	0	201	1097	
07:00AM	0	0	0	8	192	7	0	6	10	5	8	0	236	1331	
07:15AM	0	0	0	7	197	15	0	13	8	5	11	0	256	1407	
07:30AM	0	0	0	20	296	26	0	13	17	10	22	0	404	1482	
07:45AM	0	0	0	18	321	32	0	21	13	6	24	0	435	1395	
08:00AM	0	0	0	15	230	25	0	16	6	5	15	0	312	1352	
08:15AM	0	0	0	15	252	18	0	15	16	5	10	0	331	1351	
08:30AM	0	0	0	10	228	18	0	11	21	8	21	0	317	1307	
08:45AM	0	0	0	19	295	19	0	17	18	9	15	0	392	1309	
09:00AM	0	0	0	12	224	17	0	13	14	14	17	0	311	1255	
09:15AM	0	0	0	11	191	19	0	17	23	13	13	0	287	--	
09:30AM	0	0	0	14	204	19	0	14	29	14	25	0	319	--	
09:45AM	0	0	0	13	253	9	0	16	27	7	13	0	338	--	

NB			SB			EB			WB			TOTAL
Main			Main			Washington			Washington			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

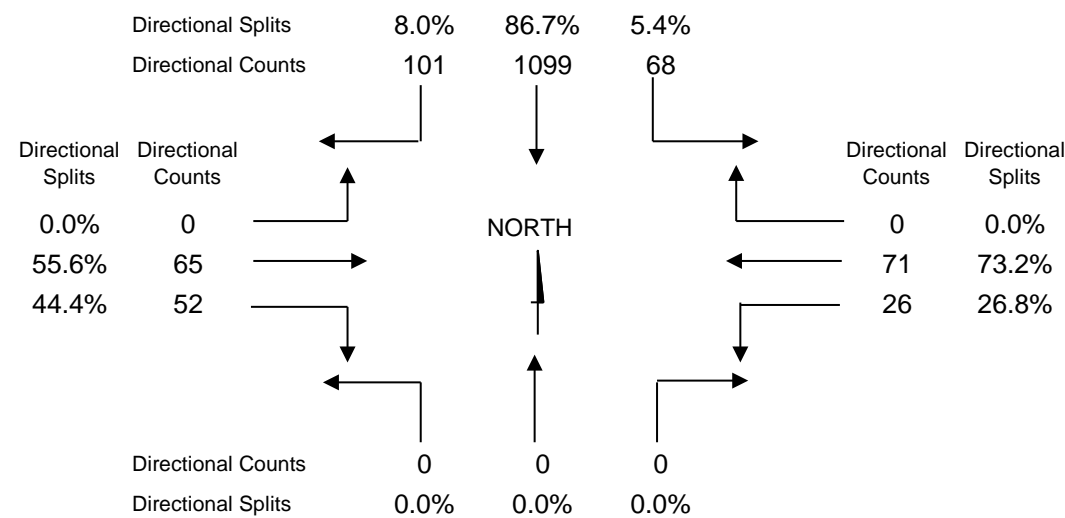
0	0	0	68	1099	101	0	65	52	26	71	0	1482
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TRUCK PERCENTAGES

0%	0%	0%	2%	4%	1%	0%	3%	0%	0%	2%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Washington
7:30 - 8:30 AM**



OVERALL PHF = 0.85



TRAFFIC VOLUMES

INTERSECTION: Main & Washington

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Washington			Washington				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	0	0	0	15	335	18	0	18	28	19	22	0	455	1825
03:15PM	0	0	0	16	300	12	0	19	19	12	23	0	401	1841
03:30PM	0	0	0	14	422	18	0	20	28	9	23	0	534	1857
03:45PM	0	0	0	27	306	25	0	19	30	10	18	0	435	1875
04:00PM	0	0	0	14	353	17	0	14	40	13	20	0	471	1891
04:15PM	0	0	0	13	298	16	0	29	27	15	19	0	417	2043
04:30PM	0	0	0	27	386	30	0	30	32	23	24	0	552	2071
04:45PM	0	0	0	24	333	20	0	19	19	18	18	0	451	1951
05:00PM	0	0	0	38	434	22	0	28	34	38	29	0	623	1871
05:15PM	0	0	0	20	328	14	0	22	17	22	22	0	445	1558
05:30PM	0	0	0	22	330	16	0	21	17	7	19	0	432	1435
05:45PM	0	0	0	28	271	20	0	8	15	13	16	0	371	1306
06:00PM	0	0	0	12	234	15	0	14	12	5	18	0	310	1207
06:15PM	0	0	0	14	260	7	0	11	14	5	11	0	322	--
06:30PM	0	0	0	15	237	11	0	20	6	3	11	0	303	--
06:45PM	0	0	0	12	221	10	0	6	13	7	3	0	272	--

NB			SB			EB			WB			TOTAL
Main			Main			Washington			Washington			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

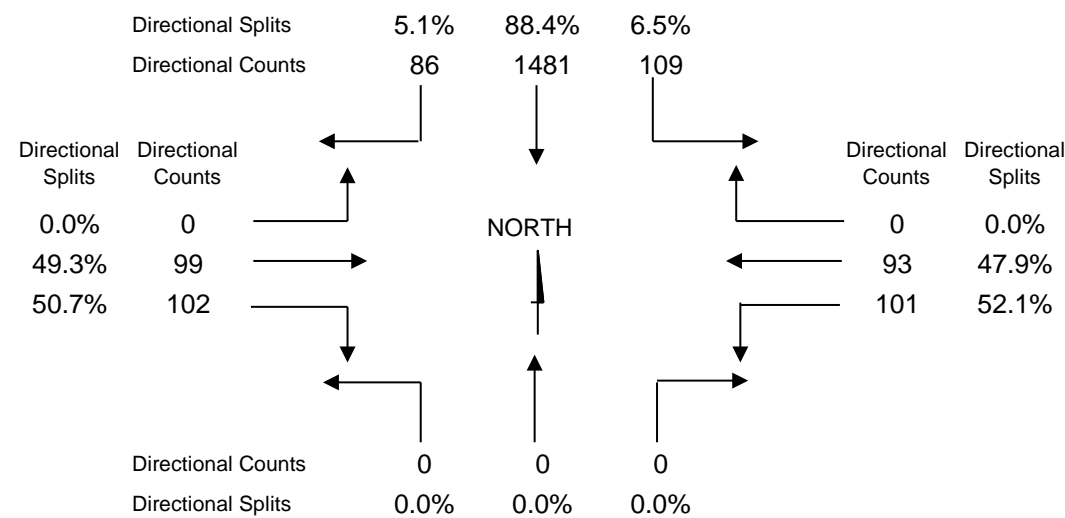
0	0	0	109	1481	86	0	99	102	101	93	0	2071
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TRUCK PERCENTAGES

0%	0%	0%	1%	2%	1%	0%	2%	0%	1%	1%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Main & Washington
4:30 - 5:30 PM



OVERALL PHF = 0.83

TRAFFIC VOLUMES

INTERSECTION: **Main & Jefferson**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Jefferson			Jefferson				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	0	0	0	5	57	0	0	0	1	1	2	0	66	531
06:15AM	0	0	0	2	87	1	0	3	2	6	2	0	103	688
06:30AM	0	0	0	3	170	4	0	5	1	2	2	0	187	837
06:45AM	0	0	0	9	134	9	0	8	2	6	7	0	175	989
07:00AM	0	0	0	8	180	10	0	3	5	11	6	0	223	1216
07:15AM	0	0	0	17	199	7	0	9	4	8	8	0	252	1313
07:30AM	0	0	0	19	253	23	0	13	6	16	9	0	339	1360
07:45AM	0	0	0	44	277	37	0	9	8	15	12	0	402	1300
08:00AM	0	0	0	32	221	19	0	13	9	15	11	0	320	1268
08:15AM	0	0	0	27	213	17	0	7	7	14	14	0	299	1230
08:30AM	0	0	0	20	212	18	0	4	9	9	7	0	279	1211
08:45AM	0	0	0	31	269	21	0	17	9	7	16	0	370	1205
09:00AM	0	0	0	20	199	16	0	12	12	9	14	0	282	1144
09:15AM	0	0	0	17	211	16	0	6	8	9	13	0	280	--
09:30AM	0	0	0	22	196	24	0	6	8	8	9	0	273	--
09:45AM	0	0	0	21	236	18	0	7	9	11	7	0	309	--

NB			SB			EB			WB			TOTAL
Main			Main			Jefferson			Jefferson			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

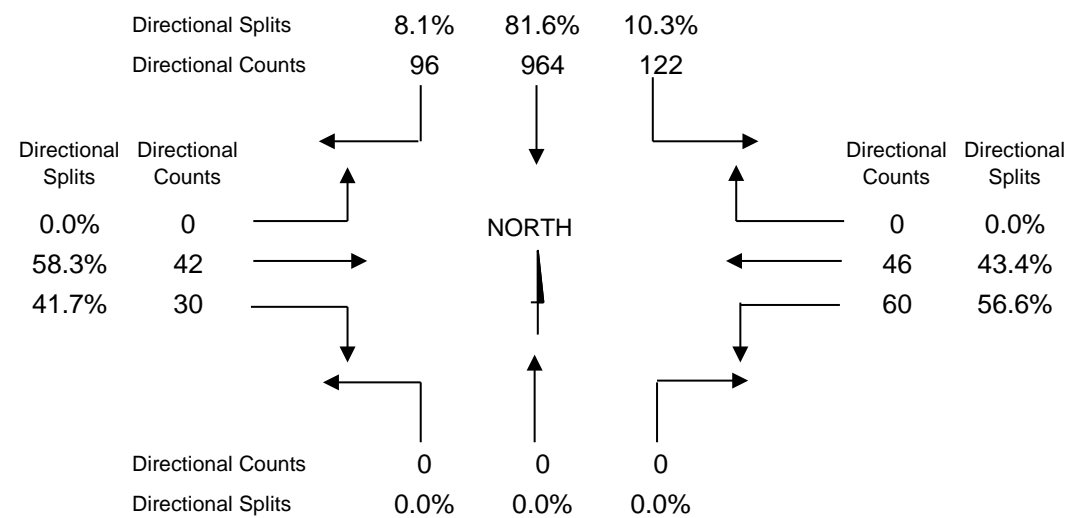
0	0	0	122	964	96	0	42	30	60	46	0	1360
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TRUCK PERCENTAGES

0%	0%	0%	1%	4%	0%	0%	3%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Jefferson
7:30 - 8:30 AM**



OVERALL PHF = 0.85

TRAFFIC VOLUMES

INTERSECTION: **Main & Jefferson**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Jefferson			Jefferson				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↱	↷	↶	↱	↷	↶	→	↷	↶	←	↷		
03:00PM	0	0	0	23	343	20	0	16	6	13	14	0	435	1706
03:15PM	0	0	0	12	301	19	0	6	9	13	11	0	371	1741
03:30PM	0	0	0	21	396	24	0	15	10	11	13	0	490	1773
03:45PM	0	0	0	29	315	13	0	13	14	16	10	0	410	1798
04:00PM	0	0	0	22	363	12	0	18	12	23	20	0	470	1825
04:15PM	0	0	0	14	307	16	0	8	16	29	13	0	403	1964
04:30PM	0	0	0	23	410	7	0	20	26	17	12	0	515	2043
04:45PM	0	0	0	18	328	7	0	14	28	28	14	0	437	1926
05:00PM	0	0	0	22	462	8	0	21	32	45	19	0	609	1862
05:15PM	0	0	0	17	383	10	0	18	12	27	15	0	482	1544
05:30PM	0	0	0	14	322	6	0	8	17	22	9	0	398	1384
05:45PM	0	0	0	18	296	7	0	9	9	24	10	0	373	1275
06:00PM	0	0	0	14	232	6	0	3	3	24	9	0	291	1158
06:15PM	0	0	0	7	271	3	0	5	5	18	13	0	322	--
06:30PM	0	0	0	8	242	2	0	7	4	13	13	0	289	--
06:45PM	0	0	0	12	220	2	0	4	6	7	5	0	256	--

NB			SB			EB			WB			TOTAL
Main			Main			Jefferson			Jefferson			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

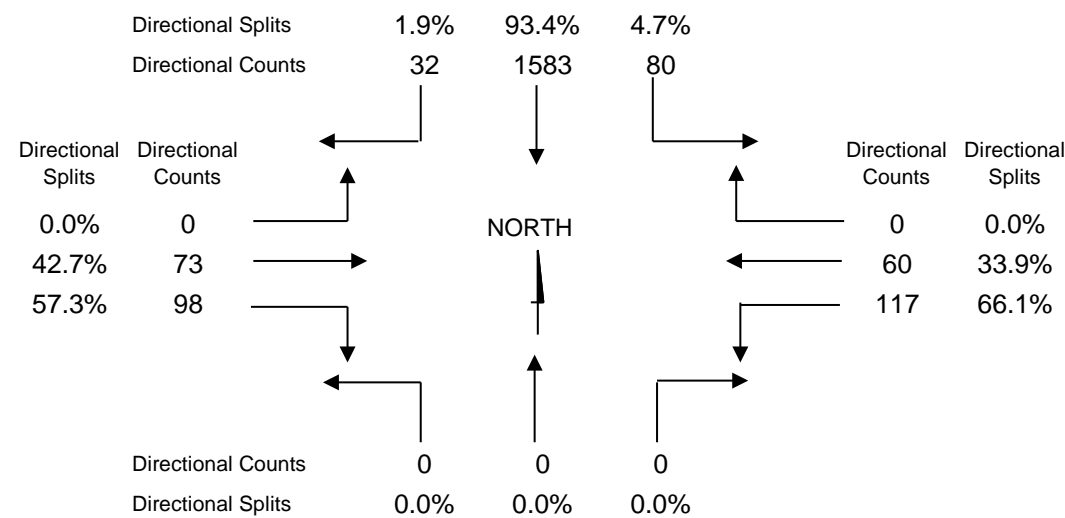
0	0	0	80	1583	32	0	73	98	117	60	0	2043
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TRUCK PERCENTAGES

0%	0%	0%	0%	2%	0%	0%	2%	0%	1%	2%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Jefferson
4:30 - 5:30 PM**



OVERALL PHF = 0.84



TRAFFIC VOLUMES

INTERSECTION: **Main & Wayne**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Wayne			Wayne				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↷	↷	↶	↷	↷	↷	→	↶	↶	←	↷		
06:00AM	0	0	0	1	59	0	0	0	0	5	1	0	66	513
06:15AM	0	0	0	1	87	0	0	4	2	2	4	0	100	666
06:30AM	0	0	0	7	165	1	0	1	2	5	7	0	188	811
06:45AM	0	0	0	6	131	3	0	0	1	10	8	0	159	932
07:00AM	0	0	0	9	171	4	0	6	6	11	12	0	219	1090
07:15AM	0	0	0	21	180	4	0	8	3	18	11	0	245	1160
07:30AM	0	0	0	21	232	10	0	10	4	16	16	0	309	1182
07:45AM	0	0	0	25	237	5	0	9	7	10	24	0	317	1137
08:00AM	0	0	0	28	197	5	0	9	3	19	28	0	289	1139
08:15AM	0	0	0	9	201	11	0	8	1	18	19	0	267	1125
08:30AM	0	0	0	12	199	4	0	5	2	20	22	0	264	1114
08:45AM	0	0	0	19	249	2	0	8	5	20	16	0	319	1106
09:00AM	0	0	0	13	200	6	0	9	5	23	19	0	275	1079
09:15AM	0	0	0	13	202	6	0	8	4	11	12	0	256	--
09:30AM	0	0	0	7	201	5	0	4	3	20	16	0	256	--
09:45AM	0	0	0	9	239	3	0	4	6	20	11	0	292	--

NB			SB			EB			WB			TOTAL
Main			Main			Wayne			Wayne			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

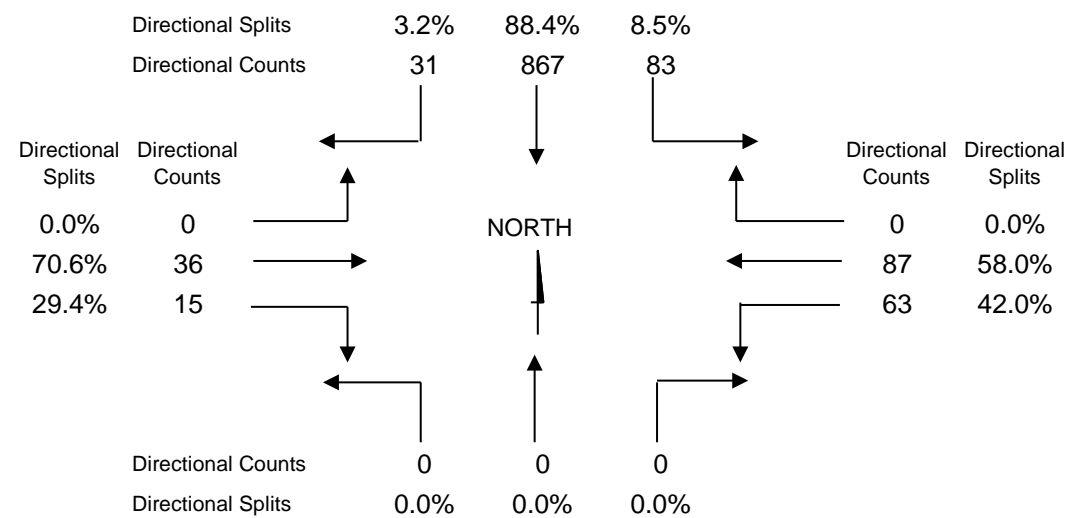
0	0	0	83	867	31	0	36	15	63	87	0	1182
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TRUCK PERCENTAGES

0%	0%	0%	3%	4%	0%	0%	0%	0%	3%	1%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Wayne
7:30 - 8:30 AM**



OVERALL PHF = 0.93



TRAFFIC VOLUMES

INTERSECTION: **Main & Wayne**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Wayne			Wayne				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↑	↷	↶	↓	↷	↶	→	↷	↶	←	↷		
03:00PM	0	0	0	12	336	4	0	12	6	37	17	0	424	1723
03:15PM	0	0	0	19	307	5	0	3	5	27	16	0	382	1802
03:30PM	0	0	0	18	396	5	0	13	5	35	17	0	489	1846
03:45PM	0	0	0	21	321	6	0	13	9	33	25	0	428	1942
04:00PM	0	0	0	17	375	3	0	19	11	54	24	0	503	1989
04:15PM	0	0	0	21	330	3	0	6	10	30	26	0	426	2114
04:30PM	0	0	0	35	443	6	0	18	19	42	22	0	585	2198
04:45PM	0	0	0	20	377	2	0	12	9	34	21	0	475	2048
05:00PM	0	0	0	41	499	8	0	8	13	45	14	0	628	1980
05:15PM	0	0	0	14	419	2	0	7	7	41	20	0	510	1685
05:30PM	0	0	0	23	340	9	0	7	4	39	13	0	435	1555
05:45PM	0	0	0	14	307	13	0	13	3	37	20	0	407	1450
06:00PM	0	0	0	11	237	15	0	4	4	37	25	0	333	1331
06:15PM	0	0	0	16	266	24	0	3	4	38	29	0	380	--
06:30PM	0	0	0	10	228	26	0	5	8	33	20	0	330	--
06:45PM	0	0	0	6	204	23	0	4	4	28	19	0	288	--

NB			SB			EB			WB			TOTAL
Main			Main			Wayne			Wayne			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

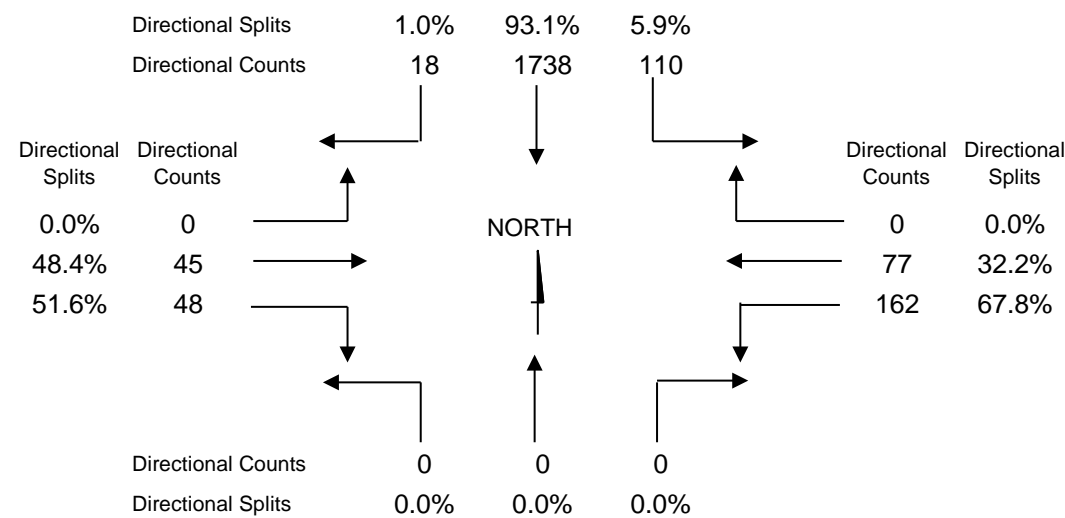
0	0	0	110	1738	18	0	45	48	162	77	0	2198
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TRUCK PERCENTAGES

0%	0%	0%	0%	1%	0%	0%	0%	0%	1%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Wayne
4:30 - 5:30 PM**



OVERALL PHF = 0.88



TRAFFIC VOLUMES

INTERSECTION: **Main & Western**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Western			Western				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↱	↷	↵	↴	↶	↷	→	↶	↷	↶	↷		
06:00AM	0	0	0	0	58	8	0	12	13	0	8	0	99	717
06:15AM	0	0	0	1	78	8	0	29	17	2	21	0	156	888
06:30AM	0	0	0	0	142	13	0	42	24	1	16	0	238	1023
06:45AM	0	0	0	0	129	16	0	30	25	2	22	0	224	1148
07:00AM	0	0	0	3	158	25	0	36	25	0	23	0	270	1310
07:15AM	0	0	0	11	159	24	0	46	30	0	21	0	291	1385
07:30AM	0	0	0	21	194	31	0	56	35	3	23	0	363	1414
07:45AM	0	0	0	17	213	28	0	65	30	4	29	0	386	1362
08:00AM	0	0	0	16	175	27	0	66	37	2	22	0	345	1373
08:15AM	0	0	0	4	192	26	0	48	29	1	20	0	320	1388
08:30AM	0	0	0	14	170	32	0	44	25	7	19	0	311	1396
08:45AM	0	0	0	17	201	41	0	59	36	8	35	0	397	1415
09:00AM	0	0	0	10	191	40	0	43	43	3	30	0	360	1376
09:15AM	0	0	0	5	193	31	0	39	35	3	22	0	328	--
09:30AM	0	0	0	5	178	21	0	48	42	8	28	0	330	--
09:45AM	0	0	0	10	192	45	0	42	46	6	17	0	358	--

NB			SB			EB			WB			TOTAL
Main			Main			Western			Western			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

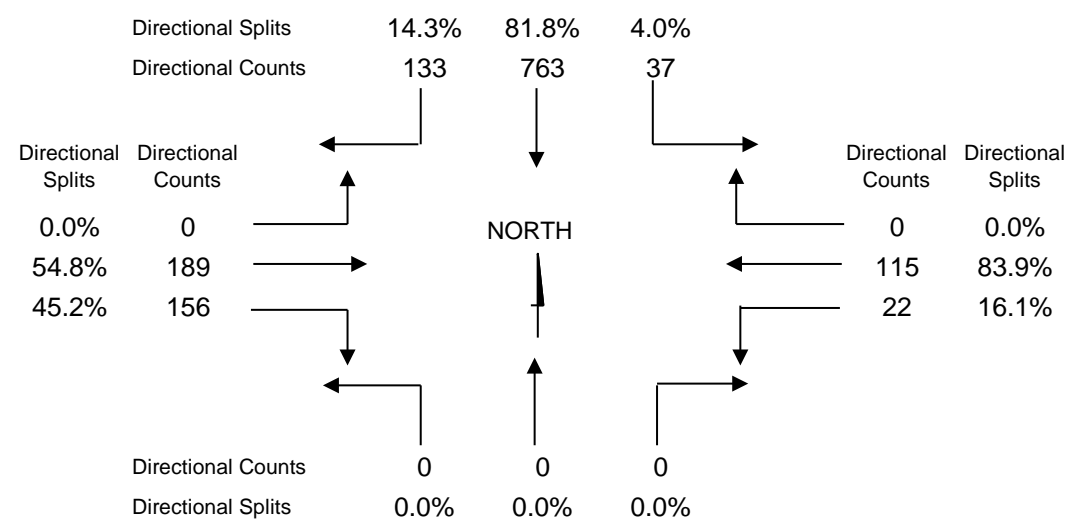
0	0	0	37	763	133	0	189	156	22	115	0	1415
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TRUCK PERCENTAGES

0%	0%	0%	3%	6%	5%	0%	2%	9%	0%	3%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Western
8:45 - 9:45 AM**



OVERALL PHF = 0.89



TRAFFIC VOLUMES

INTERSECTION: Main & Western

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Western			Western				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↱	↷	↵	↴	↶	↷	→	↶	↷	↶	↷		
03:00PM	0	0	0	5	309	44	0	54	35	9	35	0	491	2076
03:15PM	0	0	0	10	288	49	0	65	58	7	26	0	503	2171
03:30PM	0	0	0	8	363	53	0	51	41	13	22	0	551	2211
03:45PM	0	0	0	11	314	46	0	67	47	14	32	0	531	2331
04:00PM	0	0	0	11	340	59	0	68	48	17	43	0	586	2379
04:15PM	0	0	0	19	323	45	0	56	62	7	31	0	543	2469
04:30PM	0	0	0	8	442	65	0	60	44	13	39	0	671	2652
04:45PM	0	0	0	13	364	51	0	59	46	14	32	0	579	2511
05:00PM	0	0	0	12	424	61	0	50	66	18	45	0	676	2423
05:15PM	0	0	0	13	447	60	0	66	64	14	62	0	726	2194
05:30PM	0	0	0	14	312	50	0	45	60	13	36	0	530	1899
05:45PM	0	0	0	18	281	56	0	42	42	15	37	0	491	1783
06:00PM	0	0	0	5	236	51	0	44	58	15	38	0	447	1636
06:15PM	0	0	0	8	243	57	0	39	47	3	34	0	431	--
06:30PM	0	0	0	6	191	76	0	56	49	9	27	0	414	--
06:45PM	0	0	0	8	192	42	0	29	43	6	24	0	344	--

NB			SB			EB			WB			TOTAL
Main			Main			Western			Western			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

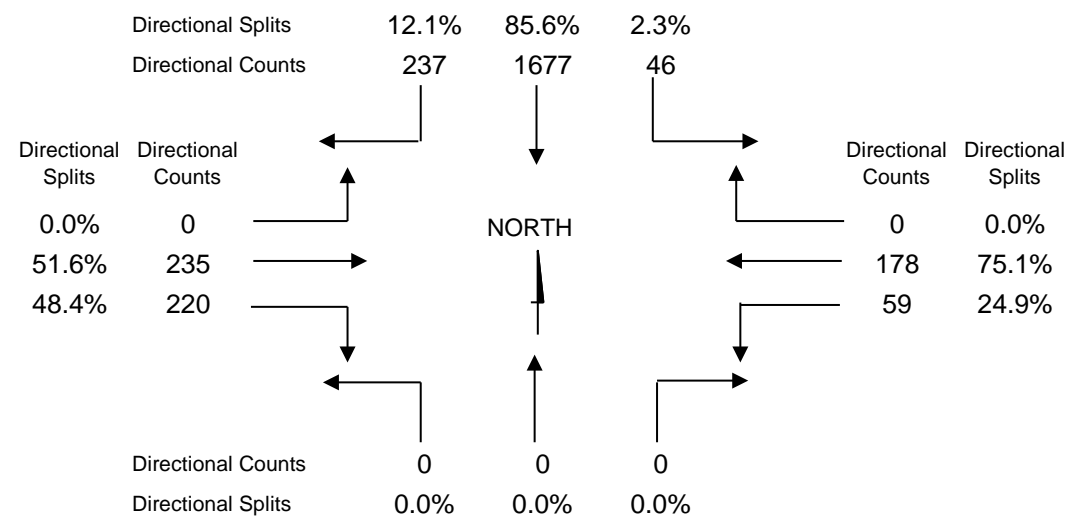
0	0	0	46	1677	237	0	235	220	59	178	0	2652
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TRUCK PERCENTAGES

0%	0%	0%	2%	2%	2%	0%	2%	4%	0%	2%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Western
4:30 - 5:30 PM**



OVERALL PHF = 0.91



TRAFFIC VOLUMES

INTERSECTION: **Main & Monroe**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL	
	Main			Main			Monroe			Monroe					
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT			
	↶	↱	↷	↵	↴	↶	↷	→	↶	↵	↷	↶	↷		
06:00AM	0	0	0	18	47	0	0	8	0	4	21	0	98	671	
06:15AM	0	0	0	19	82	1	0	3	1	4	22	0	132	800	
06:30AM	0	0	0	31	134	1	0	6	2	11	48	0	233	940	
06:45AM	0	0	0	34	118	1	0	14	1	6	34	0	208	999	
07:00AM	0	0	0	50	129	0	0	8	0	10	30	0	227	1156	
07:15AM	0	0	0	59	139	0	0	18	5	4	47	0	272	1208	
07:30AM	0	0	0	63	151	1	0	14	1	6	56	0	292	1246	
07:45AM	0	0	0	67	175	1	0	20	2	10	90	0	365	1218	
08:00AM	0	0	0	53	156	2	0	13	2	10	43	0	279	1167	
08:15AM	0	0	0	69	160	1	0	15	3	15	47	0	310	1176	
08:30AM	0	0	0	53	137	0	0	7	0	12	55	0	264	1148	
08:45AM	0	0	0	70	166	2	0	15	0	8	53	0	314	1176	
09:00AM	0	0	0	53	179	1	0	12	2	12	29	0	288	1179	
09:15AM	0	0	0	52	183	1	0	7	0	8	31	0	282	--	
09:30AM	0	0	0	52	175	4	0	14	2	12	33	0	292	--	
09:45AM	0	0	0	73	173	2	0	12	3	14	40	0	317	--	

NB			SB			EB			WB			TOTAL
Main			Main			Monroe			Monroe			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

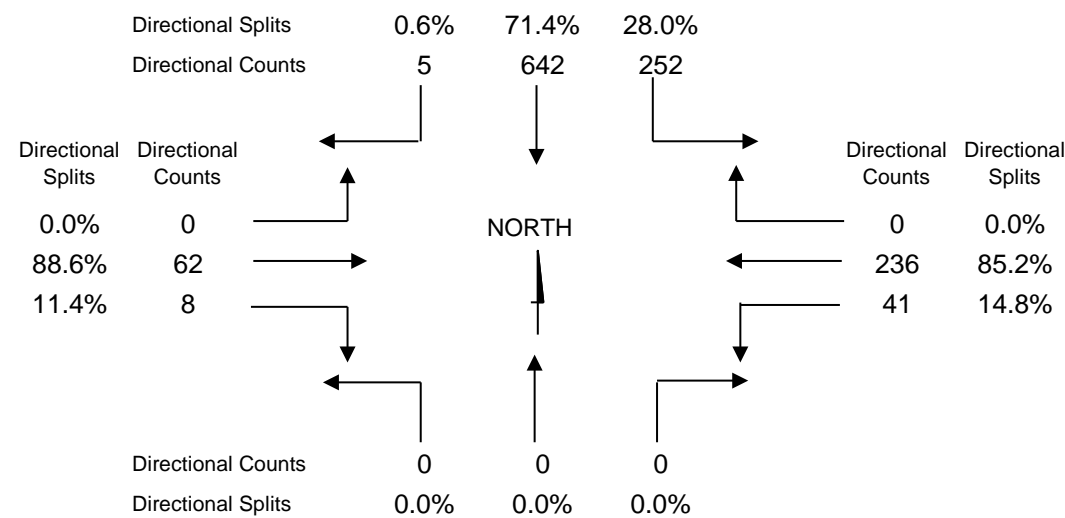
0	0	0	252	642	5	0	62	8	41	236	0	1246
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TRUCK PERCENTAGES

0%	0%	0%	5%	7%	0%	0%	10%	0%	20%	6%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Monroe
7:30 - 8:30 AM**



OVERALL PHF = 0.85



TRAFFIC VOLUMES

INTERSECTION: **Main & Monroe**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Monroe			Monroe				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↱	↷	↵	↴	↶	↷	→	↶	↷	↶	↷		
03:00PM	0	0	0	98	249	3	0	16	1	19	44	0	430	1856
03:15PM	0	0	0	89	269	5	0	19	1	19	53	0	455	1873
03:30PM	0	0	0	108	295	4	0	22	5	19	46	0	499	1893
03:45PM	0	0	0	96	280	1	0	25	1	11	58	0	472	1961
04:00PM	0	0	0	107	251	2	0	20	1	19	47	0	447	1993
04:15PM	0	0	0	118	274	1	0	9	2	15	56	0	475	2182
04:30PM	0	0	0	136	330	1	0	23	4	17	56	0	567	2352
04:45PM	0	0	0	120	278	4	0	13	2	20	67	0	504	2258
05:00PM	0	0	0	143	367	5	0	19	6	24	72	0	636	2166
05:15PM	0	0	0	147	380	5	0	24	1	26	62	0	645	1927
05:30PM	0	0	0	96	276	3	0	13	3	18	64	0	473	1670
05:45PM	0	0	0	83	247	6	0	10	2	17	47	0	412	1558
06:00PM	0	0	0	78	216	11	0	13	2	8	69	0	397	1477
06:15PM	0	0	0	71	214	9	0	10	10	18	56	0	388	--
06:30PM	0	0	0	64	154	22	0	12	7	22	80	0	361	--
06:45PM	0	0	0	56	162	16	0	12	4	17	64	0	331	--

NB			SB			EB			WB			TOTAL
Main			Main			Monroe			Monroe			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

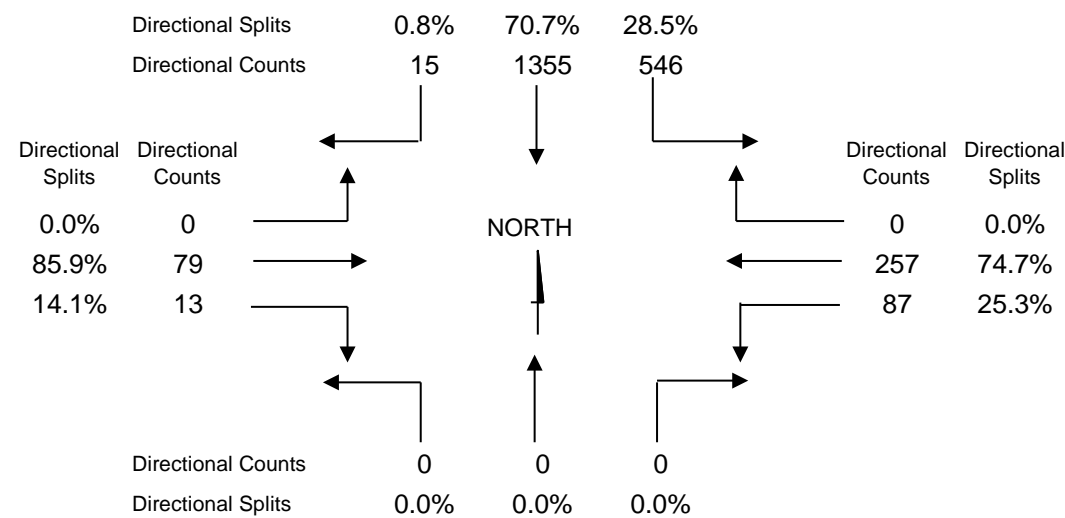
0	0	0	546	1355	15	0	79	13	87	257	0	2352
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TRUCK PERCENTAGES

0%	0%	0%	0%	2%	0%	0%	2%	0%	8%	3%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Monroe
4:30 - 5:30 PM**



OVERALL PHF = 0.91



TRAFFIC VOLUMES

INTERSECTION: **Main & South**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			South			South				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↑	↷	↶	↓	↷	↷	→	↶	↶	←	↷		
06:00AM	0	0	0	0	57	0	0	2	5	0	2	0	66	458
06:15AM	0	0	0	3	70	3	0	0	3	3	2	0	84	538
06:30AM	0	0	0	6	150	0	0	1	0	4	5	0	166	600
06:45AM	0	0	0	7	121	3	0	1	2	5	3	0	142	630
07:00AM	0	0	0	6	122	4	0	2	3	4	5	0	146	700
07:15AM	0	0	0	3	130	0	0	5	2	1	5	0	146	735
07:30AM	0	0	0	2	169	1	0	4	0	6	14	0	196	767
07:45AM	0	0	0	7	178	6	0	4	3	3	11	0	212	747
08:00AM	0	0	0	10	151	5	0	5	2	6	2	0	181	742
08:15AM	0	0	0	10	154	2	0	2	1	4	5	0	178	768
08:30AM	0	0	0	10	142	3	0	5	0	6	10	0	176	813
08:45AM	0	0	0	9	161	10	0	6	5	7	9	0	207	853
09:00AM	0	0	0	8	176	4	0	6	2	8	3	0	207	873
09:15AM	0	0	0	9	178	3	0	7	3	8	15	0	223	--
09:30AM	0	0	0	11	176	1	0	6	2	11	9	0	216	--
09:45AM	0	0	0	9	180	3	0	13	3	12	7	0	227	--

NB			SB			EB			WB			TOTAL
Main			Main			South			South			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

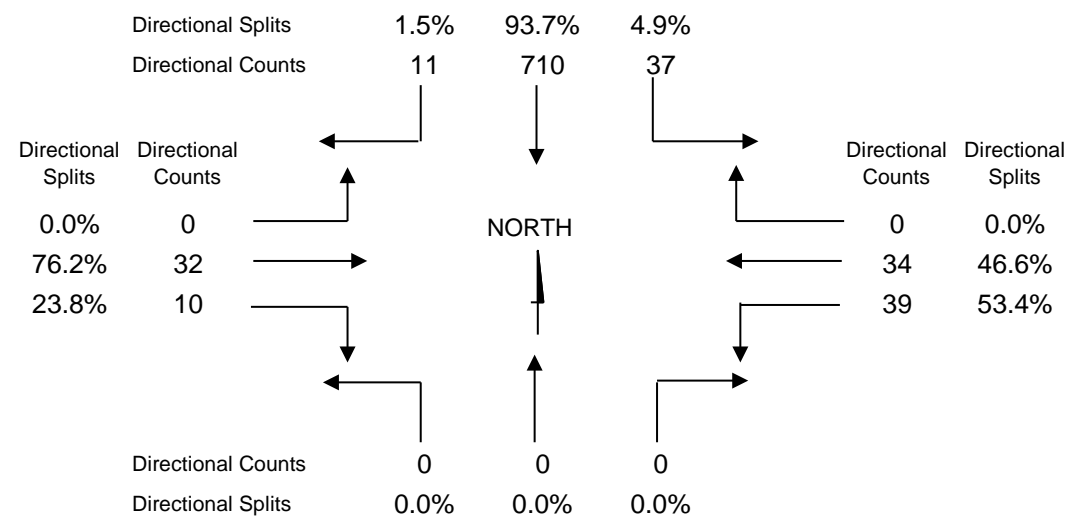
0	0	0	37	710	11	0	32	10	39	34	0	873
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TRUCK PERCENTAGES

0%	0%	0%	3%	9%	9%	0%	3%	20%	31%	12%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & South
9:00 - 10:00 AM**



OVERALL PHF = 0.96



TRAFFIC VOLUMES

INTERSECTION: **Main & South**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			South			South				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↑	↷	↵	↓	↶	↷	→	↶	↷	↶	↷		
03:00PM	0	0	0	6	249	4	0	8	6	11	17	0	301	1289
03:15PM	0	0	0	10	248	6	0	9	6	10	13	0	302	1321
03:30PM	0	0	0	7	309	4	0	7	6	9	13	0	355	1360
03:45PM	0	0	0	26	276	4	0	4	3	8	10	0	331	1424
04:00PM	0	0	0	13	274	7	0	8	7	11	13	0	333	1459
04:15PM	0	0	0	15	280	8	0	7	6	11	14	0	341	1572
04:30PM	0	0	0	22	342	11	0	9	4	18	13	0	419	1663
04:45PM	0	0	0	14	311	7	0	9	2	8	15	0	366	1606
05:00PM	0	0	0	13	384	8	0	6	11	10	14	0	446	1548
05:15PM	0	0	0	14	369	9	0	9	1	7	23	0	432	1402
05:30PM	0	0	0	10	307	7	0	7	5	8	18	0	362	1263
05:45PM	0	0	0	12	238	18	0	6	5	5	24	0	308	1174
06:00PM	0	0	0	9	203	13	0	12	8	9	46	0	300	1109
06:15PM	0	0	0	9	186	30	0	9	4	9	46	0	293	--
06:30PM	0	0	0	5	163	18	0	16	2	9	60	0	273	--
06:45PM	0	0	0	5	161	18	0	13	4	8	34	0	243	--

NB			SB			EB			WB			TOTAL
Main			Main			South			South			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

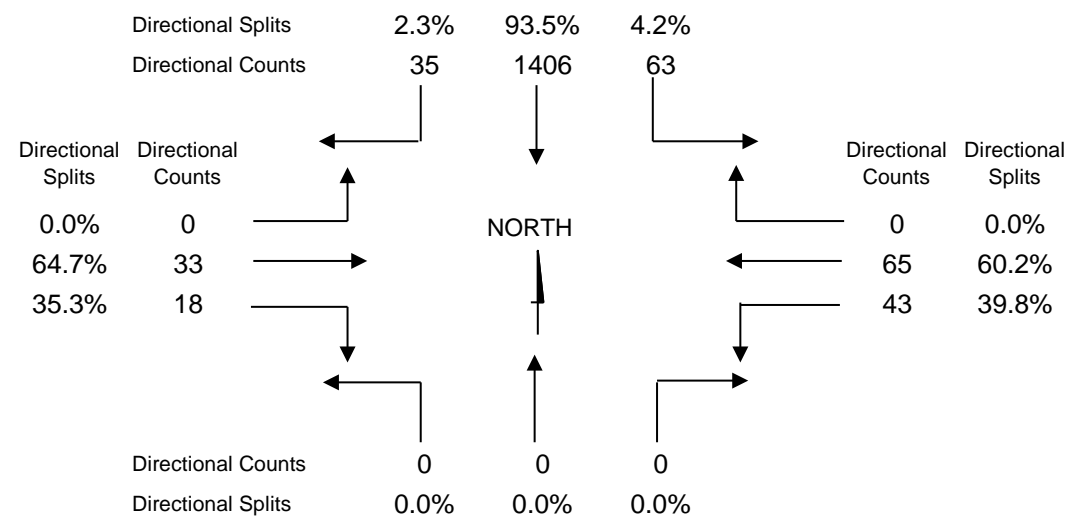
0	0	0	63	1406	35	0	33	18	43	65	0	1663
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TRUCK PERCENTAGES

0%	0%	0%	2%	3%	12%	0%	3%	17%	35%	3%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & South
4:30 - 5:30 PM**



OVERALL PHF = 0.93



TRAFFIC VOLUMES

INTERSECTION: **Main & Bronson**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Bronson			Bronson				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↑	↷	↵	↓	↶	↷	→	↶	↷	↶	↷		
06:00AM	0	0	0	1	52	2	0	0	3	1	1	0	60	443
06:15AM	0	0	0	0	91	3	0	0	1	0	1	0	96	509
06:30AM	0	0	0	3	145	1	0	0	4	4	2	0	159	571
06:45AM	0	0	0	3	114	4	0	1	3	3	0	0	128	576
07:00AM	0	0	0	0	114	4	0	0	1	6	1	0	126	615
07:15AM	0	0	0	3	151	2	0	2	0	0	0	0	158	692
07:30AM	0	0	0	2	153	2	0	3	0	3	1	0	164	708
07:45AM	0	0	0	7	153	1	0	3	0	3	0	0	167	721
08:00AM	0	0	0	3	185	6	0	1	4	3	1	0	203	765
08:15AM	0	0	0	6	156	2	0	0	0	4	6	0	174	748
08:30AM	0	0	0	6	156	4	0	1	2	5	3	0	177	766
08:45AM	0	0	0	6	190	6	0	1	0	5	3	0	211	787
09:00AM	0	0	0	9	170	3	0	1	2	1	0	0	186	766
09:15AM	0	0	0	4	178	2	0	1	1	5	1	0	192	--
09:30AM	0	0	0	3	186	2	0	3	1	1	2	0	198	--
09:45AM	0	0	0	7	175	2	0	0	3	3	0	0	190	--

NB			SB			EB			WB			TOTAL
Main			Main			Bronson			Bronson			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

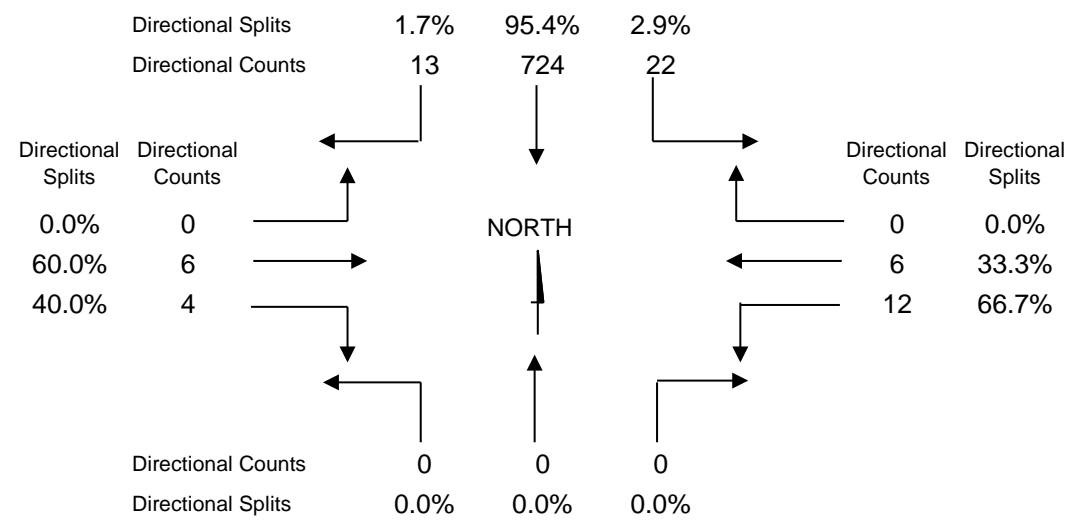
0	0	0	22	724	13	0	6	4	12	6	0	787
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TRUCK PERCENTAGES

0%	0%	0%	0%	6%	0%	0%	17%	25%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Bronson
8:45 - 9:45 AM**



OVERALL PHF = 0.93



TRAFFIC VOLUMES

INTERSECTION: **Main & Bronson**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Bronson			Bronson				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↑	↷	↶	↓	↷	↶	→	↷	↶	←	↷		
03:00PM	0	0	0	4	269	5	0	2	3	3	0	0	286	1170
03:15PM	0	0	0	6	276	4	0	0	1	3	1	0	291	1179
03:30PM	0	0	0	7	300	1	0	0	1	12	0	0	321	1171
03:45PM	0	0	0	5	251	1	0	1	3	7	4	0	272	1241
04:00PM	0	0	0	1	279	2	0	3	3	6	1	0	295	1263
04:15PM	0	0	0	8	263	0	0	1	3	6	2	0	283	1387
04:30PM	0	0	0	3	369	4	0	4	4	6	1	0	391	1470
04:45PM	0	0	0	2	278	2	0	0	0	10	2	0	294	1368
05:00PM	0	0	0	3	396	1	0	2	5	8	4	0	419	1289
05:15PM	0	0	0	2	350	2	0	0	2	9	1	0	366	1082
05:30PM	0	0	0	1	276	2	0	0	1	3	6	0	289	917
05:45PM	0	0	0	1	208	2	0	1	1	0	2	0	215	815
06:00PM	0	0	0	1	207	1	0	0	0	3	0	0	212	775
06:15PM	0	0	0	3	189	0	0	1	1	5	2	0	201	--
06:30PM	0	0	0	2	180	0	0	0	1	3	1	0	187	--
06:45PM	0	0	0	1	168	1	0	0	0	4	1	0	175	--

NB			SB			EB			WB			TOTAL
Main			Main			Bronson			Bronson			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

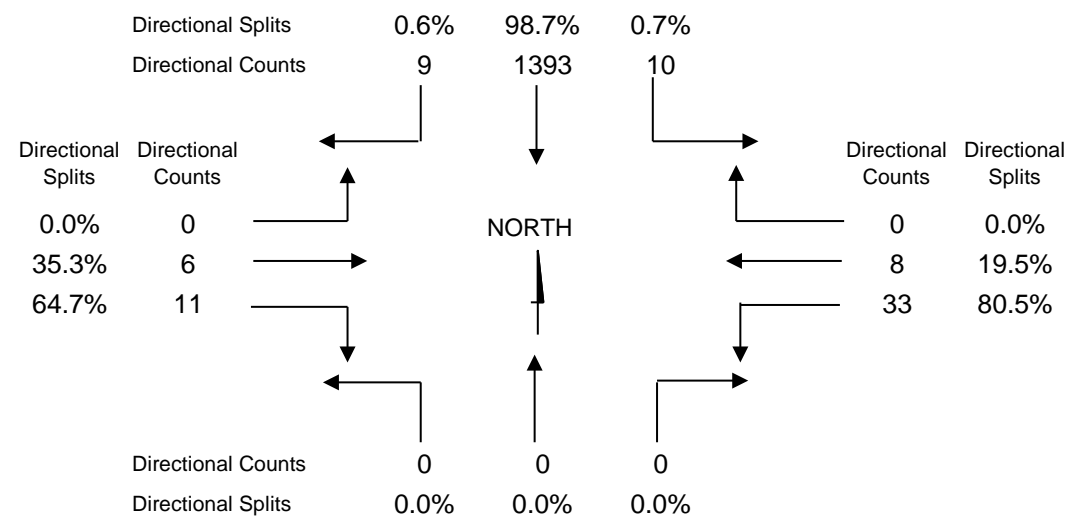
0	0	0	10	1393	9	0	6	11	33	8	0	1470
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TRUCK PERCENTAGES

0%	0%	0%	0%	1%	0%	0%	0%	9%	3%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Bronson
4:30 - 5:30 PM**



OVERALL PHF = 0.88



TRAFFIC VOLUMES

INTERSECTION: **Main & Sample**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Sample			Sample				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↑	↷	↵	↓	↶	↷	→	↶	↷	←	↷		
06:00AM	0	0	0	4	38	9	0	60	9	19	58	0	197	1261
06:15AM	0	0	0	4	53	10	0	87	8	12	81	0	255	1410
06:30AM	0	0	0	10	74	37	0	114	12	27	113	0	387	1594
06:45AM	0	0	0	15	86	25	0	125	17	38	116	0	422	1755
07:00AM	0	0	0	21	87	14	0	105	13	27	79	0	346	1899
07:15AM	0	0	0	13	100	16	0	157	15	32	106	0	439	2014
07:30AM	0	0	0	22	103	25	0	209	16	50	123	0	548	2049
07:45AM	0	0	0	25	136	13	0	195	17	51	129	0	566	1929
08:00AM	0	0	0	28	123	16	0	151	23	33	87	0	461	1853
08:15AM	0	0	0	23	116	15	0	172	19	30	99	0	474	1821
08:30AM	0	0	0	15	95	17	0	149	17	23	112	0	428	1789
08:45AM	0	0	0	29	140	13	0	137	29	34	108	0	490	1779
09:00AM	0	0	0	22	133	18	0	114	23	26	93	0	429	1742
09:15AM	0	0	0	23	138	20	0	113	26	29	93	0	442	--
09:30AM	0	0	0	20	116	16	0	102	24	30	110	0	418	--
09:45AM	0	0	0	18	144	31	0	100	23	43	94	0	453	--

NB			SB			EB			WB			TOTAL
Main			Main			Sample			Sample			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

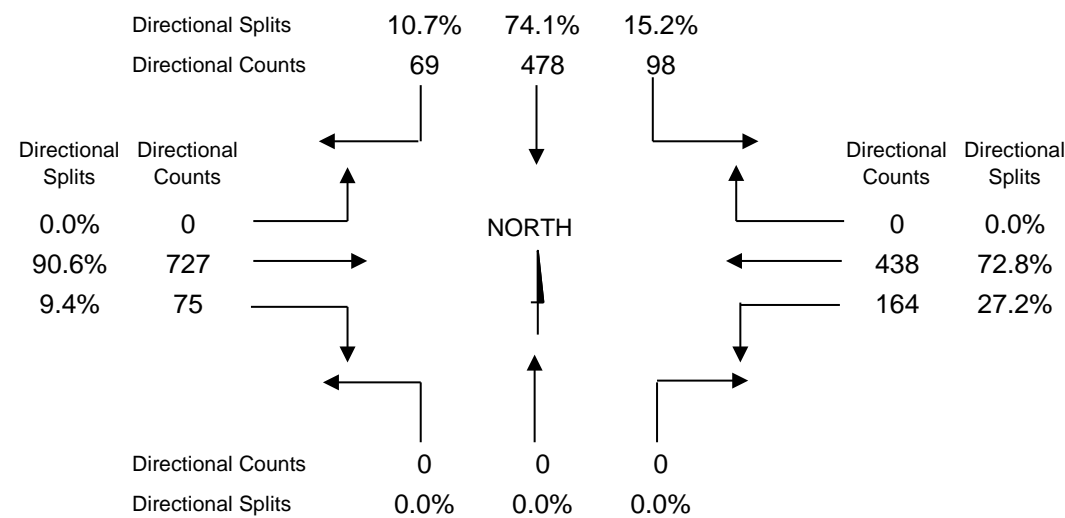
0	0	0	98	478	69	0	727	75	164	438	0	2049
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TRUCK PERCENTAGES

0%	0%	0%	11%	6%	3%	0%	4%	16%	5%	6%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Sample
7:30 - 8:30 AM**



OVERALL PHF = 0.91



TRAFFIC VOLUMES

INTERSECTION: **Main & Sample**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Sample			Sample				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↱	↷	↵	↴	↶	↷	→	↶	↷	↶	↷		
03:00PM	0	0	0	28	218	31	0	132	31	45	165	0	650	2705
03:15PM	0	0	0	26	208	34	0	142	17	53	169	0	649	2740
03:30PM	0	0	0	28	234	48	0	165	25	45	168	0	713	2767
03:45PM	0	0	0	21	255	41	0	127	35	49	165	0	693	2816
04:00PM	0	0	0	27	214	41	0	160	28	49	166	0	685	2842
04:15PM	0	0	0	20	257	38	0	134	30	47	150	0	676	2986
04:30PM	0	0	0	42	250	41	0	153	31	67	178	0	762	3103
04:45PM	0	0	0	34	274	37	0	119	34	57	164	0	719	3021
05:00PM	0	0	0	33	309	38	0	172	32	50	195	0	829	2878
05:15PM	0	0	0	31	315	50	0	141	21	55	180	0	793	2534
05:30PM	0	0	0	31	240	34	0	140	26	57	152	0	680	2226
05:45PM	1	1	1	36	199	23	1	115	29	27	142	1	576	1968
06:00PM	0	0	0	17	173	23	0	89	18	34	131	0	485	1827
06:15PM	0	0	0	16	170	22	0	84	14	28	151	0	485	--
06:30PM	0	0	0	16	131	18	0	81	24	27	125	0	422	--
06:45PM	0	0	0	21	132	21	0	89	22	22	128	0	435	--

NB			SB			EB			WB			TOTAL
Main			Main			Sample			Sample			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

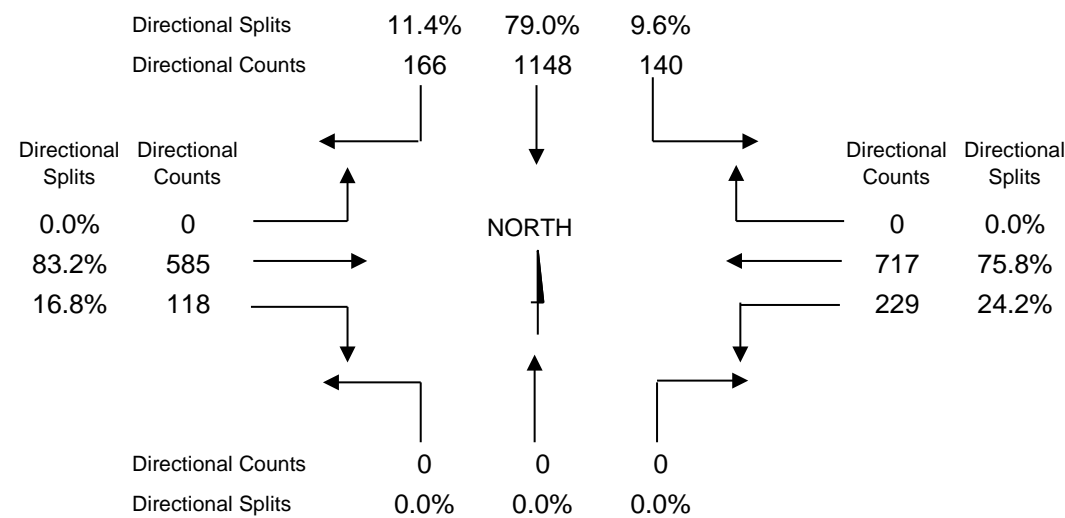
0	0	0	140	1148	166	0	585	118	229	717	0	3103
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TRUCK PERCENTAGES

0%	0%	0%	2%	2%	4%	0%	2%	3%	5%	4%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Sample
4:30 - 5:30 PM**



OVERALL PHF = 0.94



TRAFFIC VOLUMES

INTERSECTION: Main & Broadway

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Broadway			Broadway				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↑	↷	↵	↓	↶	↷	→	↶	↷	←	↷		
06:00AM	0	0	0	2	55	2	0	0	1	0	0	0	60	348
06:15AM	0	0	0	0	66	0	0	1	0	0	2	0	69	391
06:30AM	0	0	0	3	94	2	0	0	1	0	2	0	102	470
06:45AM	0	0	0	1	110	2	0	2	0	0	2	0	117	524
07:00AM	0	0	0	2	96	1	0	1	1	2	0	0	103	575
07:15AM	0	0	0	2	132	6	0	2	3	2	1	0	148	626
07:30AM	0	0	0	0	143	2	0	6	4	1	0	0	156	637
07:45AM	0	0	0	8	144	4	0	2	3	3	4	0	168	629
08:00AM	0	0	0	4	138	3	0	3	2	2	2	0	154	638
08:15AM	0	0	0	7	143	2	0	5	0	0	2	0	159	657
08:30AM	0	0	0	4	135	4	0	0	0	2	3	0	148	689
08:45AM	0	0	0	13	154	1	0	2	3	3	1	0	177	716
09:00AM	0	0	0	7	156	0	0	3	2	4	1	0	173	757
09:15AM	0	0	0	9	172	2	0	3	2	2	1	0	191	--
09:30AM	0	0	0	10	158	2	0	2	1	1	1	0	175	--
09:45AM	0	0	0	7	197	1	0	4	3	4	2	0	218	--

NB			SB			EB			WB			TOTAL
Main			Main			Broadway			Broadway			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

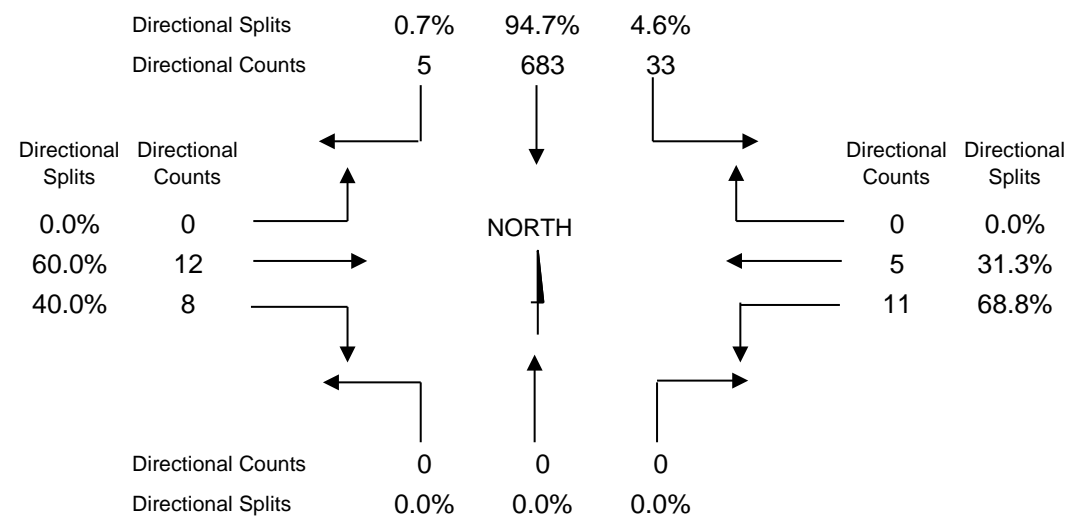
0	0	0	33	683	5	0	12	8	11	5	0	757
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TRUCK PERCENTAGES

0%	0%	0%	15%	8%	0%	0%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Broadway
9:00 - 10:00 AM**



OVERALL PHF = 0.87



TRAFFIC VOLUMES

INTERSECTION: Main & Broadway

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Broadway			Broadway				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↑	↷	↵	↓	↶	↷	→	↶	↷	↶	↷		
03:00PM	0	0	0	9	277	1	0	7	5	6	5	0	310	1298
03:15PM	0	0	0	2	273	1	0	5	5	7	1	0	294	1295
03:30PM	0	0	0	6	313	3	0	3	5	3	0	0	333	1358
03:45PM	0	0	0	13	325	4	0	4	4	5	6	0	361	1428
04:00PM	0	0	0	5	283	2	0	3	3	8	3	0	307	1460
04:15PM	0	0	0	8	325	4	0	4	6	6	4	0	357	1566
04:30PM	0	0	0	10	371	1	0	3	11	4	3	0	403	1622
04:45PM	0	0	0	12	363	6	0	0	5	3	4	0	393	1580
05:00PM	0	0	0	7	383	2	0	6	9	5	1	0	413	1459
05:15PM	0	0	0	5	386	1	0	5	10	5	1	0	413	1266
05:30PM	0	0	0	5	339	0	0	5	4	6	2	0	361	1076
05:45PM	0	0	0	4	256	1	0	4	2	4	1	0	272	926
06:00PM	0	0	0	4	211	0	0	0	2	0	3	0	220	831
06:15PM	0	0	0	3	213	1	0	1	1	3	1	0	223	--
06:30PM	0	0	0	5	199	0	0	0	1	4	2	0	211	--
06:45PM	0	0	0	2	165	4	0	1	2	2	1	0	177	--

NB			SB			EB			WB			TOTAL
Main			Main			Broadway			Broadway			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

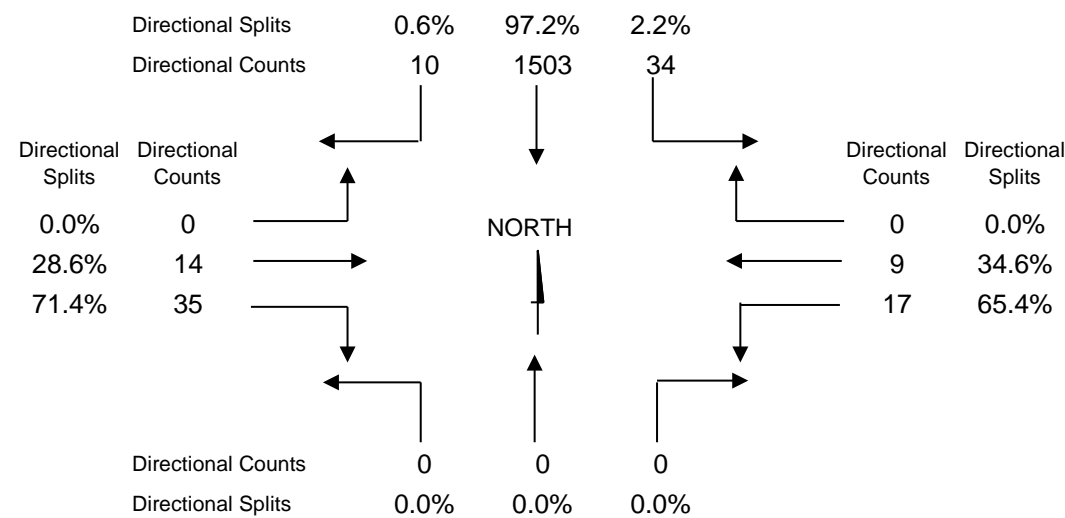
0	0	0	34	1503	10	0	14	35	17	9	0	1622
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TRUCK PERCENTAGES

0%	0%	0%	3%	2%	10%	0%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Broadway
4:30 - 5:30 PM**



OVERALL PHF = 0.98



TRAFFIC VOLUMES

INTERSECTION: Main & Indiana

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Indiana			Indiana				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↱	↷	↵	↴	↶	↷	→	↶	↷	↶	↷		
06:00AM	0	0	0	2	52	1	0	10	4	0	9	0	78	475
06:15AM	0	0	0	1	64	4	0	9	6	3	12	0	99	536
06:30AM	0	0	0	1	90	6	0	17	5	3	11	0	133	616
06:45AM	0	0	0	4	106	5	0	16	11	0	23	0	165	668
07:00AM	0	0	0	2	93	1	0	7	21	2	13	0	139	712
07:15AM	0	0	0	9	116	6	0	15	11	3	19	0	179	776
07:30AM	0	0	0	4	117	10	0	15	15	3	21	0	185	806
07:45AM	0	0	0	6	132	6	0	23	9	6	27	0	209	814
08:00AM	0	0	0	4	128	6	0	27	10	3	25	0	203	808
08:15AM	0	0	0	9	125	11	0	21	12	2	29	0	209	810
08:30AM	0	0	0	7	131	2	0	18	13	4	18	0	193	821
08:45AM	0	0	0	4	143	14	0	14	11	4	13	0	203	852
09:00AM	0	0	0	8	144	5	0	20	10	4	14	0	205	900
09:15AM	0	0	0	9	149	9	0	15	13	1	24	0	220	--
09:30AM	0	0	0	6	146	7	0	20	14	6	25	0	224	--
09:45AM	0	0	0	9	183	7	0	12	12	5	23	0	251	--

NB			SB			EB			WB			TOTAL
Main			Main			Indiana			Indiana			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

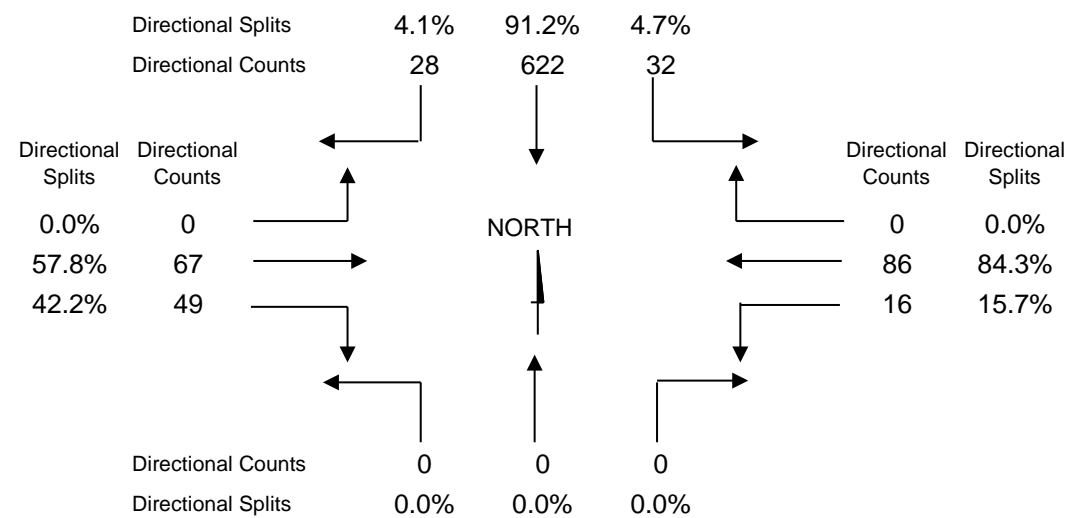
0	0	0	32	622	28	0	67	49	16	86	0	900
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TRUCK PERCENTAGES

0%	0%	0%	3%	6%	7%	0%	2%	4%	7%	6%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Indiana
9:00 - 10:00 AM**



OVERALL PHF = 0.90



TRAFFIC VOLUMES

INTERSECTION: Main & Indiana

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Indiana			Indiana				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↑	↷	↶	↓	↷	↶	→	↷	↶	←	↷		
03:00PM	0	0	0	11	270	15	0	30	20	12	39	0	397	1617
03:15PM	0	0	0	13	264	6	0	27	17	7	39	0	373	1632
03:30PM	0	0	0	9	281	23	0	26	22	4	38	0	403	1680
03:45PM	0	0	0	7	308	15	0	41	26	15	32	0	444	1775
04:00PM	0	0	0	11	266	16	0	37	27	12	43	0	412	1811
04:15PM	0	0	0	7	317	17	0	25	20	6	29	0	421	1921
04:30PM	0	0	0	18	363	14	0	29	31	6	37	0	498	1988
04:45PM	0	0	0	13	335	19	0	42	26	11	34	0	480	1907
05:00PM	0	0	0	11	366	18	0	37	36	10	44	0	522	1771
05:15PM	0	0	0	14	373	17	0	29	22	8	25	0	488	1559
05:30PM	0	0	0	9	322	14	0	20	17	14	21	0	417	1367
05:45PM	0	0	0	10	242	13	0	28	13	7	31	0	344	1207
06:00PM	0	0	0	10	190	13	0	30	22	4	41	0	310	1091
06:15PM	0	0	0	5	199	13	0	28	19	3	29	0	296	--
06:30PM	0	0	0	11	174	17	0	19	9	6	21	0	257	--
06:45PM	0	0	0	8	148	10	0	22	14	5	21	0	228	--

NB			SB			EB			WB			TOTAL
Main			Main			Indiana			Indiana			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

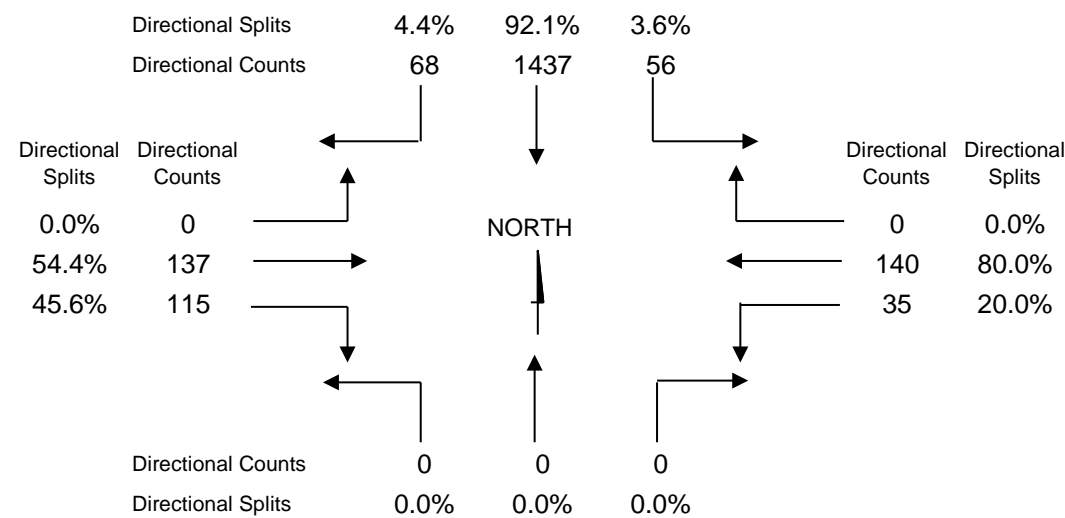
0	0	0	56	1437	68	0	137	115	35	140	0	1988
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TRUCK PERCENTAGES

0%	0%	0%	0%	2%	11%	0%	0%	2%	3%	1%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Indiana
4:30 - 5:30 PM**



OVERALL PHF = 0.95



TRAFFIC VOLUMES

INTERSECTION: Main & Calvert

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Calvert			Calvert				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↑	↷	↵	↓	↶	↷	→	↶	↷	←	↷		
06:00AM	0	0	0	1	49	3	0	1	4	1	1	0	60	375
06:15AM	0	0	0	2	69	3	0	1	2	0	2	0	79	451
06:30AM	0	0	0	1	94	1	0	6	7	2	3	0	114	519
06:45AM	0	0	0	6	104	0	0	4	3	2	3	0	122	590
07:00AM	0	0	0	3	115	3	0	6	8	0	1	0	136	635
07:15AM	0	0	0	4	127	4	0	5	2	2	3	0	147	671
07:30AM	0	0	0	2	153	1	0	17	3	4	5	0	185	682
07:45AM	0	0	0	7	136	1	0	7	11	1	4	0	167	642
08:00AM	0	0	0	4	142	1	0	6	6	4	9	0	172	654
08:15AM	0	0	0	5	133	7	0	3	7	2	1	0	158	664
08:30AM	0	0	0	0	129	2	0	10	2	2	0	0	145	702
08:45AM	0	0	0	5	158	2	0	6	5	1	2	0	179	741
09:00AM	0	0	0	8	151	6	0	5	1	7	4	0	182	780
09:15AM	0	0	0	8	165	3	0	2	11	1	6	0	196	--
09:30AM	0	0	0	6	159	2	0	7	6	2	2	0	184	--
09:45AM	0	0	0	4	191	2	0	7	3	6	5	0	218	--

NB			SB			EB			WB			TOTAL
Main			Main			Calvert			Calvert			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

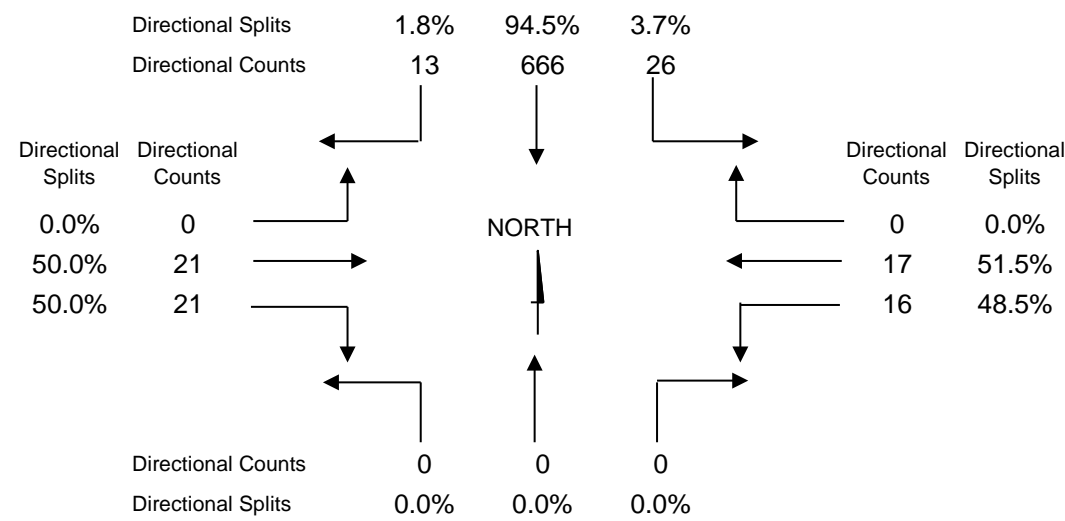
0	0	0	26	666	13	0	21	21	16	17	0	780
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TRUCK PERCENTAGES

0%	0%	0%	16%	7%	8%	0%	5%	0%	7%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Calvert
9:00 - 10:00 AM**



OVERALL PHF = 0.89



TRAFFIC VOLUMES

INTERSECTION: **Main & Calvert**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Calvert			Calvert				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↱	↷	↵	↴	↶	↷	→	↶	↷	↶	↷		
03:00PM	0	0	0	10	298	9	0	7	13	4	7	0	348	1350
03:15PM	0	0	0	16	278	4	0	7	8	3	8	0	324	1349
03:30PM	0	0	0	6	275	3	0	11	4	4	12	0	315	1406
03:45PM	0	0	0	15	318	3	0	10	7	5	5	0	363	1525
04:00PM	0	0	0	5	300	5	0	14	7	4	12	0	347	1537
04:15PM	0	0	0	7	332	6	0	16	4	6	10	0	381	1648
04:30PM	0	0	0	12	384	5	0	16	8	2	7	0	434	1712
04:45PM	0	0	0	9	338	5	0	9	5	4	5	0	375	1638
05:00PM	0	0	0	16	400	9	0	12	4	9	8	0	458	1530
05:15PM	0	0	0	9	390	10	0	11	9	4	12	0	445	1321
05:30PM	0	0	0	10	323	5	0	9	7	1	5	0	360	1121
05:45PM	0	0	0	5	233	4	0	2	10	3	10	0	267	971
06:00PM	0	0	0	6	213	5	0	10	6	3	6	0	249	883
06:15PM	0	0	0	12	209	2	0	4	8	2	8	0	245	--
06:30PM	0	0	0	9	172	1	0	5	11	5	7	0	210	--
06:45PM	0	0	0	7	156	2	0	3	4	2	5	0	179	--

NB			SB			EB			WB			TOTAL
Main			Main			Calvert			Calvert			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

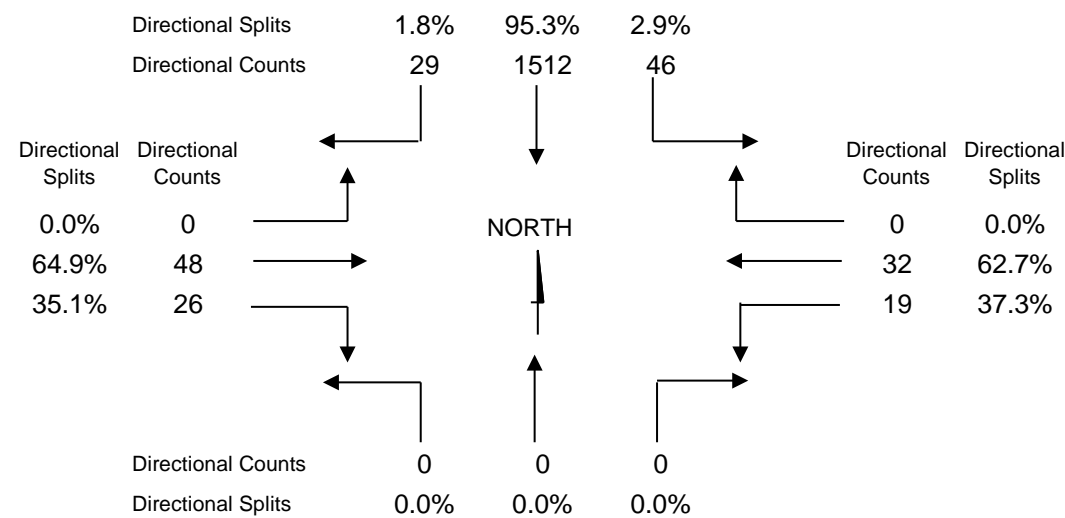
0	0	0	46	1512	29	0	48	26	19	32	0	1712
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TRUCK PERCENTAGES

0%	0%	0%	2%	2%	7%	0%	7%	0%	6%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Calvert
4:30 - 5:30 PM**



OVERALL PHF = 0.93



TRAFFIC VOLUMES

INTERSECTION: **Main & Ewing**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Ewing			Ewing				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↑	↷	↵	↓	↶	↷	→	↶	↷	↶	↷		
06:00AM	0	0	0	5	49	2	0	14	8	1	14	0	93	511
06:15AM	0	0	0	7	53	4	0	9	11	0	16	0	100	566
06:30AM	0	0	0	10	72	9	0	14	7	4	29	0	145	662
06:45AM	0	0	0	14	80	8	0	27	7	6	31	0	173	770
07:00AM	0	0	0	13	89	3	0	12	9	1	21	0	148	839
07:15AM	0	0	0	10	100	8	0	26	17	3	32	0	196	886
07:30AM	0	0	0	11	139	7	0	29	23	15	29	0	253	918
07:45AM	0	0	0	14	119	3	0	39	25	14	28	0	242	865
08:00AM	0	0	0	11	119	1	0	22	7	4	31	0	195	843
08:15AM	0	0	0	12	130	4	0	25	13	10	34	0	228	856
08:30AM	0	0	0	7	116	7	0	15	18	7	30	0	200	866
08:45AM	0	0	0	20	126	8	0	22	14	9	21	0	220	902
09:00AM	0	0	0	17	134	9	0	16	6	5	21	0	208	968
09:15AM	0	0	0	14	139	10	0	20	22	10	23	0	238	--
09:30AM	0	0	0	15	139	9	0	23	12	10	28	0	236	--
09:45AM	0	0	0	20	176	12	0	25	24	9	20	0	286	--

NB			SB			EB			WB			TOTAL
Main			Main			Ewing			Ewing			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

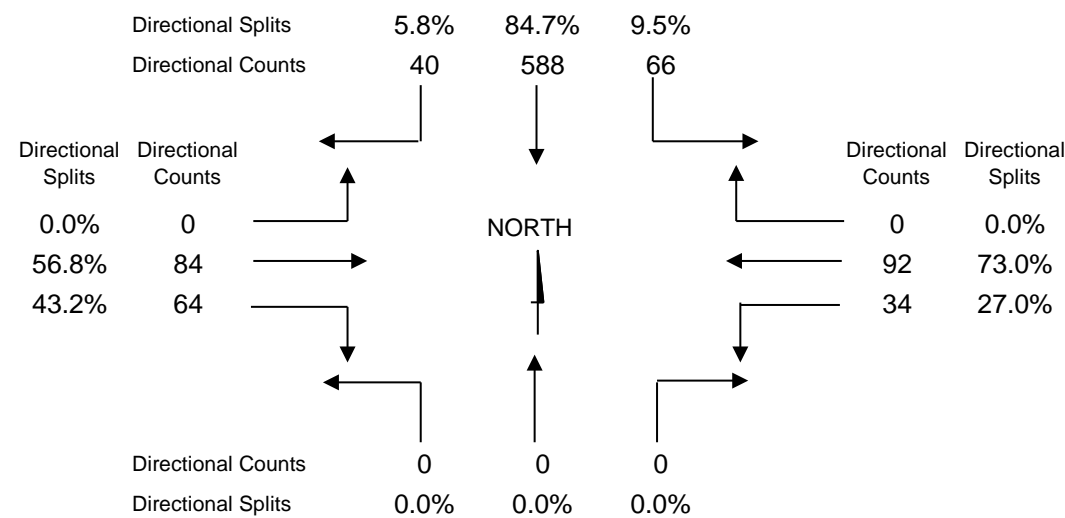
0	0	0	66	588	40	0	84	64	34	92	0	968
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TRUCK PERCENTAGES

0%	0%	0%	5%	7%	13%	0%	5%	3%	6%	7%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Ewing
9:00 - 10:00 AM**



OVERALL PHF = 0.85

TRAFFIC VOLUMES

INTERSECTION: **Main & Ewing**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Ewing			Ewing				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↱	↷	↵	↴	↶	↷	↴	↵	↶	↷	↵		
03:00PM	0	0	0	23	225	7	0	37	33	18	53	0	396	1637
03:15PM	0	0	0	32	212	9	0	32	27	16	39	0	367	1690
03:30PM	0	0	0	44	241	21	0	48	29	15	53	0	451	1818
03:45PM	0	0	0	34	248	7	0	40	32	16	46	0	423	1900
04:00PM	0	0	0	27	256	10	0	40	41	17	58	0	449	1955
04:15PM	0	0	0	35	275	12	0	51	44	31	47	0	495	2029
04:30PM	0	0	0	41	322	15	0	63	25	13	54	0	533	2063
04:45PM	0	0	0	37	319	6	0	37	20	12	47	0	478	2028
05:00PM	0	0	0	46	332	14	0	52	20	13	46	0	523	1961
05:15PM	0	0	0	38	348	13	0	37	32	16	45	0	529	1766
05:30PM	0	0	0	32	303	20	0	48	29	16	50	0	498	1555
05:45PM	0	0	0	35	230	10	0	41	36	12	47	0	411	1355
06:00PM	0	0	0	26	181	7	0	40	18	9	47	0	328	1230
06:15PM	0	0	0	24	188	9	0	31	18	9	39	0	318	--
06:30PM	0	0	0	25	149	6	0	35	23	9	51	0	298	--
06:45PM	0	0	0	12	155	12	0	23	21	17	46	0	286	--

NB			SB			EB			WB			TOTAL
Main			Main			Ewing			Ewing			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

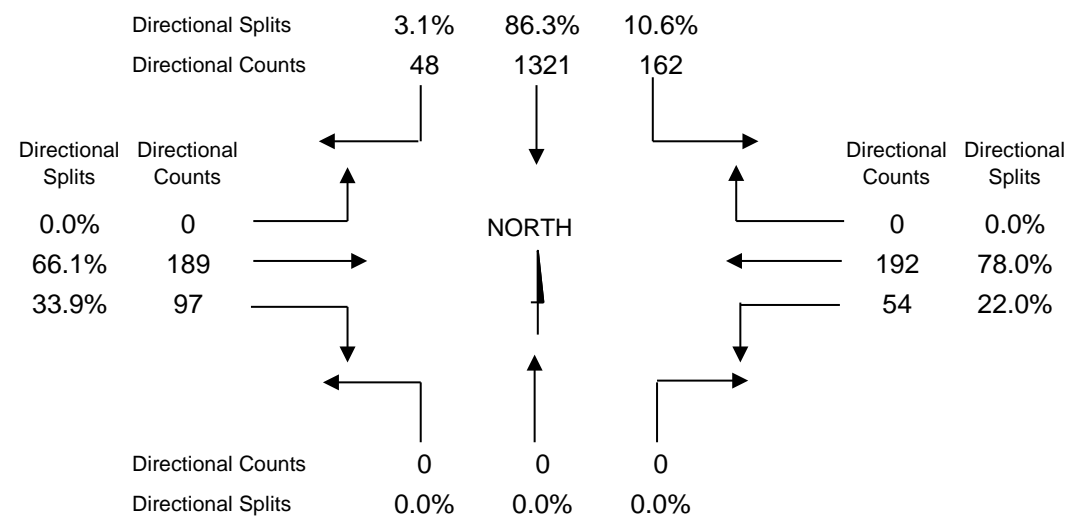
0	0	0	162	1321	48	0	189	97	54	192	0	2063
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TRUCK PERCENTAGES

0%	0%	0%	0%	2%	0%	0%	0%	4%	4%	2%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Ewing
4:30 - 5:30 PM**



OVERALL PHF = 0.97



TRAFFIC VOLUMES

INTERSECTION: Main & Chippewa

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Chippewa			Chippewa				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↱	↷	↵	↴	↶	↷	→	↶	←	↷			
06:00AM	0	0	0	44	8	3	0	3	0	0	2	0	60	334
06:15AM	0	0	2	57	11	1	0	1	0	1	1	0	74	365
06:30AM	0	0	1	55	21	4	0	8	1	0	3	0	93	426
06:45AM	2	0	4	54	28	5	0	7	2	1	4	0	107	488
07:00AM	2	0	3	57	16	4	0	0	3	0	6	0	91	560
07:15AM	2	0	2	95	19	3	0	7	1	0	6	0	135	619
07:30AM	1	0	4	97	26	13	0	6	0	0	8	0	155	640
07:45AM	2	0	8	91	29	25	0	8	2	0	14	0	179	629
08:00AM	0	0	10	90	26	7	0	8	1	1	7	0	150	599
08:15AM	3	0	12	89	33	5	0	5	5	0	4	0	156	620
08:30AM	3	0	14	83	32	3	0	5	1	0	3	0	144	628
08:45AM	1	0	13	87	28	4	0	6	3	1	6	0	149	655
09:00AM	0	0	4	111	41	4	0	5	1	0	5	0	171	702
09:15AM	0	0	4	103	30	7	0	10	2	4	4	0	164	--
09:30AM	0	0	13	101	30	7	0	12	2	1	5	0	171	--
09:45AM	0	0	8	122	40	9	0	5	2	2	8	0	196	--

NB			SB			EB			WB			TOTAL
Main			Main			Chippewa			Chippewa			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

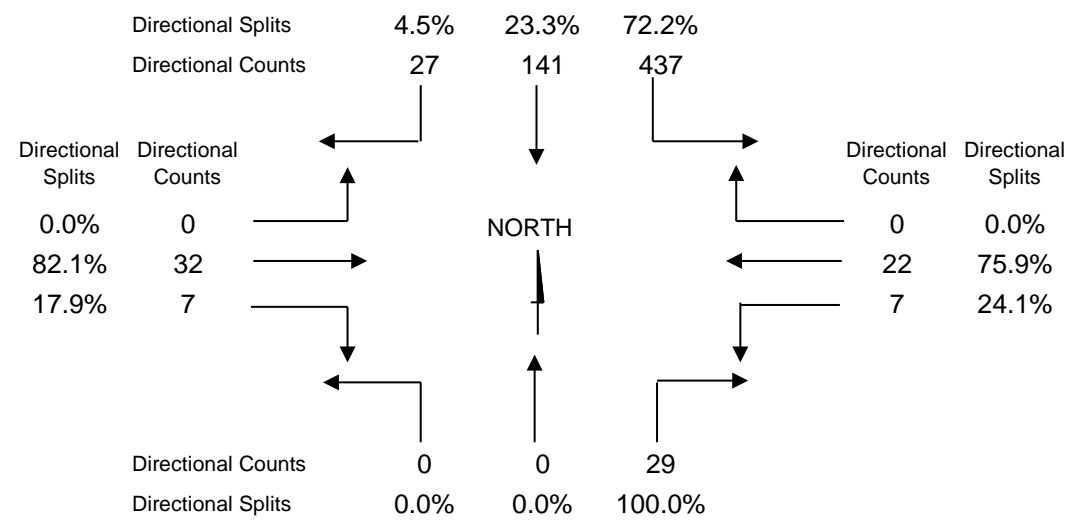
0	0	29	437	141	27	0	32	7	7	22	0	702
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TRUCK PERCENTAGES

0%	0%	31%	9%	8%	4%	0%	28%	0%	0%	5%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Chippewa
9:00 - 10:00 AM**



OVERALL PHF = 0.90

TRAFFIC VOLUMES

INTERSECTION: Main & Chippewa

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Main			Main			Chippewa			Chippewa				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↙	↓	↘	↖	→	↗	↖	←	↘		
03:00PM	4	0	17	164	76	13	0	12	3	3	3	0	295	1254
03:15PM	6	0	31	186	59	7	0	20	1	3	8	0	321	1282
03:30PM	3	0	19	181	62	11	0	18	4	4	5	0	307	1329
03:45PM	5	0	19	178	74	19	0	21	5	1	9	0	331	1406
04:00PM	2	0	15	196	70	11	0	13	4	3	9	0	323	1439
04:15PM	1	0	17	225	77	10	0	20	5	5	8	0	368	1497
04:30PM	3	0	14	217	71	17	0	44	8	4	6	0	384	1552
04:45PM	3	0	14	224	70	17	0	23	5	3	5	0	364	1487
05:00PM	1	0	24	232	69	15	0	27	4	2	7	0	381	1428
05:15PM	4	0	19	269	83	13	0	17	3	4	11	0	423	1285
05:30PM	1	0	14	193	66	16	0	21	2	2	4	0	319	1094
05:45PM	3	0	16	192	64	6	0	15	1	1	7	0	305	985
06:00PM	4	0	11	140	42	9	0	20	2	4	6	0	238	873
06:15PM	1	0	23	126	43	7	0	16	2	2	12	0	232	--
06:30PM	2	0	22	115	40	10	0	8	1	2	10	0	210	--
06:45PM	1	0	13	108	48	8	0	6	0	1	8	0	193	--

NB			SB			EB			WB			TOTAL
Main			Main			Chippewa			Chippewa			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

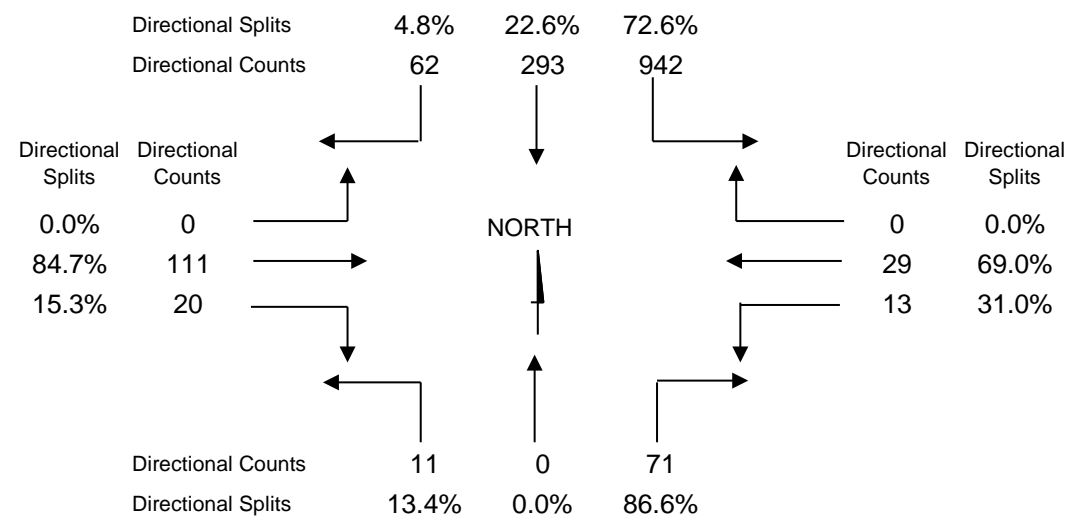
11	0	71	942	293	62	0	111	20	13	29	0	1552
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TRUCK PERCENTAGES

0%	0%	0%	1%	6%	5%	0%	7%	5%	0%	21%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Main & Chippewa
4:30 - 5:30 PM**



OVERALL PHF = 0.92



TRAFFIC VOLUMES

INTERSECTION: Michigan & North Shore

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			North Shore			North Shore				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↷	↷	↶	↷	↷	↷	→	↶	↶	←	↷		
06:00AM	0	50	2	0	66	0	1	2	2	5	1	0	129	1042
06:15AM	7	63	5	1	118	0	0	2	1	4	9	0	210	1197
06:30AM	0	105	5	6	197	1	0	9	9	8	11	2	353	1349
06:45AM	2	101	3	6	183	0	0	15	8	17	12	3	350	1500
07:00AM	1	80	9	2	168	0	0	3	8	5	8	0	284	1762
07:15AM	4	113	10	5	181	1	0	12	13	18	5	0	362	1913
07:30AM	3	124	21	9	276	0	0	18	26	13	7	7	504	2005
07:45AM	9	153	26	23	299	1	0	34	18	28	15	6	612	1884
08:00AM	4	120	17	12	203	0	1	27	15	16	12	8	435	1701
08:15AM	5	124	11	11	235	1	0	19	12	17	11	8	454	1616
08:30AM	3	129	6	9	177	0	1	20	12	14	9	3	383	1503
08:45AM	4	126	10	15	201	1	0	25	11	16	13	7	429	1502
09:00AM	8	117	14	1	158	0	1	15	8	13	8	7	350	1475
09:15AM	3	134	18	5	135	1	0	13	3	15	8	6	341	--
09:30AM	6	157	10	6	147	0	0	15	13	16	8	4	382	--
09:45AM	10	139	25	16	154	2	0	19	6	8	14	9	402	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			North Shore			North Shore			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

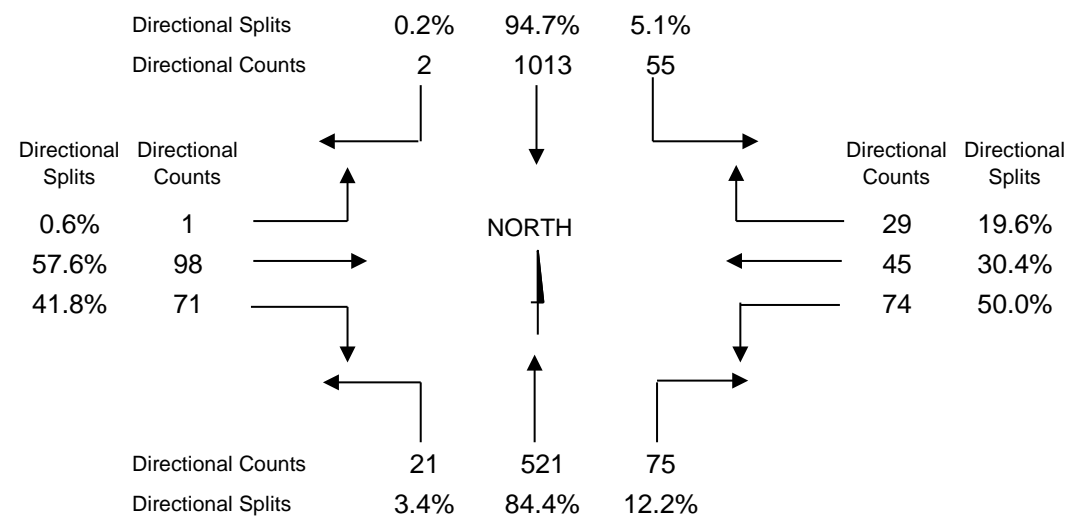
21	521	75	55	1013	2	1	98	71	74	45	29	2005
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TRUCK PERCENTAGES

5%	4%	2%	0%	3%	0%	0%	2%	2%	2%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & North Shore
7:30 - 8:30 AM**



OVERALL PHF = 0.82



TRAFFIC VOLUMES

INTERSECTION: Michigan & North Shore

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			North Shore			North Shore				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↘	↙	→	↖	↗	←	↖		
03:00PM	12	194	25	7	155	1	0	23	11	16	17	9	470	2040
03:15PM	14	209	21	6	149	1	1	12	5	15	13	7	453	2078
03:30PM	8	265	25	9	228	0	0	20	9	11	25	12	612	2102
03:45PM	6	207	27	12	163	0	0	17	11	19	24	19	505	2115
04:00PM	12	230	24	10	161	0	0	14	7	15	18	17	508	2176
04:15PM	8	228	31	13	126	2	0	13	6	13	27	10	477	2298
04:30PM	20	268	42	14	178	2	0	21	4	24	29	23	625	2359
04:45PM	7	258	26	8	182	0	1	15	6	21	22	20	566	2254
05:00PM	13	306	31	13	164	0	0	20	12	17	34	20	630	2133
05:15PM	19	223	28	13	170	0	0	22	7	16	32	8	538	1899
05:30PM	15	238	25	9	141	2	1	22	15	20	21	11	520	1766
05:45PM	9	164	24	8	154	2	1	19	7	18	26	13	445	1614
06:00PM	18	154	20	6	134	2	0	21	5	13	14	9	396	1526
06:15PM	11	135	20	5	160	1	0	13	7	18	24	11	405	--
06:30PM	13	148	12	5	136	0	2	10	3	15	20	4	368	--
06:45PM	8	127	15	7	142	0	0	20	5	14	11	8	357	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			North Shore			North Shore			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

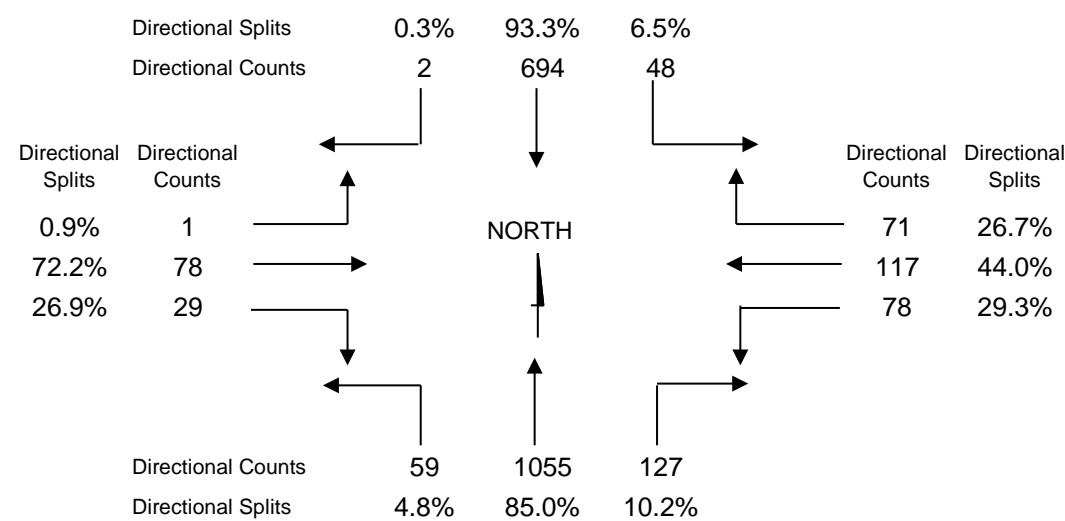
59	1055	127	48	694	2	1	78	29	78	117	71	2359
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TRUCK PERCENTAGES

0%	1%	0%	0%	1%	0%	0%	0%	4%	0%	3%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & North Shore
4:30 - 5:30 PM**



OVERALL PHF = 0.94

TRAFFIC VOLUMES

INTERSECTION: Michigan & Bartlett

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Bartlett			Bartlett				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	6	50	2	3	46	10	4	0	1	0	0	0	122	1043
06:15AM	17	69	1	3	93	13	4	0	5	0	1	0	206	1205
06:30AM	26	105	10	7	141	24	13	1	8	0	1	2	338	1375
06:45AM	28	96	9	19	158	45	10	5	4	0	1	2	377	1540
07:00AM	13	76	1	4	150	22	12	1	5	0	0	0	284	1762
07:15AM	15	105	1	11	182	30	18	1	12	0	0	1	376	1890
07:30AM	24	124	4	8	246	36	25	2	29	2	1	2	503	1941
07:45AM	52	149	4	12	283	41	25	8	21	1	0	3	599	1812
08:00AM	23	116	2	8	190	36	19	4	10	2	0	2	412	1668
08:15AM	18	116	6	9	213	37	13	2	10	2	0	1	427	1624
08:30AM	27	118	1	4	166	25	19	3	9	0	2	0	374	1559
08:45AM	27	129	2	2	226	33	11	2	17	3	1	2	455	1555
09:00AM	26	113	8	3	125	43	19	4	22	4	0	1	368	1492
09:15AM	22	140	4	5	126	23	22	1	9	4	3	3	362	--
09:30AM	20	141	5	2	133	25	25	4	11	1	2	1	370	--
09:45AM	25	137	1	2	140	27	27	3	22	5	1	2	392	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Bartlett			Bartlett			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

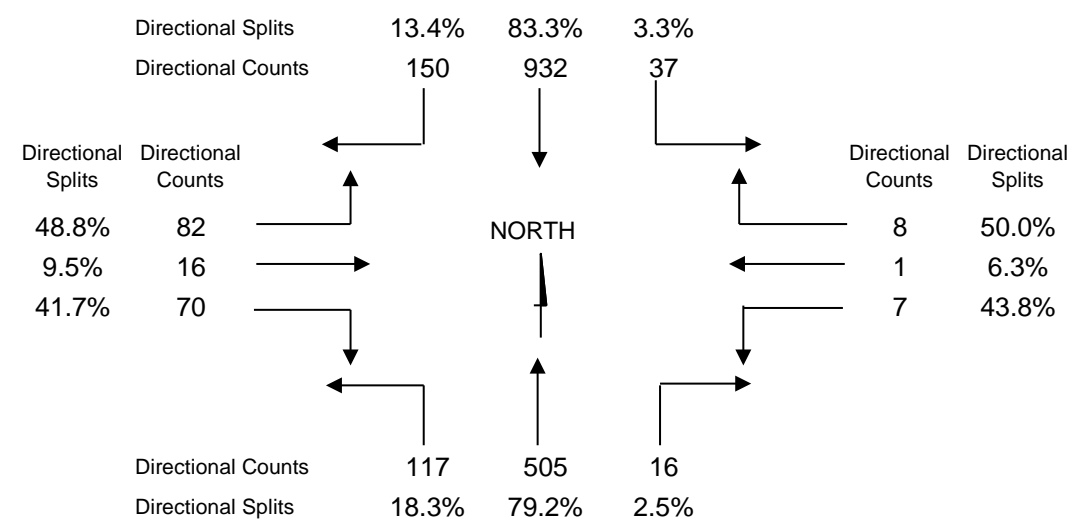
117	505	16	37	932	150	82	16	70	7	1	8	1941
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TRUCK PERCENTAGES

0%	3%	0%	0%	2%	2%	3%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Bartlett
7:30 - 8:30 AM**



OVERALL PHF = 0.81



TRAFFIC VOLUMES

INTERSECTION: Michigan & Bartlett

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Bartlett			Bartlett				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↑	↷	↶	↓	↷	↶	→	↷	↶	←	↷		
03:00PM	22	177	3	3	162	17	29	2	32	8	2	9	466	1981
03:15PM	25	182	5	3	145	16	44	2	28	7	0	13	470	2012
03:30PM	21	205	4	9	230	17	49	1	27	5	4	11	583	2005
03:45PM	22	171	6	2	161	18	41	3	17	6	2	13	462	1993
04:00PM	18	219	5	4	161	16	40	1	20	4	1	8	497	2060
04:15PM	15	214	3	0	132	5	43	2	30	5	6	8	463	2187
04:30PM	17	261	0	5	163	19	56	1	24	8	5	12	571	2236
04:45PM	21	234	2	2	177	13	44	3	24	0	2	7	529	2154
05:00PM	15	306	1	1	181	16	47	1	33	4	7	12	624	2043
05:15PM	15	237	0	0	180	13	29	2	24	2	2	8	512	1788
05:30PM	17	226	1	3	171	10	28	1	19	0	4	9	489	1667
05:45PM	12	167	0	3	160	18	32	2	16	3	0	5	418	1533
06:00PM	21	172	0	1	119	13	21	0	16	0	0	6	369	1444
06:15PM	18	131	2	2	170	23	28	1	10	3	0	3	391	--
06:30PM	24	143	0	1	133	15	20	0	13	1	0	5	355	--
06:45PM	18	116	0	0	135	16	27	0	14	1	0	2	329	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Bartlett			Bartlett			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

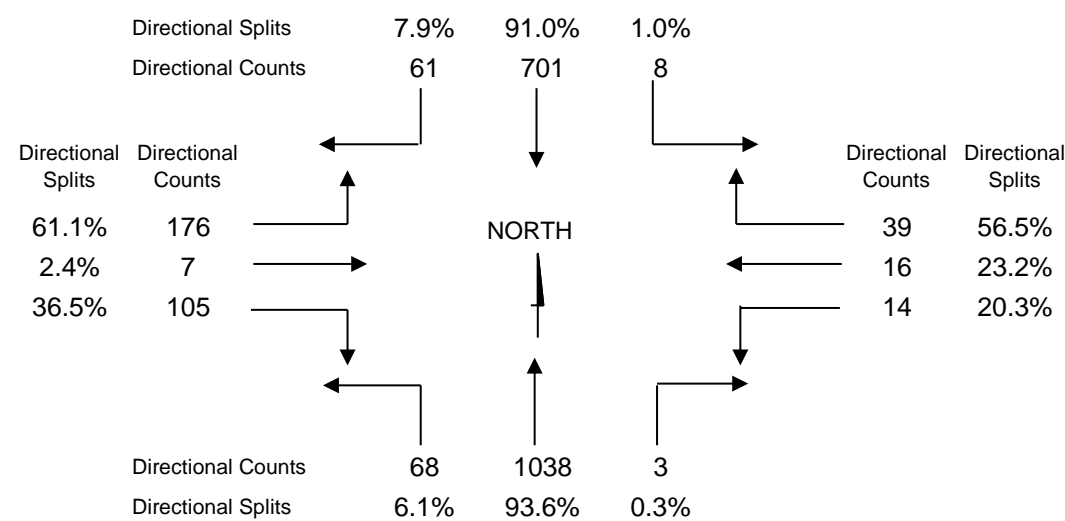
68	1038	3	8	701	61	176	7	105	14	16	39	2236
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TRUCK PERCENTAGES

2%	1%	0%	0%	2%	0%	1%	0%	1%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Bartlett
4:30 - 5:30 PM**



OVERALL PHF = 0.90



TRAFFIC VOLUMES

INTERSECTION: Michigan & Navarre

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Navarre			Navarre				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↘	↙	→	↖	↗	←	↖		
06:00AM	2	55	7	1	47	0	1	0	1	1	0	0	115	960
06:15AM	5	83	13	7	74	6	1	0	2	0	0	1	192	1098
06:30AM	6	137	22	8	144	8	2	0	3	2	0	3	335	1271
06:45AM	14	127	12	12	142	9	1	0	0	1	0	0	318	1404
07:00AM	3	84	11	4	141	6	1	0	0	0	0	3	253	1670
07:15AM	26	117	13	7	182	10	1	0	0	5	0	4	365	1799
07:30AM	19	153	17	3	244	19	1	0	3	7	1	1	468	1828
07:45AM	33	204	21	6	290	20	4	0	1	5	0	0	584	1715
08:00AM	24	135	9	4	181	15	2	0	1	9	0	2	382	1574
08:15AM	16	135	10	7	204	9	2	0	4	6	0	1	394	1525
08:30AM	13	140	12	3	168	6	4	0	4	2	0	3	355	1452
08:45AM	13	155	6	5	228	14	2	1	4	13	0	2	443	1444
09:00AM	12	142	6	4	143	7	7	0	4	4	2	2	333	1385
09:15AM	8	148	5	2	131	5	5	0	8	6	0	3	321	--
09:30AM	9	163	5	3	142	8	3	1	6	2	1	4	347	--
09:45AM	15	162	10	0	166	4	7	0	10	7	0	3	384	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Navarre			Navarre			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

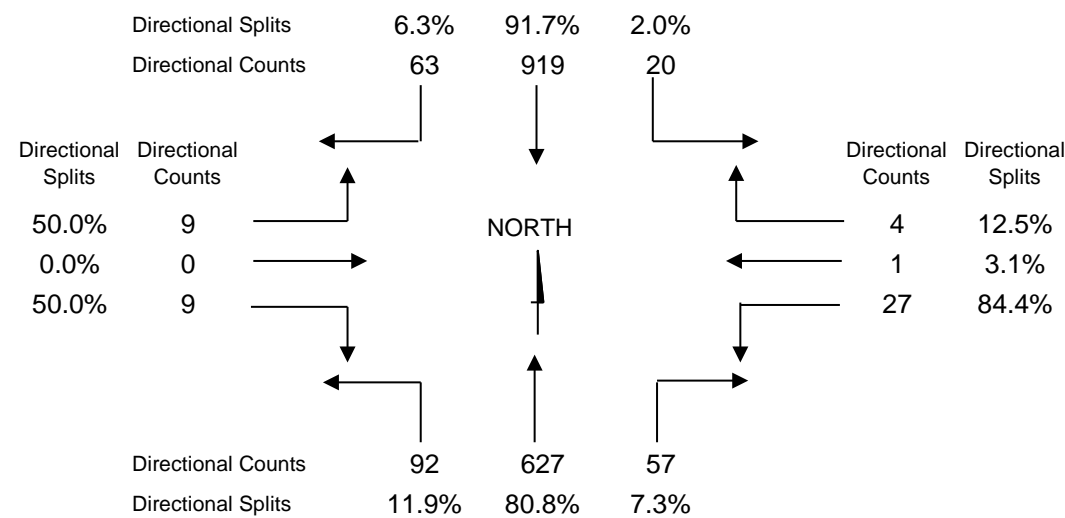
92	627	57	20	919	63	9	0	9	27	1	4	1828
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TRUCK PERCENTAGES

0%	3%	0%	0%	2%	2%	0%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Navarre
7:30 - 8:30 AM**



OVERALL PHF = 0.78

TRAFFIC VOLUMES

INTERSECTION: Michigan & Navarre

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Navarre			Navarre				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↙	↘	→	↖	↗	←	↖		
03:00PM	8	193	2	0	197	5	10	1	7	17	0	6	446	1822
03:15PM	3	200	4	2	166	6	6	2	6	11	0	0	406	1838
03:30PM	8	234	3	2	257	6	8	0	10	25	0	4	557	1852
03:45PM	6	191	3	0	179	6	9	0	6	11	0	2	413	1807
04:00PM	4	227	5	4	174	3	9	0	12	21	0	3	462	1897
04:15PM	4	208	7	1	167	1	8	1	7	12	0	4	420	1996
04:30PM	2	266	1	1	196	1	8	1	11	19	0	6	512	2062
04:45PM	0	252	0	4	199	0	11	0	6	25	0	6	503	2014
05:00PM	1	288	3	3	205	3	9	0	4	41	0	4	561	1895
05:15PM	1	246	0	6	202	4	7	0	1	14	1	4	486	1670
05:30PM	5	236	5	5	185	0	3	0	3	17	0	5	464	1518
05:45PM	2	177	3	0	179	1	5	0	1	11	0	5	384	1372
06:00PM	1	184	1	0	136	1	2	0	1	8	0	2	336	1289
06:15PM	0	143	1	1	180	0	3	0	2	3	0	1	334	--
06:30PM	0	162	2	0	149	1	2	0	1	1	0	0	318	--
06:45PM	2	142	2	0	148	0	1	0	3	3	0	0	301	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Navarre			Navarre			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

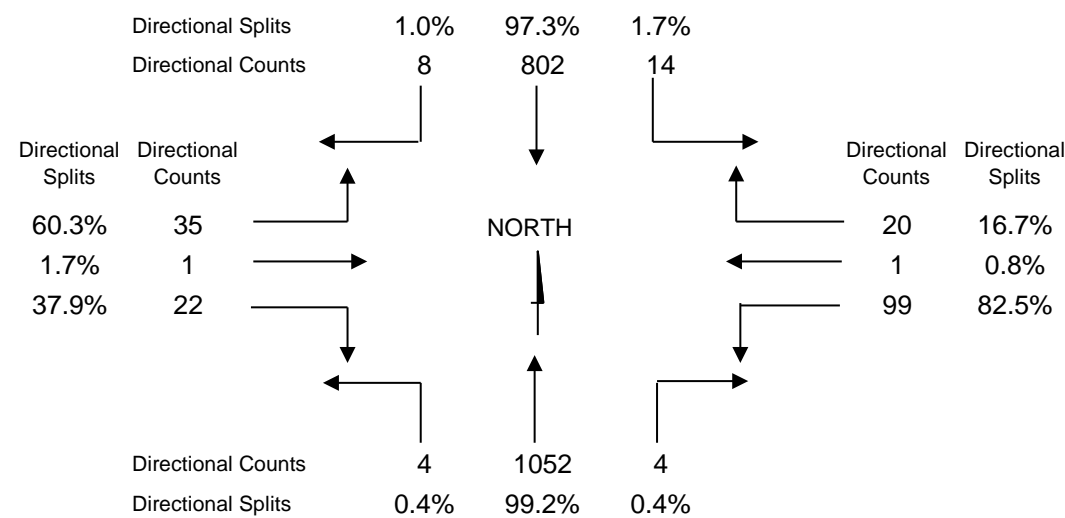
4	1052	4	14	802	8	35	1	22	99	1	20	2062
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TRUCK PERCENTAGES

0%	1%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Navarre
4:30 - 5:30 PM**



OVERALL PHF = 0.92



TRAFFIC VOLUMES

INTERSECTION: **Michigan & Marion**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Marion			Marion				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↑	↷	↶	↓	↷	↶	→	↷	↶	←	↷		
06:00AM	0	73	3	0	0	0	0	0	0	0	0	0	76	552
06:15AM	0	118	6	0	0	0	0	0	0	0	0	1	125	589
06:30AM	0	178	12	1	0	0	0	0	0	0	0	1	192	626
06:45AM	0	147	10	1	0	0	0	0	0	0	0	1	159	643
07:00AM	0	104	7	0	0	0	0	0	0	0	0	2	113	767
07:15AM	0	154	5	3	0	0	0	0	0	0	0	0	162	842
07:30AM	0	193	12	4	0	0	0	0	0	0	0	0	209	849
07:45AM	0	271	11	0	0	0	0	0	0	0	0	1	283	838
08:00AM	0	175	10	0	0	0	0	0	0	0	0	3	188	728
08:15AM	0	158	9	0	0	0	0	0	0	0	0	2	169	703
08:30AM	0	191	6	0	0	0	0	0	0	0	0	1	198	698
08:45AM	0	166	6	1	0	0	0	0	0	0	0	0	173	659
09:00AM	0	157	5	1	0	0	0	0	0	0	0	0	163	642
09:15AM	0	156	6	1	0	0	0	0	0	0	0	1	164	--
09:30AM	0	152	5	1	0	0	0	0	0	0	0	1	159	--
09:45AM	0	147	6	2	0	0	0	0	0	0	0	1	156	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Marion			Marion			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

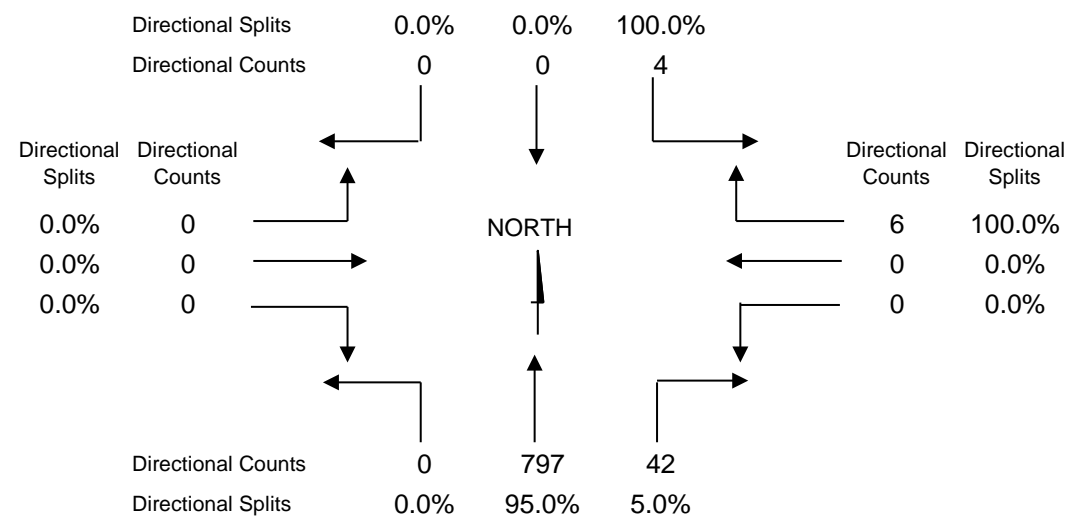
0	797	42	4	0	0	0	0	0	0	0	6	849
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TRUCK PERCENTAGES

0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Marion
7:30 - 8:30 AM**



OVERALL PHF = 0.75



TRAFFIC VOLUMES

INTERSECTION: **Michigan & Marion**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Marion			Marion				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↑	↷	↵	↓	↶	↷	→	↶	↷	↶	↷		
03:00PM	0	201	5	1	0	0	0	0	0	0	0	3	210	844
03:15PM	0	203	6	0	0	0	0	0	0	0	0	1	210	899
03:30PM	0	199	5	0	0	0	0	0	0	0	0	2	206	904
03:45PM	0	209	7	1	0	0	0	0	0	0	0	1	218	956
04:00PM	0	254	9	1	0	0	0	0	0	0	0	1	265	972
04:15PM	0	206	8	1	0	0	0	0	0	0	0	0	215	1017
04:30PM	0	244	11	0	0	0	0	0	0	0	0	3	258	1053
04:45PM	0	220	11	1	0	0	0	0	0	0	0	2	234	1013
05:00PM	0	293	12	1	0	0	0	0	0	0	0	4	310	966
05:15PM	0	237	12	0	0	0	0	0	0	0	0	2	251	817
05:30PM	0	205	8	1	0	0	0	0	0	0	0	4	218	703
05:45PM	0	176	5	2	0	0	0	0	0	0	0	4	187	639
06:00PM	0	157	2	0	0	0	0	0	0	0	0	2	161	591
06:15PM	0	136	1	0	0	0	0	0	0	0	0	0	137	--
06:30PM	0	149	4	0	0	0	0	0	0	0	0	1	154	--
06:45PM	0	131	5	2	0	0	0	0	0	0	0	1	139	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Marion			Marion			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

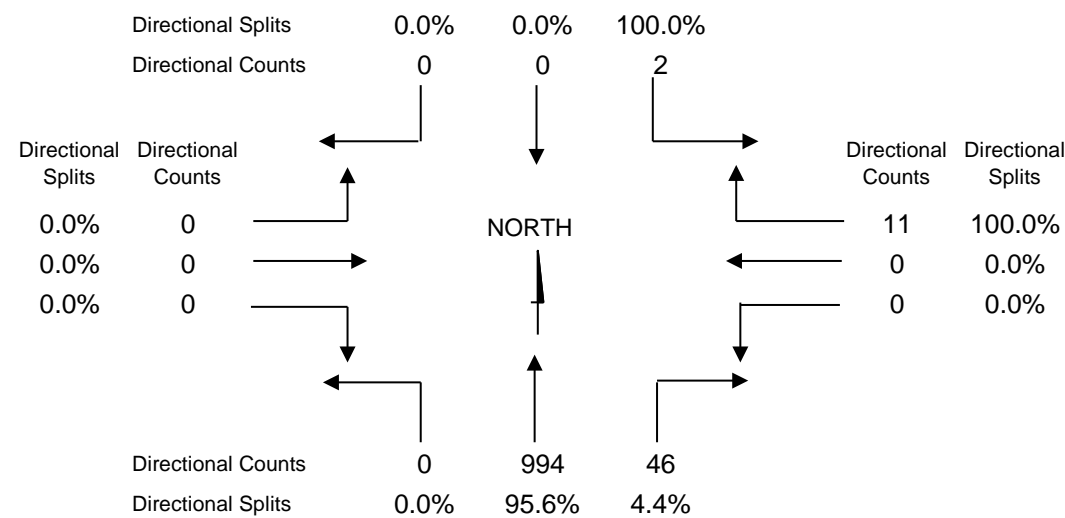
0	994	46	2	0	0	0	0	0	0	0	11	1053
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TRUCK PERCENTAGES

0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Marion
4:30 - 5:30 PM**



OVERALL PHF = 0.85



TRAFFIC VOLUMES

INTERSECTION: Michigan & La Salle

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			La Salle			La Salle				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↙	↓	↘	↖	→	↗	↖	←	↘		
06:00AM	22	56	6	0	0	0	12	41	0	0	38	9	184	1192
06:15AM	23	97	15	0	0	0	13	42	0	0	37	18	245	1298
06:30AM	37	166	14	0	0	0	18	54	0	0	64	36	389	1427
06:45AM	44	142	13	0	0	0	15	51	0	0	70	39	374	1576
07:00AM	25	89	14	0	0	0	13	65	0	0	64	20	290	1807
07:15AM	38	142	12	0	0	0	18	65	0	0	73	26	374	1975
07:30AM	53	178	30	0	0	0	18	117	0	0	105	37	538	2022
07:45AM	46	221	17	0	0	0	27	126	0	0	122	46	605	1990
08:00AM	37	159	18	0	0	0	25	97	0	0	90	32	458	1858
08:15AM	27	147	26	0	0	0	18	92	0	0	75	36	421	1821
08:30AM	47	168	31	0	0	0	21	110	0	0	89	40	506	1843
08:45AM	46	161	25	0	0	0	17	99	0	0	94	31	473	1775
09:00AM	34	134	22	0	0	0	24	81	0	0	92	34	421	1774
09:15AM	33	137	34	0	0	0	24	89	0	0	97	29	443	--
09:30AM	49	169	26	0	0	0	21	73	0	0	78	22	438	--
09:45AM	47	137	28	0	0	0	25	112	0	0	88	35	472	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			La Salle			La Salle			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

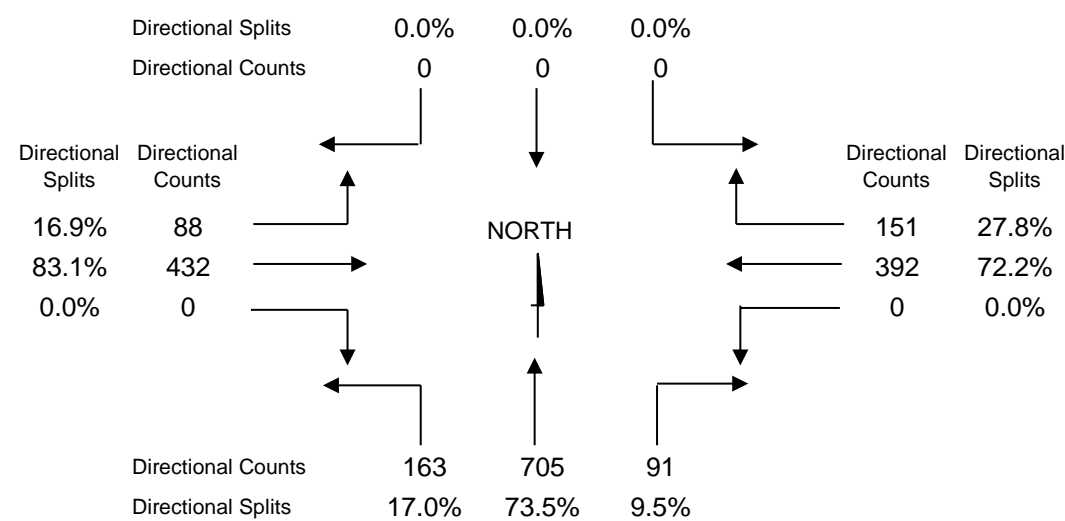
163	705	91	0	0	0	88	432	0	0	392	151	2022
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TRUCK PERCENTAGES

1%	3%	6%	0%	0%	0%	3%	1%	0%	0%	2%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & La Salle
7:30 - 8:30 AM**



OVERALL PHF = 0.84



TRAFFIC VOLUMES

INTERSECTION: Michigan & La Salle

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			La Salle			La Salle				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	49	185	37	0	0	0	24	121	0	0	156	35	607	2460
03:15PM	57	176	28	0	0	0	28	122	0	0	134	34	579	2500
03:30PM	56	230	32	0	0	0	28	125	0	0	123	31	625	2511
03:45PM	66	204	26	0	0	0	18	165	0	0	144	26	649	2568
04:00PM	60	209	34	0	0	0	20	152	0	0	150	22	647	2536
04:15PM	62	177	34	0	0	0	26	130	0	0	133	28	590	2725
04:30PM	77	250	44	0	0	0	24	135	0	0	129	23	682	2851
04:45PM	65	208	35	0	0	0	25	134	0	0	128	22	617	2797
05:00PM	74	354	46	0	0	0	27	143	0	0	167	25	836	2696
05:15PM	82	262	48	0	0	0	14	132	0	0	157	21	716	2363
05:30PM	62	244	26	0	0	0	26	118	0	0	127	25	628	2092
05:45PM	52	179	22	0	0	0	15	91	0	0	136	21	516	1923
06:00PM	55	159	27	0	0	0	25	107	0	0	115	15	503	1794
06:15PM	54	133	20	0	0	0	22	93	0	0	113	10	445	--
06:30PM	50	170	22	0	0	0	12	85	0	0	105	15	459	--
06:45PM	41	122	17	0	0	0	16	66	0	0	103	22	387	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			La Salle			La Salle			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

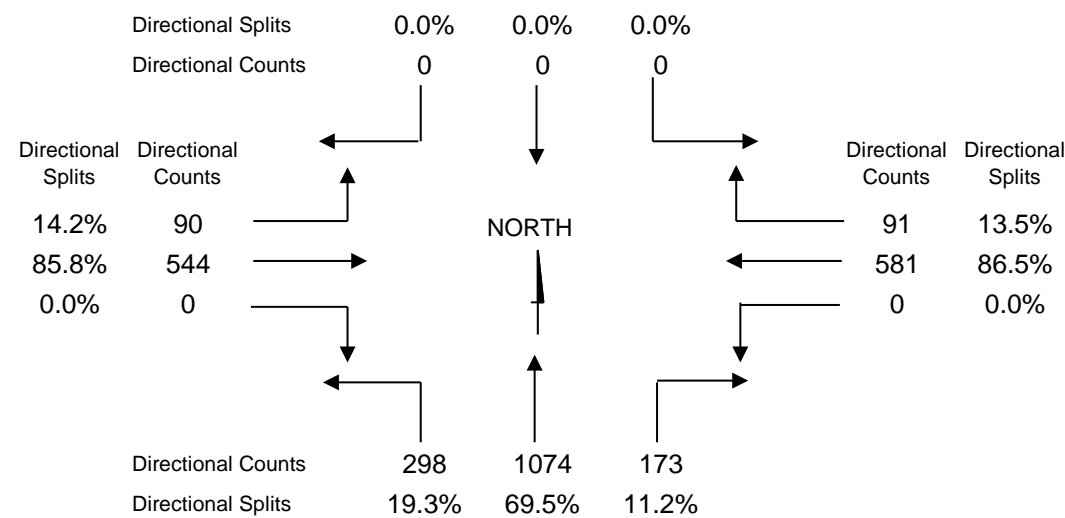
298	1074	173	0	0	0	90	544	0	0	581	91	2851
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TRUCK PERCENTAGES

1%	2%	1%	0%	0%	0%	1%	0%	0%	0%	2%	2%
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YEAR 2014 PEAK HOUR TRAFFIC

Michigan & La Salle
4:30 - 5:30 PM



OVERALL PHF = 0.85

TRAFFIC VOLUMES

INTERSECTION: Michigan & Colfax

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Colfax			Colfax				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↘	↙	→	↖	↗	←	↘		
06:00AM	1	0	2	0	0	0	0	8	1	0	9	0	21	160
06:15AM	0	0	1	1	1	0	0	9	2	2	14	0	30	226
06:30AM	1	0	5	0	0	0	0	12	3	7	18	0	46	306
06:45AM	0	0	2	0	0	0	0	19	5	9	28	0	63	449
07:00AM	3	0	1	0	0	0	0	25	8	17	33	0	87	645
07:15AM	1	0	3	0	0	0	0	30	11	28	37	0	110	748
07:30AM	5	0	5	0	0	0	0	50	15	36	78	0	189	791
07:45AM	6	0	4	0	0	1	0	47	33	58	110	0	259	732
08:00AM	4	0	4	2	0	0	0	34	11	47	88	0	190	625
08:15AM	4	0	8	0	0	0	0	36	12	38	55	0	153	548
08:30AM	5	0	5	0	0	0	0	37	7	24	52	0	130	508
08:45AM	6	0	5	1	0	0	0	35	9	32	64	0	152	470
09:00AM	8	0	11	1	0	1	0	27	6	18	41	0	113	438
09:15AM	6	0	5	1	0	1	0	29	4	20	47	0	113	--
09:30AM	3	0	14	0	0	0	0	17	1	10	47	0	92	--
09:45AM	9	0	12	0	0	0	0	33	10	19	37	0	120	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Colfax			Colfax			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

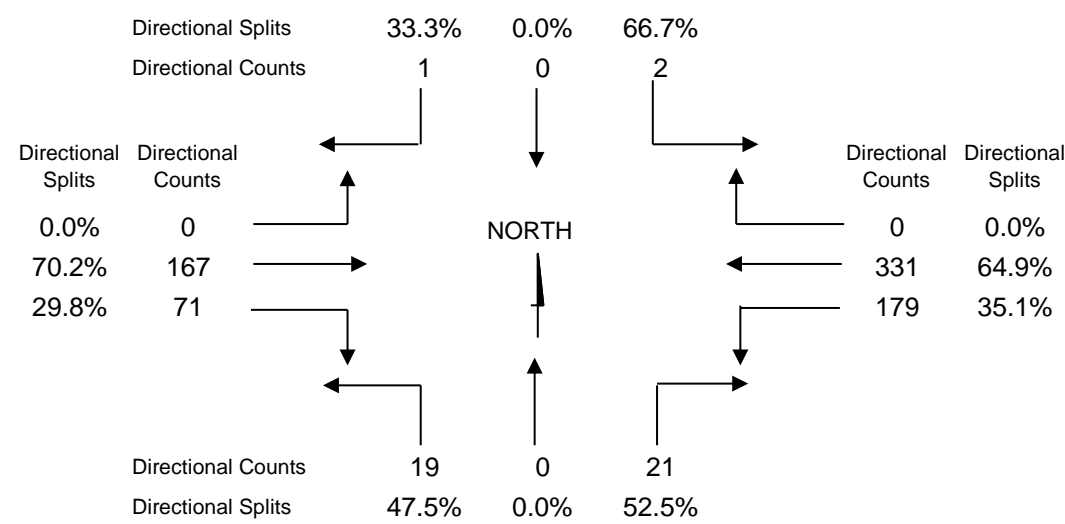
19	0	21	2	0	1	0	167	71	179	331	0	791
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TRUCK PERCENTAGES

0%	0%	10%	0%	0%	0%	0%	4%	0%	1%	4%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Colfax
7:30 - 8:30 AM**



OVERALL PHF = 0.76



TRAFFIC VOLUMES

INTERSECTION: Michigan & Colfax

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Colfax			Colfax				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↘	↙	→	↖	↗	←	↖		
03:00PM	9	0	17	1	0	1	0	44	2	6	61	0	141	583
03:15PM	9	0	12	0	0	0	0	44	2	13	52	0	132	587
03:30PM	10	0	16	0	0	1	0	52	2	21	61	0	163	599
03:45PM	10	0	17	0	0	1	0	40	11	16	52	0	147	629
04:00PM	10	0	26	2	0	0	0	36	4	7	60	0	145	635
04:15PM	6	0	13	1	0	0	0	47	5	11	61	0	144	741
04:30PM	11	0	24	0	0	1	0	75	2	17	63	0	193	772
04:45PM	10	0	25	0	0	0	0	50	1	10	57	0	153	724
05:00PM	24	0	54	3	0	1	0	55	3	18	93	0	251	702
05:15PM	6	0	38	0	0	1	0	41	8	15	66	0	175	556
05:30PM	7	0	12	0	0	0	0	50	8	12	56	0	145	497
05:45PM	11	0	13	0	0	0	0	31	7	17	52	0	131	458
06:00PM	2	0	14	1	0	1	0	26	6	16	39	0	105	428
06:15PM	12	0	8	0	0	0	0	32	5	12	47	0	116	--
06:30PM	9	0	10	0	1	1	0	21	2	10	52	0	106	--
06:45PM	9	0	13	0	2	2	0	24	1	8	42	0	101	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Colfax			Colfax			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

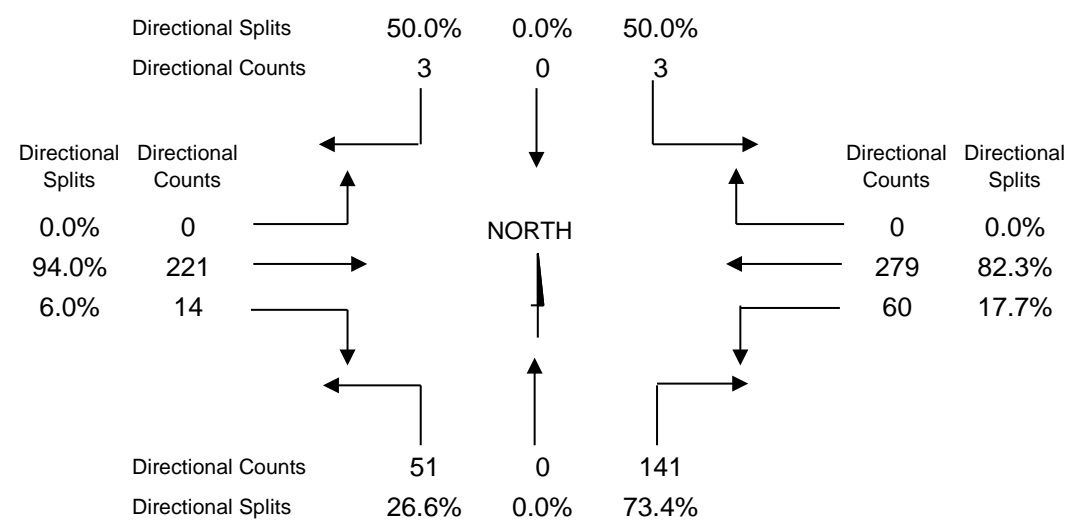
51	0	141	3	0	3	0	221	14	60	279	0	772
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TRUCK PERCENTAGES

2%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Colfax
4:30 - 5:30 PM**



OVERALL PHF = 0.77



TRAFFIC VOLUMES

INTERSECTION: Michigan & Washington

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Washington			Washington				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↙	↘	→	↖	↗	←	↖		
06:00AM	0	2	0	0	0	0	0	1	1	0	1	0	5	72
06:15AM	1	1	1	0	1	0	0	3	3	0	5	0	15	108
06:30AM	0	4	2	2	2	1	1	2	2	1	6	1	24	149
06:45AM	2	0	0	0	9	0	1	3	7	0	5	1	28	219
07:00AM	0	2	1	1	11	8	1	5	4	0	6	2	41	309
07:15AM	1	2	2	2	13	2	3	7	8	2	11	3	56	363
07:30AM	3	5	3	5	18	7	2	17	10	0	19	5	94	376
07:45AM	3	4	2	8	27	6	7	15	17	4	22	3	118	357
08:00AM	5	5	3	2	25	5	3	14	13	1	16	3	95	324
08:15AM	0	8	3	0	16	6	6	12	8	3	7	0	69	327
08:30AM	6	6	3	2	14	5	5	5	9	0	18	2	75	336
08:45AM	5	7	4	0	18	4	4	7	16	1	17	2	85	351
09:00AM	5	10	5	4	14	2	13	11	9	3	21	1	98	357
09:15AM	11	6	1	1	15	1	4	15	9	3	10	2	78	--
09:30AM	5	14	4	1	8	6	5	14	8	2	20	3	90	--
09:45AM	3	17	1	5	15	5	4	13	10	1	16	1	91	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Washington			Washington			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

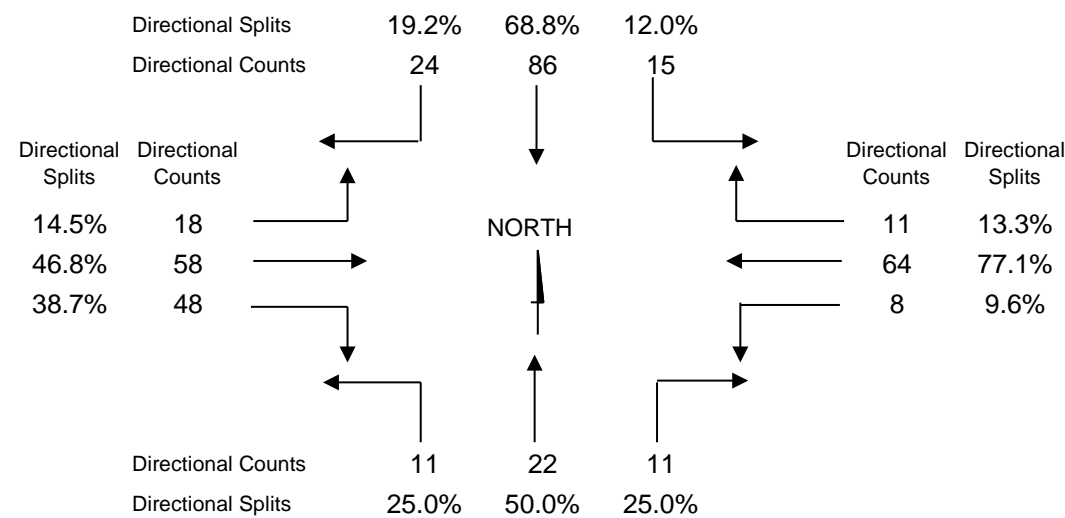
11	22	11	15	86	24	18	58	48	8	64	11	376
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TRUCK PERCENTAGES

0%	5%	0%	0%	1%	4%	6%	2%	0%	0%	2%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Washington
7:30 - 8:30 AM**



OVERALL PHF = 0.80



TRAFFIC VOLUMES

INTERSECTION: Michigan & Washington

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Washington			Washington				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↙	↓	↘	↖	→	↗	↖	←	↘		
03:00PM	10	8	4	0	4	5	10	28	11	0	20	3	103	425
03:15PM	8	11	4	2	10	4	7	20	10	1	22	3	102	440
03:30PM	4	14	3	1	10	6	9	17	8	3	17	2	94	440
03:45PM	12	9	3	2	20	5	8	23	16	5	21	2	126	491
04:00PM	6	26	11	2	11	12	6	19	10	0	12	3	118	481
04:15PM	6	8	6	1	11	5	5	33	10	0	13	4	102	543
04:30PM	8	12	9	2	15	18	15	37	6	1	17	5	145	582
04:45PM	10	17	4	3	7	4	13	27	15	0	14	2	116	525
05:00PM	8	21	15	7	12	21	15	47	8	3	20	3	180	512
05:15PM	11	15	7	1	15	14	10	38	11	2	16	1	141	418
05:30PM	4	6	6	2	8	7	7	28	5	3	10	2	88	351
05:45PM	4	9	3	0	21	4	8	28	8	0	15	3	103	350
06:00PM	10	12	3	5	15	3	3	19	2	0	12	2	86	316
06:15PM	5	10	2	3	11	4	6	13	8	0	11	1	74	--
06:30PM	3	11	7	5	6	3	5	19	12	1	13	2	87	--
06:45PM	6	13	3	0	10	2	4	12	11	1	4	3	69	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Washington			Washington			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

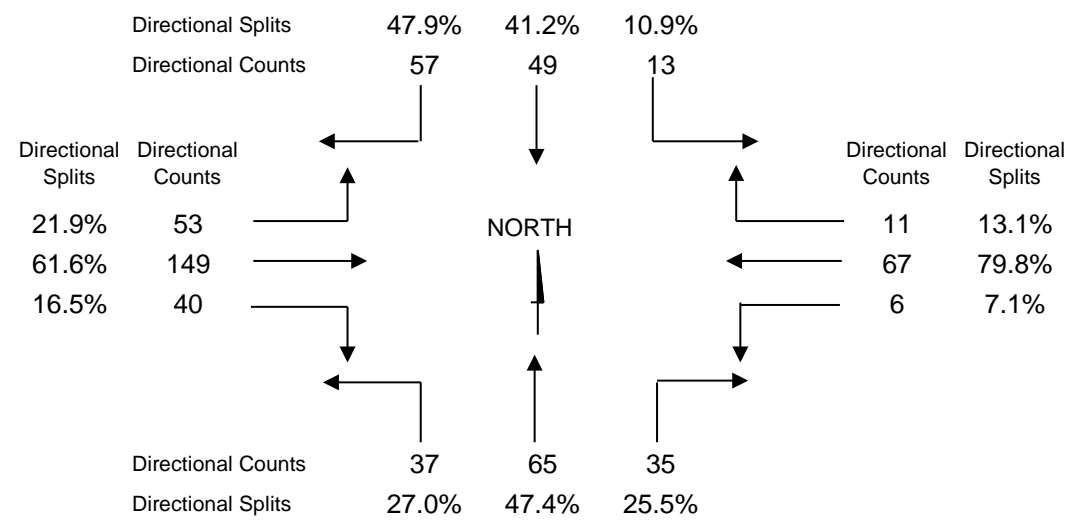
37	65	35	13	49	57	53	149	40	6	67	11	582
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TRUCK PERCENTAGES

6%	0%	0%	0%	0%	2%	2%	2%	3%	0%	3%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Washington
4:30 - 5:30 PM**



OVERALL PHF = 0.81



TRAFFIC VOLUMES

INTERSECTION: Michigan & Jefferson

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Jefferson			Jefferson				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↶	↷	↓	↵	↷	→	↶	↶	←	↷		
06:00AM	1	1	0	0	1	0	0	4	1	0	1	2	11	100
06:15AM	1	2	0	0	0	2	0	3	1	0	3	0	12	133
06:30AM	0	4	0	0	0	3	4	6	3	0	7	0	27	175
06:45AM	7	7	0	1	3	6	4	10	1	1	7	3	50	228
07:00AM	3	5	2	0	2	7	2	5	4	1	12	1	44	300
07:15AM	3	4	1	3	4	7	4	11	2	0	14	1	54	359
07:30AM	9	7	2	2	5	12	4	13	3	0	18	5	80	401
07:45AM	14	13	3	6	6	15	3	22	4	1	26	9	122	393
08:00AM	8	11	1	4	8	14	5	16	5	1	24	6	103	381
08:15AM	11	9	1	4	6	9	5	20	5	0	19	7	96	371
08:30AM	5	5	2	2	6	11	5	12	1	1	20	2	72	359
08:45AM	7	14	2	0	7	8	9	23	7	4	22	7	110	355
09:00AM	5	10	1	1	10	6	2	31	6	2	13	6	93	330
09:15AM	5	14	5	7	9	8	2	14	2	1	13	4	84	--
09:30AM	4	6	1	0	8	5	11	15	3	2	8	5	68	--
09:45AM	3	13	2	7	10	5	6	14	6	0	17	2	85	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Jefferson			Jefferson			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

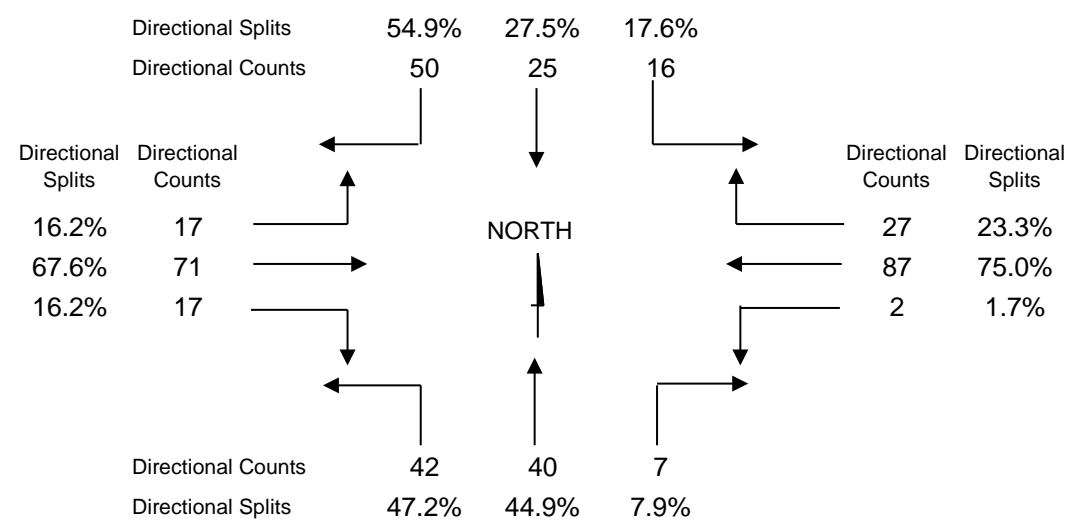
42	40	7	16	25	50	17	71	17	2	87	27	401
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TRUCK PERCENTAGES

0%	3%	0%	0%	4%	0%	6%	2%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Jefferson
7:30 - 8:30 AM**



OVERALL PHF = 0.82



TRAFFIC VOLUMES

INTERSECTION: Michigan & Jefferson

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Jefferson			Jefferson				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↱	↷	↵	↴	↶	↷	→	↶	↷	↶	↷		
03:00PM	6	6	1	4	7	7	6	32	5	1	15	5	95	395
03:15PM	2	21	1	5	9	6	5	13	5	0	15	1	83	411
03:30PM	5	13	3	2	7	12	6	20	8	1	16	1	94	441
03:45PM	3	11	3	9	18	9	12	30	6	3	13	6	123	463
04:00PM	6	11	3	4	7	4	13	33	2	4	19	5	111	459
04:15PM	11	16	2	4	10	10	5	25	6	0	19	5	113	492
04:30PM	5	15	5	5	11	8	5	34	9	2	15	2	116	513
04:45PM	6	18	6	2	13	3	3	35	7	1	23	2	119	485
05:00PM	4	14	1	2	11	15	9	45	9	3	28	3	144	473
05:15PM	4	19	4	2	24	12	7	30	11	2	17	2	134	410
05:30PM	4	12	2	2	10	5	0	26	14	1	12	0	88	342
05:45PM	2	9	3	6	18	9	4	18	7	4	22	5	107	315
06:00PM	2	9	4	2	11	8	2	12	10	2	18	1	81	267
06:15PM	2	9	3	1	6	3	2	18	2	5	14	1	66	--
06:30PM	5	12	3	3	4	8	5	11	4	0	5	1	61	--
06:45PM	2	10	3	4	11	6	2	14	3	1	3	0	59	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Jefferson			Jefferson			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

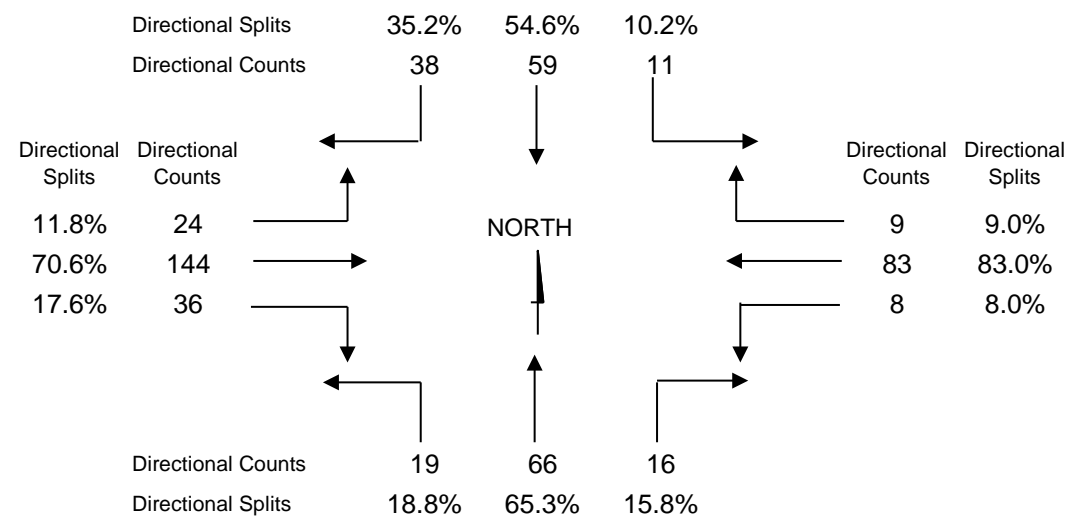
19	66	16	11	59	38	24	144	36	8	83	9	513
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TRUCK PERCENTAGES

0%	0%	0%	0%	0%	0%	4%	1%	0%	0%	1%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Jefferson
4:30 - 5:30 PM**



OVERALL PHF = 0.89



TRAFFIC VOLUMES

INTERSECTION: Michigan & Wayne

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Wayne			Wayne				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	1	2	0	1	2	1	0	3	0	1	2	2	15	109
06:15AM	0	1	1	0	0	0	0	5	0	3	7	1	18	148
06:30AM	0	4	0	3	0	0	2	5	1	3	9	0	27	205
06:45AM	0	8	0	2	3	0	1	6	1	5	21	2	49	263
07:00AM	1	4	0	4	0	2	2	12	1	3	19	6	54	326
07:15AM	2	6	1	3	1	1	2	21	5	5	26	2	75	374
07:30AM	1	7	1	4	2	1	1	23	5	6	27	7	85	397
07:45AM	0	18	1	7	3	2	3	29	3	4	35	7	112	403
08:00AM	0	15	0	4	0	4	3	27	2	2	41	4	102	392
08:15AM	1	18	0	7	4	2	1	18	3	6	33	5	98	384
08:30AM	3	8	2	3	3	4	0	16	2	6	37	7	91	368
08:45AM	1	12	1	10	4	1	1	15	6	5	36	9	101	345
09:00AM	2	12	3	7	5	4	2	16	3	2	35	3	94	320
09:15AM	4	9	0	7	4	0	5	16	3	7	19	8	82	--
09:30AM	3	8	0	2	5	6	1	9	2	6	24	2	68	--
09:45AM	0	10	1	7	1	5	2	6	2	5	31	6	76	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Wayne			Wayne			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

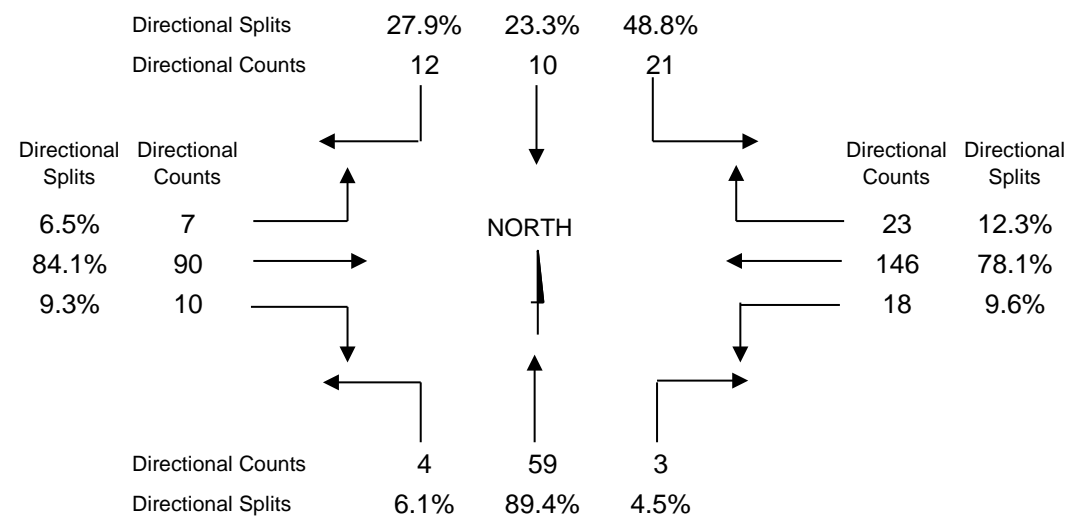
4	59	3	21	10	12	7	90	10	18	146	23	403
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TRUCK PERCENTAGES

0%	2%	0%	5%	0%	0%	0%	2%	0%	0%	2%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Michigan & Wayne
7:45 - 8:45 AM



OVERALL PHF = 0.90

TRAFFIC VOLUMES

INTERSECTION: Michigan & Wayne

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Wayne			Wayne				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	4	9	4	4	9	5	2	17	3	6	42	7	112	467
03:15PM	2	13	3	4	5	4	4	19	1	4	39	4	102	515
03:30PM	2	10	4	5	6	4	4	23	2	4	46	7	117	542
03:45PM	6	8	1	12	7	6	2	28	4	5	49	8	136	587
04:00PM	3	14	5	10	5	5	0	37	2	5	65	9	160	601
04:15PM	3	18	0	6	7	4	4	19	0	5	53	10	129	594
04:30PM	0	18	0	14	6	2	3	45	2	10	57	5	162	611
04:45PM	3	13	2	16	7	3	5	26	4	6	54	11	150	570
05:00PM	2	10	5	14	4	4	5	42	2	11	49	5	153	549
05:15PM	6	11	3	14	11	6	3	23	0	7	52	10	146	502
05:30PM	1	8	0	14	5	1	2	27	0	5	49	9	121	463
05:45PM	0	6	2	16	5	9	5	24	1	4	52	5	129	442
06:00PM	1	9	3	5	8	2	1	12	5	4	52	4	106	398
06:15PM	1	5	1	3	6	5	1	16	0	2	62	5	107	--
06:30PM	1	12	0	3	3	4	2	12	2	2	52	7	100	--
06:45PM	0	7	0	4	5	1	1	9	2	1	49	6	85	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Wayne			Wayne			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

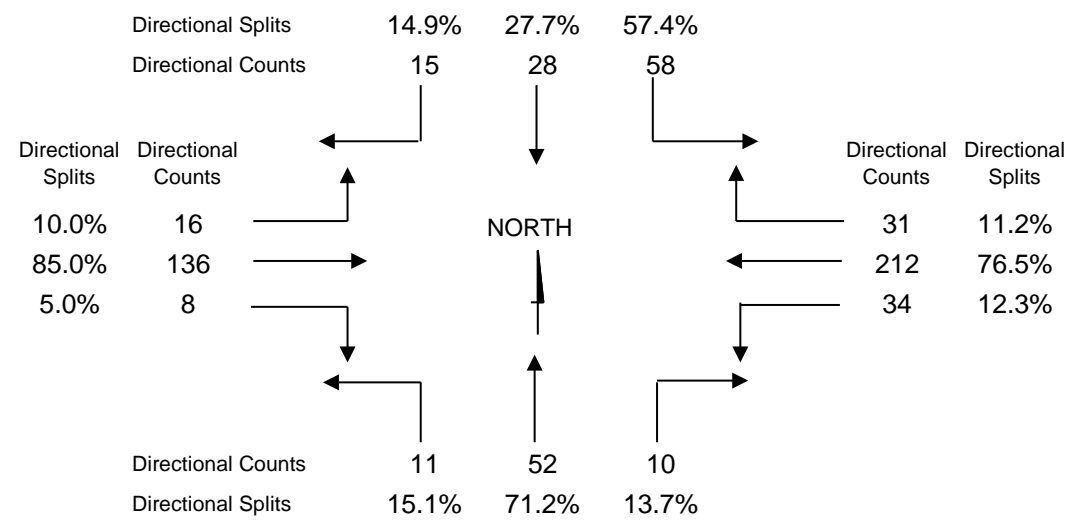
11	52	10	58	28	15	16	136	8	34	212	31	611
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TRUCK PERCENTAGES

0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	1%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Michigan & Wayne
4:30 - 5:30 PM



OVERALL PHF = 0.94

TRAFFIC VOLUMES

INTERSECTION: Michigan & Monroe

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Monroe			Monroe				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↘	↙	→	↖	↗	←	↘		
06:00AM	3	70	2	0	0	0	0	22	0	0	22	28	147	996
06:15AM	3	105	5	0	0	0	0	21	0	0	22	40	196	1114
06:30AM	9	166	4	0	0	0	0	33	0	0	50	58	320	1320
06:45AM	3	149	11	0	0	0	5	40	0	0	37	88	333	1493
07:00AM	5	125	4	0	0	0	3	50	0	0	35	43	265	1815
07:15AM	10	194	10	0	0	0	1	72	0	0	41	74	402	2000
07:30AM	8	227	6	0	0	0	6	72	0	0	58	116	493	2011
07:45AM	25	333	13	0	0	0	5	78	0	0	73	128	655	1937
08:00AM	9	238	12	0	0	0	3	64	0	0	43	81	450	1730
08:15AM	13	191	12	0	0	0	2	80	0	0	51	64	413	1626
08:30AM	12	211	10	0	0	0	1	58	0	0	55	72	419	1524
08:45AM	11	206	20	0	0	0	1	78	0	0	49	83	448	1477
09:00AM	5	162	8	0	0	0	2	70	0	0	36	63	346	1397
09:15AM	14	151	6	0	0	0	3	57	0	0	29	51	311	--
09:30AM	7	198	9	0	0	0	4	60	0	0	38	56	372	--
09:45AM	17	167	9	0	0	0	3	79	0	0	37	56	368	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Monroe			Monroe			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

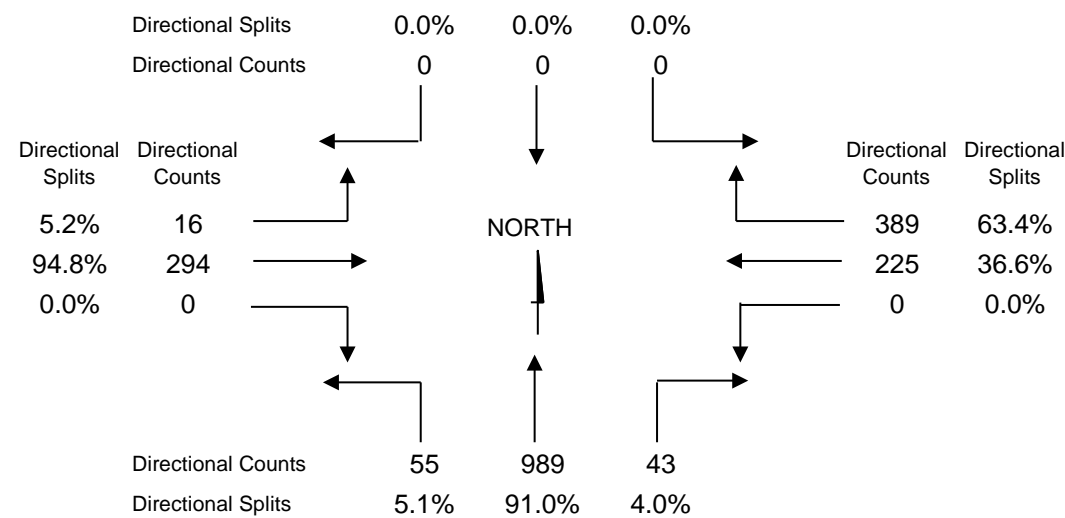
55	989	43	0	0	0	16	294	0	0	225	389	2011
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TRUCK PERCENTAGES

11%	3%	12%	0%	0%	0%	7%	4%	0%	0%	7%	1%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Monroe
7:30 - 8:30 AM**



OVERALL PHF = 0.77



TRAFFIC VOLUMES

INTERSECTION: Michigan & Monroe

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Monroe			Monroe				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	16	192	13	0	0	0	10	116	0	0	49	66	462	1920
03:15PM	17	211	11	0	0	0	4	105	0	0	57	49	454	1940
03:30PM	17	222	8	0	0	0	8	119	0	0	48	81	503	1998
03:45PM	20	242	11	0	0	0	8	104	0	0	47	69	501	2080
04:00PM	14	228	5	0	0	0	9	118	0	0	53	55	482	2083
04:15PM	13	234	15	0	0	0	7	123	0	0	64	56	512	2171
04:30PM	17	259	12	0	0	0	8	150	0	0	55	84	585	2200
04:45PM	14	210	14	0	0	0	2	129	0	0	70	65	504	2079
05:00PM	16	219	8	0	0	0	15	152	0	0	79	81	570	1960
05:15PM	16	197	11	0	0	0	7	158	0	0	74	78	541	1794
05:30PM	19	201	10	0	0	0	5	104	0	0	63	62	464	1643
05:45PM	10	159	9	0	0	0	11	82	0	0	49	65	385	1580
06:00PM	14	166	5	0	0	0	4	90	0	0	65	60	404	1541
06:15PM	18	172	10	0	0	0	9	71	0	0	62	48	390	--
06:30PM	33	174	4	0	0	0	6	68	0	0	70	46	401	--
06:45PM	19	159	3	0	0	0	3	66	0	0	58	38	346	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Monroe			Monroe			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

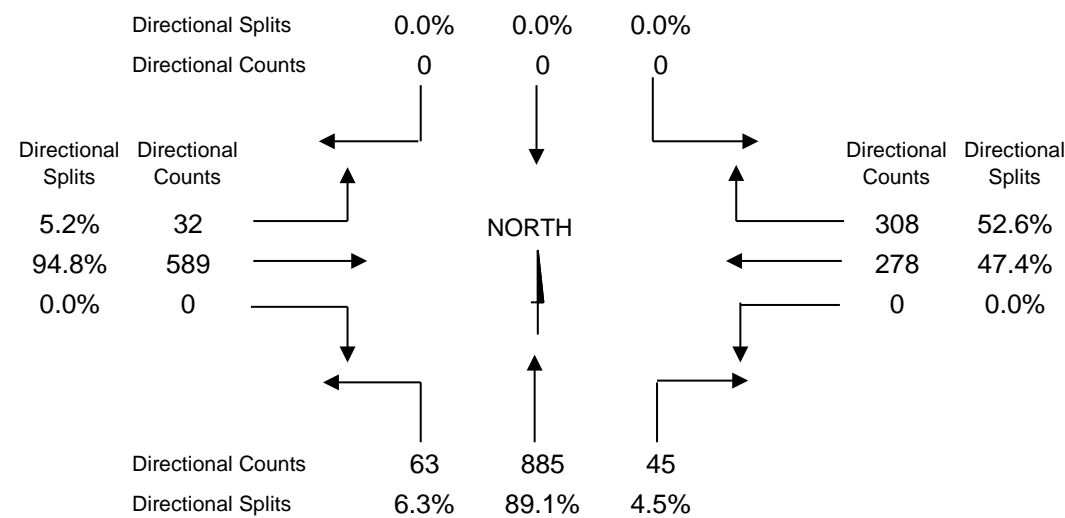
63	885	45	0	0	0	32	589	0	0	278	308	2200
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TRUCK PERCENTAGES

7%	2%	5%	0%	0%	0%	0%	1%	0%	0%	3%	2%
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YEAR 2014 PEAK HOUR TRAFFIC

Michigan & Monroe
4:30 - 5:30 PM



OVERALL PHF = 0.94

TRAFFIC VOLUMES

INTERSECTION: Michigan & South

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			South			South				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	1	72	2	0	0	0	0	2	0	0	0	1	78	554
06:15AM	2	117	1	0	0	0	0	3	0	0	2	1	126	638
06:30AM	5	174	0	0	0	0	0	5	0	0	4	3	191	740
06:45AM	3	143	2	0	0	0	1	6	0	0	3	1	159	834
07:00AM	7	143	0	0	0	0	2	4	0	0	4	2	162	1037
07:15AM	4	207	3	0	0	0	3	4	0	0	2	5	228	1167
07:30AM	10	256	2	0	0	0	1	3	0	0	10	3	285	1180
07:45AM	7	337	1	0	0	0	2	8	0	0	6	1	362	1161
08:00AM	4	265	4	0	0	0	0	11	0	0	4	4	292	1050
08:15AM	5	216	4	0	0	0	2	9	0	0	2	3	241	969
08:30AM	11	220	2	0	0	0	4	12	0	0	8	9	266	935
08:45AM	6	216	4	0	0	0	3	11	0	0	9	2	251	910
09:00AM	6	176	8	0	0	0	2	10	0	0	6	3	211	885
09:15AM	11	163	2	0	0	0	5	10	0	0	8	8	207	--
09:30AM	10	196	4	0	0	0	5	10	0	0	12	4	241	--
09:45AM	11	166	5	0	0	0	4	18	0	0	10	12	226	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			South			South			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

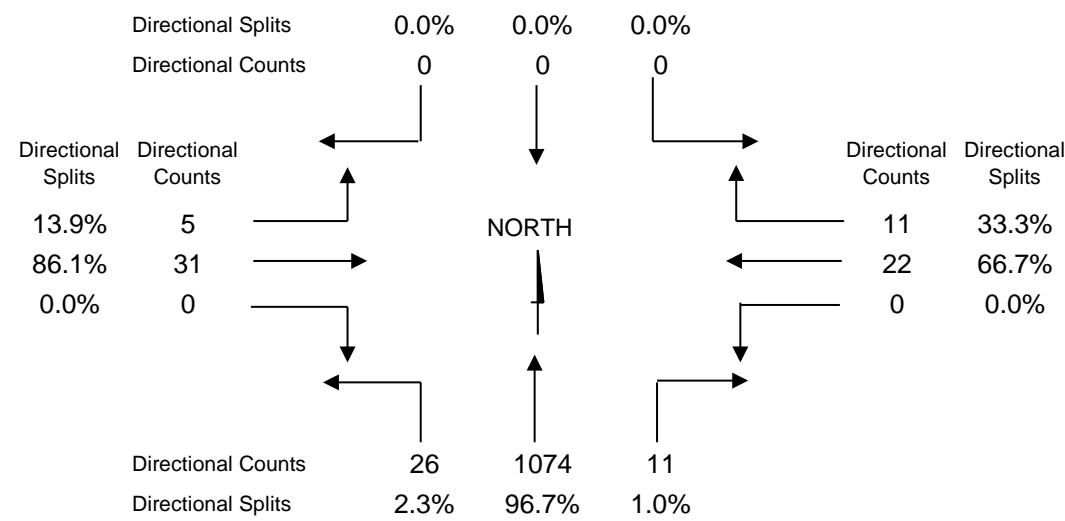
26	1074	11	0	0	0	5	31	0	0	22	11	1180
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TRUCK PERCENTAGES

35%	4%	18%	0%	0%	0%	40%	0%	0%	0%	9%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Michigan & South
7:30 - 8:30 AM



OVERALL PHF = 0.81

TRAFFIC VOLUMES

INTERSECTION: Michigan & South

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			South			South				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↙	↘	→	↖	↗	←	↖		
03:00PM	16	224	3	0	0	0	4	12	0	0	9	5	273	1150
03:15PM	11	218	6	0	0	0	6	14	0	0	10	11	276	1172
03:30PM	14	233	13	0	0	0	5	10	0	0	11	10	296	1200
03:45PM	12	242	5	0	0	0	11	18	0	0	7	10	305	1256
04:00PM	8	241	5	0	0	0	5	15	0	0	13	8	295	1215
04:15PM	15	247	3	0	0	0	10	11	0	0	8	10	304	1211
04:30PM	19	274	7	0	0	0	9	21	0	0	11	11	352	1192
04:45PM	14	209	3	0	0	0	3	19	0	0	9	7	264	1110
05:00PM	16	235	4	0	0	0	7	12	0	0	8	9	291	1057
05:15PM	18	218	5	0	0	0	4	17	0	0	11	12	285	1041
05:30PM	14	210	7	0	0	0	7	11	0	0	12	9	270	1031
05:45PM	21	152	3	0	0	0	6	14	0	0	8	7	211	1038
06:00PM	47	187	3	0	0	0	10	11	0	0	9	8	275	1054
06:15PM	50	184	7	0	0	0	8	8	0	0	7	11	275	--
06:30PM	57	184	0	0	0	0	14	6	0	0	5	11	277	--
06:45PM	35	157	2	0	0	0	7	12	0	0	7	7	227	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			South			South			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

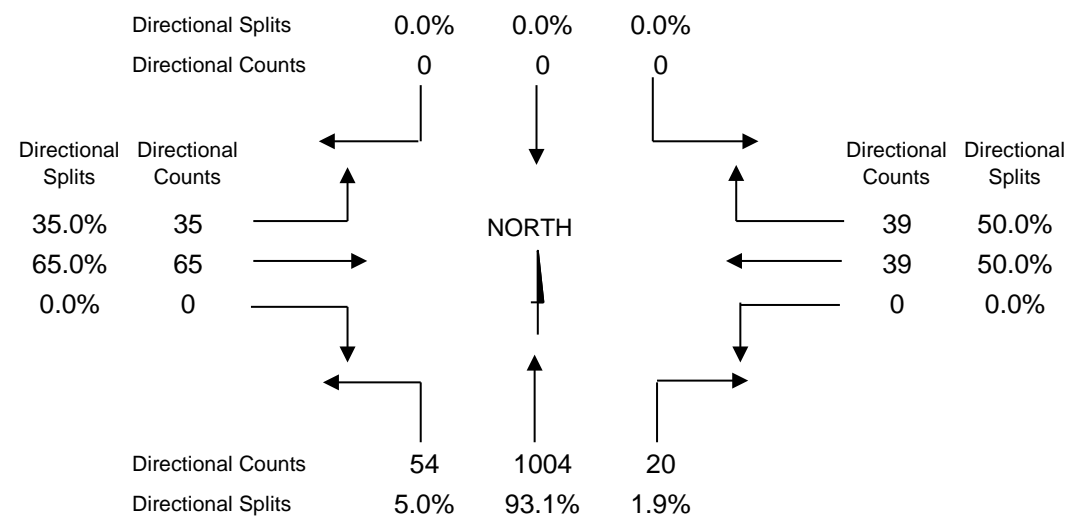
54	1004	20	0	0	0	35	65	0	0	39	39	1256
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TRUCK PERCENTAGES

26%	3%	10%	0%	0%	0%	0%	0%	0%	0%	5%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Michigan & South
3:45 - 4:45 PM



OVERALL PHF = 0.89

TRAFFIC VOLUMES

INTERSECTION: Michigan & Bronson

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Bronson			Bronson				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↘	↙	→	↖	↗	←	↘		
06:00AM	1	69	0	0	0	0	0	0	0	0	1	0	71	537
06:15AM	0	120	2	0	0	0	0	0	0	0	1	0	123	606
06:30AM	5	180	0	0	0	0	1	1	0	0	2	0	189	708
06:45AM	3	141	0	0	0	0	7	1	0	0	0	2	154	790
07:00AM	3	136	0	0	0	0	0	0	0	0	1	0	140	999
07:15AM	2	218	0	0	0	0	2	1	0	0	2	0	225	1128
07:30AM	3	262	1	0	0	0	2	1	0	0	0	2	271	1140
07:45AM	3	343	4	0	0	0	3	1	0	0	3	6	363	1101
08:00AM	2	253	3	0	0	0	2	0	0	0	7	2	269	975
08:15AM	1	223	3	0	0	0	2	6	0	0	1	1	237	901
08:30AM	1	226	0	0	0	0	1	2	0	0	2	0	232	836
08:45AM	2	219	7	0	0	0	2	0	0	0	7	0	237	836
09:00AM	2	177	4	0	0	0	9	2	0	0	1	0	195	787
09:15AM	1	159	2	0	0	0	4	0	0	0	2	4	172	--
09:30AM	4	207	8	0	0	0	2	5	0	0	5	1	232	--
09:45AM	3	172	4	0	0	0	1	3	0	0	2	3	188	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Bronson			Bronson			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

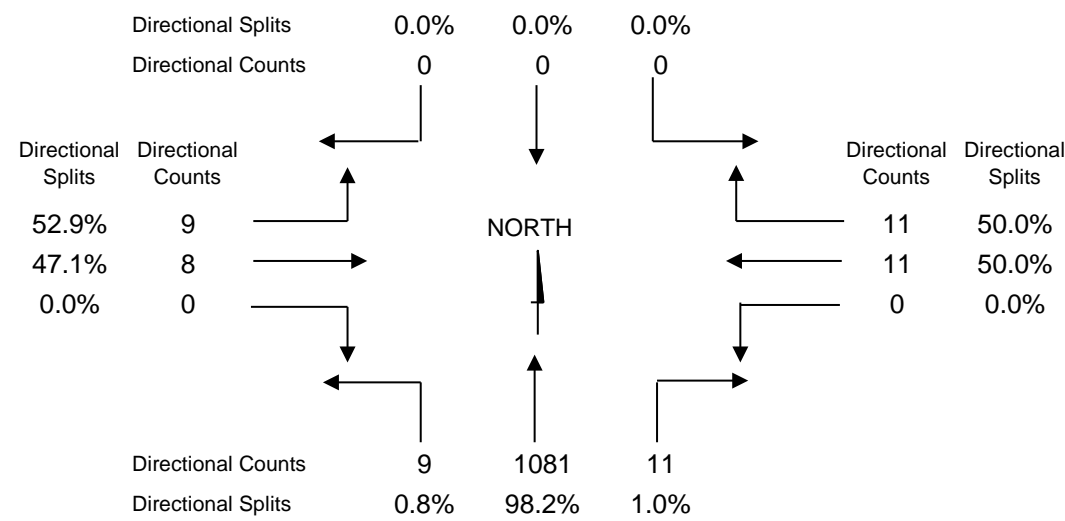
9	1081	11	0	0	0	9	8	0	0	11	11	1140
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TRUCK PERCENTAGES

0%	2%	0%	0%	0%	0%	0%	0%	0%	0%	9%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Bronson
7:30 - 8:30 AM**



OVERALL PHF = 0.79



TRAFFIC VOLUMES

INTERSECTION: Michigan & Bronson

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Bronson			Bronson				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	5	210	6	0	0	0	3	2	0	0	9	2	237	1007
03:15PM	5	216	7	0	0	0	5	1	0	0	2	2	238	1018
03:30PM	5	241	1	0	0	0	6	2	0	0	5	2	262	1046
03:45PM	2	241	9	0	0	0	3	1	0	0	11	3	270	1071
04:00PM	6	222	5	0	0	0	7	3	0	0	5	0	248	1032
04:15PM	8	245	3	0	0	0	2	2	0	0	4	2	266	1041
04:30PM	4	260	6	0	0	0	5	4	0	0	8	0	287	1022
04:45PM	2	209	8	0	0	0	2	5	0	0	3	2	231	983
05:00PM	4	235	4	0	0	0	3	3	0	0	6	2	257	932
05:15PM	3	225	5	0	0	0	3	1	0	0	7	3	247	909
05:30PM	3	223	9	0	0	0	0	5	0	0	7	1	248	905
05:45PM	3	170	1	0	0	0	1	3	0	0	2	0	180	900
06:00PM	6	221	1	0	0	0	0	0	0	0	3	3	234	933
06:15PM	0	237	1	0	0	0	1	0	0	0	3	1	243	--
06:30PM	2	231	2	0	0	0	0	2	0	0	4	2	243	--
06:45PM	2	199	2	0	0	0	1	3	0	0	5	1	213	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Bronson			Bronson			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

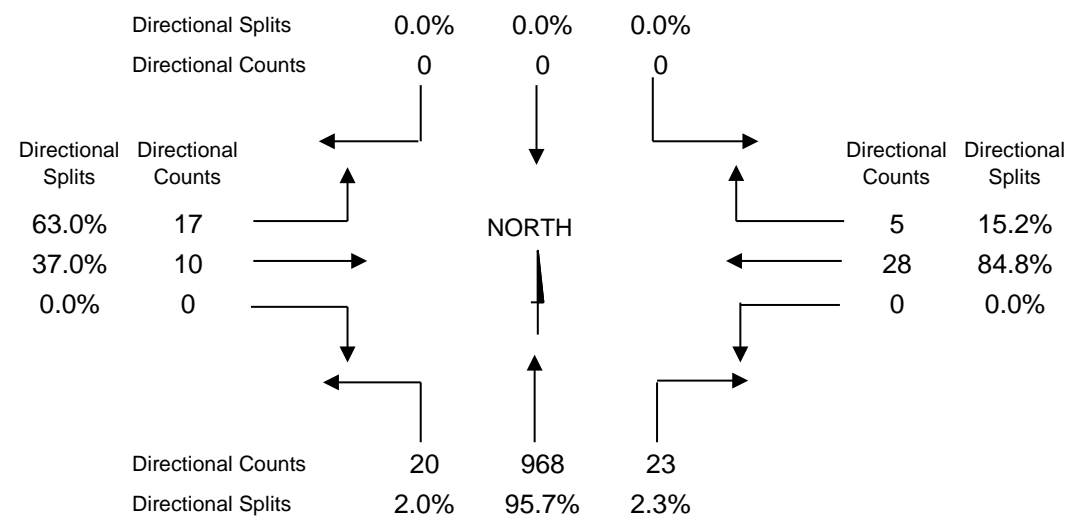
20	968	23	0	0	0	17	10	0	0	28	5	1071
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TRUCK PERCENTAGES

0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Michigan & Bronson
3:45 - 4:45 PM



OVERALL PHF = 0.93

TRAFFIC VOLUMES

INTERSECTION: Michigan & Sample

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Sample			Sample				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	18	63	18	0	0	0	9	68	0	0	52	2	230	1458
06:15AM	28	111	24	0	0	0	17	68	0	0	67	1	316	1631
06:30AM	30	155	30	0	0	0	36	95	0	0	113	1	460	1841
06:45AM	39	111	35	0	0	0	23	117	0	0	125	2	452	2105
07:00AM	26	132	22	0	0	0	28	116	0	0	74	5	403	2414
07:15AM	42	188	27	0	0	0	29	140	0	0	87	13	526	2599
07:30AM	36	271	56	0	0	0	34	188	0	0	134	5	724	2626
07:45AM	40	273	67	0	0	0	50	187	0	0	135	9	761	2463
08:00AM	32	217	52	0	0	0	44	136	0	0	97	10	588	2259
08:15AM	27	187	44	0	0	0	32	156	0	0	96	11	553	2100
08:30AM	32	199	56	0	0	0	35	129	0	0	102	8	561	1996
08:45AM	30	180	44	0	0	0	31	143	0	0	120	9	557	1941
09:00AM	27	147	33	0	0	0	18	110	0	0	87	7	429	1850
09:15AM	27	150	40	0	0	0	16	112	0	0	91	13	449	--
09:30AM	34	182	52	0	0	0	25	100	0	0	104	9	506	--
09:45AM	28	152	45	0	0	0	18	103	0	0	110	10	466	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Sample			Sample			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

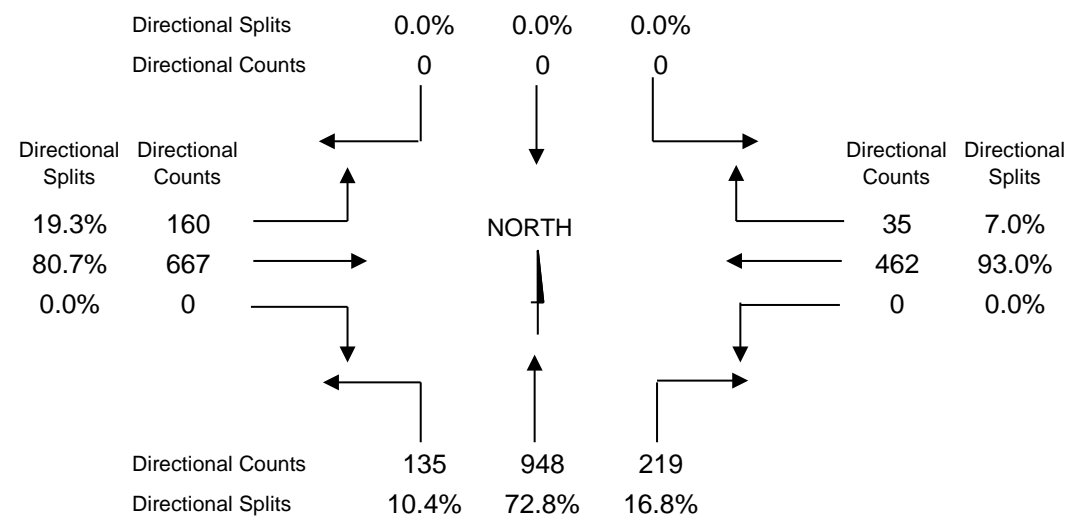
135	948	219	0	0	0	160	667	0	0	462	35	2626
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TRUCK PERCENTAGES

10%	3%	4%	0%	0%	0%	2%	5%	0%	0%	5%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Michigan & Sample
7:30 - 8:30 AM



OVERALL PHF = 0.86

TRAFFIC VOLUMES

INTERSECTION: Michigan & Sample

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Sample			Sample				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	45	185	67	0	0	0	30	139	0	0	171	15	652	2668
03:15PM	43	195	73	0	0	0	35	128	0	0	180	8	662	2658
03:30PM	44	203	78	0	0	0	33	161	0	0	150	12	681	2622
03:45PM	34	221	60	0	0	0	29	128	0	0	186	15	673	2692
04:00PM	34	184	46	0	0	0	27	154	0	0	182	15	642	2661
04:15PM	34	223	57	0	0	0	26	115	0	0	161	10	626	2751
04:30PM	43	221	71	0	0	0	32	166	0	0	204	14	751	2785
04:45PM	39	184	59	0	0	0	25	139	0	0	189	7	642	2656
05:00PM	49	200	61	0	0	0	23	183	0	0	204	12	732	2529
05:15PM	40	191	62	0	0	0	23	142	0	0	190	12	660	2316
05:30PM	28	193	65	0	0	0	35	132	0	0	162	7	622	2180
05:45PM	33	149	38	0	0	0	14	135	0	0	134	12	515	2073
06:00PM	39	192	44	0	0	0	19	82	0	0	137	6	519	2026
06:15PM	40	216	42	0	0	0	20	79	0	0	120	7	524	--
06:30PM	33	217	34	0	0	0	18	84	0	0	124	5	515	--
06:45PM	40	156	26	0	0	0	20	92	0	0	119	15	468	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Sample			Sample			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

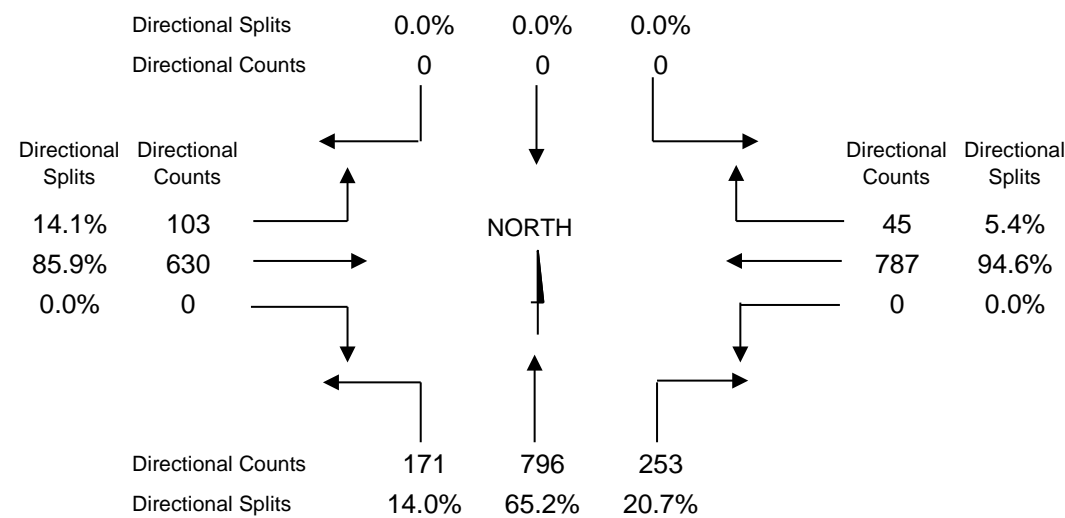
171	796	253	0	0	0	103	630	0	0	787	45	2785
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TRUCK PERCENTAGES

3%	2%	2%	0%	0%	0%	1%	2%	0%	0%	4%	2%
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YEAR 2014 PEAK HOUR TRAFFIC

Michigan & Sample
4:30 - 5:30 PM



OVERALL PHF = 0.93

TRAFFIC VOLUMES

INTERSECTION: Michigan & Broadway

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL	
	Michigan			Michigan			Broadway			Broadway					
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT			
	↶	↑	↷	↵	↓	↶	↷	→	↶	↵	↶	←	↷		
06:00AM	0	94	2	0	0	0	1	0	0	0	0	0	2	99	701
06:15AM	0	150	0	0	0	0	1	1	0	0	0	2	4	158	778
06:30AM	1	225	1	0	0	0	1	2	0	0	0	1	3	234	862
06:45AM	2	200	1	0	0	0	2	1	0	0	0	0	4	210	1014
07:00AM	1	169	1	0	0	0	0	1	0	0	0	1	3	176	1282
07:15AM	3	228	0	0	0	0	2	2	0	0	0	3	4	242	1430
07:30AM	0	369	1	0	0	0	2	5	0	0	0	2	7	386	1465
07:45AM	4	433	6	0	0	0	6	5	0	0	0	8	16	478	1393
08:00AM	4	295	5	0	0	0	3	5	0	0	0	1	11	324	1209
08:15AM	2	254	1	0	0	0	5	7	0	0	0	0	8	277	1124
08:30AM	5	296	2	0	0	0	2	2	0	0	0	2	5	314	1064
08:45AM	4	267	1	0	0	0	10	4	0	0	0	2	6	294	1035
09:00AM	4	217	4	0	0	0	4	5	0	0	0	2	3	239	986
09:15AM	3	190	3	0	0	0	9	5	0	0	0	2	5	217	--
09:30AM	2	260	0	0	0	0	6	4	0	0	0	1	12	285	--
09:45AM	5	218	3	0	0	0	2	6	0	0	0	4	7	245	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Broadway			Broadway			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

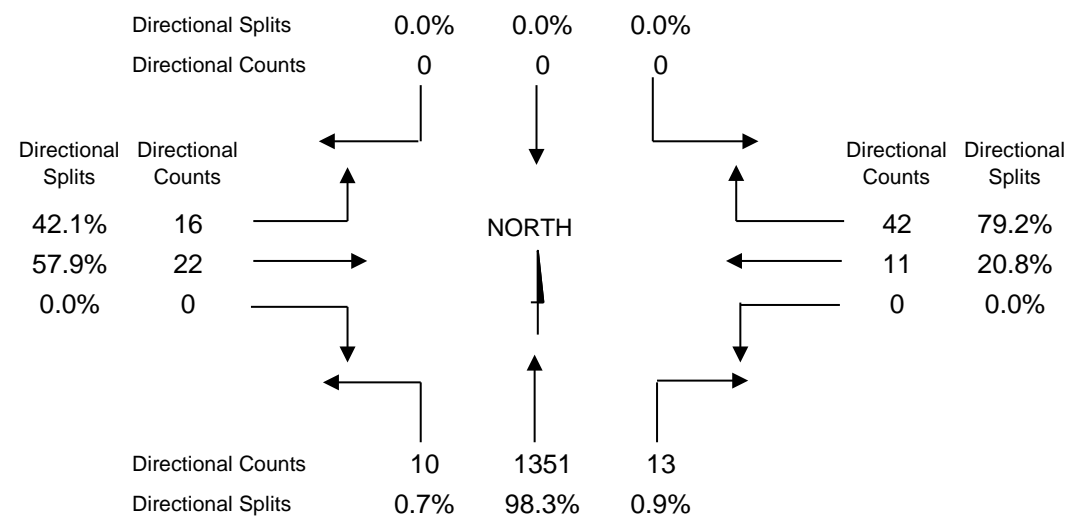
10	1351	13	0	0	0	16	22	0	0	11	42	1465
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TRUCK PERCENTAGES

10%	3%	8%	0%	0%	0%	19%	5%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Broadway
7:30 - 8:30 AM**



OVERALL PHF = 0.77

TRAFFIC VOLUMES

INTERSECTION: Michigan & Broadway

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Broadway			Broadway				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↙	↓	↘	↖	→	↗	↖	←	↘		
03:00PM	3	248	4	0	0	0	8	8	0	0	5	7	283	1258
03:15PM	5	268	6	0	0	0	4	4	0	0	3	7	297	1256
03:30PM	3	330	3	0	0	0	2	8	0	0	2	3	351	1265
03:45PM	7	284	4	0	0	0	9	4	0	0	8	11	327	1254
04:00PM	4	255	4	0	0	0	4	5	0	0	7	2	281	1214
04:15PM	3	269	6	0	0	0	6	9	0	0	7	6	306	1228
04:30PM	3	307	3	0	0	0	6	7	0	0	6	8	340	1204
04:45PM	2	257	5	0	0	0	5	6	0	0	4	8	287	1177
05:00PM	3	262	5	0	0	0	7	7	0	0	5	6	295	1125
05:15PM	1	259	3	0	0	0	9	2	0	0	2	6	282	1109
05:30PM	4	286	4	0	0	0	5	6	0	0	3	5	313	1105
05:45PM	2	215	2	0	0	0	3	7	0	0	3	3	235	1094
06:00PM	2	266	2	0	0	0	2	2	0	0	1	4	279	1087
06:15PM	2	262	4	0	0	0	0	4	0	0	3	3	278	--
06:30PM	2	291	3	0	0	0	2	3	0	0	1	0	302	--
06:45PM	3	212	3	0	0	0	0	3	0	0	1	6	228	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Broadway			Broadway			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

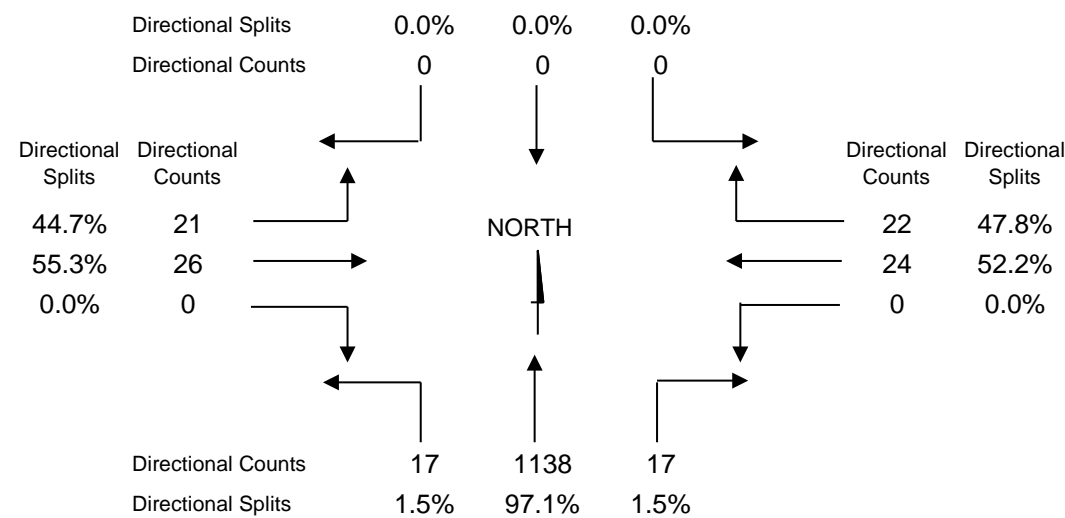
17	1138	17	0	0	0	21	26	0	0	24	22	1265
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TRUCK PERCENTAGES

6%	3%	6%	0%	0%	0%	5%	0%	0%	0%	4%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Broadway
3:30 - 4:30 PM**



OVERALL PHF = 0.90



TRAFFIC VOLUMES

INTERSECTION: Michigan & Indiana

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Indiana			Indiana				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	4	94	0	0	0	0	3	10	0	0	4	1	116	783
06:15AM	6	160	1	0	0	0	1	8	0	0	10	2	188	875
06:30AM	11	210	3	0	0	0	5	12	0	0	4	2	247	990
06:45AM	12	187	2	0	0	0	7	12	0	0	9	3	232	1166
07:00AM	6	172	5	0	0	0	3	8	0	0	10	4	208	1414
07:15AM	9	247	9	0	0	0	3	19	0	0	12	4	303	1558
07:30AM	17	375	1	0	0	0	10	7	0	0	10	3	423	1567
07:45AM	16	403	4	0	0	0	11	17	0	0	18	11	480	1478
08:00AM	15	275	5	0	0	0	17	18	0	0	14	8	352	1299
08:15AM	14	241	3	0	0	0	16	11	0	0	20	7	312	1191
08:30AM	9	283	3	0	0	0	15	9	0	0	9	6	334	1114
08:45AM	8	251	7	0	0	0	9	9	0	0	9	8	301	1082
09:00AM	7	188	3	0	0	0	13	16	0	0	10	7	244	1067
09:15AM	14	181	6	0	0	0	9	11	0	0	8	6	235	--
09:30AM	13	237	8	0	0	0	14	12	0	0	15	3	302	--
09:45AM	15	217	7	0	0	0	9	13	0	0	17	8	286	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Indiana			Indiana			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

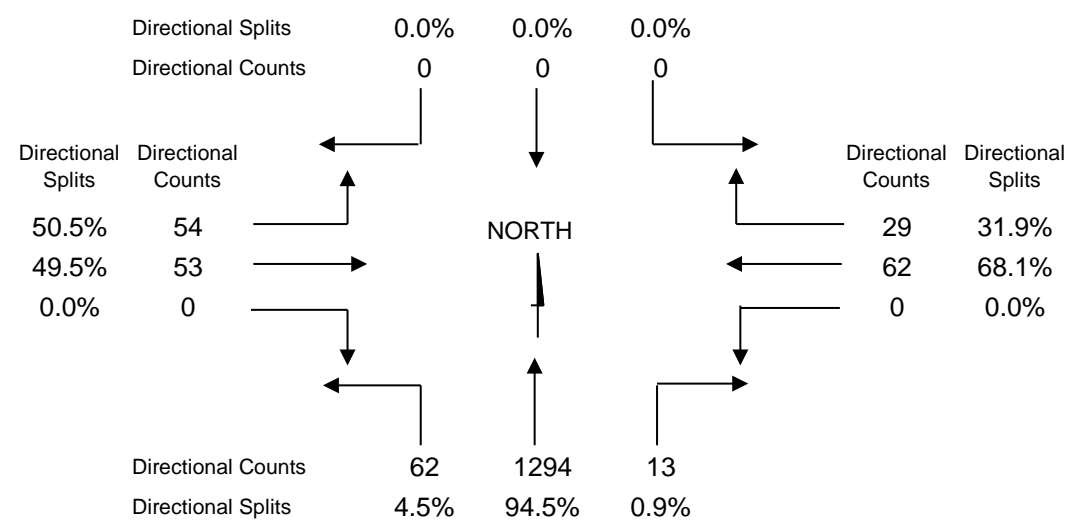
62	1294	13	0	0	0	54	53	0	0	62	29	1567
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TRUCK PERCENTAGES

10%	3%	8%	0%	0%	0%	2%	2%	0%	0%	8%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Michigan & Indiana
7:30 - 8:30 AM



OVERALL PHF = 0.82

TRAFFIC VOLUMES

INTERSECTION: Michigan & Indiana

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Indiana			Indiana				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↙	↘	→	↖	↗	←	↖		
03:00PM	26	240	7	0	0	0	19	25	0	0	25	8	350	1483
03:15PM	18	259	8	0	0	0	13	27	0	0	27	11	363	1477
03:30PM	19	310	7	0	0	0	15	20	0	0	23	7	401	1444
03:45PM	30	257	4	0	0	0	18	29	0	0	18	13	369	1449
04:00PM	24	228	13	0	0	0	20	29	0	0	23	7	344	1418
04:15PM	17	250	7	0	0	0	13	19	0	0	15	9	330	1451
04:30PM	19	293	12	0	0	0	20	34	0	0	18	10	406	1462
04:45PM	20	226	6	0	0	0	20	32	0	0	31	3	338	1401
05:00PM	16	265	11	0	0	0	20	31	0	0	30	4	377	1356
05:15PM	14	243	8	0	0	0	14	26	0	0	21	15	341	1330
05:30PM	15	267	11	0	0	0	13	16	0	0	16	7	345	1326
05:45PM	13	201	3	0	0	0	7	32	0	0	23	14	293	1345
06:00PM	18	245	11	0	0	0	16	25	0	0	31	5	351	1331
06:15PM	13	259	4	0	0	0	13	21	0	0	17	10	337	--
06:30PM	8	283	12	0	0	0	10	18	0	0	24	9	364	--
06:45PM	12	206	8	0	0	0	3	28	0	0	14	8	279	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Indiana			Indiana			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

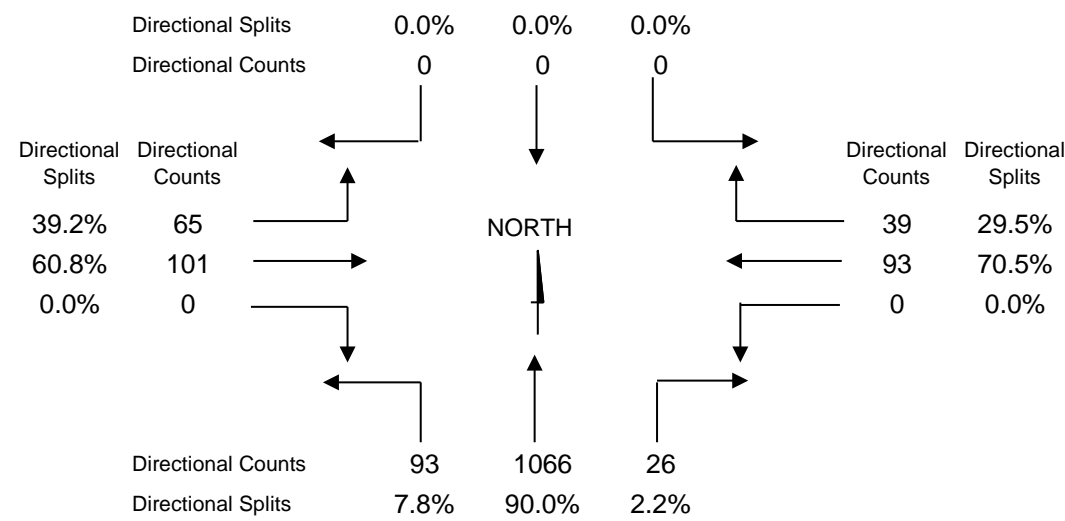
93	1066	26	0	0	0	65	101	0	0	93	39	1483
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TRUCK PERCENTAGES

3%	5%	0%	0%	0%	0%	5%	1%	0%	0%	3%	5%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Indiana
3:00 - 4:00 PM**



OVERALL PHF = 0.92



TRAFFIC VOLUMES

INTERSECTION: Michigan & Calvert

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Calvert			Calvert				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	2	98	1	0	0	0	1	2	0	0	0	1	105	705
06:15AM	2	154	0	0	0	0	2	1	0	0	0	2	161	796
06:30AM	2	220	1	0	0	0	5	1	0	0	3	1	233	913
06:45AM	2	193	2	0	0	0	3	3	0	0	3	0	206	1077
07:00AM	1	187	0	0	0	0	2	4	0	0	0	2	196	1301
07:15AM	3	261	2	0	0	0	5	3	0	0	2	2	278	1434
07:30AM	7	369	1	0	0	0	14	2	0	0	0	4	397	1405
07:45AM	4	413	2	0	0	0	5	5	0	0	0	1	430	1284
08:00AM	7	309	1	0	0	0	6	3	0	0	3	0	329	1130
08:15AM	1	239	0	0	0	0	3	2	0	0	3	1	249	1047
08:30AM	1	262	1	0	0	0	10	0	0	0	1	1	276	1009
08:45AM	3	259	1	0	0	0	6	4	0	0	1	2	276	989
09:00AM	6	211	11	0	0	0	5	8	0	0	2	3	246	962
09:15AM	5	192	3	0	0	0	6	2	0	0	1	2	211	--
09:30AM	2	234	0	0	0	0	11	4	0	0	2	3	256	--
09:45AM	5	223	2	0	0	0	9	2	0	0	6	2	249	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Calvert			Calvert			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

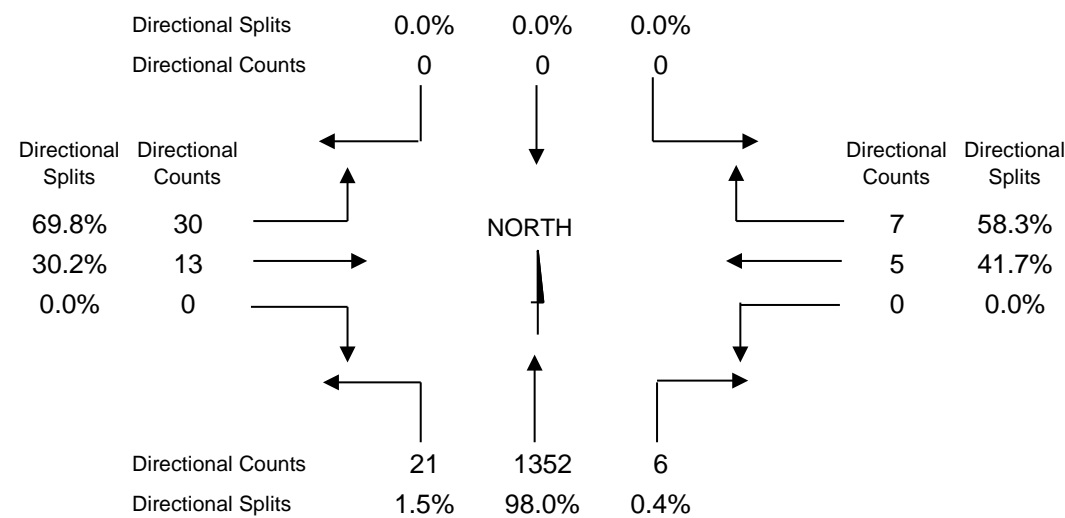
21	1352	6	0	0	0	30	13	0	0	5	7	1434
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TRUCK PERCENTAGES

5%	4%	0%	0%	0%	0%	7%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Michigan & Calvert
7:15 - 8:15 AM



OVERALL PHF = 0.83

TRAFFIC VOLUMES

INTERSECTION: Michigan & Calvert

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Calvert			Calvert				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	8	274	0	0	0	0	12	5	0	0	2	3	304	1260
03:15PM	4	274	1	0	0	0	14	8	0	0	6	5	312	1266
03:30PM	10	307	3	0	0	0	14	6	0	0	4	6	350	1254
03:45PM	5	255	4	0	0	0	17	7	0	0	2	4	294	1228
04:00PM	11	268	4	0	0	0	10	9	0	0	2	6	310	1200
04:15PM	8	261	1	0	0	0	14	9	0	0	5	2	300	1228
04:30PM	2	277	4	0	0	0	20	10	0	0	5	6	324	1203
04:45PM	4	233	5	0	0	0	10	8	0	0	4	2	266	1166
05:00PM	11	287	6	0	0	0	14	15	0	0	3	2	338	1142
05:15PM	12	237	4	0	0	0	10	6	0	0	2	4	275	1100
05:30PM	4	251	3	0	0	0	17	8	0	0	2	2	287	1128
05:45PM	7	211	6	0	0	0	2	5	0	0	5	6	242	1132
06:00PM	3	270	3	0	0	0	9	6	0	0	3	2	296	1118
06:15PM	7	279	1	0	0	0	4	8	0	0	3	1	303	--
06:30PM	8	257	3	0	0	0	12	4	0	0	4	3	291	--
06:45PM	3	208	1	0	0	0	3	7	0	0	2	4	228	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Calvert			Calvert			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

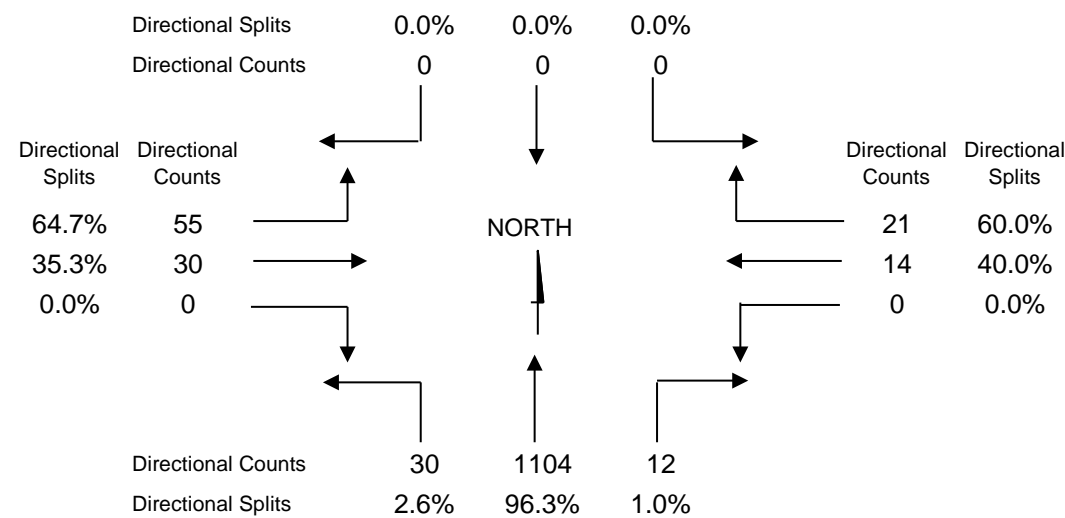
30	1104	12	0	0	0	55	30	0	0	14	21	1266
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TRUCK PERCENTAGES

0%	4%	9%	0%	0%	0%	2%	4%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

Michigan & Calvert
3:15 - 4:15 PM



OVERALL PHF = 0.90



TRAFFIC VOLUMES

INTERSECTION: Michigan & Ewing

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Ewing			Ewing				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↷	↷	↶	↷	↷	↷	→	↶	↶	←	↷		
06:00AM	3	86	3	0	0	0	4	14	0	0	11	13	134	873
06:15AM	7	138	0	0	0	0	4	11	0	0	9	12	181	966
06:30AM	11	185	4	0	0	0	7	15	0	0	23	28	273	1103
06:45AM	11	177	2	0	0	0	6	36	0	0	26	27	285	1263
07:00AM	9	163	3	0	0	0	4	20	0	0	11	17	227	1477
07:15AM	16	218	4	0	0	0	15	22	0	0	21	22	318	1617
07:30AM	11	297	9	0	0	0	16	23	0	0	33	44	433	1629
07:45AM	13	348	9	0	0	0	17	36	0	0	29	47	499	1505
08:00AM	17	284	4	0	0	0	14	15	0	0	15	18	367	1327
08:15AM	19	210	6	0	0	0	9	30	0	0	26	30	330	1238
08:30AM	11	220	7	0	0	0	6	17	0	0	27	21	309	1167
08:45AM	6	215	8	0	0	0	12	28	0	0	25	27	321	1161
09:00AM	10	196	4	0	0	0	15	20	0	0	15	18	278	1118
09:15AM	15	173	5	0	0	0	8	26	0	0	15	17	259	--
09:30AM	16	204	2	0	0	0	13	26	0	0	21	21	303	--
09:45AM	9	175	6	0	0	0	13	33	0	0	21	21	278	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Ewing			Ewing			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

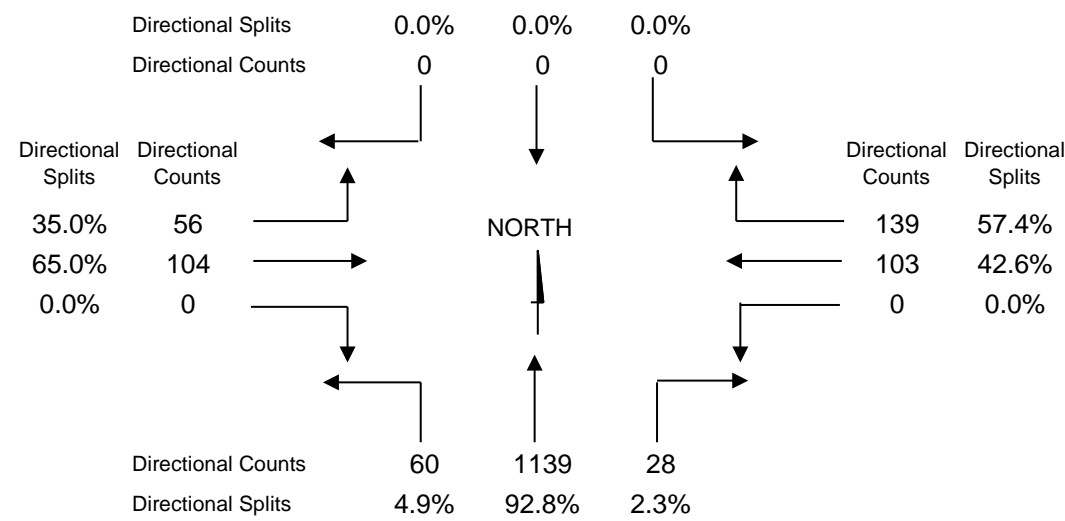
60	1139	28	0	0	0	56	104	0	0	103	139	1629
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TRUCK PERCENTAGES

10%	4%	4%	0%	0%	0%	6%	7%	0%	0%	2%	3%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Ewing
7:30 - 8:30 AM**



OVERALL PHF = 0.82



TRAFFIC VOLUMES

INTERSECTION: Michigan & Ewing

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Ewing			Ewing				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↷	↷	↶	↷	↷	↷	→	↶	↶	←	↷		
03:00PM	22	259	21	0	0	0	13	47	0	0	43	15	420	1671
03:15PM	16	232	17	0	0	0	11	54	0	0	36	34	400	1635
03:30PM	21	230	13	0	0	0	15	80	0	0	46	29	434	1686
03:45PM	21	229	19	0	0	0	12	62	0	0	43	31	417	1735
04:00PM	30	208	16	0	0	0	14	54	0	0	43	19	384	1750
04:15PM	21	231	24	0	0	0	14	76	0	0	58	27	451	1792
04:30PM	30	241	35	0	0	0	26	83	0	0	37	31	483	1726
04:45PM	24	258	20	0	0	0	9	62	0	0	37	22	432	1646
05:00PM	19	229	25	0	0	0	16	79	0	0	38	20	426	1582
05:15PM	25	210	18	0	0	0	12	71	0	0	34	15	385	1538
05:30PM	27	221	15	0	0	0	16	67	0	0	39	18	403	1535
05:45PM	23	179	22	0	0	0	10	68	0	0	39	27	368	1500
06:00PM	21	232	12	0	0	0	8	58	0	0	28	23	382	1450
06:15PM	20	243	20	0	0	0	5	52	0	0	24	18	382	--
06:30PM	28	222	13	0	0	0	15	38	0	0	28	24	368	--
06:45PM	16	198	19	0	0	0	4	36	0	0	33	12	318	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Ewing			Ewing			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

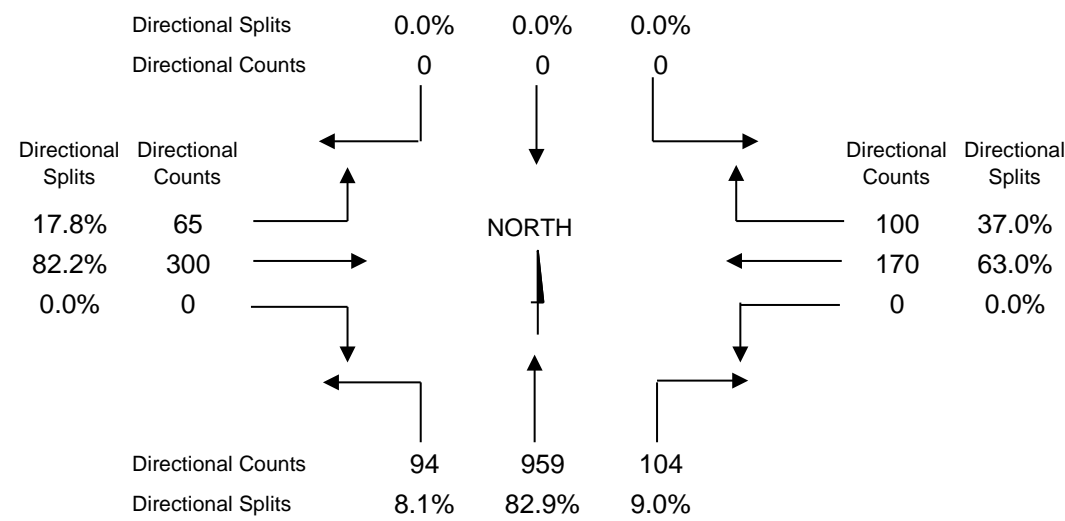
94	959	104	0	0	0	65	300	0	0	170	100	1792
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TRUCK PERCENTAGES

6%	3%	1%	0%	0%	0%	2%	1%	0%	0%	1%	1%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Ewing
4:15 - 5:15 PM**



OVERALL PHF = 0.93



TRAFFIC VOLUMES

INTERSECTION: Michigan & Don Moyer

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Don Moyer			Don Moyer				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	0	72	1	0	0	0	0	2	0	0	1	12	88	624
06:15AM	0	125	2	0	0	0	0	7	0	0	4	11	149	708
06:30AM	0	179	1	0	0	0	0	2	0	0	2	16	200	790
06:45AM	0	159	2	0	0	0	0	5	0	0	2	19	187	932
07:00AM	0	153	0	0	0	0	0	4	0	0	0	15	172	1129
07:15AM	0	197	4	0	0	0	1	8	0	0	2	19	231	1232
07:30AM	0	291	0	0	0	0	0	8	0	0	1	42	342	1231
07:45AM	0	355	2	0	0	0	2	4	0	0	1	20	384	1147
08:00AM	0	238	1	0	0	0	0	10	0	0	1	25	275	1012
08:15AM	1	202	3	0	0	0	1	7	0	0	3	13	230	940
08:30AM	0	226	2	0	0	0	0	7	0	0	2	21	258	903
08:45AM	0	213	4	0	0	0	0	12	0	0	4	16	249	872
09:00AM	0	170	6	0	0	0	1	9	0	0	3	14	203	850
09:15AM	0	160	4	0	0	0	2	7	0	0	3	17	193	--
09:30AM	0	196	6	0	0	0	3	5	0	0	5	12	227	--
09:45AM	0	178	6	0	0	0	3	20	0	0	2	18	227	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Don Moyer			Don Moyer			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

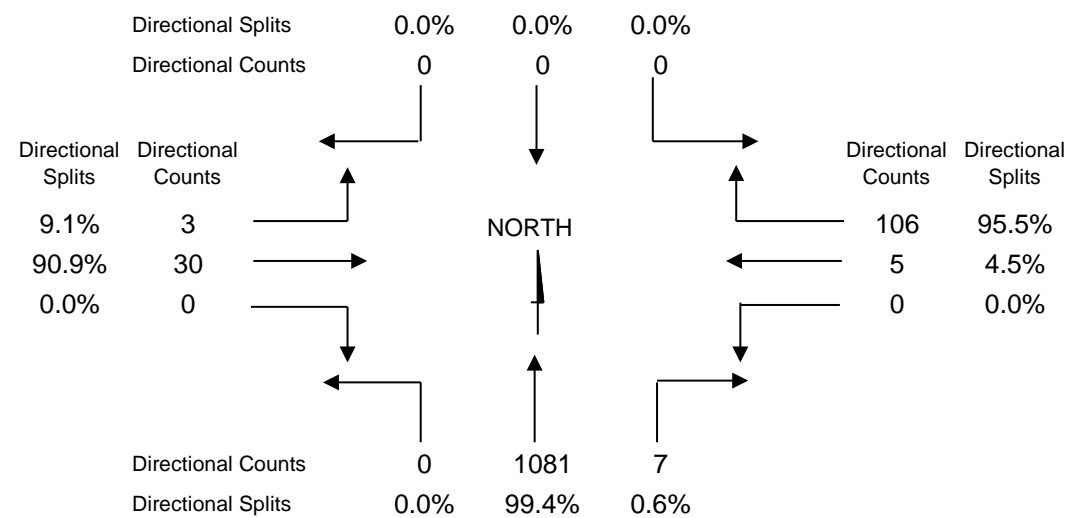
0	1081	7	0	0	0	3	30	0	0	5	106	1232
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TRUCK PERCENTAGES

0%	4%	15%	0%	0%	0%	0%	10%	0%	0%	0%	3%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Don Moyer
7:15 - 8:15 AM**



OVERALL PHF = 0.80

TRAFFIC VOLUMES

INTERSECTION: Michigan & Don Moyer

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Don Moyer			Don Moyer				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↙	↘	→	↖	↗	←	↖		
03:00PM	0	243	4	0	0	0	2	16	0	0	4	15	284	1154
03:15PM	0	235	4	0	0	0	1	22	0	0	1	15	278	1155
03:30PM	0	258	6	0	0	0	3	21	0	0	2	18	308	1153
03:45PM	0	224	10	0	0	0	0	26	0	0	7	17	284	1190
04:00PM	2	222	7	0	0	0	2	30	0	0	6	16	285	1153
04:15PM	1	221	7	0	0	0	0	27	0	0	5	15	276	1161
04:30PM	1	273	11	0	0	0	2	28	0	0	6	24	345	1144
04:45PM	0	195	6	0	0	0	1	26	0	0	8	11	247	1071
05:00PM	1	229	16	0	0	0	2	23	0	0	3	19	293	1071
05:15PM	0	203	6	0	0	0	2	33	0	0	7	8	259	1050
05:30PM	1	223	9	0	0	0	0	16	0	0	2	21	272	1084
05:45PM	1	191	7	0	0	0	1	26	0	0	3	18	247	1114
06:00PM	0	220	4	0	0	0	2	19	0	0	9	18	272	1092
06:15PM	0	247	8	0	0	0	4	17	0	0	3	14	293	--
06:30PM	0	251	6	0	0	0	0	11	0	0	11	23	302	--
06:45PM	0	190	7	0	0	0	0	12	0	0	3	13	225	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Don Moyer			Don Moyer			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

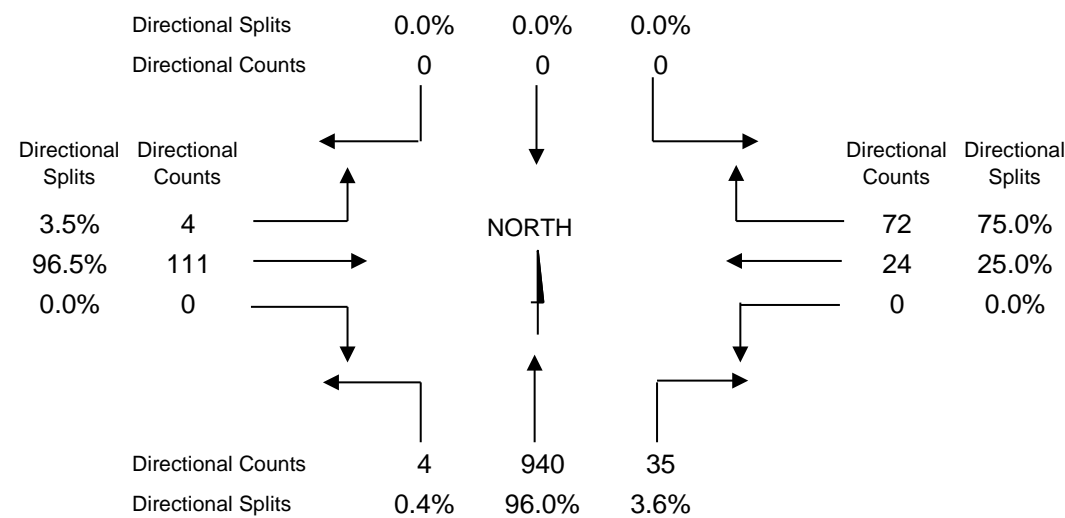
4	940	35	0	0	0	4	111	0	0	24	72	1190
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TRUCK PERCENTAGES

0%	4%	0%	0%	0%	0%	0%	3%	0%	0%	4%	3%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Don Moyer
3:45 - 4:45 PM**



OVERALL PHF = 0.86



TRAFFIC VOLUMES

INTERSECTION: Michigan & Chippewa

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Chippewa			Chippewa				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	2	63	0	0	0	0	1	0	47	1	0	2	116	788
06:15AM	1	118	3	0	0	0	3	0	57	6	3	2	193	893
06:30AM	1	176	1	0	0	0	6	1	57	8	0	4	254	1014
06:45AM	3	145	1	0	0	0	6	0	59	5	3	3	225	1184
07:00AM	6	141	0	0	0	0	4	0	57	7	0	6	221	1406
07:15AM	4	186	3	0	0	0	6	4	92	6	4	9	314	1494
07:30AM	5	291	1	0	0	0	6	2	96	8	2	13	424	1484
07:45AM	12	306	3	0	0	0	14	3	91	6	3	9	447	1383
08:00AM	7	186	0	0	0	0	19	3	80	6	2	6	309	1254
08:15AM	4	181	3	0	0	0	16	2	89	6	0	3	304	1242
08:30AM	4	202	3	0	0	0	19	5	79	4	0	7	323	1213
08:45AM	7	183	4	0	0	0	18	4	84	6	4	8	318	1204
09:00AM	6	156	3	0	0	0	9	3	109	5	0	6	297	1196
09:15AM	4	137	2	0	0	0	8	3	108	5	5	3	275	--
09:30AM	5	175	1	0	0	0	15	7	103	3	0	5	314	--
09:45AM	6	156	2	0	0	0	10	4	121	5	4	2	310	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Chippewa			Chippewa			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

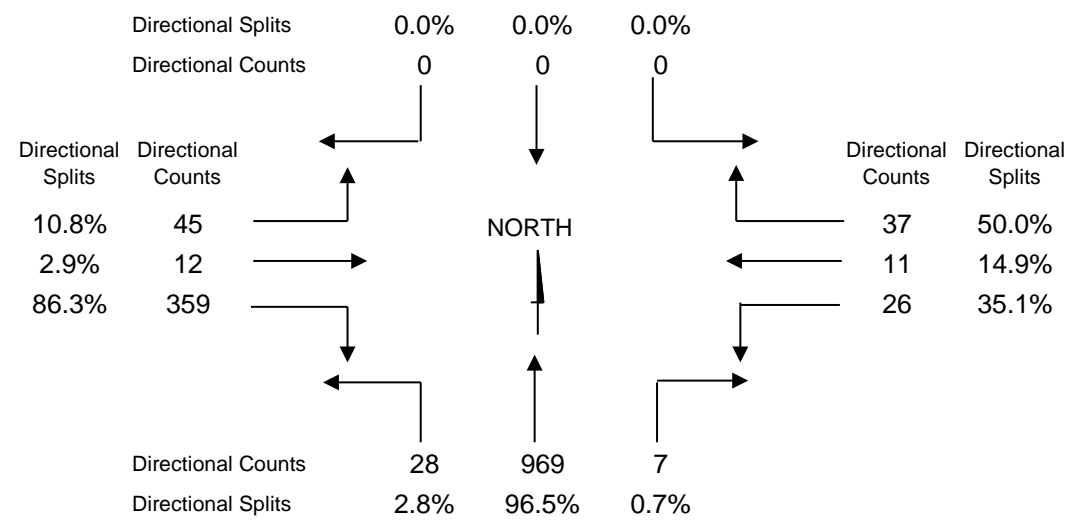
28	969	7	0	0	0	45	12	359	26	11	37	1494
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TRUCK PERCENTAGES

4%	4%	29%	0%	0%	0%	9%	0%	12%	12%	0%	8%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Chippewa
7:15 - 8:15 AM**



OVERALL PHF = 0.84

TRAFFIC VOLUMES

INTERSECTION: Michigan & Chippewa

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Chippewa			Chippewa				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↘	↙	→	↖	↗	←	↘		
03:00PM	4	198	9	0	0	0	25	9	166	4	4	8	427	1813
03:15PM	9	224	6	0	0	0	32	14	189	6	0	4	484	1839
03:30PM	7	215	4	0	0	0	26	5	187	11	6	4	465	1851
03:45PM	5	191	9	0	0	0	29	14	178	7	3	1	437	1904
04:00PM	10	195	8	0	0	0	24	14	186	9	1	6	453	1931
04:15PM	9	204	11	0	0	0	26	10	224	3	4	5	496	1985
04:30PM	3	214	8	0	0	0	35	14	224	9	6	5	518	2028
04:45PM	4	161	15	0	0	0	22	16	226	11	7	2	464	1971
05:00PM	4	194	14	0	0	0	35	15	233	5	2	5	507	1953
05:15PM	12	189	17	0	0	0	24	15	266	8	3	5	539	1845
05:30PM	5	200	16	0	0	0	15	18	192	8	2	5	461	1741
05:45PM	4	185	21	0	0	0	13	28	183	7	3	2	446	1686
06:00PM	9	185	18	0	0	0	24	14	130	7	5	7	399	1567
06:15PM	8	228	13	0	0	0	27	19	119	7	7	7	435	--
06:30PM	12	217	10	0	0	0	18	15	117	10	2	5	406	--
06:45PM	8	150	17	0	0	0	10	12	103	7	4	16	327	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Chippewa			Chippewa			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

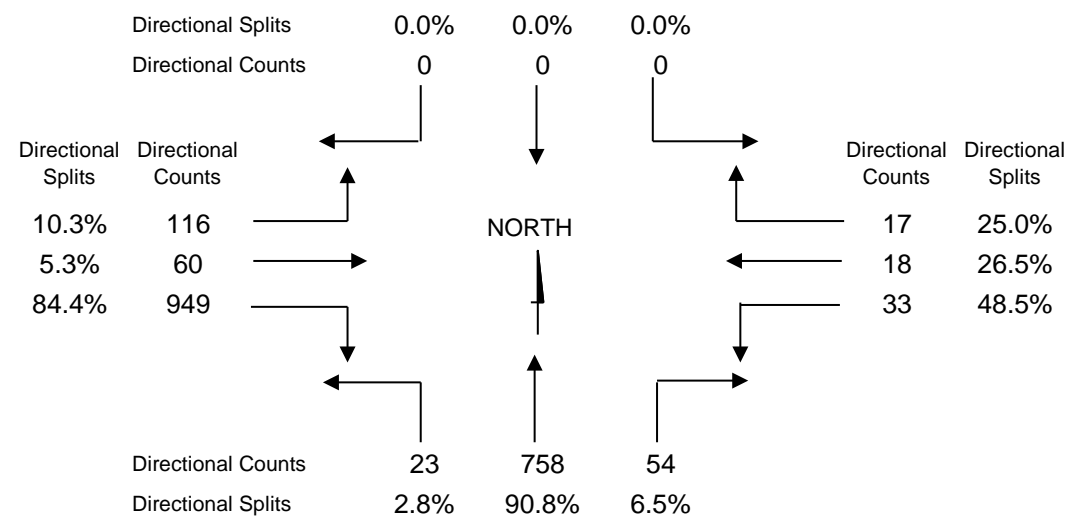
23	758	54	0	0	0	116	60	949	33	18	17	2028
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TRUCK PERCENTAGES

22%	3%	4%	0%	0%	0%	2%	0%	2%	6%	6%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Chippewa
4:30 - 5:30 PM**



OVERALL PHF = 0.94



TRAFFIC VOLUMES

INTERSECTION: Michigan & Ireland

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Ireland			Ireland				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	22	59	2	8	45	2	9	11	13	20	7	15	213	1277
06:15AM	21	101	5	10	48	2	9	12	14	17	20	25	284	1448
06:30AM	29	145	18	5	63	4	17	16	16	32	25	22	392	1637
06:45AM	32	121	21	16	57	3	18	16	19	23	31	31	388	1861
07:00AM	41	121	21	5	61	5	15	29	13	19	20	34	384	2133
07:15AM	26	148	19	16	87	6	20	33	16	34	29	39	473	2222
07:30AM	32	205	23	25	91	3	20	37	12	52	40	76	616	2217
07:45AM	51	261	40	27	73	0	27	37	22	31	35	56	660	2062
08:00AM	29	132	26	22	74	5	20	26	16	45	29	49	473	1884
08:15AM	32	134	25	16	91	8	22	25	16	26	25	48	468	1889
08:30AM	34	144	23	23	59	3	23	30	17	32	33	40	461	1919
08:45AM	34	141	29	39	58	6	17	41	18	26	31	42	482	1972
09:00AM	38	119	22	29	75	2	25	47	9	32	44	36	478	2036
09:15AM	30	99	20	48	93	5	23	64	16	31	33	36	498	--
09:30AM	33	113	31	36	79	6	33	58	16	34	35	40	514	--
09:45AM	37	106	25	55	71	6	34	67	13	33	47	52	546	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Ireland			Ireland			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

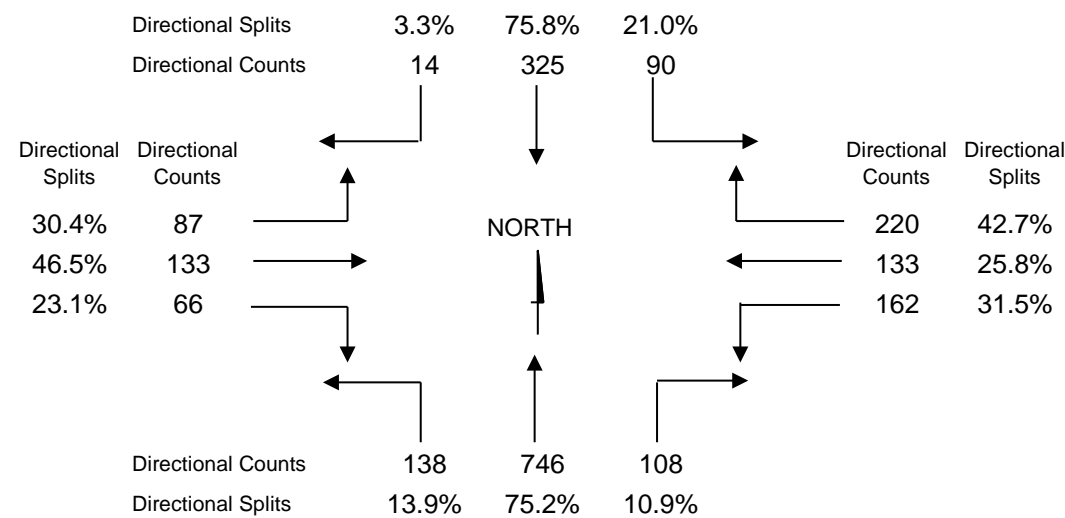
138	746	108	90	325	14	87	133	66	162	133	220	2222
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TRUCK PERCENTAGES

10%	4%	4%	7%	11%	7%	12%	12%	28%	5%	4%	2%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Ireland
7:15 - 8:15 AM**



OVERALL PHF = 0.84

TRAFFIC VOLUMES

INTERSECTION: Michigan & Ireland

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Ireland			Ireland				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	↶	↑	↷	↶	↓	↷	↶	→	↷	↶	←	↷		
03:00PM	38	127	33	59	120	9	47	84	37	47	86	69	756	3208
03:15PM	48	129	57	92	135	13	39	101	30	50	72	60	826	3252
03:30PM	46	119	41	63	130	17	46	113	15	39	102	75	806	3275
03:45PM	45	145	46	73	142	3	34	94	40	52	92	54	820	3323
04:00PM	53	115	47	79	143	12	39	68	23	60	92	69	800	3352
04:15PM	44	120	53	77	155	12	49	101	37	44	93	64	849	3455
04:30PM	55	137	32	89	164	15	43	104	23	53	70	69	854	3490
04:45PM	54	101	50	80	173	16	37	109	24	56	99	50	849	3545
05:00PM	34	155	48	93	193	12	40	102	27	73	70	56	903	3522
05:15PM	61	128	56	86	177	17	45	93	16	51	101	53	884	3337
05:30PM	53	135	43	78	176	22	37	109	25	64	101	66	909	3175
05:45PM	52	147	55	73	115	9	43	103	21	60	101	47	826	2961
06:00PM	39	113	43	57	110	13	43	68	19	60	93	60	718	2754
06:15PM	42	141	47	47	94	13	47	69	18	54	81	69	722	--
06:30PM	55	146	39	47	88	13	40	74	13	50	62	68	695	--
06:45PM	25	89	35	52	91	10	41	82	16	43	74	61	619	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Ireland			Ireland			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

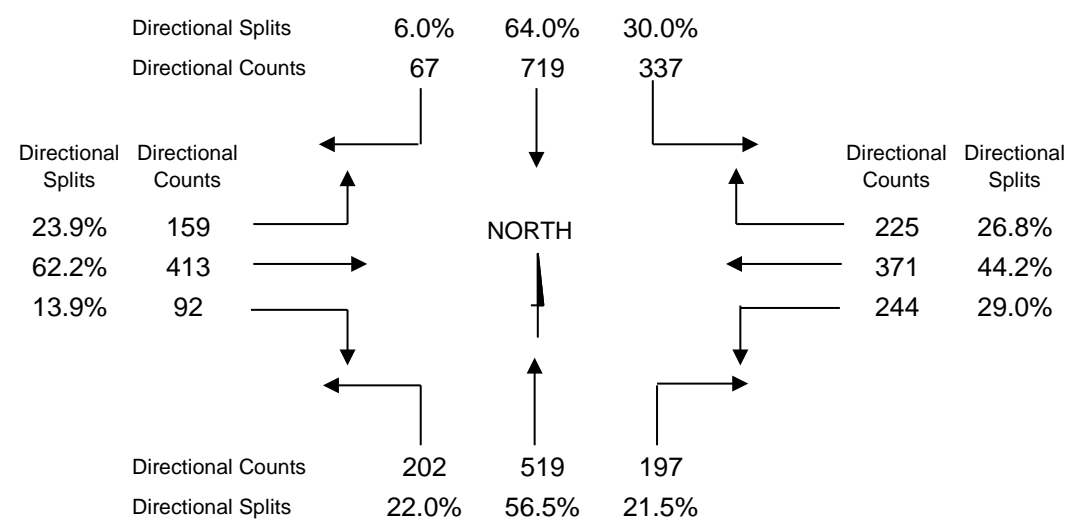
202	519	197	337	719	67	159	413	92	244	371	225	3545
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TRUCK PERCENTAGES

5%	3%	1%	1%	2%	6%	5%	2%	2%	1%	1%	1%
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YEAR 2014 PEAK HOUR TRAFFIC

**Michigan & Ireland
4:45 - 5:45 PM**



OVERALL PHF = 0.97



TRAFFIC VOLUMES

INTERSECTION: **St. Joseph & Colfax**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	St. Joseph			St. Joseph			Colfax			Colfax				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↙	↓	↘	↖	→	↗	↖	←	↘		
06:00AM	1	84	4	0	0	0	1	9	0	0	8	6	113	828
06:15AM	1	138	9	0	0	0	0	11	0	0	15	1	175	935
06:30AM	2	201	13	0	0	0	4	17	0	0	23	4	264	1098
06:45AM	5	179	13	0	0	0	2	24	0	0	40	13	276	1322
07:00AM	2	136	11	0	0	0	1	20	0	0	41	9	220	1605
07:15AM	5	200	29	0	0	0	1	32	0	0	59	12	338	1804
07:30AM	20	261	32	0	0	0	5	50	0	0	100	20	488	1824
07:45AM	38	277	40	0	0	0	6	39	0	0	134	25	559	1713
08:00AM	23	218	26	0	0	0	6	36	0	0	103	7	419	1557
08:15AM	18	176	34	0	0	0	8	36	0	0	70	16	358	1462
08:30AM	10	222	22	0	0	0	10	34	0	0	67	12	377	1434
08:45AM	12	222	32	0	0	0	3	37	0	0	81	16	403	1403
09:00AM	10	181	37	0	0	0	10	26	0	0	46	14	324	1332
09:15AM	11	184	30	0	0	0	4	30	0	0	52	19	330	--
09:30AM	7	213	28	0	0	0	8	24	0	0	52	14	346	--
09:45AM	7	183	31	0	0	0	7	37	0	0	48	19	332	--

NB			SB			EB			WB			TOTAL
St. Joseph			St. Joseph			Colfax			Colfax			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

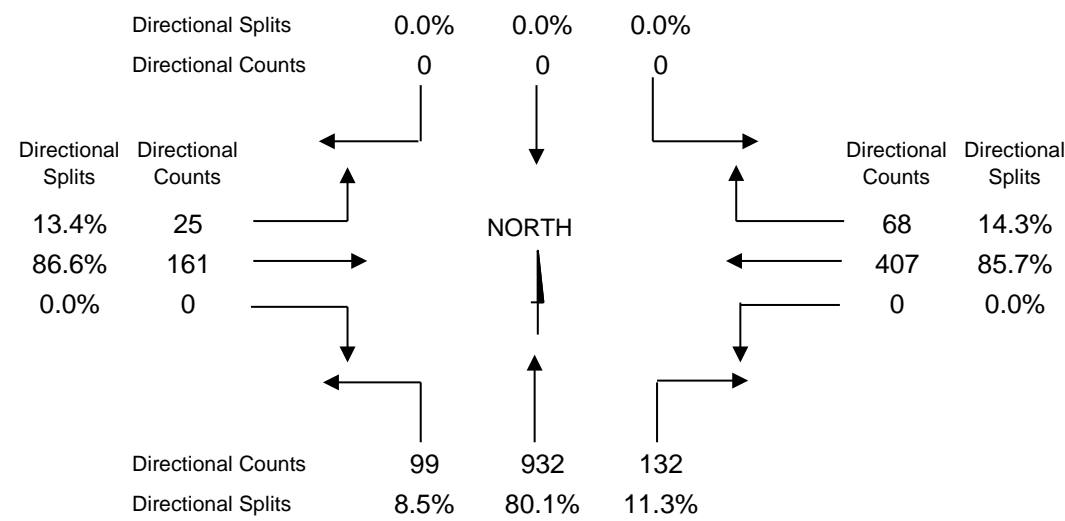
99	932	132	0	0	0	25	161	0	0	407	68	1824
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TRUCK PERCENTAGES

2%	3%	6%	0%	0%	0%	4%	5%	0%	0%	3%	3%
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YEAR 2014 PEAK HOUR TRAFFIC

**St. Joseph & Colfax
7:30 - 8:30 AM**



OVERALL PHF = 0.82



TRAFFIC VOLUMES

INTERSECTION: **St. Joseph & Colfax**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	St. Joseph			St. Joseph			Colfax			Colfax				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↙	↘	→	↖	↗	←	↖		
03:00PM	10	317	42	0	0	0	11	52	0	0	52	15	499	2106
03:15PM	19	300	46	0	0	0	5	59	0	0	50	25	504	2113
03:30PM	11	369	39	0	0	0	11	60	0	0	70	28	588	2079
03:45PM	7	315	51	0	0	0	11	49	0	0	62	20	515	2090
04:00PM	14	283	75	0	0	0	18	46	0	0	54	16	506	2089
04:15PM	16	264	55	0	0	0	5	56	0	0	55	19	470	2309
04:30PM	16	318	74	0	0	0	12	88	0	0	68	23	599	2425
04:45PM	7	267	74	0	0	0	13	62	0	0	65	26	514	2309
05:00PM	21	360	110	0	0	0	25	87	0	0	82	41	726	2189
05:15PM	14	311	98	0	0	0	17	60	0	0	68	18	586	1852
05:30PM	6	261	68	0	0	0	6	55	0	0	67	20	483	1608
05:45PM	10	213	59	0	0	0	9	35	0	0	55	13	394	1484
06:00PM	4	229	46	0	0	0	6	34	0	0	49	21	389	1381
06:15PM	7	195	30	0	0	0	4	35	0	0	50	21	342	--
06:30PM	6	205	41	0	0	0	2	29	0	0	59	17	359	--
06:45PM	14	158	32	0	0	0	8	30	0	0	35	14	291	--

NB			SB			EB			WB			TOTAL
St. Joseph			St. Joseph			Colfax			Colfax			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

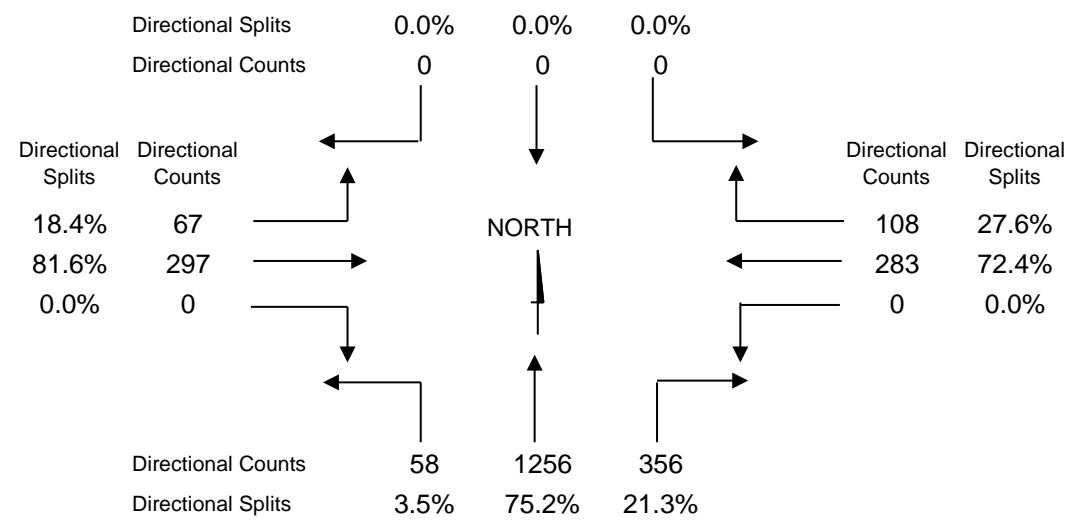
58	1256	356	0	0	0	67	297	0	0	283	108	2425
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TRUCK PERCENTAGES

0%	2%	1%	0%	0%	0%	0%	0%	0%	0%	2%	2%
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YEAR 2014 PEAK HOUR TRAFFIC

**St. Joseph & Colfax
4:30 - 5:30 PM**



OVERALL PHF = 0.84



TRAFFIC VOLUMES

INTERSECTION: **St. Joseph & Washington**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	St. Joseph			St. Joseph			Washington			Washington				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↶	↷	↓	↵	↷	→	↶	↶	←	↷		
06:00AM	0	79	0	0	0	0	1	0	0	0	0	0	80	672
06:15AM	5	154	0	0	0	0	4	0	0	0	0	0	163	742
06:30AM	7	212	0	0	0	0	3	0	0	0	0	0	222	836
06:45AM	6	198	0	0	0	0	3	0	0	0	0	0	207	949
07:00AM	8	136	0	0	0	0	6	0	0	0	0	0	150	1136
07:15AM	15	236	0	0	0	0	6	0	0	0	0	0	257	1265
07:30AM	20	300	0	0	0	0	15	0	0	0	0	0	335	1259
07:45AM	23	348	0	0	0	0	23	0	0	0	0	0	394	1200
08:00AM	18	249	1	0	0	0	11	0	0	0	0	0	279	1088
08:15AM	10	228	0	0	0	0	12	0	0	0	0	1	251	1045
08:30AM	18	246	0	0	0	0	10	0	0	0	0	2	276	1042
08:45AM	20	251	0	0	0	0	10	0	0	0	0	1	282	1039
09:00AM	22	195	1	0	0	0	18	0	0	0	0	0	236	986
09:15AM	16	215	0	0	0	0	17	0	0	0	0	0	248	--
09:30AM	27	228	0	0	0	0	17	0	0	0	1	0	273	--
09:45AM	14	194	0	0	0	0	21	0	0	0	0	0	229	--

NB			SB			EB			WB			TOTAL
St. Joseph			St. Joseph			Washington			Washington			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

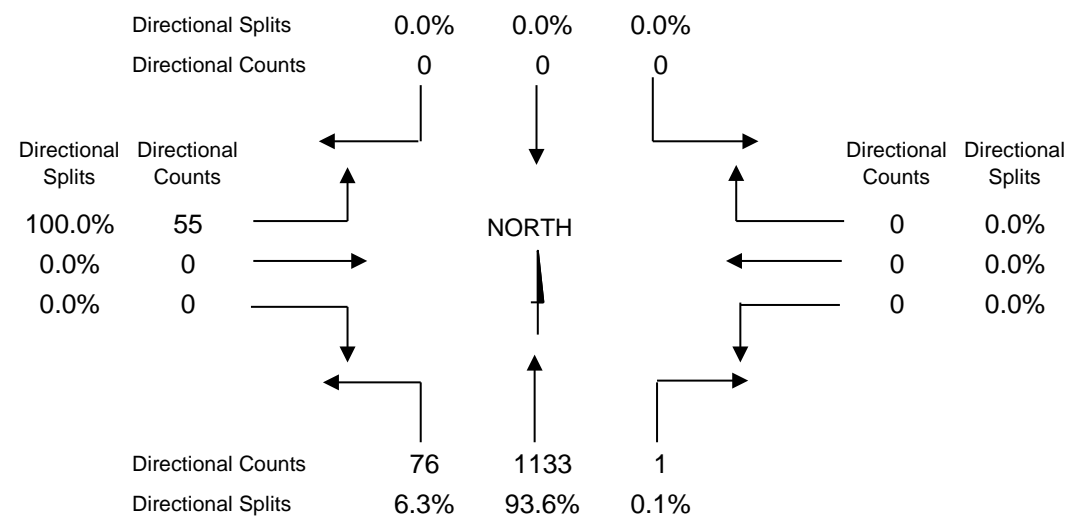
76	1133	1	0	0	0	55	0	0	0	0	0	1265
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TRUCK PERCENTAGES

2%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**St. Joseph & Washington
7:15 - 8:15 AM**



OVERALL PHF = 0.80



TRAFFIC VOLUMES

INTERSECTION: **St. Joseph & Washington**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	St. Joseph			St. Joseph			Washington			Washington				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↙	↘	→	↖	↗	←	↖		
03:00PM	23	254	0	0	0	0	31	0	0	0	0	0	308	1316
03:15PM	20	287	0	0	0	0	17	0	0	0	2	1	327	1356
03:30PM	24	293	0	0	0	0	26	0	0	0	1	1	345	1363
03:45PM	21	284	0	0	0	0	28	0	0	0	1	2	336	1441
04:00PM	15	301	0	0	0	0	32	0	0	0	0	0	348	1460
04:15PM	14	284	0	0	0	0	36	0	0	0	0	0	334	1565
04:30PM	26	348	0	0	0	0	49	0	0	0	0	0	423	1659
04:45PM	16	303	0	0	0	0	35	0	0	0	0	1	355	1582
05:00PM	20	368	0	0	0	0	65	0	0	0	0	0	453	1525
05:15PM	17	363	0	0	0	0	48	0	0	0	0	0	428	1355
05:30PM	16	297	0	0	0	0	33	0	0	0	0	0	346	1182
05:45PM	16	254	0	0	0	0	28	0	0	0	0	0	298	1113
06:00PM	12	247	0	0	0	0	23	0	0	0	1	0	283	1023
06:15PM	8	232	0	0	0	0	15	0	0	0	0	0	255	--
06:30PM	15	233	0	0	0	0	29	0	0	0	0	0	277	--
06:45PM	6	189	0	0	0	0	13	0	0	0	0	0	208	--

NB			SB			EB			WB			TOTAL
St. Joseph			St. Joseph			Washington			Washington			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

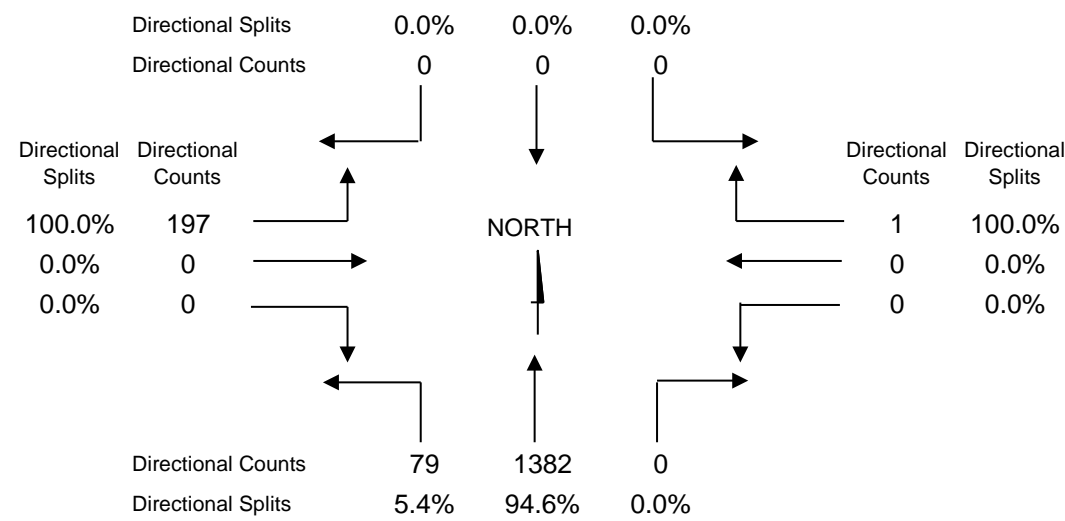
79	1382	0	0	0	0	197	0	0	0	0	1	1659
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TRUCK PERCENTAGES

3%	2%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**St. Joseph & Washington
4:30 - 5:30 PM**



OVERALL PHF = 0.92



TRAFFIC VOLUMES

INTERSECTION: **St. Joseph & Jefferson**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	St. Joseph			St. Joseph			Jefferson			Jefferson				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↙	↘	→	↖	↗	←	↖		
06:00AM	3	85	1	0	0	0	2	1	0	0	1	0	93	700
06:15AM	3	148	1	0	0	0	3	0	0	0	0	0	155	778
06:30AM	7	216	1	0	0	0	4	1	0	0	0	0	229	893
06:45AM	9	202	2	0	0	0	8	1	0	0	0	1	223	1018
07:00AM	13	150	4	0	0	0	2	1	0	0	1	0	171	1247
07:15AM	15	233	8	0	0	0	9	5	0	0	0	0	270	1403
07:30AM	24	311	6	0	0	0	6	7	0	0	0	0	354	1424
07:45AM	33	377	14	0	0	0	8	18	0	0	1	1	452	1373
08:00AM	30	265	12	0	0	0	14	2	0	0	3	1	327	1246
08:15AM	22	225	14	0	0	0	15	8	0	0	4	3	291	1182
08:30AM	25	254	5	0	0	0	10	8	0	0	1	0	303	1144
08:45AM	30	262	12	0	0	0	13	6	0	0	0	2	325	1118
09:00AM	18	204	7	0	0	0	25	6	0	0	1	2	263	1035
09:15AM	15	200	4	0	0	0	23	4	0	0	3	4	253	--
09:30AM	16	238	3	0	0	0	14	2	0	0	2	2	277	--
09:45AM	15	196	8	0	0	0	14	5	0	0	2	2	242	--

NB			SB			EB			WB			TOTAL
St. Joseph			St. Joseph			Jefferson			Jefferson			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

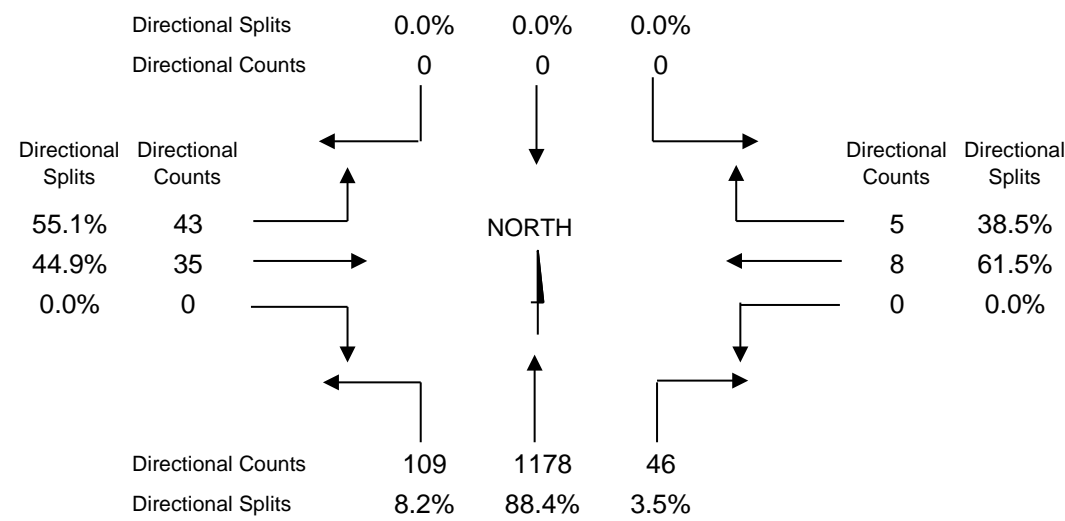
109	1178	46	0	0	0	43	35	0	0	8	5	1424
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TRUCK PERCENTAGES

0%	3%	0%	0%	0%	0%	3%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**St. Joseph & Jefferson
7:30 - 8:30 AM**



OVERALL PHF = 0.79



TRAFFIC VOLUMES

INTERSECTION: **St. Joseph & Jefferson**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	St. Joseph			St. Joseph			Jefferson			Jefferson				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↙	↓	↘	↖	→	↗	↖	←	↘		
03:00PM	14	256	2	0	0	0	30	2	0	0	5	4	313	1332
03:15PM	11	290	4	0	0	0	17	2	0	0	4	2	330	1412
03:30PM	13	295	3	0	0	0	22	3	0	0	1	6	343	1428
03:45PM	15	277	10	0	0	0	31	5	0	0	2	6	346	1501
04:00PM	17	301	23	0	0	0	37	2	0	0	5	8	393	1527
04:15PM	17	284	12	0	0	0	25	0	0	0	5	3	346	1569
04:30PM	16	334	17	0	0	0	35	3	0	0	5	6	416	1599
04:45PM	11	285	12	0	0	0	43	3	0	0	9	9	372	1511
05:00PM	19	332	6	0	0	0	47	2	0	0	8	21	435	1440
05:15PM	10	306	9	0	0	0	32	0	0	0	9	10	376	1279
05:30PM	11	272	6	0	0	0	26	0	0	0	2	11	328	1156
05:45PM	9	237	4	0	0	0	19	7	0	0	15	10	301	1061
06:00PM	9	221	2	0	0	0	18	1	0	0	9	14	274	954
06:15PM	6	202	8	0	0	0	20	1	0	0	12	4	253	--
06:30PM	3	195	1	0	0	0	13	1	0	0	2	18	233	--
06:45PM	2	173	1	0	0	0	17	1	0	0	0	0	194	--

NB			SB			EB			WB			TOTAL
St. Joseph			St. Joseph			Jefferson			Jefferson			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

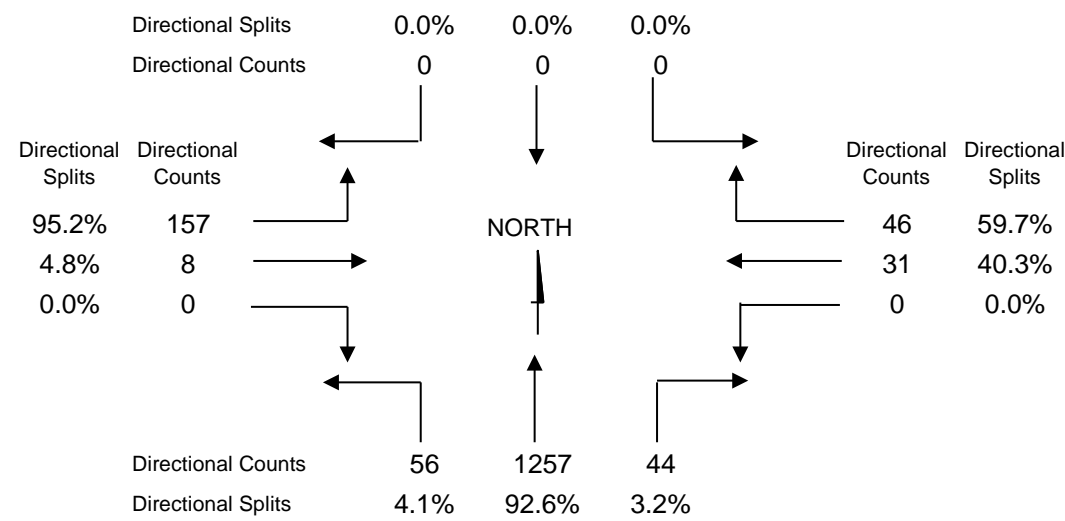
56	1257	44	0	0	0	157	8	0	0	31	46	1599
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TRUCK PERCENTAGES

0%	2%	3%	0%	0%	0%	0%	0%	0%	0%	3%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**St. Joseph & Jefferson
4:30 - 5:30 PM**



OVERALL PHF = 0.92

TRAFFIC VOLUMES

INTERSECTION: **St. Joseph & Wayne**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	St. Joseph			St. Joseph			Wayne			Wayne				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↶	↷	↓	↵	↷	→	↶	↶	←	↷		
06:00AM	1	96	6	0	0	0	1	5	0	0	7	1	117	834
06:15AM	4	141	11	0	0	0	0	5	0	0	10	4	175	955
06:30AM	0	217	19	0	0	0	0	8	0	0	18	8	270	1123
06:45AM	5	201	21	0	0	0	1	5	0	0	29	10	272	1301
07:00AM	11	157	22	0	0	0	1	8	0	0	23	16	238	1578
07:15AM	14	238	24	0	0	0	1	7	0	0	38	21	343	1777
07:30AM	16	312	33	0	0	0	2	13	0	0	43	29	448	1792
07:45AM	24	387	34	0	0	0	9	12	0	0	48	35	549	1732
08:00AM	14	292	30	0	0	0	1	22	0	0	53	25	437	1588
08:15AM	10	217	31	0	0	0	4	17	0	0	46	33	358	1465
08:30AM	10	258	30	0	0	0	6	10	0	0	49	25	388	1392
08:45AM	7	268	22	0	0	0	4	19	0	0	51	34	405	1334
09:00AM	6	208	23	0	0	0	7	15	0	0	39	16	314	1230
09:15AM	8	191	29	0	0	0	10	11	0	0	26	10	285	--
09:30AM	6	238	28	0	0	0	3	8	0	0	34	13	330	--
09:45AM	7	194	30	0	0	0	2	12	0	0	35	21	301	--

NB			SB			EB			WB			TOTAL
St. Joseph			St. Joseph			Wayne			Wayne			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

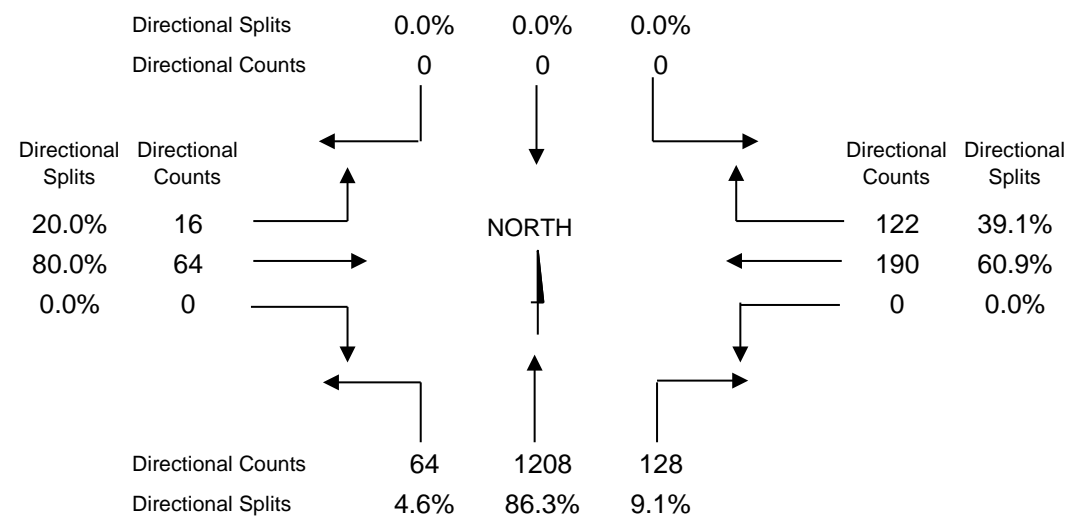
64	1208	128	0	0	0	16	64	0	0	190	122	1792
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TRUCK PERCENTAGES

2%	3%	2%	0%	0%	0%	13%	2%	0%	0%	1%	1%
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YEAR 2014 PEAK HOUR TRAFFIC

**St. Joseph & Wayne
7:30 - 8:30 AM**



OVERALL PHF = 0.82



TRAFFIC VOLUMES

INTERSECTION: **St. Joseph & Wayne**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	St. Joseph			St. Joseph			Wayne			Wayne				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↙	↘	→	↖	↗	←	↖		
03:00PM	6	251	38	0	0	0	13	13	0	0	49	12	382	1648
03:15PM	8	272	43	0	0	0	10	19	0	0	40	20	412	1763
03:30PM	6	287	43	0	0	0	7	16	0	0	48	20	427	1772
03:45PM	6	280	44	0	0	0	13	28	0	0	43	13	427	1898
04:00PM	6	319	47	0	0	0	14	51	0	0	39	21	497	1959
04:15PM	14	276	41	0	0	0	11	21	0	0	38	20	421	1992
04:30PM	6	341	44	0	0	0	16	61	0	0	64	21	553	2033
04:45PM	4	297	51	0	0	0	10	48	0	0	51	27	488	1907
05:00PM	5	338	45	0	0	0	25	56	0	0	46	15	530	1790
05:15PM	6	284	43	0	0	0	11	45	0	0	50	23	462	1619
05:30PM	1	266	40	0	0	0	11	40	0	0	56	13	427	1491
05:45PM	2	220	31	0	0	0	17	33	0	0	53	15	371	1393
06:00PM	2	227	36	0	0	0	7	17	0	0	54	16	359	1295
06:15PM	6	203	37	0	0	0	7	13	0	0	59	9	334	--
06:30PM	3	202	37	0	0	0	3	12	0	0	59	13	329	--
06:45PM	8	172	22	0	0	0	4	11	0	0	45	11	273	--

NB			SB			EB			WB			TOTAL
St. Joseph			St. Joseph			Wayne			Wayne			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

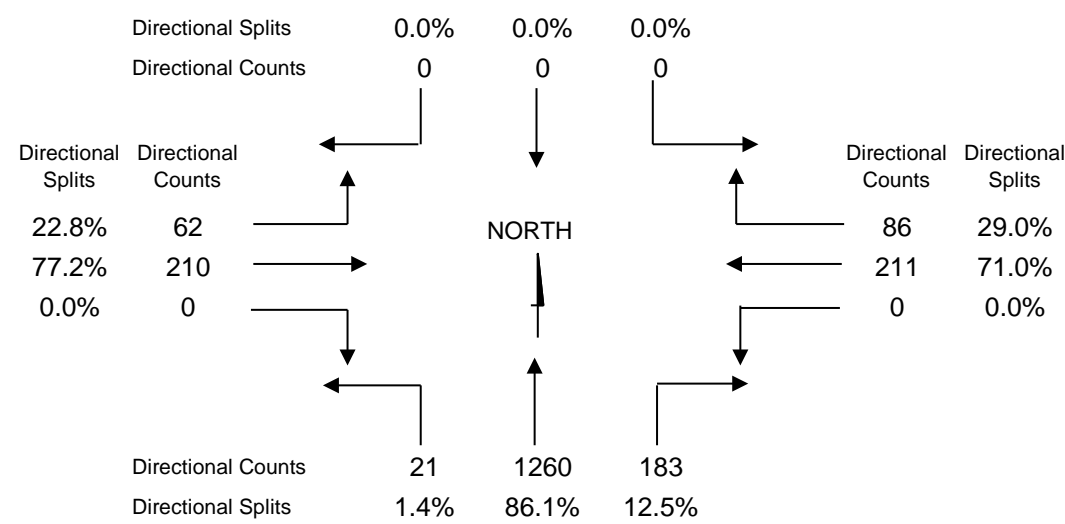
21	1260	183	0	0	0	62	210	0	0	211	86	2033
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TRUCK PERCENTAGES

0%	2%	1%	0%	0%	0%	0%	0%	0%	0%	1%	1%
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YEAR 2014 PEAK HOUR TRAFFIC

**St. Joseph & Wayne
4:30 - 5:30 PM**



OVERALL PHF = 0.92



TRAFFIC VOLUMES

INTERSECTION: **St. Joseph & Western**

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	St. Joseph			St. Joseph			Western			Western				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↙	↘	→	↖	↗	←	↖		
06:00AM	7	92	0	0	0	0	11	0	0	0	0	1	111	822
06:15AM	18	128	0	0	0	0	25	1	0	0	1	1	174	923
06:30AM	18	205	2	0	0	0	36	4	0	0	2	0	267	1071
06:45AM	33	206	5	0	0	0	21	5	0	0	0	0	270	1238
07:00AM	22	152	1	0	0	0	29	5	0	0	1	2	212	1508
07:15AM	22	243	3	0	0	0	37	14	0	0	1	2	322	1694
07:30AM	36	315	5	0	0	0	52	24	0	0	1	1	434	1685
07:45AM	48	403	9	0	0	0	48	26	0	0	1	5	540	1608
08:00AM	35	264	13	0	0	0	44	31	0	0	4	7	398	1438
08:15AM	33	212	6	0	0	0	41	12	0	0	3	6	313	1328
08:30AM	35	260	4	0	0	0	42	9	0	0	3	4	357	1267
08:45AM	48	245	1	0	0	0	43	20	0	0	5	8	370	1230
09:00AM	43	182	2	0	0	0	47	8	0	0	1	5	288	1133
09:15AM	22	177	1	0	0	0	40	3	0	0	3	6	252	--
09:30AM	32	234	2	0	0	0	38	7	0	0	4	3	320	--
09:45AM	30	198	1	0	0	0	31	6	0	0	2	5	273	--

NB			SB			EB			WB			TOTAL
St. Joseph			St. Joseph			Western			Western			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

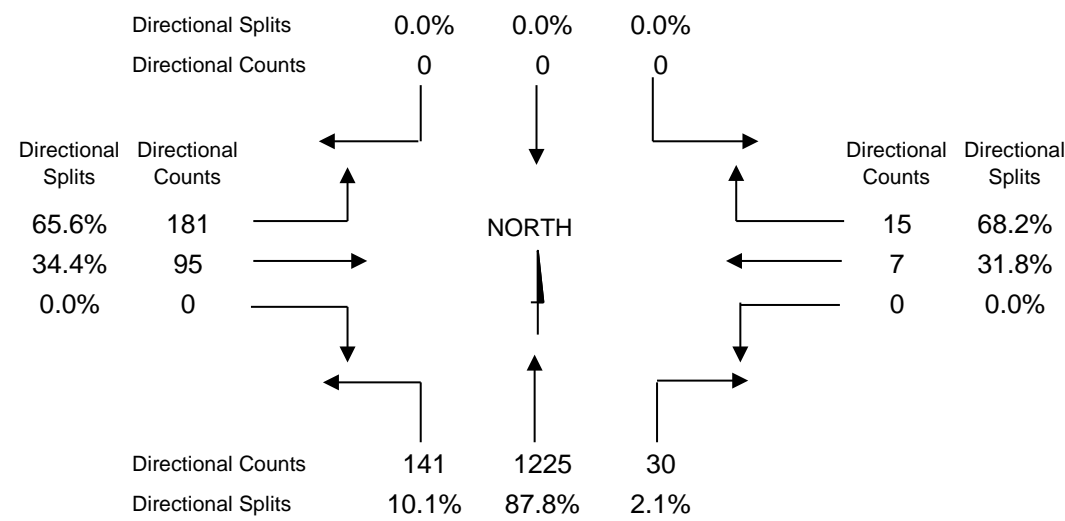
141	1225	30	0	0	0	181	95	0	0	7	15	1694
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TRUCK PERCENTAGES

1%	3%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**St. Joseph & Western
7:15 - 8:15 AM**



OVERALL PHF = 0.78



TRAFFIC VOLUMES

INTERSECTION: **St. Joseph & Western**

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	St. Joseph			St. Joseph			Western			Western				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↖	↓	↙	↘	→	↖	↗	←	↖		
03:00PM	38	228	4	0	0	0	57	8	0	0	4	1	340	1488
03:15PM	30	241	1	0	0	0	66	7	0	0	5	7	357	1544
03:30PM	41	292	1	0	0	0	43	9	0	0	3	8	397	1572
03:45PM	39	271	0	0	0	0	62	10	0	0	3	9	394	1628
04:00PM	41	249	3	0	0	0	74	8	0	0	9	12	396	1614
04:15PM	39	259	1	0	0	0	52	17	0	0	4	13	385	1669
04:30PM	38	326	3	0	0	0	58	13	0	0	6	9	453	1694
04:45PM	32	247	3	0	0	0	58	14	0	0	9	17	380	1613
05:00PM	31	291	0	0	0	0	59	15	0	0	22	33	451	1535
05:15PM	48	236	2	0	0	0	69	17	0	0	19	19	410	1384
05:30PM	38	248	2	0	0	0	50	10	0	0	11	13	372	1253
05:45PM	37	196	0	0	0	0	51	7	0	0	6	5	302	1181
06:00PM	35	198	0	0	0	0	52	5	0	0	6	4	300	1114
06:15PM	28	200	2	0	0	0	39	3	0	0	3	4	279	--
06:30PM	34	198	2	0	0	0	48	7	0	0	6	5	300	--
06:45PM	24	169	1	0	0	0	29	7	0	0	4	1	235	--

NB			SB			EB			WB			TOTAL
St. Joseph			St. Joseph			Western			Western			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

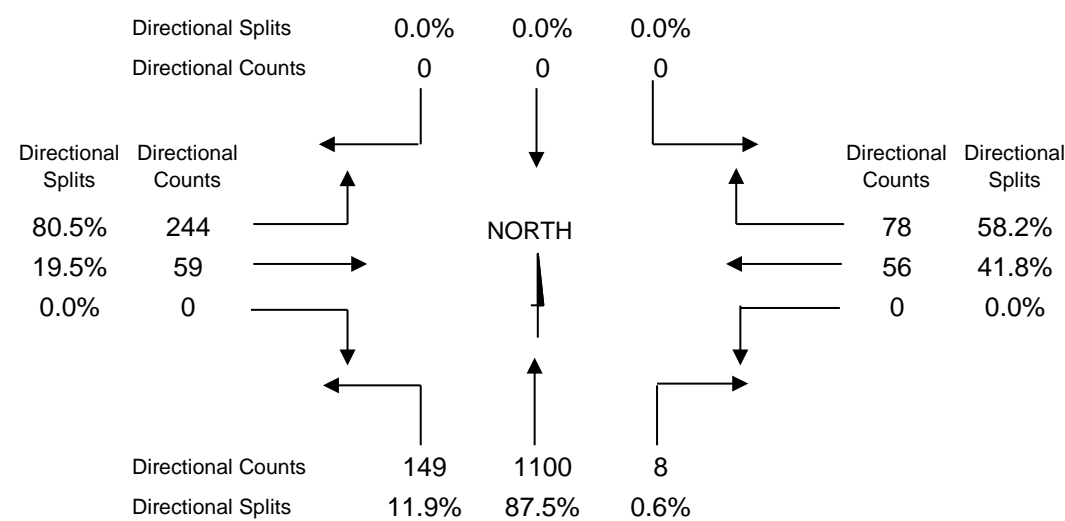
149	1100	8	0	0	0	244	59	0	0	56	78	1694
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TRUCK PERCENTAGES

2%	2%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**St. Joseph & Western
4:30 - 5:30 PM**



OVERALL PHF = 0.93

TRAFFIC VOLUMES

INTERSECTION: Chapin & Lincoln Way

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Chapin			Chapin			Lincoln Way			Lincoln Way				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↶	↷	↓	↵	↷	→	↶	↶	←	↷		
06:00AM	3	2	4	1	2	1	2	52	2	4	49	0	122	709
06:15AM	2	12	6	0	2	0	2	57	3	3	53	0	140	784
06:30AM	7	11	7	1	6	2	4	79	8	7	88	0	220	913
06:45AM	13	13	6	0	10	1	3	77	4	9	91	0	227	1025
07:00AM	10	8	8	0	10	1	3	86	7	10	54	0	197	1163
07:15AM	4	15	6	1	11	3	2	125	5	5	92	0	269	1239
07:30AM	6	13	13	2	18	5	5	151	3	2	114	0	332	1221
07:45AM	11	20	11	2	14	3	8	158	12	14	112	0	365	1169
08:00AM	6	10	7	0	10	1	6	137	5	8	83	0	273	1099
08:15AM	16	12	8	0	10	2	3	108	13	3	76	0	251	1063
08:30AM	14	7	14	0	7	6	6	122	7	7	90	0	280	1055
08:45AM	10	14	3	2	9	7	4	140	13	12	79	2	295	1041
09:00AM	5	10	6	0	11	2	1	108	6	7	79	2	237	1026
09:15AM	8	5	8	3	4	2	3	86	12	13	97	2	243	--
09:30AM	10	6	7	1	11	2	6	117	9	5	92	0	266	--
09:45AM	8	11	8	2	10	6	8	121	7	11	87	1	280	--
	133	169	122	15	145	44	66	1724	116	120	1336	7	3997	13507

NB			SB			EB			WB			TOTAL
Chapin			Chapin			Lincoln Way			Lincoln Way			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

2014 PEAK HOUR VOLUMES

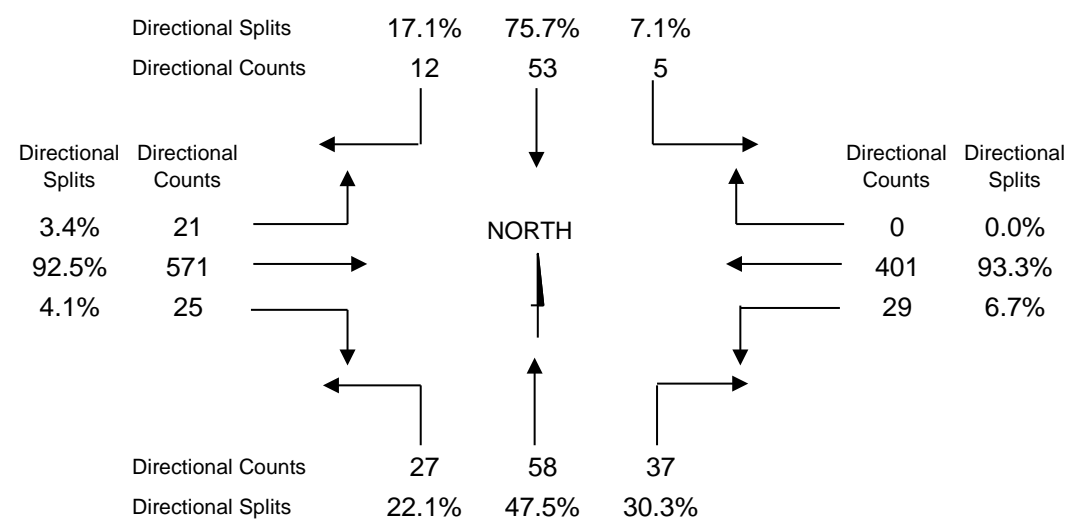
27	58	37	5	53	12	21	571	25	29	401	0	1239
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TRUCK PERCENTAGES

15%	4%	0%	0%	6%	0%	0%	4%	20%	4%	3%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Chapin & Lincoln Way
7:15 - 8:15 AM**



OVERALL PHF = 0.85



TRAFFIC VOLUMES

INTERSECTION: Chapin & Lincoln Way

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Chapin			Chapin			Lincoln Way			Lincoln Way				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↗	↙	↓	↘	↖	→	↗	↖	←	↘		
03:00PM	14	17	12	1	15	15	2	147	15	15	168	2	423	1657
03:15PM	15	11	18	3	7	10	5	131	17	12	143	0	372	1650
03:30PM	12	23	7	3	26	17	5	174	17	22	151	0	457	1688
03:45PM	15	11	12	3	26	11	2	159	17	13	135	1	405	1634
04:00PM	17	12	8	0	16	12	3	154	17	14	162	1	416	1631
04:15PM	19	8	8	0	14	9	4	140	6	19	183	0	410	1654
04:30PM	21	10	8	1	16	18	2	149	12	15	151	0	403	1662
04:45PM	15	18	13	2	8	16	4	140	15	11	160	0	402	1648
05:00PM	15	15	14	5	18	15	4	153	11	15	173	1	439	1570
05:15PM	12	16	8	2	9	17	4	136	8	17	187	2	418	1440
05:30PM	19	13	9	3	14	6	3	138	10	14	158	2	389	1350
05:45PM	15	19	7	0	7	9	2	99	12	12	140	2	324	1249
06:00PM	14	11	9	3	7	7	5	119	14	11	106	3	309	1186
06:15PM	10	18	8	1	9	10	8	104	18	11	129	2	328	--
06:30PM	8	11	6	2	6	7	6	95	12	16	119	0	288	--
06:45PM	5	15	6	1	4	10	4	87	9	12	108	0	261	--
	226	228	153	30	202	189	63	2125	210	229	2373	16	6044	20019

NB			SB			EB			WB			TOTAL
Chapin			Chapin			Lincoln Way			Lincoln Way			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	
63	54	35	6	82	49	14	627	57	68	631	2	1688

2014 PEAK HOUR VOLUMES

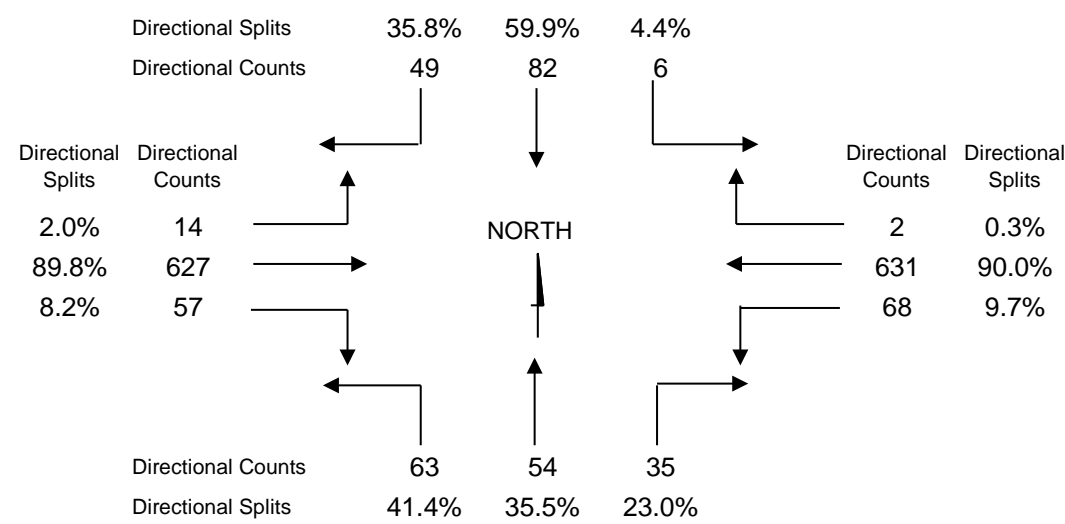
63	54	35	6	82	49	14	627	57	68	631	2	1688
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TRUCK PERCENTAGES

5%	0%	3%	0%	10%	0%	0%	2%	6%	2%	2%	0%
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YEAR 2014 PEAK HOUR TRAFFIC

**Chapin & Lincoln Way
3:30 - 4:30 PM**



OVERALL PHF = 0.92



TRAFFIC VOLUMES

INTERSECTION: William & Lincoln Way

DATA DATE: 7/29/2014 **DURATION:** 6:00 AM - 10:00 AM

VEHICLES - TOTAL **AM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	William			William			Lincoln Way			Lincoln Way				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
	←	↑	↶	↷	↓	↵	↷	→	↶	↶	←	↷		
06:00AM	3	1	0	9	1	7	8	46	3	4	49	11	142	773
06:15AM	3	1	0	11	1	10	9	50	3	4	53	10	155	850
06:30AM	4	0	0	20	1	22	8	76	3	5	102	9	250	1002
06:45AM	4	0	0	18	1	24	12	68	3	3	82	11	226	1153
07:00AM	4	0	0	24	1	17	8	82	4	4	66	9	219	1333
07:15AM	3	1	0	36	1	29	15	114	4	3	87	14	307	1448
07:30AM	3	1	0	50	1	34	18	144	3	4	121	22	401	1436
07:45AM	4	0	0	50	1	39	15	152	3	4	122	16	406	1370
08:00AM	4	0	0	51	2	31	10	130	3	4	88	11	334	1316
08:15AM	3	1	0	48	2	29	12	101	3	4	78	14	295	1257
08:30AM	3	1	0	44	1	27	18	116	3	4	95	23	335	1243
08:45AM	3	1	0	47	2	32	29	113	3	4	85	33	352	1211
09:00AM	3	1	0	30	1	24	16	95	3	4	82	16	275	1163
09:15AM	3	1	0	24	1	25	16	79	3	4	104	21	281	--
09:30AM	3	1	0	34	1	26	13	109	4	3	94	15	303	--
09:45AM	3	1	0	34	1	25	20	109	4	3	85	19	304	--

NB			SB			EB			WB			TOTAL
William			William			Lincoln Way			Lincoln Way			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

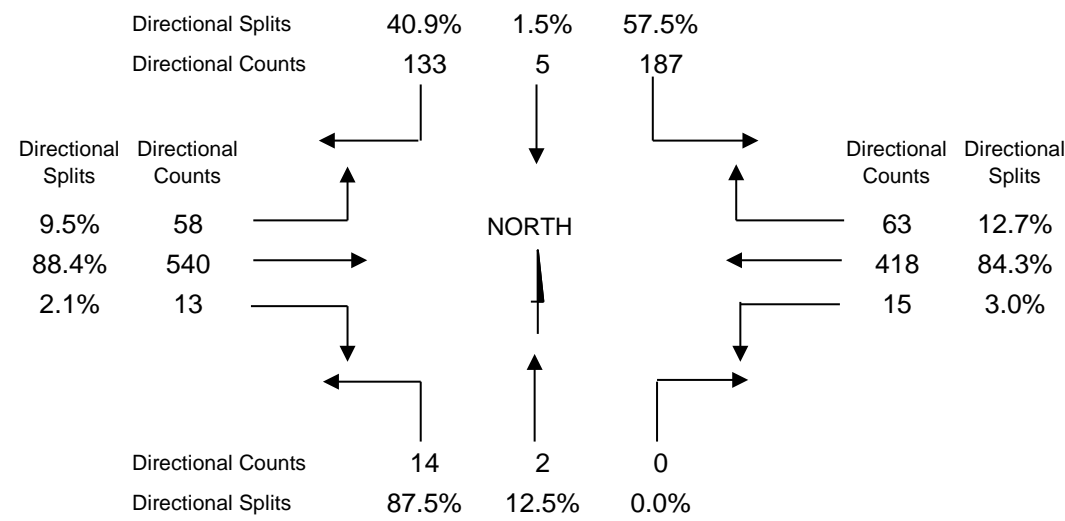
2014 PEAK HOUR VOLUMES

14	2	0	187	5	133	58	540	13	15	418	63	1448
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TRUCK PERCENTAGES

0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC
William & Lincoln Way
7:15 - 8:15 AM



OVERALL PHF = 0.89

TRAFFIC VOLUMES

INTERSECTION: William & Lincoln Way

DATA DATE: 7/29/2014 **DURATION:** 3:00 PM - 7:00 PM

VEHICLES - TOTAL **PM Peak**

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	William			William			Lincoln Way			Lincoln Way				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	3	1	0	33	1	34	24	134	3	4	160	27	424	1750
03:15PM	3	1	0	36	1	35	29	120	3	4	144	37	413	1784
03:30PM	3	1	0	40	1	33	22	158	4	4	163	27	456	1790
03:45PM	3	1	0	43	1	33	33	137	3	4	152	47	457	1789
04:00PM	3	1	0	46	1	45	32	126	3	4	155	42	458	1745
04:15PM	3	1	0	32	1	41	33	112	3	4	155	34	419	1795
04:30PM	3	1	0	43	1	42	40	117	3	4	150	51	455	1827
04:45PM	3	1	0	38	1	39	31	121	3	4	137	35	413	1831
05:00PM	3	1	0	40	1	44	43	126	3	5	183	59	508	1766
05:15PM	3	1	0	29	1	41	38	105	3	5	179	46	451	1646
05:30PM	3	1	0	44	1	44	32	116	3	4	166	45	459	1539
05:45PM	3	1	0	29	1	36	22	82	2	3	138	31	348	1407
06:00PM	3	1	0	46	2	40	28	101	3	3	123	38	388	1347
06:15PM	3	1	0	33	1	38	24	86	2	3	123	30	344	--
06:30PM	3	1	0	30	1	37	19	81	3	3	125	24	327	--
06:45PM	3	1	0	24	1	31	22	70	3	4	105	24	288	--

NB			SB			EB			WB			TOTAL
William			William			Lincoln Way			Lincoln Way			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

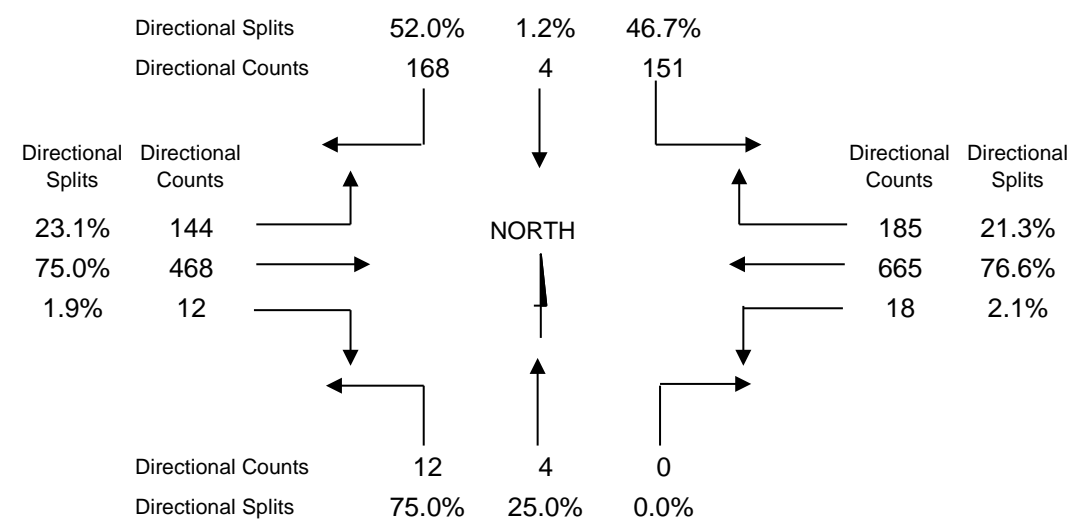
2014 PEAK HOUR VOLUMES

12	4	0	151	4	168	144	468	12	18	665	185	1831
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TRUCK PERCENTAGES

0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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YEAR 2014 PEAK HOUR TRAFFIC
William & Lincoln Way
4:45 - 5:45 PM



OVERALL PHF = 0.90

TRAFFIC VOLUMES

INTERSECTION: Lafayette & Bartlett

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Bartlett			Bartlett				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	0	3	1	2	2	0	0	0	0	2	0	9	19	195
06:15AM	0	13	9	5	5	0	0	0	0	8	0	11	51	220
06:30AM	0	8	15	7	7	0	0	0	0	10	0	5	52	238
06:45AM	0	32	5	2	16	0	0	0	0	10	0	8	73	294
07:00AM	0	13	5	2	7	0	0	0	0	10	0	7	44	353
07:15AM	0	24	5	3	15	0	0	0	0	12	0	10	69	397
07:30AM	0	28	8	2	28	0	0	0	0	33	0	9	108	403
07:45AM	0	32	14	4	31	0	0	0	0	39	0	12	132	388
08:00AM	0	32	0	0	26	0	0	0	0	21	0	9	88	349
08:15AM	0	22	8	3	15	0	0	0	0	19	0	8	75	261
08:30AM	0	29	4	1	15	0	0	0	0	31	0	13	93	186
08:45AM	0	27	7	3	26	0	0	0	0	21	0	9	93	93
09:00AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:15AM	0	0	0	0	0	0	0	0	0	0	0	0	0	--
09:30AM	0	0	0	0	0	0	0	0	0	0	0	0	0	--
09:45AM	0	0	0	0	0	0	0	0	0	0	0	0	0	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Bartlett			Bartlett			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

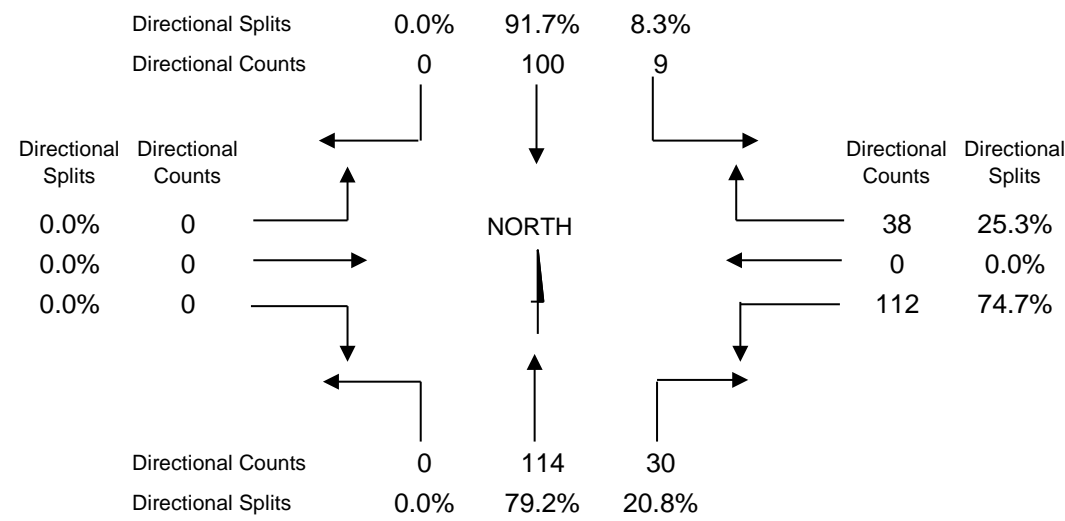
2014 PEAK HOUR VOLUMES

0	114	30	9	100	0	0	0	0	112	0	38	403
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TRUCK PERCENTAGES

0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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**YEAR 2014 PEAK HOUR TRAFFIC
Lafayette & Bartlett
7:30 - 8:30 AM**



OVERALL PHF = 0.76

TRAFFIC VOLUMES

INTERSECTION: Lafayette & Bartlett

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Lafayette			Lafayette			Bartlett			Bartlett				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	0	44	2	0	11	0	0	0	0	27	0	14	98	420
03:15PM	0	38	2	0	9	0	0	0	0	30	0	19	98	422
03:30PM	0	40	5	2	15	0	0	0	0	29	0	23	114	417
03:45PM	0	33	9	3	14	0	0	0	0	28	0	23	110	421
04:00PM	0	43	6	1	7	0	0	0	0	26	0	17	100	426
04:15PM	0	24	9	4	13	0	0	0	0	23	0	20	93	454
04:30PM	0	58	0	0	14	0	0	0	0	22	0	24	118	470
04:45PM	0	43	9	3	12	0	0	0	0	24	0	24	115	441
05:00PM	0	65	3	1	7	0	0	0	0	18	0	34	128	396
05:15PM	0	55	1	0	11	0	0	0	0	15	0	27	109	--
05:30PM	0	44	2	1	9	0	0	0	0	13	0	20	89	--
05:45PM	0	41	0	0	9	0	0	0	0	9	0	11	70	--
06:00PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15PM	0	0	0	0	0	0	0	0	0	0	0	0	0	--
06:30PM	0	0	0	0	0	0	0	0	0	0	0	0	0	--
06:45PM	0	0	0	0	0	0	0	0	0	0	0	0	0	--

NB			SB			EB			WB			TOTAL
Lafayette			Lafayette			Bartlett			Bartlett			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

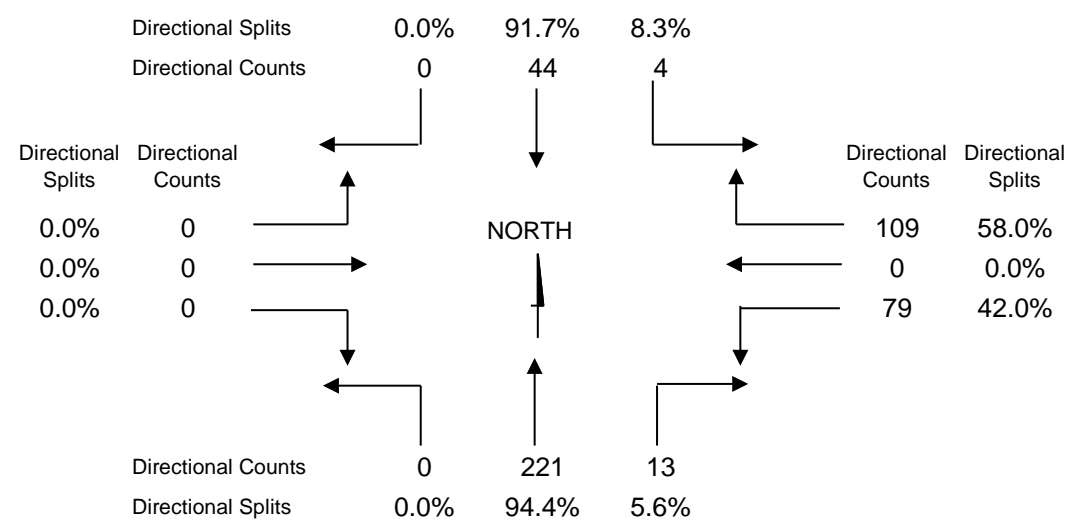
2014 PEAK HOUR VOLUMES

0	221	13	4	44	0	0	0	0	79	0	109	470
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TRUCK PERCENTAGES

0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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**YEAR 2014 PEAK HOUR TRAFFIC
Lafayette & Bartlett
4:30 - 5:30 PM**



OVERALL PHF = 0.92

TRAFFIC VOLUMES

INTERSECTION: Michigan & Western

DATA DATE: 7/29/2014 DURATION: 6:00 AM - 10:00 AM

VEHICLES - TOTAL AM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Western			Western				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
06:00AM	0	0	0	2	0	1	3	9	0	0	5	2	22	212
06:15AM	0	0	0	2	0	1	2	28	0	0	17	2	52	256
06:30AM	0	0	0	3	0	1	4	38	0	0	16	4	66	295
06:45AM	0	0	0	5	0	4	7	23	0	0	25	8	72	356
07:00AM	0	0	0	2	0	2	5	34	0	0	19	4	66	425
07:15AM	0	0	0	8	0	3	9	48	0	0	16	7	91	484
07:30AM	0	0	0	10	0	3	8	69	0	0	27	10	127	494
07:45AM	0	0	0	7	0	3	16	66	0	0	31	18	141	474
08:00AM	0	0	0	3	0	1	14	68	0	0	24	15	125	477
08:15AM	0	0	0	9	0	4	14	38	0	0	19	17	101	459
08:30AM	0	0	0	7	0	4	12	46	0	0	25	13	107	442
08:45AM	0	0	0	9	0	6	14	62	0	0	40	13	144	437
09:00AM	0	0	0	6	0	4	13	40	0	0	29	15	107	385
09:15AM	0	0	0	9	0	5	10	34	0	0	17	9	84	--
09:30AM	0	0	0	7	0	6	11	42	0	0	28	8	102	--
09:45AM	0	0	0	5	0	3	12	40	0	0	22	10	92	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Western			Western			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

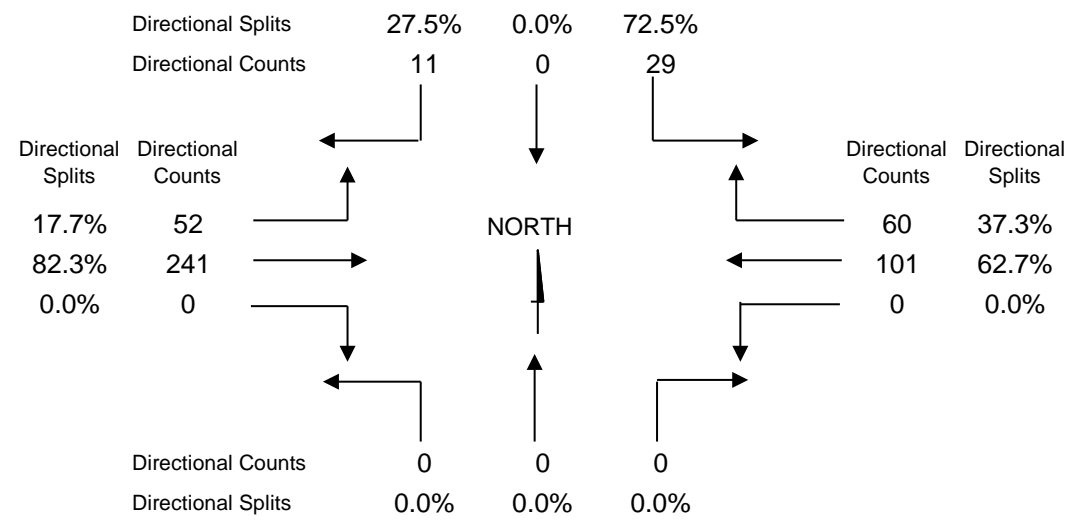
2014 PEAK HOUR VOLUMES

0	0	0	29	0	11	52	241	0	0	101	60	494
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TRUCK PERCENTAGES

0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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**YEAR 2014 PEAK HOUR TRAFFIC
Michigan & Western
7:30 - 8:30 AM**



OVERALL PHF = 0.88

TRAFFIC VOLUMES

INTERSECTION: Michigan & Western

DATA DATE: 7/29/2014 DURATION: 3:00 PM - 7:00 PM

VEHICLES - TOTAL PM Peak

TIME BEGIN	NB			SB			EB			WB			INTERVAL TOTAL	HOUR TOTAL
	Michigan			Michigan			Western			Western				
	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT		
03:00PM	0	0	0	11	0	7	12	47	0	0	30	12	119	491
03:15PM	0	0	0	7	0	3	15	60	0	0	23	12	120	514
03:30PM	0	0	0	7	0	5	14	45	0	0	30	14	115	524
03:45PM	0	0	0	10	0	6	13	65	0	0	32	11	137	539
04:00PM	0	0	0	7	0	5	17	62	0	0	37	14	142	532
04:15PM	0	0	0	8	0	4	17	58	0	0	28	15	130	522
04:30PM	0	0	0	10	0	8	14	54	0	0	33	11	130	556
04:45PM	0	0	0	10	0	7	14	58	0	0	30	11	130	545
05:00PM	0	0	0	9	0	8	12	50	0	0	42	11	132	528
05:15PM	0	0	0	10	0	8	15	64	0	0	53	14	164	503
05:30PM	0	0	0	6	0	5	8	51	0	0	41	8	119	425
05:45PM	0	0	0	5	0	5	7	53	0	0	37	6	113	415
06:00PM	0	0	0	9	0	8	9	40	0	0	33	8	107	375
06:15PM	0	0	0	4	0	4	7	40	0	0	26	5	86	--
06:30PM	0	0	0	4	0	3	12	50	0	0	29	11	109	--
06:45PM	0	0	0	4	0	4	6	31	0	0	23	5	73	--

NB			SB			EB			WB			TOTAL
Michigan			Michigan			Western			Western			
LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	LEFT	THRU	RIGHT	

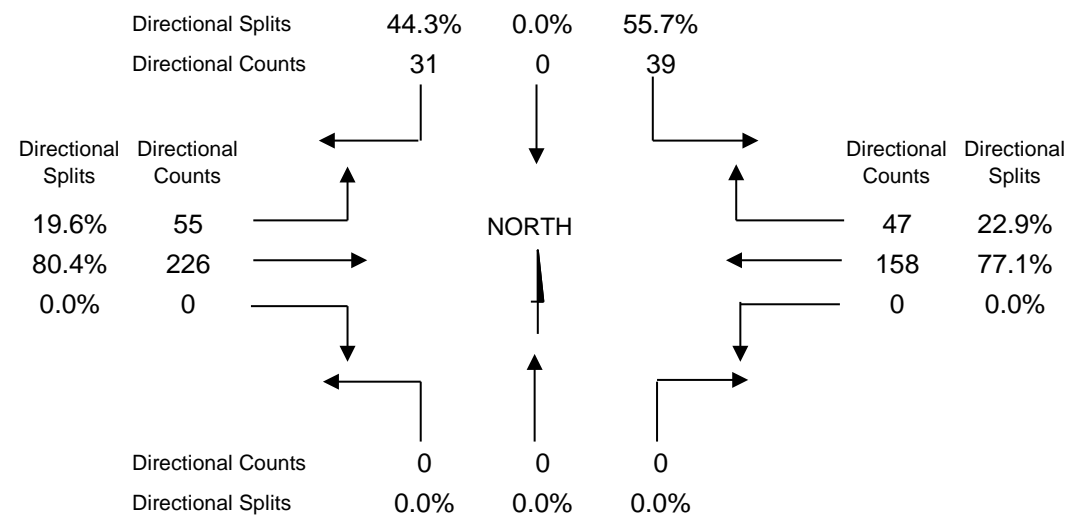
2014 PEAK HOUR VOLUMES

0	0	0	39	0	31	55	226	0	0	158	47	556
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TRUCK PERCENTAGES

0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
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**YEAR 2014 PEAK HOUR TRAFFIC
Michigan & Western
4:30 - 5:30 PM**



OVERALL PHF = 0.85

Cross Street		Williams		Lafayette		Main		Michigan		St Joe	
North Shore		X		X		X		X		X	
								29,392			
Bartlett		X		X		X		X		X	
Navarre		X		X		X		X		X	
								29,570			
Marion		X	1,687	X		X		X		X	
		7,178				14,044		13,837			
Madison		X	1,387	X		X		X		X	
						17,010					
LaSalle		X	18,816	X	17,782	X		X		X	16,142
						15,489				20,625	
Colfax	3,249	X	2,800	X		X		X		X	8,640
						19,308				22,206	
Washington		X		X		X		X		X	
		3,748		5,521				2,751			
Jefferson		X		X		X		X		X	
				6,988							
Wayne		X		X		X		X		X	5,934
						23,133				22,662	
Western		X	11,695	X	9,546	X		X		X	
						16,113					
Monroe		X		X		X		X	17,648	X	
						17,118		17,829			
South		X	1,038	X		X		X		X	
Bronson		X		X		X		X		X	
				2,833		16,180		14,196			
Sample	17,332	X		X	25,692	X	17,419	X	18,232	X	
						15,990		22,491			
Broadway		X		X		X		X		X	
Indiana		X		X	3,265	X	4,073	X	4,320	X	
Calvert		X		X		X		X		X	
Ewing		X		X	7,016	X		X	7,619	X	
						13,678					
Donmoyer		X		X		X		X		X	
						11,300					
Chippewa		X		X		X	11,671	X		X	
						5,350		24,017			
Ireland		X	9,518	X		X		X	1,886	X	

Cross Street		Williams		Lafayette		Main		Michigan		St Joe	
North Shore		X		X		X		X		X	
								29,101			
Bartlett		X		X		X		X		X	
Navarre		X		X		X		X		X	
								29,277			
Marion		X	1,670	X		X		X		X	
		7,107				13,905		13,700			
Madison		X	1,373	X		X		X		X	
						16,842					
LaSalle		X	18,630	X	17,606	X		X		X	
						15,336				20,421	
Colfax		X	2,772	X		X		X		X	8,554
						19,117				21,986	
Washington		X		X		X		X		X	
Jefferson		X		X		X		X		X	
				6,919							
Wayne		X		X		X		X		X	
						22,904				22,438	
Western		X	11,695	X	9,546	X		X		X	
						16,113					
Monroe		X		X		X		X	17,473	X	
						16,949		17,652			
South		X	1,028	X		X		X		X	
Bronson		X		X		X		X		X	
				2,805		16,020		14,055			
Sample	17,332	X		X	25,438	X	17,419	X	18,232	X	
						15,832		22,268			
Broadway		X		X		X		X		X	
Indiana		X		X		X	4,033	X		X	
Calvert		X		X		X		X		X	
Ewing		X		X		X		X		X	
						13,678					
Donmoyer		X		X		X		X		X	
						11,300					
Chippewa		X		X		X	11,555	X		X	
						5,095		22,873			
Ireland		X	9,424	X		X		X	1,886	X	

Year of Count: 2009 2013 2014

Cross Street		Williams		Lafayette		Main		Michigan		St Joe	
North Shore		X		X		X		X		X	
								29,392			
Bartlett		X		X		X		X		X	
Navarre		X		X		X		X		X	
								29,570			
Marion		X	1,687	X		X		X		X	
		7,178				14,044		13,837			
Madison		X	1,387	X		X		X		X	
						17,010					
LaSalle		X	18,816	X	17,782	X		X		X	
						15,489				20,625	
Colfax		X	2,800	X		X		X		X	8,640
						19,308				22,206	
Washington		X		X		X		X		X	
Jefferson		X		X		X		X		X	
				6,988							
Wayne		X		X		X		X		X	
						23,133				22,662	
Western		X	11,695	X	9,546	X		X		X	
						16,113					
Monroe		X		X		X		X	17,648	X	
						17,118		17,829			
South		X	1,038	X		X		X		X	
Bronson		X		X		X		X		X	
				2,833		16,180		14,196			
Sample	17,332	X		X	25,692	X	17,419	X	18,232	X	
						15,990		22,491			
Broadway		X		X		X		X		X	
Indiana		X		X		X	4,073	X		X	
Calvert		X		X		X		X		X	
Ewing		X		X		X		X		X	
						13,678					
Donmoyer		X		X		X		X		X	
						11,300					
Chippewa		X		X		X	11,671	X		X	
						5,350		24,017			
Ireland		X	9,518	X		X		X	1,886	X	

Annual Growth Rate 1%

Cross Street		Williams	Lafayette	Main		Michigan	St Joe	
North Shore		X	X	X		X	X	
Bartlett		X	X	X		X	X	
Navarre		X	X	X		X	X	
Marion		X	X	X		X	X	
Madison		X	X	X		X	X	
LaSalle		X	X	X		X	X	16,142
Colfax	3,249	X	X	X		X	X	
Washington		X	X	X		X	X	
Jefferson		3,748	5,521			2,751		
Wayne		X	X	X		X	X	5,934
Western		X	X	X		X	X	
Monroe		X	X	X		X	X	
South		X	X	X		X	X	
Bronson		X	X	X		X	X	
Sample		X	X	X		X	X	
Broadway		X	X	X		X	X	
Indiana		X	X	3,265	X	4,320	X	
Calvert		X	X	X		X	X	
Ewing		X	X	7,016	X	7,619	X	
Donmoyer		X	X	X		X	X	
Chippewa		X	X	X		X	X	
Ireland		X	X	X		X	X	



M E M O R A N D U M

DATE: September 22, 2014
TO: File
FROM:
RE: South Bend Downtown Two-Way Conversion Study: Truck Percentages
CC:

The intersection turning movement counts obtained for this study provided counts of trucks, from which truck percentages were calculated. These truck percentages were then compared to the truck percentages derived from the various classification counts collected by INDOT. The INDOT counts consistently showed a larger percentage of trucks than the turning movement counts on all study roadways. This is believed to have resulted from the truck classification system used by Miovision, in which vehicles are classified based on size as obtained from videos of the intersection.

The truck percentages obtained from the INDOT classification counts were considered to be a more accurate representation of the corridors. Since the INDOT truck percentages are larger than those from the turning movement counts, the INDOT counts are also considered to be more conservative and were therefore selected for use in the study.

INDOT classification counts were available at numerous locations along the most study roadways. Truck percentages at each count location varied somewhat. To normalize this variation, the average truck percentage for each north-south roadway was selected for use in the study. These percentages were assigned to all north-south movements.

Truck percentages along east-west streets tended to vary significantly more than those of the north-south streets. This is largely due to different land uses on either side of the Main St/ Michigan St corridor. As such, truck percentages for any given east-west street are not consistent through the study area. Where no classification counts were available for a given east-west street, the truck percentage from the nearest east-west street with classification counts and similar adjacent land uses were selected. These percentages were assigned to all east-west movements.

All truck percentages calculated from the INDOT classification counts are provided in the attached pages.

Cross Street	Williams	Lafayette	Main	Michigan	St Joe
North Shore	X	X	X	X	X
Bartlett	X	X	X	711681	X
Navarre	X	X	X	X	X
Marion	X	X	712203	X	X
Madison	X	71X514	X	711610	711600
LaSalle	X	U71110	X	X	X
Colfax	X	712202	X	X	X
Washington	X	X	711630	X	711580
Jefferson	X	X	X	X	X
Wayne	X	71W490	X	X	X
Western	X	71W604	X	X	711572
Monroe	X	X	X	X	X
South	X	X	711650	711571	X
Bronson	X	X	X	X	X
Sample	X	X	710896	X	710898
Broadway	X	X	712246	712245	X
Indiana	X	X	U71090	X	U71091
Calvert	X	X	X	X	X
Ewing	X	X	U71082	X	U71083
Donmoyer	X	X	X	X	U71077
Chippewa	X	X	U71075	X	X
Ireland	X	X	712130	71W534	U71015

Cross Street	Williams	Lafayette	Main	Michigan	St Joe
North Shore					
Bartlett				9%	
Navarre					
Marion			4%		
Madison	7%		7%	13%	
LaSalle	6%		6%		
Colfax		11%			14%
Washington	7%		14%		11%
Jefferson		8%			
Wayne					11%
Western	6%				
Monroe			12%	11%	
South					
Bronson					
Sample			20%		9%
Broadway			10%	11%	
Indiana			13%		11%
Calvert					
Ewing			25%		5%
Donmoyer					5%
Chippewa			4%		
Ireland			10%	9%	9%
	6%	9%	11%	11%	12%

Cross Street	Williams	Lafayette	Main	Michigan	St Joe
North Shore					
Bartlett				5%	
Navarre					
Marion			5%		
Madison	5%		6%	12%	
LaSalle	4%				
Colfax	4%	9%			8%
Washington			9%		8%
Jefferson		8%			
Wayne					7%
Western	4%				
Monroe			7%	9%	
South					
Bronson					
Sample			13%		4%
Broadway			7%	6%	
Indiana			5%		4%
Calvert					
Ewing			18%		3%
Donmoyer					3%
Chippewa			7%		
Ireland			10%	5%	3%
Averages	4%	8%	7%	7%	8%

Appendix C: School Traffic Adjustments

Project Information	
Project Name:	South Bend
No:	
Date:	8/11/2014
City:	
Analyst's Name:	
Edition:	ITE-TGM 9th Edition

Land Use	Size	Description	AM Peak		PM Peak	
			Entry	Exit	Entry	Exit
520 - Elementary School	460 Students	James Madison Primary Center	114	93	58	71
Reduction		0	0	0	0	
Internal		0	0	0	0	
Pass-by		0	0	0	0	
Non-pass-by		114	93	58	71	
520 - Elementary School	325 Students	Henry Studebaker Elementary	80	66	41	50
Reduction		0	0	0	0	
Internal		0	0	0	0	
Pass-by		0	0	0	0	
Non-pass-by		80	66	51	50	
540 - Junior/Community College	5000 Students	Ivy Tech	514	277	349	285
Reduction		0	0	0	0	
Internal		0	0	0	0	
Pass-by		0	0	0	0	
Non-pass-by		514	277	349	285	
550 - University/College	12000 Students	Notre Dame & St Mary's	1317	463	647	1376
Reduction		0	0	0	0	
Internal		0	0	0	0	
Pass-by		0	0	0	0	
Non-pass-by		1317	463	647	1376	
530 - High School	1200 Students	Riley High School	351	165	114	231
Reduction		0	0	0	0	
Internal		0	0	0	0	
Pass-by		0	0	0	0	
Non-pass-by		351	165	114	231	
Total			2376	1064	1209	2013
Total Reduction			0	0	0	0
Total Internal			0	0	0	0
Total Pass-by			0	0	0	0
Total Non-pass-by			2376	1064	1219	2013

Trip generation summary

Added Trips

Zone ID: Name	Land Use variables	Code	Ind. Var.	Rate	Quantity	% In	% Out	Trips In	Trips Out	Total trips	% of Total Trips
1: Zone	James Maison			1.000	129.000	45.00	55.00	58	71	129	3.99
2: Zone	Ivy Tech			1.000	634.000	55.00	45.00	349	285	634	19.62
3: Zone	Notre Dame			1.000	2,023.000	32.00	68.00	647	1376	2023	62.59
14: Zone	Riley HS			1.000	345.000	33.00	67.00	114	231	345	10.67
26: Zone	Henry Studebaker			1.000	101.000	50.00	50.00	50	51	101	3.13
Added Trips Total								1218	2014	3232	100.00

Trip distribution summary

Zone / Gate	Zone 1: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
14: Zone	0.00	0	0.00	0
26: Zone	0.00	0	0.00	0
17: Gate	0.00	0	0.00	0
18: Gate	0.00	0	0.00	0
19: Gate	0.00	0	0.00	0
20: Gate	40.00	23	40.00	28
21: Gate	60.00	35	60.00	43
22: Gate	0.00	0	0.00	0
23: Gate	0.00	0	0.00	0
24: Gate	0.00	0	0.00	0
Total	100.00	58	100.00	71

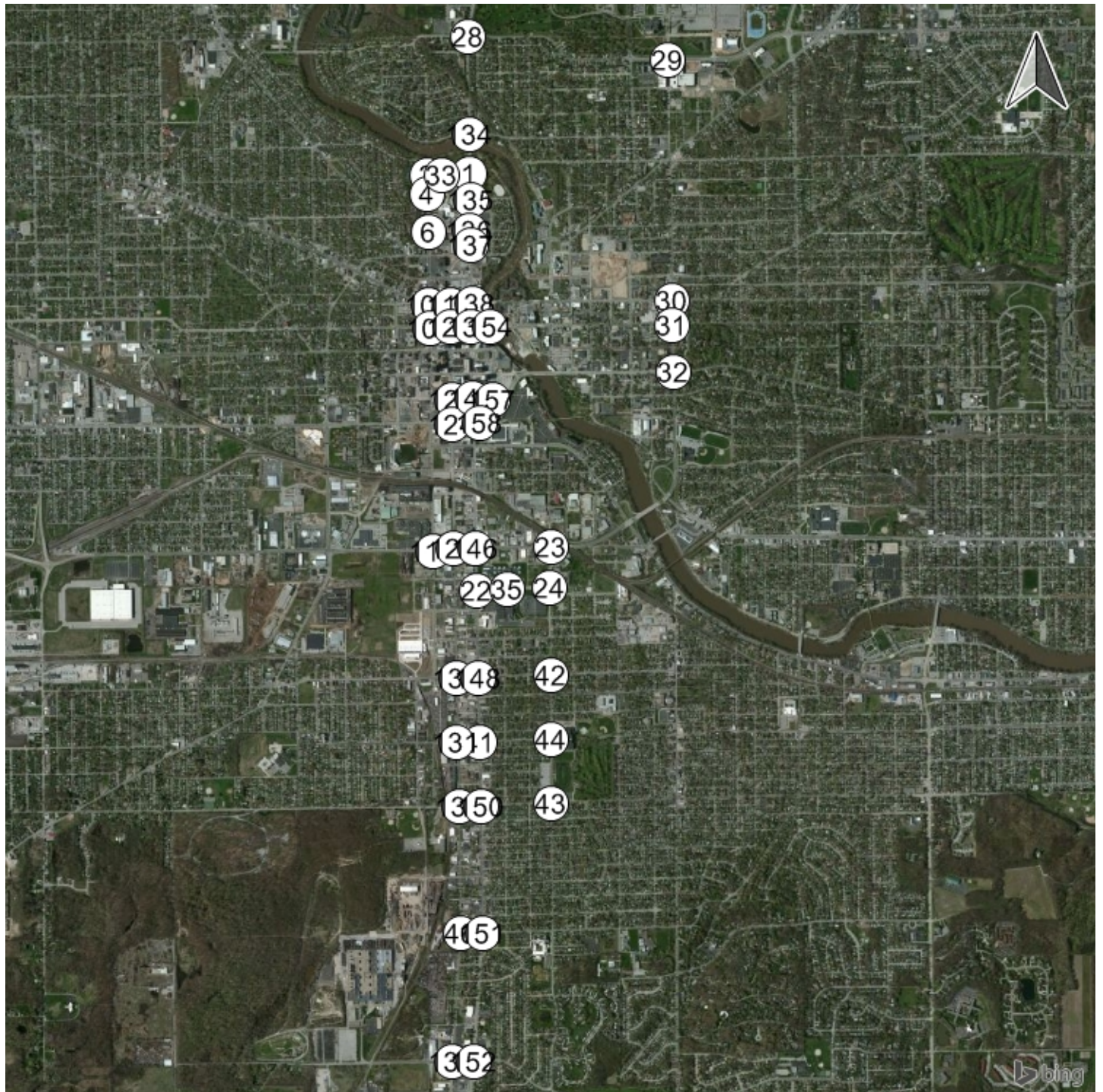
Zone / Gate	Zone 2: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
14: Zone	0.00	0	0.00	0
26: Zone	0.00	0	0.00	0
17: Gate	10.00	35	10.00	29
18: Gate	10.00	35	10.00	29
19: Gate	5.00	17	5.00	14
20: Gate	10.00	35	10.00	29
21: Gate	10.00	35	10.00	29
22: Gate	20.00	70	20.00	57
23: Gate	20.00	70	20.00	57
24: Gate	15.00	52	15.00	43
Total	100.00	349	100.00	287

Zone / Gate	Zone 3: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
14: Zone	0.00	0	0.00	0
26: Zone	0.00	0	0.00	0
17: Gate	10.00	65	10.00	138
18: Gate	10.00	65	10.00	138
19: Gate	5.00	32	5.00	69
20: Gate	10.00	65	10.00	138
21: Gate	10.00	65	10.00	138
22: Gate	25.00	162	25.00	344
23: Gate	20.00	129	20.00	275
24: Gate	10.00	65	10.00	138
Total	100.00	648	100.00	1378

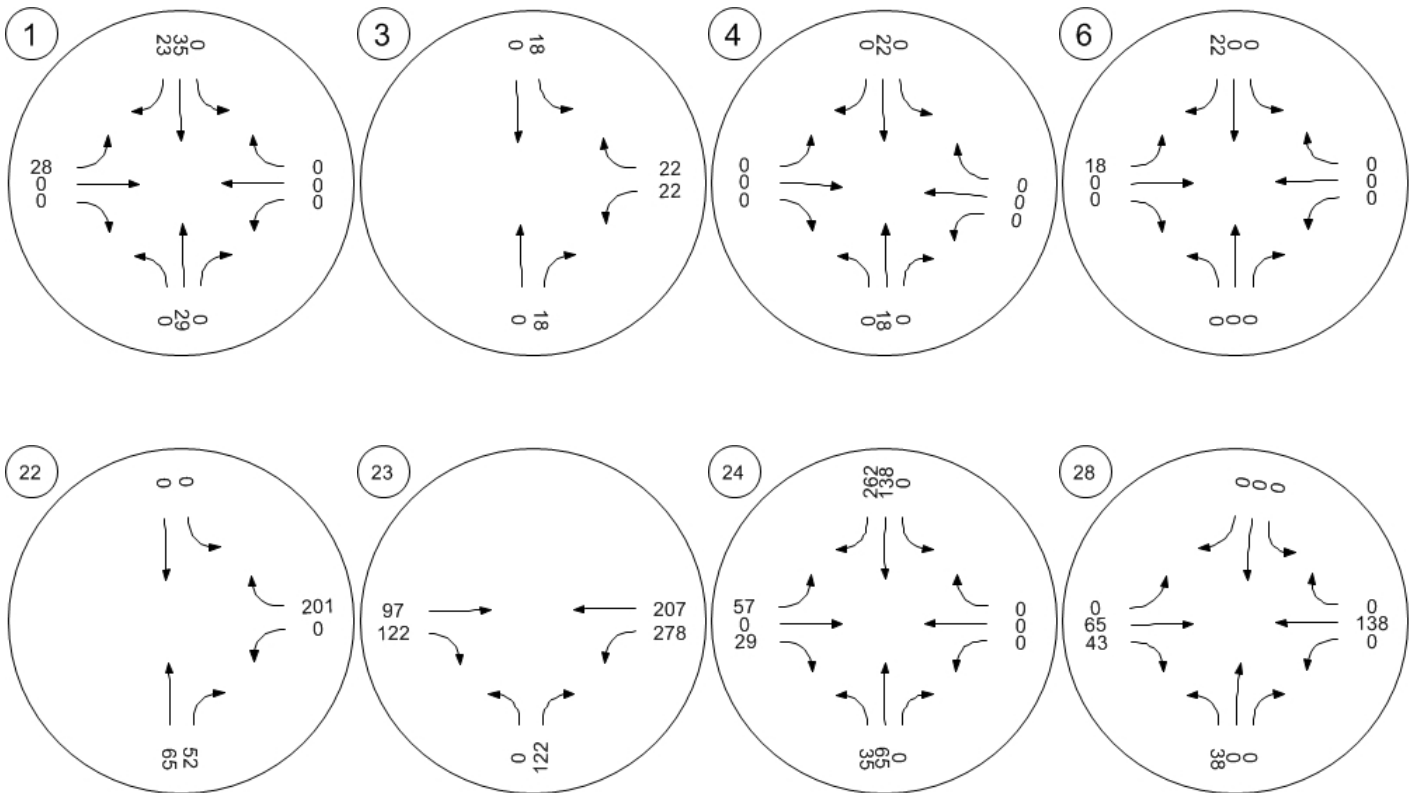
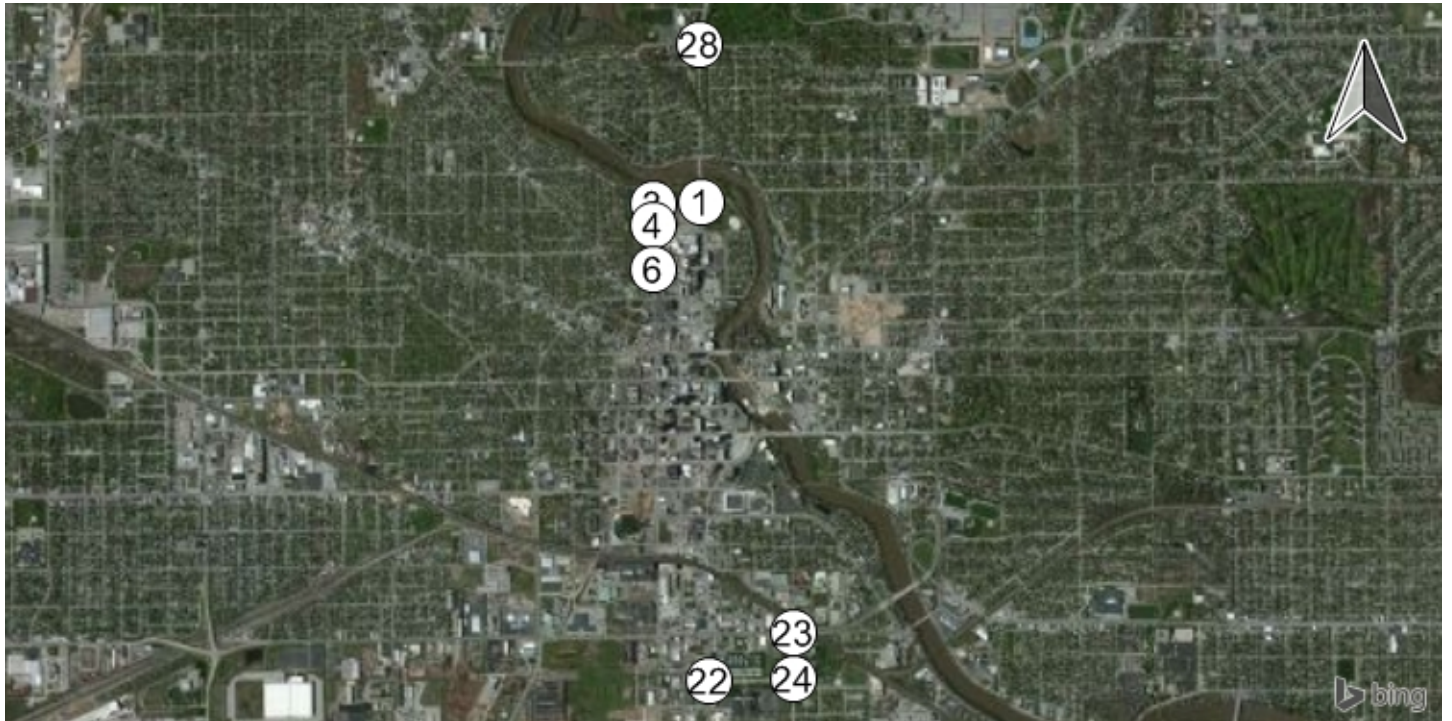
Zone / Gate	Zone 14: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
26: Zone	0.00	0	0.00	0
17: Gate	60.00	68	60.00	139
18: Gate	40.00	46	40.00	92
19: Gate	0.00	0	0.00	0
20: Gate	0.00	0	0.00	0
21: Gate	0.00	0	0.00	0
22: Gate	0.00	0	0.00	0
23: Gate	0.00	0	0.00	0
24: Gate	0.00	0	0.00	0
Total	100.00	114	100.00	231

Zone / Gate	Zone 26: Zone			
	To Zone:		From Zone:	
	Share %	Trips	Share %	Trips
1: Zone	0.00	0	0.00	0
2: Zone	0.00	0	0.00	0
3: Zone	0.00	0	0.00	0
14: Zone	0.00	0	0.00	0
17: Gate	60.00	30	60.00	31
18: Gate	40.00	20	40.00	20
19: Gate	0.00	0	0.00	0
20: Gate	0.00	0	0.00	0
21: Gate	0.00	0	0.00	0
22: Gate	0.00	0	0.00	0
23: Gate	0.00	0	0.00	0
24: Gate	0.00	0	0.00	0
Total	100.00	50	100.00	51

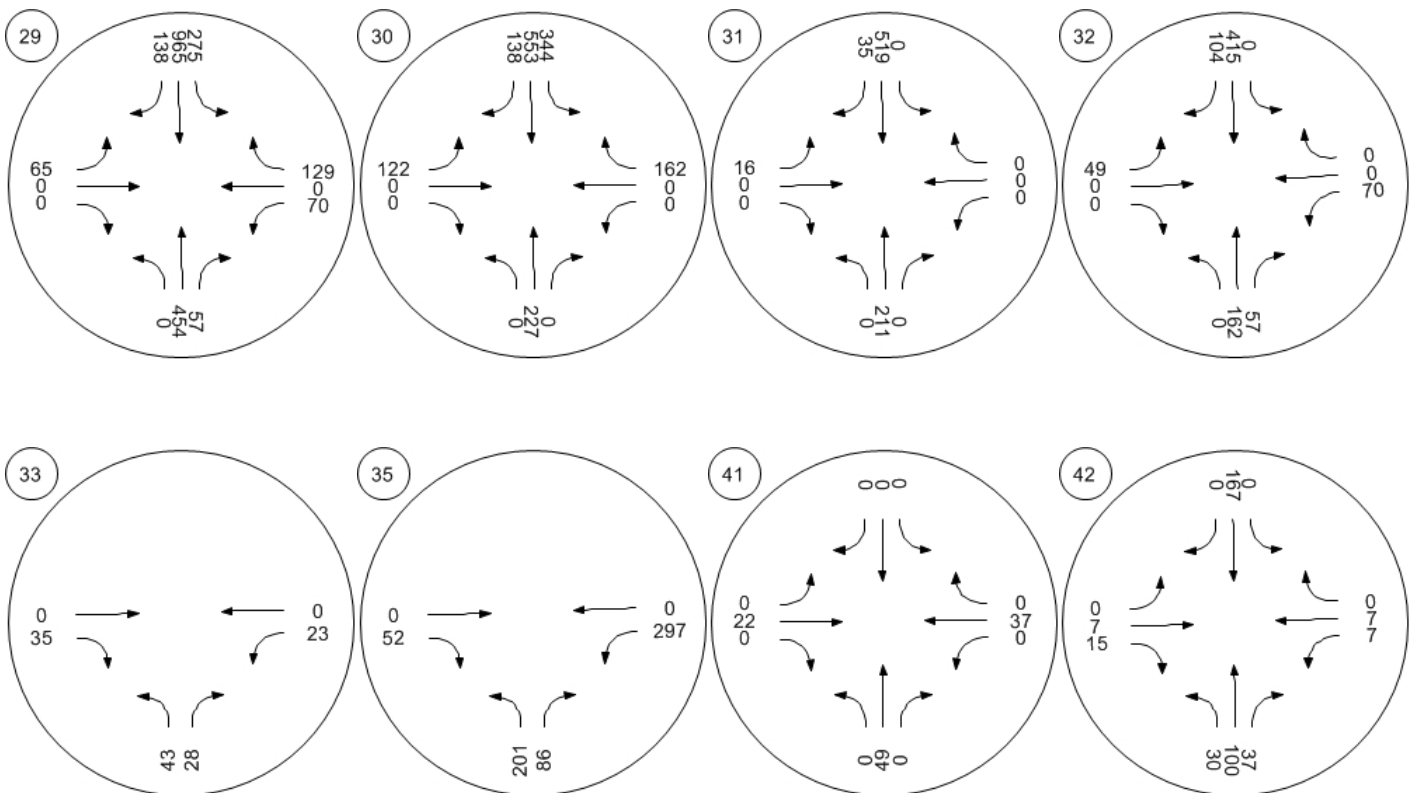
Study Intersections



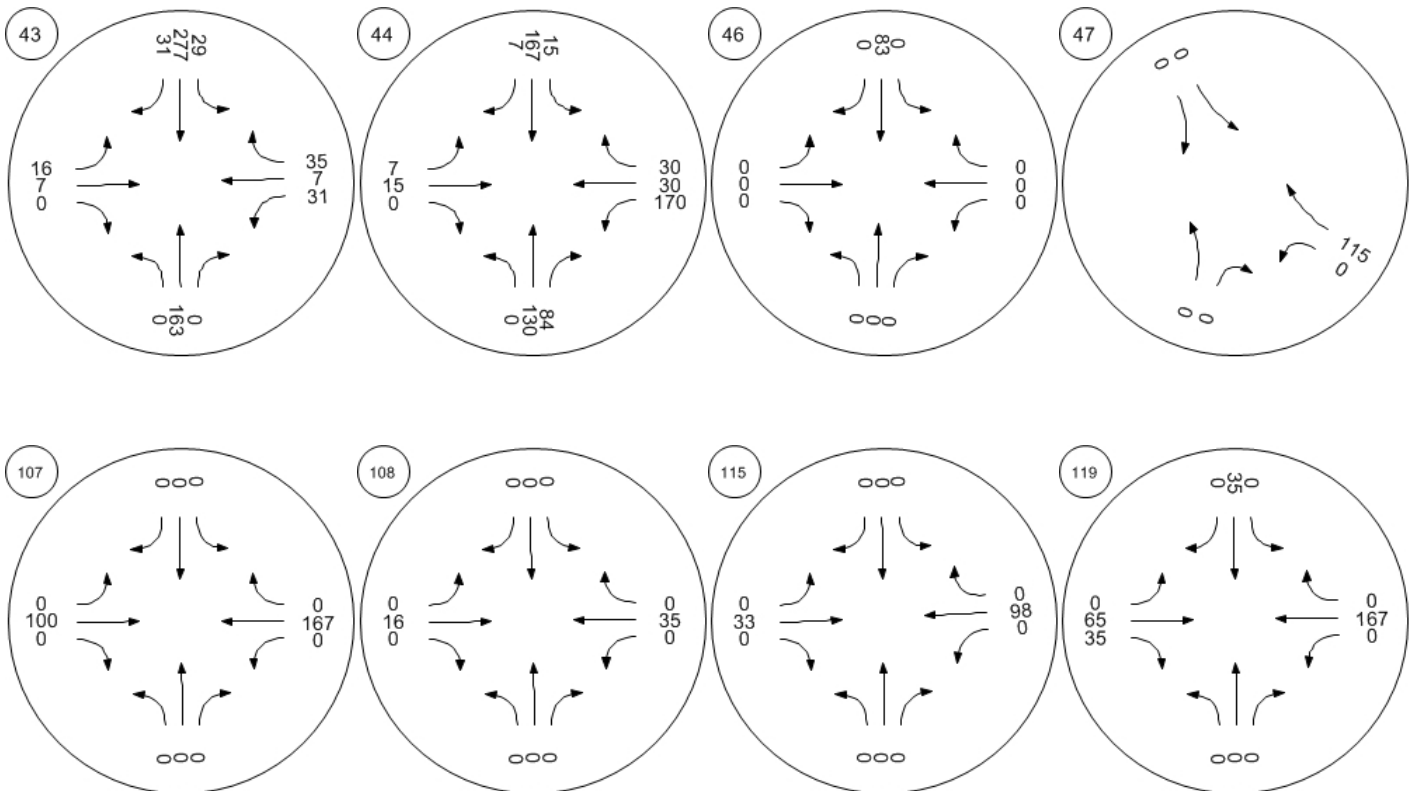
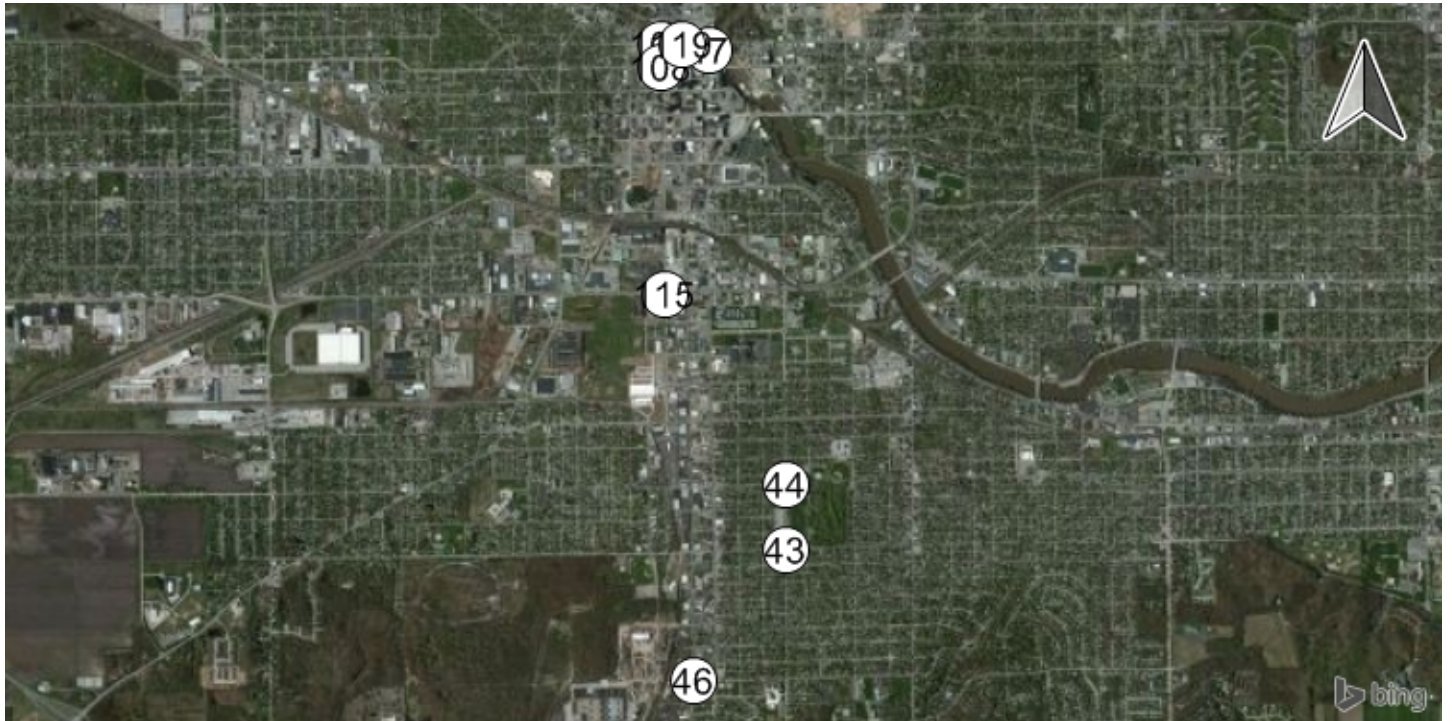
Traffic Volume - Net New Site Trips



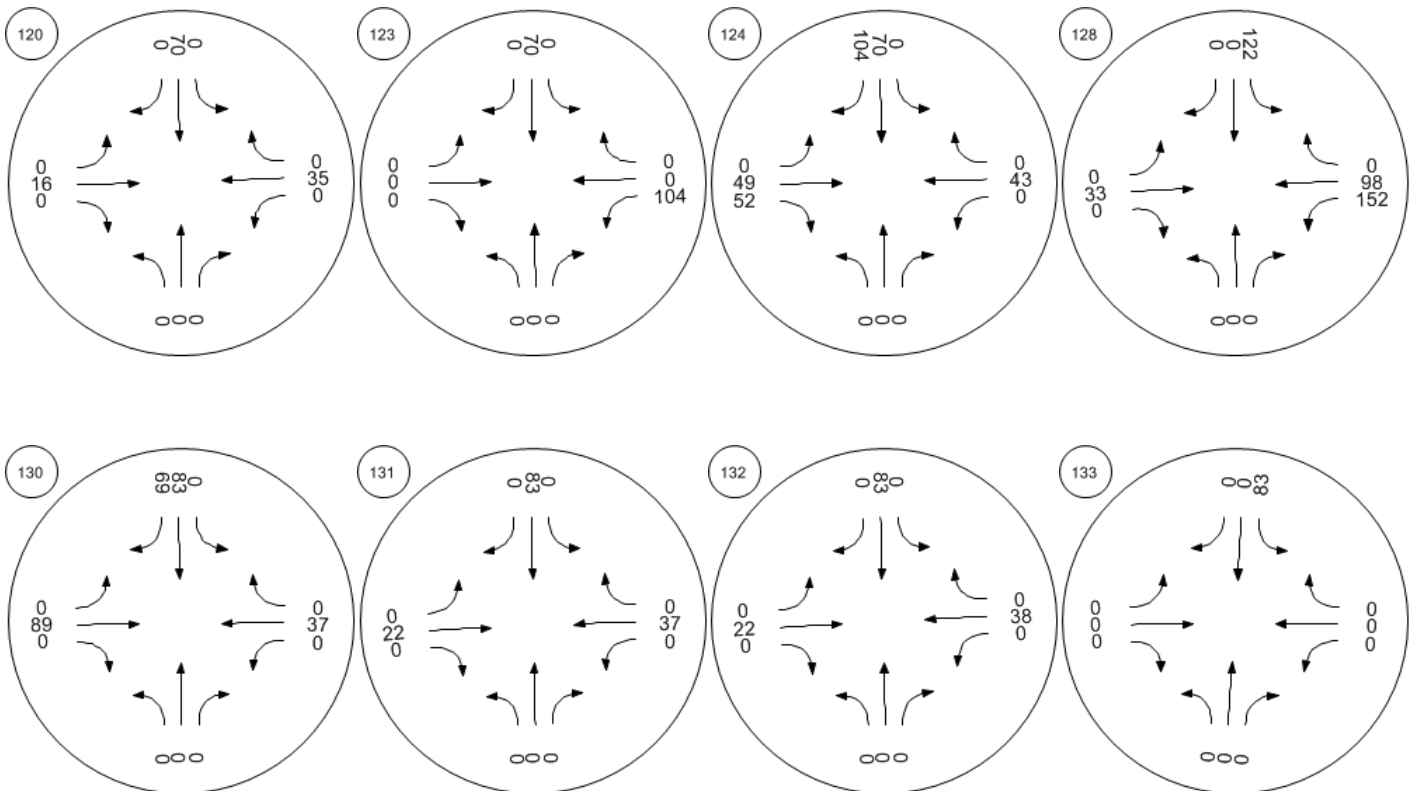
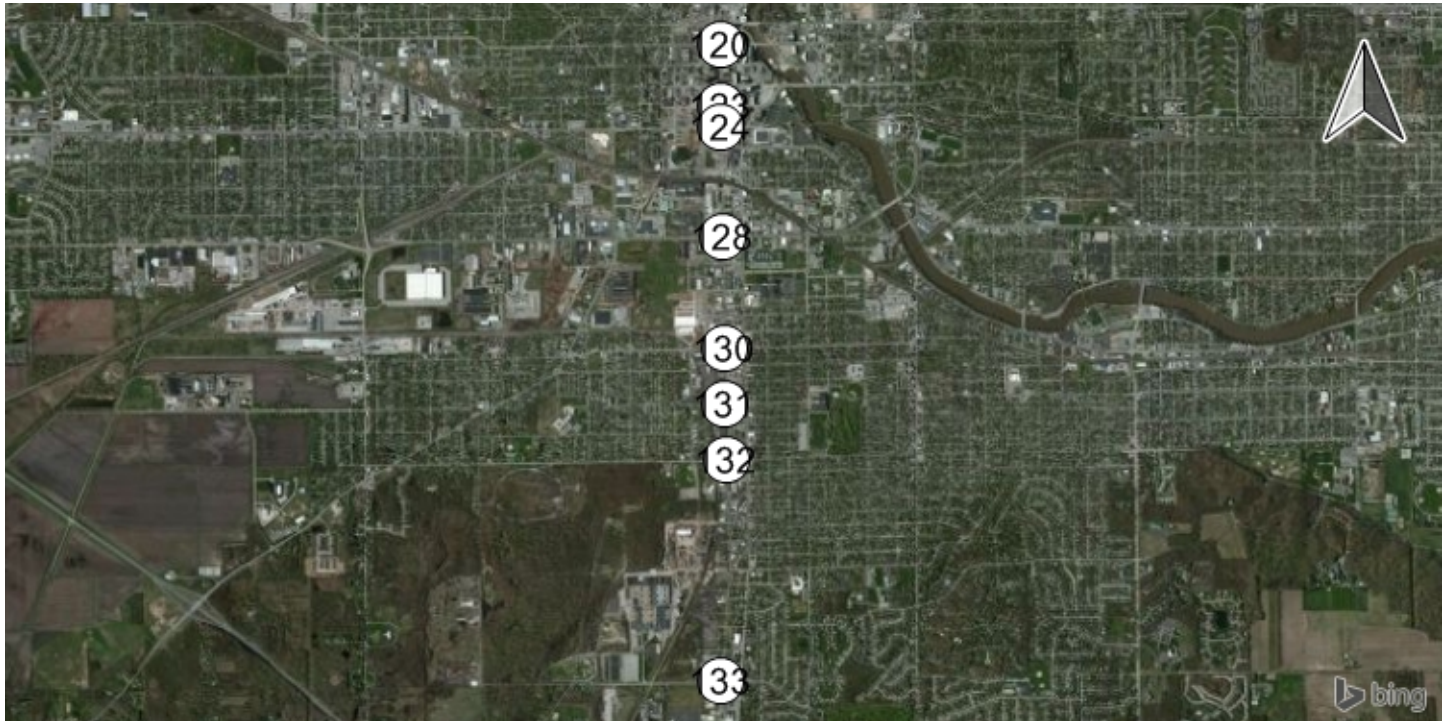
Traffic Volume - Net New Site Trips



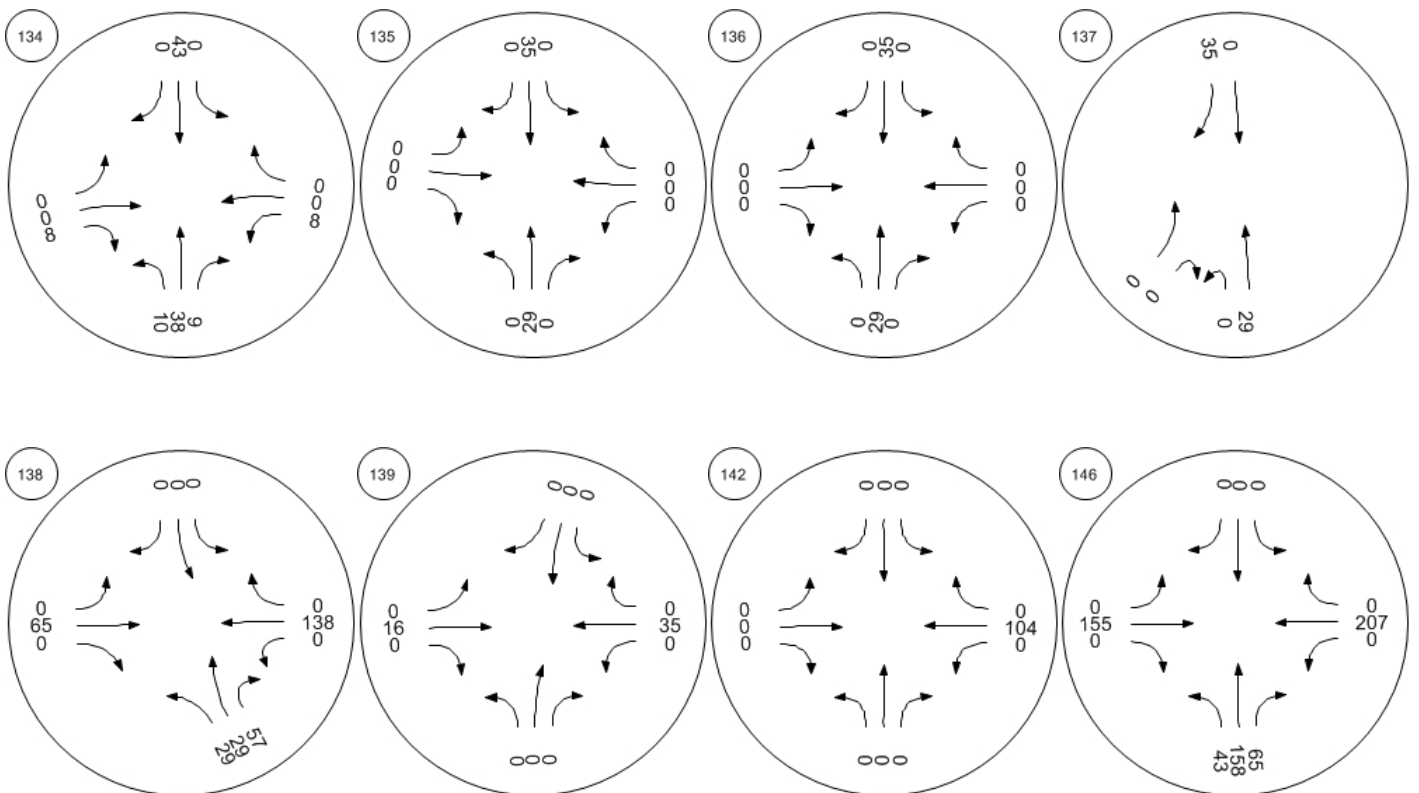
Traffic Volume - Net New Site Trips



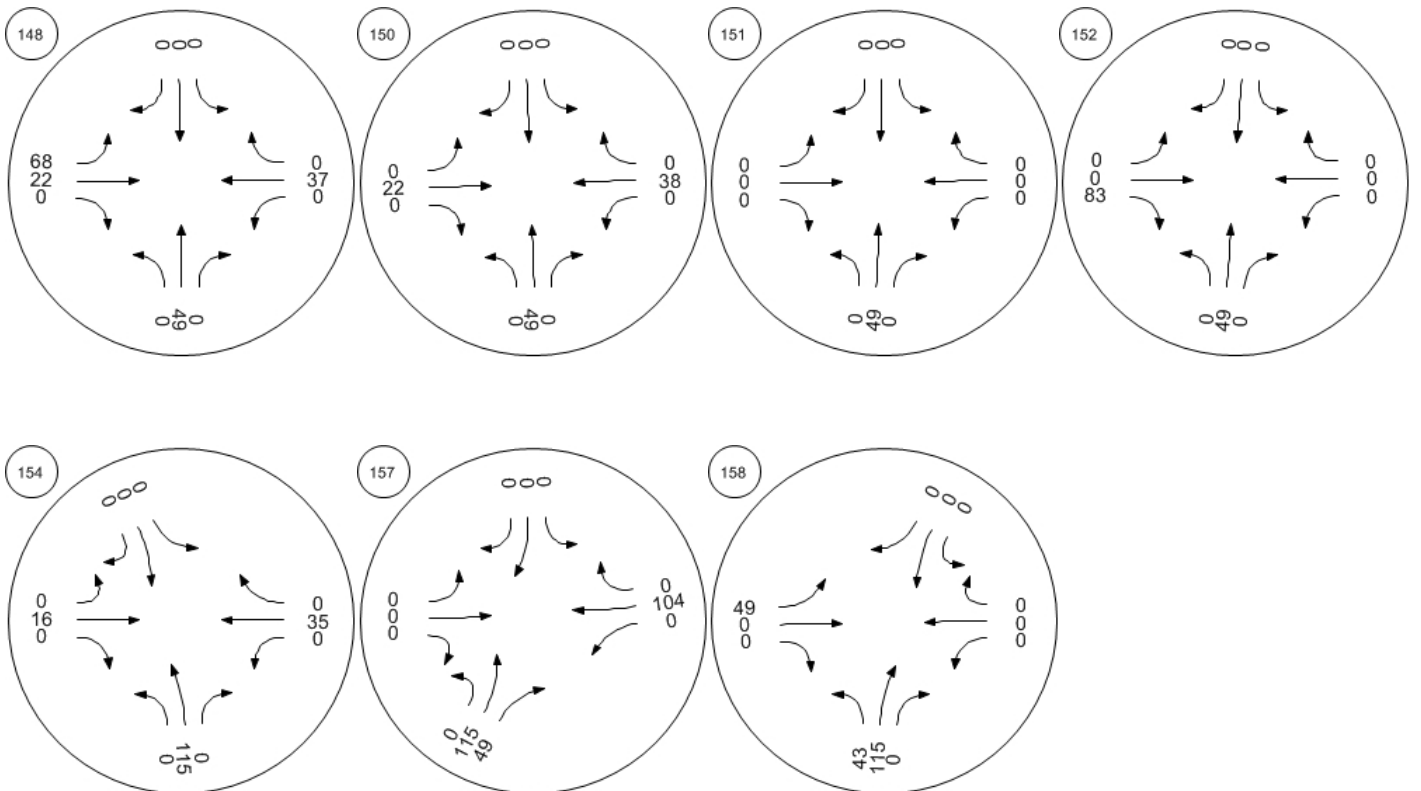
Traffic Volume - Net New Site Trips



Traffic Volume - Net New Site Trips



Traffic Volume - Net New Site Trips



2014 Unadjusted AM Peak Hour Volumes

No.	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	William / Marion	0	93	0	0	343	24	0	0	0	17	34	37
2	William / Madison	0	60	5	28	334	0	36	44	2	0	0	0
3	William / Washington	0	0	0	41	280	29	21	69	39	29	80	8
4	William / Western	0	0	1	198	0	36	0	368	0	0	192	0
5	Lafayette / Marion	34	127	0	0	80	34	0	0	0	0	33	16
6	Lafayette / Madison	0	140	55	76	0	0	18	62	0	0	0	12
7	Lafayette / La Salle	119	124	69	0	0	0	20	593	0	0	369	46
8	Lafayette / Colfax	23	270	27	0	0	0	23	151	0	0	97	41
9	Lafayette / Washington	58	294	58	0	0	0	8	71	0	0	104	19
10	Lafayette / Jefferson	45	361	59	0	0	0	16	45	0	0	55	53
11	Lafayette / Wayne	6	425	19	0	0	0	8	33	0	0	58	52
12	Lafayette / Western	69	328	10	0	0	0	88	350	111	2	147	51
13	Lafayette / Monroe	0	190	12	59	49	0	0	0	0	9	0	224
14	Lafayette / South	7	187	5	4	50	4	0	10	9	5	24	17
15	Lafayette / Sample	14	46	9	14	39	4	102	770	18	12	441	59
16	Main / Bartlett	3	5	20	16	29	20	28	88	1	7	126	31
17	Main / Marion	0	0	0	0	913	36	0	0	0	50	92	0
18	Main / Madison	0	0	0	25	996	4	0	80	83	12	24	0
19	Main / La Salle	0	0	0	103	932	40	0	443	240	193	390	0
20	Main / Colfax	0	0	0	119	1170	37	0	125	48	184	132	0
21	Main / Washington	0	0	0	68	1099	101	0	65	52	26	71	0
22	Main / Jefferson	0	0	0	122	964	96	0	42	30	60	46	0
23	Main / Wayne	0	0	0	83	867	31	0	36	15	63	87	0
24	Main / Western	0	0	0	37	763	133	0	189	156	22	115	0
25	Main / Monroe	0	0	0	252	642	5	0	62	8	41	236	0
26	Main / South	0	0	0	37	710	11	0	32	10	39	34	0
27	Main / Bronson	0	0	0	22	724	13	0	6	4	12	6	0
28	Main / Sample	0	0	0	98	478	69	0	727	75	164	438	0
29	Main / Broadway	0	0	0	33	683	5	0	12	8	11	5	0
30	Main / Indiana	0	0	0	32	622	28	0	67	49	16	86	0
31	Main / Calvert	0	0	0	26	666	13	0	21	21	16	17	0
32	Main / Ewing	0	0	0	66	588	40	0	84	64	34	92	0
33	Main / Chippewa	0	0	29	437	141	27	0	32	7	7	22	0
34	Michigan / North Shore	21	521	75	55	1013	2	1	98	71	74	45	29
35	Michigan / Bartlett	117	505	16	37	932	150	82	16	70	7	1	8
36	Michigan / Navarre	92	627	57	20	919	63	9	0	9	27	1	4
37	Michigan / Marion	0	797	42	4	0	0	0	0	0	0	0	6
38	Michigan / La Salle	163	705	91	0	0	0	88	432	0	0	392	151
39	Michigan / Colfax	19	0	21	2	0	1	0	167	71	179	331	0
40	Michigan / Washington	11	22	11	15	86	24	18	58	48	8	64	11
41	Michigan / Jefferson	42	40	7	16	25	50	17	71	17	2	87	27
42	Michigan / Wayne	4	59	3	21	10	12	7	90	10	18	146	23
43	Michigan / Monroe	55	989	43	0	0	0	16	294	0	0	225	389
44	Michigan / South	26	1074	11	0	0	0	5	31	0	0	22	11
45	Michigan / Bronson	9	1081	11	0	0	0	9	8	0	0	11	11
46	Michigan / Sample	135	948	219	0	0	0	160	667	0	0	462	35
47	Michigan / Broadway	10	1351	13	0	0	0	16	22	0	0	11	42
48	Michigan / Indiana	62	1294	13	0	0	0	54	53	0	0	62	29
49	Michigan / Calvert	21	1352	6	0	0	0	30	13	0	0	5	7
50	Michigan / Ewing	60	1139	28	0	0	0	56	104	0	0	103	139
51	Michigan / Don Moyer	0	1081	7	0	0	0	3	30	0	0	5	106
52	Michigan / Chippewa	28	969	7	0	0	0	45	12	359	26	11	37
53	Michigan / Ireland	138	746	108	90	325	14	87	133	66	162	133	220
54	St. Joseph / Colfax	99	932	132	0	0	0	25	161	0	0	407	68
55	St. Joseph / Washington	76	1133	1	0	0	0	55	0	0	0	0	0
56	St. Joseph / Jefferson	109	1178	46	0	0	0	43	35	0	0	8	5
57	St. Joseph / Wayne	64	1208	128	0	0	0	16	64	0	0	190	122
58	St. Joseph / Western	141	1225	30	0	0	0	181	95	0	0	7	15
59	Chapin / Lincoln Way	27	58	37	5	53	12	21	571	25	29	401	0

2014 Unadjusted PM Peak Hour Volumes

No.	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	William / Marion	4	265	0	0	299	39	0	0	0	26	80	187
2	William / Madison	0	208	7	19	314	0	55	19	4	0	0	0
3	William / Washington	0	0	0	13	273	24	40	113	20	21	114	31
4	William / Western	1	0	1	246	4	108	0	426	2	9	482	0
5	Lafayette / Marion	150	194	0	0	86	39	0	0	0	0	97	40
6	Lafayette / Madison	0	300	62	94	0	0	8	44	0	0	0	30
7	Lafayette / La Salle	202	280	109	0	0	0	24	634	0	0	653	58
8	Lafayette / Colfax	20	505	81	0	0	0	21	127	0	0	140	69
9	Lafayette / Washington	44	441	47	0	0	0	43	137	0	0	106	76
10	Lafayette / Jefferson	6	402	26	0	0	0	25	104	0	0	37	76
11	Lafayette / Wayne	2	395	41	0	0	0	7	37	0	0	55	43
12	Lafayette / Western	129	277	10	0	0	0	84	435	168	12	362	43
13	Lafayette / Monroe	43	115	14	57	93	19	0	0	1	68	33	213
14	Lafayette / South	40	96	3	19	39	44	55	48	10	6	115	144
15	Lafayette / Sample	28	67	26	46	92	30	48	634	25	14	842	33
16	Main / Bartlett	7	38	7	15	7	43	21	88	2	2	143	17
17	Main / Marion	0	0	0	0	887	24	0	0	0	22	121	0
18	Main / Madison	0	0	0	15	1036	4	0	68	153	37	23	0
19	Main / La Salle	0	0	0	142	1014	69	0	475	270	200	682	0
20	Main / Colfax	0	0	0	74	1356	42	0	173	66	156	171	0
21	Main / Washington	0	0	0	109	1481	86	0	99	102	101	93	0
22	Main / Jefferson	0	0	0	80	1583	32	0	73	98	117	60	0
23	Main / Wayne	0	0	0	110	1738	18	0	45	48	162	77	0
24	Main / Western	0	0	0	46	1677	237	0	235	220	59	178	0
25	Main / Monroe	0	0	0	546	1355	15	0	79	13	87	257	0
26	Main / South	0	0	0	63	1406	35	0	33	18	43	65	0
27	Main / Bronson	0	0	0	10	1393	9	0	6	11	33	8	0
28	Main / Sample	0	0	0	140	1148	166	0	585	118	229	717	0
29	Main / Broadway	0	0	0	34	1503	10	0	14	35	17	9	0
30	Main / Indiana	0	0	0	56	1437	68	0	137	115	35	140	0
31	Main / Calvert	0	0	0	46	1512	29	0	48	26	19	32	0
32	Main / Ewing	0	0	0	162	1321	48	0	189	97	54	192	0
33	Main / Chippewa	11	0	71	942	293	62	0	111	20	13	29	0
34	Michigan / North Shore	59	1055	127	48	694	2	1	78	29	78	117	71
35	Michigan / Bartlett	68	1038	3	8	701	61	176	7	105	14	16	39
36	Michigan / Navarre	4	1052	4	14	802	8	35	1	22	99	1	20
37	Michigan / Marion	0	994	46	2	0	0	0	0	0	0	0	11
38	Michigan / La Salle	298	1074	173	0	0	0	90	544	0	0	581	91
39	Michigan / Colfax	51	0	141	3	0	3	0	221	14	60	279	0
40	Michigan / Washington	37	65	35	13	49	57	53	149	40	6	67	11
41	Michigan / Jefferson	19	66	16	11	59	38	24	144	36	8	83	9
42	Michigan / Wayne	11	52	10	58	28	15	16	136	8	34	212	31
43	Michigan / Monroe	63	885	45	0	0	0	32	589	0	0	278	308
44	Michigan / South	54	1004	20	0	0	0	35	65	0	0	39	39
45	Michigan / Bronson	20	968	23	0	0	0	17	10	0	0	28	5
46	Michigan / Sample	171	796	253	0	0	0	103	630	0	0	787	45
47	Michigan / Broadway	17	1138	17	0	0	0	21	26	0	0	24	22
48	Michigan / Indiana	93	1066	26	0	0	0	65	101	0	0	93	39
49	Michigan / Calvert	30	1104	12	0	0	0	55	30	0	0	14	21
50	Michigan / Ewing	94	959	104	0	0	0	65	300	0	0	170	100
51	Michigan / Don Moyer	4	940	35	0	0	0	4	111	0	0	24	72
52	Michigan / Chippewa	23	758	54	0	0	0	116	60	949	33	18	17
53	Michigan / Ireland	202	519	197	337	719	67	159	413	92	244	371	225
54	St. Joseph / Colfax	58	1256	356	0	0	0	67	297	0	0	283	108
55	St. Joseph / Washington	79	1382	0	0	0	0	197	0	0	0	0	1
56	St. Joseph / Jefferson	56	1257	44	0	0	0	157	8	0	0	31	46
57	St. Joseph / Wayne	21	1260	183	0	0	0	62	210	0	0	211	86
58	St. Joseph / Western	149	1100	8	0	0	0	244	59	0	0	56	78
59	Chapin / Lincoln Way	63	54	35	6	82	49	14	627	57	68	631	2

Adjustments to AM Peak Hour Volumes

No.	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	William / Marion	0	0	0	0	0	0	0	0	0	0	0	0
2	William / Madison	0	0	0	0	0	0	0	0	0	0	0	0
3	William / Washington	0	0	0	0	0	0	0	0	0	0	0	0
4	William / Western	0	0	0	0	0	0	0	99	0	0	42	0
5	Lafayette / Marion	0	0	0	0	0	0	0	0	0	0	0	0
6	Lafayette / Madison	0	0	0	0	0	0	0	0	0	0	0	0
7	Lafayette / La Salle	0	0	0	0	0	0	0	183	0	0	74	0
8	Lafayette / Colfax	0	0	0	0	0	0	0	33	0	0	12	0
9	Lafayette / Washington	0	0	0	0	0	0	0	0	0	0	0	0
10	Lafayette / Jefferson	0	0	0	0	0	0	0	0	0	0	0	0
11	Lafayette / Wayne	0	0	0	0	0	0	0	0	0	0	0	0
12	Lafayette / Western	0	0	0	0	0	0	0	99	0	0	42	0
13	Lafayette / Monroe	0	0	0	0	0	0	0	0	0	0	0	0
14	Lafayette / South	0	0	0	0	0	0	0	0	0	0	0	0
15	Lafayette / Sample	0	0	0	0	0	0	0	66	0	0	51	0
16	Main / Bartlett	0	0	0	0	0	0	0	0	0	0	0	0
17	Main / Marion	0	0	0	0	51	0	0	0	0	0	0	0
18	Main / Madison	0	0	0	0	51	0	0	0	0	0	0	0
19	Main / La Salle	0	0	0	0	51	0	0	132	51	0	74	0
20	Main / Colfax	0	0	0	0	102	0	0	33	0	0	12	0
21	Main / Washington	0	0	0	0	102	0	0	0	0	0	0	0
22	Main / Jefferson	0	0	0	0	102	0	0	0	0	0	0	0
23	Main / Wayne	0	0	0	0	102	0	0	0	0	35	0	0
24	Main / Western	0	0	0	0	102	35	0	99	77	0	42	0
25	Main / Monroe	0	0	0	0	179	0	0	0	0	0	0	0
26	Main / South	0	0	0	0	179	0	0	0	0	0	0	0
27	Main / Bronson	0	0	0	0	179	0	0	0	0	0	0	0
28	Main / Sample	0	0	0	179	0	0	0	66	0	60	51	0
29	Main / Broadway	0	0	0	0	60	0	0	0	0	0	0	0
30	Main / Indiana	0	0	0	0	60	0	0	174	0	0	30	0
31	Main / Calvert	0	0	0	0	60	0	0	57	0	0	30	0
32	Main / Ewing	0	0	0	0	37	23	0	58	0	0	31	0
33	Main / Chippewa	0	0	0	37	0	0	0	0	0	0	0	0
34	Michigan / North Shore	13	40	12	0	66	0	0	0	16	15	0	0
35	Michigan / Bartlett	0	28	0	0	51	0	0	0	0	0	0	0
36	Michigan / Navarre	0	28	0	0	51	0	0	0	0	0	0	0
37	Michigan / Marion	0	28	0	0	0	0	0	0	0	0	0	0
38	Michigan / La Salle	28	28	55	0	0	0	0	132	0	0	46	0
39	Michigan / Colfax	0	0	0	0	0	0	0	33	0	0	12	0
40	Michigan / Washington	0	0	0	0	0	0	0	0	0	0	0	0
41	Michigan / Jefferson	0	0	0	0	0	0	0	0	0	0	0	0
42	Michigan / Wayne	0	0	0	0	0	0	0	0	0	0	35	0
43	Michigan / Monroe	0	153	0	0	0	0	0	0	0	0	0	0
44	Michigan / South	0	153	0	0	0	0	0	0	0	0	0	0
45	Michigan / Bronson	0	153	0	0	0	0	0	0	0	0	0	0
46	Michigan / Sample	42	153	132	0	0	0	0	245	0	0	69	0
47	Michigan / Broadway	0	209	0	0	0	0	0	0	0	0	0	0
48	Michigan / Indiana	0	92	0	0	0	0	117	57	0	0	30	0
49	Michigan / Calvert	0	92	0	0	0	0	0	57	0	0	30	0
50	Michigan / Ewing	0	92	0	0	0	0	0	58	0	0	31	0
51	Michigan / Don Moyer	0	92	0	0	0	0	0	0	0	0	0	0
52	Michigan / Chippewa	0	92	0	0	0	0	0	0	37	0	0	0
53	Michigan / Ireland	0	0	0	0	0	0	0	0	0	0	0	0
54	St. Joseph / Colfax	0	111	0	0	0	0	0	33	0	0	12	0
55	St. Joseph / Washington	0	111	0	0	0	0	0	0	0	0	0	0
56	St. Joseph / Jefferson	0	111	0	0	0	0	0	0	0	0	0	0
57	St. Joseph / Wayne	0	111	99	0	0	0	0	0	0	0	35	0
58	St. Joseph / Western	42	111	0	0	0	0	99	0	0	0	0	0
59	Chapin / Lincoln Way	0	0	0	0	0	0	0	0	0	0	0	0

Adjustments to PM Peak Hour Volumes

No.	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	William / Marion	0	0	0	0	0	0	0	0	0	0	0	0
2	William / Madison	0	0	0	0	0	0	0	0	0	0	0	0
3	William / Washington	0	0	0	0	0	0	0	0	0	0	0	0
4	William / Western	0	0	0	0	0	0	0	49	0	0	147	0
5	Lafayette / Marion	0	0	0	0	0	0	0	0	0	0	0	0
6	Lafayette / Madison	0	0	0	0	0	0	0	0	0	0	0	0
7	Lafayette / La Salle	0	0	0	0	0	0	0	100	0	0	167	0
8	Lafayette / Colfax	0	0	0	0	0	0	0	16	0	0	35	0
9	Lafayette / Washington	0	0	0	0	0	0	0	0	0	0	0	0
10	Lafayette / Jefferson	0	0	0	0	0	0	0	0	0	0	0	0
11	Lafayette / Wayne	0	0	0	0	0	0	0	0	0	0	0	0
12	Lafayette / Western	0	0	0	0	0	0	0	49	0	0	147	0
13	Lafayette / Monroe	0	0	0	0	0	0	0	0	0	0	0	0
14	Lafayette / South	0	0	0	0	0	0	0	0	0	0	0	0
15	Lafayette / Sample	0	0	0	0	0	0	0	33	0	0	98	0
16	Main / Bartlett	0	0	0	0	0	0	0	0	0	0	0	0
17	Main / Marion	0	0	0	0	35	0	0	0	0	0	0	0
18	Main / Madison	0	0	0	0	35	0	0	0	0	0	0	0
19	Main / La Salle	0	0	0	0	35	0	0	65	35	0	167	0
20	Main / Colfax	0	0	0	0	70	0	0	16	0	0	35	0
21	Main / Washington	0	0	0	0	70	0	0	0	0	0	0	0
22	Main / Jefferson	0	0	0	0	70	0	0	0	0	0	0	0
23	Main / Wayne	0	0	0	0	70	0	0	0	0	104	0	0
24	Main / Western	0	0	0	0	70	104	0	49	52	0	147	0
25	Main / Monroe	0	0	0	0	122	0	0	0	0	0	0	0
26	Main / South	0	0	0	0	122	0	0	0	0	0	0	0
27	Main / Bronson	0	0	0	0	122	0	0	0	0	0	0	0
28	Main / Sample	0	0	0	122	0	0	0	33	0	152	98	0
29	Main / Broadway	0	0	0	0	152	0	0	0	0	0	0	0
30	Main / Indiana	0	0	0	0	83	69	0	89	0	0	37	0
31	Main / Calvert	0	0	0	0	83	0	0	22	0	0	37	0
32	Main / Ewing	0	0	0	0	83	0	0	22	0	0	38	0
33	Main / Chippewa	0	0	0	83	0	0	0	0	0	0	0	0
34	Michigan / North Shore	10	38	9	0	43	0	0	8	8	8	0	0
35	Michigan / Bartlett	0	29	0	0	35	0	0	0	0	0	0	0
36	Michigan / Navarre	0	29	0	0	35	0	0	0	0	0	0	0
37	Michigan / Marion	0	29	0	0	0	0	0	0	0	0	0	0
38	Michigan / La Salle	29	29	57	0	0	0	0	65	0	0	138	0
39	Michigan / Colfax	0	0	0	0	0	0	0	16	0	0	35	0
40	Michigan / Washington	0	0	0	0	0	0	0	0	0	0	0	0
41	Michigan / Jefferson	0	0	0	0	0	0	0	0	0	0	0	0
42	Michigan / Wayne	0	0	0	0	0	0	0	0	0	0	104	0
43	Michigan / Monroe	0	158	0	0	0	0	0	0	0	0	0	0
44	Michigan / South	0	158	0	0	0	0	0	0	0	0	0	0
45	Michigan / Bronson	0	158	0	0	0	0	0	0	0	0	0	0
46	Michigan / Sample	43	158	65	0	0	0	0	155	0	0	207	0
47	Michigan / Broadway	0	117	0	0	0	0	0	0	0	0	0	0
48	Michigan / Indiana	0	49	0	0	0	0	68	22	0	0	37	0
49	Michigan / Calvert	0	49	0	0	0	0	0	22	0	0	37	0
50	Michigan / Ewing	0	49	0	0	0	0	0	22	0	0	38	0
51	Michigan / Don Moyer	0	49	0	0	0	0	0	0	0	0	0	0
52	Michigan / Chippewa	0	49	0	0	0	0	0	0	83	0	0	0
53	Michigan / Ireland	0	0	0	0	0	0	0	0	0	0	0	0
54	St. Joseph / Colfax	0	115	0	0	0	0	0	16	0	0	35	0
55	St. Joseph / Washington	0	115	0	0	0	0	0	0	0	0	0	0
56	St. Joseph / Jefferson	0	115	0	0	0	0	0	0	0	0	0	0
57	St. Joseph / Wayne	0	115	49	0	0	0	0	0	0	0	104	0
58	St. Joseph / Western	43	115	0	0	0	0	49	0	0	0	0	0
59	Chapin / Lincoln Way	0	0	0	0	0	0	0	0	0	0	0	0

2014 Adjusted AM Peak Hour Volumes - Existing Network

No.	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	William St / Marion St	0	93	0	0	343	24	0	0	0	17	34	37
2	William St / Madison St	0	60	5	28	334	0	36	44	2	0	0	0
3	William St / Washington St	0	0	0	41	280	29	21	69	39	29	80	8
4	William St / Western Ave	0	0	1	198	0	36	0	467	0	0	234	0
5	Lafayette Blvd / Marion St	34	127	0	0	80	34	0	0	0	0	33	16
6	Lafayette Blvd / Madison St	0	140	55	76	0	0	18	62	0	0	0	12
7	Lafayette Blvd / La Salle Ave	119	124	69	0	0	0	20	776	0	0	443	46
8	Lafayette Blvd / Colfax Ave	23	270	27	0	0	0	23	184	0	0	109	41
9	Lafayette Blvd / Washington St	58	294	58	0	0	0	8	71	0	0	104	19
10	Lafayette Blvd / Jefferson Blvd	45	361	59	0	0	0	16	45	0	0	55	53
11	Lafayette Blvd / Wayne St	6	425	19	0	0	0	8	33	0	0	58	52
12	Lafayette Blvd / Western Ave	69	328	10	0	0	0	88	449	111	2	189	51
13	Lafayette Blvd / Monroe St	0	190	12	59	49	0	0	0	0	9	0	224
14	Lafayette Blvd / South St	7	187	5	4	50	4	0	10	9	5	24	17
15	Lafayette Blvd / Sample St	14	46	9	14	39	4	102	836	18	12	492	59
16	Main St / Bartlett St	3	5	20	16	29	20	28	88	1	7	126	31
17	Main St / Marion St	0	0	0	0	964	36	0	0	0	50	92	0
18	Main St / Madison St	0	0	0	25	1047	4	0	80	83	12	24	0
19	Main St / La Salle Ave	0	0	0	103	983	40	0	575	291	193	464	0
20	Main St / Colfax Ave	0	0	0	119	1272	37	0	158	48	184	144	0
21	Main St / Washington St	0	0	0	68	1201	101	0	65	52	26	71	0
22	Main St / Jefferson Blvd	0	0	0	122	1066	96	0	42	30	60	46	0
23	Main St / Wayne St	0	0	0	83	969	31	0	36	15	98	87	0
24	Main St / Western Ave	0	0	0	37	865	168	0	288	233	22	157	0
25	Main St / Monroe St	0	0	0	252	821	5	0	62	8	41	236	0
26	Main St / South St	0	0	0	37	889	11	0	32	10	39	34	0
27	Main St / Bronson St	0	0	0	22	903	13	0	6	4	12	6	0
28	Main St / Sample St	0	0	0	277	478	69	0	793	75	224	489	0
29	Main St / Broadway St	0	0	0	33	743	5	0	12	8	11	5	0
30	Main St / Indiana Ave	0	0	0	32	682	28	0	241	49	16	116	0
31	Main St / Calvert St	0	0	0	26	726	13	0	78	21	16	47	0
32	Main St / Ewing Ave	0	0	0	66	625	63	0	142	64	34	123	0
33	Main St / Chippewa Ave	0	0	29	474	141	27	0	32	7	7	22	0
34	Michigan St / North Shore Dr	34	561	87	55	1079	2	1	98	87	89	45	29
35	Michigan St / Bartlett St	117	533	16	37	983	150	82	16	70	7	1	8
36	Michigan St / Navarre St	92	655	57	20	970	63	9	0	9	27	1	4
37	Michigan St / Marion St	0	825	42	4	0	0	0	0	0	0	0	6
38	Michigan St / La Salle Ave	191	733	146	0	0	0	88	564	0	0	438	151
39	Michigan St / Colfax Ave	19	0	21	2	0	1	0	200	71	179	343	0
40	Michigan St / Washington St	11	22	11	15	86	24	18	58	48	8	64	11
41	Michigan St / Jefferson Blvd	42	40	7	16	25	50	17	71	17	2	87	27
42	Michigan St / Wayne St	4	59	3	21	10	12	7	90	10	18	181	23
43	Michigan St / Monroe St	55	1142	43	0	0	0	16	294	0	0	225	389
44	Michigan St / South St	26	1227	11	0	0	0	5	31	0	0	22	11
45	Michigan St / Bronson St	9	1234	11	0	0	0	9	8	0	0	11	11
46	Michigan St / Sample St	177	1101	351	0	0	0	160	912	0	0	531	35
47	Michigan St / Broadway St	10	1560	13	0	0	0	16	22	0	0	11	42
48	Michigan St / Indiana Ave	62	1386	13	0	0	0	171	110	0	0	92	29
49	Michigan St / Calvert St	21	1444	6	0	0	0	30	70	0	0	35	7
50	Michigan St / Ewing Ave	60	1231	28	0	0	0	56	162	0	0	134	139
51	Michigan St / Don Moyer Ave	0	1173	7	0	0	0	3	30	0	0	5	106
52	Michigan St / Chippewa Ave	28	1061	7	0	0	0	45	12	396	26	11	37
53	Michigan St / Ireland Rd	138	746	108	90	325	14	87	133	66	162	133	220
54	St Joseph St / Colfax Ave	99	1043	132	0	0	0	25	194	0	0	419	68
55	St Joseph St / Washington St	76	1244	1	0	0	0	55	0	0	0	0	0
56	St Joseph St / Jefferson Blvd	109	1289	46	0	0	0	43	35	0	0	8	5
57	St Joseph St / Wayne St	64	1319	227	0	0	0	16	64	0	0	225	122
58	St Joseph St / Western Ave	183	1336	30	0	0	0	280	95	0	0	7	15
59	Chapin St / Lincoln Way	27	58	37	5	53	12	21	571	25	29	401	0

2014 Adjusted PM Peak Hour Volumes - Existing Network

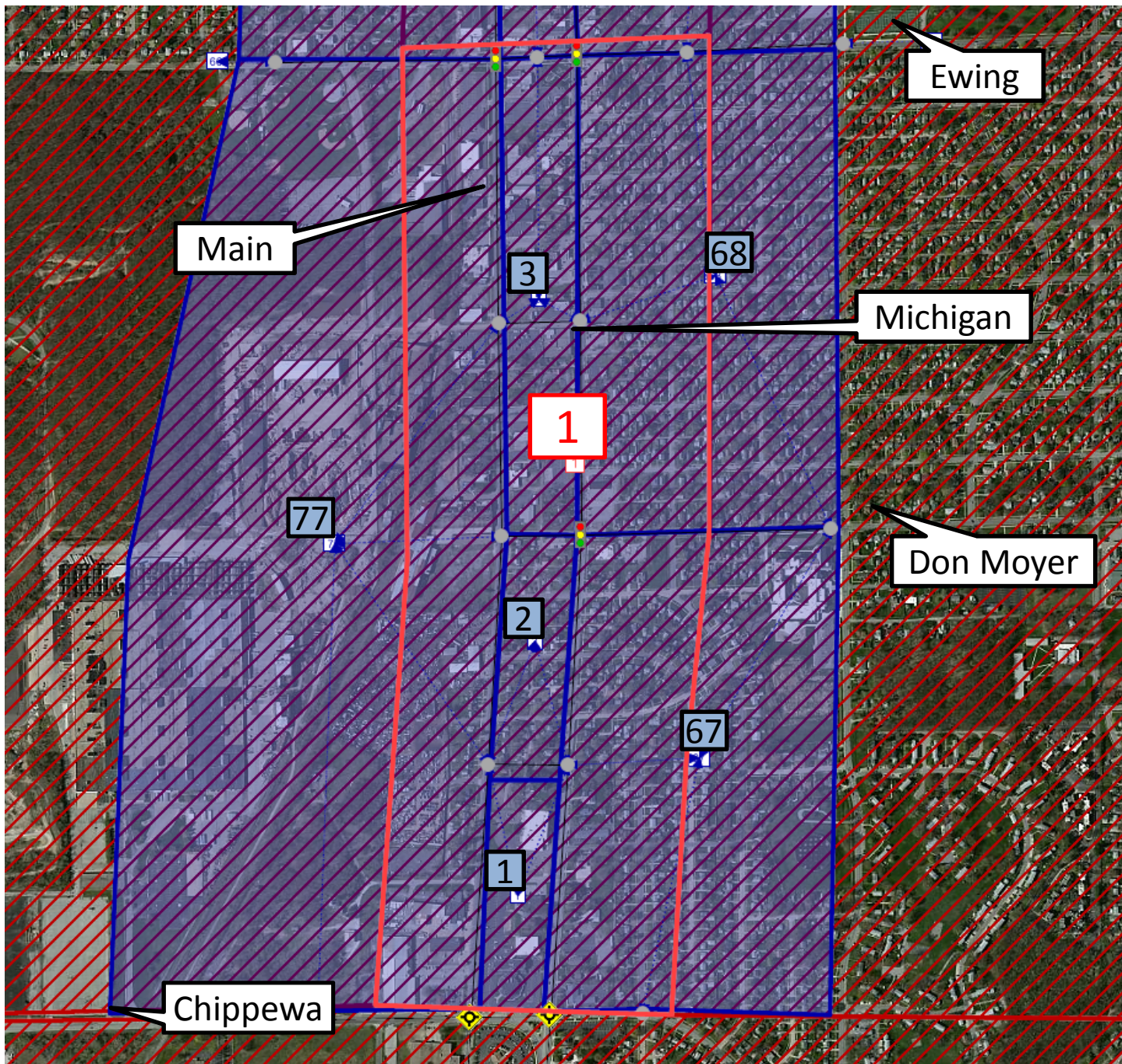
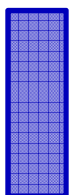
No.	Intersection	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1	William St / Marion St	4	265	0	0	299	39	0	0	0	26	80	187
2	William St / Madison St	0	208	7	19	314	0	55	19	4	0	0	0
3	William St / Washington St	0	0	0	13	273	24	40	113	20	21	114	31
4	William St / Western Ave	1	0	1	246	4	108	0	475	2	9	629	0
5	Lafayette Blvd / Marion St	150	194	0	0	86	39	0	0	0	0	97	40
6	Lafayette Blvd / Madison St	0	300	62	94	0	0	8	44	0	0	0	30
7	Lafayette Blvd / La Salle Ave	202	280	109	0	0	0	24	734	0	0	820	58
8	Lafayette Blvd / Colfax Ave	20	505	81	0	0	0	21	143	0	0	175	69
9	Lafayette Blvd / Washington St	44	441	47	0	0	0	43	137	0	0	106	76
10	Lafayette Blvd / Jefferson Blvd	6	402	26	0	0	0	25	104	0	0	37	76
11	Lafayette Blvd / Wayne St	2	395	41	0	0	0	7	37	0	0	55	43
12	Lafayette Blvd / Western Ave	129	277	10	0	0	0	84	484	168	12	509	43
13	Lafayette Blvd / Monroe St	43	115	14	57	93	19	0	0	1	68	33	213
14	Lafayette Blvd / South St	40	96	3	19	39	44	55	48	10	6	115	144
15	Lafayette Blvd / Sample St	28	67	26	46	92	30	48	667	25	14	940	33
16	Main St / Bartlett St	7	38	7	15	7	43	21	88	2	2	143	17
17	Main St / Marion St	0	0	0	0	922	24	0	0	0	22	121	0
18	Main St / Madison St	0	0	0	15	1071	4	0	68	153	37	23	0
19	Main St / La Salle Ave	0	0	0	142	1049	69	0	540	305	200	849	0
20	Main St / Colfax Ave	0	0	0	74	1426	42	0	189	66	156	206	0
21	Main St / Washington St	0	0	0	109	1551	86	0	99	102	101	93	0
22	Main St / Jefferson Blvd	0	0	0	80	1653	32	0	73	98	117	60	0
23	Main St / Wayne St	0	0	0	110	1808	18	0	45	48	266	77	0
24	Main St / Western Ave	0	0	0	46	1747	341	0	284	272	59	325	0
25	Main St / Monroe St	0	0	0	546	1477	15	0	79	13	87	257	0
26	Main St / South St	0	0	0	63	1528	35	0	33	18	43	65	0
27	Main St / Bronson St	0	0	0	10	1515	9	0	6	11	33	8	0
28	Main St / Sample St	0	0	0	262	1148	166	0	618	118	381	815	0
29	Main St / Broadway St	0	0	0	34	1655	10	0	14	35	17	9	0
30	Main St / Indiana Ave	0	0	0	56	1520	137	0	226	115	35	177	0
31	Main St / Calvert St	0	0	0	46	1595	29	0	70	26	19	69	0
32	Main St / Ewing Ave	0	0	0	162	1404	48	0	211	97	54	230	0
33	Main St / Chippewa Ave	11	0	71	1025	293	62	0	111	20	13	29	0
34	Michigan St / North Shore Dr	69	1093	136	48	737	2	1	78	37	86	117	71
35	Michigan St / Bartlett St	68	1067	3	8	736	61	176	7	105	14	16	39
36	Michigan St / Navarre St	4	1081	4	14	837	8	35	1	22	99	1	20
37	Michigan St / Marion St	0	1023	46	2	0	0	0	0	0	0	0	11
38	Michigan St / La Salle Ave	327	1103	230	0	0	0	90	609	0	0	719	91
39	Michigan St / Colfax Ave	51	0	141	3	0	3	0	237	14	60	314	0
40	Michigan St / Washington St	37	65	35	13	49	57	53	149	40	6	67	11
41	Michigan St / Jefferson Blvd	19	66	16	11	59	38	24	144	36	8	83	9
42	Michigan St / Wayne St	11	52	10	58	28	15	16	136	8	34	316	31
43	Michigan St / Monroe St	63	1043	45	0	0	0	32	589	0	0	278	308
44	Michigan St / South St	54	1162	20	0	0	0	35	65	0	0	39	39
45	Michigan St / Bronson St	20	1126	23	0	0	0	17	10	0	0	28	5
46	Michigan St / Sample St	214	954	318	0	0	0	103	785	0	0	994	45
47	Michigan St / Broadway St	17	1255	17	0	0	0	21	26	0	0	24	22
48	Michigan St / Indiana Ave	93	1115	26	0	0	0	133	123	0	0	130	39
49	Michigan St / Calvert St	30	1153	12	0	0	0	55	52	0	0	51	21
50	Michigan St / Ewing Ave	94	1008	104	0	0	0	65	322	0	0	208	100
51	Michigan St / Don Moyer Ave	4	989	35	0	0	0	4	111	0	0	24	72
52	Michigan St / Chippewa Ave	23	807	54	0	0	0	116	60	1032	33	18	17
53	Michigan St / Ireland Rd	202	519	197	337	719	67	159	413	92	244	371	225
54	St Joseph St / Colfax Ave	58	1371	356	0	0	0	67	313	0	0	318	108
55	St Joseph St / Washington St	79	1497	0	0	0	0	197	0	0	0	0	1
56	St Joseph St / Jefferson Blvd	56	1372	44	0	0	0	157	8	0	0	31	46
57	St Joseph St / Wayne St	21	1375	232	0	0	0	62	210	0	0	315	86
58	St Joseph St / Western Ave	192	1215	8	0	0	0	293	59	0	0	56	78
59	Chapin St / Lincoln Way	63	54	35	6	82	49	14	627	57	68	631	2

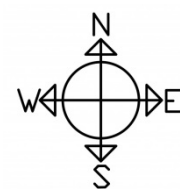
Appendix D: Origin-Destination Data

Airsage Zones



VISUM Zones

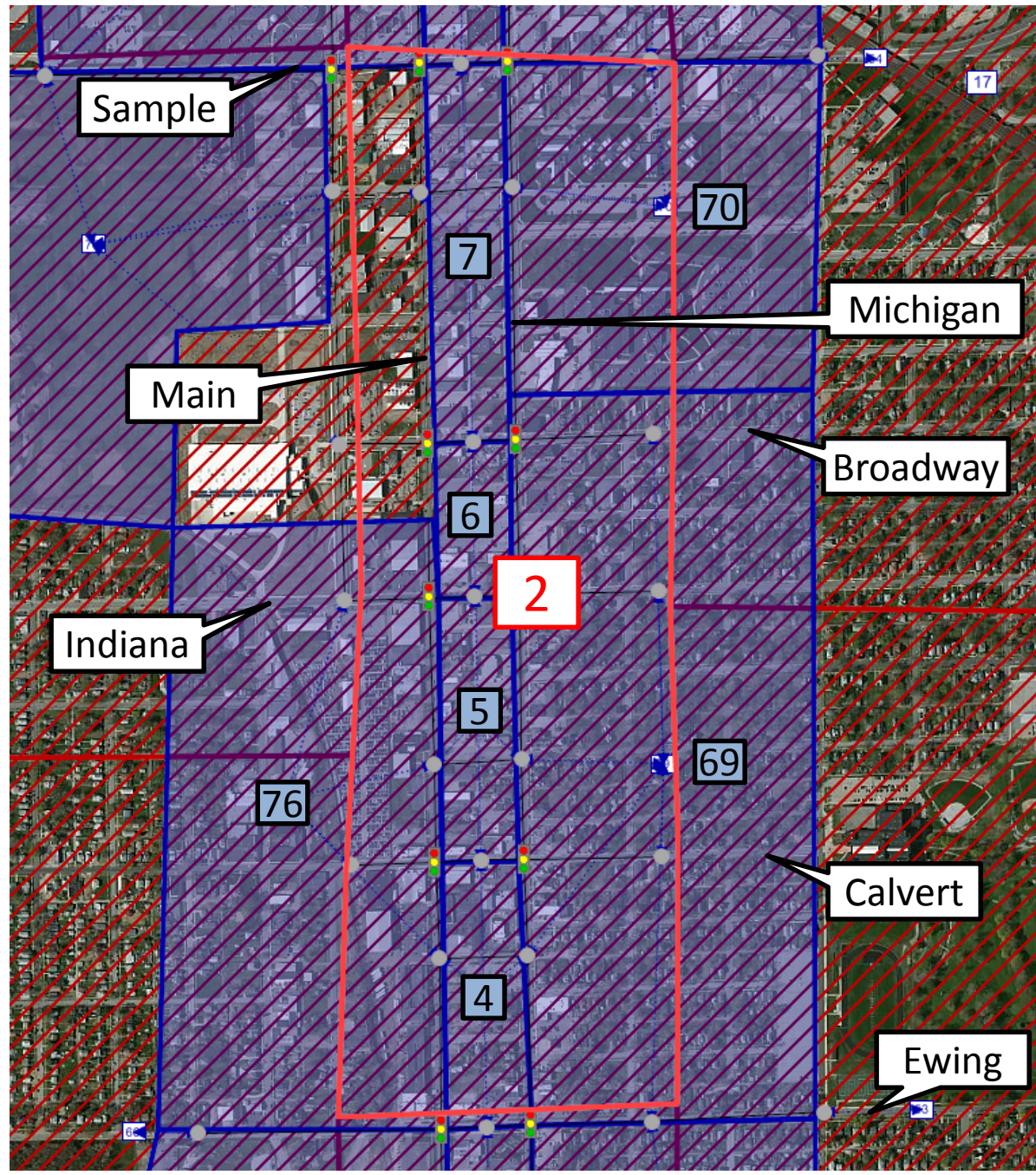
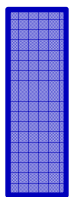


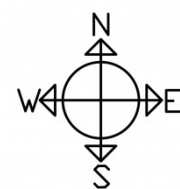


Airsage Zones



VISUM Zones

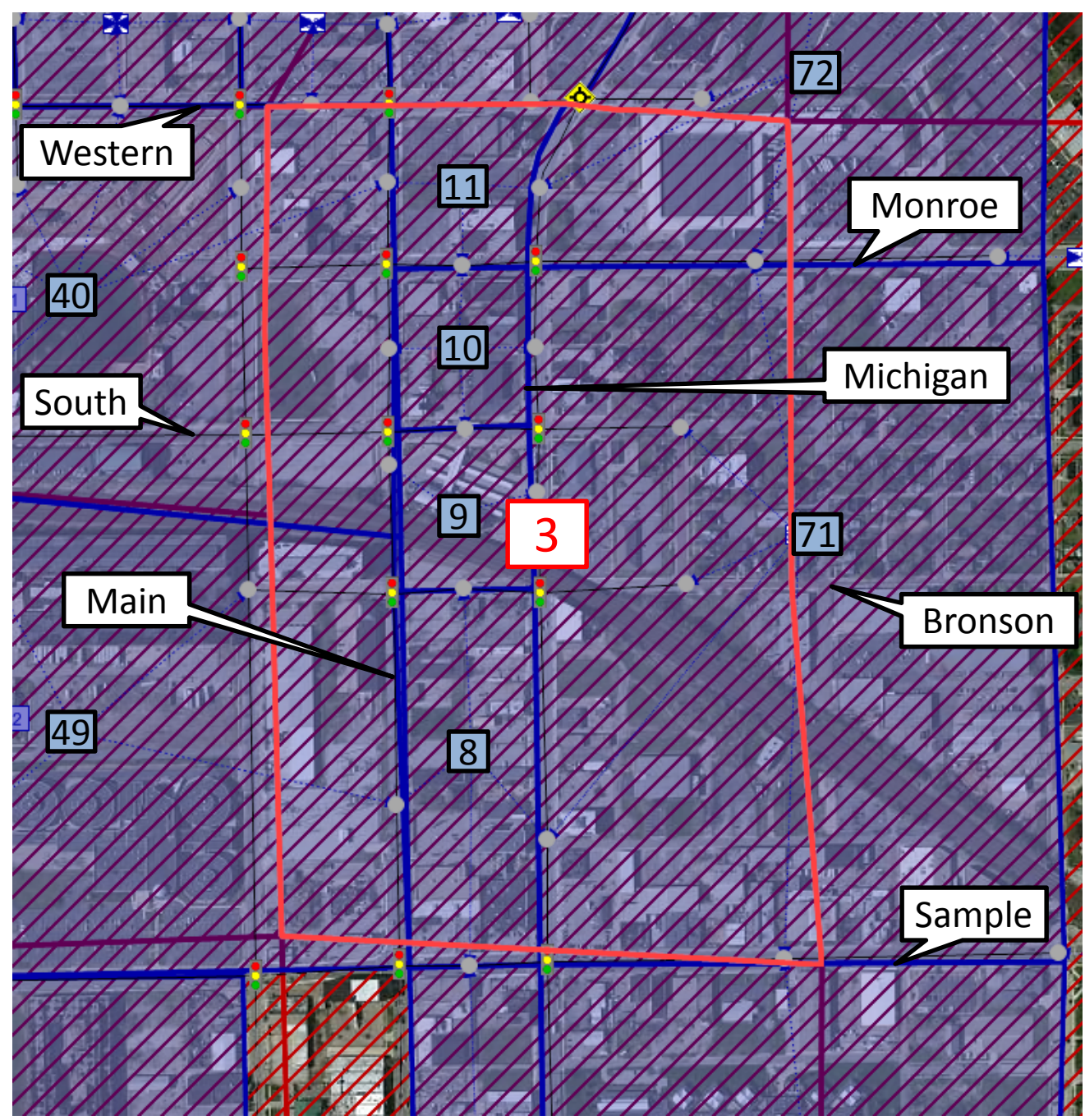
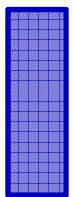




Airsage Zones



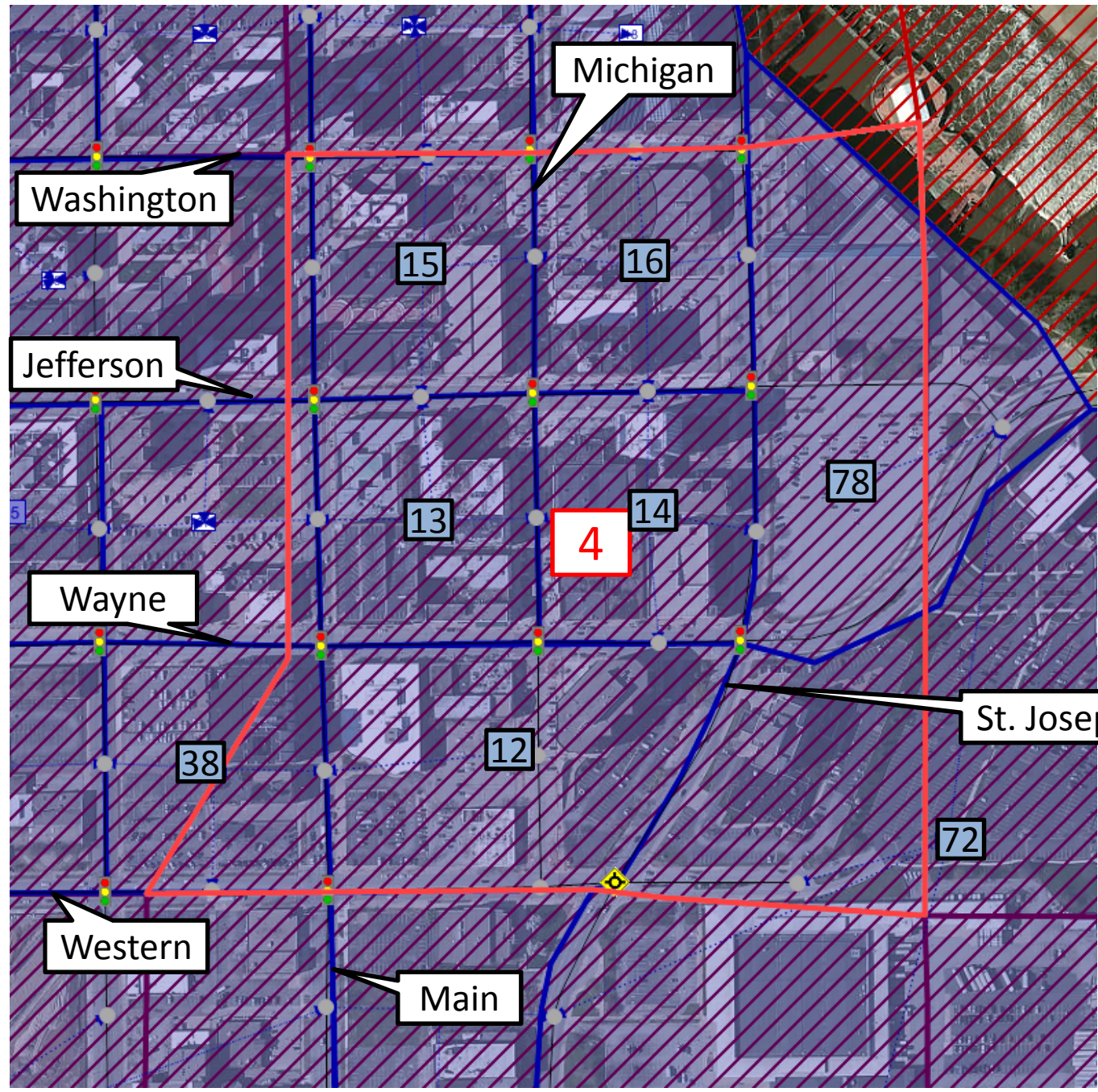
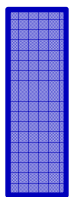
VISUM Zones



Airsage Zones



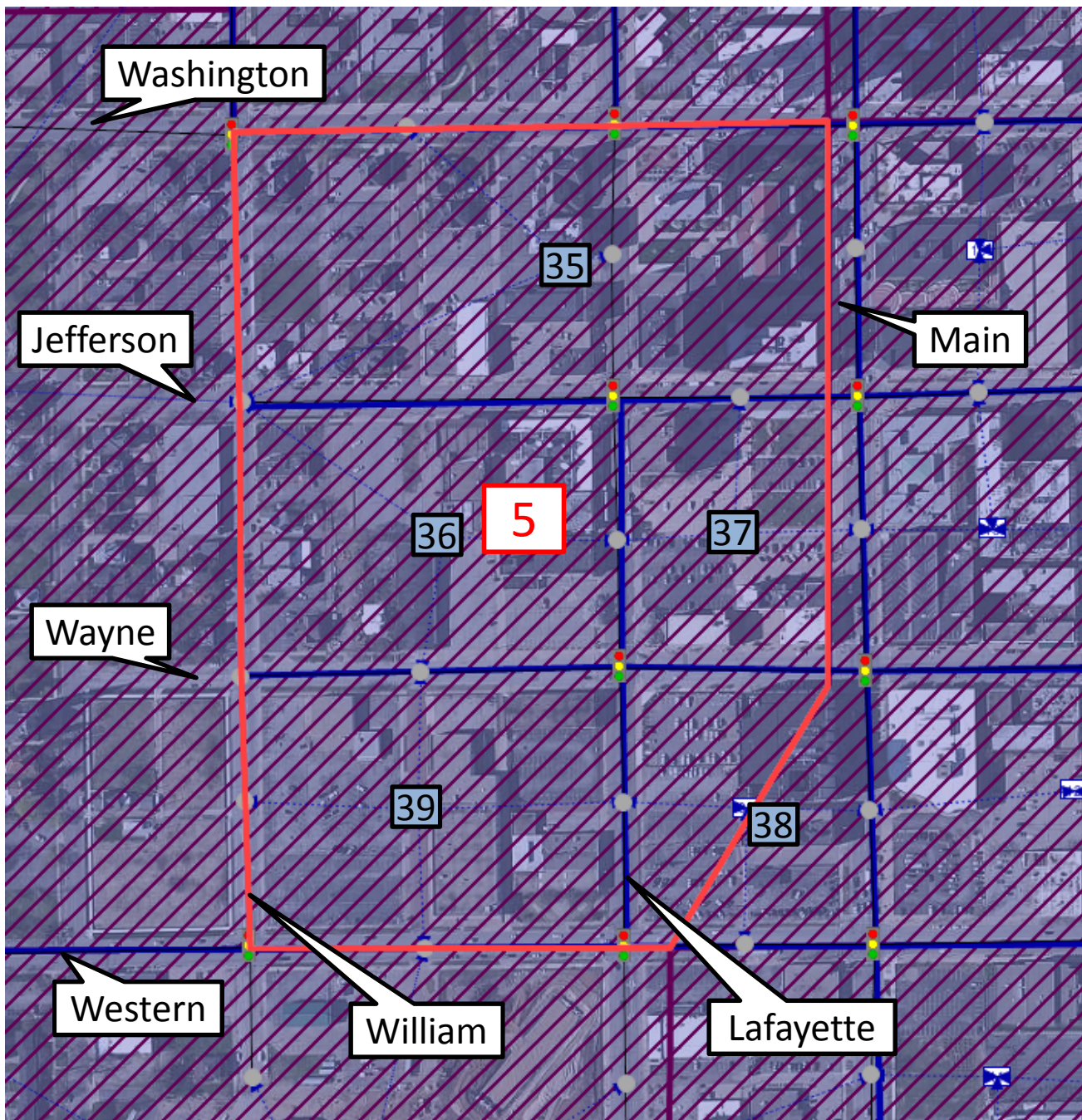
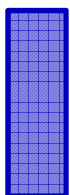
VISUM Zones



Airsage Zones



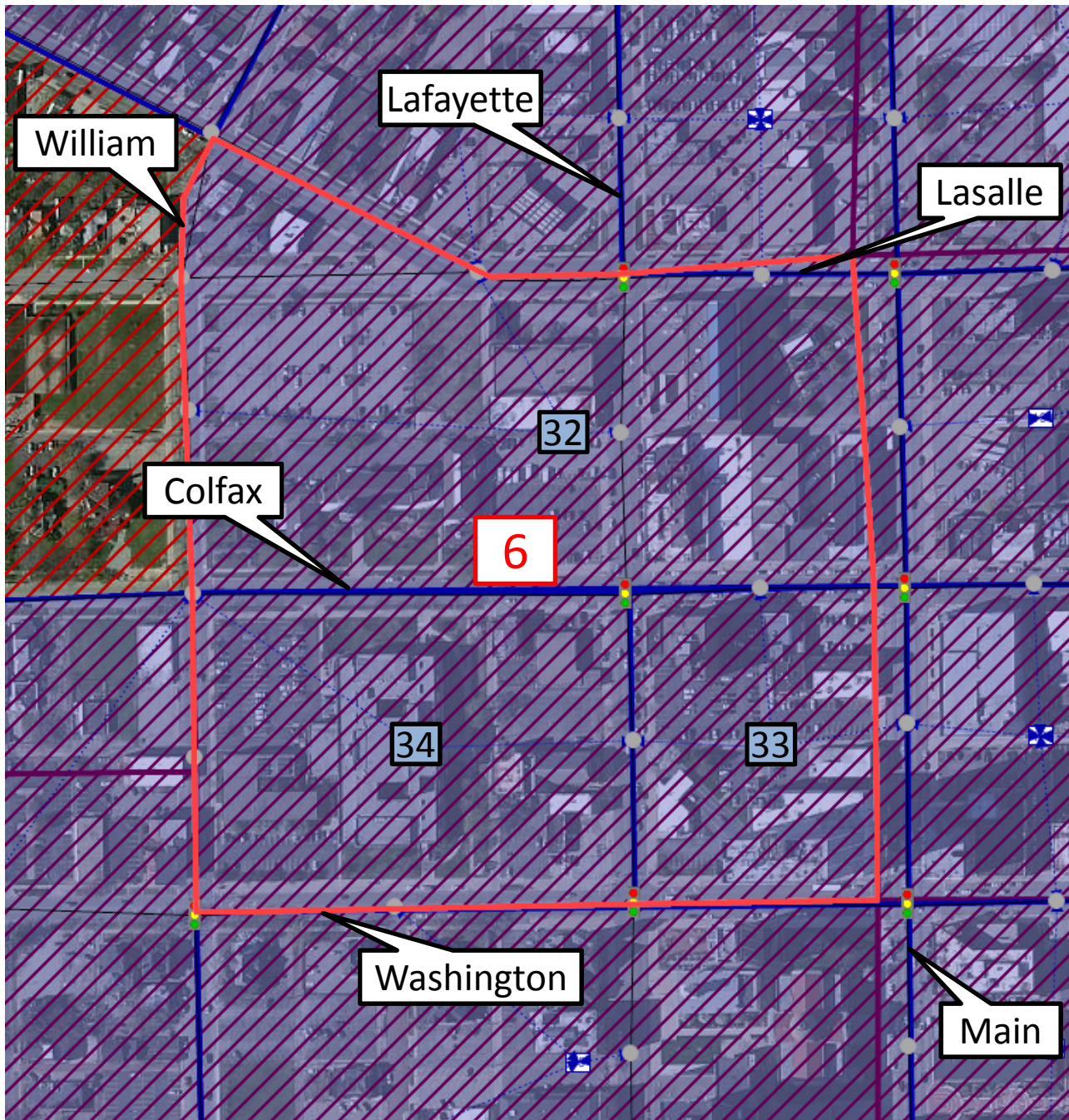
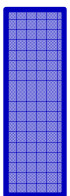
VISUM Zones

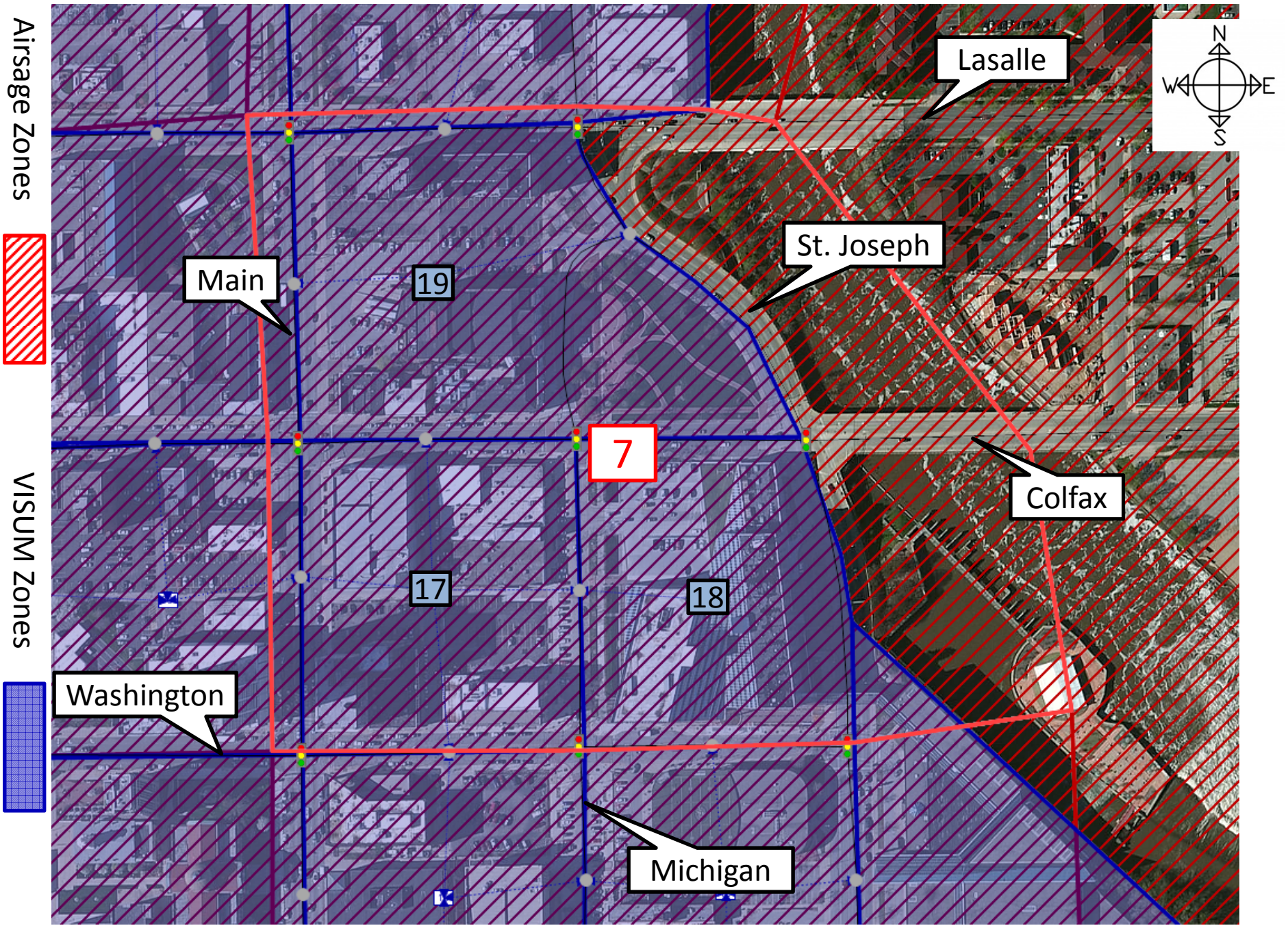


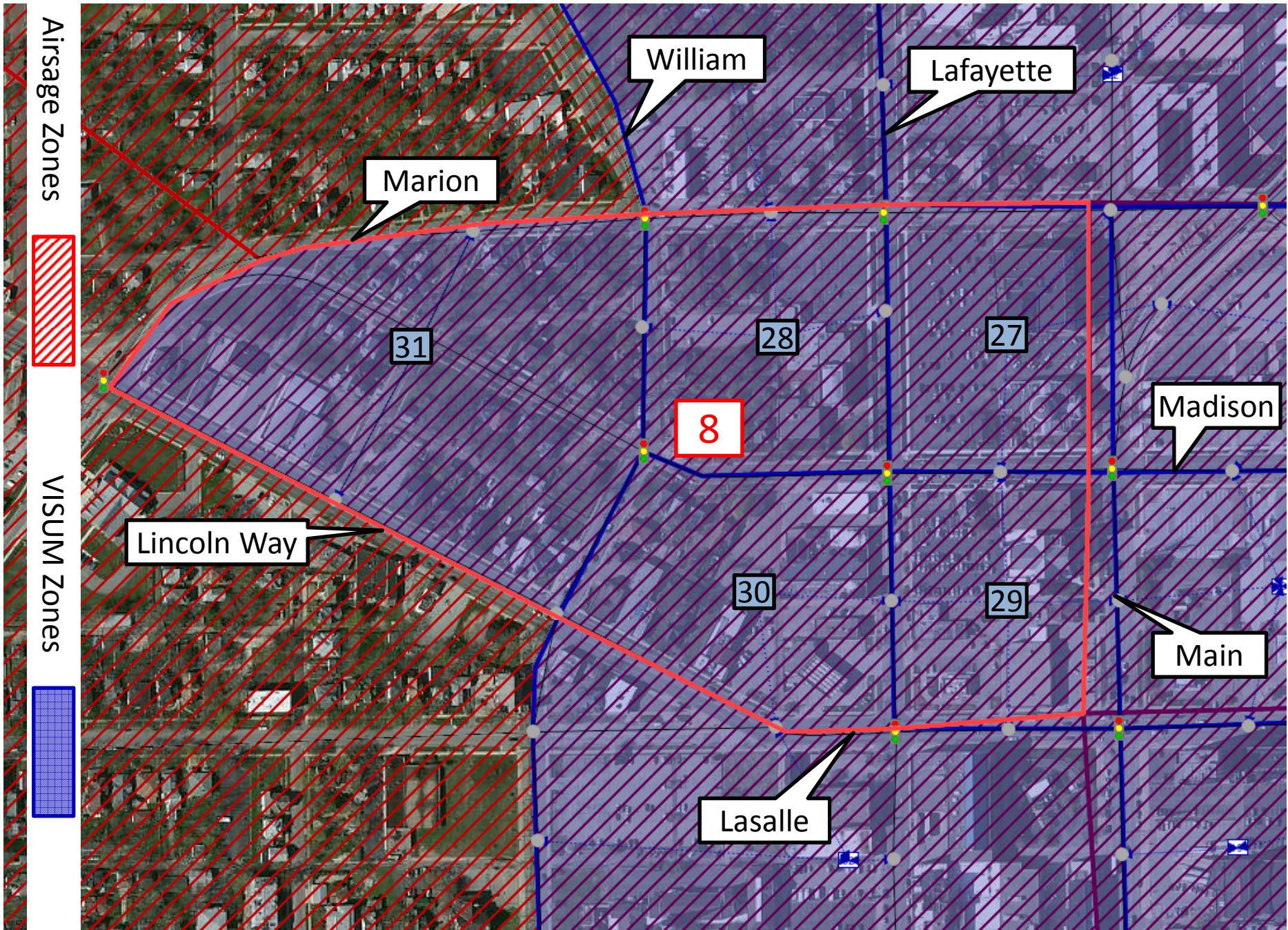
Airsage Zones

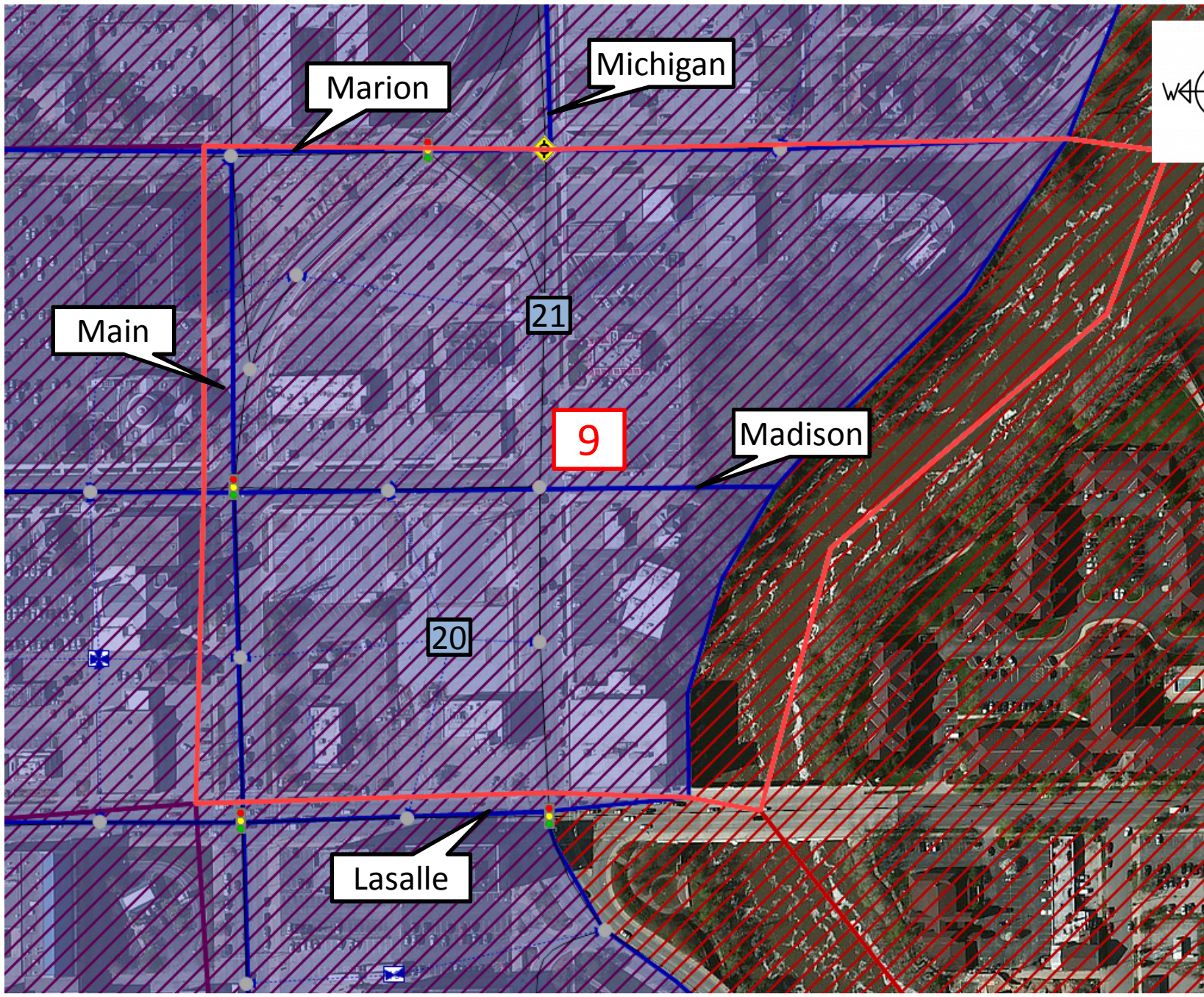


VISUM Zones





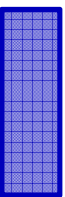




Airsage Zones



VISUM Zones



Marion

Michigan

Main

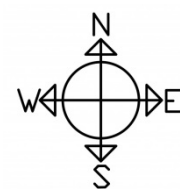
21

9

Madison

20

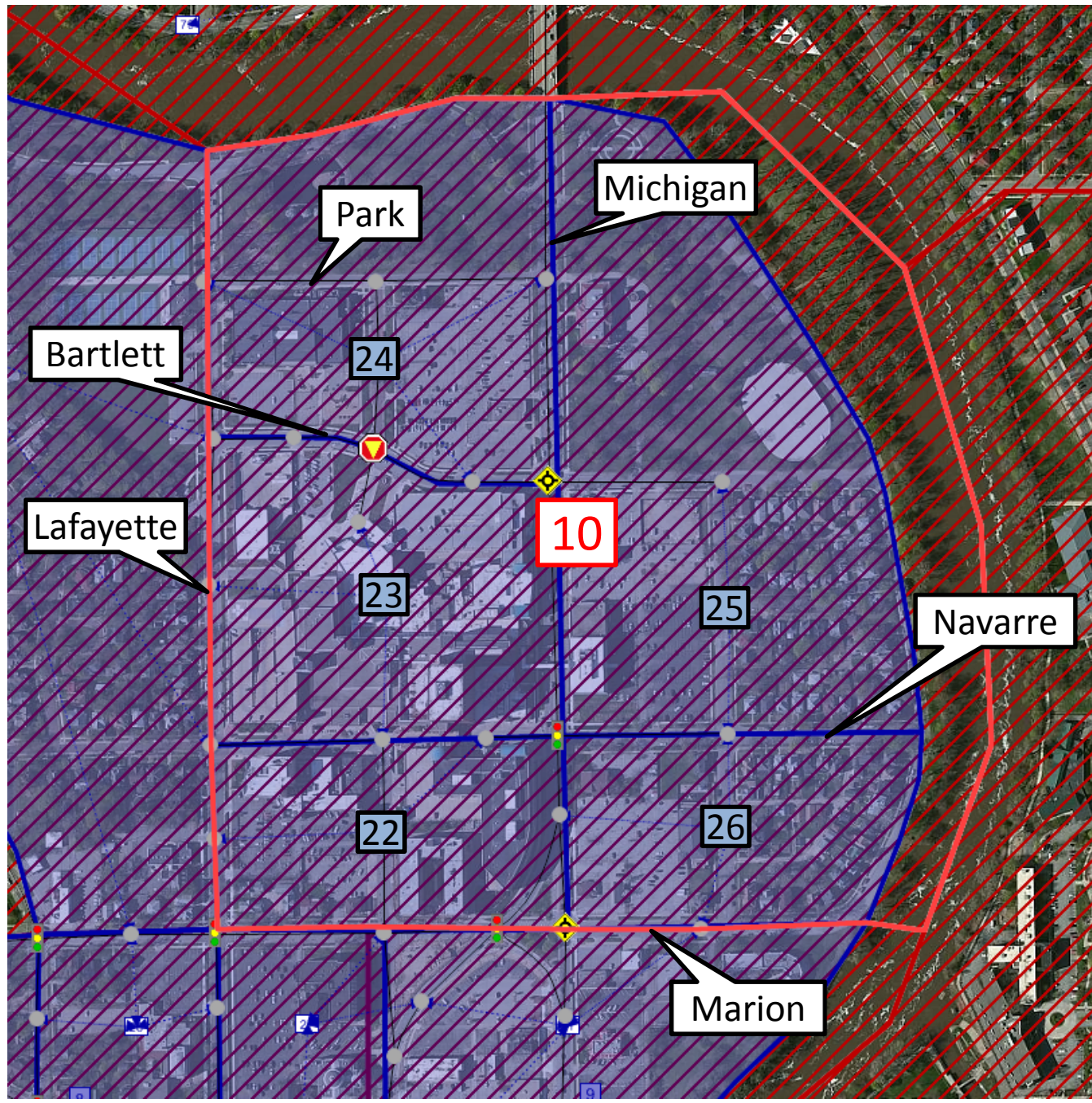
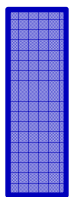
Lasalle



Airsage Zones



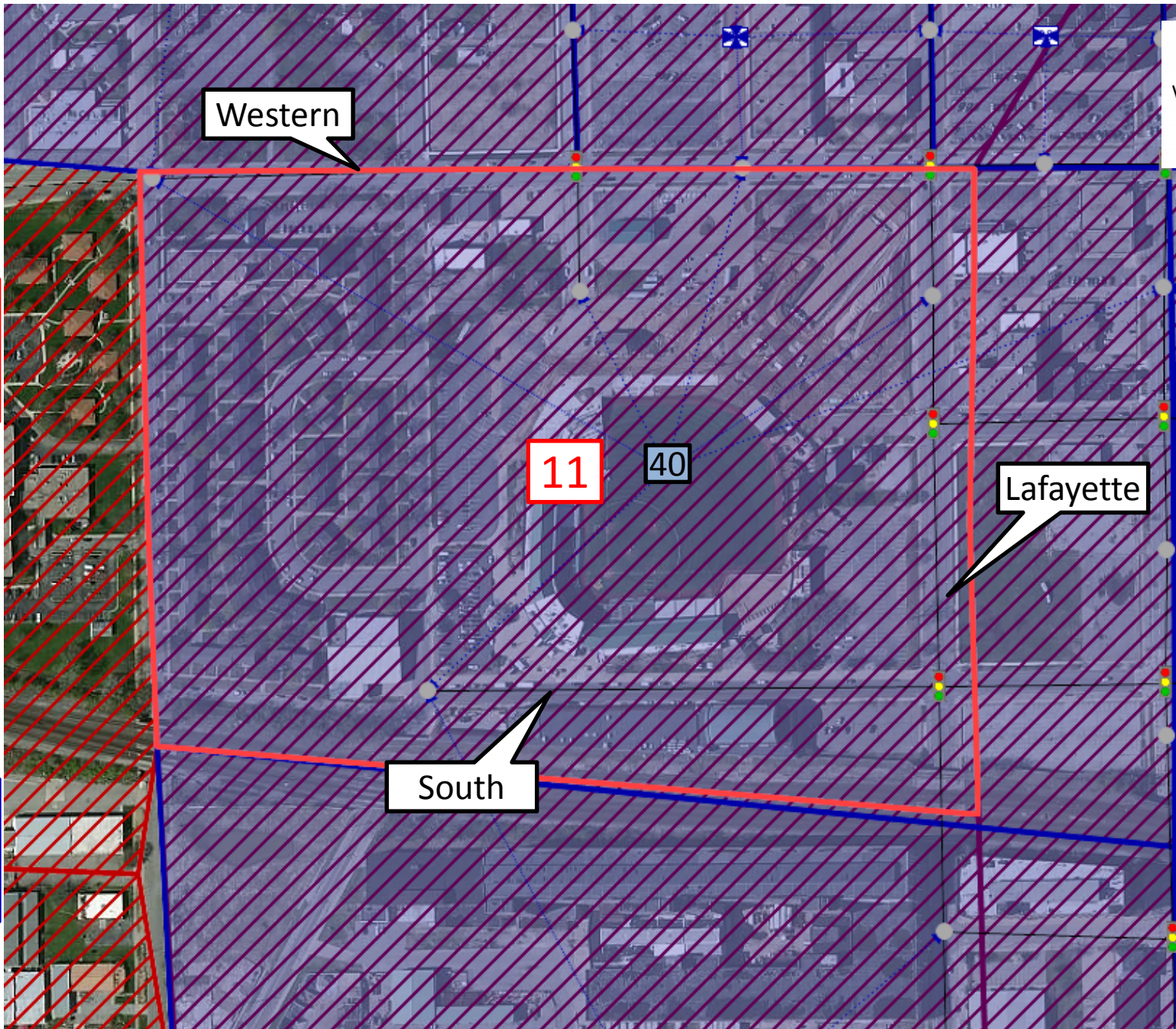
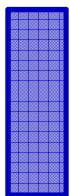
VISUM Zones



Airsage Zones



VISUM Zones



Western

11

40

Lafayette

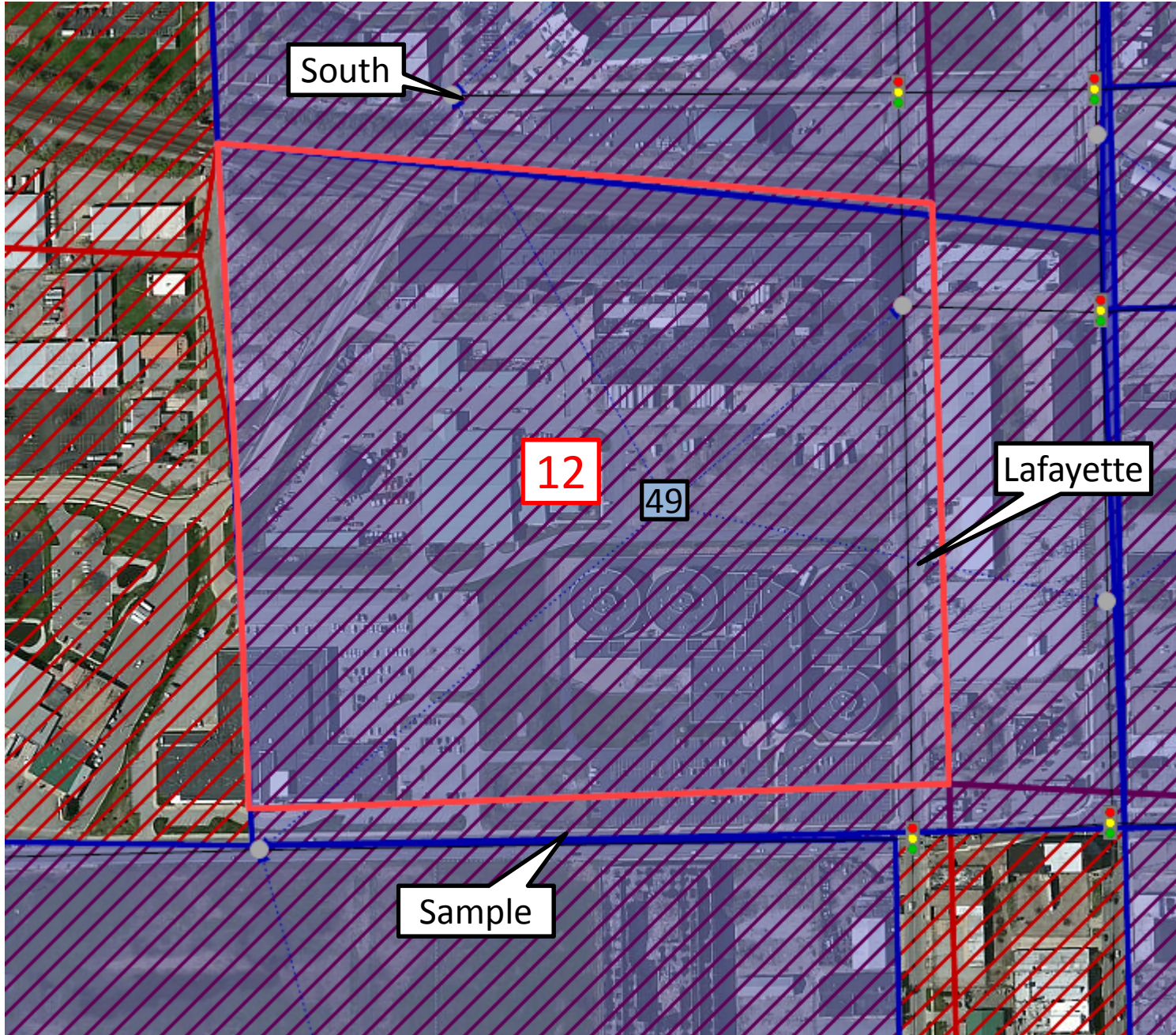
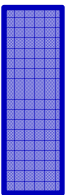
South



Airsage Zones



VISUM Zones



South

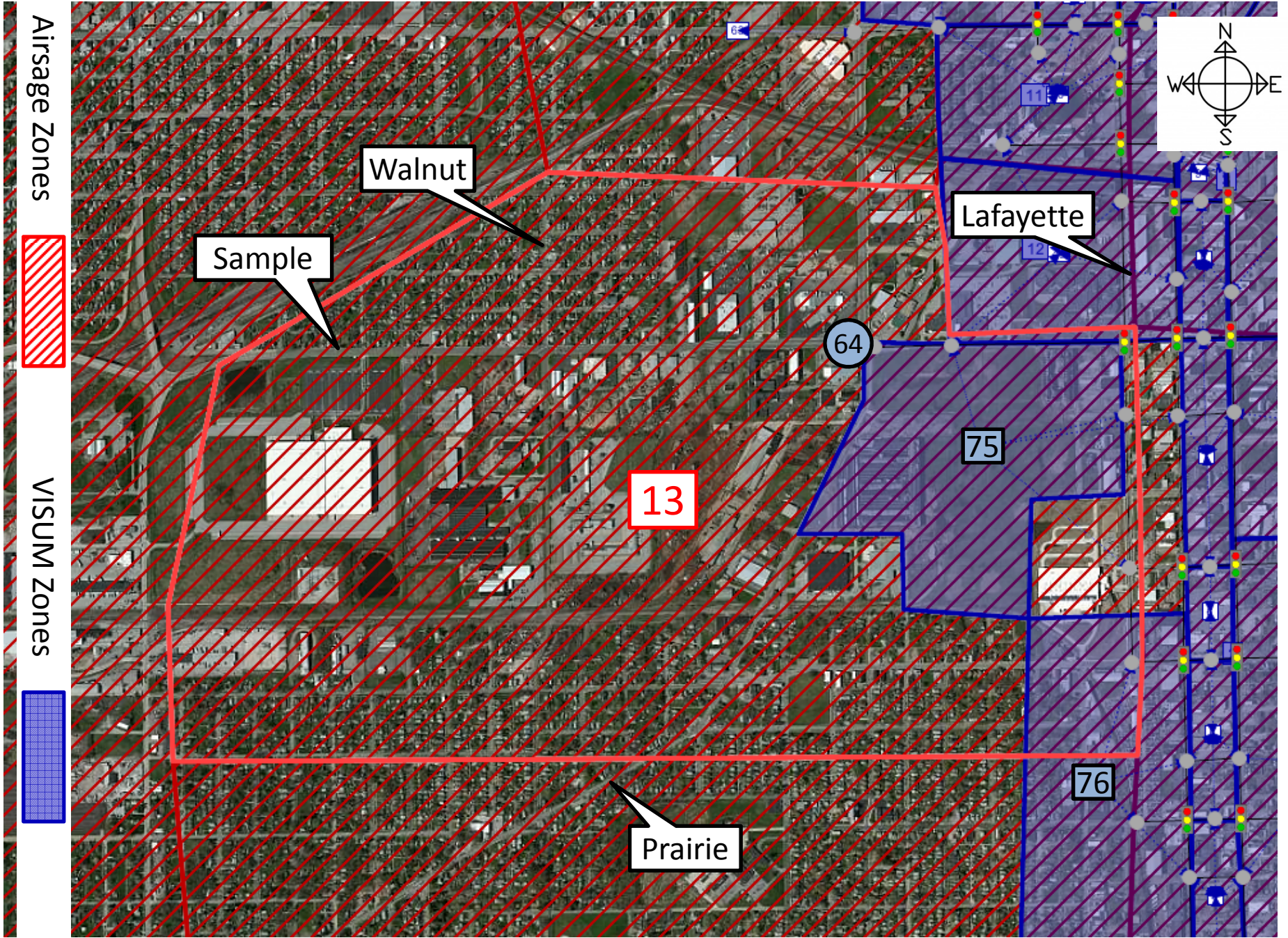
12

49

Lafayette

Sample

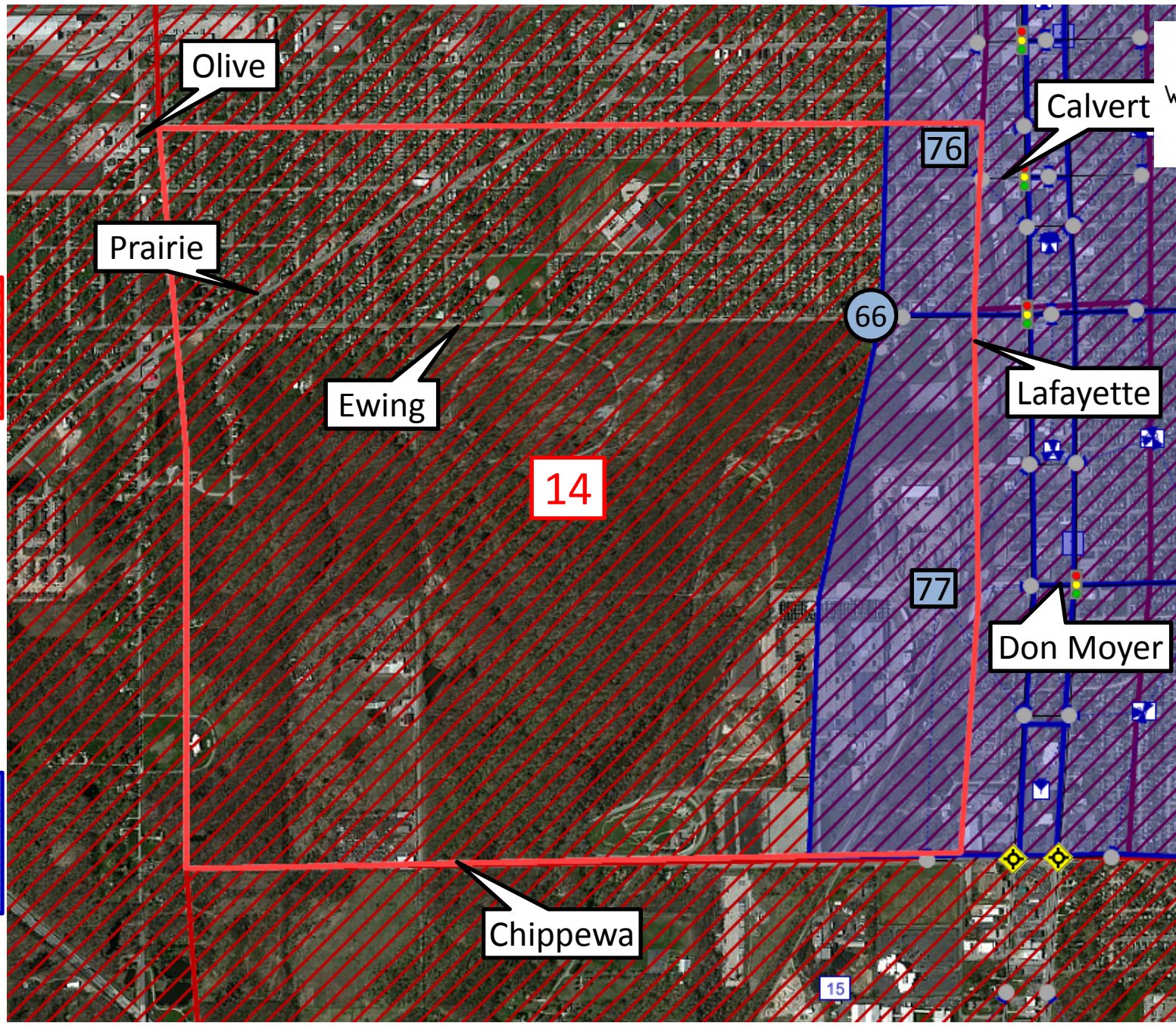


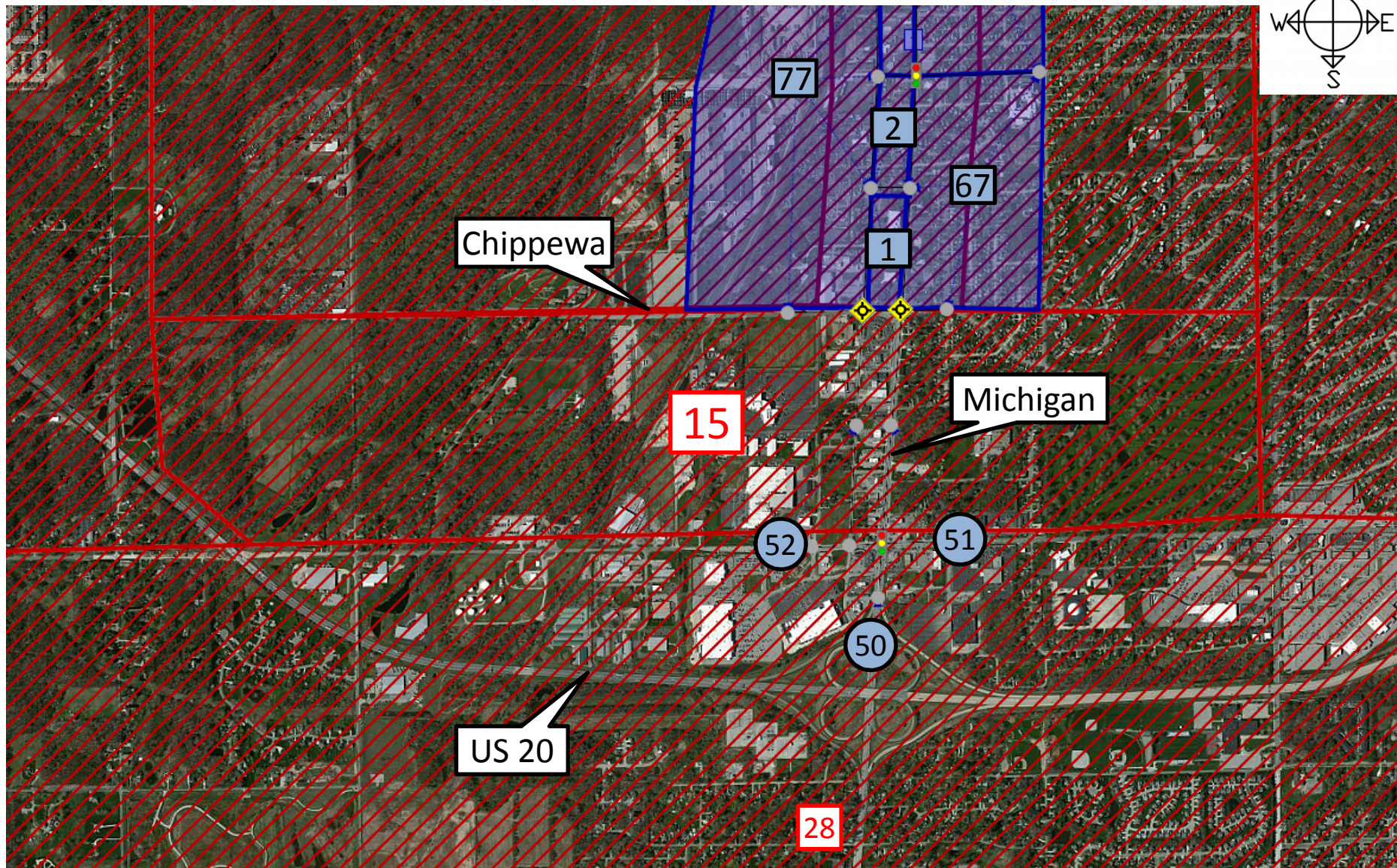


Airsage Zones



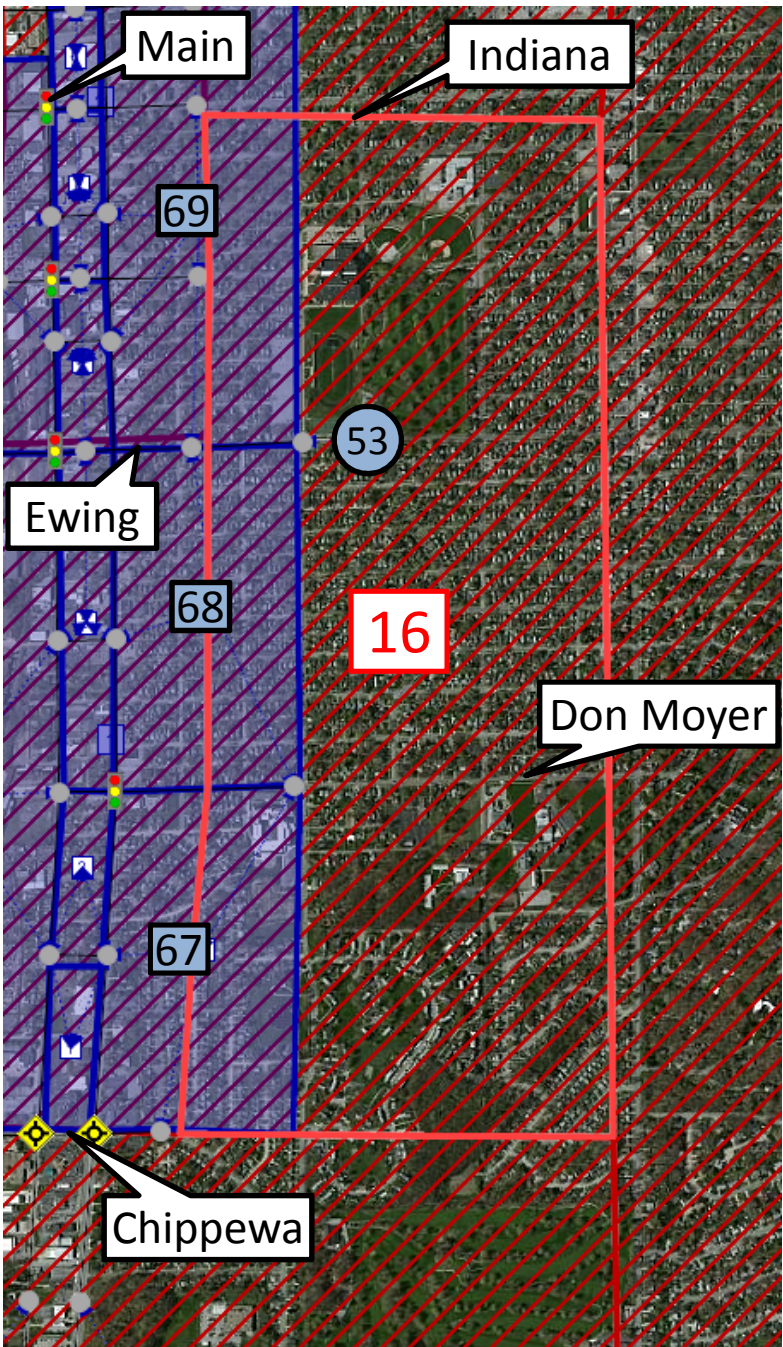
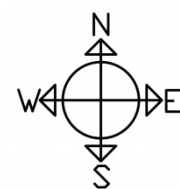
VISUM Zones





Airsage Zones 

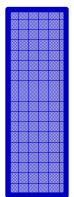
VISUM Zones 

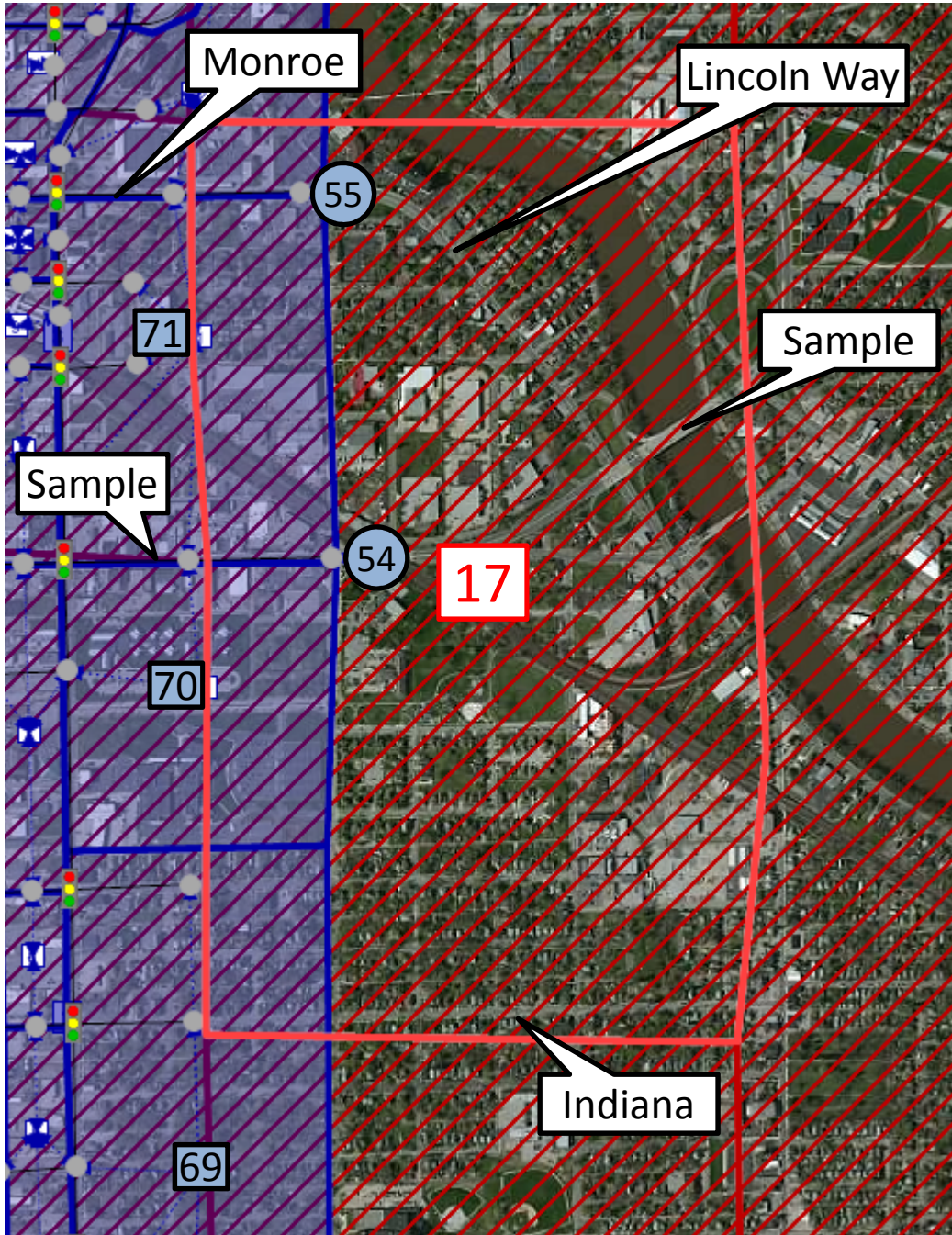


Airsage Zones



VISUM Zones

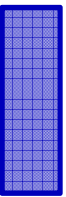


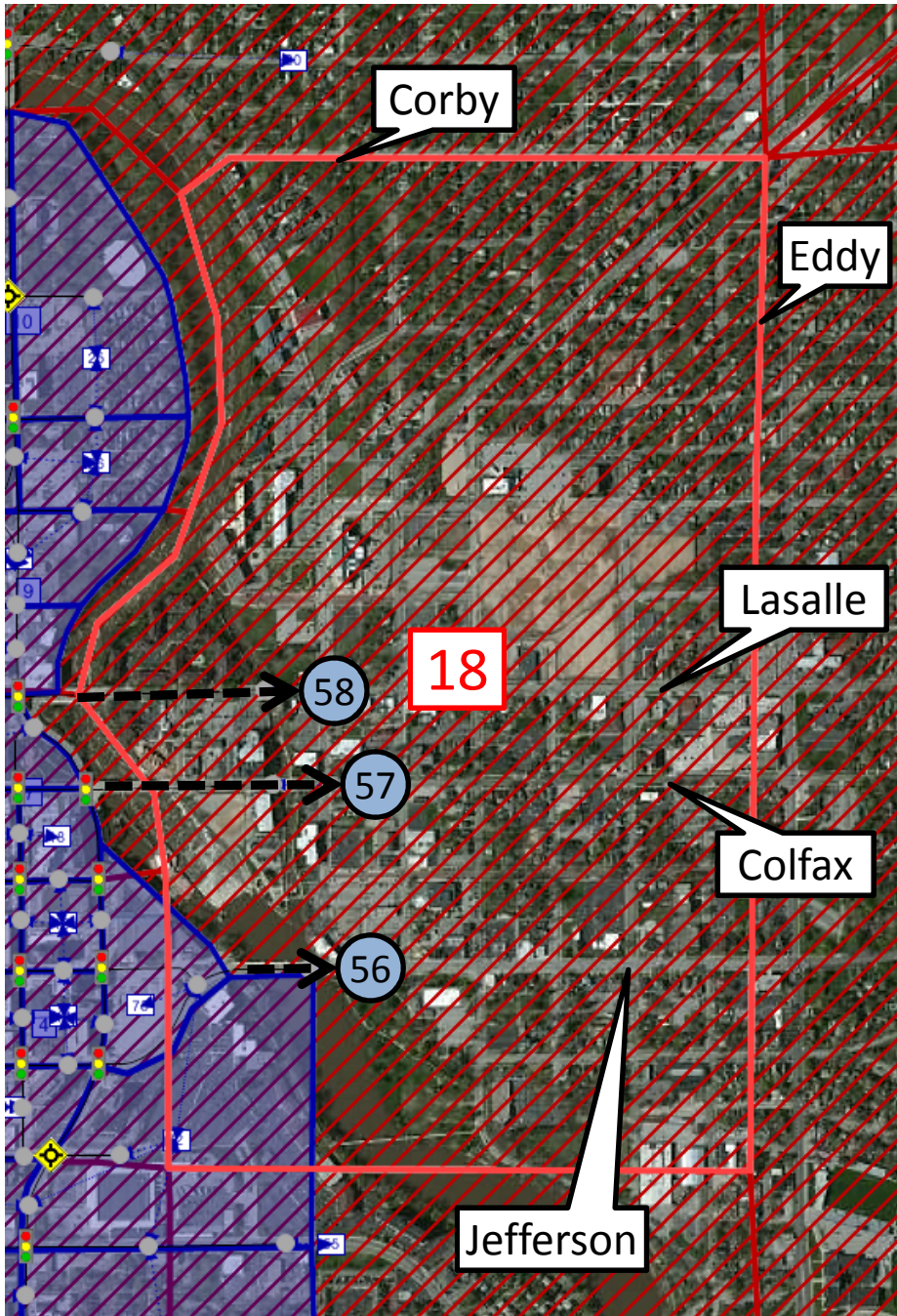


Airsage Zones



VISUM Zones

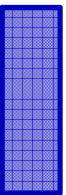


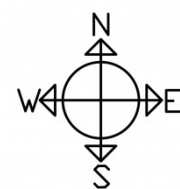


Airsage Zones



VISUM Zones

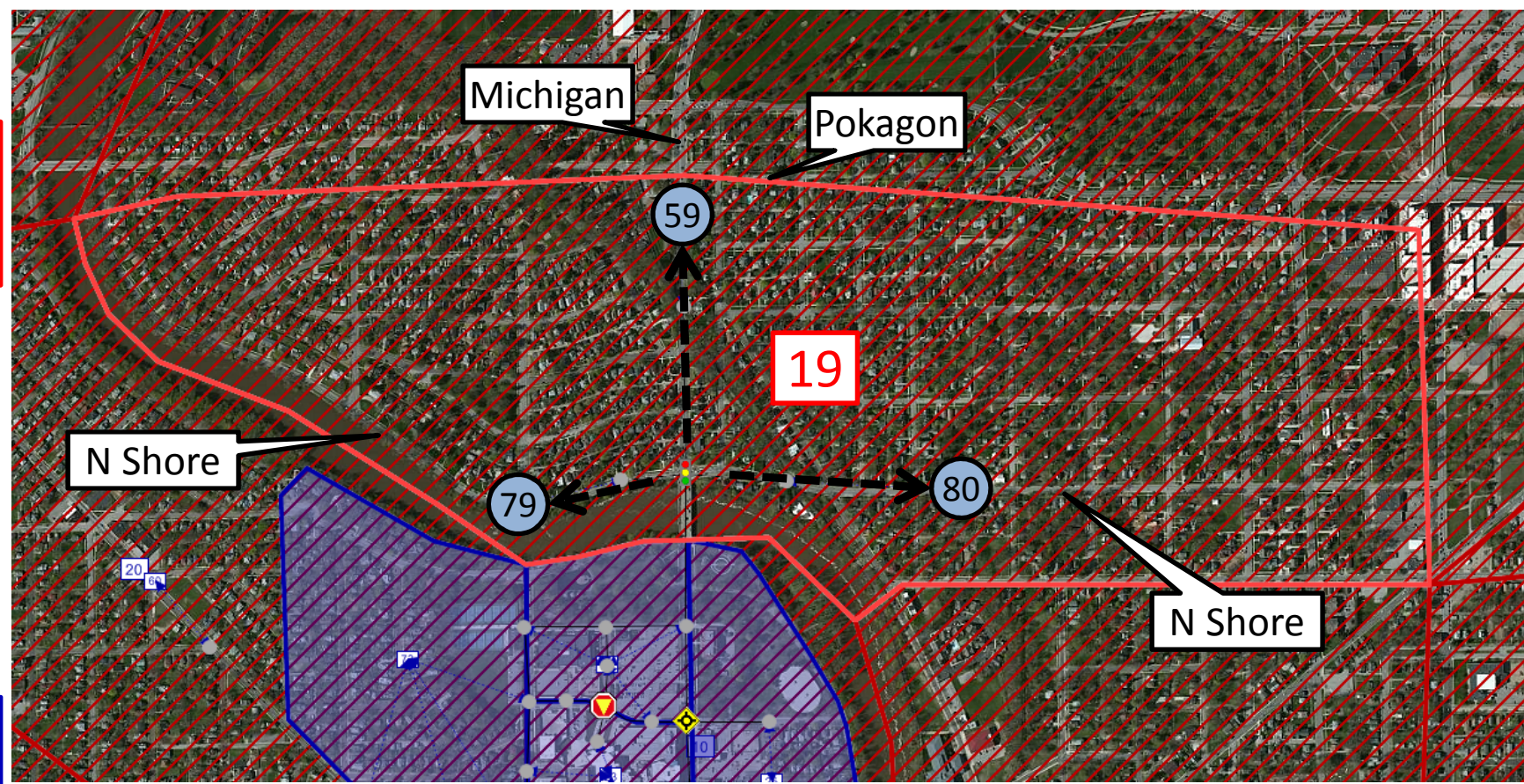
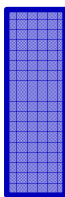




Airsage Zones



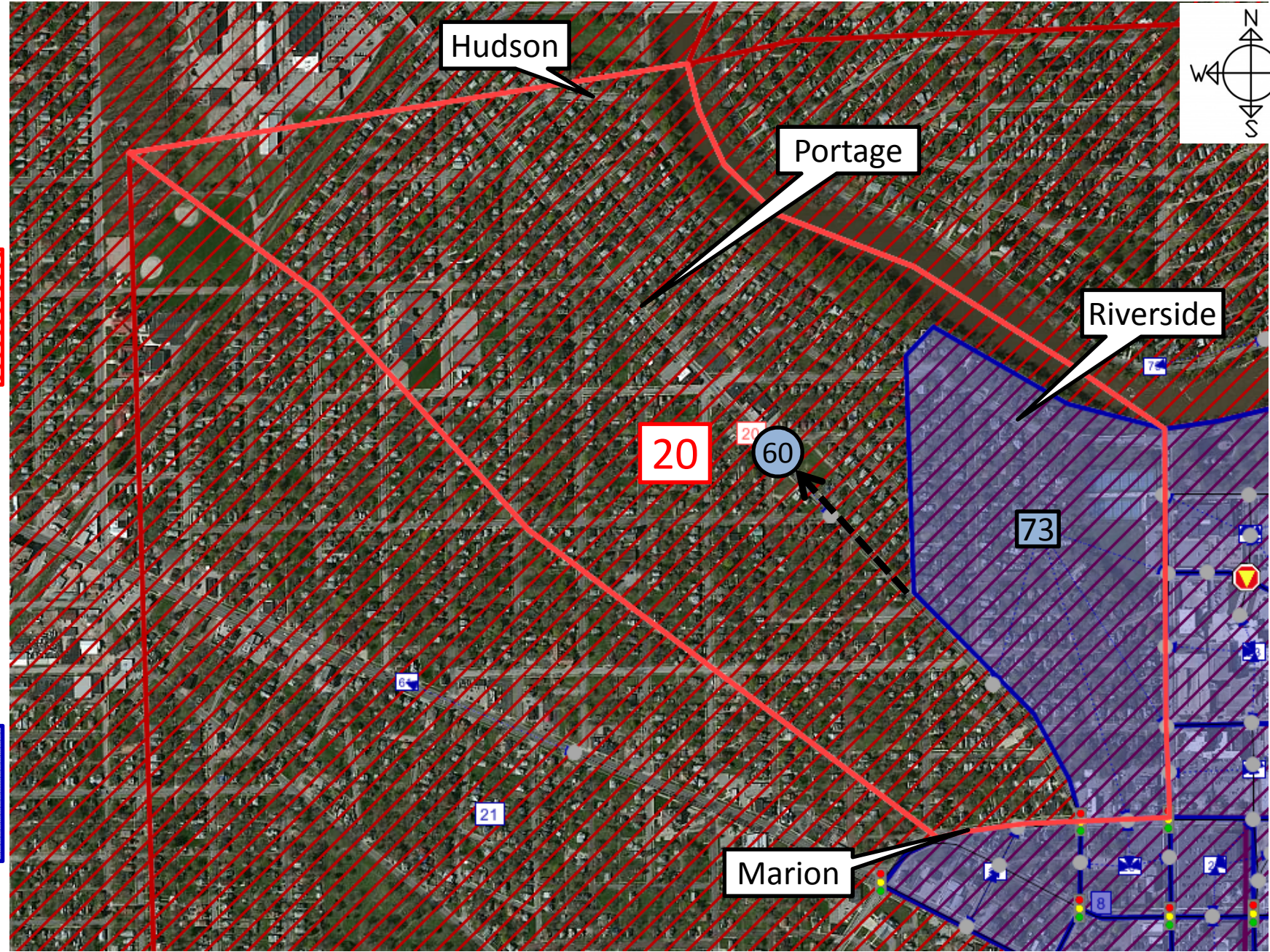
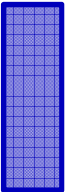
VISUM Zones

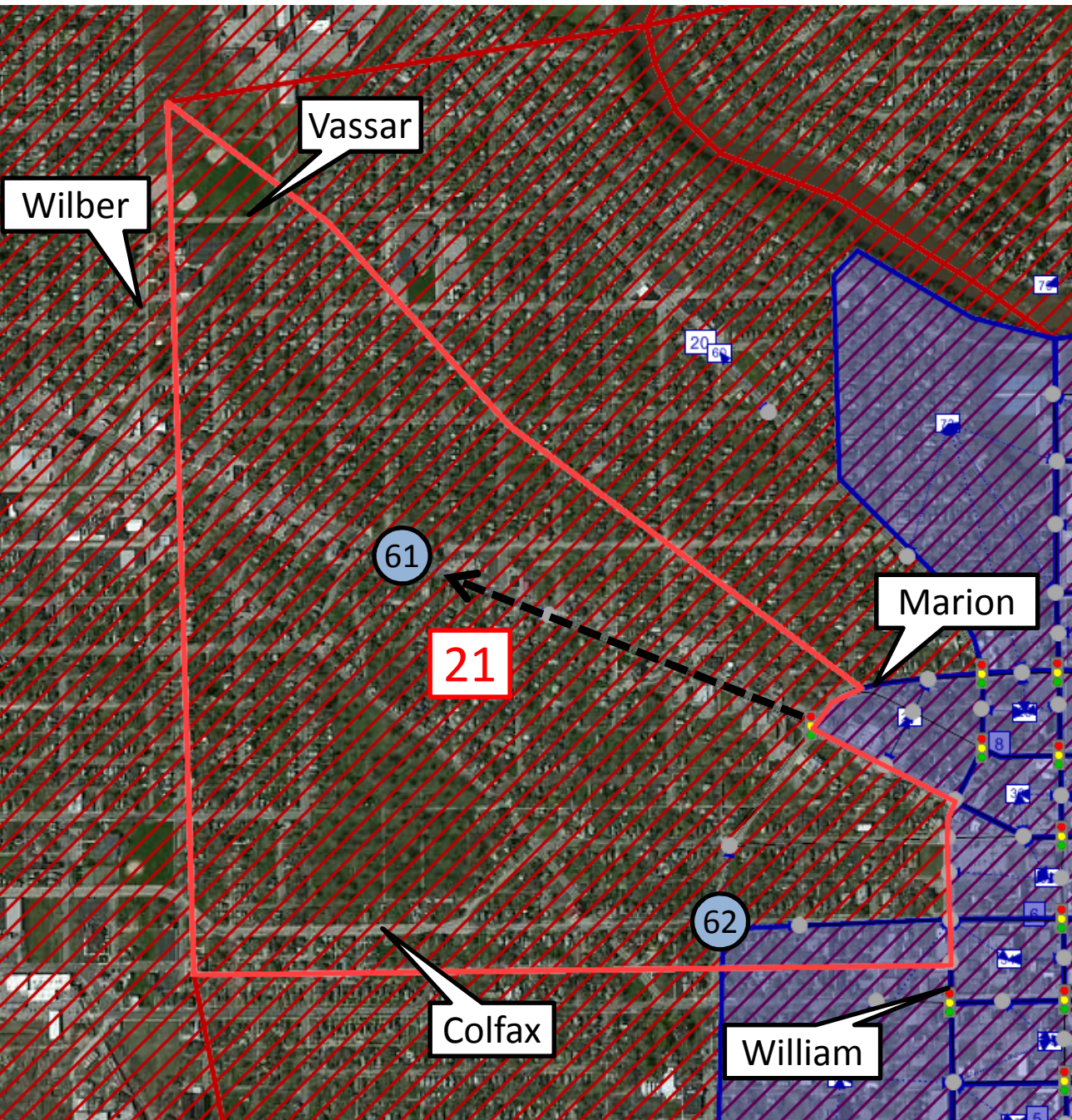


Airsage Zones



VISUM Zones

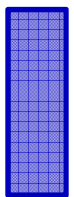




Airsage Zones



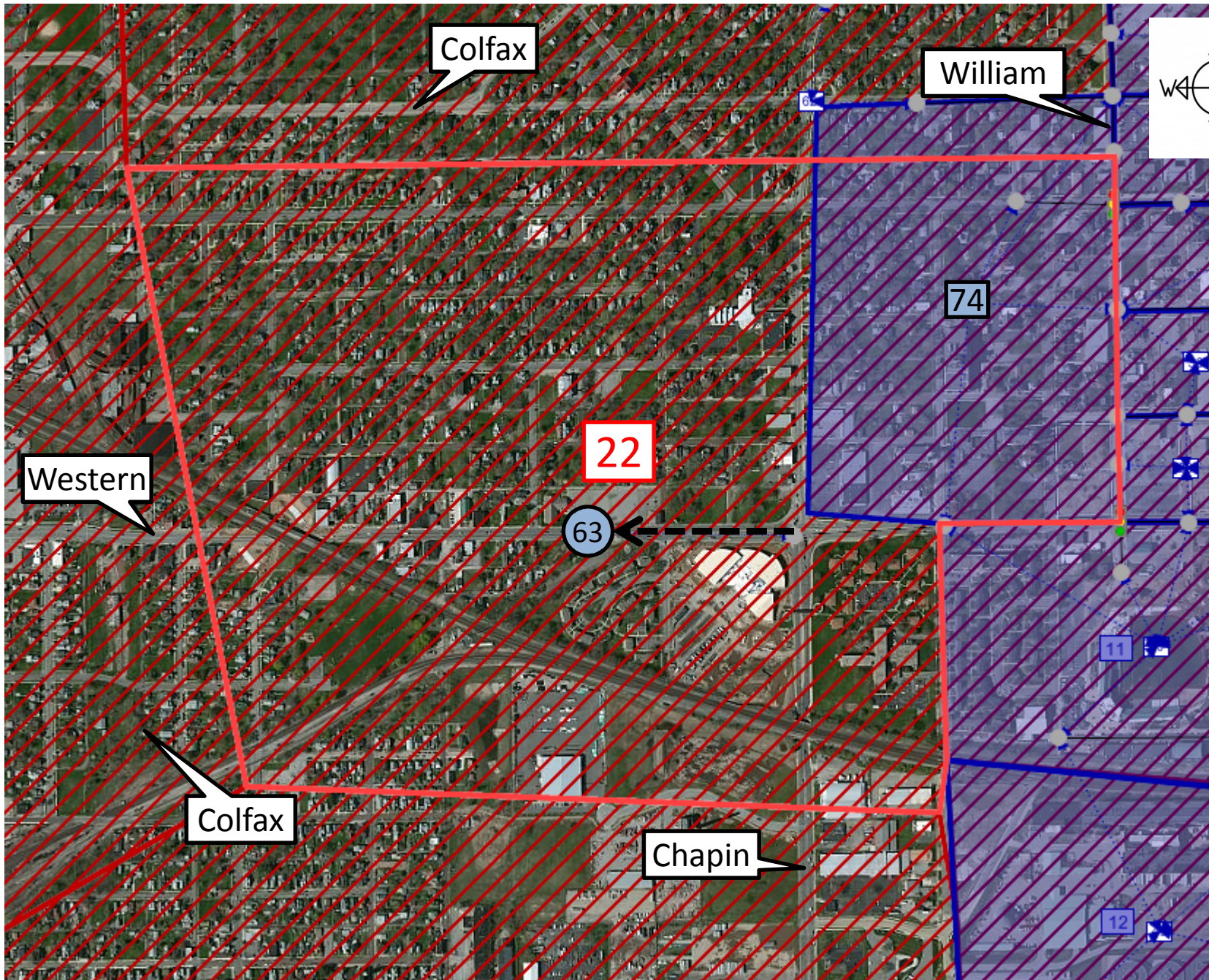
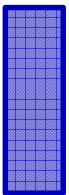
VISUM Zones



Airsage Zones



VISUM Zones



Zone	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
	Sum	41.503	43.957	94.875	189.45	239.118	129.875	136.666	111.513	175.711	318.117	159.114	230.901	168.136	363.495	427.965	536.116	594.512	267.752	336.787	512.139	
1	179.736	0	0.454	0.903	0	0	0	0	0.001	0.004	0.01	0.008	0	0	0	0	0	0	0	0	0	
2	187.139	0.454	0	1.803	0	0	0	0	0.002	0.009	0.021	0.016	0	0	0	0	0	0	0	0	0	0
3	128.305	0.157	0.313	0	0	0	0	0	0.001	0.005	0.013	0.01	0	0	0	0	0	0	0	0	0	0
4	53.628	0	0	0	0	0.001	0	0.039	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	578.305	0	0	0	0.04	0	0.005	0.356	0	0	0	0	0	0	0	0	0	0	0	0	0	0.002
6	231.14	0	0	0	0	0.001	0	0.69	0	0	0	0	0	0	0	0	0	0	0	0	0	0.024
7	155.917	0	0	0	0.008	0.094	0.077	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.084
8	94.804	0	0	0	0	0	0	0	0	0.205	0.135	0.173	0	0	0	0	0	0	0	0	0.006	0
9	193.277	0	0	0	0	0	0	0	0.127	0	0.111	0.165	0	0	0	0	0	0	0	0	0.008	0
10	169.914	0	0	0	0	0	0	0	0.118	0.03	0	0.01	0	0	0	0	0	0	0	0	0.003	0
11	112.84	0	0	0	0	0	0	0	0.096	0.025	0.112	0	0	0	0	0	0	0	0	0	0.001	0
12	59.9	0	0	0	0	0	0	0	0	0	0	0	0	0.298	0.335	0.032	0.009	0	0	0	0	0
13	63.256	0	0	0	0	0	0	0	0	0	0	0	13.945	0	16.285	15.63	2.518	0.027	0.006	0.044	0	0
14	276.364	0	0	0	0	0	0	0	0	0	0	0	10.024	66.007	0	80.52	3.021	0.137	0.026	0.031	0	0
15	119.962	0	0	0	0	0	0	0	0	0	0	0	0.15	12.209	12.668	0	33.486	0.131	0.016	0.166	0	0
16	448.419	0	0	0	0	0	0	0	0	0	0	0	0.44	23.896	1.727	135.76	0	13.057	9.351	0.04	0	0
17	318.938	0	0	0	0	0.002	0	0.001	0.003	0.001	0.003	0	0.021	0.608	0.653	2.906	8.448	0	10.882	4.887	0	0
18	91.124	0	0	0	0	0	0	0	0	0	0	0	0	0.034	0.056	0.114	1.027	9.704	0	0.127	0	0
19	51.641	0	0	0	0	0	0	0	0	0	0	0	0	0.005	0.01	0.011	0.05	3.345	0.034	0	0	0
20	465.226	0.007	0.013	0.004	0.001	0.012	0.002	0.008	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	101.446	0.007	0.014	0.004	0.001	0.013	0.002	0.009	0	0	0	0	0	0	0	0	0	0	0	0	0	2.648
22	373.811	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.318
23	644.997	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.717
24	621.588	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.109
25	188.269	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.086
26	71.986	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.068
27	106.397	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.047	0	0.012	0.86	0
28	11.445	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.039
29	77.822	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.033	0	0.009	1.031	0
30	103.458	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.042	0	0.011	6.157	0
31	327.138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.003	0	0.001	0.304	0
32	87.564	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.819	0.01	0.186	0	0
33	93.635	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.128	0.287	0.425	0	0
34	35.495	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.841	0.015	0.028	0	0
35	528.726	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	12.565	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	90.875	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	185.483	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	16.782	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	21.356	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	81.767	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	3013.772	10.608	10.608	21.099	109.032	1.286	0.72	45.599	10.739	38.39	93.752	71.007	44.71	1.463	69.823	1.044	0.378	0.022	0.022	3.447	29.876	0
51	1660.857	3.641	3.641	7.241	36.203	0.427	0.239	15.141	3.637	13.001	31.75	24.048	13.443	0.44	20.994	0.314	0.114	0.006	0.006	0.951	5.951	0
52	1183.134	1.624	1.624	3.229	20.703	0.244	0.137	8.658	2.124	7.593	18.543	14.044	6.512	0.213	10.17	0.152	0.055	0.003	0.003	0.539	2.399	0
53	568.418	10.16	12.287	35.564	10.96	0.051	0.028	1.874	0.419	1.496	3.655	2.768	1.983	0.069	3.3	0.049	0.017	0.001	0.001	0.118	0.737	0

Zone		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
	Sum	41.503	43.957	94.875	189.45	239.118	129.875	136.666	111.513	175.711	318.117	159.114	230.901	168.136	363.495	427.965	536.116	594.512	267.752	336.787	512.139	
54		2.4359	2.4359	0.7559	1.73378	32.4026	10.5681	7.97462	0.26085	0.38867	0.94865	0.7183	0.60864	0.13237	0.95059	0.01428	0.00519	0.0026	0	9.81222	4.71145	
55		1.5181	1.5181	0.4711	1.09022	20.3664	6.64085	5.27938	1.50115	0.56033	2.57835	5.3237	9.30036	2.02563	14.5234	0.21672	0.07881	0.0384	0.004	200.369	72.3456	
56	1014.31	0.23	0.236	0.073	0.161	3.014	0.987	1.017	1.472	0.378	1.495	0.053	99.316	0.544	43.368	0.058	201.822	15.203	0.001	2.608	1.467	
57	1612.828	0	0	0	0	0	0	0	0	0	0	0	0.001	6.958	1.483	3.035	40.052	361.048	44.586	17.781	9.778	
58		0.4334	0.4492	0.1395	0.3069	5.74554	1.87953	1.94091	2.75838	0.70866	2.80209	0.10044	0.99975	2.97321	7.78782	4.24266	14.2281	7.53393	0.09951	2.6412	56.7514	
59		4.8006	4.8018	1.4905	2.9801	56.0825	18.4165	18.8321	27.8646	7.16134	28.3079	1.01156	9.43225	28.0398	73.4492	40.0153	134.193	80.3411	1.06049	28.1778	185.352	
60	974.501	0	0	0	0	0.162	16.034	0.078	0.109	0.028	0.06	0.002	0.014	0.042	1.118	0.104	0.304	0.312	0.01	0.109	32.678	
61	1895.455	1.156	1.156	0.359	0.884	76.529	11.113	3.11	8.42	2.164	8.554	0.306	2.105	6.452	16.901	9.207	30.333	19.856	0.261	6.939	40.623	
62		0	0	0	0	0.1082	10.6655	0.37	1.12904	5.5734	40.3378	1.60384	1.26144	4.43772	11.8915	25.1357	38.1655	59.1566	1.89108	7.9338	29.4338	
63		0	0	0	0	0.01161	1.15662	0.07742	0.62941	13.881	56.6297	3.86935	6.38157	7.09071	29.4529	52.7766	1.11792	4.37954	0.07819	30.7233	9.49145	
64		0.6011	0.6011	0.1868	0.5776	23.4551	9.2768	8.50877	40.5177	66.5747	5.69929	20.642	2.07665	0.6146	10.728	33.3654	14.0276	4.46738	0.06137	3.62625	1.71475	
66		1.9039	1.9039	1.0332	1.4854	11.8929	40.2842	11.4332	6.99226	13.5293	7.37171	10.668	5.93335	0.6784	5.87098	7.41258	2.12244	0.61863	0.02663	0.91576	4.01125	
67	439.166	0	0	0.019	0.009	0	0	0.005	0	0.001	0.004	0.003	0.005	0	0.016	0	0	0	0	0.001	0.007	
68	256.571	0.135	0.27	17.58	0	0	0	0	0.008	0.028	0.068	0.052	0	0	0	0	0	0	0	0	0	
69	671.799	0	0	0	1.707	0.028	0.01	1.632	0	0	0	0	0	0	0	0	0	0	0	0	0.035	
70	553.074	0	0	0	0.425	5.002	0.658	2.773	0	0	0	0	0	0	0	0	0	0	0	0	0.105	
71	271.03	0	0	0	0	0	0	0	0.957	0.437	0.888	0.622	0	0	0	0	0	0	0	0	0.197	0
72	264.124	0	0	0	0	0	0	0	0.304	0.078	0.342	0.077	0	0	0	0	0	0	0	0	0.186	0
73	187.779	0	0	0	0	0	0	0	0.001	0	0.001	0	0	0	0	0	0	0.005	0	0.001	1.07	
74		0	0	0	0	0.00207	0.20617	0.0138	0.11819	2.49034	10.9214	0.69472	1.13753	1.26394	5.25007	9.4076	0.19927	6.40167	198.958	12.0265	2.60088	
75	238.924	0	0	0	0	0.033	0.069	0.011	0	0	0	0	0	0	0.002	0.011	0.001	0.002	0	0.001	0.003	
76	488.767	0	0	0	0.016	0.017	0.005	0.064	0	0	0	0	0.007	0.001	0.015	0.002	0	0	0	0.003	0.011	
77	281.075	0	0	0	0	0	0	0	0.001	0.002	0.002	0.004	0	0.015	0	0	0	0	0	0	0.001	
78	118.872	0	0	0	0	0	0	0	0	0	0	0	0.018	0.236	0.028	4.007	4.036	0.823	0.003	0.002	0	
79	415.41	0	0	0	0.002	0.022	0.003	0.015	0	0	0	0	0	0	0	0	0	0.008	0	0.002	0.065	
80	461.766	0.193	0.193	0.06	0.114	2.101	0.673	0.733	1.04	0.267	1.057	0.038	0.442	1.315	3.443	1.876	6.291	3.925	0.052	1.374	8.319	
81	87.51	1.438	1.438	2.86	1.01	0.012	0.007	0.422	0.157	0.562	1.372	1.039	0.565	0.018	0.883	0.013	0.005	0	0	0.007	0.059	

Zone	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
	Sum	581.662	805.813	842.576	1039.109	452.802	64.591	158.708	12.739	26.759	216.146	168.403	148.775	351.603	100.643	471.203	122.59	124.824	386.901	511.996	26.627	
1	179.736	0	0	0	0	0	0	0.002	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	187.139	0	0	0	0	0	0	0.003	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	128.305	0	0	0	0	0	0	0.002	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	53.628	0.002	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	578.305	0.022	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	231.14	0.013	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	155.917	0.024	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	94.804	0	0	0	0	0	0	0	0	0	0	0	0	0	0.003	0.001	0.002	0.001	0.004	0	0	0
9	193.277	0	0	0	0	0	0	0	0	0	0	0	0	0	0.008	0.004	0.004	0.003	0.018	0	0	0
10	169.914	0	0	0	0	0	0	0	0	0	0	0	0	0	0.035	0.013	0.023	0.009	0.045	0	0	0
11	112.84	0	0	0	0	0	0	0	0	0	0	0	0	0	0.016	0.006	0.009	0.004	0.024	0	0	0
12	59.9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	63.256	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	276.364	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	119.962	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	448.419	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	318.938	0	0	0	0	0	0	0	0	0	0	1.447	3.61	0.903	32.865	0.039	0.126	0.135	0.558	0	0	0
18	91.124	0	0	0	0	0	0	0	0	0	0	0.22	1.93	0.166	11.509	0	0	0	0.003	0	0	0
19	51.641	0	0	0	0	0	0	0	0	0	0	0.256	0.444	0.023	0.356	0	0	0	0.002	0	0	0
20	465.226	3.469	2.534	18.26	3.066	0.061	0.012	0	0	0	0	0	0	0	0	0	0	0	0	0	0.02	0
21	101.446	0	0.13	1.442	0.083	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.003
22	373.811	0.226	0	161.95	105.021	9.114	0.606	0	0	0	0	0	0	0	0.162	0.004	0.016	0.018	0.008	0	0	0
23	644.997	1.615	211.274	0	134.238	14.879	2.588	0	0	0	0	0	0	0	0.605	0.012	0.03	0.035	0.069	0	0	0
24	621.588	0.276	176.749	198.036	0	2.852	0.497	0	0	0	0	0	0	0	0.139	0.003	0.005	0.005	0.027	0	0	0
25	188.269	0.022	10.455	71.282	15.878	0	0.01	0	0	0	0	0	0	0	0.163	0.005	0.006	0.007	0.016	0	0	0
26	71.986	0.019	0.054	0.362	0.268	0	0	0	0	0	0	0	0	0	0.023	0	0.003	0.003	0.001	0	0	0
27	106.397	0.917	0	0	0	0	0	0.695	0.663	2.298	0.131	0	0	0	0	0	0	0	0	0	0	0
28	11.445	0.022	0	0	0	0	0	0.005	0	0.017	0.105	0.162	0	0	0	0	0	0	0	0	0	0
29	77.822	2.241	0	0	0	0	0	9.4	0.521	0	1.977	0.733	0	0	0	0	0	0	0	0	0	0
30	103.458	10.157	0	0	0	0	0	5.827	1.111	4.787	0	0.154	0	0	0	0	0	0	0	0	0	0
31	327.138	0.057	0	0	0	0	0	0.013	0.015	0.202	5.537	0	0	0	0	0	0	0	0	0	0	0
32	87.564	0	0	0	0	0	0	0	0	0	0	0	0.721	1.442	0	0	0	0	0	0	0	0
33	93.635	0	0	0	0	0	0	0	0	0	0	0	1.96	0.546	0	0	0	0	0	0	0	0
34	35.495	0	0	0	0	0	0	0	0	0	0	0	0.766	2.306	0	0	0	0	0	0	0	0
35	528.726	0	0	0	0	0	0	0	0	0	0	0	0	0	0	40.016	43.053	56.118	115.478	0.493	0	0
36	12.565	0	0	0	0	0	0	0	0	0	0	0	0	0	0.243	0	0.771	0.47	4.191	0.019	0	0
37	90.875	0	0	0	0	0	0	0	0	0	0	0	0	0	1.074	0.55	0	0.442	3.137	0.008	0	0
38	185.483	0	0	0	0	0	0	0	0	0	0	0	0	0	1.008	0.308	0.965	0	0.501	0.003	0	0
39	16.782	0	0	0	0	0	0	0	0	0	0	0	0	0	0.526	0.238	0.504	0.089	0	0.008	0	0
40	21.356	0	0	0	0	0	0	0	0	0	0	0	0.001	0	0	0	0	0	0	0	0	0
49	81.767	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	3013.772	244.825	12.727	0.014	0.081	78.713	29.84	2.041	0	0	0	0	0	0	0	0	0.001	0.201	0	0	0	0
51	1660.857	73.309	3.203	0.003	0.02	19.809	7.51	0.482	0	0	0	0	0	0	0	0	0	0.056	0	0	0	0
52	1183.134	35.533	1.754	0.002	0.011	10.847	4.112	0.226	0	0	0	0	0	0	0	0	0	0.03	0	0	0	0
53	568.418	10.689	0.433	0.001	0.003	2.554	0.944	0.08	0	0	0	0	0	0	0	0	0	0.009	0	0	0	0

Zone	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
	Sum	581.662	805.813	842.576	1039.109	452.802	64.591	158.708	12.739	26.759	216.146	168.403	148.775	351.603	100.643	471.203	122.59	124.824	386.901	511.996	26.627
54		3.31118	12.4466	5.89564	1.26919	1.05961	0.4017	5.68345	0.133	0.17	0.70597	0.13107	0.28356	0.00389	0.17065	0.95773	0.6515	0.76307	1.30877	1.6676	0.1771
55		50.2508	189.513	84.8574	28.33881	15.0344	5.6993	59.4055	2.487	1.953	13.21	2.45593	1.00244	0.05411	0.29135	20.4463	13.873	9.43293	23.4592	40.2484	2.0389
56	1014.31	0.654	2.811	4.791	0.444	0.195	0.074	0.987	0.396	0.127	3.24	5.112	21.018	94.522	7.624	4.098	21.604	3.126	2.783	151.557	0.373
57	1612.828	4.356	15.641	24.86	2.306	1.337	0.507	6.786	1.173	0.706	14.63	26.525	96.474	217.678	19.362	129.107	0	0.081	0.019	0.369	0.001
58		33.36	92.1305	133.514	12.38481	10.39	3.9386	52.5599	3.0039	3.1415	37.4195	67.8956	16.541	0.16461	0.04371	14.1332	0.997	2.34081	5.301	28.67	1.9865
59		59.688	64.3106	81.7754	685.8162	114.384	2.6765	13.5681	1.6721	11.578	76.4505	5.55842	6.36202	1.68739	0.45829	162.847	11.549	27.1662	61.568	36.643	2.5585
60	974.501	3.771	0.444	2.055	0.355	13.412	0.445	0.057	0.055	0.924	32.884	34.587	0.896	3.072	29.96	36.495	13.663	3.556	46.122	53.699	2.793
61	1895.455	8.956	1.056	4.688	0.835	32.57	1.091	0.122	0.175	1.031	19.905	5.235	0.611	12.498	20.445	24.555	9.274	14.442	91.865	36.448	3.395
62		18.3812	2.92532	27.672	4.924	90.177	1.4309	0.465	1.1741	0.6564	3.9104	19.623	0.5644	12.7898	19.098	23.0649	8.7209	14.9806	91.2288	34.2856	6.353
63		2.11119	0.17729	5.27449	0.909662	5.35191	0.0279	0.03871	0.0302	0.0526	0.15871	0.02942	0.08129	0.0271	0.04877	0.3089	0.2121	1.33159	1.97261	0.92515	4.7132
64		0.38176	0.10289	3.1407	0.532475	3.07572	0.296	0.09476	0.0171	0.0298	0.08935	0.01625	0.04783	0.01534	0.02888	0.18231	0.1191	0.73373	0.76713	0.30595	0.1516
66		5.19324	0.61412	0.6303	0.167525	8.32928	0.381	0.09824	0.0019	0.0032	0.00965	0.00176	0.00517	0.00166	0.00312	0.0207	0.0139	0.09127	0.28988	0.03405	0.0174
67	439.166	0.045	0.002	0	0	0.005	0.001	0.001	0	0	0	0	0	0	0	0	0	0	0	0	0
68	256.571	0	0	0	0	0	0	0.011	0	0	0	0	0	0	0	0	0	0	0	0	0
69	671.799	0.101	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70	553.074	0.069	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	271.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.372	0.119	0.037	0.048	0.399	0
72	264.124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.215	0.159	0.036	0.035	1.014	0
73	187.779	3.857	0.328	1.184	0.09	6.378	0.268	0.228	0.003	0.159	0.029	0.025	0	0	0	0.037	0.001	0.007	0.019	0.003	0
74		0.56933	0.1736	6.01319	0.72415	3.11899	0.014	0.0069	0.0054	0.0094	0.02829	0.00524	0.01449	0.00483	0.00869	0.05506	0.0378	0.23736	0.35162	0.16491	1.3441
75	238.924	0.002	0.002	0.021	0.002	0.026	0	0	0	0	0	0	0	0	0	0.001	0	0.001	0	0.001	0
76	488.767	0.026	0.016	0.002	0.001	0.08	0.004	0	0	0	0	0	0	0	0	0	0	0	0	0	0
77	281.075	0.005	0.001	0	0	0.004	0.001	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	118.872	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
79	415.41	0.017	0.108	0.268	1.619	0.108	0.001	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	461.766	2.613	3.229	4.526	39.709	5.999	0.121	0.464	0.07	0.548	3.557	0.022	0.223	0.073	0.02	5.569	0.395	0.929	2.106	1.47	0.123
81	87.51	0.484	0.466	0.003	0.003	2.884	1.093	0.05	0	0	0	0	0	0	0	0	0	0	0.002	0	0

Table with 20 columns (Zone, 49-67) and 20 rows (1-53). Columns 49-67 show traffic flow between zones. Row 1 (Zone 1) shows sum and origin/destination for zones 49-67. Rows 2-53 show the same structure for zones 2-53.

Zone	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	66	67	
	Sum	253.068	1851.34	1279.152	1448.24	437.227		915.331	929.15			550.044	1546.69					220.828	
54	30.4372	0	0	0	8.46127	0	11.99631	0.17584	0.29913	1.664774	0.863095	0.01882	0.75399	2.60202	22.0097	643.349	91.42451	13.0695	
55	22.1228	0	0	0	5.44473	35.99154	25.96815	3.37816	5.73487	31.94573	16.56141	0.53918	21.43	30.8837	289.888	348.1844	53.84506	8.19346	
56	1014.31	23.431	0	0	0.483	0.955137	1.794863	0	0.952	5.30202	0.52862	0.011	46.876	47.7847	44.8352	0.009025	0.212975	1.2	
57	1612.828	0	0	0	0	0	0	0.633	0	49.08782	4.89442	0.03	290.125	161.847	14.6476	0	0	0	
58	43.9844	0	0	0	1.09182	2.159745	4.058235	5.54559	11.5181	0	8.67783	0.07254	698.139	12.4809	44.8472	125.1266	13.92052	2.2971	
59	59.3067	0	0	0	0.38618	0.162561	0.305459	0.81041	1.68295	1.36285	0.75152	2.33546	52.5511	5.98222	4.34137	9.511087	5.691824	23.7629	
60	974.501	1.336	0.001	0.001	0	0.374398	0.511602	4.309	0.313	506.1159	36.53083	0	0.239	44.13	1.16283	0.000903	0.024098	0	
61	1895.455	2.631	59.057	40.287	0	33.031	66.34439	136.0826	6.922	16.284	668.8674	48.26878	59.796	0	71.6769	1.1425	0.000903	3.683098	3.094
62	7.71668	0.001	0.001	0	0.001	0.676227	78.46025	60.5844	186.529	59.42806	4.292703	84.7593	61.1698	0.07672	0.6952	0	0.01408	0	
63	4.64198	0	0	0	0	0.063797	10.48905	477.421	262.93	2.149983	0.155928	0.0031	0.19122	0.05419	0	0	0.000774	0	
64	49.2846	23.4668	9.996993	0	12.2993	1083.399	586.2781	1.08932	2.20752	1.068894	0.077137	0.00181	0.04242	0.04603	0.2823	0	38.68386	1.02885	
66	6.41138	68.0332	17.92101	0	183.602	131.3137	71.62292	3.22768	1.53549	15.52781	1.674563	0.0002	0.00558	0.00537	0.03441	2.861828	4.488315	0.21115	
67	439.166	0	67.385	22.251	0	25.675	41.89301	35.17099	6.428	7.844	51.72137	162.1005	0	0	0	0	0.952138	0.334863	0
68	256.571	0	1.595	0.666	0.566	14.614	22.34644	19.20556	5.206	6.961	43.0777	86.2057	0	0	0	0	1.831173	30.56283	0
69	671.799	0	160.201	51.896	83.938	13.949	41.26945	35.05255	5.626	6.994	45.83153	152.4164	0	0	0.00008	0.00078	5.25977	6.17523	0.056
70	553.074	0	40.878	13.242	21.418	4.559	16.41252	15.48748	2.767	3.473	22.63883	73.69473	0.013	0.515	0.77212	5.3872	180.1137	52.51627	0.02
71	271.03	0	20.891	5.664	9.485	3.154	7.215437	7.557563	2.401	2.822	18.44649	83.92619	0.338	20.275	4.30832	26.2197	8.64595	29.82905	0.012
72	264.124	0	6.134	1.663	2.785	0.926	3.213854	5.270146	5.775	2.53	16.53947	75.24757	0.09	47.316	8.9062	59.9716	0.206673	5.043328	0.003
73	187.779	0	0.396	0.082	0.156	0.032	6.391372	7.716628	5.906	2.039	120.5846	8.71598	9.747	0.022	15.517	0.02893	1.053218	0.601783	0
74	0.82745	0.004	0.001	0.003	0	1.393466	42.24061	133.575	114.447	44.79372	3.255675	106.553	27.4251	21.9722	42.2335	0.01805	0.292088	0	
75	238.924	0.095	10.96	3.398	5.87	1.031	24.66875	13.42125	6.217	0.667	3.95566	0.29146	0.009	0.383	0.56284	3.88889	5.70741	156.4786	0.001
76	488.767	0.002	108.911	33.768	58.33	11.074	57.79617	37.04683	10.944	7.015	65.09864	22.10384	0	0	0.00024	0.00235	55.60483	18.06817	0.021
77	281.075	0	98.891	29.24	69.648	2.612	7.013639	5.784361	1.038	1.28	8.5263	30.1393	0	0	0	0	5.764268	20.05473	0.005
78	118.872	0	22.349	7.454	6.354	4.321	19.22992	30.98308	0.006	0.053	0.34435	1.18285	0.001	10.493	6.21708	0.00078	0.005415	0.615585	0.011
79	415.41	0	29.445	6.208	4.693	3.338	38.69019	55.45781	4.641	7.17	14.55097	5.75407	0.659	0.001	1.18392	0.09697	0.004513	0.456488	0.001
80	461.766	0.749	15.848	10.812	0	8.112	16.15427	33.41773	3.397	4.888	9.17135	75.13685	0	0	0.04644	0.15093	0.004513	0.142488	0.865
81	87.51	0.001	0.56	0.732	0.014	2.514	7.507429	6.920571	1.092	1.853	5.15943	21.27733	0	0	0	0	1.702115	7.220885	0.008

Zone	68	69	70	71	72	73	74	75	76	77	78	79	80	81	
	Sum	126.891	958.691	1134.941	321.911	533.189	156.228	233.188	309.267	315.626	197.471	273.373	600.94	149.976	
1	179.736	2.048	0	0	0.07	0.101	0	0	0	0	0	0.026	3.024	0.034	
2	187.139	4.094	0	0	0.139	0.203	0	0	0	0	0	0.053	3.45	0.034	
3	128.305	7.285	0	0	0.082	0.119	0	0	0	0	0	0.031	2.027	0.012	
4	53.628	0	0.776	1.023	0	0	0	0	0.004	0	0	0.002	0.437	0.013	
5	578.305	0	1.991	17.831	0	0	0	0	0.003	0	0	0.03	11.884	0.023	
6	231.14	0	0.098	2.864	0	0	0	1.89778	0.046	0	0	0.005	4.656	0	
7	155.917	0	2.805	7.248	0	0	0	2.03205	3.783	0.004	0	0	0.004	0.861	0.003
8	94.804	0	0	0	0.86	2.202	0	1.02068	0	0	0	0	0.001	0.515	0.01
9	193.277	0	0	0	0.219	0.749	0	3.36464	0	0	0	0	0	0.04	0.036
10	169.914	0	0	0	1.861	0.091	0	10.2292	0	0	0	0	0	0.028	0.034
11	112.84	0	0	0	2.383	0.027	0	4.98761	0	0	0	0	0	0.011	0.027
12	59.9	0	0	0	0	0	0	3.83433	0	0	0	0	0	0.007	0.018
13	63.256	0	0	0	0	0	0	0.16215	0	0	0	0.484	0	0.113	0
14	276.364	0	0	0	0	0	0	1.53208	0	0	0	0.045	0	0.362	0.046
15	119.962	0	0	0	0	0	0	0.00828	0	0	0	2.374	0	1.253	0
16	448.419	0	0	0	0	0	0	3.13177	0	0	0	0.305	0	0.688	0.123
17	318.938	0	0.032	0.048	0.062	0.247	0	0.37633	0	0.001	0.007	0.091	0	0.65	0.001
18	91.124	0	0	0	0	0	0	1.65407	0	0	0	0.008	0	0.211	0
19	51.641	0	0	0	0	0.001	0	0.01711	0	0	0	0.001	0	0.044	0
20	465.226	0.099	0.2	0.301	0	0	0.291	0.53396	0	0	0	0	0.08	14.677	0.003
21	101.446	0.104	0.21	0.316	0	0	0.25	0.01	0	0	0	0	0	0.067	0.003
22	373.811	0	0	0	0	0	0.068	0.00014	0	0	0	0	0	0.013	0.039
23	644.997	0	0	0	0	0	16.975	0.04954	0	0	0	0	0.161	8.051	0.039
24	621.588	0	0	0	0	0	9.207	0.04057	0	0	0	0	0.162	11.446	0.009
25	188.269	0	0	0	0	0	1.203	0.00524	0	0	0	0	0.016	2.514	0.031
26	71.986	0	0	0	0	0	0.026	0.00041	0	0	0	0	0	0.001	0.029
27	106.397	0	0	0	0	0	0	0.00179	0	0	0	0	0.024	2.091	0.019
28	11.445	0	0	0	0	0	0	0.00856	0	0	0	0	0	0	0
29	77.822	0	0	0	0	0	0	0.13041	0	0	0	0	0.007	0.651	0.014
30	103.458	0	0	0	0	0	0	0.13358	0	0	0	0	0	0.008	0.022
31	327.138	0	0	0	0	0	0	0.00828	0	0	0	0	0	0	0
32	87.564	0	0	0	0	0	0	0.21859	0	0.001	0	0	0	0.029	0.001
33	93.635	0	0	0	0	0	0	0.06127	0.001	0.009	0	0	0	0	0.046
34	35.495	0	0	0	0	0	0	0.12172	0	0	0	0	0	0	0
35	528.726	0	0	0	0	0	0	0.54718	0	0	0	0	0	0	0.013
36	12.565	0	0	0	0	0	0	0.02432	0	0	0	0	0	0	0
37	90.875	0	0	0	0	0	0	0.03321	0	0	0	0	0	0.002	0.028
38	185.483	0	0	0	0	0	0	0.48119	0	0	0	0	0	0.008	0.129
39	16.782	0	0	0	0	0	0	0.09949	0	0	0	0	0	0	0
40	21.356	0	0	0	0	0	0	0.42976	0	0	0	0	0	0	0
49	81.767	0	0	0	0	0	0	0.13772	0.056	0.002	0	0	0	0	0
50	3013.772	19.154	87.218	302.47	75.943	110.592	0	0	0.496	114.268	8.447	33.948	68.956	43.446	54.906
51	1660.857	6.573	28.96	100.432	25.719	37.454	0	0	0.183	42.163	0.286	10.207	10.282	29.618	16.45
52	1183.134	2.932	16.561	57.433	15.021	21.874	0	0	0.116	26.68	2.646	4.945	7.948	0	64.863
53	568.418	39.694	4.419	14.717	3.423	4.984	0	0	0.078	4.383	95.283	1.506	0.765	7.439	0.2

Zone	68	69	70	71	72	73	74	75	76	77	78	79	80	81
Sum	126.891	958.691	1134.941	321.911	533.189	156.228		233.188	309.267	315.626	197.471	273.373	600.94	149.976
54	7.18948	100.09	25.36109	0.75074	1.1751	0.04867	12.7833	69.0489	23.9115	22.1148	0.462	1.53004	1.33408	0.0837
55	4.48152	62.9995	23.39691	4.52326	14.2469	0.84533	215.472	38.6301	16.4975	13.9002	7.061	18.191	28.1209	0.0543
56	1014.31	0.76	9.043	9.713	4.244	38.544	0.019	75.0781	0.299	0.648	2.081	0.092	0.239	0.347
57	1612.828	0	0	0	0	0.056	42.3279	0	0	0	0.477	1.71	2.376	0
58	1.46382	17.3426	18.68184	7.9515	10.9508	0.14508	38.8972	0.558	1.20993	3.94692	2.05716	13.5408	16.7177	0.00744
59	14.1832	164.759	175.0912	80.3375	110.637	119.123	219.43	0.636	11.9101	45.6761	19.4048	9.4262	124.539	0.08956
60	974.501	0	0.063	0.337	0.295	0.605	0.084	68.1912	0.302	0.006	0.001	0.029	0	0
61	1895.455	0.004	0.711	58.843	24.277	33.433	0.291	47.4506	0.795	0.075	0.034	4.33	0	0
62	0	0.04248	0.23048	1.19584	21.4898	1.83544	47.105	1.6868	0.00408	0.001	12.7515	0	0	0
63	0	0.00465	0.024	0.17264	66.5772	0.01394	14.9347	0.33677	0.00077	0	72.5647	0	0	0
64	1.77251	46.5654	198.4895	51.8197	23.2908	0.00812	4.22839	91.5758	38.858	20.3451	7.43209	0	0	0.01083
66	11.8585	320.403	53.26947	8.71426	5.07518	0.00088	0.4815	19.7692	27.724	99.3019	1.87991	0.009	0.025	0.05917
67	439.166	0.028	0.026	0.131	0.023	0.033	0	0	0.012	0	0.004	0	7.165	11.997
68	256.571	0	0	0	0.448	0.652	0	0	0	0	0	0.169	6.085	0.004
69	671.799	0	0	53.621	0	0	0	0.00014	0.002	0.051	0	0	0.09	7.58
70	553.074	0	81.312	0	0	0	0	0.95068	4.652	0.116	0	0	0.062	3.933
71	271.03	0	0	0	0	8.337	0	5.122	0	0	0	0	0.045	2.983
72	264.124	0	0	0	7.004	0	0	11.0082	0	0	0	0	0.041	2.675
73	187.779	0	0	0	0.021	0.041	0	0.00511	0	0	0	0	0	0.001
74	0	0.00083	0.004278	0.22377	13.0136	0.00248	10.1151	0.06203	0.00014	0	12.9349	0	0.001	0
75	238.924	0	0.173	0.259	0	0	0	0.68927	0	0.165	0.005	0	0	0.001
76	488.767	0	3.422	1.094	0	0	0	0.00041	0.05	0	0.161	0.002	0.002	0.65
77	281.075	0	0	0	0.016	0.023	0	0	0	0.003	0	0.003	0	1.323
78	118.872	0	0	0	0	0	0	0.00014	0	0	0	0	0	0.045
79	415.41	0	0.363	0.548	0	0	0	0.05311	0	0.002	0	0	0	240.446
80	461.766	0.571	7.293	8.361	2.999	4.13	5.735	6.88863	0.017	0.334	1.389	0.91	139.326	0
81	87.51	2.596	0.808	2.802	1.111	1.618	0	0	0.005	0.221	0	0.429	0.439	4.271

Zone		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Sum	46.483	49.232	106.26	212.184	267.796	145.426	153.061	124.895	196.796	356.291	178.208	258.609	188.312	407.113	479.315	600.449	665.852	299.882	377.201	573.594
1	201.3043	0	0.5085	1.0114	0	0	0	0	0.00112	0.00448	0.0112	0.00896	0	0	0	0	0	0	0	0	0
2	209.5957	0.5085	0	2.0194	0	0	0	0	0.00224	0.01008	0.02352	0.01792	0	0	0	0	0	0	0	0	0
3	143.7016	0.1758	0.3506	0	0	0	0	0	0.00112	0.0056	0.01456	0.0112	0	0	0	0	0	0	0	0	0
4	60.06336	0	0	0	0	0.00112	0	0.04368	0	0	0	0	0	0	0	0	0	0	0	0	0
5	647.7016	0	0	0	0.0448	0	0.0056	0.39872	0	0	0	0	0	0	0	0	0	0	0	0	0.00224
6	258.9267	0	0	0	0	0.00112	0	0.7728	0	0	0	0	0	0	0	0	0	0	0	0	0.02688
7	178.7287	0	0	0	0.00896	0.10528	0.08624	0	0	0	0	0	0	0	0	0	0	0	0	0	0.09408
8	106.1805	0	0	0	0	0	0	0	0	0.2296	0.1512	0.19376	0	0	0	0	0	0	0	0.00672	0
9	216.4702	0	0	0	0	0	0	0	0.14224	0	0.12432	0.1848	0	0	0	0	0	0	0	0.00896	0
10	190.3037	0	0	0	0	0	0	0	0.13216	0.0336	0	0.0112	0	0	0	0	0	0	0	0.00336	0
11	126.3808	0	0	0	0	0	0	0	0.10752	0.028	0.12544	0	0	0	0	0	0	0	0	0.00112	0
12	67.088	0	0	0	0	0	0	0	0	0	0	0	0	0.33376	0.3752	0.03584	0.01008	0	0	0	0
13	70.84672	0	0	0	0	0	0	0	0	0	0	0	15.6184	0	18.2392	17.5056	2.82016	0.03024	0.00672	0.04928	0
14	309.5277	0	0	0	0	0	0	0	0	0	0	0	11.2269	73.9278	0	90.1824	3.38352	0.15344	0.02912	0.03472	0
15	134.3574	0	0	0	0	0	0	0	0	0	0	0	0.168	13.6741	14.1882	0	37.5043	0.14672	0.01792	0.18592	0
16	502.2293	0	0	0	0	0	0	0	0	0	0	0	0.4928	26.7635	1.93424	152.051	0	14.6238	10.4731	0.0448	0
17	357.2106	0	0	0	0	0.00224	0	0.00112	0.00336	0.00112	0.00336	0	0.02352	0.68096	0.73136	3.25472	9.46176	0	12.1878	5.47344	0
18	102.0589	0	0	0	0	0	0	0	0	0	0	0	0	0.03808	0.06272	0.12768	1.15024	10.8685	0	0.14224	0
19	57.83792	0	0	0	0	0	0	0	0	0	0	0	0	0.0056	0.0112	0.01232	0.056	3.7464	0.03808	0	0
20	521.2543	0.0078	0.0146	0.0045	0.00112	0.01344	0.00224	0.00896	0	0	0	0	0	0	0	0	0	0	0	0	0
21	113.6497	0.0078	0.0157	0.0045	0.00112	0.01456	0.00224	0.01008	0	0	0	0	0	0	0	0	0	0	0	0	2.96576
22	418.6683	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.35616
23	722.3966	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.80304
24	696.1786	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.12208
25	210.8613	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.09632
26	80.62432	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.07616
27	119.1646	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.05264	0	0.01344	0.9632
28	12.8184	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.04368
29	87.16064	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.03696	0	0.01008	1.15472
30	115.873	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.04704	0	0.01232	6.89584
31	366.3946	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00336	0	0.00112	0.34048
32	98.07168	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.91728	0.0112	0.20832	0
33	104.8723	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.38336	0.32144	0.476	0
34	39.7544	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.94192	0.0168	0.03136	0
35	597.1315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
36	14.2639	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
37	101.8605	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
38	207.7711	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
39	18.8763	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
40	223.356	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	91.63976	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	3375.962	11.881	11.881	23.631	122.116	1.44032	0.8064	51.0709	12.0277	42.9968	105.002	79.5278	50.0752	1.63856	78.2018	1.16928	0.42336	0.02464	0.02464	3.86064	33.4611
51	1860.358	4.0779	4.0779	8.1099	40.5474	0.47824	0.26768	16.9579	4.07344	14.5611	35.56	26.9338	15.0562	0.4928	23.5133	0.35168	0.12768	0.00672	0.00672	1.06512	6.66512
52	1325.236	1.8189	1.8189	3.6165	23.1874	0.27328	0.15344	9.69696	2.37888	8.50416	20.7682	15.7293	7.29344	0.23856	11.3904	0.17024	0.0616	0.00336	0.00336	0.60368	2.68688
53	636.7127	11.379	13.761	39.832	12.2752	0.05712	0.03136	2.09888	0.46928	1.67552	4.0936	3.10016	2.22096	0.07728	3.696	0.05488	0.01904	0.00112	0.00112	0.13216	0.82544

Zone		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Sum	46.483	49.232	106.26	212.184	267.796	145.426	153.061	124.895	196.796	356.291	178.208	258.609	188.312	407.113	479.315	600.449	665.852	299.882	377.201	573.594
54	2201.483	2.7282	2.7282	0.8466	1.94184	36.2909	11.8363	8.93157	0.29215	0.43531	1.06249	0.8045	0.68168	0.14825	1.06467	0.01599	0.00581	0.00291	0	10.9897	5.27682
55	1817.241	1.7003	1.7003	0.5276	1.22104	22.8103	7.43775	5.91291	1.68129	0.62757	2.88775	5.96254	10.4164	2.26871	16.2662	0.24273	0.08827	0.04301	0.00448	224.413	81.027
56	1140.103	0.2576	0.2643	0.0818	0.18032	3.37568	1.10544	1.13904	1.64864	0.42336	1.6744	0.05936	111.234	0.60928	48.5722	0.06496	226.041	17.0274	0.00112	2.92096	1.64304
57	1806.377	0	0	0	0	0	0	0	0	0	0	0	0.00112	7.79296	1.66096	3.3992	44.8582	404.374	49.9363	19.9147	10.9514
58	2119.819	0.4854	0.5031	0.1562	0.34373	6.435	2.10507	2.17382	3.08939	0.7937	3.13834	0.11249	1.11972	3.33	8.72236	4.75178	15.9354	8.438	0.11145	2.95814	63.5616
59	3735.605	5.3767	5.378	1.6694	3.33771	62.8124	20.6264	21.0919	31.2084	8.0207	31.7049	1.13295	10.5641	31.4046	82.2631	44.8172	150.296	89.982	1.18775	31.5591	207.594
60	1119.86	0	0	0	0	0.18144	17.9581	0.08736	0.12208	0.03136	0.0672	0.00224	0.01568	0.04704	1.25216	0.11648	0.34048	0.34944	0.0112	0.12208	36.5994
61	2157.917	1.2947	1.2947	0.4021	0.99008	85.7125	12.4466	3.4832	9.4304	2.42368	9.58048	0.34272	2.3576	7.22624	18.9291	10.3118	33.973	22.2387	0.29232	7.77168	45.4978
62	1327.006	0	0	0	0	0.12118	11.9454	0.4144	1.26452	6.24221	45.1784	1.7963	1.41281	4.97025	13.3185	28.152	42.7454	66.2553	2.11801	8.88586	32.9659
63	1731.434	0	0	0	0	0.01301	1.29542	0.08671	0.70494	15.5468	63.4253	4.33367	7.14735	7.9416	32.9873	59.1098	1.25207	4.90508	0.08758	34.4101	10.6304
64	3277.56	0.6732	0.6732	0.2092	0.64691	26.2697	10.39	9.52982	45.3799	74.5637	6.3832	23.119	2.32585	0.68835	12.0154	37.3693	15.7109	5.00346	0.06873	4.06139	1.92052
66	1055.457	2.1324	2.1324	1.1572	1.66365	13.3201	45.1183	12.8052	7.83133	15.1528	8.25632	11.9482	6.64535	0.75981	6.5755	8.30208	2.37714	0.69286	0.02983	1.02565	4.4926
67	491.8659	0	0	0.0213	0.01008	0	0	0.0056	0	0.00112	0.00448	0.00336	0.0056	0	0.01792	0	0	0	0	0.00112	0.00784
68	287.3595	0.1512	0.3024	19.69	0	0	0	0	0.00896	0.03136	0.07616	0.05824	0	0	0	0	0	0	0	0	0
69	752.417	0	0	0	1.91184	0.03136	0.0112	1.82784	0	0	0	0	0	0	0	0	0	0	0	0	0.0392
70	624.4867	0	0	0	0.476	5.60224	0.73696	3.10576	0	0	0	0	0	0	0	0	0	0	0	0	0.1176
71	303.5536	0	0	0	0	0	0	0	1.07184	0.48944	0.99456	0.69664	0	0	0	0	0	0	0	0.22064	0
72	295.8189	0	0	0	0	0	0	0	0.34048	0.08736	0.38304	0.08624	0	0	0	0	0	0	0	0.20832	0
73	210.3125	0	0	0	0	0	0	0	0.00112	0	0.00112	0	0	0	0	0	0	0.0056	0	0.00112	1.1984
74	713.348	0	0	0	0	0.00232	0.23091	0.01546	0.13238	2.78918	12.232	0.77809	1.27404	1.41562	5.88008	10.5365	0.22318	7.16987	222.833	13.4697	2.91299
75	151	0	0	0	0	0.02086	0.04361	0.00695	0	0	0	0	0	0	0.00126	0.00695	0.00063	0.00126	0	0.00063	0.0019
76	547.4733	0	0	0	0.01792	0.01904	0.0056	0.07168	0	0	0	0	0.00784	0.00112	0.0168	0.00224	0	0	0	0.00336	0.01232
77	314.804	0	0	0	0	0	0	0	0.00112	0.00224	0.00224	0.00448	0	0.0168	0	0	0	0	0	0	0.00112
78	133.1366	0	0	0	0	0	0	0	0	0	0	0	0.02016	0.26432	0.03136	4.48784	4.52032	0.92176	0.00336	0.00224	0
79	465.2592	0	0	0	0.00224	0.02464	0.00336	0.0168	0	0	0	0	0	0	0	0	0	0.00896	0	0.00224	0.0728
80	518.4334	0.2162	0.2162	0.0672	0.12768	2.35312	0.75376	0.82096	1.1648	0.29904	1.18384	0.04256	0.49504	1.4728	3.85616	2.10112	7.04592	4.396	0.05824	1.53888	9.31728
81	98.0056	1.6106	1.6106	3.2032	1.1312	0.01344	0.00784	0.47264	0.17584	0.62944	1.53664	1.16368	0.6328	0.02016	0.98896	0.01456	0.0056	0	0	0.00784	0.06608

Zone	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
	Sum	651.46	902.51	943.675	1163.801	507.126	72.342	177.753	14.268	29.97	242.084	188.611	166.637	393.795	112.72	527.747	137.3	139.802	433.329	573.435	297.63	
1	201.3043	0	0	0	0	0	0	0.00224	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	209.5957	0	0	0	0	0	0	0.00336	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	143.7016	0	0	0	0	0	0	0.00224	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	60.06336	0.00224	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	647.7016	0.02464	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	258.9267	0.01456	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	178.7287	0.02688	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	106.1805	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00336	0.0011	0.00224	0.00112	0.00448	0	0	0
9	216.4702	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00896	0.0045	0.00448	0.00336	0.02016	0	0	0
10	190.3037	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0392	0.0146	0.02576	0.01008	0.0504	0	0	0
11	126.3808	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01792	0.0067	0.01008	0.00448	0.02688	0	0	0
12	67.088	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	70.84672	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	309.5277	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	134.3574	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	502.2293	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	357.2106	0	0	0	0	0	0	0	0	0	0	1.62064	4.0432	1.01136	36.8088	0.0437	0.14112	0.1512	0.62496	0	0	0
18	102.0589	0	0	0	0	0	0	0	0	0	0	0.2464	2.1616	0.18592	12.8901	0	0	0	0.00336	0	0	0
19	57.83792	0	0	0	0	0	0	0	0	0	0	0.28672	0.49728	0.02576	0.39872	0	0	0	0.00224	0	0	0
20	521.2543	3.88528	2.83808	20.4512	3.43392	0.06832	0.0134	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0224	0
21	113.6497	0	0.1456	1.61504	0.09296	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0034	0
22	418.6683	0.25312	0	181.384	117.6235	10.2077	0.6787	0	0	0	0	0	0	0	0.18144	0.0045	0.01792	0.02016	0.00896	0	0	0
23	722.3966	1.8088	236.627	0	150.3466	16.6645	2.8986	0	0	0	0	0	0	0	0.6776	0.0134	0.0336	0.0392	0.07728	0	0	0
24	696.1786	0.30912	197.959	221.8	0	3.19424	0.5566	0	0	0	0	0	0	0	0.15568	0.0034	0.0056	0.0056	0.03024	0	0	0
25	210.8613	0.02464	11.7096	79.8358	17.78336	0	0.0112	0	0	0	0	0	0	0	0.18256	0.0056	0.00672	0.00784	0.01792	0	0	0
26	80.62432	0.02128	0.06048	0.40544	0.30016	0	0	0	0	0	0	0	0	0	0.02576	0	0.00336	0.00336	0.00112	0	0	0
27	119.1646	1.02704	0	0	0	0	0	0	0.7784	0.7426	2.57376	0.14672	0	0	0	0	0	0	0	0	0	0
28	12.8184	0.02464	0	0	0	0	0	0.0056	0	0.019	0.1176	0.18144	0	0	0	0	0	0	0	0	0	0
29	87.16064	2.50992	0	0	0	0	0	10.528	0.5835	0	2.21424	0.82096	0	0	0	0	0	0	0	0	0	0
30	115.873	11.3758	0	0	0	0	0	6.52624	1.2443	5.3614	0	0.17248	0	0	0	0	0	0	0	0	0	0
31	366.3946	0.06384	0	0	0	0	0	0.01456	0.0168	0.2262	6.20144	0	0	0	0	0	0	0	0	0	0	0
32	98.07168	0	0	0	0	0	0	0	0	0	0	0	0.80752	1.61504	0	0	0	0	0	0	0	0
33	104.8723	0	0	0	0	0	0	0	0	0	0	0	2.1952	0	0.61152	0	0	0	0	0	0	0
34	39.7544	0	0	0	0	0	0	0	0	0	0	0	0.85792	2.58272	0	0	0	0	0	0	0	0
35	597.1315	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44.818	48.2194	62.8522	129.335	0.5522	0	0
36	14.2639	0	0	0	0	0	0	0	0	0	0	0	0	0	0.27216	0	0.86352	0.5264	4.69392	0.0213	0	0
37	101.8605	0	0	0	0	0	0	0	0	0	0	0	0	0	1.20288	0.616	0	0.49504	3.51344	0.009	0	0
38	207.7711	0	0	0	0	0	0	0	0	0	0	0	0	0	1.12896	0.345	1.0808	0	0.56112	0.0034	0	0
39	18.8763	0	0	0	0	0	0	0	0	0	0	0	0	0	0.58912	0.2666	0.56448	0.09968	0	0.009	0	0
40	223.356	0	0	0	0	0	0	0	0	0	0	0.00112	0	0	0	0	0	0	0	0	0	0
49	91.63976	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	3375.962	274.204	14.2542	0.01568	0.09072	88.1586	33.421	2.28592	0	0	0	0	0	0	0	0	0.00112	0.22512	0	0	0	0
51	1860.358	82.1061	3.58736	0.00336	0.0224	22.1861	8.4112	0.53984	0	0	0	0	0	0	0	0	0	0.06272	0	0	0	0
52	1325.236	39.797	1.96448	0.00224	0.01232	12.1486	4.6054	0.25312	0	0	0	0	0	0	0	0	0	0.0336	0	0	0	0
53	636.7127	11.9717	0.48496	0.00112	0.00336	2.86048	1.0573	0.0896	0	0	0	0	0	0	0	0	0	0.01008	0	0	0	0

Zone	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
	Sum	651.46	902.51	943.675	1163.801	507.126	72.342	177.753	14.268	29.97	242.084	188.611	166.637	393.795	112.72	527.747	137.3	139.802	433.329	573.435	297.63
54	2201.483	3.70853	13.9402	6.60311	1.421493	1.18676	0.4498	6.36547	0.149	0.1904	0.79069	0.1468	0.31758	0.00436	0.19113	1.07266	0.7296	0.85464	1.46582	1.86771	0.1984
55	1817.241	56.2809	212.255	95.0402	31.73947	16.8385	6.3833	66.5342	2.7854	2.1874	14.7952	2.75064	1.12274	0.0606	0.32631	22.8998	15.537	10.5649	26.2743	45.0782	2.2835
56	1140.103	0.73248	3.14832	5.36592	0.49728	0.2184	0.0829	1.10544	0.4435	0.1422	3.6288	5.72544	23.5402	105.865	8.53888	4.58976	24.196	3.50112	3.11696	169.744	0.4178
57	1806.377	4.87872	17.5179	27.8432	2.58272	1.49744	0.5678	7.60032	1.3138	0.7907	16.3856	29.708	108.051	243.799	21.6854	144.6	0	0.09072	0.02128	0.41328	0.0011
58	2119.819	37.3632	103.186	149.535	13.87099	11.6368	4.4112	58.8671	3.3644	3.5185	41.9098	76.043	18.5259	0.18436	0.04896	15.8292	1.1166	2.62171	5.93712	32.1104	2.2249
59	3735.605	66.8505	72.0278	91.5885	768.1141	128.11	2.9976	15.1963	1.8728	12.968	85.6246	6.22543	7.12546	1.88988	0.51328	182.388	12.935	30.4261	68.9562	41.0401	2.8655
60	1119.86	4.22352	0.49728	2.3016	0.3976	15.0214	0.4984	0.06384	0.0616	1.0349	36.8301	38.7374	1.00352	3.44064	33.5552	40.8744	15.303	3.98272	51.6566	60.1429	3.1282
61	2157.917	10.0307	1.18272	5.25056	0.9352	36.4784	1.2219	0.13664	0.196	1.1547	22.2936	5.8632	0.68432	13.9978	22.8984	27.5016	10.387	16.175	102.889	40.8218	3.8024
62	1327.006	20.5869	3.27636	30.9927	5.51488	100.998	1.6026	0.5208	1.315	0.7352	4.37965	21.9778	0.63213	14.3246	21.3898	25.8327	9.7674	16.7783	102.176	38.3999	7.1154
63	1731.434	2.36453	0.19856	5.90743	1.018821	5.99414	0.0312	0.04335	0.0338	0.059	0.17775	0.03295	0.09104	0.03035	0.05463	0.34597	0.2376	1.49138	2.20932	1.03616	5.2788
64	3277.56	0.42757	0.11523	3.51758	0.596372	3.44481	0.3315	0.10613	0.0192	0.0334	0.10007	0.01819	0.05357	0.01718	0.03235	0.20418	0.1334	0.82178	0.85918	0.34266	0.1698
66	1055.457	5.81643	0.68781	0.70594	0.187628	9.32879	0.4267	0.11003	0.0021	0.0036	0.01081	0.00197	0.00579	0.00186	0.00349	0.02318	0.0155	0.10222	0.32466	0.03814	0.0195
67	491.8659	0.0504	0.00224	0	0	0.0056	0.0011	0.00112	0	0	0	0	0	0	0	0	0	0	0	0	0
68	287.3595	0	0	0	0	0	0	0.01232	0	0	0	0	0	0	0	0	0	0	0	0	0
69	752.417	0.11312	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70	624.4867	0.07728	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	303.5536	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.41664	0.1333	0.04144	0.05376	0.44688	0
72	295.8189	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2408	0.1781	0.04032	0.0392	1.13568	0
73	210.3125	4.31984	0.36736	1.32608	0.1008	7.14336	0.3002	0.25536	0.0034	0.1781	0.03248	0.028	0	0	0	0.04144	0.0011	0.00784	0.02128	0.00336	0
74	713.348	0.63765	0.19443	6.73478	0.811048	3.49327	0.0156	0.00773	0.006	0.0105	0.03168	0.00587	0.01623	0.00541	0.00974	0.06167	0.0423	0.26584	0.39382	0.1847	1.5054
75	151	0.00126	0.00126	0.01327	0.001264	0.01643	0	0	0	0	0	0	0	0	0.00063	0	0.00063	0	0.00063	0	0
76	547.4733	0.02912	0.01792	0.00224	0.00112	0.0896	0.0045	0	0	0	0	0	0	0	0	0	0	0	0	0	0
77	314.804	0.0056	0.00112	0	0	0.00448	0.0011	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	133.1366	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
79	465.2592	0.01904	0.12096	0.30016	1.81328	0.12096	0.0011	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	518.4334	2.92656	3.61648	5.06912	44.47408	6.71888	0.1355	0.51968	0.0784	0.6138	3.98384	0.02464	0.24976	0.08176	0.0224	6.23728	0.4424	1.04048	2.35872	1.6464	0.1378
81	98.0056	0.54208	0.52192	0.00336	0.00336	3.23008	1.2242	0.056	0	0	0	0	0	0	0	0	0	0	0.00224	0	0

Zone	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	66	67	
	Sum	283.39	2068.15	1430.992	1619.16	489.191	3582.002	964.7924	1179.43	1051.44	2662.591	2290.796	616.045	1732.27	743.669	1128.79	2119.825	914.4887	247.327
54	2201.483	34.0897	0	0	0	9.47662	0	13.43587	0.19695	0.33502	1.864547	0.966666	0.02108	0.84447	2.91426	24.6509	720.5509	102.3955	14.6379
55	1817.241	24.7775	0	0	0	6.0981	40.31052	29.08433	3.78353	6.42306	35.77921	18.54877	0.60388	24.0016	34.5897	324.674	389.9665	60.30646	9.17667
56	1140.103	26.2427	0	0	0	0.54096	1.069753	2.010247	0	1.06624	5.938262	0.592054	0.01232	52.5011	53.5189	50.2154	0.010108	0.238532	1.344
57	1806.377	0	0	0	0	0	0	0	0.70896	0	54.97836	5.48175	0.0336	324.94	181.269	16.4054	0	0	0
58	2119.819	49.2625	0	0	0	1.22284	2.418915	4.545223	6.21106	12.9002	0	9.71917	0.08124	781.916	13.9786	50.2289	140.1418	15.59098	2.57275
59	3735.605	66.4234	0	0	0	0.43252	0.182069	0.342114	0.90766	1.8849	1.526392	0.841702	2.61572	58.8572	6.70009	4.86233	10.65242	6.374842	26.6144
60	1119.86	1.49632	0.00112	0.00112	0	0	0.419326	0.572994	4.82608	0.35056	566.8498	40.91453	0	0.26768	49.4256	1.30237	0.001011	0.026989	0
61	2157.917	2.94672	66.1438	45.12144	0	36.9947	74.30571	152.4125	7.75264	18.2381	749.1315	54.06103	66.9715	0	80.2781	1.2796	0.001011	4.125069	3.46528
62	1327.006	8.64268	0.00112	0.00112	0	0.00112	0.757374	87.87548	67.8545	208.912	66.55943	4.807827	94.9304	68.5101	0.08593	0.77862	0	0.01577	0
63	1731.434	5.19902	0	0	0	0	0.071453	11.74774	534.712	294.482	2.407981	0.174639	0.00347	0.21417	0.0607	0	0	0.000867	0
64	3277.56	55.1988	26.2828	11.19663	0	13.7752	1213.407	656.6314	1.22004	2.47242	1.197161	0.086393	0.00202	0.04751	0.05155	0.31618	0	43.32592	1.15231
66	1055.457	7.18074	76.1972	20.07153	0	205.634	147.0714	80.21767	3.615	1.71974	17.39114	1.875511	0.00022	0.00625	0.00602	0.03854	3.205247	5.026913	0.23649
67	491.8659	0	75.4712	24.92112	0	28.756	46.92017	39.39151	7.19936	8.78528	57.92793	181.5525	0	0	0	0	1.066394	0.375046	0
68	287.3595	0	1.7864	0.74592	0.63392	16.3677	25.02802	21.51022	5.83072	7.79632	48.24702	96.55038	0	0	0	0	2.050913	34.23037	0
69	752.417	0	179.425	58.12352	94.0106	15.6229	46.22178	39.25886	6.30112	7.83328	51.33131	170.7064	0	0	9E-05	0.00088	5.890942	6.916258	0.06272
70	624.4867	0	45.7834	14.83104	23.9882	5.10608	18.38203	17.34597	3.09904	3.88976	25.35549	82.5381	0.01456	0.5768	0.86477	6.03366	201.7274	58.81822	0.0224
71	303.5536	0	23.3979	6.34368	10.6232	3.53248	8.08129	8.46447	2.68912	3.16064	20.66007	93.99733	0.37856	22.708	4.82532	29.366	9.683464	33.40854	0.01344
72	295.8189	0	6.87008	1.86256	3.1192	1.03712	3.599517	5.902563	6.468	2.8336	18.52421	84.27728	0.1008	52.9939	9.97494	67.1682	0.231473	5.648527	0.00336
73	210.3125	0	0.44352	0.09184	0.17472	0.03584	7.158337	8.642623	6.61472	2.28368	135.0547	9.761898	10.9166	0.02464	17.379	0.03241	1.179604	0.673996	0
74	713.348	0.92674	0.00448	0.00112	0.00336	0	1.560682	47.30949	149.604	128.181	50.16897	3.646356	119.339	30.7161	24.6089	47.3015	0.020216	0.327139	0
75	151	0.06004	6.92672	2.147536	3.70984	0.65159	24.02738	0.045504	3.92915	0.42154	2.577297	0.003792	0.00569	0.24206	0.10428	3.14294	3.996769	98.50481	0.00063
76	547.4733	0.00224	121.98	37.82016	65.3296	12.4029	64.73171	41.49245	12.2573	7.8568	72.91048	24.7563	0	0	0.00027	0.00263	62.27741	20.23635	0.02352
77	314.804	0	110.758	32.7488	78.0058	2.92544	7.855275	6.478485	1.16256	1.4336	9.549456	33.75602	0	0	0	0	6.45598	22.4613	0.0056
78	133.1366	0	25.0309	8.34848	7.11648	4.83952	33.19232	23.04624	0.00672	0.05936	0.3976	1.29696	0.00112	11.7522	6.96304	0.00112	0.00672	0.6888	0.01232
79	465.2592	0	32.9784	6.95296	5.25616	3.73856	43.33301	62.11275	5.19792	8.0304	16.29709	6.444558	0.73808	0.00112	1.32599	0.1086	0.005054	0.511266	0.00112
80	518.4334	0.83888	17.7498	12.10944	0	9.08544	18.09279	37.42785	3.80464	5.47456	10.27191	84.15327	0	0	0.05201	0.16904	0.005054	0.159586	0.9688
81	98.0056	0.00112	0.6272	0.81984	0.01568	2.81568	8.40832	7.75104	1.22304	2.07536	5.778562	23.83061	0	0	0	0	1.906369	8.087391	0.00896

Zone	68	69	70	71	72	73	74	75	76	77	78	79	80	81	
	Sum	142.118	1073.65	1271.008	360.54	597.172	174.975	809.636	513.989	346.299	353.499	221.168	306.178	673.053	167.973
1	201.3043	2.29376	0	0	0.0784	0.11312	0	0	0	0	0	0.02912	3.38688	0.03808	
2	209.5957	4.58528	0	0	0.15568	0.22736	0	0	0	0	0	0.05936	3.864	0.03808	
3	143.7016	8.1592	0	0	0.09184	0.13328	0	0	0	0	0	0.03472	2.27024	0.01344	
4	60.06336	0	0.86912	1.14576	0	0	0	0	0.00448	0	0	0.00224	0.48944	0.01456	
5	647.7016	0	2.22992	19.97072	0	0	0	0	0.00336	0	0	0.0336	13.3101	0.02576	
6	258.9267	0	0.10976	3.20768	0	0	0	2.12551	0.1014	0	0	0	0.0056	5.21472	0
7	178.7287	0	3.1416	8.11776	0	0	0	2.2759	8.3386	0.00448	0	0	0.00448	0.96432	0.00336
8	106.1805	0	0	0	0.9632	2.46624	0	1.14316	0	0	0	0	0.00112	0.5768	0.0112
9	216.4702	0	0	0	0.24528	0.83888	0	3.76839	0	0	0	0	0	0.0448	0.04032
10	190.3037	0	0	0	2.08432	0.10192	0	11.4567	0	0	0	0	0	0.03136	0.03808
11	126.3808	0	0	0	2.66896	0.03024	0	5.58613	0	0	0	0	0	0.01232	0.03024
12	67.088	0	0	0	0	0	0	4.29445	0	0	0	0	0	0.00784	0.02016
13	70.84672	0	0	0	0	0	0	0.18161	0	0	0	0.54208	0	0.12656	0
14	309.5277	0	0	0	0	0	0	1.71593	0	0	0	0.0504	0	0.40544	0.05152
15	134.3574	0	0	0	0	0	0	0.00927	0	0	0	2.65888	0	1.40336	0
16	502.2293	0	0	0	0	0	0	3.50758	0	0	0	0.3416	0	0.77056	0.13776
17	357.2106	0	0.03584	0.05376	0.06944	0.27664	0	0.42149	0	0.00112	0.00784	0.10192	0	0.728	0.00112
18	102.0589	0	0	0	0	0	0	1.85256	0	0	0	0.00896	0	0.23632	0
19	57.83792	0	0	0	0	0.00112	0	0.01917	0	0	0	0.00112	0	0.04928	0
20	521.2543	0.11088	0.224	0.33712	0	0	0.32592	0.59803	0	0	0	0	0.0896	16.4382	0.00336
21	113.6497	0.11648	0.2352	0.35392	0	0	0.28	0.0112	0	0	0	0	0	0.07504	0.00336
22	418.6683	0	0	0	0	0	0.07616	0.00015	0	0	0	0	0	0.01456	0.04368
23	722.3966	0	0	0	0	0	19.012	0.05549	0	0	0	0	0.18032	9.01712	0.04368
24	696.1786	0	0	0	0	0	10.3118	0.04544	0	0	0	0	0.18144	12.8195	0.01008
25	210.8613	0	0	0	0	0	1.34736	0.00587	0	0	0	0	0.01792	2.81568	0.03472
26	80.62432	0	0	0	0	0	0.02912	0.00046	0	0	0	0	0	0.00112	0.03248
27	119.1646	0	0	0	0	0	0	0.00201	0	0	0	0	0.02688	2.34192	0.02128
28	12.8184	0	0	0	0	0	0	0.00958	0	0	0	0	0	0	0
29	87.16064	0	0	0	0	0	0	0.14606	0	0	0	0	0.00784	0.72912	0.01568
30	115.873	0	0	0	0	0	0	0.14961	0	0	0	0	0	0.00896	0.02464
31	366.3946	0	0	0	0	0	0	0.00927	0	0	0	0	0	0	0
32	98.07168	0	0	0	0	0	0	0.24482	0	0.00112	0	0	0	0.03248	0.00112
33	104.8723	0	0	0	0	0	0	0.06862	0.0022	0.01008	0	0	0	0	0.05152
34	39.7544	0	0	0	0	0	0	0.13632	0	0	0	0	0	0	0
35	597.1315	0	0	0	0	0	0	0.61284	0	0	0	0	0	0	0.01456
36	14.2639	0	0	0	0	0	0	0.02724	0	0	0	0	0	0	0
37	101.8605	0	0	0	0	0	0	0.0372	0	0	0	0	0	0.00224	0.03136
38	207.7711	0	0	0	0	0	0	0.53894	0	0	0	0	0	0.00896	0.14448
39	18.8763	0	0	0	0	0	0	0.11143	0	0	0	0	0	0	0
40	223.356	0	0	0	0	0	0	0.48134	0	0	0	0	0	0	0
49	91.63976	0	0	0	0	0	0	0.15424	0.12344	0.00224	0	0	0	0	0
50	3375.962	21.4525	97.6842	338.7664	85.0562	123.863	0	0	1.0933	127.98	9.46064	38.0218	77.2307	48.6595	61.4947
51	1860.358	7.36176	32.4352	112.4838	28.8053	41.9485	0	0	0.40337	47.2226	0.32032	11.4318	11.5158	33.1722	18.424
52	1325.236	3.28384	18.5483	64.32496	16.8235	24.4989	0	0	0.25569	29.8816	2.96352	5.5384	8.90176	0	72.6466
53	636.7127	44.4573	4.94928	16.48304	3.83376	5.58208	0	0	0.17193	4.90896	106.717	1.68672	0.8568	8.33168	0.224

Zone	68	69	70	71	72	73	74	75	76	77	78	79	80	81	
	Sum	142.118	1073.65	1271.008	360.54	597.172	174.975	809.636	513.989	346.299	353.499	221.168	306.178	673.053	167.973
54	2201.483	8.05222	112.1	28.40442	0.84083	1.31612	0.05451	14.3173	234.561	26.7809	24.7686	0.79744	1.71364	1.49417	0.09375
55	1817.241	5.0193	70.5594	26.20454	5.06605	15.9565	0.94677	241.329	2.78835	18.4772	15.5682	7.62832	20.3739	31.4954	0.06081
56	1140.103	0.8512	10.1282	10.87856	4.75328	43.1693	0.02128	84.0875	0.65907	0.72576	2.33072	0.10304	0.26768	0.38864	0.00784
57	1806.377	0	0	0	0	0	0.06272	47.4072	0	0	0	0.53424	1.9152	2.66112	0
58	2119.819	1.63948	19.4238	20.92366	8.90568	12.2648	0.16249	43.5648	1.32254	1.35512	4.42055	2.47744	15.1657	18.7238	0.00833
59	3735.605	15.8852	184.53	196.1021	89.978	123.914	133.418	245.762	1.30931	13.3393	51.1572	21.56	10.5573	139.484	0.10031
60	1119.86	0	0.07056	0.37744	0.3304	0.6776	0.09408	76.3742	0.66568	0.00672	0.00112	0.03248	0	0	0
61	2157.917	0.00448	0.79632	65.90416	27.1902	37.445	0.32592	53.1447	1.75236	0.084	0.03808	4.8496	0	0	0
62	1327.006	0	0.04758	0.258138	1.33934	24.0685	2.05569	52.7576	3.64139	0.00457	0.00112	5.88336	0	0	0
63	1731.434	0	0.0052	0.02688	0.19336	74.5664	0.01561	16.7269	0.95884	0.00087	0	104.979	0	0	0
64	3277.56	1.98521	52.1532	222.3083	58.0381	26.0857	0.0091	4.7358	223.661	43.521	22.7865	9.2232	0	0	0.01213
66	1055.457	13.2815	358.851	59.6618	9.75997	5.6842	0.00098	0.53928	21.769	31.0508	111.218	1.20624	0.01008	0.028	0.06627
67	491.8659	0.03136	0.02912	0.14672	0.02576	0.03696	0	0	0	0.01344	0	0.00448	0	8.0248	13.4366
68	287.3595	0	0	0	0.50176	0.73024	0	0	0	0	0	0	0.18928	6.8152	0.00448
69	752.417	0	0	60.05552	0	0	0	0.00015	0.00441	0.05712	0	0	0.1008	8.4896	0.18592
70	624.4867	0	91.0694	0	0	0	0	1.06476	10.2541	0.12992	0	0	0.06944	4.40496	0.04704
71	303.5536	0	0	0	0	9.33744	0	5.73664	0	0	0	0	0.0504	3.34096	0.04144
72	295.8189	0	0	0	7.84448	0	0	12.3292	0	0	0	0	0.04592	2.996	0.01232
73	210.3125	0	0	0	0.02352	0.04592	0	0.00572	0	0	0	0	0	0.00112	0
74	713.348	0	0.00093	0.004791	0.25063	14.5752	0.00278	11.3289	0.00441	0.00015	0	0	0	0.00112	0
75	151	0	0.10934	0.163688	0	0	0	0.0019	0	0.10428	0.00316	0	0	0	0.00063
76	547.4733	0	3.83264	1.22528	0	0	0	0.00046	0.11021	0	0.18032	0.00224	0.00224	0.728	0.01568
77	314.804	0	0	0	0.01792	0.02576	0	0	0	0.00336	0	0.00336	0	1.48176	0.02912
78	133.1366	0	0	0	0	0	0	0	0	0	0	0	0	0.0504	0.07504
79	465.2592	0	0.40656	0.61376	0	0	0	0.05949	0	0.00224	0	0	0	269.3	0.01008
80	518.4334	0.63952	8.16816	9.36432	3.35888	4.6256	6.4232	7.71527	0.03747	0.37408	1.55568	1.0192	156.045	0	0.02576
81	98.0056	2.90752	0.90496	3.13824	1.24432	1.81216	0	0	0	0.24752	0	0.48048	0.49168	4.78352	0.01008

Zone	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
	Sum	93.006	94.979	178.04	153.941	596.236	119.997	197.424	138.795	300.889	646.701	503.724	229.165	242.231	231.579	225.16	897.103	471.824	135.862	586.872	541.441	
1	206.698	0	0.266	0.737	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	209.808	0.266	0	1.475	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	178.985	0.036	0.073	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	67.455	0	0.001	0	0	0	0	0.069	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	917.841	0.001	0.003	0.001	0.008	0	0	3.434	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	211.73	0	0	0	0	0	0	2.261	0	0	0	0	0	0	0	0	0	0	0	0	0.001	0.001
7	377.093	0	0	0	0	0.305	0.801	0	0	0	0	0	0	0	0	0	0	0	0	0	0.007	0.004
8	378.343	0.001	0.001	0	0	0.005	0	0	0	0.061	9.915	34.972	0	0.005	0.029	0.014	0	0	0	0	0.005	0
9	238.551	0.005	0.009	0.002	0	0.83	0.062	0.001	0.052	0	0	0.002	0	0	0	0	0	0	0	0	0	0
10	653.816	0.001	0.001	0	0	0.038	0.002	0	0.006	0	0	0.588	0	0.004	0.003	0.001	0	0	0	0	0.535	0
11	220.635	0.001	0.001	0	0	0.004	0	0	0.008	0	0.04	0	0	0.002	0.001	0	0	0	0	0	0.179	0
12	1342.577	0	0	0	0	0	0	0.001	0	0.004	0	0	6.167	6.414	33.229	0.312	0.001	0	0	0	0	0
13	478.651	0	0	0	0	0	0	0	0	0.001	0	109.347	0	86.032	17.457	123.911	0.005	0	0.001	0	0	0
14	560.24	0	0	0	0	0	0	0	0.013	0	0.05	0.006	40.57	37.129	0	133.788	8.021	0.072	0	2.692	0	0
15	366.765	0	0	0	0	0	0	0	0.007	0	0.025	0.003	0.909	62.603	0.799	0	213.705	0.012	0	0.015	0	0
16	793.718	0	0	0	0	0	0	0	0	0	0	0.001	92.939	0.004	23.246	0	91.33	6.701	1.697	0	0	0
17	627.563	0	0	0	0	0	0	0	0	0	0	0	0.016	0	0	0.046	0	0.003	41.709	0.285	0	0
18	164.644	0	0	0	0	0	0	0	0	0	0	0	0.483	0.003	0.024	21.352	42.451	0	0.004	0	0	0
19	75.575	0	0	0	0	0	0	0	0	0	0	0	0.002	0	0	0.035	2.568	0	0	0	0.002	0
20	975.367	0	0	0	0	0.002	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	34.864	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.097
22	528.384	0	0	0	0.001	0.023	0	0.003	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	841.873	0	0	0	0.004	0.154	0	0.014	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	783.537	0	0	0	0	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	400.18	0	0	0	0	0.01	0	0.002	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	87.017	0	0	0	0	0.003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	574.587	0	0	0	0.002	0.048	0	0.009	0	0	0	0	0	0	0	0	0	0	0	0	0	0.246
28	122.466	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.057
29	211.825	0	0	0	0	0.009	0	0.002	0	0	0	0	0	0	0	0	0	0	0	0	0	0.031
30	220.798	0	0	0	0	0.003	0	0.006	0	0	0	0	0	0	0	0	0	0	0	0	0	0.076
31	756.114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.011
32	573.81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.006	0	0.027	0	0
33	538.246	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.008	0	0.265	0	0
34	97.468	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.001	0	0.001	0	0	0
35	809.155	0	0	0	0	0.001	0.004	0.001	0.108	0	5.16	0.97	0	0	0	0	0.008	51.886	0.001	0	0	0
36	17.76	0	0	0	0	0.001	0	0	0	0.003	0.001	0	0	0	0	0	0	0	0	0	0	0
37	495.652	0	0	0	0	0.005	0	0.004	0.006	0	0.023	0.003	0	0	0	0	0	0.21	0	1.062	0	0
38	344.83	0	0	0	0	0	0	0	0.011	0	0.04	0.005	0	0	0	0	0	0.001	0	0.001	0	0
39	43.903	0	0	0	0	0	0	0	0	0.001	0	0	0	0	0	0	0	0	0	0.001	0	0
40	118.426	0	0	0	0	0.001	0.015	0	0	0	0	0	0	0	0	0	0.042	0	0.769	0	0	0
49	262.752	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	3530.794	9.886	9.886	27.375	71.261	0.001	0	65.967	9.677	113.763	71.668	156.026	0.164	0.001	37.671	3.011	0.162	0	0	0.004	0.002	0
51	3313.78	5.793	5.793	16.043	36.94	0	0	34.196	3.592	42.229	26.603	57.917	0.007	0.002	15.379	1.229	0.066	0	0	0.001	0.001	0
52	2552.178	3.249	3.249	8.997	31.876	0	0	29.508	3.911	45.973	28.961	63.051	0.004	0.001	8.449	0.675	0.036	0	0	0.001	0.001	0
53	701.255	9.279	9.279	68.113	5.475	0	0	1.267	0.165	1.944	1.225	2.666	0.001	0	1.254	0.1	0.005	0	0	0	0	0

Zone	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
Sum	93.006	94.979	178.04	153.941	596.236	119.997	197.424	138.795	300.889	646.701	503.724	229.165	242.231	231.579	225.16	897.103	471.824	135.862	586.872	541.441	
54	6.8904	6.8904	1.908	0.5697	127.81	18.1629	5.2281	0.0819	0.297	5.9841	0.4068	0.2925	0.0288	0.1872	0.0153	0.0009	0	0	1.4382	1.8099	
55	1.1536	1.1536	0.319	0.0983	234.272	19.1171	0.8339	0.6001	0.033	6.5539	11.2162	21.0495	2.0932	13.4418	1.0747	0.0581	0.009	0	124.962	216.844	
56	1265.049	10.064	11.101	3.074	0.822	9.047	0.007	1.305	13.51	0	49.958	5.646	50.253	6.165	1.046	3.164	27.06	62.336	0	0.009	0.009
57	1523.337	0	0	0	0	0	0	0	0	0	0	0	0	0.025	0	0.001	1.609	252.138	0.058	0.086	0.082
58	4.3182	4.8356	1.3394	0.34496	8.35736	0.6732	5.1436	5.96552	0	22.0581	2.49304	0.00088	0.1364	0	0	2.12696	0.0088	0	0.05984	86.4987	
59	32.687	32.757	9.0706	2.83504	69.5476	5.6768	9.8334	51.0255	0	188.683	21.324	0.00612	1.2396	0.002	0.003	19.368	0.0822	0	0.57916	92.6373	
60	1238.15	0	0	0	0.068	5.462	0.002	0.109	0	1.691	0.879	0.001	0.049	4.965	0.001	0.108	0.01	0	0.027	53.162	
61	2368.906	0	0	0	0.067	5.351	0.002	0.762	0	49.105	20.329	0.133	29.018	0.502	0.075	433.635	2.137	0	14.785	74.951	
62	1249.787	0	0	0	0.029	4.696	0.002	0.094	0	1.458	0.758	0	0.116	0.073	0.677	3.567	5.149	0	4.05	10.291	
63	1622.169	0	0	0	0.035	2.786	0.001	0.058	0.002	150.987	65.912	3.026	3.076	49.031	6.623	28.425	0.655	0.025	89.254	0.049	
64	2534.081	0.021	0.021	0.006	0.004	60.732	44.083	12.587	41.196	76.207	1.386	29.163	0.59	0	0.001	0.017	0.03	0.004	0	0.034	0.002
66	1267.631	5.715	5.715	2.334	0.09	0.352	6.135	16.134	2.869	13.378	2.802	16.234	0.112	0	0.018	0.081	0.014	0	0	0.002	0.001
67	528.901	0	0	0	0.001	0	0	0.002	0	0.002	0.001	0.002	0	0	0.005	0	0	0	0	0	0
68	367.194	0.027	0.053	31.046	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
69	1091.762	0.089	0.178	0.085	0.715	0.001	0	2.321	0	0	0	0	0	0	0	0	0	0	0	0	0
70	2549.478	0.096	0.19	0.053	0.213	79.615	5.783	3.504	0	0	0	0	0	0	0	0	0	0	0.045	0.324	
71	460.224	0.046	0.093	0.026	0.001	2.537	0.181	0.011	1.688	0	7.421	1.332	0.107	0.023	0.15	0.012	0	0	0	0.114	0
72	769.405	0.047	0.095	0.026	0.001	0.036	0	0.002	0.542	0	2.566	1.324	1.895	0.437	1.99	0.224	0.039	0.007	0	6.374	0
73	422.301	0	0	0	0.001	0.001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.661
74	776.182	0	0	0	0.004	0.278	0.001	0	0	0	0	0	0	0	0	0	0	11.936	77.189	296.049	0
75	393.59	0	0	0	0	0.153	0.549	0.006	0	0	0	0	0	0	0	0	0	0	0	0	0
76	401.582	0	0	0	0.001	0	0	0.051	0	0	0	0	0	0.002	0.001	0	0	0	0	0	0
77	643.613	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	311.267	0	0	0	0	0	0	0.005	0	0.017	0.002	0.68	0.415	0.543	0.131	12.539	0.634	0	0.002	0	
79	445.559	0	0	0	0.003	0	0.004	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	858.157	1.294	1.294	0.358	0.088	2.117	0.17	1.309	2.137	0	7.901	0.893	0	0.055	0	0	0.857	0.003	0	0.024	3.305
81	440.11	2.04	2.04	5.65	2.59	0	0	2.397	0.595	7	4.41	9.6	0.016	0	3.584	0.286	0.015	0	0	0	0

Zone	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
	Sum	401.396	208.239	1151.89	180.385	147.594	66.338	199.585	9.048	7.469	328.75	675.78	242.699	497.97	37.503	124.807	4.151	222.858	955.849	422.245	491.46	
1	206.698	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	209.808	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	178.985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	67.455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	917.841	0.011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	211.73	0.003	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	377.093	0.03	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	378.343	0	0	0.01	0	0.009	0.001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2.963
9	238.551	0	0	0.01	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4.658
10	653.816	0	0.002	72.638	1.393	0.001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	121.02
11	220.635	0	0.001	3.585	0.384	0.001	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.157
12	1342.577	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	478.651	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	560.24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	366.765	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	793.718	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	627.563	2.808	0.121	41.171	0.319	0.474	0.407	0	0	0	0	0.521	6.864	0.44	0	0	0	0	0	0	0	0
18	164.644	0	0.001	0.007	0	0	0	0	0	0	0	0.033	1.519	0.006	0	0	0	0	0	0	0	0
19	75.575	0.001	0.001	0.548	0.011	0.002	0	0	0	0	0	0.375	2.866	0.007	0	0	0	0	0	0	0	0
20	975.367	5.071	1.324	5.085	0.774	0.021	0.004	0.393	0	0	0.032	0.021	0	0	0	0	0	0	0	0	0	0
21	34.864	0	0.008	0.334	0.116	0	0	0.002	0.001	0	0.001	0	0	0	0	0	0	0	0	0	0	0
22	528.384	0	0	327.284	24.626	13.798	0.042	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	841.873	0	90.391	0	107.721	26.742	41.417	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	783.537	0	0.921	173.406	0	0.001	0.002	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	400.18	0	0.449	1.653	7.698	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	87.017	0	0.28	0.123	0.381	0.002	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	574.587	0.002	0	0	0	0	0	0.579	0.28	8.454	0.11	0	0	0	0	0	0	0	0	0	0	0
28	122.466	0.014	0	0	0	0	0	0.004	0	0.125	0.442	0.799	0	0	0	0	0	0	0	0	0	0
29	211.825	0.078	0	0	0	0	0	26.713	0.322	0	1.315	1.454	0	0	0	0	0	0	0	0	0	0
30	220.798	0.19	0	0	0	0	0	0.34	2.365	0.56	0	0.237	0	0	0	0	0	0	0	0	0	0
31	756.114	0	0	0	0	0	0	0	0.087	9.187	0	0	0	0	0	0	0	0	0	0	0	0
32	573.81	0	0	0	0	0	0	0	0	0	0	0	4.948	13.584	0	0	0	0	0	0	0	0
33	538.246	0	0	0	0	0	0	0	0	0	0	0	5.481	0.74	0	0	0	0	0	0	0	0
34	97.468	0	0	0	0	0	0	0	0	0	0	0	0.789	7.236	0	0	0	0	0	0	0	0
35	809.155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.739	19.317	151.305	56.092	0	0	0
36	17.76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.034	0.297	0.141	0	0	0
37	495.652	0	0	0	0	0	0	0	0	0	0	0	0	0	0.958	0.103	0	0.871	0.753	0	0	0
38	344.83	0	0	0	0	0	0	0	0	0	0	0	0	0	0.001	0	0.003	0	0.044	0	0	0
39	43.903	0	0	0	0	0	0	0	0	0	0	0	0	0	0.001	0	0.002	0.012	0	0	0	0
40	118.426	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	262.752	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	3530.794	10.189	0	0	0	28.841	10.998	0.477	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	3313.78	4.299	0	0	0	10.325	3.937	0.154	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	2552.178	2.567	0	0	0	6.618	2.524	0.16	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	701.255	0.253	0	0	0	0.542	0.203	0.007	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Zone	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	
	Sum	401.396	208.239	1151.89	180.385	147.594	66.338	199.585	9.048	7.469	328.75	675.78	242.699	497.97	37.503	124.807	4.151	222.858	955.849	422.245	491.46
54		3.4425	1.3986	0.9288	0.0171	0.1116	0.0423	15.1803	0.0099	0.0009	0.2115	0.063	0.0045	0.0009	0	0.0027	0	0.0099	0.0927	0.0117	1.9251
55		252.373	48.4084	6.9832	0.4399	7.7184	2.9427	146.235	0.0031	0.0131	0.0635	0.019	0.0115	0.7971	2.91	2.1303	0.089	22.9541	156.282	22.0233	6.2709
56	1265.049	0.002	0.011	0.022	0.001	0	0	0.002	0.01	0	0.243	0.159	0.144	58.377	0.179	0.027	0.03	5.688	4.206	215.956	9.637
57	1523.337	0.02	0.139	0.099	0.01	0.001	0	0.003	0.578	0	9.59	6.381	229.209	284.761	0.157	0.678	0	0.001	0	0	0
58		66.1496	56.4027	98.5248	5.64696	2.09704	0.7999	8.61168	0.4453	0.0581	49.0186	62.4703	4.63408	0.02464	0.00176	78.166	1.2778	6.68536	18.165	51.5513	0.249
59		9.2454	7.93028	233.479	27.60504	24.464	0.1141	1.22032	4.2467	0.9269	169.283	10.4477	0.65092	0.23636	0.01824	41.98	0.7092	75.3446	206.554	54.1487	0.107
60	1238.15	3.49	0	0.978	0.012	0.324	0.033	0.005	0.002	1.929	24.876	72.144	0.182	2.097	6.268	0.021	0.068	1.322	14.553	7.318	41.329
61	2368.906	7.981	0.001	2.25	0.029	0.781	0.081	0.013	0.017	2.991	24.045	26.972	0.298	82.51	8.038	0.019	0.065	30.521	380.497	6.952	45.895
62	1249.787	2.862	0.003	38.937	0.492	1.989	0.031	0.016	0.296	0.461	25.496	494.377	0.355	45.715	5.151	0.017	0.055	59.06	16.494	5.955	34.768
63	1622.169	0.247	0.001	40.324	0.489	1.088	0.009	0.002	0.006	0.001	0.137	0.04	0.009	0.007	0.002	0.002	0	0.02	1.151	0.09	144.08
64	2534.081	0.015	0	4.128	0.052	0.081	0	0	0.001	0	0.014	0.004	0.001	0.001	0	0	0	0.002	0.176	0.001	4.877
66	1267.631	0.037	0	0	0	0.211	0.004	0.002	0	0	0	0	0	0	0	0	0	0	0	0	0
67	528.901	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
68	367.194	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
69	1091.762	0.049	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70	2549.478	0.883	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	460.224	0	0.091	0.006	0	0.016	0.003	0	0	0	0	0	0	0	0	0	0	0	0	0	44.954
72	769.405	0	0.272	0.026	0.029	0.038	0.007	0	0	0	0	0	0	0	0	0	0	0	0	0	0.028
73	422.301	28.931	0.069	56.656	0.33	16.649	1.439	0	0	0	0	0	0	0	0.008	0.001	0.003	0.008	0.011	0	0
74	776.182	0	0	27.918	0.219	0.015	0	0	0.003	0	0.022	0.007	0	0	0	0	0	0	0	0	28.531
75	393.59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01
76	401.582	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
77	643.613	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	311.267	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
79	445.559	0	0	0.28	0.022	0.008	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	858.157	0.009	0.013	14.492	1.568	1.225	0	0.002	0.163	0.036	6.319	0.075	0.001	0.01	0.001	0.796	0.014	1.891	5.185	1.197	0.002
81	440.11	0.144	0	0	0	3.4	1.297	0.043	0	0	0	0	0	0	0	0	0	0	0	0	0

Zone	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	66	67	
	Sum	336.434	3365.67	3306.555	3166.94	990.205		1248.38	1736.24			1336.67	2872.1	1555.88	2099.9	3571.789	1354.36	1039.91	
54	40.4019	0	0	0	15.7941	0	1.9467	0	0.0657	0.086328	0.081072	0.0027	0.342	0	0.0504	1423.158	4.9392	65.0259	
55	4.5771	0	0	0	2.9239	32.8698	3.8685	0.03	6.5663	8.685512	8.182088	0.0013	0.149	0.218	29.0376	166.1287	1.9318	10.9411	
56	1265.049	0	0	0	58.621	4.788	26.375	0	0.004	0.00528	0.00072	0.027	1.226	1.416	89.086	8	0.011	86.135	
57	1523.337	0	0	0	0	0	0	0	0	0.0704	0.0126	0.988	47.403	614.867	23.869	8	0	0	
58	0	0	0	0	29.1386	2.37996	13.11068	0	1.64032	0	7.95608	0.6556	1569.09	4.39824	0	7.04	0.01144	36.711	
59	0.001	0	0	0	11.9864	4.32684	23.83552	0	0.31968	9.73016	2.41176	20.7404	218.494	2.26176	0	8.96	0.09356	312.205	
60	1238.15	0.014	0	0	0	0.3789	0.0511	26.039	112.279	664.0286	90.54936	0	26.802	19.976	0.038	0	0	0	
61	2368.906	0.045	0	0	0	0.4518	0.8022	0.001	99.501	716.7204	97.7356	0	0	147.12	0.039	0	0	0	
62	1249.787	0.012	0	0	0	0.4356	0.0594	0.209	227.276	41.39432	5.66068	0	105.3	0	0.027	0	0	0	
63	1622.169	0.007	0	0	0	0.6273	0.4397	747.097	0.519	0.16808	0.07892	0.001	0.095	0.023	0	0	0	0	
64	2534.081	72.841	1.328	0.971	0	0.741	1367.893	151.9901	0.004	0.242	0.01408	0.00692	0	0.006	0.002	0	0	0.077	0.04
66	1267.631	0.015	185.669	96.519	0	286.519	18.2934	2.1546	0.003	0.659	1.1088	1.8102	0	0	0	0	0.007	0	0.13
67	528.901	0	129.432	63.644	0	40.265	21.8043	5.3557	0.14	21.55	33.7348	147.8122	0	0	0	0	0	0.066	0
68	367.194	0	0.411	0.309	0.225	81.645	22.5324	6.2546	0.179	26.357	40.18168	123.0513	0	0	0	0	0	33.32	0.003
69	1091.762	0	214.485	116.137	146.904	24.528	52.0461	12.5559	0.337	53.597	83.89392	338.8011	0	0	0	0	0.013	3.698	0.125
70	2549.478	2.505	160.578	86.948	109.982	23.833	72.9558	12.0222	0.198	31.729	49.48328	187.4267	0.002	0	0	0.007	1400.796	19.351	0.134
71	460.224	104.528	53.026	28.82	40.843	8.183	6.0786	2.7854	0.1	15.444	23.9624	99.7676	0	0	0	0.45	8	0.801	0.044
72	769.405	0	54.072	29.389	41.648	8.345	8.0667	32.8973	9.03	37.505	58.19176	242.2772	0	0.003	0.003	206.13	8	0.01	0.045
73	422.301	0	0.024	0.006	0.012	0.002	1.6146	0.5394	0.034	0.508	62.722	9.284	82.657	16.429	135.649	0.021	8	0.001	0
74	776.182	0	0.002	0.001	0.002	0	14.3136	2.6244	113.901	7.873	0.82808	1.31692	148.969	1.722	4.008	30.353	8	0.035	0
75	393.59	0	5.928	3.401	5.157	0.627	47.0457	5.2453	0.001	0.193	0.01672	0.01328	0.001	0.021	0.01	0.002	11.943	310.781	0
76	401.582	0	75.725	42.347	64.206	7.9	98.1729	13.3321	0.084	14.655	23.85064	57.09636	0	0	0	0	0.012	0.18	0.012
77	643.613	0	255.026	139.433	132.551	13.042	7.6896	1.9214	0.051	7.872	12.276	54.963	0	0	0	0	0	16.016	0.001
78	311.267	0	29.576	14.574	16.521	4.468	6.3027	27.1513	0.03	0.052	0.08184	0.34216	2.667	79.732	106.072	0	8	0	0.007
79	445.559	0	45.599	6.614	11.752	1.837	16.3746	54.6804	0	0.142	17.92032	8.13168	1.674	0.124	0.033	0	8	0.001	0.005
80	858.157	0	29.266	31.306	0	21.344	11.6874	72.0406	0	0.179	20.04112	192.9469	0.323	0.109	0.005	0	8	0.003	11.682
81	440.11	0	30.002	61.476	30	24.939	25.2774	6.9256	0.149	32.287	21.31096	107.464	0	0	0	0	0	13.169	0.039

Zone	68	69	70	71	72	73	74	75	76	77	78	79	80	81	
	Sum	124.225	1305.12	1710.441	489.107	429.579	594.082	846.717	19.402	465.624	445.745	171.52	616.236	884.926	308.423
1	206.698	0.265	0	0	0	0	7.412	0	0	0	0	0	0.901	1.355	
2	209.808	0.53	0	0	0	0	7.412	0	0	0	0	0	0.901	1.355	
3	178.985	1.706	0	0	0	0	7.412	0	0	0	0	0	0.252	0.185	
4	67.455	0.007	0.484	0.695	0	0	7.412	0	0	0.001	0	0	0.837	0.017	
5	917.841	0.01	2.53	30.667	0	0	7.412	0	0	0.005	0	0	0	3.123	0.12
6	211.73	0	0.022	2.134	0	0	7.412	0.001	0.043	0	0	0	0	0.04	0
7	377.093	0.001	2.159	7.089	0	0	7.412	0	0.331	0.022	0	0	0	0.744	0.007
8	378.343	0.004	0.014	0.005	2.376	0.294	7.412	0	0	0	0	0.001	0	5.369	0.049
9	238.551	0.033	0.336	0.059	0	0	7.412	0	0	0	0	0	0	0	0.433
10	653.816	0.004	0.024	0.007	0.176	0.07	7.412	0	0	0	0	0	0	0.48	0.05
11	220.635	0.005	0.005	0.009	0.187	0.033	7.412	0	0	0	0	0	0	0.569	0.065
12	1342.577	0	0	0	0.02	5.108	7.412	0	0	0	0.002	0	0	0	0.068
13	478.651	0	0	0	0.006	2.653	7.412	0	0	0	0.001	0	0	0	0.01
14	560.24	0	0	0	0.269	6.63	7.412	0	0	0	0.023	0	0.012	2.523	0.409
15	366.765	0	0	0	0.133	0.135	7.412	0	0	0	0.011	0	0.001	0.149	0.202
16	793.718	0	0	0	0	0	7.412	0	0	0	0	0	0.029	8.741	0
17	627.563	0	0.008	0.136	0	0	7.412	20.575	0	0	0	0	0	2.997	0.085
18	164.644	0	0	0	0	0	7.412	57.56	0	0	0	0	0	0.002	0
19	75.575	0	0	0	0	0	7.412	2.846	0	0	0	0	0	0.025	0
20	975.367	0	0.017	0.075	0	0	20.516	0	0	0.002	0.007	0	0.02	14.81	0.105
21	34.864	0	0.001	0.004	0	0	6.145	0	0	0	0	0	0	0.109	0.007
22	528.384	0	0.125	0.51	0	0	7.412	0	0	0.001	0	0	0	0.063	1.022
23	841.873	0	0.703	2.628	0	0	0	0	0	0.008	0	0	0	8.842	2.623
24	783.537	0	0.028	0.072	0	0	0	0	0	0	0	0	0	25.364	0.114
25	400.18	0	0.074	0.327	0	0	0	0	0	0.001	0	0	0	5.929	1.301
26	87.017	0	0.017	0.069	0	0	0	0	0	0	0	0	0	0.009	0.556
27	574.587	0	0.338	1.491	0	0	11.607	0	0	0.006	0	0	0	4.37	2.337
28	122.466	0	0	0.001	0	0	0.005	0	0	0	0	0	0	0	0
29	211.825	0	0.063	0.276	0	0	7.412	0	0	0.001	0	0	0	2.295	0.433
30	220.798	0	0.017	0.714	0	0	7.412	0	0	0	0	0	0	0.783	0.028
31	756.114	0	0	0	0	0	7.412	0	0	0	0	0	0	0	0
32	573.81	0	0	0	0	0	7.412	0	0	0	0	0	0	0.723	0.011
33	538.246	0	0	0	0	0	7.412	0	0	0	0	0	0	0.194	2.657
34	97.468	0	0	0	0	0	7.412	0	0	0	0	0	0	0	0.001
35	809.155	0	0.001	0.052	2.826	107.874	7.412	0.893	0	0	0	0	0	0	0
36	17.76	0	0.001	0.001	0.003	0.195	7.412	0	0	0	0	0	0	0	0
37	495.652	0	0.09	0.149	0.123	4.145	7.412	0.119	0	0	0	0	0	0.203	0.649
38	344.83	0	0	0.003	0.214	1.263	7.412	0.009	0	0	0	0	0	0.028	0
39	43.903	0	0	0	0	0.264	7.412	0.004	0	0	0	0	0	0	0
40	118.426	0	0	0.003	0	0	7.412	2.438	0	0	0	0	0	0.028	0
49	262.752	0	0	0	0	0	7.412	0	0.054	0.011	0	0	0.001	0.116	0.001
50	3530.794	3.935	72.637	166.121	148.757	32.492	7.412	0	0	128.948	6.196	3.003	141.612	118.165	29.087
51	3313.78	2.306	37.654	86.114	55.218	12.061	7.412	0	0	65.432	3.073	1.226	29.511	121.122	54.43
52	2552.178	1.293	32.491	74.307	60.114	13.13	7.412	0	0	57.478	39.325	0.674	29.529	0	108.384
53	701.255	8.907	1.591	3.811	3.317	0.724	7.412	0	0	2.751	64.092	0.09	1.088	12.949	4.364

Zone	68	69	70	71	72	73	74	75	76	77	78	79	80	81	
	Sum	124.225	1305.12	1710.441	489.107	429.579	594.082	846.717	19.402	465.624	445.745	171.52	616.236	884.926	308.423
54	9.7344	148.64	31.1625	0.4995	0.0846	6.6708	1.179	8.2701	114.985	31.842	0.0153	0.6624	0.5328	3.6945	
55	1.6296	39.2425	8.2915	1.3805	5.2744	8.1532	170.081	1.1329	29.6391	5.549	1.0717	40.3956	60.6792	0.6835	
56	1265.049	20.096	14.893	127.325	34.922	102.188	7.412	79.318	0	4.211	45.066	0	0	0.001	4.652
57	1523.337	0	0	0	0	0	7.412	35.081	0	0	0	0	0.003	0.005	0
58	9.02352	39.1706	54.56616	15.4942	0.00176	6.52256	244.676	0	3.07384	18.6666	0.00616	11.7735	16.2589	1.15632	
59	46.5765	130.528	396.1528	126.767	0.01424	217.106	34.3529	0.001	33.4372	155.871	0.05884	14.2175	142	12.8697	
60	1238.15	0	0.005	0.029	0.057	0.3	0.061	54.046	0.007	0.002	0	0.002	0	0	0
61	2368.906	0	0.005	0.032	0.673	0.094	0.445	53.155	0.006	0.002	0	1.27	0	0	0
62	1249.787	0	0.002	0.024	0.05	0.022	7.601	46.725	0.006	0.001	0	51.491	0.001	0	0
63	1622.169	0	0.003	0.016	0.143	129.842	0.067	43.087	0.003	0.001	0	112.298	0.001	0.003	0
64	2534.081	0.03	7.295	633.699	6.738	0.001	0.007	0.538	9.27	4.731	0.168	0.003	0	0	0.008
66	1267.631	13.559	463.863	30.293	3.586	0.012	0	0	0.253	16.36	71.457	0.003	0.032	0.04	3.045
67	528.901	0	0.005	0.017	0.019	0.004	0	0	0	0.004	0.001	0	0.002	3.975	61.057
68	367.194	0	0	0	0	0	0	0	0	0	0	0	0	1.545	0.054
69	1091.762	0.59	0	29.079	0	0	0	0	0	0.125	0	0	0	10.007	1.402
70	2549.478	0.675	292.581	0	0	0	0	0.002	0.025	0.703	0	0	0	5.786	1.049
71	460.224	0.329	2.343	0.527	0	2.493	0	0	0	0	0	0.005	0	2.331	0.551
72	769.405	0.336	0.115	0.613	10.487	0	0	0	0	0	0	0.013	0	5.661	0.562
73	422.301	0	0.001	0.004	0	0	0	0	0	0	0	0	0	0.025	0
74	776.182	0	0.002	0.028	0	0	0	0	0	0	0	0	0	0.031	0
75	393.59	0	0.093	0.198	0	0	0	0	0	2.187	0	0	0	0	0.008
76	401.582	0	2.053	0.434	0	0	0	0	0	0	0.006	0	0.001	1.359	0.101
77	643.613	0	0	0	0	0	0	0	0	0.002	0	0	0	1.283	1.486
78	311.267	0	0	0	0.094	0.177	0.115	0	0	0	0.008	0	0	0.012	0.316
79	445.559	0	0.079	0.15	0	0	0.067	0	0	0.001	0	0	0	271.861	0.196
80	858.157	1.828	10.127	14.234	5.305	0.001	19.925	0.031	0	0.721	4.357	0.003	345.76	0	2.128
81	440.11	0.812	2.64	6.037	9.153	1.999	0	0	0	0.771	0.023	0.286	1.584	17.775	0.884

Zone	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
	Sum	93.006	94.979	178.04	153.941	596.236	119.997	197.424	138.795	300.889	646.701	503.724	229.165	242.231	231.579	225.16	897.103	471.824	135.862	586.872	541.441	
1	206.698	0	0.2979	0.8254	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	209.808	0.2979	0	1.652	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	178.985	0.0403	0.0818	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	67.455	0	0.0011	0	0	0	0	0.07728	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	917.841	0.0011	0.0034	0.0011	0.00896	0	0	3.84608	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	211.73	0	0	0	0	0	0	2.53232	0	0	0	0	0	0	0	0	0	0	0	0.00112	0.00112	0
7	377.093	0	0	0	0	0.3416	0.89712	0	0	0	0	0	0	0	0	0	0	0	0	0.00784	0.00448	0
8	378.343	0.0011	0.0011	0	0	0.0056	0	0	0	0.06832	11.1048	39.1686	0	0.0056	0.03248	0.01568	0	0	0	0.0056	0	0
9	238.551	0.0056	0.0101	0.0022	0	0.9296	0.06944	0.00112	0.05824	0	0	0.00224	0	0	0	0	0	0	0	0	0	0
10	653.816	0.0011	0.0011	0	0	0.04256	0.00224	0	0.00672	0	0	0.65856	0	0.00448	0.00336	0.00112	0	0	0	0	0.5992	0
11	220.635	0.0011	0.0011	0	0	0.00448	0	0	0.00896	0	0.0448	0	0	0.00224	0.00112	0	0	0	0	0.20048	0	0
12	1342.577	0	0	0	0	0	0	0.00112	0	0.00448	0	0	6.90704	7.18368	37.2165	0.34944	0.00112	0	0	0	0	0
13	478.651	0	0	0	0	0	0	0	0	0.00112	0	122.469	0	96.3558	19.5518	138.78	0.0056	0	0.00112	0	0	0
14	560.24	0	0	0	0	0	0	0	0.01456	0	0.056	0.00672	45.4384	41.5845	0	149.843	8.98352	0.08064	0	3.01504	0	0
15	366.765	0	0	0	0	0	0	0	0.00784	0	0.028	0.00336	1.01808	70.1154	0.89488	0	239.35	0.01344	0	0.0168	0	0
16	793.718	0	0	0	0	0	0	0	0	0	0	0.00112	104.092	0.00448	26.0355	0	102.29	7.50512	1.90064	0	0	0
17	627.563	0	0	0	0	0	0	0	0	0	0	0	0.01792	0	0	0.05152	0	0.00336	46.7141	0.3192	0	0
18	164.644	0	0	0	0	0	0	0	0	0	0	0	0.54096	0.00336	0.02688	23.9142	47.5451	0	0.00448	0	0	0
19	75.575	0	0	0	0	0	0	0	0	0	0	0	0.00224	0	0	0.0392	2.87616	0	0	0.00224	0	0
20	975.367	0	0	0	0	0.00224	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
21	34.864	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.10864	0
22	528.384	0	0	0	0.00112	0.02576	0	0.00336	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	841.873	0	0	0	0.00448	0.17248	0	0.01568	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	783.537	0	0	0	0	0.0112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	400.18	0	0	0	0	0.0112	0	0.00224	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	87.017	0	0	0	0	0.00336	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	574.587	0	0	0	0.00224	0.05376	0	0.01008	0	0	0	0	0	0	0	0	0	0	0	0	0.27552	0
28	122.466	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.06384	0
29	211.825	0	0	0	0	0.01008	0	0.00224	0	0	0	0	0	0	0	0	0	0	0	0	0.03472	0
30	220.798	0	0	0	0	0.00336	0	0.00672	0	0	0	0	0	0	0	0	0	0	0	0	0.08512	0
31	756.114	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01232	0
32	573.81	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00672	0	0.03024	0	0	0
33	538.246	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00896	0	0.2968	0	0	0
34	97.468	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00112	0	0.00112	0	0	0
35	809.155	0	0	0	0	0.00112	0.00448	0.00112	0.12096	0	5.7792	1.0864	0	0	0	0	0.00896	58.1123	0.00112	0	0	0
36	17.76	0	0	0	0	0.00112	0	0	0	0.00336	0.00112	0	0	0	0	0	0	0	0	0	0	0
37	495.652	0	0	0	0	0.0056	0	0.00448	0.00672	0	0.02576	0.00336	0	0	0	0	0.2352	0	1.18944	0	0	0
38	344.83	0	0	0	0	0	0	0	0.01232	0	0.0448	0.0056	0	0	0	0	0.00112	0	0.00112	0	0	0
39	43.903	0	0	0	0	0	0	0	0	0.00112	0	0	0	0	0	0	0	0	0.00112	0	0	0
40	118.426	0	0	0	0	0.00112	0.0168	0	0	0	0	0	0	0	0	0	0.04704	0	0.86128	0	0	0
49	262.752	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	3530.794	11.072	11.072	30.66	79.8123	0.00112	0	73.883	10.8382	127.415	80.2682	174.749	0.18368	0.00112	42.1915	3.37232	0.18144	0	0	0.00448	0.00224	0
51	3313.78	6.4882	6.4882	17.968	41.3728	0	0	38.2995	4.02304	47.2965	29.7954	64.867	0.00784	0.00224	17.2245	1.37648	0.07392	0	0	0.00112	0.00112	0
52	2552.178	3.6389	3.6389	10.077	35.7011	0	0	33.049	4.38032	51.4898	32.4363	70.6171	0.00448	0.00112	9.46288	0.756	0.04032	0	0	0.00112	0.00112	0
53	701.255	10.392	10.392	76.287	6.132	0	0	1.41904	0.1848	2.17728	1.372	2.98592	0.00112	0	1.40448	0.112	0.0056	0	0	0	0	0

Zone	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
	Sum	93.006	94.979	178.04	153.941	596.236	119.997	197.424	138.795	300.889	646.701	503.724	229.165	242.231	231.579	225.16	897.103	471.824	135.862	586.872	541.441
54	2345.914	7.7172	7.7172	2.137	0.63806	143.147	20.3424	5.85547	0.09173	0.33264	6.70219	0.45562	0.3276	0.03226	0.20966	0.01714	0.00101	0	0	1.61078	2.02709
55	1748.273	1.292	1.292	0.3573	0.1101	262.385	21.4112	0.93397	0.67211	0.03696	7.34037	12.5621	23.5754	2.34438	15.0548	1.20366	0.06507	0.01008	0	139.957	242.865
56	1265.049	11.272	12.433	3.4429	0.92064	10.1326	0.00784	1.4616	15.1312	0	55.953	6.32352	56.2834	6.9048	1.17152	3.54368	30.3072	69.8163	0	0.01008	0.01008
57	1523.337	0	0	0	0	0	0	0	0	0	0	0	0	0.028	0	0.00112	1.80208	282.395	0.06496	0.09632	0.09184
58	3122.567	4.8363	5.4159	1.5001	0.38636	9.36024	0.75398	5.76083	6.68138	0	24.705	2.7922	0.00099	0.15277	0	0	2.3822	0.00986	0	0.06702	96.8786
59	2956.682	36.609	36.688	10.159	3.17524	77.8934	6.35802	11.0134	57.1485	0	211.325	23.8828	0.00685	1.38835	0.00224	0.00336	21.6922	0.09206	0	0.64866	103.754
60	1238.15	0	0	0	0	0.07616	6.11744	0.00224	0.12208	0	1.89392	0.98448	0.00112	0.05488	5.5608	0.00112	0.12096	0.0112	0	0.03024	59.5414
61	2368.906	0	0	0	0	0.07504	5.99312	0.00224	0.85344	0	54.9976	22.7685	0.14896	32.5002	0.56224	0.084	485.671	2.39344	0	16.5592	83.9451
62	1249.787	0	0	0	0	0.03248	5.25952	0.00224	0.10528	0	1.63296	0.84896	0	0.12992	0.08176	0.75824	3.99504	5.76688	0	4.536	11.5259
63	1622.169	0	0	0	0	0.0392	3.12032	0.00112	0.06496	0.00224	169.105	73.8214	3.38912	3.44512	54.9147	7.41776	31.836	0.7336	0.028	99.9645	0.05488
64	2534.081	0.0235	0.0235	0.0067	0.00448	68.0198	49.373	14.0974	46.1395	85.3518	1.55232	32.6626	0.6608	0	0.00112	0.01904	0.0336	0.00448	0	0.03808	0.00224
66	1267.631	6.4008	6.4008	2.6141	0.1008	0.39424	6.8712	18.0701	3.21328	14.9834	3.13824	18.1821	0.12544	0	0.02016	0.09072	0.01568	0	0	0.00224	0.00112
67	528.901	0	0	0	0.00112	0	0	0.00224	0	0.00224	0.00112	0.00224	0	0	0.0056	0	0	0	0	0	0
68	367.194	0.0302	0.0594	34.772	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
69	1091.762	0.0997	0.1994	0.0952	0.8008	0.00112	0	2.59952	0	0	0	0	0	0	0	0	0	0	0	0	0
70	2549.478	0.1075	0.2128	0.0594	0.23856	89.1688	6.47696	3.92448	0	0	0	0	0	0	0	0	0	0	0	0.0504	0.36288
71	460.224	0.0515	0.1042	0.0291	0.00112	2.84144	0.20272	0.01232	1.89056	0	8.31152	1.49184	0.11984	0.02576	0.168	0.01344	0	0	0	0.12768	0
72	769.405	0.0526	0.1064	0.0291	0.00112	0.04032	0	0.00224	0.60704	0	2.87392	1.48288	2.1224	0.48944	2.2288	0.25088	0.04368	0.00784	0	7.13888	0
73	422.301	0	0	0	0	0.00112	0.00112	0	0	0	0	0	0	0	0	0	0	0	0	0	0.74032
74	776.182	0	0	0	0	0.00448	0.31136	0.00112	0	0	0	0	0	0	0	0	0	13.3683	86.4517	331.575	0
75	393.59	0	0	0	0	0.153	0.549	0.006	0	0	0	0	0	0	0	0	0	0	0	0	0
76	401.582	0	0	0	0.00112	0	0	0.05712	0	0	0	0	0	0	0.00224	0.00112	0	0	0	0	0
77	643.613	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	311.267	0	0	0	0	0	0	0	0.005	0	0.017	0.002	0.68	0.415	0.543	0.131	12.539	0.634	0	0.002	0
79	445.559	0	0	0	0	0.00336	0	0.00448	0	0	0	0	0	0	0	0	0	0	0	0	0
80	858.157	1.4493	1.4493	0.401	0.09856	2.37104	0.1904	1.46608	2.39344	0	8.84912	1.00016	0	0.0616	0	0	0.95984	0.00336	0	0.02688	3.7016
81	440.11	2.2848	2.2848	6.328	2.9008	0	0	2.68464	0.6664	7.84	4.9392	10.752	0.01792	0	4.01408	0.32032	0.0168	0	0	0	0

Zone	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40		
	Sum	401.396	208.239	1151.89	180.385	147.594	66.338	199.585	9.048	7.469	328.75	675.78	242.699	497.97	37.503	124.807	4.151	222.858	955.849	422.245	491.46	
1	206.698	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2	209.808	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	178.985	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	67.455	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	917.841	0.01232	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	211.73	0.00336	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	377.093	0.0336	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	378.343	0	0	0.0112	0	0.01008	0.0011	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3.3186
9	238.551	0	0	0.0112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5.217
10	653.816	0	0.00224	81.3546	1.56016	0.00112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	135.54
11	220.635	0	0.00112	4.0152	0.43008	0.00112	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.1758
12	1342.577	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	478.651	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	560.24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	366.765	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	793.718	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	627.563	3.14496	0.13552	46.1115	0.35728	0.53088	0.4558	0	0	0	0	0.58352	7.68768	0.4928	0	0	0	0	0	0	0	0
18	164.644	0	0.00112	0.00784	0	0	0	0	0	0	0	0.03696	1.70128	0.00672	0	0	0	0	0	0	0	0
19	75.575	0.00112	0.00112	0.61376	0.01232	0.00224	0	0	0	0	0	0.42	3.20992	0.00784	0	0	0	0	0	0	0	0
20	975.367	5.67952	1.48288	5.6952	0.86688	0.02352	0.0045	0.44016	0	0	0.03584	0.02352	0	0	0	0	0	0	0	0	0	0
21	34.864	0	0.00896	0.37408	0.12992	0	0	0.00224	0.0011	0	0.00112	0	0	0	0	0	0	0	0	0	0	0
22	528.384	0	0	366.558	27.58112	15.4538	0.047	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	841.873	0	101.238	0	120.6475	29.951	46.387	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	783.537	0	1.03152	194.215	0	0.00112	0.0022	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25	400.18	0	0.50288	1.85136	8.62176	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
26	87.017	0	0.3136	0.13776	0.42672	0.00224	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
27	574.587	0.00224	0	0	0	0	0	0.6485	0.3136	9.46848	0.1232	0	0	0	0	0	0	0	0	0	0	0
28	122.466	0.01568	0	0	0	0	0.00448	0	0.14	0.49504	0.89488	0	0	0	0	0	0	0	0	0	0	0
29	211.825	0.08736	0	0	0	0	29.9186	0.3606	0	1.4728	1.62848	0	0	0	0	0	0	0	0	0	0	0
30	220.798	0.2128	0	0	0	0	0.3808	2.6488	0.6272	0	0.26544	0	0	0	0	0	0	0	0	0	0	0
31	756.114	0	0	0	0	0	0	0	0.0974	10.2894	0	0	0	0	0	0	0	0	0	0	0	0
32	573.81	0	0	0	0	0	0	0	0	0	0	0	5.54176	15.2141	0	0	0	0	0	0	0	0
33	538.246	0	0	0	0	0	0	0	0	0	0	6.13872	0	0.8288	0	0	0	0	0	0	0	0
34	97.468	0	0	0	0	0	0	0	0	0	0	0.88368	8.10432	0	0	0	0	0	0	0	0	0
35	809.155	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1.9477	21.635	169.462	62.823	0	0	0
36	17.76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.03808	0.33264	0.15792	0	0	0
37	495.652	0	0	0	0	0	0	0	0	0	0	0	0	0	1.07296	0.1154	0	0.97552	0.84336	0	0	0
38	344.83	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00112	0	0.00336	0	0.04928	0	0	0
39	43.903	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00112	0	0.00224	0.01344	0	0	0	0
40	118.426	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
49	262.752	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
50	3530.794	11.4117	0	0	0	32.3019	12.318	0.53424	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51	3313.78	4.81488	0	0	0	11.564	4.4094	0.17248	0	0	0	0	0	0	0	0	0	0	0	0	0	0
52	2552.178	2.87504	0	0	0	7.41216	2.8269	0.1792	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53	701.255	0.28336	0	0	0	0.60704	0.2274	0.00784	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Zone		21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
	Sum	401.396	208.239	1151.89	180.385	147.594	66.338	199.585	9.048	7.469	328.75	675.78	242.699	497.97	37.503	124.807	4.151	222.858	955.849	422.245	491.46
54	2345.914	3.8556	1.56643	1.04026	0.019152	0.12499	0.0474	17.0019	0.0111	0.001	0.23688	0.07056	0.00504	0.00101	0	0.00302	0	0.01109	0.10382	0.0131	2.1561
55	1748.273	282.657	54.2174	7.82118	0.492688	8.64461	3.2958	163.783	0.0035	0.0147	0.07112	0.02128	0.01288	0.89275	3.2592	2.38594	0.0997	25.7086	175.036	24.6661	7.0234
56	1265.049	0.00224	0.01232	0.02464	0.00112	0	0	0.00224	0.0112	0	0.27216	0.17808	0.16128	65.3822	0.20048	0.03024	0.0336	6.37056	4.71072	241.871	10.793
57	1523.337	0.0224	0.15568	0.11088	0.0112	0.00112	0	0.00336	0.6474	0	10.7408	7.14672	256.714	318.932	0.17584	0.75936	0	0.00112	0	0	0
58	3122.567	74.0876	63.171	110.348	6.324595	2.34868	0.8959	9.64508	0.4987	0.065	54.9009	69.9668	5.19017	0.0276	0.00197	87.5459	1.4311	7.4876	20.3448	57.7374	0.2789
59	2956.682	10.3548	8.88191	261.497	30.91764	27.3996	0.1278	1.36676	4.7563	1.0382	189.597	11.7014	0.72903	0.26472	0.02043	47.0176	0.7943	84.386	231.341	60.6466	0.1198
60	1238.15	3.9088	0	1.09536	0.01344	0.36288	0.037	0.0056	0.0022	2.1605	27.8611	80.8013	0.20384	2.34864	7.02016	0.02352	0.0762	1.48064	16.2994	8.19616	46.288
61	2368.906	8.93872	0.00112	2.52	0.03248	0.87472	0.0907	0.01456	0.019	3.3499	26.9304	30.2086	0.33376	92.4112	9.00256	0.02128	0.0728	34.1835	426.157	7.78624	51.402
62	1249.787	3.20544	0.00336	43.6094	0.55104	2.22768	0.0347	0.01792	0.3315	0.5163	28.5555	553.702	0.3976	51.2008	5.76912	0.01904	0.0616	66.1472	18.4733	6.6696	38.94
63	1622.169	0.27664	0.00112	45.1629	0.54768	1.21856	0.0101	0.00224	0.0067	0.0011	0.15344	0.0448	0.01008	0.00784	0.00224	0.00224	0	0.0224	1.28912	0.1008	161.37
64	2534.081	0.0168	0	4.62336	0.05824	0.09072	0	0	0.0011	0	0.01568	0.00448	0.00112	0.00112	0	0	0	0.00224	0.19712	0.00112	5.4622
66	1267.631	0.04144	0	0	0	0.23632	0.0045	0.00224	0	0	0	0	0	0	0	0	0	0	0	0	0
67	528.901	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
68	367.194	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
69	1091.762	0.05488	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
70	2549.478	0.98896	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
71	460.224	0	0.10192	0.00672	0	0.01792	0.0034	0	0	0	0	0	0	0	0	0	0	0	0	0	50.348
72	769.405	0	0.30464	0.02912	0.03248	0.04256	0.0078	0	0	0	0	0	0	0	0	0	0	0	0	0	0.0314
73	422.301	32.4027	0.07728	63.4547	0.3696	18.6469	1.6117	0	0	0	0	0	0	0	0	0.00896	0.0011	0.00336	0.00896	0.01232	0
74	776.182	0	0	31.2682	0.24528	0.0168	0	0	0.0034	0	0.02464	0.00784	0	0	0	0	0	0	0	0	31.955
75	393.59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.01
76	401.582	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
77	643.613	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
78	311.267	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
79	445.559	0	0	0.3136	0.02464	0.00896	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
80	858.157	0.01008	0.01456	16.231	1.75616	1.372	0	0.00224	0.1826	0.0403	7.07728	0.084	0.00112	0.0112	0.00112	0.89152	0.0157	2.11792	5.8072	1.34064	0.0022
81	440.11	0.16128	0	0	0	3.808	1.4526	0.04816	0	0	0	0	0	0	0	0	0	0	0	0	0

Zone	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	66	67	
	Sum	336.434	3365.67	3306.555	3166.94	990.205	2937.124	1667.248	1248.38	1736.24	2842.406	3909.644	1336.67	2872.1	1555.88	2099.9	3571.789	1354.362	1039.91
54	2345.914	45.2501	0	0	0	17.6894	0	2.180304	0	0.07358	0.096687	0.090801	0.00302	0.38304	0	0.05645	1593.937	5.531904	72.829
55	1748.273	5.12635	0	0	0	3.27477	36.81418	4.33272	0.0336	7.35426	9.727773	9.163939	0.00146	0.16688	0.24416	32.5221	186.0641	2.163616	12.254
56	1265.049	0	0	0	0	65.6555	5.36256	29.54	0	0.00448	0.005914	0.000806	0.03024	1.37312	1.58592	99.7763	8.96	0.01232	96.4712
57	1523.337	0	0	0	0	0	0	0	0	0	0.078848	0.014112	1.10656	53.0914	688.651	26.7333	8.96	0	0
58	3122.567	0	0	0	0	32.6352	2.665555	14.68396	0	1.83716	0	8.91081	0.73427	1757.38	4.92603	0	7.8848	0.012813	41.1163
59	2956.682	0.00112	0	0	0	13.4248	4.846061	26.69578	0	0.35804	10.89778	2.701171	23.2292	244.714	2.53317	0	10.0352	0.104787	349.67
60	1238.15	0.01568	0	0	0	0	0.424368	0.057232	29.1637	125.752	743.7121	101.4153	0	30.0182	22.3731	0.04256	0	0	0
61	2368.906	0.0504	0	0	0	0	0.506016	0.898464	0.00112	111.441	802.7268	109.4639	0	0	164.774	0.04368	0	0	0
62	1249.787	0.01344	0	0	0	0	0.487872	0.066528	0.23408	254.549	46.36164	6.339962	0	117.936	0	0.03024	0	0	0
63	1622.169	0.00784	0	0	0	0	0.702576	0.492464	836.749	0.58128	0.18825	0.08839	0.00112	0.1064	0.02576	0	0	0	0
64	2534.081	81.5819	1.48736	1.08752	0	0.82992	1532.04	170.2289	0.00448	0.27104	0.01577	0.00775	0	0.00672	0.00224	0	0	0.08624	0.0448
66	1267.631	0.0168	207.949	108.1013	0	320.901	20.48861	2.413152	0.00336	0.73808	1.241856	2.027424	0	0	0	0	0.00784	0	0.1456
67	528.901	0	144.964	71.28128	0	45.0968	24.42082	5.998384	0.1568	24.136	37.78298	165.5497	0	0	0	0	0	0.07392	0
68	367.194	0	0.46032	0.34608	0.252	91.4424	25.23629	7.005152	0.20048	29.5198	45.00348	137.8175	0	0	0	0	0	37.3184	0.00336
69	1091.762	0	240.223	130.0734	164.532	27.4714	58.29163	14.06261	0.37744	60.0286	93.96119	379.4572	0	0	0	0	0.01456	4.14176	0.14
70	2549.478	2.8056	179.847	97.38176	123.18	26.693	81.7105	13.46486	0.22176	35.5365	55.42127	209.9179	0.00224	0	0	0.00784	1568.892	21.67312	0.15008
71	460.224	117.071	59.3891	32.2784	45.7442	9.16496	6.808032	3.119648	0.112	17.2973	26.83789	111.7397	0	0	0	0.504	8.96	0.89712	0.04928
72	769.405	0	60.5606	32.91568	46.6458	9.3464	9.034704	36.84498	10.1136	42.0056	65.17477	271.3505	0	0.00336	0.00336	230.866	8.96	0.0112	0.0504
73	422.301	0	0.02688	0.00672	0.01344	0.00224	1.808352	0.604128	0.03808	0.56896	70.24864	10.39808	92.5758	18.4005	151.927	0.02352	8.96	0.00112	0
74	776.182	0	0.00224	0.00112	0.00224	0	16.03123	2.939328	127.569	8.81776	0.92745	1.47495	166.845	1.92864	4.48896	33.9954	8.96	0.0392	0
75	393.59	0	5.928	3.401	5.157	0.627	52.273	0.018	0.001	0.193	0.019	0.011	0.001	0.021	0.01	0.002	11.943	310.781	0
76	401.582	0	84.812	47.42864	71.9107	8.848	109.9536	14.93195	0.09408	16.4136	26.71272	63.94792	0	0	0	0	0.01344	0.2016	0.01344
77	643.613	0	285.629	156.165	148.457	14.607	8.612352	2.151968	0.05712	8.81664	13.74912	61.55856	0	0	0	0	0	17.93792	0.00112
78	311.267	0	29.576	14.574	16.521	4.468	7.003	26.451	0.03	0.052	0.093	0.331	2.667	79.732	106.072	0	8	0	0.007
79	445.559	0	51.0709	7.40768	13.1622	2.05744	18.33955	61.24205	0	0.15904	20.07076	9.107482	1.87488	0.13888	0.03696	0	8.96	0.00112	0.0056
80	858.157	0	32.7779	35.06272	0	23.9053	13.08989	80.68547	0	0.20048	22.44605	216.1005	0.36176	0.12208	0.0056	0	8.96	0.00336	13.0838
81	440.11	0	33.6022	68.85312	33.6	27.9317	28.31069	7.756672	0.16688	36.1614	23.86828	120.3597	0	0	0	0	0	14.74928	0.04368

Zone	68	69	70	71	72	73	74	75	76	77	78	79	80	81	
	Sum	124.225	1305.12	1710.441	489.107	429.579	594.082	846.717	19.402	465.624	445.745	171.52	616.236	884.926	308.423
1	206.698	0.2968	0	0	0	0	8.30144	0	0	0	0	0	1.00912	1.5176	
2	209.808	0.5936	0	0	0	0	8.30144	0	0	0	0	0	1.00912	1.5176	
3	178.985	1.91072	0	0	0	0	8.30144	0	0	0	0	0	0.28224	0.2072	
4	67.455	0.00784	0.54208	0.7784	0	0	8.30144	0	0	0.00112	0	0	0.93744	0.01904	
5	917.841	0.0112	2.8336	34.34704	0	0	8.30144	0	0	0.0056	0	0	3.49776	0.1344	
6	211.73	0	0.02464	2.39008	0	0	8.30144	0.00112	0.043	0	0	0	0.0448	0	
7	377.093	0.00112	2.41808	7.93968	0	0	8.30144	0	0.331	0.02464	0	0	0.83328	0.00784	
8	378.343	0.00448	0.01568	0.0056	2.66112	0.32928	8.30144	0	0	0	0	0.001	6.01328	0.05488	
9	238.551	0.03696	0.37632	0.06608	0	0	8.30144	0	0	0	0	0	0	0.48496	
10	653.816	0.00448	0.02688	0.00784	0.19712	0.0784	8.30144	0	0	0	0	0	0.5376	0.056	
11	220.635	0.0056	0.0056	0.01008	0.20944	0.03696	8.30144	0	0	0	0	0	0.63728	0.0728	
12	1342.577	0	0	0	0.0224	5.72096	8.30144	0	0	0	0.00224	0	0	0.07616	
13	478.651	0	0	0	0.00672	2.97136	8.30144	0	0	0	0.00112	0	0	0.0112	
14	560.24	0	0	0	0.30128	7.4256	8.30144	0	0	0	0.02576	0	0.01344	2.82576	0.45808
15	366.765	0	0	0	0.14896	0.1512	8.30144	0	0	0	0.01232	0	0.00112	0.16688	0.22624
16	793.718	0	0	0	0	0	8.30144	0	0	0	0	0	0.03248	9.78992	0
17	627.563	0	0.00896	0.15232	0	0	8.30144	23.044	0	0	0	0	0	3.35664	0.0952
18	164.644	0	0	0	0	0	8.30144	64.4672	0	0	0	0	0	0.00224	0
19	75.575	0	0	0	0	0	8.30144	3.18752	0	0	0	0	0	0.028	0
20	975.367	0	0.01904	0.084	0	0	22.9779	0	0	0.00224	0.00784	0	0.0224	16.5872	0.1176
21	34.864	0	0.00112	0.00448	0	0	6.8824	0	0	0	0	0	0	0.12208	0.00784
22	528.384	0	0.14	0.5712	0	0	8.30144	0	0	0.00112	0	0	0	0.07056	1.14464
23	841.873	0	0.78736	2.94336	0	0	0	0	0	0.00896	0	0	0	9.90304	2.93776
24	783.537	0	0.03136	0.08064	0	0	0	0	0	0	0	0	0	28.4077	0.12768
25	400.18	0	0.08288	0.36624	0	0	0	0	0	0.00112	0	0	0	6.64048	1.45712
26	87.017	0	0.01904	0.07728	0	0	0	0	0	0	0	0	0	0.01008	0.62272
27	574.587	0	0.37856	1.66992	0	0	12.9998	0	0	0.00672	0	0	0	4.8944	2.61744
28	122.466	0	0	0.00112	0	0	0.0056	0	0	0	0	0	0	0	0
29	211.825	0	0.07056	0.30912	0	0	8.30144	0	0	0.00112	0	0	0	2.5704	0.48496
30	220.798	0	0.01904	0.79968	0	0	8.30144	0	0	0	0	0	0	0.87696	0.03136
31	756.114	0	0	0	0	0	8.30144	0	0	0	0	0	0	0	0
32	573.81	0	0	0	0	0	8.30144	0	0	0	0	0	0	0.80976	0.01232
33	538.246	0	0	0	0	0	8.30144	0	0	0	0	0	0	0.21728	2.97584
34	97.468	0	0	0	0	0	8.30144	0	0	0	0	0	0	0	0.00112
35	809.155	0	0.00112	0.05824	3.16512	120.819	8.30144	1.00016	0	0	0	0	0	0	0
36	17.76	0	0.00112	0.00112	0.00336	0.2184	8.30144	0	0	0	0	0	0	0	0
37	495.652	0	0.1008	0.16688	0.13776	4.6424	8.30144	0.13328	0	0	0	0	0	0.22736	0.72688
38	344.83	0	0	0.00336	0.23968	1.41456	8.30144	0.01008	0	0	0	0	0	0.03136	0
39	43.903	0	0	0	0	0.29568	8.30144	0.00448	0	0	0	0	0	0	0
40	118.426	0	0	0.00336	0	0	8.30144	2.73056	0	0	0	0	0	0.03136	0
49	262.752	0	0	0	0	0	8.30144	0	0.054	0.01232	0	0	0.00112	0.12992	0.00112
50	3530.794	4.4072	81.3534	186.0555	166.608	36.391	8.30144	0	0	144.422	6.93952	3.003	158.605	132.345	32.5774
51	3313.78	2.58272	42.1725	96.44768	61.8442	13.5083	8.30144	0	0	73.2838	3.44176	1.226	33.0523	135.657	60.9616
52	2552.178	1.44816	36.3899	83.22384	67.3277	14.7056	8.30144	0	0	64.3754	44.044	0.674	33.0725	0	121.39
53	701.255	9.97584	1.78192	4.26832	3.71504	0.81088	8.30144	0	0	3.08112	71.783	0.09	1.21856	14.5029	4.88768

Zone	68	69	70	71	72	73	74	75	76	77	78	79	80	81	
	Sum	124.225	1305.12	1710.441	489.107	429.579	594.082	846.717	19.402	465.624	445.745	171.52	616.236	884.926	308.423
54	2345.914	10.9025	166.476	34.902	0.55944	0.09475	7.4713	1.32048	9.189	128.783	35.663	0.017	0.74189	0.59674	4.13784
55	1748.273	1.82515	43.9516	9.28648	1.54616	5.90733	9.13158	190.491	0.214	33.1958	6.21488	1.07	45.2431	67.9607	0.76552
56	1265.049	22.5075	16.6802	142.604	39.1126	114.451	8.30144	88.8362	0	4.71632	50.4739	0	0	0.00112	5.21024
57	1523.337	0	0	0	0	0	8.30144	39.2907	0	0	0	0	0.00336	0.0056	0
58	3122.567	10.1063	43.871	61.1141	17.3535	0.00197	7.30527	274.037	0	3.4427	20.9065	0.007	13.1863	18.2099	1.29508
59	2956.682	52.1657	146.192	443.6912	141.979	0.01595	243.159	38.4753	0.001	37.4496	174.576	0.058	15.9236	159.04	14.414
60	1238.15	0	0.0056	0.03248	0.06384	0.336	0.06832	60.5315	0.007	0.00224	0	0.002	0	0	0
61	2368.906	0	0.0056	0.03584	0.75376	0.10528	0.4984	59.5336	0.006	0.00224	0	1.27	0	0	0
62	1249.787	0	0.00224	0.02688	0.056	0.02464	8.51312	52.332	0.006	0.00112	0	51.491	0.00112	0	0
63	1622.169	0	0.00336	0.01792	0.16016	145.423	0.07504	48.2574	0.003	0.00112	0	112.298	0.00112	0.00336	0
64	2534.081	0.0336	8.1704	709.7429	7.54656	0.00112	0.00784	0.60256	9.27	5.29872	0.18816	0.003	0	0	0.00896
66	1267.631	15.1861	519.527	33.92816	4.01632	0.01344	0	0	0.253	18.3232	80.0318	0.003	0.03584	0.0448	3.4104
67	528.901	0	0.0056	0.01904	0.02128	0.00448	0	0	0	0.00448	0.00112	0	0.00224	4.452	68.3838
68	367.194	0	0	0	0	0	0	0	0	0	0	0	0	1.7304	0.06048
69	1091.762	0.6608	0	32.56848	0	0	0	0	0	0.14	0	0	0	11.2078	1.57024
70	2549.478	0.756	327.691	0	0	0	0	0.00224	0.025	0.78736	0	0	0	6.48032	1.17488
71	460.224	0.36848	2.62416	0.59024	0	2.79216	0	0	0	0	0	0.005	0	2.61072	0.61712
72	769.405	0.37632	0.1288	0.68656	11.7454	0	0	0	0	0	0	0.013	0	6.34032	0.62944
73	422.301	0	0.00112	0.00448	0	0	0	0	0	0	0	0	0	0.028	0
74	776.182	0	0.00224	0.03136	0	0	0	0	0	0	0	0	0	0.03472	0
75	393.59	0	0.093	0.198	0	0	0	0	0	2.187	0	0	0	0	0.008
76	401.582	0	2.29936	0.48608	0	0	0	0	0	0	0.00672	0	0.00112	1.52208	0.11312
77	643.613	0	0	0	0	0	0	0	0	0.00224	0	0	0	1.43696	1.66432
78	311.267	0	0	0	0.094	0.177	0.115	0	0	0	0.00896	0	0	0.01344	0.35392
79	445.559	0	0.08848	0.168	0	0	0.07504	0	0	0.00112	0	0	0	304.484	0.21952
80	858.157	2.04736	11.3422	15.94208	5.9416	0.00112	22.316	0.03472	0	0.80752	4.87984	0.003	387.251	0	2.38336
81	440.11	0.90944	2.9568	6.76144	10.2514	2.23888	0	0	0	0.86352	0.02576	0.286	1.77408	19.908	0.99008

Appendix E: Signal Warrant Analyses

Appendix F: Scenario 1 Capacity Analysis

Lanes, Volumes, Timings
1: William St & Marion St

Existing Network - 2014 AM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↕		↖	↕			↕	↗
Volume (vph)	0	0	0	17	34	37	0	93	0	0	343	24
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type				Perm	NA		Perm	NA			NA	Perm
Protected Phases					4			2			6	
Permitted Phases				4			2					6
Detector Phase				4	4		2	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	5.0
Minimum Split (s)				29.2	29.2		26.2	26.2			26.2	26.2
Total Split (s)				29.6	29.6		50.4	50.4			50.4	50.4
Total Split (%)				37.0%	37.0%		63.0%	63.0%			63.0%	63.0%
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	3.2
All-Red Time (s)				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)				5.2	5.2		5.2	5.2			5.2	5.2
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode				None	None		C-Max	C-Max			C-Max	C-Max

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 60 (75%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 1: William St & Marion St



HCM 2010 Signalized Intersection Summary
 1: William St & Marion St

Existing Network - 2014 AM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	17	34	37	0	93	0	0	343	24
Number				7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1900	1827	1976	1792	1792	0	0	1792	1792
Adj Flow Rate, veh/h				19	38	13	0	104	0	0	385	14
Adj No. of Lanes				1	2	0	1	1	0	0	1	1
Peak Hour Factor				0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %				4	4	4	6	6	0	0	6	6
Cap, veh/h				89	127	41	90	1471	0	0	1471	1250
Arrive On Green				0.05	0.05	0.05	0.00	1.00	0.00	0.00	0.82	0.82
Sat Flow, veh/h				1810	2576	838	945	1792	0	0	1792	1524
Grp Volume(v), veh/h				19	25	26	0	104	0	0	385	14
Grp Sat Flow(s),veh/h/ln				1810	1736	1679	945	1792	0	0	1792	1524
Q Serve(g_s), s				0.8	1.1	1.2	0.0	0.0	0.0	0.0	3.9	0.1
Cycle Q Clear(g_c), s				0.8	1.1	1.2	0.0	0.0	0.0	0.0	3.9	0.1
Prop In Lane				1.00		0.50	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				89	86	83	90	1471	0	0	1471	1250
V/C Ratio(X)				0.21	0.29	0.31	0.00	0.07	0.00	0.00	0.26	0.01
Avail Cap(c_a), veh/h				552	529	512	90	1471	0	0	1471	1250
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				36.5	36.7	36.7	0.0	0.0	0.0	0.0	1.6	1.3
Incr Delay (d2), s/veh				0.4	0.7	0.8	0.0	0.1	0.0	0.0	0.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				0.7	1.0	1.0	0.0	0.1	0.0	0.0	3.8	0.1
LnGrp Delay(d),s/veh				37.0	37.4	37.5	0.0	0.1	0.0	0.0	2.1	1.3
LnGrp LOS				D	D	D		A			A	A
Approach Vol, veh/h					70			104			399	
Approach Delay, s/veh					37.3			0.1			2.0	
Approach LOS					D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		70.9		9.1		70.9						
Change Period (Y+Rc), s		* 5.2		* 5.2		* 5.2						
Max Green Setting (Gmax), s		* 45		* 24		* 45						
Max Q Clear Time (g_c+I1), s		2.0		3.2		5.9						
Green Ext Time (p_c), s		0.6		0.0		0.6						
Intersection Summary												
HCM 2010 Ctrl Delay				6.0								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
2: William St & Madison St

Existing Network - 2014 AM
2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↑	↗	↘	↑	
Volume (vph)	36	44	2	0	0	0	0	60	5	28	334	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type	Perm	NA						NA	Perm	Perm	NA	
Protected Phases		8						2			6	
Permitted Phases	8								2	6		
Minimum Split (s)	26.2	26.2						24.2	24.2	24.2	24.2	
Total Split (s)	29.6	29.6						50.4	50.4	50.4	50.4	
Total Split (%)	37.0%	37.0%						63.0%	63.0%	63.0%	63.0%	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	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	
Total Lost Time (s)		5.2						5.2	5.2	5.2	5.2	
Lead/Lag												
Lead-Lag Optimize?												

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 72 (90%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 2: William St & Madison St



HCM 2010 Signalized Intersection Summary
 2: William St & Madison St

Existing Network - 2014 AM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	36	44	2	0	0	0	0	60	5	28	334	0
Number	3	8	18				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1776	1900				0	1792	1792	1792	1792	0
Adj Flow Rate, veh/h	42	52	1				0	71	1	33	393	0
Adj No. of Lanes	0	2	0				0	1	1	1	1	0
Peak Hour Factor	0.85	0.85	0.85				0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	7	0				0	6	6	6	6	0
Cap, veh/h	440	607	12				0	1013	861	786	1013	0
Arrive On Green	0.30	0.30	0.30				0.00	0.56	0.56	1.00	1.00	0.00
Sat Flow, veh/h	1443	1990	39				0	1792	1524	1273	1792	0
Grp Volume(v), veh/h	50	0	45				0	71	1	33	393	0
Grp Sat Flow(s),veh/h/ln	1704	0	1769				0	1792	1524	1273	1792	0
Q Serve(g_s), s	1.7	0.0	1.5				0.0	1.4	0.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	1.7	0.0	1.5				0.0	1.4	0.0	1.5	0.0	0.0
Prop In Lane	0.85		0.02				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	520	0	539				0	1013	861	786	1013	0
V/C Ratio(X)	0.10	0.00	0.08				0.00	0.07	0.00	0.04	0.39	0.00
Avail Cap(c_a), veh/h	520	0	539				0	1013	861	786	1013	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.9	0.0	19.8				0.0	7.9	7.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.3				0.0	0.1	0.0	0.1	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.0	1.4				0.0	1.3	0.0	0.1	0.6	0.0
LnGrp Delay(d),s/veh	20.3	0.0	20.1				0.0	8.0	7.6	0.1	1.1	0.0
LnGrp LOS	C		C					A	A	A	A	
Approach Vol, veh/h		95						72			426	
Approach Delay, s/veh		20.2						8.0			1.0	
Approach LOS		C						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		50.4				50.4		29.6				
Change Period (Y+Rc), s		* 5.2				* 5.2		5.2				
Max Green Setting (Gmax), s		* 45				* 45		24.4				
Max Q Clear Time (g_c+I1), s		3.4				3.5		3.7				
Green Ext Time (p_c), s		0.5				0.5		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			5.0									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 3: William St & Washington St

Existing Network - 2014 AM
 2/25/2015



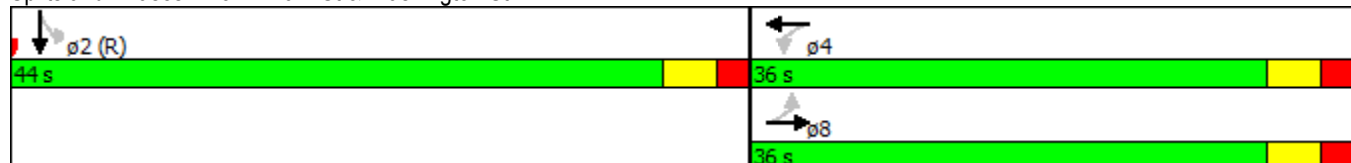
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗						↕	↕
Volume (vph)	21	69	39	29	80	8	0	0	0	41	280	29
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	6%	6%	6%	6%	6%	6%
Parking (#/hr)												5
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		8			4							2
Permitted Phases	8			4						2		
Minimum Split (s)	21.2	21.2		24.2	24.2					25.2	25.2	
Total Split (s)	36.0	36.0		36.0	36.0					44.0	44.0	
Total Split (%)	45.0%	45.0%		45.0%	45.0%					55.0%	55.0%	
Yellow Time (s)	3.2	3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)	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
Total Lost Time (s)	5.2	5.2		5.2	5.2							5.2

Lead/Lag
 Lead-Lag Optimize?

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 43.2 (54%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 3: William St & Washington St



HCM 2010 Signalized Intersection Summary
 3: William St & Washington St

Existing Network - 2014 AM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	21	69	39	29	80	8	0	0	0	41	280	29
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1776	1776	1900	1776	1776	1900				1900	1864	1900
Adj Flow Rate, veh/h	27	87	19	37	101	4				52	354	27
Adj No. of Lanes	1	1	0	1	1	0				0	2	0
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79				0.79	0.79	0.79
Percent Heavy Veh, %	7	7	7	7	7	7				0	6	0
Cap, veh/h	496	544	119	511	653	26				192	1365	109
Arrive On Green	0.38	0.38	0.38	0.13	0.13	0.13				0.97	0.97	0.97
Sat Flow, veh/h	1224	1413	309	1223	1697	67				396	2815	225
Grp Volume(v), veh/h	27	0	106	37	0	105				242	0	191
Grp Sat Flow(s),veh/h/ln	1224	0	1721	1223	0	1764				1844	0	1591
Q Serve(g_s), s	1.2	0.0	3.2	2.2	0.0	4.2				0.4	0.0	0.4
Cycle Q Clear(g_c), s	5.4	0.0	3.2	5.4	0.0	4.2				0.4	0.0	0.4
Prop In Lane	1.00		0.18	1.00		0.04				0.21		0.14
Lane Grp Cap(c), veh/h	496	0	663	511	0	679				895	0	772
V/C Ratio(X)	0.05	0.00	0.16	0.07	0.00	0.15				0.27	0.00	0.25
Avail Cap(c_a), veh/h	496	0	663	511	0	679				895	0	772
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33				2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	18.3	0.0	16.1	25.3	0.0	23.3				0.6	0.0	0.6
Incr Delay (d2), s/veh	0.2	0.0	0.5	0.3	0.0	0.5				0.7	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	0.0	2.9	1.4	0.0	3.9				0.6	0.0	0.5
LnGrp Delay(d),s/veh	18.5	0.0	16.6	25.5	0.0	23.8				1.4	0.0	1.4
LnGrp LOS	B		B	C		C				A		A
Approach Vol, veh/h		133			142						433	
Approach Delay, s/veh		17.0			24.3						1.4	
Approach LOS		B			C						A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		44.0		36.0				36.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 39		* 31				* 31				
Max Q Clear Time (g_c+I1), s		2.4		7.4				7.4				
Green Ext Time (p_c), s		0.5		0.2				0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			8.9									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
4: William St & Western Ave

Existing Network - 2014 AM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑		↑		↑	↑	↑	
Volume (vph)	0	467	0	0	234	0	0	0	1	198	0	36
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type		NA			NA		Perm		Prot	Perm		NA
Protected Phases		8			4				2			6
Permitted Phases				4			2			6		
Minimum Split (s)		24.2		24.2	24.2		9.2		9.2	25.2		25.2
Total Split (s)		48.0		48.0	48.0		32.0		32.0	32.0		32.0
Total Split (%)		60.0%		60.0%	60.0%		40.0%		40.0%	40.0%		40.0%
Yellow Time (s)		3.2		3.2	3.2		3.2		3.2	3.2		3.2
All-Red Time (s)		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)		5.2			5.2		5.2		5.2	5.2		5.2

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

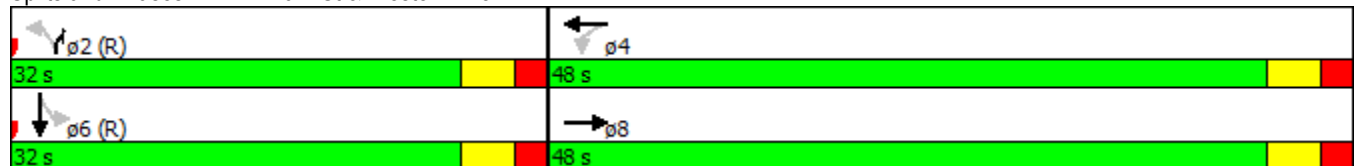
Actuated Cycle Length: 80

Offset: 79.2 (99%), Referenced to phase 2:NBL and 6:SBTL, Start of Green

Natural Cycle: 50






















Control Type: Pretimed

Splits and Phases: 4: William St & Western Ave



HCM 2010 Signalized Intersection Summary
4: William St & Western Ave

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Volume (veh/h)	0	467	0	0	234	0	0	0	1	198	0	36
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1792	1976	1900	1792	0	1792	0	1864	1864	1864	1976
Adj Flow Rate, veh/h	0	543	0	0	272	0	0	0	1	230	0	42
Adj No. of Lanes	0	2	0	0	2	0	1	0	1	1	1	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	6	6	6	6	0	6	0	6	6	6	6
Cap, veh/h	0	1822	0	0	1822	0	0	0	0	563	0	531
Arrive On Green	0.00	0.54	0.00	0.00	0.18	0.00	0.00	0.00	0.00	0.34	0.00	0.34
Sat Flow, veh/h	0	3585	0	0	3585	0		0		1412	0	1585
Grp Volume(v), veh/h	0	543	0	0	272	0		0.0		230	0	42
Grp Sat Flow(s),veh/h/ln	0	1703	0	0	1703	0				1412	0	1585
Q Serve(g_s), s	0.0	7.1	0.0	0.0	5.4	0.0				10.4	0.0	1.4
Cycle Q Clear(g_c), s	0.0	7.1	0.0	0.0	5.4	0.0				10.4	0.0	1.4
Prop In Lane	0.00		0.00	0.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1822	0	0	1822	0				563	0	531
V/C Ratio(X)	0.00	0.30	0.00	0.00	0.15	0.00				0.41	0.00	0.08
Avail Cap(c_a), veh/h	0	1822	0	0	1822	0				563	0	531
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	0.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.3	0.0	0.0	17.5	0.0				21.1	0.0	18.2
Incr Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.2	0.0				2.2	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	6.2	0.0	0.0	4.7	0.0				7.8	0.0	1.2
LnGrp Delay(d),s/veh	0.0	10.7	0.0	0.0	17.7	0.0				23.3	0.0	18.5
LnGrp LOS		B			B					C		B
Approach Vol, veh/h		543			272							272
Approach Delay, s/veh		10.7			17.7							22.6
Approach LOS		B			B							C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				48.0		32.0		48.0				
Change Period (Y+Rc), s				* 5.2		* 5.2		* 5.2				
Max Green Setting (Gmax), s				* 43		* 27		* 43				
Max Q Clear Time (g_c+I1), s				7.4		12.4		9.1				
Green Ext Time (p_c), s				1.4		0.1		1.4				
Intersection Summary												
HCM 2010 Ctrl Delay				15.4								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
5: Lafayette Blvd & Marion St

Existing Network - 2014 AM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					↔↔↔			↔↔			↔	
Volume (vph)	0	0	0	0	33	16	34	127	0	0	80	34
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	9%	9%	9%	9%	9%	9%
Parking (#/hr)				5	5	5					5	5
Shared Lane Traffic (%)												
Turn Type					NA		Perm	NA			NA	
Protected Phases					8			2				6
Permitted Phases				8			2					
Minimum Split (s)				20.0	20.0		24.0	24.0				24.0
Total Split (s)				28.0	28.0		52.0	52.0				52.0
Total Split (%)				35.0%	35.0%		65.0%	65.0%				65.0%
Yellow Time (s)				3.5	3.5		3.2	3.2				3.2
All-Red Time (s)				0.5	0.5		1.8	1.8				1.8
Lost Time Adjust (s)					0.0			0.0				0.0
Total Lost Time (s)					4.0			5.0				5.0
Lead/Lag												
Lead-Lag Optimize?												

Intersection Summary
















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed

Splits and Phases: 5: Lafayette Blvd & Marion St



HCM 2010 Signalized Intersection Summary
5: Lafayette Blvd & Marion St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	33	16	34	127	0	0	80	34
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	0.94	0.88	1.00	1.00	1.00	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln				1710	1644	1710	1710	1569	0	0	1569	1710
Adj Flow Rate, veh/h				0	38	5	39	146	0	0	92	24
Adj No. of Lanes				0	3	0	0	2	0	0	1	0
Peak Hour Factor				0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %				0	4	0	9	9	0	0	9	9
Cap, veh/h				0	1109	140	353	1291	0	0	617	161
Arrive On Green				0.00	0.30	0.30	0.60	0.59	0.00	0.00	0.59	0.59
Sat Flow, veh/h				0	3779	466	493	2269	0	0	1050	274
Grp Volume(v), veh/h				0	28	15	98	87	0	0	0	116
Grp Sat Flow(s),veh/h/ln				0	1403	1356	1334	1356	0	0	0	1324
Q Serve(g_s), s				0.0	0.6	0.6	0.0	2.3	0.0	0.0	0.0	3.2
Cycle Q Clear(g_c), s				0.0	0.6	0.6	3.2	2.3	0.0	0.0	0.0	3.2
Prop In Lane				0.00		0.34	0.40		0.00	0.00		0.21
Lane Grp Cap(c), veh/h				0	842	407	860	797	0	0	0	778
V/C Ratio(X)				0.00	0.03	0.04	0.11	0.11	0.00	0.00	0.00	0.15
Avail Cap(c_a), veh/h				0	842	407	860	797	0	0	0	778
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				0.0	19.8	19.8	7.2	7.3	0.0	0.0	0.0	7.5
Incr Delay (d2), s/veh				0.0	0.1	0.2	0.3	0.3	0.0	0.0	0.0	0.4
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln				0.0	0.4	0.4	1.8	1.6	0.0	0.0	0.0	2.2
LnGrp Delay(d),s/veh				0.0	19.9	20.0	7.5	7.6	0.0	0.0	0.0	7.9
LnGrp LOS					B	B	A	A				A
Approach Vol, veh/h					43			185			116	
Approach Delay, s/veh					19.9			7.5			7.9	
Approach LOS					B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		52.0				52.0		28.0				
Change Period (Y+Rc), s		5.0				5.0		4.0				
Max Green Setting (Gmax), s		47.0				47.0		24.0				
Max Q Clear Time (g_c+I1), s		5.2				5.2		2.6				
Green Ext Time (p_c), s		0.1				0.1		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				9.2								
HCM 2010 LOS				A								

Lanes, Volumes, Timings
6: Lafayette Blvd & Madison St

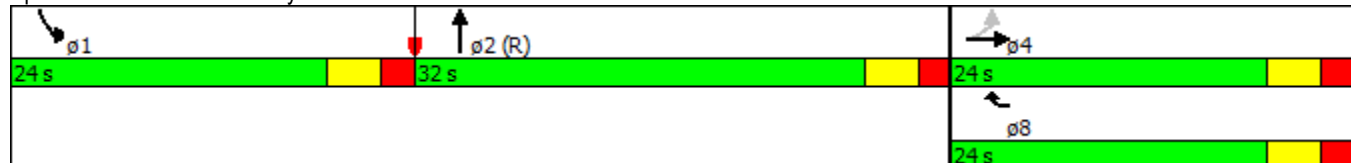
Existing Network - 2014 AM
2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	62	0	0	0	12	0	140	55	76	0	0
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	9%	9%	9%	9%	9%	9%
Parking (#/hr)						5						
Shared Lane Traffic (%)												
Turn Type	Perm	NA				Prot		NA		Prot		
Protected Phases		4				8		2		1		
Permitted Phases	4											
Detector Phase	4	4				8		2		1		
Switch Phase												
Minimum Initial (s)	5.0	5.0				4.0		5.0		5.0		
Minimum Split (s)	22.2	22.2				9.2		23.2		10.2		
Total Split (s)	24.0	24.0				24.0		32.0		24.0		
Total Split (%)	30.0%	30.0%				30.0%		40.0%		30.0%		
Yellow Time (s)	3.2	3.2				3.2		3.2		3.2		
All-Red Time (s)	2.0	2.0				2.0		2.0		2.0		
Lost Time Adjust (s)	-1.0	0.0				0.0		0.0		0.0		
Total Lost Time (s)	4.2	5.2				5.2		5.2		5.2		
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?												
Recall Mode	Max	Max				None		C-Max		Max		

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 22.4 (28%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 6: Lafayette Blvd & Madison St



HCM 2010 Signalized Intersection Summary
6: Lafayette Blvd & Madison St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	62	0	0	0	12	0	140	55	76	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1662	1598	0	0	0	1662	0	1569	1710	1632	0	0
Adj Flow Rate, veh/h	25	87	0	0	0	17	0	197	23	107	0	0
Adj No. of Lanes	1	2	0	0	0	1	0	2	0	1	0	0
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71	0.71
Percent Heavy Veh, %	7	7	0	0	0	7	0	9	9	9	0	0
Cap, veh/h	397	714	0	0	0	0	0	902	104	365	0	0
Arrive On Green	0.25	0.23	0.00	0.00	0.00	0.00	0.00	0.34	0.34	0.23	0.00	0.00
Sat Flow, veh/h	1240	3116	0		0		0	2772	311	1554	107	
Grp Volume(v), veh/h	25	87	0		0.0		0	108	112	107	27.2	
Grp Sat Flow(s),veh/h/ln	1240	1518	0				0	1490	1514	1554	C	
Q Serve(g_s), s	1.2	1.8	0.0				0.0	4.2	4.3	4.5		
Cycle Q Clear(g_c), s	1.2	1.8	0.0				0.0	4.2	4.3	4.5		
Prop In Lane	1.00		0.00				0.00		0.21	1.00		
Lane Grp Cap(c), veh/h	397	714	0				0	499	507	365		
V/C Ratio(X)	0.06	0.12	0.00				0.00	0.22	0.22	0.29		
Avail Cap(c_a), veh/h	397	714	0				0	499	507	365		
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	1.00	0.99		
Uniform Delay (d), s/veh	23.1	24.1	0.0				0.0	19.1	19.1	25.1		
Incr Delay (d2), s/veh	0.3	0.3	0.0				0.0	1.0	1.0	2.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0		
%ile BackOfQ(95%),veh/ln	0.8	1.4	0.0				0.0	3.3	3.4	3.8		
LnGrp Delay(d),s/veh	23.4	24.4	0.0				0.0	20.1	20.1	27.2		
LnGrp LOS	C	C						C	C	C		
Approach Vol, veh/h		112						220				
Approach Delay, s/veh		24.2						20.1				
Approach LOS		C						C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4								
Phs Duration (G+Y+Rc), s	24.0	32.0		24.0								
Change Period (Y+Rc), s	* 5.2	* 5.2		* 5.2								
Max Green Setting (Gmax), s	* 19	* 27		* 19								
Max Q Clear Time (g_c+I1), s	6.5	6.3		3.8								
Green Ext Time (p_c), s	0.0	0.1		0.0								
Intersection Summary												
HCM 2010 Ctrl Delay			22.9									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
7: Lafayette Blvd & LaSalle Ave

Existing Network - 2014 AM
2/25/2015

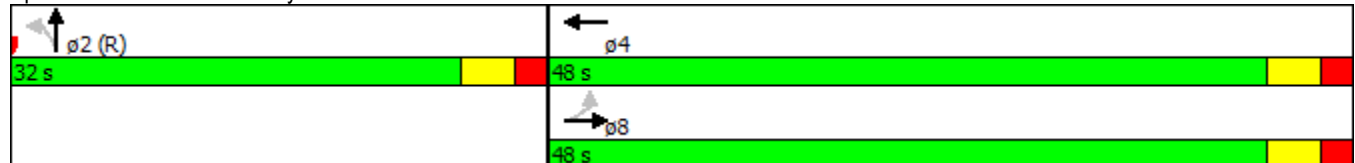


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔↔↔				
Volume (vph)	20	776	0	0	443	46	119	124	69	0	0	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	9%	9%	9%	9%	9%	9%
Parking (#/hr)							0		5			
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	27.2	27.2			27.2		26.2	26.2				
Total Split (s)	48.0	48.0			48.0		32.0	32.0				
Total Split (%)	60.0%	60.0%			60.0%		40.0%	40.0%				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				
Lead/Lag												
Lead-Lag Optimize?												

Intersection Summary
















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 10.4 (13%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 7: Lafayette Blvd & LaSalle Ave



HCM 2010 Signalized Intersection Summary
7: Lafayette Blvd & LaSalle Ave

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	20	776	0	0	443	46	119	124	69	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	0.88			
Adj Sat Flow, veh/h/ln	1778	1678	0	0	1678	1778	1710	1632	1710			
Adj Flow Rate, veh/h	23	902	0	0	515	43	138	144	25			
Adj No. of Lanes	0	2	0	0	2	0	0	3	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	6	6	0	0	6	6	0	9	0			
Cap, veh/h	66	1632	0	0	1594	133	468	813	138			
Arrive On Green	0.55	0.54	0.00	0.00	0.54	0.54	0.35	0.34	0.34			
Sat Flow, veh/h	36	3126	0	0	3064	248	1398	2426	413			
Grp Volume(v), veh/h	491	434	0	0	275	283	138	87	82			
Grp Sat Flow(s),veh/h/ln	1635	1450	0	0	1594	1634	1398	1485	1355			
Q Serve(g_s), s	0.0	15.9	0.0	0.0	7.8	7.8	5.7	3.3	3.4			
Cycle Q Clear(g_c), s	15.2	15.9	0.0	0.0	7.8	7.8	5.7	3.3	3.4			
Prop In Lane	0.05		0.00	0.00		0.15	1.00		0.30			
Lane Grp Cap(c), veh/h	942	776	0	0	853	874	468	497	454			
V/C Ratio(X)	0.52	0.56	0.00	0.00	0.32	0.32	0.29	0.17	0.18			
Avail Cap(c_a), veh/h	942	776	0	0	853	874	468	497	454			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	12.2	12.3	0.0	0.0	10.5	10.5	19.2	18.8	18.8			
Incr Delay (d2), s/veh	2.1	2.9	0.0	0.0	1.0	1.0	1.6	0.8	0.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	11.7	11.2	0.0	0.0	6.5	6.7	4.3	2.6	2.5			
LnGrp Delay(d),s/veh	14.2	15.3	0.0	0.0	11.5	11.4	20.8	19.6	19.7			
LnGrp LOS	B	B			B	B	C	B	B			
Approach Vol, veh/h		925			558			307				
Approach Delay, s/veh		14.7			11.4			20.2				
Approach LOS		B			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		32.0		48.0				48.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 27		* 43				* 43				
Max Q Clear Time (g_c+l1), s		7.7		9.8				17.9				
Green Ext Time (p_c), s		0.1		0.4				0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			14.6									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
8: Lafayette Blvd & Colfax Ave

Existing Network - 2014 AM
2/25/2015



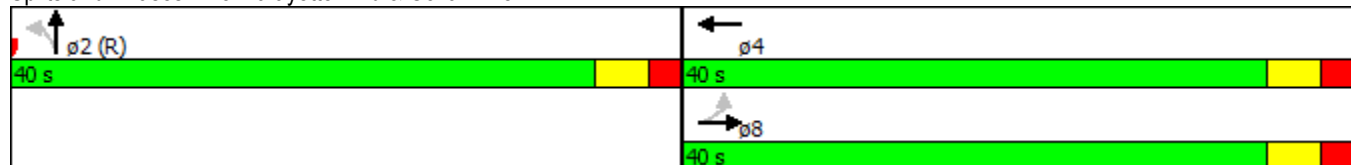
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔↔↔				
Volume (vph)	23	184	0	0	109	41	23	270	27	0	0	0
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	9%	9%	9%	9%	9%	9%
Parking (#/hr)					5	5	0		5			
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	26.2	26.2			26.2		26.2	26.2				
Total Split (s)	40.0	40.0			40.0		40.0	40.0				
Total Split (%)	50.0%	50.0%			50.0%		50.0%	50.0%				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				

Lead/Lag
Lead-Lag Optimize?

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 78.4 (98%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 8: Lafayette Blvd & Colfax Ave



HCM 2010 Signalized Intersection Summary
8: Lafayette Blvd & Colfax Ave

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Volume (veh/h)	23	184	0	0	109	41	23	270	27	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	0.90	1.00	0.88			
Adj Sat Flow, veh/h/ln	1710	1662	0	0	1662	1710	1710	1632	1710			
Adj Flow Rate, veh/h	32	256	0	0	151	35	32	375	20			
Adj No. of Lanes	0	1	0	0	1	0	0	3	0			
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72			
Percent Heavy Veh, %	7	7	0	0	7	7	0	9	0			
Cap, veh/h	95	652	0	0	497	115	133	1660	90			
Arrive On Green	0.87	0.87	0.00	0.00	0.44	0.44	0.15	0.14	0.14			
Sat Flow, veh/h	104	1499	0	0	1143	265	305	3816	208			
Grp Volume(v), veh/h	288	0	0	0	0	186	152	141	134			
Grp Sat Flow(s),veh/h/ln	1604	0	0	0	0	1408	1453	1485	1391			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	6.9	7.4	6.7	6.8			
Cycle Q Clear(g_c), s	2.8	0.0	0.0	0.0	0.0	6.9	7.4	6.7	6.8			
Prop In Lane	0.11		0.00	0.00		0.19	0.21		0.15			
Lane Grp Cap(c), veh/h	748	0	0	0	0	612	632	646	605			
V/C Ratio(X)	0.39	0.00	0.00	0.00	0.00	0.30	0.24	0.22	0.22			
Avail Cap(c_a), veh/h	748	0	0	0	0	612	632	646	605			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	3.1	0.0	0.0	0.0	0.0	14.7	22.5	22.2	22.3			
Incr Delay (d2), s/veh	1.5	0.0	0.0	0.0	0.0	1.3	0.9	0.8	0.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	2.6	0.0	0.0	0.0	0.0	5.1	5.7	5.2	5.0			
LnGrp Delay(d),s/veh	4.6	0.0	0.0	0.0	0.0	16.0	23.4	23.0	23.1			
LnGrp LOS	A					B	C	C	C			
Approach Vol, veh/h		288			186			427				
Approach Delay, s/veh		4.6			16.0			23.2				
Approach LOS		A			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		40.0		40.0				40.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 35		* 35				* 35				
Max Q Clear Time (g_c+I1), s		9.4		8.9				4.8				
Green Ext Time (p_c), s		0.1		0.1				0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			15.8									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

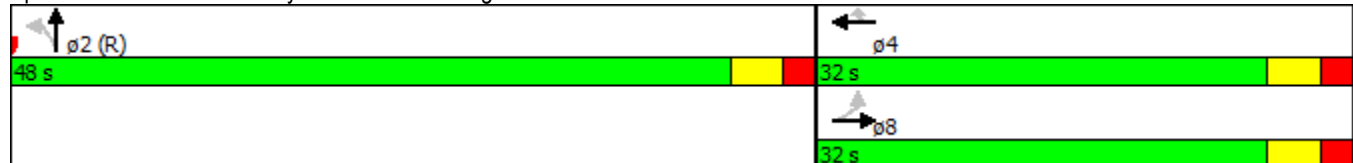
Lanes, Volumes, Timings
 9: Lafayette Blvd & Washington St

Existing Network - 2014 AM
 2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	8	71	0	0	104	19	58	294	58	0	0	0
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	9%	9%	9%	9%	9%	9%
Parking (#/hr)					0	0	10		10			
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8					4	2					
Minimum Split (s)	20.0	20.0			26.2	26.2	25.2	25.2				
Total Split (s)	32.0	32.0			32.0	32.0	48.0	48.0				
Total Split (%)	40.0%	40.0%			40.0%	40.0%	60.0%	60.0%				
Yellow Time (s)	3.2	3.2			3.2	3.2	3.2	3.2				
All-Red Time (s)	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				
Total Lost Time (s)	5.2	5.2			5.2	5.2		5.2				
Lead/Lag												
Lead-Lag Optimize?												



















Intersection Summary
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 66.4 (83%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 9: Lafayette Blvd & Washington St



HCM 2010 Signalized Intersection Summary
 9: Lafayette Blvd & Washington St

Existing Network - 2014 AM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	71	0	0	104	19	58	294	58	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.90	0.85	1.00	0.85			
Adj Sat Flow, veh/h/ln	1613	1613	0	0	1613	1613	1710	1632	1710			
Adj Flow Rate, veh/h	12	103	0	0	151	0	84	426	46			
Adj No. of Lanes	1	1	0	0	1	1	0	3	0			
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69	0.69			
Percent Heavy Veh, %	6	6	0	0	6	6	0	9	0			
Cap, veh/h	374	540	0	0	540	413	316	1724	189			
Arrive On Green	0.11	0.11	0.00	0.00	0.34	0.00	0.18	0.18	0.18			
Sat Flow, veh/h	1066	1613	0	0	1613	1234	591	3223	353			
Grp Volume(v), veh/h	12	103	0	0	151	0	193	190	173			
Grp Sat Flow(s),veh/h/ln	1066	1613	0	0	1613	1234	1357	1485	1325			
Q Serve(g_s), s	0.8	4.6	0.0	0.0	5.5	0.0	9.8	8.8	9.0			
Cycle Q Clear(g_c), s	6.3	4.6	0.0	0.0	5.5	0.0	9.8	8.8	9.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.44		0.27			
Lane Grp Cap(c), veh/h	374	540	0	0	540	413	726	794	709			
V/C Ratio(X)	0.03	0.19	0.00	0.00	0.28	0.00	0.27	0.24	0.24			
Avail Cap(c_a), veh/h	374	540	0	0	540	413	726	794	709			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	29.0	25.7	0.0	0.0	19.5	0.0	19.3	18.9	19.0			
Incr Delay (d2), s/veh	0.2	0.8	0.0	0.0	1.3	0.0	0.9	0.7	0.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.5	3.9	0.0	0.0	4.7	0.0	6.9	6.8	6.2			
LnGrp Delay(d),s/veh	29.1	26.5	0.0	0.0	20.8	0.0	20.2	19.7	19.8			
LnGrp LOS	C	C			C		C	B	B			
Approach Vol, veh/h		115			151			556				
Approach Delay, s/veh		26.8			20.8			19.9				
Approach LOS		C			C			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		48.0		32.0				32.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 43		* 27				* 27				
Max Q Clear Time (g_c+I1), s		11.8		7.5				8.3				
Green Ext Time (p_c), s		0.2		0.1				0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			21.0									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 10: Lafayette Blvd & Jefferson Blvd

Existing Network - 2014 AM
 2/25/2015



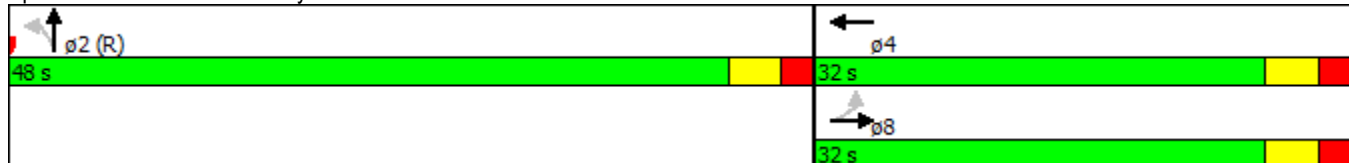
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↗			↖↗↘				
Volume (vph)	16	45	0	0	55	53	45	361	59	0	0	0
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	9%	9%	9%	9%	9%	9%
Parking (#/hr)	10	10			10	10	10		10			
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	25.2	25.2			25.2		25.2	25.2				
Total Split (s)	32.0	32.0			32.0		48.0	48.0				
Total Split (%)	40.0%	40.0%			40.0%		60.0%	60.0%				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				

Lead/Lag
 Lead-Lag Optimize?

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 54.4 (68%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 10: Lafayette Blvd & Jefferson Blvd



HCM 2010 Signalized Intersection Summary
 10: Lafayette Blvd & Jefferson Blvd

Existing Network - 2014 AM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Volume (veh/h)	16	45	0	0	55	53	45	361	59	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.85	0.85	1.00	0.85			
Adj Sat Flow, veh/h/ln	1710	1678	0	0	1678	1710	1710	1632	1710			
Adj Flow Rate, veh/h	22	62	0	0	75	24	62	495	51			
Adj No. of Lanes	0	1	0	0	1	0	0	3	0			
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73			
Percent Heavy Veh, %	6	6	0	0	6	6	0	9	0			
Cap, veh/h	162	410	0	0	347	111	214	1828	192			
Arrive On Green	0.35	0.34	0.00	0.00	0.34	0.34	0.18	0.18	0.18			
Sat Flow, veh/h	315	1223	0	0	1036	332	401	3416	358			
Grp Volume(v), veh/h	84	0	0	0	0	99	212	208	188			
Grp Sat Flow(s),veh/h/ln	1538	0	0	0	0	1368	1367	1485	1324			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	4.2	10.7	9.7	9.8			
Cycle Q Clear(g_c), s	2.8	0.0	0.0	0.0	0.0	4.2	10.7	9.7	9.8			
Prop In Lane	0.26		0.00	0.00		0.24	0.29		0.27			
Lane Grp Cap(c), veh/h	591	0	0	0	0	458	731	794	708			
V/C Ratio(X)	0.14	0.00	0.00	0.00	0.00	0.22	0.29	0.26	0.27			
Avail Cap(c_a), veh/h	591	0	0	0	0	458	731	794	708			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	18.5	0.0	0.0	0.0	0.0	19.1	19.7	19.3	19.4			
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.0	1.1	1.0	0.8	0.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	2.4	0.0	0.0	0.0	0.0	3.1	7.6	7.5	6.8			
LnGrp Delay(d),s/veh	19.0	0.0	0.0	0.0	0.0	20.1	20.7	20.1	20.3			
LnGrp LOS	B					C	C	C	C			
Approach Vol, veh/h		84			99			608				
Approach Delay, s/veh		19.0			20.1			20.4				
Approach LOS		B			C			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		48.0		32.0				32.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 43		* 27				* 27				
Max Q Clear Time (g_c+l1), s		12.7		6.2				4.8				
Green Ext Time (p_c), s		0.2		0.1				0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				20.2								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 11: Lafayette Blvd & Wayne St

Existing Network - 2014 AM
 2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↑			↑	↗		↔↑↗				
Volume (vph)	8	33	0	0	58	52	6	425	19	0	0	0
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	9%	9%	9%	9%	9%	9%
Parking (#/hr)		0				0	0		0			
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8					4	2					
Minimum Split (s)	26.2	26.2			26.2	26.2	25.2	25.2				
Total Split (s)	32.0	32.0			32.0	32.0	48.0	48.0				
Total Split (%)	40.0%	40.0%			40.0%	40.0%	60.0%	60.0%				
Yellow Time (s)	3.2	3.2			3.2	3.2	3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)		0.0			0.0	0.0		0.0				
Total Lost Time (s)		5.2			5.2	5.2		5.2				

Lead/Lag
 Lead-Lag Optimize?

Intersection Summary




















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 42.4 (53%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 11: Lafayette Blvd & Wayne St



HCM 2010 Signalized Intersection Summary
 11: Lafayette Blvd & Wayne St

Existing Network - 2014 AM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 						  				
Volume (veh/h)	8	33	0	0	58	52	6	425	19	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.90	0.90	1.00	0.90			
Adj Sat Flow, veh/h/ln	1710	1613	0	0	1613	1613	1710	1632	1710			
Adj Flow Rate, veh/h	11	45	0	0	79	22	8	582	18			
Adj No. of Lanes	0	2	0	0	1	1	0	3	0			
Peak Hour Factor	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73	0.73			
Percent Heavy Veh, %	6	6	0	0	6	6	0	9	0			
Cap, veh/h	208	796	0	0	540	413	29	2251	72			
Arrive On Green	0.34	0.34	0.00	0.00	0.34	0.34	0.18	0.18	0.18			
Sat Flow, veh/h	437	2450	0	0	1613	1234	54	4207	134			
Grp Volume(v), veh/h	30	26	0	0	79	22	215	198	194			
Grp Sat Flow(s),veh/h/ln	1418	1395	0	0	1613	1234	1466	1485	1445			
Q Serve(g_s), s	0.0	1.0	0.0	0.0	2.7	1.0	10.2	9.2	9.3			
Cycle Q Clear(g_c), s	1.0	1.0	0.0	0.0	2.7	1.0	10.2	9.2	9.3			
Prop In Lane	0.36		0.00	0.00		1.00	0.04		0.09			
Lane Grp Cap(c), veh/h	536	467	0	0	540	413	784	794	773			
V/C Ratio(X)	0.06	0.05	0.00	0.00	0.15	0.05	0.27	0.25	0.25			
Avail Cap(c_a), veh/h	536	467	0	0	540	413	784	794	773			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	18.0	18.0	0.0	0.0	18.6	18.0	19.5	19.1	19.1			
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.0	0.6	0.2	0.9	0.8	0.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.9	0.7	0.0	0.0	2.3	0.6	7.7	7.1	7.0			
LnGrp Delay(d),s/veh	18.2	18.2	0.0	0.0	19.2	18.3	20.4	19.9	19.9			
LnGrp LOS	B	B			B	B	C	B	B			
Approach Vol, veh/h		56			101			608				
Approach Delay, s/veh		18.2			19.0			20.1				
Approach LOS		B			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		48.0		32.0				32.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 43		* 27				* 27				
Max Q Clear Time (g_c+I1), s		12.2		4.7				3.0				
Green Ext Time (p_c), s		0.2		0.0				0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			19.8									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

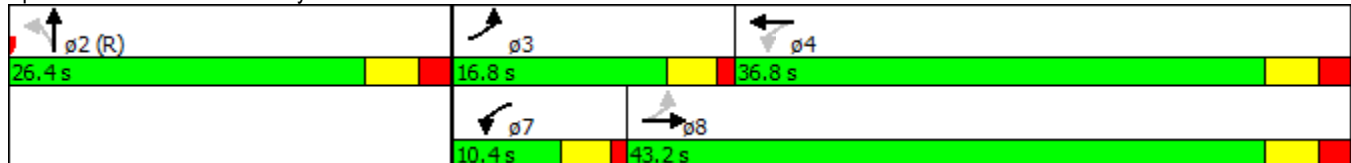
Lanes, Volumes, Timings
 12: Lafayette Blvd & Western Ave

Existing Network - 2014 AM
 2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	449	111	2	189	51	69	328	10	0	0	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	9%	9%	9%	9%	9%	9%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA				
Protected Phases	3	8		7	4			2				
Permitted Phases	8			4			2					
Minimum Split (s)	10.0	27.2		8.0	20.0		23.2	23.2				
Total Split (s)	16.8	43.2		10.4	36.8		26.4	26.4				
Total Split (%)	21.0%	54.0%		13.0%	46.0%		33.0%	33.0%				
Yellow Time (s)	3.0	3.2		3.0	3.2		3.2	3.2				
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0				
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0				
Total Lost Time (s)	4.0	5.2		4.0	5.2			5.2				
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?		Yes		Yes								

Intersection Summary
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 30.4 (38%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 12: Lafayette Blvd & Western Ave



HCM 2010 Signalized Intersection Summary
 12: Lafayette Blvd & Western Ave

Existing Network - 2014 AM
 2/25/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	88	449	111	2	189	51	69	328	10	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1678	1678	1778	1678	1678	1778	1710	1569	1710			
Adj Flow Rate, veh/h	106	541	122	2	228	48	83	395	10			
Adj No. of Lanes	1	1	0	1	1	0	0	2	0			
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
Percent Heavy Veh, %	6	6	6	6	6	6	0	9	0			
Cap, veh/h	614	630	142	296	531	112	133	671	18			
Arrive On Green	0.16	0.47	0.47	0.08	0.39	0.39	0.53	0.53	0.53			
Sat Flow, veh/h	1598	1326	299	1598	1345	283	503	2531	67			
Grp Volume(v), veh/h	106	0	663	2	0	276	255	0	233			
Grp Sat Flow(s),veh/h/ln	1598	0	1625	1598	0	1628	1544	0	1557			
Q Serve(g_s), s	2.4	0.0	28.9	0.1	0.0	9.9	9.3	0.0	8.0			
Cycle Q Clear(g_c), s	2.4	0.0	28.9	0.1	0.0	9.9	9.3	0.0	8.0			
Prop In Lane	1.00		0.18	1.00		0.17	0.33		0.04			
Lane Grp Cap(c), veh/h	614	0	772	296	0	643	409	0	413			
V/C Ratio(X)	0.17	0.00	0.86	0.01	0.00	0.43	0.62	0.00	0.57			
Avail Cap(c_a), veh/h	614	0	772	296	0	643	409	0	413			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00			
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	8.5	0.0	18.6	14.2	0.0	17.6	16.0	0.0	15.7			
Incr Delay (d2), s/veh	0.6	0.0	12.0	0.0	0.0	2.1	7.0	0.0	5.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	2.0	0.0	21.9	0.0	0.0	8.4	8.1	0.0	7.2			
LnGrp Delay(d),s/veh	9.2	0.0	30.6	14.3	0.0	19.7	23.0	0.0	21.2			
LnGrp LOS	A		C	B		B	C		C			
Approach Vol, veh/h		769			278			488				
Approach Delay, s/veh		27.6			19.7			22.1				
Approach LOS		C			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4			7	8				
Phs Duration (G+Y+Rc), s		26.4	16.8	36.8			10.4	43.2				
Change Period (Y+Rc), s		* 5.2	4.0	* 5.2			4.0	* 5.2				
Max Green Setting (Gmax), s		* 21	12.8	* 32			6.4	* 38				
Max Q Clear Time (g_c+I1), s		11.3	4.4	11.9			2.1	30.9				
Green Ext Time (p_c), s		0.1	0.0	0.3			0.0	0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			24.4									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 13: Lafayette Blvd & Monroe St

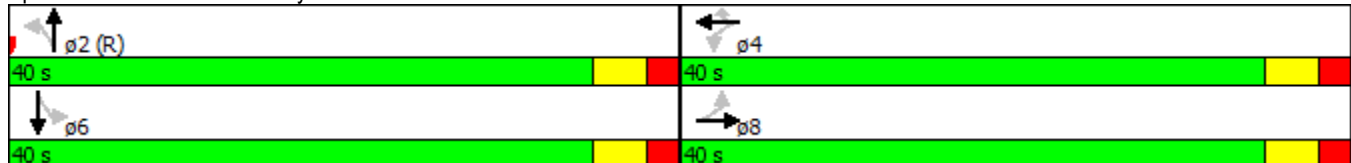
Existing Network - 2014 AM
 2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	0	0	9	0	224	0	190	12	59	49	0
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	9%	9%	9%	9%	9%	9%
Parking (#/hr)						5						
Shared Lane Traffic (%)												
Turn Type				Perm	NA	Perm		NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4		4	2			6		
Minimum Split (s)	29.2	29.2		29.2	29.2	29.2	29.2	29.2		29.2	29.2	
Total Split (s)	40.0	40.0		40.0	40.0	40.0	40.0	40.0		40.0	40.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.2	3.2		3.2	3.2	3.2	3.2	3.2		3.2	3.2	
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	
Total Lost Time (s)		5.2			5.2	5.2		5.2			5.2	
Lead/Lag												
Lead-Lag Optimize?												

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 12 (15%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 13: Lafayette Blvd & Monroe St



HCM 2010 Signalized Intersection Summary
 13: Lafayette Blvd & Monroe St

Existing Network - 2014 AM
 2/25/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	9	0	224	0	190	12	59	49	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1792	1900	1900	1792	1792	1900	1743	1900	1900	1743	1900
Adj Flow Rate, veh/h	0	0	0	12	0	125	0	247	10	77	64	0
Adj No. of Lanes	0	1	0	0	1	1	0	2	0	0	2	0
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Percent Heavy Veh, %	6	6	6	6	6	6	9	9	9	9	9	9
Cap, veh/h	0	780	0	681	0	580	0	1412	57	533	656	0
Arrive On Green	0.00	0.00	0.00	0.44	0.00	0.44	0.00	0.87	0.87	0.44	0.44	0.00
Sat Flow, veh/h	0	1792	0	1358	0	1333	0	3332	131	1018	1586	0
Grp Volume(v), veh/h	0	0	0	12	0	125	0	126	131	77	64	0
Grp Sat Flow(s),veh/h/ln	0	1792	0	1358	0	1333	0	1656	1720	1018	1507	0
Q Serve(g_s), s	0.0	0.0	0.0	0.4	0.0	4.7	0.0	0.9	0.9	3.7	2.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.4	0.0	4.7	0.0	0.9	0.9	4.6	2.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	0.00		0.08	1.00		0.00
Lane Grp Cap(c), veh/h	0	780	0	681	0	580	0	720	748	533	656	0
V/C Ratio(X)	0.00	0.00	0.00	0.02	0.00	0.22	0.00	0.17	0.18	0.14	0.10	0.00
Avail Cap(c_a), veh/h	0	780	0	681	0	580	0	720	748	533	656	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	12.9	0.0	14.1	0.0	3.0	3.0	14.4	13.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.5	0.5	0.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.0	0.3	0.0	3.3	0.0	0.8	0.9	2.0	1.6	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	12.9	0.0	14.9	0.0	3.5	3.5	14.9	13.6	0.0
LnGrp LOS				B		B		A	A	B	B	
Approach Vol, veh/h		0			137			257			141	
Approach Delay, s/veh		0.0			14.8			3.5			14.3	
Approach LOS					B			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.0		40.0		40.0		40.0				
Change Period (Y+Rc), s		* 5.2		* 5.2		* 5.2		* 5.2				
Max Green Setting (Gmax), s		* 35		* 35		* 35		* 35				
Max Q Clear Time (g_c+I1), s		2.9		6.7		6.6		0.0				
Green Ext Time (p_c), s		0.1		0.1		0.1		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				9.3								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 14: Lafayette Blvd & South St

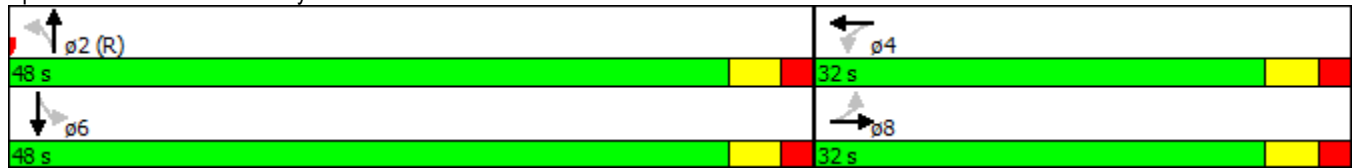
Existing Network - 2014 AM
 2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	10	9	5	24	17	7	187	5	4	50	4
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	9%	9%	9%	9%	9%	9%
Parking (#/hr)				0	0	0						
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6		6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	29.2	29.2		29.2	29.2		25.2	25.2		25.2		25.2
Total Split (s)	32.0	32.0		32.0	32.0		48.0	48.0		48.0		48.0
Total Split (%)	40.0%	40.0%		40.0%	40.0%		60.0%	60.0%		60.0%		60.0%
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2		3.2
All-Red Time (s)	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
Total Lost Time (s)		5.2			5.2			5.2				5.2
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		C-Max	C-Max		Max		Max

Intersection Summary

















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 10.4 (13%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated

Splits and Phases: 14: Lafayette Blvd & South St



HCM 2010 Signalized Intersection Summary
 14: Lafayette Blvd & South St

Existing Network - 2014 AM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	10	9	5	24	17	7	187	5	4	50	4
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1792	1900	1900	1792	1900	1900	1743	1900	1900	1743	1900
Adj Flow Rate, veh/h	0	12	4	6	30	7	9	231	4	5	62	3
Adj No. of Lanes	0	1	0	0	1	0	0	2	0	0	2	0
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	6	6	6	6	6	6	9	9	9	9	9	9
Cap, veh/h	0	59	20	59	51	11	111	2604	45	197	2370	116
Arrive On Green	0.00	0.05	0.05	0.05	0.05	0.05	1.00	1.00	1.00	0.82	0.82	0.82
Sat Flow, veh/h	0	1288	429	160	1109	247	76	3159	54	177	2875	140
Grp Volume(v), veh/h	0	0	16	43	0	0	128	0	116	37	0	33
Grp Sat Flow(s),veh/h/ln	0	0	1717	1516	0	0	1713	0	1577	1631	0	1561
Q Serve(g_s), s	0.0	0.0	0.7	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Cycle Q Clear(g_c), s	0.0	0.0	0.7	2.2	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.3
Prop In Lane	0.00		0.25	0.14		0.16	0.07		0.03	0.14		0.09
Lane Grp Cap(c), veh/h	0	0	78	120	0	0	1460	0	1300	1395	0	1287
V/C Ratio(X)	0.00	0.00	0.20	0.36	0.00	0.00	0.09	0.00	0.09	0.03	0.00	0.03
Avail Cap(c_a), veh/h	0	0	575	554	0	0	1460	0	1300	1395	0	1287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	0.99	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	36.8	37.5	0.0	0.0	0.0	0.0	0.0	1.3	0.0	1.3
Incr Delay (d2), s/veh	0.0	0.0	0.9	1.3	0.0	0.0	0.1	0.0	0.1	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.7	1.8	0.0	0.0	0.1	0.0	0.1	0.3	0.0	0.3
LnGrp Delay(d),s/veh	0.0	0.0	37.7	38.8	0.0	0.0	0.1	0.0	0.1	1.3	0.0	1.3
LnGrp LOS			D	D			A		A	A		A
Approach Vol, veh/h		16			43			244				70
Approach Delay, s/veh		37.7			38.8			0.1				1.3
Approach LOS		D			D			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		71.1		8.9		71.1		8.9				
Change Period (Y+Rc), s		* 5.2		* 5.2		* 5.2		* 5.2				
Max Green Setting (Gmax), s		* 43		* 27		* 43		* 27				
Max Q Clear Time (g_c+I1), s		2.0		4.2		2.3		2.7				
Green Ext Time (p_c), s		0.1		0.1		0.1		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			6.4									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
15: Lafayette Blvd & Sample St

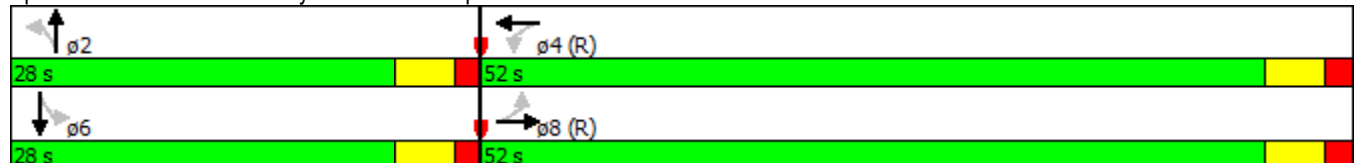
Existing Network - 2014 AM
2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	102	836	18	12	492	59	14	46	9	14	39	4
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	20%	20%	20%	20%	20%	20%	9%	9%	9%	9%	9%	9%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6		6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		10.0		10.0
Minimum Split (s)	26.3	26.3		26.3	26.3		26.1	26.1		26.1		26.1
Total Split (s)	52.0	52.0		52.0	52.0		28.0	28.0		28.0		28.0
Total Split (%)	65.0%	65.0%		65.0%	65.0%		35.0%	35.0%		35.0%		35.0%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5		3.5
All-Red Time (s)	1.8	1.8		1.8	1.8		1.6	1.6		1.6		1.6
Lost Time Adjust (s)	0.0	0.0			0.0			0.0				0.0
Total Lost Time (s)	5.3	5.3			5.3			5.1				5.1
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	C-Max	C-Max		C-Max	C-Max		None	None		None		None

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 54 (68%), Referenced to phase 4:WBTL and 8:EBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 15: Lafayette Blvd & Sample St



HCM 2010 Signalized Intersection Summary
 15: Lafayette Blvd & Sample St

Existing Network - 2014 AM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	102	836	18	12	492	59	14	46	9	14	39	4
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1583	1583	1900	1900	1583	1900	1900	1743	1900	1900	1743	1900
Adj Flow Rate, veh/h	115	939	18	13	553	55	16	52	2	16	44	1
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	20	20	20	20	20	20	9	9	9	9	9	9
Cap, veh/h	621	2329	45	67	2034	200	79	134	5	84	132	3
Arrive On Green	0.77	0.77	0.77	1.00	1.00	1.00	0.11	0.10	0.10	0.11	0.10	0.10
Sat Flow, veh/h	688	3019	58	26	2636	259	241	1357	47	273	1334	27
Grp Volume(v), veh/h	115	468	489	325	0	296	70	0	0	61	0	0
Grp Sat Flow(s),veh/h/ln	688	1504	1573	1526	0	1395	1645	0	0	1633	0	0
Q Serve(g_s), s	3.7	8.3	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.7	8.3	8.3	0.0	0.0	0.0	3.0	0.0	0.0	2.6	0.0	0.0
Prop In Lane	1.00		0.04	0.04		0.19	0.23		0.03	0.26		0.02
Lane Grp Cap(c), veh/h	621	1160	1213	1239	0	1076	238	0	0	238	0	0
V/C Ratio(X)	0.19	0.40	0.40	0.26	0.00	0.28	0.29	0.00	0.00	0.26	0.00	0.00
Avail Cap(c_a), veh/h	621	1160	1213	1239	0	1076	538	0	0	535	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.96	0.00	0.96	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	2.5	3.0	3.0	0.0	0.0	0.0	33.8	0.0	0.0	33.6	0.0	0.0
Incr Delay (d2), s/veh	0.7	1.0	1.0	0.5	0.0	0.6	0.5	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	6.7	7.0	0.3	0.0	0.3	2.6	0.0	0.0	2.3	0.0	0.0
LnGrp Delay(d),s/veh	3.2	4.1	4.0	0.5	0.0	0.6	34.3	0.0	0.0	34.0	0.0	0.0
LnGrp LOS	A	A	A	A		A	C			C		
Approach Vol, veh/h		1072			621			70				61
Approach Delay, s/veh		4.0			0.5			34.3				34.0
Approach LOS		A			A			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		13.0		67.0		13.0		67.0				
Change Period (Y+Rc), s		* 5.1		* 5.3		* 5.1		* 5.3				
Max Green Setting (Gmax), s		* 23		* 47		* 23		* 47				
Max Q Clear Time (g_c+I1), s		5.0		2.0		4.6		10.3				
Green Ext Time (p_c), s		0.3		0.8		0.3		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				5.0								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection												
Intersection Delay, s/veh	8.8											
Intersection LOS	A											
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	28	88	1	0	7	126	31	0	3	5	20
Peak Hour Factor	0.92	0.87	0.87	0.87	0.92	0.87	0.87	0.87	0.92	0.87	0.87	0.87
Heavy Vehicles, %	2	4	4	4	2	4	4	4	2	9	9	9
Mvmt Flow	0	32	101	1	0	8	145	36	0	3	6	23
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	2
HCM Control Delay	8.6	9.1	8
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	100%	0%	100%	0%	25%
Vol Thru, %	0%	20%	0%	99%	0%	80%	45%
Vol Right, %	0%	80%	0%	1%	0%	20%	31%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	25	28	89	7	157	65
LT Vol	3	0	28	0	7	0	16
Through Vol	0	5	0	88	0	126	29
RT Vol	0	20	0	1	0	31	20
Lane Flow Rate	3	29	32	102	8	180	75
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.006	0.04	0.049	0.142	0.012	0.242	0.111
Departure Headway (Hd)	6.038	4.972	5.513	5.003	5.476	4.835	5.352
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	594	721	650	717	655	743	671
Service Time	3.765	2.699	3.239	2.729	3.2	2.559	3.377
HCM Lane V/C Ratio	0.005	0.04	0.049	0.142	0.012	0.242	0.112
HCM Control Delay	8.8	7.9	8.5	8.6	8.3	9.1	9
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.1	0.2	0.5	0	0.9	0.4

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	16	29	20
Peak Hour Factor	0.92	0.87	0.87	0.87
Heavy Vehicles, %	2	9	9	9
Mvmt Flow	0	18	33	23
Number of Lanes	0	0	1	0

Approach

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	9
HCM LOS	A

Lane

Lanes, Volumes, Timings
17: Main St & Marion St

Existing Network - 2014 AM
2/25/2015
















Lane Group	EBL	EBR	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Volume (vph)	0	0	92	0	0	0	0	0	964	36
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	4%	4%	6%	0%	0%	0%	0%	0%	2%	3%
Shared Lane Traffic (%)										
Turn Type			Prot						NA	
Protected Phases			4						2	
Permitted Phases										
Detector Phase			4						2	
Switch Phase										
Minimum Initial (s)			5.0						5.0	
Minimum Split (s)			22.4						26.0	
Total Split (s)			22.4						57.6	
Total Split (%)			28.0%						72.0%	
Yellow Time (s)			3.2						3.5	
All-Red Time (s)			1.8						1.5	
Lost Time Adjust (s)			0.0						0.0	
Total Lost Time (s)			5.0						5.0	
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode			None						C-Max	

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 7 (9%), Referenced to phase 2:SWT, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated

Splits and Phases: 17: Main St & Marion St



										
Movement	EBL	EBR	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Volume (veh/h)	0	0	92	0	0	0	0	0	964	36
Number			7	14				5	2	12
Initial Q (Qb), veh			0	0				0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00				1.00		1.00
Parking Bus, Adj			1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1678	0				0	1743	1778
Adj Flow Rate, veh/h			115	0				0	1205	41
Adj No. of Lanes			1	0				0	2	0
Peak Hour Factor			0.80	0.80				0.80	0.80	0.80
Percent Heavy Veh, %			6	0				0	2	2
Cap, veh/h			0	0				0	3064	104
Arrive On Green			0.00	0.00				0.00	0.94	0.94
Sat Flow, veh/h			0					0	3355	111
Grp Volume(v), veh/h			0.0					0	610	636
Grp Sat Flow(s),veh/h/ln								0	1656	1723
Q Serve(g_s), s								0.0	2.9	2.9
Cycle Q Clear(g_c), s								0.0	2.9	2.9
Prop In Lane								0.00		0.06
Lane Grp Cap(c), veh/h								0	1552	1616
V/C Ratio(X)								0.00	0.39	0.39
Avail Cap(c_a), veh/h								0	1552	1616
HCM Platoon Ratio								1.00	1.00	1.00
Upstream Filter(I)								0.00	1.00	1.00
Uniform Delay (d), s/veh								0.0	0.2	0.2
Incr Delay (d2), s/veh								0.0	0.7	0.7
Initial Q Delay(d3),s/veh								0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln								0.0	2.7	2.8
LnGrp Delay(d),s/veh								0.0	1.0	1.0
LnGrp LOS									A	A
Approach Vol, veh/h									1246	
Approach Delay, s/veh									1.0	
Approach LOS									A	
Timer	1	2	3	4	5	6	7	8		
Assigned Phs		2								
Phs Duration (G+Y+Rc), s		80.0								
Change Period (Y+Rc), s		5.0								
Max Green Setting (Gmax), s		52.6								
Max Q Clear Time (g_c+I1), s		4.9								
Green Ext Time (p_c), s		0.3								
Intersection Summary										
HCM 2010 Ctrl Delay			1.0							
HCM 2010 LOS			A							

Lanes, Volumes, Timings
18: Main St & Madison St

Existing Network - 2014 AM
2/25/2015

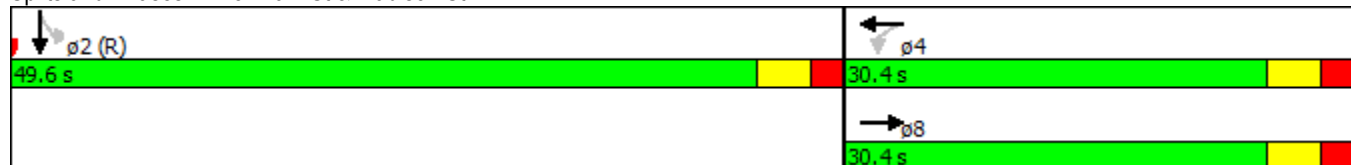


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↶		↷	↶						↶↷↶↷	
Volume (vph)	0	80	83	12	24	0	0	0	0	25	1047	4
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	11%	11%	11%	11%	11%	11%
Parking (#/hr)		3	3	3	3							
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4							2
Permitted Phases				4						2		
Minimum Split (s)		28.2		28.2	28.2					26.2	26.2	
Total Split (s)		30.4		30.4	30.4					49.6	49.6	
Total Split (%)		38.0%		38.0%	38.0%					62.0%	62.0%	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.0		2.0	2.0					2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0						0.0	
Total Lost Time (s)		5.2		5.2	5.2						5.2	
Lead/Lag												
Lead-Lag Optimize?												

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 53 (66%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 18: Main St & Madison St



HCM 2010 Signalized Intersection Summary
 18: Main St & Madison St

Existing Network - 2014 AM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	80	83	12	24	0	0	0	0	25	1047	4
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1598	1710	1598	1598	0				1710	1541	1710
Adj Flow Rate, veh/h	0	103	50	15	31	0				32	1342	5
Adj No. of Lanes	0	1	0	1	1	0				0	4	0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78				0.78	0.78	0.78
Percent Heavy Veh, %	0	7	7	7	7	0				0	11	0
Cap, veh/h	0	284	138	329	503	0				69	3094	12
Arrive On Green	0.00	0.32	0.32	0.32	0.32	0.00				0.57	0.56	0.56
Sat Flow, veh/h	0	900	437	1054	1598	0				124	5576	21
Grp Volume(v), veh/h	0	0	153	15	31	0				396	622	361
Grp Sat Flow(s),veh/h/ln	0	0	1337	1054	1598	0				1534	1325	1537
Q Serve(g_s), s	0.0	0.0	7.1	0.9	1.1	0.0				12.4	10.9	10.9
Cycle Q Clear(g_c), s	0.0	0.0	7.1	8.0	1.1	0.0				12.4	10.9	10.9
Prop In Lane	0.00		0.33	1.00		0.00				0.08		0.01
Lane Grp Cap(c), veh/h	0	0	421	329	503	0				852	1471	853
V/C Ratio(X)	0.00	0.00	0.36	0.05	0.06	0.00				0.47	0.42	0.42
Avail Cap(c_a), veh/h	0	0	421	329	503	0				852	1471	853
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	21.2	24.3	19.1	0.0				10.7	10.4	10.4
Incr Delay (d2), s/veh	0.0	0.0	2.4	0.3	0.2	0.0				1.8	0.9	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	5.2	0.5	0.9	0.0				9.5	7.5	8.6
LnGrp Delay(d),s/veh	0.0	0.0	23.6	24.5	19.4	0.0				12.5	11.2	11.9
LnGrp LOS			C	C	B					B	B	B
Approach Vol, veh/h		153			46						1379	
Approach Delay, s/veh		23.6			21.1						11.8	
Approach LOS		C			C						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		49.6		30.4				30.4				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 44		* 25				* 25				
Max Q Clear Time (g_c+I1), s		14.4		10.0				9.1				
Green Ext Time (p_c), s		0.6		0.1				0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			13.2									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
19: Main St & LaSalle Ave

Existing Network - 2014 AM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑						↑↑↑	
Volume (vph)	0	575	291	193	464	0	0	0	0	103	983	40
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	11%	11%	11%	11%	11%	11%
Parking (#/hr)										3		3
Shared Lane Traffic (%)												
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		8		7	4							2
Permitted Phases				4						2		
Minimum Split (s)		28.2		10.2	28.2					28.2	28.2	
Total Split (s)		36.8		13.6	50.4					29.6	29.6	
Total Split (%)		46.0%		17.0%	63.0%					37.0%	37.0%	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.0		2.0	2.0					2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0							0.0
Total Lost Time (s)		5.2		5.2	5.2							5.2
Lead/Lag		Lead		Lag								
Lead-Lag Optimize?		Yes		Yes								

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 69 (86%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed

Splits and Phases: 19: Main St & LaSalle Ave



HCM 2010 Signalized Intersection Summary
 19: Main St & LaSalle Ave

Existing Network - 2014 AM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	575	291	193	464	0	0	0	0	103	983	40
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				0.88	1.00	0.88
Adj Sat Flow, veh/h/ln	0	1598	1710	1598	1598	0				1710	1541	1710
Adj Flow Rate, veh/h	0	701	301	235	566	0				126	1199	42
Adj No. of Lanes	0	2	0	1	2	0				0	4	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82				0.82	0.82	0.82
Percent Heavy Veh, %	0	7	7	7	7	0				0	11	0
Cap, veh/h	0	818	351	279	1716	0				140	1433	51
Arrive On Green	0.00	0.39	0.39	0.21	1.00	0.00				0.10	0.10	0.10
Sat Flow, veh/h	0	2150	889	1522	3116	0				457	4699	167
Grp Volume(v), veh/h	0	514	488	235	566	0				369	663	335
Grp Sat Flow(s),veh/h/ln	0	1518	1441	1522	1518	0				1341	1325	1334
Q Serve(g_s), s	0.0	24.8	24.8	5.1	0.0	0.0				21.8	19.6	19.7
Cycle Q Clear(g_c), s	0.0	24.8	24.8	5.1	0.0	0.0				21.8	19.6	19.7
Prop In Lane	0.00		0.62	1.00		0.00				0.34		0.13
Lane Grp Cap(c), veh/h	0	600	569	279	1716	0				409	808	407
V/C Ratio(X)	0.00	0.86	0.86	0.84	0.33	0.00				0.90	0.82	0.82
Avail Cap(c_a), veh/h	0	600	569	279	1716	0				409	808	407
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	22.1	22.1	28.7	0.0	0.0				34.7	33.8	33.8
Incr Delay (d2), s/veh	0.0	14.7	15.3	25.5	0.5	0.0				25.8	9.2	16.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	18.6	17.9	10.9	0.2	0.0				16.5	13.0	14.2
LnGrp Delay(d),s/veh	0.0	36.8	37.5	54.2	0.5	0.0				60.5	43.0	50.7
LnGrp LOS		D	D	D	A					E	D	D
Approach Vol, veh/h		1002			801						1367	
Approach Delay, s/veh		37.1			16.3						49.6	
Approach LOS		D			B						D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		29.6		50.4			13.6	36.8				
Change Period (Y+Rc), s		* 5.2		* 5.2			* 5.2	* 5.2				
Max Green Setting (Gmax), s		* 24		* 45			* 8.4	* 32				
Max Q Clear Time (g_c+I1), s		23.8		2.0			7.1	26.8				
Green Ext Time (p_c), s		0.1		0.4			0.1	0.3				
Intersection Summary												
HCM 2010 Ctrl Delay				37.2								
HCM 2010 LOS				D								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
20: Main St & Colfax Ave

Existing Network - 2014 AM
2/25/2015

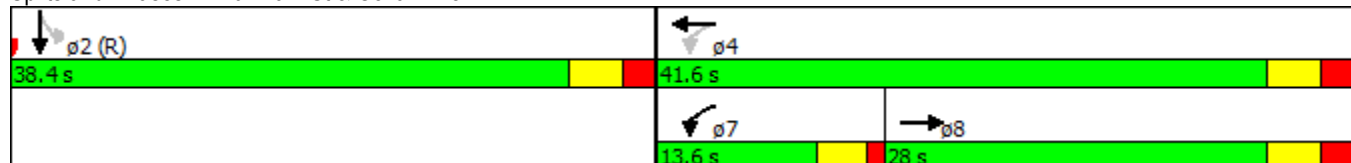


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖						↖↗↘↙	
Volume (vph)	0	158	48	184	144	0	0	0	0	119	1272	37
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	11%	11%	11%	11%	11%	11%
Parking (#/hr)		5	5		10					5		10
Shared Lane Traffic (%)												
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		8		7	4							2
Permitted Phases				4						2		
Minimum Split (s)		27.2		9.0	39.2					26.2	26.2	
Total Split (s)		28.0		13.6	41.6					38.4	38.4	
Total Split (%)		35.0%		17.0%	52.0%					48.0%	48.0%	
Yellow Time (s)		3.2		3.0	3.2					3.2	3.2	
All-Red Time (s)		2.0		1.0	2.0					2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0							0.0
Total Lost Time (s)		5.2		4.0	5.2							5.2
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?				Yes								

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 4 (5%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 20: Main St & Colfax Ave



HCM 2010 Signalized Intersection Summary
20: Main St & Colfax Ave

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	158	48	184	144	0	0	0	0	119	1272	37
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00				0.88	1.00	0.85
Adj Sat Flow, veh/h/ln	0	1662	1778	1598	1598	0				1710	1541	1710
Adj Flow Rate, veh/h	0	205	62	239	187	0				155	1652	48
Adj No. of Lanes	0	1	0	1	1	0				0	4	0
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77				0.77	0.77	0.77
Percent Heavy Veh, %	0	7	7	7	7	0				0	11	0
Cap, veh/h	0	306	92	383	727	0				170	1956	58
Arrive On Green	0.00	0.28	0.28	0.12	0.46	0.00				0.14	0.14	0.14
Sat Flow, veh/h	0	1073	324	1522	1598	0				410	4712	140
Grp Volume(v), veh/h	0	0	267	239	187	0				502	911	442
Grp Sat Flow(s),veh/h/ln	0	0	1397	1522	1598	0				1327	1325	1285
Q Serve(g_s), s	0.0	0.0	13.5	8.5	5.8	0.0				29.8	26.8	26.8
Cycle Q Clear(g_c), s	0.0	0.0	13.5	8.5	5.8	0.0				29.8	26.8	26.8
Prop In Lane	0.00		0.23	1.00		0.00				0.31		0.11
Lane Grp Cap(c), veh/h	0	0	398	383	727	0				551	1100	533
V/C Ratio(X)	0.00	0.00	0.67	0.62	0.26	0.00				0.91	0.83	0.83
Avail Cap(c_a), veh/h	0	0	398	383	727	0				551	1100	533
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	25.3	17.4	13.5	0.0				33.0	31.8	31.8
Incr Delay (d2), s/veh	0.0	0.0	8.7	7.5	0.9	0.0				21.7	7.2	13.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	10.2	7.7	4.9	0.0				20.5	16.4	17.2
LnGrp Delay(d),s/veh	0.0	0.0	34.0	24.9	14.3	0.0				54.7	39.0	45.6
LnGrp LOS			C	C	B					D	D	D
Approach Vol, veh/h		267			426						1855	
Approach Delay, s/veh		34.0			20.3						44.8	
Approach LOS		C			C						D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		38.4		41.6			13.6	28.0				
Change Period (Y+Rc), s		* 5.2		* 5.2			4.0	* 5.2				
Max Green Setting (Gmax), s		* 33		* 36			9.6	* 23				
Max Q Clear Time (g_c+I1), s		31.8		7.8			10.5	15.5				
Green Ext Time (p_c), s		0.3		0.1			0.0	0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			39.6									
HCM 2010 LOS			D									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
21: Main St & Washington St

Existing Network - 2014 AM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↑						↑↑↑	
Volume (vph)	0	65	52	26	71	0	0	0	0	68	1201	101
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)		5	5		5					0		3
Shared Lane Traffic (%)												
Turn Type		NA	Perm	Perm	NA					Perm	NA	
Protected Phases		8			4							2
Permitted Phases			8	4						2		
Minimum Split (s)		31.2	31.2	31.2	31.2					25.2	25.2	
Total Split (s)		32.0	32.0	32.0	32.0					48.0	48.0	
Total Split (%)		40.0%	40.0%	40.0%	40.0%					60.0%	60.0%	
Yellow Time (s)		3.2	3.2	3.2	3.2					3.2	3.2	
All-Red Time (s)		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	
Total Lost Time (s)		5.2	5.2	5.2	5.2						5.2	

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 19 (24%), Referenced to phase 2:SBTL, Start of Green

Natural Cycle: 60




















Control Type: Pretimed

Splits and Phases: 21: Main St & Washington St



HCM 2010 Signalized Intersection Summary
 21: Main St & Washington St

Existing Network - 2014 AM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	65	52	26	71	0	0	0	0	68	1201	101
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00				0.90	1.00	0.88
Adj Sat Flow, veh/h/ln	0	1678	1613	1613	1613	0				1710	1541	1710
Adj Flow Rate, veh/h	0	76	30	31	84	0				80	1413	119
Adj No. of Lanes	0	1	1	1	1	0				0	4	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85				0.85	0.85	0.85
Percent Heavy Veh, %	0	6	6	6	6	0				0	11	0
Cap, veh/h	0	562	402	427	540	0				132	2497	215
Arrive On Green	0.00	0.34	0.34	0.11	0.11	0.00				0.18	0.18	0.18
Sat Flow, veh/h	0	1678	1200	1111	1613	0				246	4668	402
Grp Volume(v), veh/h	0	76	30	31	84	0				446	783	383
Grp Sat Flow(s),veh/h/ln	0	1678	1200	1111	1613	0				1374	1325	1292
Q Serve(g_s), s	0.0	2.5	1.4	2.0	3.8	0.0				24.0	21.6	21.6
Cycle Q Clear(g_c), s	0.0	2.5	1.4	4.6	3.8	0.0				24.0	21.6	21.6
Prop In Lane	0.00		1.00	1.00		0.00				0.18		0.31
Lane Grp Cap(c), veh/h	0	562	402	427	540	0				735	1418	691
V/C Ratio(X)	0.00	0.14	0.07	0.07	0.16	0.00				0.61	0.55	0.55
Avail Cap(c_a), veh/h	0	562	402	427	540	0				735	1418	691
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	18.5	18.1	26.8	25.3	0.0				25.2	24.2	24.2
Incr Delay (d2), s/veh	0.0	0.5	0.4	0.3	0.6	0.0				3.7	1.6	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	2.2	0.9	1.2	3.2	0.0				15.1	12.9	13.1
LnGrp Delay(d),s/veh	0.0	19.0	18.5	27.2	25.9	0.0				28.9	25.8	27.4
LnGrp LOS		B	B	C	C					C	C	C
Approach Vol, veh/h		106			115						1612	
Approach Delay, s/veh		18.9			26.3						27.0	
Approach LOS		B			C						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		48.0		32.0				32.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 43		* 27				* 27				
Max Q Clear Time (g_c+I1), s		26.0		6.6				4.5				
Green Ext Time (p_c), s		0.7		0.1				0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			26.5									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
22: Main St & Jefferson Blvd

Existing Network - 2014 AM
2/25/2015



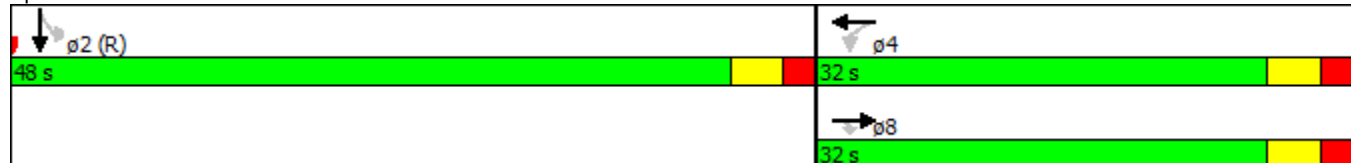
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖						↑↑↑	
Volume (vph)	0	42	30	60	46	0	0	0	0	122	1066	96
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)										3		3
Shared Lane Traffic (%)												
Turn Type		NA	Perm	Perm	NA					Perm	NA	
Protected Phases		8			4							2
Permitted Phases			8	4						2		
Minimum Split (s)		31.2	31.2	24.2	24.2					25.2	25.2	
Total Split (s)		32.0	32.0	32.0	32.0					48.0	48.0	
Total Split (%)		40.0%	40.0%	40.0%	40.0%					60.0%	60.0%	
Yellow Time (s)		3.2	3.2	3.2	3.2					3.2	3.2	
All-Red Time (s)		2.0	2.0	2.0	2.0					2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0						0.0	
Total Lost Time (s)		5.2	5.2		5.2						5.2	

Lead/Lag
Lead-Lag Optimize?

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 14 (18%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 22: Main St & Jefferson Blvd



HCM 2010 Signalized Intersection Summary
 22: Main St & Jefferson Blvd

Existing Network - 2014 AM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	42	30	60	46	0	0	0	0	122	1066	96
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				0.88	1.00	0.88
Adj Sat Flow, veh/h/ln	0	1613	1613	1778	1678	0				1710	1541	1710
Adj Flow Rate, veh/h	0	49	10	71	54	0				144	1254	97
Adj No. of Lanes	0	1	1	0	1	0				0	4	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85				0.85	0.85	0.85
Percent Heavy Veh, %	0	6	6	6	6	0				0	11	0
Cap, veh/h	0	540	459	316	217	0				254	2388	188
Arrive On Green	0.00	0.34	0.34	0.35	0.34	0.00				0.18	0.18	0.18
Sat Flow, veh/h	0	1613	1371	733	649	0				475	4464	351
Grp Volume(v), veh/h	0	49	10	125	0	0				406	730	359
Grp Sat Flow(s),veh/h/ln	0	1613	1371	1382	0	0				1340	1325	1301
Q Serve(g_s), s	0.0	1.7	0.4	3.4	0.0	0.0				22.2	20.0	20.0
Cycle Q Clear(g_c), s	0.0	1.7	0.4	5.0	0.0	0.0				22.2	20.0	20.0
Prop In Lane	0.00		1.00	0.57		0.00				0.35		0.27
Lane Grp Cap(c), veh/h	0	540	459	554	0	0				717	1418	696
V/C Ratio(X)	0.00	0.09	0.02	0.23	0.00	0.00				0.57	0.51	0.52
Avail Cap(c_a), veh/h	0	540	459	554	0	0				717	1418	696
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	18.2	17.8	19.1	0.0	0.0				24.4	23.5	23.6
Incr Delay (d2), s/veh	0.0	0.3	0.1	0.9	0.0	0.0				3.2	1.3	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	1.4	0.3	3.7	0.0	0.0				13.8	12.1	12.3
LnGrp Delay(d),s/veh	0.0	18.6	17.9	20.0	0.0	0.0				27.6	24.9	26.3
LnGrp LOS		B	B	B						C	C	C
Approach Vol, veh/h		59			125						1495	
Approach Delay, s/veh		18.5			20.0						26.0	
Approach LOS		B			B						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		48.0		32.0				32.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 43		* 27				* 27				
Max Q Clear Time (g_c+I1), s		24.2		7.0				3.7				
Green Ext Time (p_c), s		0.7		0.1				0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			25.2									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
23: Main St & Wayne St

Existing Network - 2014 AM
2/25/2015



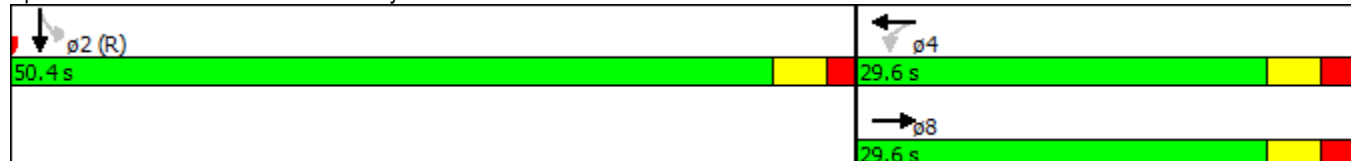
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑						↑↑↑↑	
Volume (vph)	0	36	15	98	87	0	0	0	0	83	969	31
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)			5		5							0
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4							2
Permitted Phases				4						2		
Minimum Split (s)		28.2		28.2	28.2					25.0	25.0	
Total Split (s)		29.6		29.6	29.6					50.4	50.4	
Total Split (%)		37.0%		37.0%	37.0%					63.0%	63.0%	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.0		2.0	2.0					1.8	1.8	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.2			5.2						5.0	

Lead/Lag
Lead-Lag Optimize?

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 30 (38%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 23: Main St & Wayne St



HCM 2010 Signalized Intersection Summary
23: Main St & Wayne St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	36	15	98	87	0	0	0	0	83	969	31
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00				1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	0	1613	1710	1710	1613	0				1710	1541	1710
Adj Flow Rate, veh/h	0	39	5	105	94	0				89	1042	29
Adj No. of Lanes	0	2	0	0	2	0				0	4	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	6	6	6	6	0				0	11	0
Cap, veh/h	0	783	98	426	438	0				225	2834	80
Arrive On Green	0.00	0.30	0.30	0.30	0.30	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	2646	322	1105	1511	0				396	4994	142
Grp Volume(v), veh/h	0	23	21	109	90	0				341	540	278
Grp Sat Flow(s),veh/h/ln	0	1533	1355	1148	1395	0				1521	1325	1361
Q Serve(g_s), s	0.0	0.8	0.9	5.6	3.9	0.0				15.8	14.2	14.3
Cycle Q Clear(g_c), s	0.0	0.8	0.9	6.5	3.9	0.0				15.8	14.2	14.3
Prop In Lane	0.00		0.24	0.97		0.00				0.26		0.10
Lane Grp Cap(c), veh/h	0	467	413	439	425	0				863	1504	773
V/C Ratio(X)	0.00	0.05	0.05	0.25	0.21	0.00				0.40	0.36	0.36
Avail Cap(c_a), veh/h	0	467	413	439	425	0				863	1504	773
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.6	19.6	21.9	20.7	0.0				20.4	19.8	19.9
Incr Delay (d2), s/veh	0.0	0.2	0.2	1.3	1.1	0.0				1.4	0.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.7	0.6	3.7	2.9	0.0				11.3	9.1	9.5
LnGrp Delay(d),s/veh	0.0	19.8	19.9	23.2	21.8	0.0				21.8	20.5	21.2
LnGrp LOS		B	B	C	C					C	C	C
Approach Vol, veh/h		44			199						1160	
Approach Delay, s/veh		19.8			22.6						21.0	
Approach LOS		B			C						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		50.4		29.6				29.6				
Change Period (Y+Rc), s		5.0		* 5.2				* 5.2				
Max Green Setting (Gmax), s		45.4		* 24				* 24				
Max Q Clear Time (g_c+I1), s		17.8		8.5				2.9				
Green Ext Time (p_c), s		0.5		0.1				0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				21.2								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
24: Main St & Western Ave

Existing Network - 2014 AM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑						↑↑↑↑	
Volume (vph)	0	288	233	22	157	0	0	0	0	37	865	168
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)				5	5					5		0
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4						2	
Permitted Phases				4						2		
Minimum Split (s)		28.2		34.2	34.2					26.2	26.2	
Total Split (s)		40.0		40.0	40.0					40.0	40.0	
Total Split (%)		50.0%		50.0%	50.0%					50.0%	50.0%	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.0		2.0	2.0					2.0	2.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.2			5.2						5.2	

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

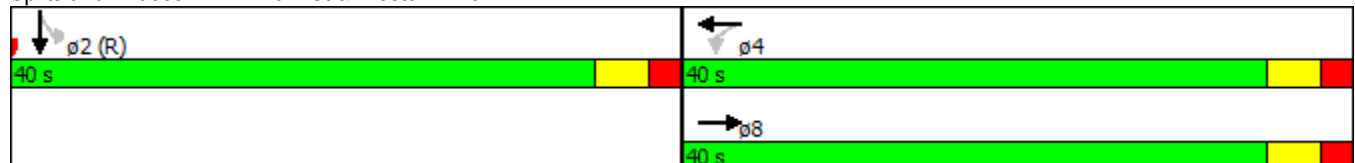
Actuated Cycle Length: 80

Offset: 45 (56%), Referenced to phase 2:SBTL, Start of Green

Natural Cycle: 65
















Control Type: Pretimed

Splits and Phases: 24: Main St & Western Ave



HCM 2010 Signalized Intersection Summary
 24: Main St & Western Ave

Existing Network - 2014 AM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	288	233	22	157	0	0	0	0	37	865	168
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				0.88	1.00	0.90
Adj Sat Flow, veh/h/ln	0	1613	1710	1778	1678	0				1710	1541	1710
Adj Flow Rate, veh/h	0	324	226	25	176	0				42	972	145
Adj No. of Lanes	0	2	0	0	1	0				0	4	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	0	6	6	6	6	0				0	11	0
Cap, veh/h	0	759	518	102	619	0				78	1919	290
Arrive On Green	0.00	0.44	0.44	0.45	0.44	0.00				0.15	0.14	0.14
Sat Flow, veh/h	0	1826	1191	117	1422	0				178	4412	667
Grp Volume(v), veh/h	0	284	266	201	0	0				316	568	276
Grp Sat Flow(s),veh/h/ln	0	1533	1403	1540	0	0				1339	1325	1269
Q Serve(g_s), s	0.0	10.3	10.6	0.0	0.0	0.0				17.5	15.8	16.0
Cycle Q Clear(g_c), s	0.0	10.3	10.6	6.1	0.0	0.0				17.5	15.8	16.0
Prop In Lane	0.00		0.85	0.12		0.00				0.13		0.53
Lane Grp Cap(c), veh/h	0	667	610	740	0	0				582	1153	552
V/C Ratio(X)	0.00	0.43	0.44	0.27	0.00	0.00				0.54	0.49	0.50
Avail Cap(c_a), veh/h	0	667	610	740	0	0				582	1153	552
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	15.7	15.8	14.5	0.0	0.0				26.8	26.1	26.2
Incr Delay (d2), s/veh	0.0	2.0	2.3	0.9	0.0	0.0				3.6	1.5	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	8.3	7.9	5.3	0.0	0.0				11.4	10.1	10.2
LnGrp Delay(d),s/veh	0.0	17.7	18.0	15.4	0.0	0.0				30.4	27.6	29.4
LnGrp LOS		B	B	B						C	C	C
Approach Vol, veh/h		550			201						1159	
Approach Delay, s/veh		17.8			15.4						28.8	
Approach LOS		B			B						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		40.0		40.0				40.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 35		* 35				* 35				
Max Q Clear Time (g_c+I1), s		19.5		8.1				12.6				
Green Ext Time (p_c), s		0.5		0.3				0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			24.2									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
25: Main St & Monroe St

Existing Network - 2014 AM
2/25/2015

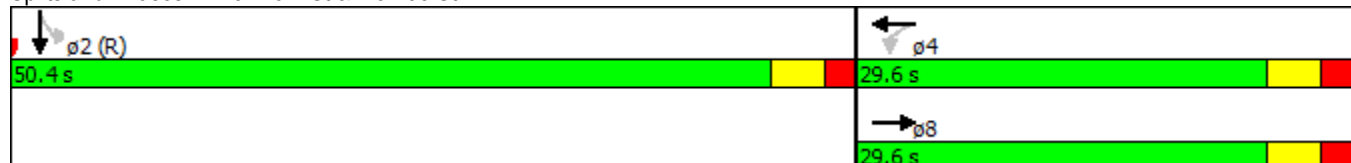


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑						↑↑↑↑	
Volume (vph)	0	62	8	41	236	0	0	0	0	252	821	5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)			3									0
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4							2
Permitted Phases				4						2		
Minimum Split (s)		28.2		28.2	28.2					29.2	29.2	
Total Split (s)		29.6		29.6	29.6					50.4	50.4	
Total Split (%)		37.0%		37.0%	37.0%					63.0%	63.0%	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.0		2.0	2.0					2.0	2.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.2			5.2						5.2	
Lead/Lag												
Lead-Lag Optimize?												

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 60 (75%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 25: Main St & Monroe St



HCM 2010 Signalized Intersection Summary
25: Main St & Monroe St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	62	8	41	236	0	0	0	0	252	821	5
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00				1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	0	1792	1900	1900	1792	0				1900	1712	1900
Adj Flow Rate, veh/h	0	73	2	48	278	0				296	966	5
Adj No. of Lanes	0	2	0	0	2	0				0	4	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85				0.85	0.85	0.85
Percent Heavy Veh, %	0	6	6	6	6	0				0	11	0
Cap, veh/h	0	972	27	165	868	0				753	2694	14
Arrive On Green	0.00	0.30	0.30	0.41	0.41	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	3277	87	352	2927	0				1332	4768	25
Grp Volume(v), veh/h	0	39	36	173	153	0				365	592	309
Grp Sat Flow(s),veh/h/ln	0	1703	1571	1647	1550	0				1645	1472	1536
Q Serve(g_s), s	0.0	1.3	1.3	0.2	5.4	0.0				15.6	14.0	14.0
Cycle Q Clear(g_c), s	0.0	1.3	1.3	5.3	5.4	0.0				15.6	14.0	14.0
Prop In Lane	0.00		0.06	0.28		0.00				0.81		0.02
Lane Grp Cap(c), veh/h	0	519	479	560	473	0				929	1663	868
V/C Ratio(X)	0.00	0.07	0.08	0.31	0.32	0.00				0.39	0.36	0.36
Avail Cap(c_a), veh/h	0	519	479	560	473	0				929	1663	868
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.8	19.8	18.1	18.1	0.0				20.4	19.9	19.9
Incr Delay (d2), s/veh	0.0	0.3	0.3	1.4	1.8	0.0				1.2	0.6	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	1.2	1.1	5.0	4.5	0.0				11.9	9.8	10.3
LnGrp Delay(d),s/veh	0.0	20.1	20.1	19.5	19.9	0.0				21.7	20.5	21.0
LnGrp LOS		C	C	B	B					C	C	C
Approach Vol, veh/h		75			326						1267	
Approach Delay, s/veh		20.1			19.7						20.9	
Approach LOS		C			B						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		50.4		29.6				29.6				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 45		* 24				* 24				
Max Q Clear Time (g_c+I1), s		17.6		7.4				3.3				
Green Ext Time (p_c), s		0.5		0.1				0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				20.7								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
26: Main St & South St

Existing Network - 2014 AM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↶			↷					↶	↷	↶
Volume (vph)	0	32	10	39	34	0	0	0	0	37	889	11
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)										3		3
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4							2
Permitted Phases				4						2		
Minimum Split (s)		28.2		28.2	28.2					27.0	27.0	
Total Split (s)		32.0		32.0	32.0					48.0	48.0	
Total Split (%)		40.0%		40.0%	40.0%					60.0%	60.0%	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.0		2.0	2.0					1.8	1.8	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.2			5.2						5.0	

Lead/Lag
Lead-Lag Optimize?

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 75 (94%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 26: Main St & South St



HCM 2010 Signalized Intersection Summary
26: Main St & South St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	32	10	39	34	0	0	0	0	37	889	11
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				0.88	1.00	0.88
Adj Sat Flow, veh/h/ln	0	1792	1900	1900	1792	0				1900	1712	1900
Adj Flow Rate, veh/h	0	33	3	41	35	0				39	926	9
Adj No. of Lanes	0	1	0	0	1	0				0	4	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96				0.96	0.96	0.96
Percent Heavy Veh, %	0	6	6	6	6	0				0	11	0
Cap, veh/h	0	542	49	324	254	0				119	3050	30
Arrive On Green	0.00	0.34	0.34	0.35	0.34	0.00				0.18	0.18	0.18
Sat Flow, veh/h	0	1619	147	759	758	0				222	5674	56
Grp Volume(v), veh/h	0	0	36	76	0	0				264	470	240
Grp Sat Flow(s),veh/h/ln	0	0	1766	1517	0	0				1504	1472	1505
Q Serve(g_s), s	0.0	0.0	1.1	0.8	0.0	0.0				12.3	11.1	11.1
Cycle Q Clear(g_c), s	0.0	0.0	1.1	2.5	0.0	0.0				12.3	11.1	11.1
Prop In Lane	0.00		0.08	0.54		0.00				0.15		0.04
Lane Grp Cap(c), veh/h	0	0	592	596	0	0				808	1582	809
V/C Ratio(X)	0.00	0.00	0.06	0.13	0.00	0.00				0.33	0.30	0.30
Avail Cap(c_a), veh/h	0	0	592	596	0	0				808	1582	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	18.1	18.3	0.0	0.0				20.2	19.8	19.8
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.4	0.0	0.0				1.1	0.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	1.0	2.2	0.0	0.0				9.2	8.2	8.5
LnGrp Delay(d),s/veh	0.0	0.0	18.3	18.7	0.0	0.0				21.3	20.3	20.7
LnGrp LOS			B	B						C	C	C
Approach Vol, veh/h		36			76						974	
Approach Delay, s/veh		18.3			18.7						20.7	
Approach LOS		B			B						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		48.0		32.0				32.0				
Change Period (Y+Rc), s		5.0		* 5.2				* 5.2				
Max Green Setting (Gmax), s		43.0		* 27				* 27				
Max Q Clear Time (g_c+I1), s		14.3		4.5				3.1				
Green Ext Time (p_c), s		0.3		0.3				0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			20.4									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
27: Main St & Bronson St

Existing Network - 2014 AM
2/25/2015

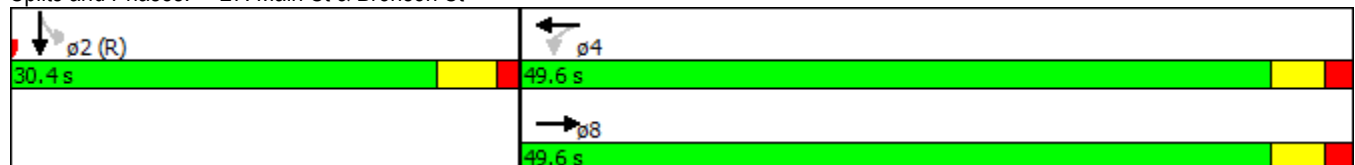


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻			↻					↻	↻↻↻	
Volume (vph)	0	6	4	12	6	0	0	0	0	22	903	13
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4						2	
Permitted Phases				4						2		
Detector Phase		8		4	4					2	2	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		28.0		28.0	28.0					24.1	24.1	
Total Split (s)		49.6		49.6	49.6					30.4	30.4	
Total Split (%)		62.0%		62.0%	62.0%					38.0%	38.0%	
Yellow Time (s)		3.2		3.2	3.2					3.5	3.5	
All-Red Time (s)		1.8		1.8	1.8					1.5	1.5	
Lost Time Adjust (s)		0.0			0.0					-0.6	0.0	
Total Lost Time (s)		5.0			5.0					4.4	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None		None	None					C-Max	C-Max	

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 8 (10%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated

Splits and Phases: 27: Main St & Bronson St



HCM 2010 Signalized Intersection Summary
27: Main St & Bronson St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	6	4	12	6	0	0	0	0	22	903	13
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1864	1976	1976	1864	0				1712	1712	1900
Adj Flow Rate, veh/h	0	6	2	13	6	0				24	971	12
Adj No. of Lanes	0	1	0	0	1	0				1	3	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	6	6	6	6	0				11	11	11
Cap, veh/h	0	38	13	102	12	0				1393	4029	50
Arrive On Green	0.00	0.03	0.03	0.04	0.03	0.00				0.28	0.28	0.28
Sat Flow, veh/h	0	1339	446	929	429	0				1630	4758	59
Grp Volume(v), veh/h	0	0	8	19	0	0				24	636	347
Grp Sat Flow(s),veh/h/ln	0	0	1785	1358	0	0				1630	1558	1701
Q Serve(g_s), s	0.0	0.0	0.3	1.0	0.0	0.0				0.8	12.6	12.6
Cycle Q Clear(g_c), s	0.0	0.0	0.3	1.3	0.0	0.0				0.8	12.6	12.6
Prop In Lane	0.00		0.25	0.68		0.00				1.00		0.03
Lane Grp Cap(c), veh/h	0	0	50	131	0	0				1393	2638	1441
V/C Ratio(X)	0.00	0.00	0.16	0.14	0.00	0.00				0.02	0.24	0.24
Avail Cap(c_a), veh/h	0	0	995	936	0	0				1393	2638	1441
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	0.00	1.00	0.99	0.00	0.00				0.96	0.96	0.96
Uniform Delay (d), s/veh	0.0	0.0	37.9	38.3	0.0	0.0				4.5	9.0	9.0
Incr Delay (d2), s/veh	0.0	0.0	1.1	0.4	0.0	0.0				0.0	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.3	0.8	0.0	0.0				0.7	9.3	10.1
LnGrp Delay(d),s/veh	0.0	0.0	39.0	38.6	0.0	0.0				4.5	9.2	9.3
LnGrp LOS			D	D						A	A	A
Approach Vol, veh/h		8			19						1007	
Approach Delay, s/veh		39.0			38.6						9.1	
Approach LOS		D			D						A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		72.7		7.3				7.3				
Change Period (Y+Rc), s		5.0		5.0				5.0				
Max Green Setting (Gmax), s		25.4		44.6				44.6				
Max Q Clear Time (g_c+I1), s		14.6		3.3				2.3				
Green Ext Time (p_c), s		0.3		0.1				0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			9.9									
HCM 2010 LOS			A									

Lanes, Volumes, Timings
28: Main St & Sample St

Existing Network - 2014 AM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↘	↑↑↑	↖
Volume (vph)	0	793	75	224	489	0	0	0	0	277	478	69
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	20%	20%	20%	20%	20%	20%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type		NA		pm+pt	NA					Perm	NA	Perm
Protected Phases		8		7	4						2	
Permitted Phases				4						2		2
Detector Phase		8		7	4					2	2	2
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	5.0
Minimum Split (s)		25.2		10.2	28.2					28.5	28.5	28.5
Total Split (s)		33.6		17.6	51.2					28.8	28.8	28.8
Total Split (%)		42.0%		22.0%	64.0%					36.0%	36.0%	36.0%
Yellow Time (s)		3.2		3.2	3.2					3.7	3.7	3.7
All-Red Time (s)		2.0		2.0	2.0					1.8	1.8	1.8
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)		5.2		5.2	5.2					5.5	5.5	5.5
Lead/Lag		Lead		Lag								
Lead-Lag Optimize?												
Recall Mode		None		None	None					C-Max	C-Max	C-Max

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 11.2 (14%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 28: Main St & Sample St



HCM 2010 Signalized Intersection Summary
28: Main St & Sample St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	793	75	224	489	0	0	0	0	277	478	69
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1583	1900	1583	1583	0				1712	1712	1712
Adj Flow Rate, veh/h	0	871	73	246	537	0				304	525	2
Adj No. of Lanes	0	2	0	1	2	0				1	3	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	20	20	20	20	0				11	11	11
Cap, veh/h	0	952	80	284	1590	0				551	1579	492
Arrive On Green	0.00	0.23	0.23	0.25	1.00	0.00				0.11	0.11	0.11
Sat Flow, veh/h	0	2890	236	1508	3088	0				1630	4673	1455
Grp Volume(v), veh/h	0	466	478	246	537	0				304	525	2
Grp Sat Flow(s),veh/h/ln	0	1504	1542	1508	1504	0				1630	1558	1455
Q Serve(g_s), s	0.0	24.2	24.2	7.0	0.0	0.0				14.1	8.3	0.1
Cycle Q Clear(g_c), s	0.0	24.2	24.2	7.0	0.0	0.0				14.1	8.3	0.1
Prop In Lane	0.00		0.15	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	510	522	284	1590	0				551	1579	492
V/C Ratio(X)	0.00	0.91	0.91	0.87	0.34	0.00				0.55	0.33	0.00
Avail Cap(c_a), veh/h	0	534	547	329	1730	0				551	1579	492
HCM Platoon Ratio	1.00	0.67	0.67	2.00	2.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	0.90	0.90	0.81	0.81	0.00				0.98	0.98	0.98
Uniform Delay (d), s/veh	0.0	29.8	29.8	27.5	0.0	0.0				29.8	27.2	23.6
Incr Delay (d2), s/veh	0.0	18.2	17.9	14.4	0.1	0.0				3.9	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	18.1	18.5	9.7	0.0	0.0				11.3	6.6	0.1
LnGrp Delay(d),s/veh	0.0	48.0	47.7	42.0	0.1	0.0				33.7	27.8	23.6
LnGrp LOS		D	D	D	A					C	C	C
Approach Vol, veh/h		944			783						831	
Approach Delay, s/veh		47.9			13.2						29.9	
Approach LOS		D			B						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		32.5		47.5			15.2	32.3				
Change Period (Y+Rc), s		5.5		* 5.2			* 5.2	* 5.2				
Max Green Setting (Gmax), s		23.3		* 46			* 12	* 28				
Max Q Clear Time (g_c+I1), s		16.1		2.0			9.0	26.2				
Green Ext Time (p_c), s		0.3		2.7			1.0	0.9				
Intersection Summary												
HCM 2010 Ctrl Delay			31.4									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
29: Main St & Broadway St

Existing Network - 2014 AM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔↔↔	
Volume (vph)	0	12	8	11	5	0	0	0	0	33	743	5
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4						2	
Permitted Phases				4						2		
Minimum Split (s)		24.2		24.2	24.2					23.7	23.7	
Total Split (s)		28.0		28.0	28.0					52.0	52.0	
Total Split (%)		35.0%		35.0%	35.0%					65.0%	65.0%	
Yellow Time (s)		3.2		3.2	3.2					3.7	3.7	
All-Red Time (s)		2.0		2.0	2.0					1.5	1.5	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.2			5.2						5.2	

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 44.8 (56%), Referenced to phase 2:SBTL, Start of Green

Natural Cycle: 50


















Control Type: Pretimed

Splits and Phases: 29: Main St & Broadway St



HCM 2010 Signalized Intersection Summary
29: Main St & Broadway St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	12	8	11	5	0	0	0	0	33	743	5
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1900	1976	1976	1900	0				1900	1712	1900
Adj Flow Rate, veh/h	0	14	2	13	6	0				38	854	5
Adj No. of Lanes	0	1	0	0	1	0				0	3	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87				0.87	0.87	0.87
Percent Heavy Veh, %	0	4	4	4	4	0				0	11	0
Cap, veh/h	0	464	66	364	155	0				116	2773	17
Arrive On Green	0.00	0.28	0.28	0.28	0.28	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	1627	232	1013	544	0				198	4740	29
Grp Volume(v), veh/h	0	0	16	19	0	0				327	272	298
Grp Sat Flow(s),veh/h/ln	0	0	1859	1557	0	0				1702	1558	1707
Q Serve(g_s), s	0.0	0.0	0.5	0.0	0.0	0.0				13.2	12.0	12.0
Cycle Q Clear(g_c), s	0.0	0.0	0.5	0.6	0.0	0.0				13.2	12.0	12.0
Prop In Lane	0.00		0.12	0.68		0.00				0.12		0.02
Lane Grp Cap(c), veh/h	0	0	530	520	0	0				996	911	998
V/C Ratio(X)	0.00	0.00	0.03	0.04	0.00	0.00				0.33	0.30	0.30
Avail Cap(c_a), veh/h	0	0	530	520	0	0				996	911	998
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	20.6	20.7	0.0	0.0				18.7	18.2	18.2
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.1	0.0	0.0				0.9	0.8	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.5	0.6	0.0	0.0				10.7	9.2	9.9
LnGrp Delay(d),s/veh	0.0	0.0	20.7	20.8	0.0	0.0				19.6	19.1	19.0
LnGrp LOS			C	C						B	B	B
Approach Vol, veh/h		16			19						897	
Approach Delay, s/veh		20.7			20.8						19.2	
Approach LOS		C			C						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		52.0		28.0				28.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 47		* 23				* 23				
Max Q Clear Time (g_c+I1), s		15.2		2.6				2.5				
Green Ext Time (p_c), s		0.8		0.0				0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			19.3									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
30: Main St & Indiana Ave

Existing Network - 2014 AM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑	↑	↑						↑↑↑	↑
Volume (vph)	0	241	49	16	116	0	0	0	0	32	682	28
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	13%	13%	13%	11%	11%	11%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type		NA	Perm	Perm	NA					Perm	NA	Perm
Protected Phases		8			4						2	
Permitted Phases			8	4						2		2
Minimum Split (s)		26.2	26.2	26.2	26.2					23.7	23.7	23.7
Total Split (s)		28.0	28.0	28.0	28.0					52.0	52.0	52.0
Total Split (%)		35.0%	35.0%	35.0%	35.0%					65.0%	65.0%	65.0%
Yellow Time (s)		3.2	3.2	3.2	3.2					3.7	3.7	3.7
All-Red Time (s)		2.0	2.0	2.0	2.0					1.4	1.4	1.4
Lost Time Adjust (s)		0.0	0.0	0.0	0.0						0.0	0.0
Total Lost Time (s)		5.2	5.2	5.2	5.2						5.1	5.1

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

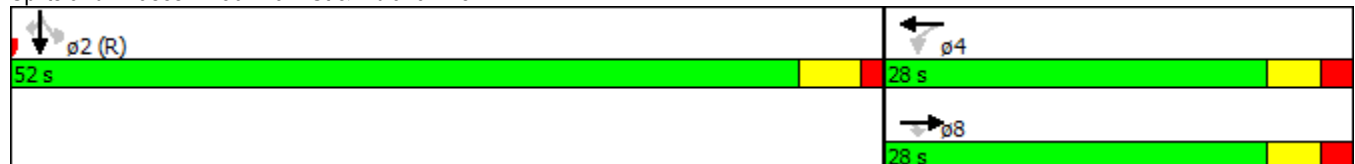
Actuated Cycle Length: 80

Offset: 59.2 (74%), Referenced to phase 2:SBTL, Start of Green

Natural Cycle: 50



















Control Type: Pretimed

Splits and Phases: 30: Main St & Indiana Ave



HCM 2010 Signalized Intersection Summary
30: Main St & Indiana Ave

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	241	49	16	116	0	0	0	0	32	682	28
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1681	1681	1712	1712	0				1900	1712	1712
Adj Flow Rate, veh/h	0	268	14	18	129	0				36	758	19
Adj No. of Lanes	0	1	1	1	1	0				0	3	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90				0.90	0.90	0.90
Percent Heavy Veh, %	0	13	13	11	11	0				11	11	11
Cap, veh/h	0	479	407	240	488	0				120	2703	853
Arrive On Green	0.00	0.28	0.28	0.57	0.57	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	1681	1429	1004	1712	0				206	4611	1455
Grp Volume(v), veh/h	0	268	14	18	129	0				298	496	19
Grp Sat Flow(s),veh/h/ln	0	1681	1429	1004	1712	0				1701	1558	1455
Q Serve(g_s), s	0.0	10.8	0.6	1.0	3.1	0.0				12.0	10.8	0.8
Cycle Q Clear(g_c), s	0.0	10.8	0.6	11.9	3.1	0.0				12.0	10.8	0.8
Prop In Lane	0.00		1.00	1.00		0.00				0.12		1.00
Lane Grp Cap(c), veh/h	0	479	407	240	488	0				997	1826	853
V/C Ratio(X)	0.00	0.56	0.03	0.07	0.26	0.00				0.30	0.27	0.02
Avail Cap(c_a), veh/h	0	479	407	240	488	0				997	1826	853
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	24.3	20.7	18.8	13.0	0.0				18.2	17.7	13.7
Incr Delay (d2), s/veh	0.0	4.7	0.2	0.6	1.3	0.0				0.8	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	9.5	0.4	0.6	2.9	0.0				9.9	8.3	0.6
LnGrp Delay(d),s/veh	0.0	29.0	20.8	19.4	14.3	0.0				19.0	18.1	13.7
LnGrp LOS		C	C	B	B					B	B	B
Approach Vol, veh/h		282			147						813	
Approach Delay, s/veh		28.6			14.9						18.3	
Approach LOS		C			B						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		52.0		28.0				28.0				
Change Period (Y+Rc), s		* 5.1		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 47		* 23				* 23				
Max Q Clear Time (g_c+I1), s		14.0		13.9				12.8				
Green Ext Time (p_c), s		0.9		0.4				0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			20.2									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
31: Main St & Calvert St

Existing Network - 2014 AM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔↔↔	
Volume (vph)	0	78	21	16	47	0	0	0	0	26	726	13
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4						2	
Permitted Phases				4						2		
Minimum Split (s)		26.2		26.2	26.2					25.7	25.7	
Total Split (s)		28.0		28.0	28.0					52.0	52.0	
Total Split (%)		35.0%		35.0%	35.0%					65.0%	65.0%	
Yellow Time (s)		3.2		3.2	3.2					3.7	3.7	
All-Red Time (s)		2.0		2.0	2.0					1.4	1.4	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.2			5.2						5.1	

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

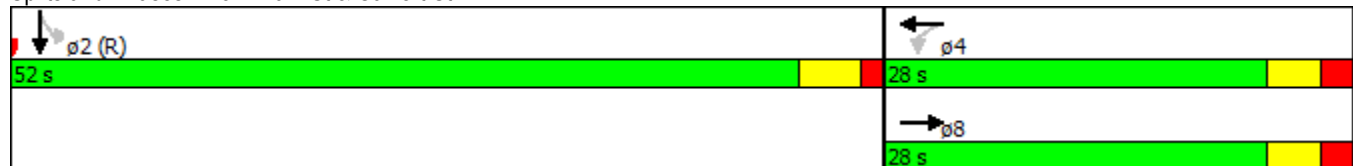
Actuated Cycle Length: 80

Offset: 3.2 (4%), Referenced to phase 2:SBTL, Start of Green

Natural Cycle: 55


















Control Type: Pretimed

Splits and Phases: 31: Main St & Calvert St



HCM 2010 Signalized Intersection Summary
31: Main St & Calvert St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										  		
Volume (veh/h)	0	78	21	16	47	0	0	0	0	26	726	13
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1900	1976	1976	1900	0				1900	1712	1900
Adj Flow Rate, veh/h	0	88	12	18	53	0				29	816	13
Adj No. of Lanes	0	1	0	0	1	0				0	3	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	0	4	4	4	4	0				0	11	0
Cap, veh/h	0	467	64	149	408	0				92	2770	46
Arrive On Green	0.00	0.28	0.28	0.28	0.28	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	1637	223	325	1430	0				158	4724	78
Grp Volume(v), veh/h	0	0	100	71	0	0				313	260	284
Grp Sat Flow(s),veh/h/ln	0	0	1861	1756	0	0				1704	1558	1698
Q Serve(g_s), s	0.0	0.0	3.2	0.0	0.0	0.0				12.6	11.4	11.4
Cycle Q Clear(g_c), s	0.0	0.0	3.2	2.2	0.0	0.0				12.6	11.4	11.4
Prop In Lane	0.00		0.12	0.25		0.00				0.09		0.05
Lane Grp Cap(c), veh/h	0	0	530	557	0	0				999	913	995
V/C Ratio(X)	0.00	0.00	0.19	0.13	0.00	0.00				0.31	0.29	0.29
Avail Cap(c_a), veh/h	0	0	530	557	0	0				999	913	995
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	21.6	21.2	0.0	0.0				18.4	18.0	18.0
Incr Delay (d2), s/veh	0.0	0.0	0.8	0.5	0.0	0.0				0.8	0.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	3.2	2.2	0.0	0.0				10.3	8.8	9.5
LnGrp Delay(d),s/veh	0.0	0.0	22.4	21.7	0.0	0.0				19.3	18.7	18.7
LnGrp LOS			C	C						B	B	B
Approach Vol, veh/h		100			71						858	
Approach Delay, s/veh		22.4			21.7						18.9	
Approach LOS		C			C						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		52.0		28.0				28.0				
Change Period (Y+Rc), s		* 5.1		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 47		* 23				* 23				
Max Q Clear Time (g_c+I1), s		14.6		4.2				5.2				
Green Ext Time (p_c), s		0.8		0.2				0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			19.4									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
32: Main St & Ewing Ave

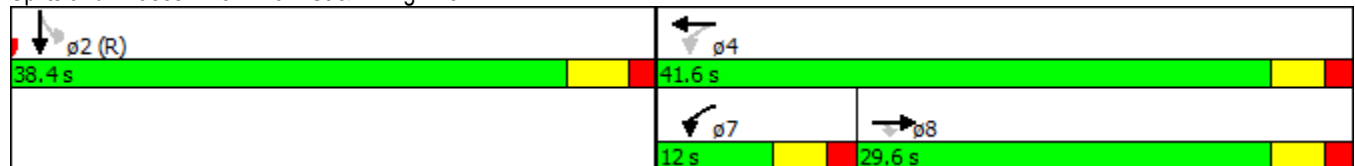
Existing Network - 2014 AM
2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	142	64	34	123	0	0	0	0	66	625	63
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	25%	25%	25%	5%	5%	5%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		8		7	4						2	
Permitted Phases			8	4						2		
Minimum Split (s)		25.0	25.0	10.0	25.0					26.3	26.3	
Total Split (s)		29.6	29.6	12.0	41.6					38.4	38.4	
Total Split (%)		37.0%	37.0%	15.0%	52.0%					48.0%	48.0%	
Yellow Time (s)		3.2	3.2	3.2	3.2					3.7	3.7	
All-Red Time (s)		1.8	1.8	1.8	1.8					1.6	1.6	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0						0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0						5.3	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes									

Intersection Summary




















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 0 (0%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 32: Main St & Ewing Ave



HCM 2010 Signalized Intersection Summary
32: Main St & Ewing Ave

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	142	64	34	123	0	0	0	0	66	625	63
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1520	1520	1810	1810	0				1900	1712	1900
Adj Flow Rate, veh/h	0	167	0	40	145	0				78	735	60
Adj No. of Lanes	0	1	1	1	1	0				0	3	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85				0.85	0.85	0.85
Percent Heavy Veh, %	0	25	25	5	5	0				0	11	0
Cap, veh/h	0	467	397	503	828	0				171	1713	144
Arrive On Green	0.00	0.31	0.00	0.17	0.91	0.00				0.14	0.14	0.14
Sat Flow, veh/h	0	1520	1292	1723	1810	0				412	4140	347
Grp Volume(v), veh/h	0	167	0	40	145	0				320	268	285
Grp Sat Flow(s),veh/h/ln	0	1520	1292	1723	1810	0				1691	1558	1650
Q Serve(g_s), s	0.0	6.8	0.0	1.0	0.6	0.0				13.9	12.6	12.7
Cycle Q Clear(g_c), s	0.0	6.8	0.0	1.0	0.6	0.0				13.9	12.6	12.7
Prop In Lane	0.00		1.00	1.00		0.00				0.24		0.21
Lane Grp Cap(c), veh/h	0	467	397	503	828	0				700	644	683
V/C Ratio(X)	0.00	0.36	0.00	0.08	0.18	0.00				0.46	0.42	0.42
Avail Cap(c_a), veh/h	0	467	397	503	828	0				700	644	683
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	0.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	21.5	0.0	12.9	1.9	0.0				26.3	25.7	25.7
Incr Delay (d2), s/veh	0.0	2.1	0.0	0.3	0.5	0.0				2.1	2.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	5.7	0.0	0.9	0.7	0.0				11.3	9.7	10.2
LnGrp Delay(d),s/veh	0.0	23.7	0.0	13.2	2.3	0.0				28.4	27.7	27.6
LnGrp LOS		C		B	A					C	C	C
Approach Vol, veh/h		167			185						873	
Approach Delay, s/veh		23.7			4.7						27.9	
Approach LOS		C			A						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		38.4		41.6			12.0	29.6				
Change Period (Y+Rc), s		* 5.3		5.0			5.0	5.0				
Max Green Setting (Gmax), s		* 33		36.6			7.0	24.6				
Max Q Clear Time (g_c+I1), s		15.9		2.6			3.0	8.8				
Green Ext Time (p_c), s		0.8		0.3			0.0	0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			23.8									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 33: Main St & Chippewa Ave

Existing Network - 2014 AM
 2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻		↻	↻		↻		↻	↻↻	↻	↻
Volume (vph)	0	32	7	7	22	0	0	0	29	474	141	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA		Prot		Prot	Split	NA	Prot
Protected Phases		8			4		5		5	6	6	6
Permitted Phases				4					5			
Minimum Split (s)		22.2		22.2	22.2		22.9		22.9	24.0	24.0	24.0
Total Split (s)		22.4		22.4	22.4		23.2		23.2	34.4	34.4	34.4
Total Split (%)		28.0%		28.0%	28.0%		29.0%		29.0%	43.0%	43.0%	43.0%
Yellow Time (s)		3.2		3.2	3.2		3.2		3.2	3.7	3.7	3.7
All-Red Time (s)		2.0		2.0	2.0		1.7		1.7	2.3	2.3	2.3
Lost Time Adjust (s)		0.0		0.0	0.0		0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)		5.2		5.2	5.2		4.9		4.9	6.0	6.0	6.0
Lead/Lag							Lead		Lead	Lag	Lag	Lag
Lead-Lag Optimize?												

Intersection Summary





















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 40.8 (51%), Referenced to phase 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 33: Main St & Chippewa Ave



HCM 2010 Signalized Intersection Summary
33: Main St & Chippewa Ave

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	32	7	7	22	0	0	0	29	474	141	27
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1900	1976	1827	1827	0	1712	0	1712	1712	1712	1712
Adj Flow Rate, veh/h	0	36	1	8	24	0	0	0	32	527	157	30
Adj No. of Lanes	0	1	0	1	1	0	1	0	1	2	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	4	4	4	4	0	11	0	11	11	11	11
Cap, veh/h	0	557	15	514	553	0	0	0	0	1581	856	727
Arrive On Green	0.00	0.30	0.30	0.30	0.30	0.00	0.00	0.00	0.00	0.50	0.50	0.50
Sat Flow, veh/h	0	1840	51	1339	1827	0	0	0	0	3163	1712	1455
Grp Volume(v), veh/h	0	0	37	8	24	0	0	0.0	0	527	157	30
Grp Sat Flow(s),veh/h/ln	0	0	1891	1339	1827	0	0	0	0	1581	1712	1455
Q Serve(g_s), s	0.0	0.0	0.8	0.2	0.5	0.0	0.0	0.0	0.0	5.7	2.9	0.6
Cycle Q Clear(g_c), s	0.0	0.0	0.8	1.0	0.5	0.0	0.0	0.0	0.0	5.7	2.9	0.6
Prop In Lane	0.00		0.03	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	0	573	514	553	0	0	0	0	1581	856	727
V/C Ratio(X)	0.00	0.00	0.06	0.02	0.04	0.00	0.00	0.00	0.00	0.33	0.18	0.04
Avail Cap(c_a), veh/h	0	0	573	514	553	0	0	0	0	1581	856	727
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	14.1	14.4	14.0	0.0	0.0	0.0	0.0	8.5	7.8	7.2
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.6	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.8	0.2	0.5	0.0	0.0	0.0	0.0	4.6	2.6	0.5
LnGrp Delay(d),s/veh	0.0	0.0	14.3	14.5	14.1	0.0	0.0	0.0	0.0	9.1	8.3	7.4
LnGrp LOS			B	B	B					A	A	A
Approach Vol, veh/h		37			32						714	
Approach Delay, s/veh		14.3			14.2						8.8	
Approach LOS		B			B						A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				22.4		34.4		22.4				
Change Period (Y+Rc), s				* 5.2		6.0		* 5.2				
Max Green Setting (Gmax), s				* 17		28.4		* 17				
Max Q Clear Time (g_c+I1), s				3.0		7.7		2.8				
Green Ext Time (p_c), s				0.0		0.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			9.3									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
34: Michigan St & North Shore Dr

Existing Network - 2014 AM
2/25/2015

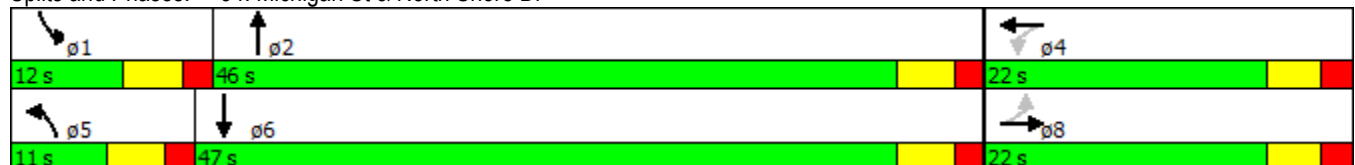


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↕	
Volume (vph)	1	98	87	89	45	29	34	561	87	55	1079	2
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4								
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.2	21.2		21.2	21.2		9.3	21.3		9.3	21.3	
Total Split (s)	22.0	22.0		22.0	22.0		11.0	46.0		12.0	47.0	
Total Split (%)	27.5%	27.5%		27.5%	27.5%		13.8%	57.5%		15.0%	58.8%	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.5	3.5		3.5	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.2	5.2		5.2	5.2		5.3	5.3		5.3	5.3	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	

Intersection Summary





















Cycle Length: 80
 Actuated Cycle Length: 76.8
 Natural Cycle: 70
 Control Type: Semi Act-Uncoord

Splits and Phases: 34: Michigan St & North Shore Dr



HCM 2010 Signalized Intersection Summary
34: Michigan St & North Shore Dr

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	98	87	89	45	29	34	561	87	55	1079	2
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1712	1712	1900	1712	1712	1900
Adj Flow Rate, veh/h	1	120	106	109	55	35	41	684	106	67	1316	2
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	4	4	4	4	4	4	11	11	11	11	11	11
Cap, veh/h	315	195	172	202	227	145	49	1488	230	83	1825	3
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.03	0.53	0.53	0.05	0.55	0.55
Sat Flow, veh/h	1276	896	791	1128	1045	665	1630	2824	437	1630	3332	5
Grp Volume(v), veh/h	1	0	226	109	0	90	41	394	396	67	642	676
Grp Sat Flow(s),veh/h/ln	1276	0	1687	1128	0	1710	1630	1626	1635	1630	1626	1711
Q Serve(g_s), s	0.1	0.0	9.3	7.5	0.0	3.4	1.9	11.7	11.7	3.1	22.8	22.8
Cycle Q Clear(g_c), s	3.4	0.0	9.3	16.8	0.0	3.4	1.9	11.7	11.7	3.1	22.8	22.8
Prop In Lane	1.00		0.47	1.00		0.39	1.00		0.27	1.00		0.00
Lane Grp Cap(c), veh/h	315	0	367	202	0	372	49	857	861	83	890	937
V/C Ratio(X)	0.00	0.00	0.62	0.54	0.00	0.24	0.83	0.46	0.46	0.81	0.72	0.72
Avail Cap(c_a), veh/h	315	0	367	202	0	372	120	857	861	141	890	937
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.4	0.0	27.3	34.9	0.0	25.0	37.2	11.4	11.4	36.3	13.1	13.1
Incr Delay (d2), s/veh	0.0	0.0	3.1	2.9	0.0	0.3	28.1	1.8	1.8	16.5	5.0	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	8.2	4.4	0.0	2.9	2.3	9.4	9.5	3.2	17.0	17.6
LnGrp Delay(d),s/veh	26.4	0.0	30.4	37.8	0.0	25.3	65.4	13.2	13.2	52.8	18.1	17.9
LnGrp LOS	C		C	D		C	E	B	B	D	B	B
Approach Vol, veh/h		227			199			831			1385	
Approach Delay, s/veh		30.4			32.1			15.7			19.7	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	46.0		22.0	7.6	47.6		22.0				
Change Period (Y+Rc), s	* 5.3	* 5.3		* 5.2	* 5.3	* 5.3		* 5.2				
Max Green Setting (Gmax), s	* 6.7	* 41		* 17	* 5.7	* 42		* 17				
Max Q Clear Time (g_c+I1), s	5.1	13.7		18.8	3.9	24.8		11.3				
Green Ext Time (p_c), s	0.0	17.5		0.0	0.0	12.5		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay			20.3									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
35: Michigan St & Bartlett St

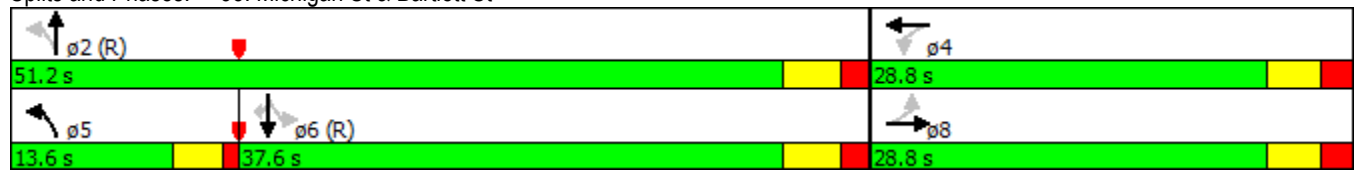
Existing Network - 2014 AM
2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	82	16	70	7	1	8	117	533	16	37	983	150
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Parking (#/hr)					3	3						
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		6
Detector Phase	8	8		4	4		5	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		4.0	7.0		7.0	7.0	7.0
Minimum Split (s)	27.2	27.2		27.2	27.2		8.0	23.5		23.5	23.5	23.5
Total Split (s)	28.8	28.8		28.8	28.8		13.6	51.2		37.6	37.6	37.6
Total Split (%)	36.0%	36.0%		36.0%	36.0%		17.0%	64.0%		47.0%	47.0%	47.0%
Yellow Time (s)	3.2	3.2		3.2	3.2		3.0	3.5		3.5	3.5	3.5
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.8		1.8	1.8	1.8
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.2	5.2		5.2	5.2		4.0	5.3		5.3	5.3	5.3
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max

Intersection Summary






















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 23 (29%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated

Splits and Phases: 35: Michigan St & Bartlett St



HCM 2010 Signalized Intersection Summary
35: Michigan St & Bartlett St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	82	16	70	7	1	8	117	533	16	37	983	150
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1827	1754	1824	1712	1712	1900	1712	1712	1712
Adj Flow Rate, veh/h	101	20	23	9	1	3	144	658	18	46	1214	111
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	4	4	4	4	4	4	11	11	11	11	11	11
Cap, veh/h	226	76	87	188	33	100	351	2495	68	559	2187	978
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.10	1.00	1.00	0.67	0.67	0.67
Sat Flow, veh/h	1435	776	893	1332	343	1028	1630	3234	88	698	3252	1455
Grp Volume(v), veh/h	101	0	43	9	0	4	144	331	345	46	1214	111
Grp Sat Flow(s),veh/h/ln	1435	0	1669	1332	0	1371	1630	1626	1696	698	1626	1455
Q Serve(g_s), s	5.5	0.0	1.9	0.5	0.0	0.2	2.1	0.0	0.0	1.8	15.6	2.2
Cycle Q Clear(g_c), s	5.7	0.0	1.9	2.4	0.0	0.2	2.1	0.0	0.0	1.8	15.6	2.2
Prop In Lane	1.00		0.53	1.00		0.75	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	226	0	162	188	0	133	351	1254	1308	559	2187	978
V/C Ratio(X)	0.45	0.00	0.26	0.05	0.00	0.03	0.41	0.26	0.26	0.08	0.56	0.11
Avail Cap(c_a), veh/h	509	0	492	451	0	404	466	1254	1308	559	2187	978
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.95	0.95	0.95	0.60	0.60	0.60
Uniform Delay (d), s/veh	35.3	0.0	33.5	34.6	0.0	32.7	5.6	0.0	0.0	4.6	6.9	4.6
Incr Delay (d2), s/veh	1.0	0.0	0.6	0.1	0.0	0.1	0.3	0.5	0.5	0.2	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.0	0.0	1.6	0.3	0.0	0.1	1.9	0.3	0.3	0.7	10.5	1.6
LnGrp Delay(d),s/veh	36.3	0.0	34.1	34.7	0.0	32.8	5.8	0.5	0.5	4.8	7.5	4.8
LnGrp LOS	D		C	C		C	A	A	A	A	A	A
Approach Vol, veh/h		144			13			820			1371	
Approach Delay, s/veh		35.6			34.1			1.4			7.2	
Approach LOS		D			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		67.0		13.0	7.9	59.1		13.0				
Change Period (Y+Rc), s		* 5.3		* 5.2	4.0	* 5.3		* 5.2				
Max Green Setting (Gmax), s		* 46		* 24	9.6	* 32		* 24				
Max Q Clear Time (g_c+I1), s		2.0		4.4	4.1	17.6		7.7				
Green Ext Time (p_c), s		2.9		0.4	0.0	2.8		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			7.1									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
36: Michigan St & Navarre St

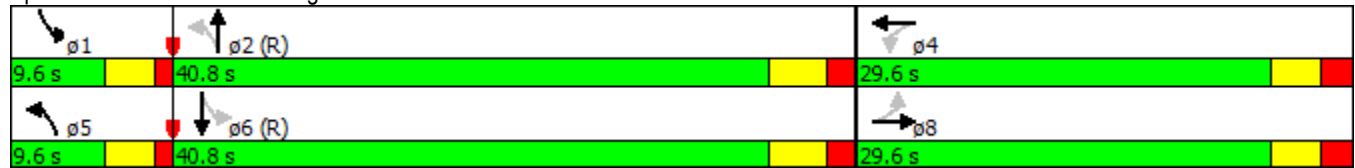
Existing Network - 2014 AM
2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	9	0	9	27	1	4	92	655	57	20	970	63
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Parking (#/hr)				5	5	5						
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		4.0	7.0		4.0	7.0	
Minimum Split (s)	28.0	28.0		28.0	28.0		8.0	22.7		8.0	22.7	
Total Split (s)	29.6	29.6		29.6	29.6		9.6	40.8		9.6	40.8	
Total Split (%)	37.0%	37.0%		37.0%	37.0%		12.0%	51.0%		12.0%	51.0%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.5		3.0	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.8		1.0	1.8	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.0		4.0	5.3		4.0	5.3	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary





















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 22 (28%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 36: Michigan St & Navarre St



HCM 2010 Signalized Intersection Summary
36: Michigan St & Navarre St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	0	9	27	1	4	92	655	57	20	970	63
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1976	1900	1976	1712	1712	1900	1712	1712	1900
Adj Flow Rate, veh/h	12	0	12	35	1	1	118	840	63	26	1244	73
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	4	4	4	4	4	4	11	11	11	11	11	11
Cap, veh/h	192	0	101	156	4	2	437	2252	169	484	2217	130
Arrive On Green	0.06	0.00	0.06	0.06	0.06	0.06	0.05	0.73	0.73	0.04	1.00	1.00
Sat Flow, veh/h	1382	0	1553	1057	66	31	1630	3067	230	1630	3123	183
Grp Volume(v), veh/h	12	0	12	37	0	0	118	445	458	26	647	670
Grp Sat Flow(s),veh/h/ln	1382	0	1553	1154	0	0	1630	1626	1671	1630	1626	1679
Q Serve(g_s), s	0.0	0.0	0.6	2.1	0.0	0.0	1.5	8.0	8.0	0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	0.6	2.7	0.0	0.0	1.5	8.0	8.0	0.3	0.0	0.0
Prop In Lane	1.00		1.00	0.95		0.03	1.00		0.14	1.00		0.11
Lane Grp Cap(c), veh/h	192	0	101	163	0	0	437	1194	1227	484	1154	1192
V/C Ratio(X)	0.06	0.00	0.12	0.23	0.00	0.00	0.27	0.37	0.37	0.05	0.56	0.56
Avail Cap(c_a), veh/h	527	0	478	468	0	0	475	1194	1227	562	1154	1192
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.79	0.79	0.79
Uniform Delay (d), s/veh	35.2	0.0	35.2	36.4	0.0	0.0	2.6	3.9	3.9	3.1	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.2	0.3	0.0	0.0	0.1	0.9	0.9	0.0	1.6	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	0.5	1.4	0.0	0.0	1.2	6.8	6.9	0.3	0.9	0.9
LnGrp Delay(d),s/veh	35.3	0.0	35.4	36.7	0.0	0.0	2.7	4.8	4.8	3.1	1.6	1.5
LnGrp LOS	D		D	D			A	A	A	A	A	A
Approach Vol, veh/h		24			37			1021			1343	
Approach Delay, s/veh		35.4			36.7			4.5			1.6	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	64.0		10.2	7.7	62.1		10.2				
Change Period (Y+Rc), s	4.0	* 5.3		5.0	4.0	* 5.3		5.0				
Max Green Setting (Gmax), s	5.6	* 36		24.6	5.6	* 36		24.6				
Max Q Clear Time (g_c+I1), s	2.3	10.0		4.7	3.5	2.0		2.6				
Green Ext Time (p_c), s	0.0	2.9		0.1	0.0	2.9		0.1				

Intersection Summary

HCM 2010 Ctrl Delay	3.7
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.







Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕↗		↖	
Volume (vph)	0	6	825	42	4	0
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Heavy Vehicles (%)	4%	4%	11%	11%	11%	11%
Parking (#/hr)				5		
Shared Lane Traffic (%)						
Turn Type		Prot	NA		Prot	
Protected Phases		3	2		1	
Permitted Phases						
Detector Phase		3	2		1	
Switch Phase						
Minimum Initial (s)		5.0	5.0		5.0	
Minimum Split (s)		10.2	25.2		9.0	
Total Split (s)		22.4	44.8		12.8	
Total Split (%)		28.0%	56.0%		16.0%	
Yellow Time (s)		3.7	3.7		3.0	
All-Red Time (s)		1.5	1.5		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.2	5.2		4.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Recall Mode		None	C-Max		Min	

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 10.4 (13%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated

Splits and Phases: 37: Michigan St & Marion St



								
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Volume (veh/h)	0	6	825	42	4	0		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	0.88	1.00	1.00		
Adj Sat Flow, veh/h/ln	0	1644	1541	1710	1602	0		
Adj Flow Rate, veh/h	0	8	1100	51	5	0		
Adj No. of Lanes	0	1	2	0	1	0		
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75		
Percent Heavy Veh, %	0	4	11	11	11	0		
Cap, veh/h	0	0	2193	102	95	0		
Arrive On Green	0.00	0.00	0.82	0.82	0.06	0.00		
Sat Flow, veh/h	0		2743	124	1526	5		
Grp Volume(v), veh/h	0.0		604	547	5	35.4		
Grp Sat Flow(s),veh/h/ln			1464	1326	1526	D		
Q Serve(g_s), s			10.0	10.0	0.2			
Cycle Q Clear(g_c), s			10.0	10.0	0.2			
Prop In Lane				0.09	1.00			
Lane Grp Cap(c), veh/h			1204	1091	95			
V/C Ratio(X)			0.50	0.50	0.05			
Avail Cap(c_a), veh/h			1204	1091	168			
HCM Platoon Ratio			1.00	1.00	1.00			
Upstream Filter(I)			1.00	1.00	1.00			
Uniform Delay (d), s/veh			2.1	2.1	35.3			
Incr Delay (d2), s/veh			1.5	1.6	0.1			
Initial Q Delay(d3),s/veh			0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln			7.8	7.2	0.2			
LnGrp Delay(d),s/veh			3.6	3.8	35.4			
LnGrp LOS			A	A	D			
Approach Vol, veh/h			1151					
Approach Delay, s/veh			3.7					
Approach LOS			A					
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2						
Phs Duration (G+Y+Rc), s	9.0	71.0						
Change Period (Y+Rc), s	4.0	* 5.2						
Max Green Setting (Gmax), s	8.8	* 40						
Max Q Clear Time (g_c+I1), s	2.2	12.0						
Green Ext Time (p_c), s	0.0	1.4						
Intersection Summary								
HCM 2010 Ctrl Delay			3.9					
HCM 2010 LOS			A					
Notes								
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.								

Lanes, Volumes, Timings
 38: St. Joseph St/Michigan St & LaSalle Ave

Existing Network - 2014 AM
 2/25/2015

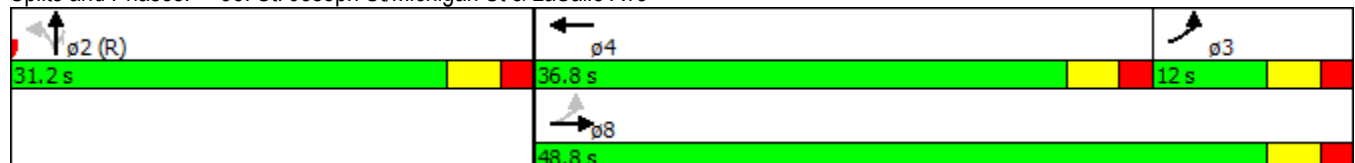


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖	↗		↖	↗			
Volume (vph)	88	564	0	0	438	151	191	733	146	0	0	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA			NA		Perm	NA	Perm			
Protected Phases	3	8			4			2				
Permitted Phases	8						2		2			
Detector Phase	3	8			4		2	2	2			
Switch Phase												
Minimum Initial (s)	4.0	5.0			5.0		5.0	5.0	5.0			
Minimum Split (s)	9.2	29.2			29.2		26.2	26.2	26.2			
Total Split (s)	12.0	48.8			36.8		31.2	31.2	31.2			
Total Split (%)	15.0%	61.0%			46.0%		39.0%	39.0%	39.0%			
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2	3.2			
All-Red Time (s)	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)	5.2	5.2			5.2		5.2	5.2	5.2			
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?												
Recall Mode	None	Max			Max		C-Max	C-Max	C-Max			

Intersection Summary























Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 55.2 (69%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 38: St. Joseph St/Michigan St & LaSalle Ave



HCM 2010 Signalized Intersection Summary
 38: St. Joseph St/Michigan St & LaSalle Ave

Existing Network - 2014 AM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			   				
Volume (veh/h)	88	564	0	0	438	151	191	733	146	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1598	1598	0	0	1662	1710	1710	1541	1541			
Adj Flow Rate, veh/h	105	671	0	0	521	132	227	873	0			
Adj No. of Lanes	1	2	0	0	2	0	0	4	1			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84			
Percent Heavy Veh, %	7	7	0	0	7	7	11	11	11			
Cap, veh/h	359	1655	0	0	987	249	341	1435	426			
Arrive On Green	0.17	1.00	0.00	0.00	0.39	0.39	0.11	0.11	0.00			
Sat Flow, veh/h	1522	3116	0	0	2583	630	1049	4414	1309			
Grp Volume(v), veh/h	105	671	0	0	328	325	322	778	0			
Grp Sat Flow(s),veh/h/ln	1522	1518	0	0	1579	1551	1488	1325	1309			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	12.7	12.8	16.6	14.9	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	12.7	12.8	16.6	14.9	0.0			
Prop In Lane	1.00		0.00	0.00		0.41	0.70		1.00			
Lane Grp Cap(c), veh/h	359	1655	0	0	624	613	484	1292	426			
V/C Ratio(X)	0.29	0.41	0.00	0.00	0.53	0.53	0.67	0.60	0.00			
Avail Cap(c_a), veh/h	359	1655	0	0	624	613	484	1292	426			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	0.31	0.31	0.00	0.00	1.00	1.00	0.74	0.74	0.00			
Uniform Delay (d), s/veh	21.1	0.0	0.0	0.0	18.5	18.5	31.4	30.8	0.0			
Incr Delay (d2), s/veh	0.1	0.2	0.0	0.0	3.2	3.3	5.3	1.5	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	2.9	0.1	0.0	0.0	10.0	10.0	11.4	9.0	0.0			
LnGrp Delay(d),s/veh	21.1	0.2	0.0	0.0	21.6	21.8	36.7	32.3	0.0			
LnGrp LOS	C	A			C	C	D	C				
Approach Vol, veh/h		776			653			1100				
Approach Delay, s/veh		3.1			21.7			33.6				
Approach LOS		A			C			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4				8				
Phs Duration (G+Y+Rc), s		31.2	12.0	36.8				48.8				
Change Period (Y+Rc), s		* 5.2	* 5.2	* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 26	* 6.8	* 32				* 44				
Max Q Clear Time (g_c+I1), s		18.6	2.0	14.8				2.0				
Green Ext Time (p_c), s		0.6	0.4	0.2				0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			21.2									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
39: Michigan St & Colfax Ave

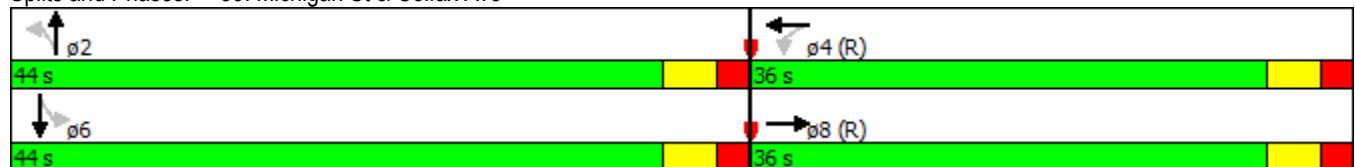
Existing Network - 2014 AM
2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	200	71	179	343	0	19	0	21	2	0	1
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	11%	11%	11%	11%	11%	11%
Parking (#/hr)		5	5									
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases				4			2			6		
Detector Phase		8		4	4		2	2		6		6
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0		5.0	5.0		5.0		5.0
Minimum Split (s)		20.0		22.6	22.6		25.2	25.2		25.2		25.2
Total Split (s)		36.0		36.0	36.0		44.0	44.0		44.0		44.0
Total Split (%)		45.0%		45.0%	45.0%		55.0%	55.0%		55.0%		55.0%
Yellow Time (s)		3.2		3.2	3.2		3.2	3.2		3.2		3.2
All-Red Time (s)		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
Total Lost Time (s)		5.2		5.2	5.2		5.2	5.2		5.2		5.2
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		C-Max		C-Max	C-Max		Ped	Ped		Ped		Ped

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 13.6 (17%), Referenced to phase 4:WBTL and 8:EBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 39: Michigan St & Colfax Ave



HCM 2010 Signalized Intersection Summary
39: Michigan St & Colfax Ave

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	200	71	179	343	0	19	0	21	2	0	1
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1662	1778	1598	1598	0	1778	1602	1778	1710	1541	1710
Adj Flow Rate, veh/h	0	263	73	236	451	0	25	0	10	3	0	1
Adj No. of Lanes	0	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	0	7	7	7	7	0	11	11	11	11	11	11
Cap, veh/h	0	914	254	787	1332	0	110	0	13	111	5	12
Arrive On Green	0.00	0.83	0.83	1.00	1.00	0.00	0.05	0.00	0.04	0.05	0.00	0.04
Sat Flow, veh/h	0	1096	304	892	1598	0	906	0	362	878	136	338
Grp Volume(v), veh/h	0	0	336	236	451	0	35	0	0	4	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1401	892	1598	0	1268	0	0	1352	0	0
Q Serve(g_s), s	0.0	0.0	4.2	2.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	4.2	6.1	0.0	0.0	2.1	0.0	0.0	0.2	0.0	0.0
Prop In Lane	0.00		0.22	1.00		0.00	0.71		0.29	0.75		0.25
Lane Grp Cap(c), veh/h	0	0	1168	787	1332	0	139	0	0	145	0	0
V/C Ratio(X)	0.00	0.00	0.29	0.30	0.34	0.00	0.25	0.00	0.00	0.03	0.00	0.00
Avail Cap(c_a), veh/h	0	0	1168	787	1332	0	701	0	0	679	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	0.60	0.60	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	1.5	0.2	0.0	0.0	37.8	0.0	0.0	36.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.6	0.6	0.4	0.0	0.7	0.0	0.0	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	3.2	0.9	0.3	0.0	1.4	0.0	0.0	0.2	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	2.1	0.8	0.4	0.0	38.5	0.0	0.0	36.9	0.0	0.0
LnGrp LOS			A	A	A		D			D		
Approach Vol, veh/h		336			687			35				4
Approach Delay, s/veh		2.1			0.5			38.5				36.9
Approach LOS		A			A			D				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		8.1		71.9		8.1		71.9				
Change Period (Y+Rc), s		* 5.2		* 5.2		* 5.2		* 5.2				
Max Green Setting (Gmax), s		* 39		* 31		* 39		* 31				
Max Q Clear Time (g_c+I1), s		4.1		8.1		2.2		6.2				
Green Ext Time (p_c), s		0.1		0.6		0.1		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			2.4									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
40: Michigan St & Washington St

Existing Network - 2014 AM
2/25/2015

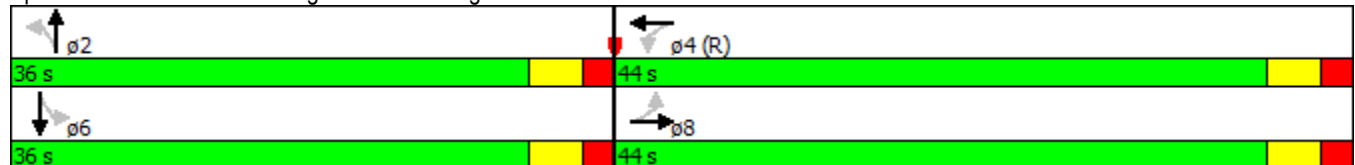


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	18	58	48	8	64	11	11	22	11	15	86	24
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)		5	5		5	5						
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6		6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	22.2	22.2		22.2	22.2		25.2	25.2		25.2		25.2
Total Split (s)	44.0	44.0		44.0	44.0		36.0	36.0		36.0		36.0
Total Split (%)	55.0%	55.0%		55.0%	55.0%		45.0%	45.0%		45.0%		45.0%
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2		3.2
All-Red Time (s)	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)	5.2	5.2		5.2	5.2		5.2	5.2		5.2		5.2
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		C-Max	C-Max		Ped	Ped		Ped		Ped

Intersection Summary




















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 41 (51%), Referenced to phase 4:WBTL, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated

Splits and Phases: 40: Michigan St & Washington St



HCM 2010 Signalized Intersection Summary
40: Michigan St & Washington St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	18	58	48	8	64	11	11	22	11	15	86	24
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1613	1613	1710	1613	1613	1710	1710	1541	1710	1778	1602	1778
Adj Flow Rate, veh/h	22	72	29	10	80	7	14	28	5	19	108	18
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	6	6	6	6	6	6	11	11	11	11	11	11
Cap, veh/h	915	715	288	900	956	84	91	128	19	66	150	23
Arrive On Green	0.75	0.75	0.75	0.75	0.75	0.75	0.13	0.12	0.12	0.04	0.04	0.04
Sat Flow, veh/h	1130	958	386	1116	1280	112	264	1041	155	122	1214	189
Grp Volume(v), veh/h	22	0	101	10	0	87	47	0	0	145	0	0
Grp Sat Flow(s),veh/h/ln	1130	0	1343	1116	0	1392	1461	0	0	1525	0	0
Q Serve(g_s), s	0.4	0.0	1.6	0.2	0.0	1.4	0.0	0.0	0.0	3.5	0.0	0.0
Cycle Q Clear(g_c), s	1.8	0.0	1.6	1.8	0.0	1.4	2.2	0.0	0.0	7.5	0.0	0.0
Prop In Lane	1.00		0.29	1.00		0.08	0.30		0.11	0.13		0.12
Lane Grp Cap(c), veh/h	915	0	1003	900	0	1039	250	0	0	250	0	0
V/C Ratio(X)	0.02	0.00	0.10	0.01	0.00	0.08	0.19	0.00	0.00	0.58	0.00	0.00
Avail Cap(c_a), veh/h	915	0	1003	900	0	1039	597	0	0	643	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	0.99	0.00	0.99	1.00	0.00	1.00	0.95	0.00	0.00	0.88	0.00	0.00
Uniform Delay (d), s/veh	3.0	0.0	2.8	3.0	0.0	2.7	31.6	0.0	0.0	37.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.0	0.0	0.2	0.3	0.0	0.0	1.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.0	1.2	0.1	0.0	1.0	1.7	0.0	0.0	5.8	0.0	0.0
LnGrp Delay(d),s/veh	3.0	0.0	3.0	3.1	0.0	2.9	31.9	0.0	0.0	38.6	0.0	0.0
LnGrp LOS	A		A	A		A	C			D		
Approach Vol, veh/h		123			97			47			145	
Approach Delay, s/veh		3.0			2.9			31.9			38.6	
Approach LOS		A			A			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		15.1		64.9		15.1		64.9				
Change Period (Y+Rc), s		* 5.2		* 5.2		* 5.2		* 5.2				
Max Green Setting (Gmax), s		* 31		* 39		* 31		* 39				
Max Q Clear Time (g_c+I1), s		4.2		3.8		9.5		3.8				
Green Ext Time (p_c), s		0.6		0.1		0.5		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			18.8									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
41: Michigan St & Jefferson Blvd

Existing Network - 2014 AM
2/25/2015

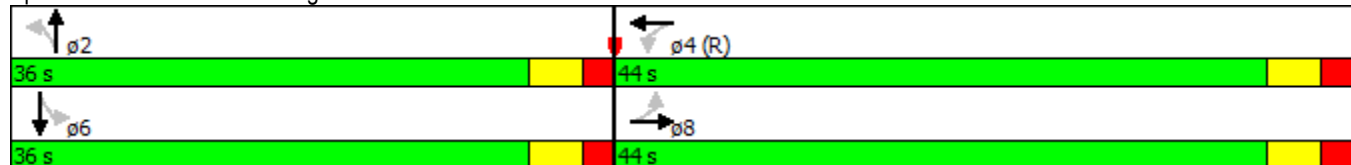


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	17	71	17	2	87	27	42	40	7	16	25	50
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)	5	5	5	5	5	5						
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6		6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	22.2	22.2		22.2	22.2		25.2	25.2		25.2		25.2
Total Split (s)	44.0	44.0		44.0	44.0		36.0	36.0		36.0		36.0
Total Split (%)	55.0%	55.0%		55.0%	55.0%		45.0%	45.0%		45.0%		45.0%
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2		3.2
All-Red Time (s)	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
Total Lost Time (s)		5.2			5.2			5.2				5.2
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max		C-Max	C-Max		Ped	Ped		Ped		Ped

Intersection Summary

















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 79 (99%), Referenced to phase 4:WBTL, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated

Splits and Phases: 41: Michigan St & Jefferson Blvd



HCM 2010 Signalized Intersection Summary
41: Michigan St & Jefferson Blvd

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	17	71	17	2	87	27	42	40	7	16	25	50
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1710	1613	1710	1710	1613	1710	1710	1541	1710	1778	1602	1778
Adj Flow Rate, veh/h	21	87	11	2	106	18	51	49	4	20	30	23
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	6	6	6	6	6	6	11	11	11	11	11	11
Cap, veh/h	201	760	92	49	904	151	124	76	5	84	76	47
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00	0.10	0.10	0.10	0.10	0.10	0.10
Sat Flow, veh/h	192	987	120	5	1174	196	573	763	53	267	760	473
Grp Volume(v), veh/h	119	0	0	126	0	0	104	0	0	73	0	0
Grp Sat Flow(s),veh/h/ln	1299	0	0	1375	0	0	1390	0	0	1500	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	5.6	0.0	0.0	3.6	0.0	0.0
Prop In Lane	0.18		0.09	0.02		0.14	0.49		0.04	0.27		0.32
Lane Grp Cap(c), veh/h	1053	0	0	1104	0	0	206	0	0	207	0	0
V/C Ratio(X)	0.11	0.00	0.00	0.11	0.00	0.00	0.50	0.00	0.00	0.35	0.00	0.00
Avail Cap(c_a), veh/h	1053	0	0	1104	0	0	573	0	0	601	0	0
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.99	0.00	0.00	0.94	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	34.8	0.0	0.0	34.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.2	0.0	0.0	1.4	0.0	0.0	0.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.0	0.1	0.0	0.0	4.1	0.0	0.0	2.8	0.0	0.0
LnGrp Delay(d),s/veh	0.2	0.0	0.0	0.2	0.0	0.0	36.2	0.0	0.0	34.7	0.0	0.0
LnGrp LOS	A			A			D			C		
Approach Vol, veh/h		119			126			104				73
Approach Delay, s/veh		0.2			0.2			36.2				34.7
Approach LOS		A			A			D				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		13.2		66.8		13.2		66.8				
Change Period (Y+Rc), s		* 5.2		* 5.2		* 5.2		* 5.2				
Max Green Setting (Gmax), s		* 31		* 39		* 31		* 39				
Max Q Clear Time (g_c+I1), s		7.6		2.0		5.6		2.0				
Green Ext Time (p_c), s		0.5		0.1		0.5		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			15.1									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
42: Michigan St & Wayne St

Existing Network - 2014 AM
2/25/2015

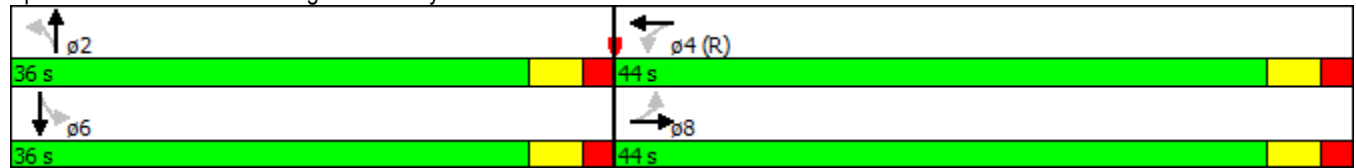


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔			↔	
Volume (vph)	7	90	10	18	181	23	4	59	3	21	10	12
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)			5	3								
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6		6
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	22.2	22.2		22.2	22.2		25.2	25.2		25.2		25.2
Total Split (s)	44.0	44.0		44.0	44.0		36.0	36.0		36.0		36.0
Total Split (%)	55.0%	55.0%		55.0%	55.0%		45.0%	45.0%		45.0%		45.0%
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2		3.2
All-Red Time (s)	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
Total Lost Time (s)		5.2			5.2			5.2				5.2
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		C-Max	C-Max		Ped	Ped		Ped		Ped

Intersection Summary

















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 69 (86%), Referenced to phase 4:WBTL, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated

Splits and Phases: 42: Michigan St & Wayne St



HCM 2010 Signalized Intersection Summary
42: Michigan St & Wayne St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	90	10	18	181	23	4	59	3	21	10	12
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1710	1613	1710	1710	1613	1710	1710	1541	1710	1778	1602	1778
Adj Flow Rate, veh/h	8	100	5	20	201	15	4	66	1	23	11	5
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	6	6	6	6	6	6	11	11	11	11	11	11
Cap, veh/h	172	2015	101	217	2057	153	51	96	1	117	39	13
Arrive On Green	0.80	0.80	0.80	0.27	0.27	0.27	0.07	0.07	0.07	0.07	0.07	0.07
Sat Flow, veh/h	151	2508	126	205	2559	190	47	1453	21	689	592	188
Grp Volume(v), veh/h	63	0	50	123	0	113	71	0	0	39	0	0
Grp Sat Flow(s),veh/h/ln	1522	0	1262	1521	0	1434	1521	0	0	1469	0	0
Q Serve(g_s), s	0.0	0.0	0.7	0.0	0.0	4.8	1.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.6	0.0	0.7	4.6	0.0	4.8	3.6	0.0	0.0	1.9	0.0	0.0
Prop In Lane	0.13		0.10	0.16		0.13	0.06		0.01	0.59		0.13
Lane Grp Cap(c), veh/h	1274	0	1014	1274	0	1153	149	0	0	169	0	0
V/C Ratio(X)	0.05	0.00	0.05	0.10	0.00	0.10	0.48	0.00	0.00	0.23	0.00	0.00
Avail Cap(c_a), veh/h	1274	0	1014	1274	0	1153	629	0	0	574	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.93	0.00	0.93	1.00	0.00	0.00	0.97	0.00	0.00
Uniform Delay (d), s/veh	1.6	0.0	1.6	7.5	0.0	7.5	36.6	0.0	0.0	35.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	0.2	1.8	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	0.4	3.8	0.0	3.5	2.9	0.0	0.0	1.5	0.0	0.0
LnGrp Delay(d),s/veh	1.6	0.0	1.6	7.6	0.0	7.7	38.3	0.0	0.0	36.0	0.0	0.0
LnGrp LOS	A		A	A		A	D			D		
Approach Vol, veh/h		113			236			71			39	
Approach Delay, s/veh		1.6			7.6			38.3			36.0	
Approach LOS		A			A			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		10.5		69.5		10.5		69.5				
Change Period (Y+Rc), s		* 5.2		* 5.2		* 5.2		* 5.2				
Max Green Setting (Gmax), s		* 31		* 39		* 31		* 39				
Max Q Clear Time (g_c+I1), s		5.6		6.8		3.9		2.7				
Green Ext Time (p_c), s		0.2		0.1		0.2		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			13.3									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
43: Michigan St & Monroe St

Existing Network - 2014 AM
2/25/2015

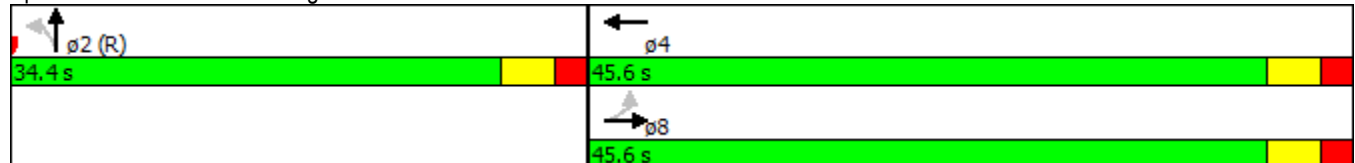


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↕			↕↔			↔↕↕↕				
Volume (vph)	16	294	0	0	225	389	55	1142	43	0	0	0
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)							5					
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	31.2	31.2			31.2		29.2	29.2				
Total Split (s)	45.6	45.6			45.6		34.4	34.4				
Total Split (%)	57.0%	57.0%			57.0%		43.0%	43.0%				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				
Lead/Lag												
Lead-Lag Optimize?												

Intersection Summary
















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 60 (75%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 43: Michigan St & Monroe St



HCM 2010 Signalized Intersection Summary
 43: Michigan St & Monroe St

Existing Network - 2014 AM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	16	294	0	0	225	389	55	1142	43	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1792	0	0	1792	1900	1900	1712	1900			
Adj Flow Rate, veh/h	21	382	0	0	292	499	71	1483	48			
Adj No. of Lanes	0	2	0	0	2	0	0	4	0			
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77			
Percent Heavy Veh, %	6	6	0	0	6	6	0	11	0			
Cap, veh/h	90	1496	0	0	860	769	92	2069	68			
Arrive On Green	1.00	1.00	0.00	0.00	0.51	0.51	0.13	0.12	0.12			
Sat Flow, veh/h	81	3043	0	0	1792	1524	252	5668	187			
Grp Volume(v), veh/h	207	196	0	0	292	499	418	754	430			
Grp Sat Flow(s),veh/h/ln	1493	1550	0	0	1703	1524	1485	1472	1679			
Q Serve(g_s), s	1.3	0.0	0.0	0.0	8.2	19.3	21.8	19.7	19.7			
Cycle Q Clear(g_c), s	20.6	0.0	0.0	0.0	8.2	19.3	21.8	19.7	19.7			
Prop In Lane	0.10		0.00	0.00		1.00	0.17		0.11			
Lane Grp Cap(c), veh/h	804	783	0	0	860	769	542	1075	613			
V/C Ratio(X)	0.26	0.25	0.00	0.00	0.34	0.65	0.77	0.70	0.70			
Avail Cap(c_a), veh/h	804	783	0	0	860	769	542	1075	613			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	0.2	0.0	0.0	0.0	11.8	14.6	31.9	31.0	31.0			
Incr Delay (d2), s/veh	0.8	0.8	0.0	0.0	1.1	4.2	10.2	3.8	6.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.9	0.3	0.0	0.0	7.3	13.8	15.8	13.4	15.5			
LnGrp Delay(d),s/veh	1.0	0.8	0.0	0.0	12.9	18.8	42.1	34.8	37.6			
LnGrp LOS	A	A			B	B	D	C	D			
Approach Vol, veh/h		403			791			1602				
Approach Delay, s/veh		0.9			16.6			37.5				
Approach LOS		A			B			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		34.4		45.6				45.6				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 29		* 40				* 40				
Max Q Clear Time (g_c+I1), s		23.8		21.3				22.6				
Green Ext Time (p_c), s		0.5		0.5				0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			26.3									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
44: Michigan St & South St

Existing Network - 2014 AM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↗		↖	↗	↖			
Volume (vph)	5	31	0	0	22	11	26	1227	11	0	0	0
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Detector Phase	8	8			4		2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	29.2	29.2			29.2		25.2	25.2				
Total Split (s)	32.0	32.0			32.0		48.0	48.0				
Total Split (%)	40.0%	40.0%			40.0%		60.0%	60.0%				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None			None		C-Max	C-Max				

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 48 (60%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated

Splits and Phases: 44: Michigan St & South St



HCM 2010 Signalized Intersection Summary
44: Michigan St & South St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Volume (veh/h)	5	31	0	0	22	11	26	1227	11	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1792	0	0	1792	1900	1900	1712	1900			
Adj Flow Rate, veh/h	6	38	0	0	27	4	32	1515	13			
Adj No. of Lanes	0	1	0	0	1	0	0	4	0			
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81			
Percent Heavy Veh, %	6	6	0	0	6	6	0	11	0			
Cap, veh/h	60	76	0	0	77	11	100	5060	45			
Arrive On Green	0.07	0.05	0.00	0.00	0.05	0.05	0.27	0.27	0.27			
Sat Flow, veh/h	172	1496	0	0	1526	226	122	6176	54			
Grp Volume(v), veh/h	44	0	0	0	0	31	448	704	407			
Grp Sat Flow(s),veh/h/ln	1668	0	0	0	0	1753	1706	1472	1702			
Q Serve(g_s), s	0.8	0.0	0.0	0.0	0.0	1.4	16.8	15.2	15.2			
Cycle Q Clear(g_c), s	2.1	0.0	0.0	0.0	0.0	1.4	16.8	15.2	15.2			
Prop In Lane	0.14		0.00	0.00		0.13	0.07		0.03			
Lane Grp Cap(c), veh/h	161	0	0	0	0	89	1397	2412	1395			
V/C Ratio(X)	0.27	0.00	0.00	0.00	0.00	0.35	0.32	0.29	0.29			
Avail Cap(c_a), veh/h	647	0	0	0	0	587	1397	2412	1395			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	0.96	0.96	0.96			
Uniform Delay (d), s/veh	36.9	0.0	0.0	0.0	0.0	36.7	11.4	10.8	10.8			
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.0	0.0	1.7	0.6	0.3	0.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	1.7	0.0	0.0	0.0	0.0	1.3	12.8	10.3	11.7			
LnGrp Delay(d),s/veh	37.6	0.0	0.0	0.0	0.0	38.4	12.0	11.1	11.3			
LnGrp LOS	D					D	B	B	B			
Approach Vol, veh/h		44			31			1560				
Approach Delay, s/veh		37.6			38.4			11.4				
Approach LOS		D			D			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		70.7		9.3				9.3				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 43		* 27				* 27				
Max Q Clear Time (g_c+I1), s		18.8		3.4				4.1				
Green Ext Time (p_c), s		0.5		0.2				0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			12.6									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
45: Michigan St & Bronson St

Existing Network - 2014 AM
2/25/2015

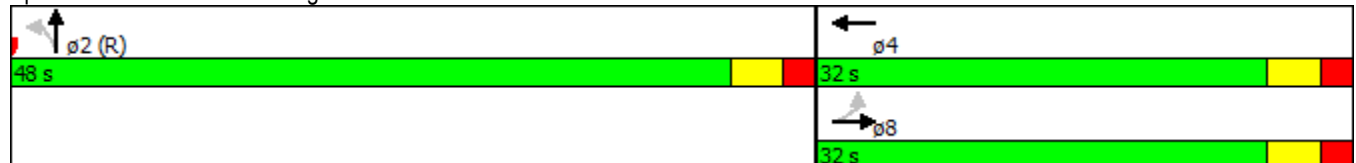


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↔			↔↔↔				
Volume (vph)	9	8	0	0	11	11	9	1234	11	0	0	0
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Detector Phase	8	8			4		2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	30.2	30.2			30.2		25.2	25.2				
Total Split (s)	32.0	32.0			32.0		48.0	48.0				
Total Split (%)	40.0%	40.0%			40.0%		60.0%	60.0%				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None			None		C-Max	C-Max				

Intersection Summary

















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 37.6 (47%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 45: Michigan St & Bronson St



HCM 2010 Signalized Intersection Summary
45: Michigan St & Bronson St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	9	8	0	0	11	11	9	1234	11	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1792	0	0	1792	1900	1900	1712	1900			
Adj Flow Rate, veh/h	11	10	0	0	14	14	11	1562	13			
Adj No. of Lanes	0	1	0	0	1	0	0	4	0			
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79			
Percent Heavy Veh, %	6	6	0	0	6	6	0	11	0			
Cap, veh/h	92	26	0	0	34	34	34	5188	44			
Arrive On Green	0.06	0.04	0.00	0.00	0.04	0.04	0.28	0.27	0.27			
Sat Flow, veh/h	560	639	0	0	824	824	41	6261	53			
Grp Volume(v), veh/h	21	0	0	0	0	28	457	716	414			
Grp Sat Flow(s),veh/h/ln	1198	0	0	0	0	1647	1710	1472	1702			
Q Serve(g_s), s	0.7	0.0	0.0	0.0	0.0	1.3	17.0	15.4	15.4			
Cycle Q Clear(g_c), s	2.0	0.0	0.0	0.0	0.0	1.3	17.0	15.4	15.4			
Prop In Lane	0.52		0.00	0.00		0.50	0.02		0.03			
Lane Grp Cap(c), veh/h	136	0	0	0	0	68	1417	2439	1410			
V/C Ratio(X)	0.15	0.00	0.00	0.00	0.00	0.41	0.32	0.29	0.29			
Avail Cap(c_a), veh/h	580	0	0	0	0	552	1417	2439	1410			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	0.22	0.22	0.22			
Uniform Delay (d), s/veh	37.5	0.0	0.0	0.0	0.0	37.4	11.2	10.6	10.6			
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.0	0.0	2.9	0.1	0.1	0.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	0.8	0.0	0.0	0.0	0.0	1.2	10.4	8.3	9.5			
LnGrp Delay(d),s/veh	37.9	0.0	0.0	0.0	0.0	40.3	11.3	10.6	10.7			
LnGrp LOS	D					D	B	B	B			
Approach Vol, veh/h		21			28			1586				
Approach Delay, s/veh		37.9			40.3			10.8				
Approach LOS		D			D			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		71.5		8.5				8.5				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 43		* 27				* 27				
Max Q Clear Time (g_c+I1), s		19.0		3.3				4.0				
Green Ext Time (p_c), s		0.5		0.1				0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			11.7									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
46: Michigan St & Sample St

Existing Network - 2014 AM
2/25/2015

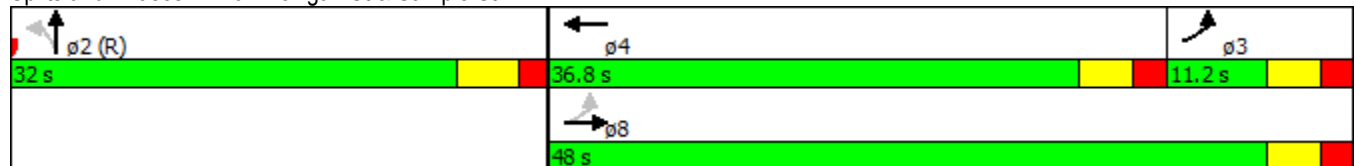


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗↗			↖↖			↖↖↖				
Volume (vph)	160	912	0	0	531	35	177	1101	351	0	0	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	20%	20%	20%	20%	20%	20%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	3	8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	10.2	29.2			29.2		27.5	27.5				
Total Split (s)	11.2	48.0			36.8		32.0	32.0				
Total Split (%)	14.0%	60.0%			46.0%		40.0%	40.0%				
Yellow Time (s)	3.2	3.2			3.2		3.7	3.7				
All-Red Time (s)	2.0	2.0			2.0		1.8	1.8				
Lost Time Adjust (s)	0.0	0.0			0.0			0.0				
Total Lost Time (s)	5.2	5.2			5.2			5.5				
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?												

Intersection Summary

















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 21 (26%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 46: Michigan St & Sample St



HCM 2010 Signalized Intersection Summary
46: Michigan St & Sample St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	160	912	0	0	531	35	177	1101	351	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1583	1583	0	0	1583	1900	1900	1712	1900			
Adj Flow Rate, veh/h	186	1060	0	0	617	34	206	1280	341			
Adj No. of Lanes	1	2	0	0	2	0	0	4	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	20	20	0	0	20	20	0	11	0			
Cap, veh/h	339	1609	0	0	1145	63	214	1427	389			
Arrive On Green	0.15	1.00	0.00	0.00	0.39	0.39	0.11	0.11	0.11			
Sat Flow, veh/h	1508	3088	0	0	2979	160	646	4308	1174			
Grp Volume(v), veh/h	186	1060	0	0	320	331	536	854	437			
Grp Sat Flow(s),veh/h/ln	1508	1504	0	0	1504	1555	1679	1472	1504			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	13.1	13.1	25.4	22.9	22.9			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	13.1	13.1	25.4	22.9	22.9			
Prop In Lane	1.00		0.00	0.00		0.10	0.38		0.78			
Lane Grp Cap(c), veh/h	339	1609	0	0	594	614	556	975	498			
V/C Ratio(X)	0.55	0.66	0.00	0.00	0.54	0.54	0.96	0.88	0.88			
Avail Cap(c_a), veh/h	339	1609	0	0	594	614	556	975	498			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	25.4	0.0	0.0	0.0	18.6	18.6	35.1	34.0	34.0			
Incr Delay (d2), s/veh	6.2	2.1	0.0	0.0	3.5	3.4	30.0	10.9	19.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	7.4	0.9	0.0	0.0	10.0	10.3	23.1	16.2	17.9			
LnGrp Delay(d),s/veh	31.6	2.1	0.0	0.0	22.1	22.0	65.1	44.9	53.1			
LnGrp LOS	C	A			C	C	E	D	D			
Approach Vol, veh/h		1246			651			1827				
Approach Delay, s/veh		6.5			22.0			52.8				
Approach LOS		A			C			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4				8				
Phs Duration (G+Y+Rc), s		32.0	11.2	36.8				48.0				
Change Period (Y+Rc), s		5.5	* 5.2	* 5.2				* 5.2				
Max Green Setting (Gmax), s		26.5	* 6	* 32				* 43				
Max Q Clear Time (g_c+I1), s		27.4	2.0	15.1				2.0				
Green Ext Time (p_c), s		0.0	0.5	0.2				0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			31.9									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
47: Michigan St & Broadway St

Existing Network - 2014 AM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↗		↖	↗	↖			
Volume (vph)	16	22	0	0	11	42	10	1560	13	0	0	0
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	29.2	29.2			29.2		23.7	23.7				
Total Split (s)	29.6	29.6			29.6		50.4	50.4				
Total Split (%)	37.0%	37.0%			37.0%		63.0%	63.0%				
Yellow Time (s)	3.2	3.2			3.2		3.7	3.7				
All-Red Time (s)	2.0	2.0			2.0		1.3	1.3				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.0				

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

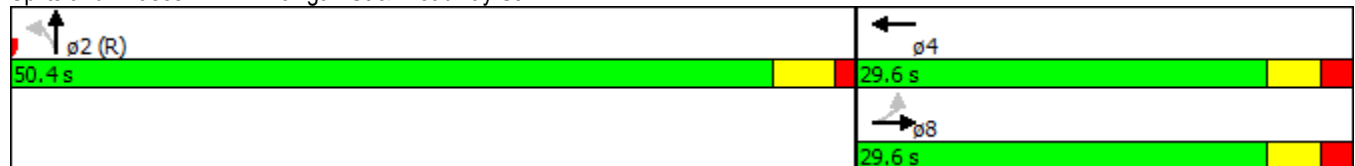
Actuated Cycle Length: 80

Offset: 63.2 (79%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 60


















Control Type: Pretimed

Splits and Phases: 47: Michigan St & Broadway St



HCM 2010 Signalized Intersection Summary
47: Michigan St & Broadway St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Volume (veh/h)	16	22	0	0	11	42	10	1560	13	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1976	1900	0	0	1827	1900	1976	1780	1976			
Adj Flow Rate, veh/h	21	29	0	0	14	39	13	2026	16			
Adj No. of Lanes	0	1	0	0	1	0	0	3	0			
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77			
Percent Heavy Veh, %	4	4	0	0	4	4	0	11	0			
Cap, veh/h	250	322	0	0	130	363	17	2894	24			
Arrive On Green	0.30	0.30	0.00	0.00	0.30	0.30	0.19	0.19	0.19			
Sat Flow, veh/h	609	1056	0	0	427	1190	31	5099	42			
Grp Volume(v), veh/h	50	0	0	0	0	53	751	622	682			
Grp Sat Flow(s),veh/h/ln	1666	0	0	0	0	1617	1779	1620	1773			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	1.9	31.9	28.6	28.6			
Cycle Q Clear(g_c), s	1.5	0.0	0.0	0.0	0.0	1.9	31.9	28.6	28.6			
Prop In Lane	0.42		0.00	0.00		0.74	0.02		0.02			
Lane Grp Cap(c), veh/h	572	0	0	0	0	493	1009	919	1006			
V/C Ratio(X)	0.09	0.00	0.00	0.00	0.00	0.11	0.74	0.68	0.68			
Avail Cap(c_a), veh/h	572	0	0	0	0	493	1009	919	1006			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	19.8	0.0	0.0	0.0	0.0	20.0	27.0	25.7	25.7			
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.0	0.0	0.4	5.0	4.0	3.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	1.5	0.0	0.0	0.0	0.0	1.6	23.9	20.0	21.5			
LnGrp Delay(d),s/veh	20.1	0.0	0.0	0.0	0.0	20.4	32.0	29.7	29.4			
LnGrp LOS	C					C	C	C	C			
Approach Vol, veh/h		50			53			2055				
Approach Delay, s/veh		20.1			20.4			30.4				
Approach LOS		C			C			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		50.4		29.6				29.6				
Change Period (Y+Rc), s		5.0		* 5.2				* 5.2				
Max Green Setting (Gmax), s		45.4		* 24				* 24				
Max Q Clear Time (g_c+I1), s		33.9		3.9				3.5				
Green Ext Time (p_c), s		2.1		0.1				0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				29.9								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
48: Michigan St & Indiana Ave

Existing Network - 2014 AM
2/25/2015

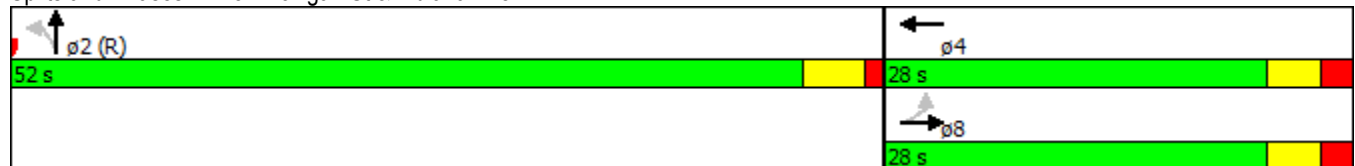
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	171	110	0	0	92	29	62	1386	13	0	0	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	13%	13%	13%	11%	11%	11%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	26.2	26.2			26.2		21.9	21.9				
Total Split (s)	28.0	28.0			28.0		52.0	52.0				
Total Split (%)	35.0%	35.0%			35.0%		65.0%	65.0%				
Yellow Time (s)	3.2	3.2			3.2		3.7	3.7				
All-Red Time (s)	2.0	2.0			2.0		1.2	1.2				
Lost Time Adjust (s)	0.0	0.0			0.0			0.0				
Total Lost Time (s)	5.2	5.2			5.2			4.9				

Lead/Lag
Lead-Lag Optimize?

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 49.6 (62%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 48: Michigan St & Indiana Ave



HCM 2010 Signalized Intersection Summary
48: Michigan St & Indiana Ave

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	171	110	0	0	92	29	62	1386	13	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1681	1681	0	0	1780	1976	1976	1780	1976			
Adj Flow Rate, veh/h	209	134	0	0	112	18	76	1690	15			
Adj No. of Lanes	1	1	0	0	1	0	0	3	0			
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82			
Percent Heavy Veh, %	13	13	0	0	11	11	0	11	0			
Cap, veh/h	347	479	0	0	427	69	122	2891	26			
Arrive On Green	0.48	0.48	0.00	0.00	0.28	0.28	0.19	0.19	0.19			
Sat Flow, veh/h	1133	1681	0	0	1497	241	207	4910	45			
Grp Volume(v), veh/h	209	134	0	0	0	130	649	540	591			
Grp Sat Flow(s),veh/h/ln	1133	1681	0	0	0	1738	1770	1620	1772			
Q Serve(g_s), s	13.2	3.9	0.0	0.0	0.0	4.6	26.9	24.2	24.2			
Cycle Q Clear(g_c), s	17.9	3.9	0.0	0.0	0.0	4.6	26.9	24.2	24.2			
Prop In Lane	1.00		0.00	0.00		0.14	0.12		0.03			
Lane Grp Cap(c), veh/h	347	479	0	0	0	495	1042	954	1043			
V/C Ratio(X)	0.60	0.28	0.00	0.00	0.00	0.26	0.62	0.57	0.57			
Avail Cap(c_a), veh/h	347	479	0	0	0	495	1042	954	1043			
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	21.7	16.0	0.0	0.0	0.0	22.1	24.1	23.0	23.0			
Incr Delay (d2), s/veh	7.5	1.5	0.0	0.0	0.0	1.3	2.8	2.4	2.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	8.4	3.5	0.0	0.0	0.0	4.3	20.1	17.0	18.3			
LnGrp Delay(d),s/veh	29.3	17.4	0.0	0.0	0.0	23.4	26.9	25.4	25.2			
LnGrp LOS	C	B				C	C	C	C			
Approach Vol, veh/h		343			130			1781				
Approach Delay, s/veh		24.6			23.4			25.9				
Approach LOS		C			C			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		52.0		28.0				28.0				
Change Period (Y+Rc), s		4.9		* 5.2				* 5.2				
Max Green Setting (Gmax), s		47.1		* 23				* 23				
Max Q Clear Time (g_c+I1), s		28.9		6.6				19.9				
Green Ext Time (p_c), s		1.9		0.3				0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			25.6									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
49: Michigan St & Calvert St

Existing Network - 2014 AM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔↔↔	↔↔↔				
Volume (vph)	30	70	0	0	35	7	21	1444	6	0	0	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	26.2	26.2			26.2		21.9	21.9				
Total Split (s)	28.0	28.0			28.0		52.0	52.0				
Total Split (%)	35.0%	35.0%			35.0%		65.0%	65.0%				
Yellow Time (s)	3.2	3.2			3.2		3.7	3.7				
All-Red Time (s)	2.0	2.0			2.0		1.2	1.2				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			4.9				

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

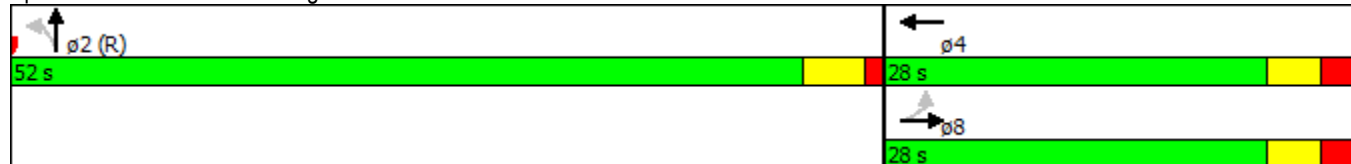
Actuated Cycle Length: 80

Offset: 25.6 (32%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 55


















Control Type: Pretimed

Splits and Phases: 49: Michigan St & Calvert St



HCM 2010 Signalized Intersection Summary
49: Michigan St & Calvert St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Volume (veh/h)	30	70	0	0	35	7	21	1444	6	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1976	1900	0	0	1900	1976	1976	1780	1976			
Adj Flow Rate, veh/h	36	84	0	0	42	2	25	1740	7			
Adj No. of Lanes	0	1	0	0	1	0	0	3	0			
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
Percent Heavy Veh, %	4	4	0	0	4	4	0	11	0			
Cap, veh/h	175	381	0	0	513	24	40	2993	12			
Arrive On Green	0.09	0.09	0.00	0.00	0.28	0.28	0.19	0.19	0.19			
Sat Flow, veh/h	410	1338	0	0	1799	86	69	5083	21			
Grp Volume(v), veh/h	120	0	0	0	0	44	647	537	589			
Grp Sat Flow(s),veh/h/ln	1747	0	0	0	0	1885	1777	1620	1776			
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	1.4	26.7	24.0	24.0			
Cycle Q Clear(g_c), s	4.7	0.0	0.0	0.0	0.0	1.4	26.7	24.0	24.0			
Prop In Lane	0.30		0.00	0.00		0.05	0.04		0.01			
Lane Grp Cap(c), veh/h	556	0	0	0	0	537	1046	954	1046			
V/C Ratio(X)	0.22	0.00	0.00	0.00	0.00	0.08	0.62	0.56	0.56			
Avail Cap(c_a), veh/h	556	0	0	0	0	537	1046	954	1046			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	28.0	0.0	0.0	0.0	0.0	20.9	24.0	22.9	22.9			
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.0	0.0	0.3	2.7	2.4	2.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	4.7	0.0	0.0	0.0	0.0	1.4	20.0	16.9	18.2			
LnGrp Delay(d),s/veh	28.9	0.0	0.0	0.0	0.0	21.2	26.7	25.3	25.1			
LnGrp LOS	C					C	C	C	C			
Approach Vol, veh/h		120			44			1772				
Approach Delay, s/veh		28.9			21.2			25.8				
Approach LOS		C			C			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		52.0		28.0				28.0				
Change Period (Y+Rc), s		4.9		* 5.2				* 5.2				
Max Green Setting (Gmax), s		47.1		* 23				* 23				
Max Q Clear Time (g_c+I1), s		28.7		3.4				6.7				
Green Ext Time (p_c), s		1.8		0.2				0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			25.9									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
50: Michigan St & Ewing Ave

Existing Network - 2014 AM
2/25/2015

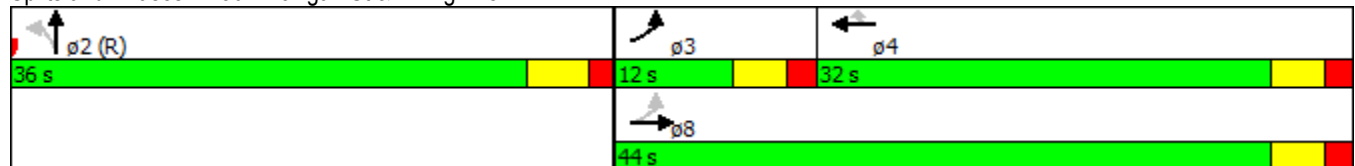


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖	↗		↖↗↘				
Volume (vph)	56	162	0	0	134	139	60	1231	28	0	0	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	25%	25%	25%	5%	5%	5%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	3	8			4			2				
Permitted Phases	8					4	2					
Minimum Split (s)	10.2	22.0			22.0	22.0	22.3	22.3				
Total Split (s)	12.0	44.0			32.0	32.0	36.0	36.0				
Total Split (%)	15.0%	55.0%			40.0%	40.0%	45.0%	45.0%				
Yellow Time (s)	3.2	3.2			3.2	3.2	3.7	3.7				
All-Red Time (s)	1.8	1.8			1.8	1.8	1.6	1.6				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.3				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 1.6 (2%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 50: Michigan St & Ewing Ave



HCM 2010 Signalized Intersection Summary
50: Michigan St & Ewing Ave

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	56	162	0	0	134	139	60	1231	28	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1520	1520	0	0	1810	1810	1976	1780	1976			
Adj Flow Rate, veh/h	68	198	0	0	163	55	73	1501	32			
Adj No. of Lanes	1	1	0	0	1	1	0	3	0			
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82			
Percent Heavy Veh, %	25	25	0	0	5	5	0	11	0			
Cap, veh/h	474	741	0	0	611	519	85	1851	41			
Arrive On Green	0.17	0.98	0.00	0.00	0.34	0.34	0.13	0.13	0.13			
Sat Flow, veh/h	1448	1520	0	0	1810	1538	220	4824	106			
Grp Volume(v), veh/h	68	198	0	0	163	55	586	488	531			
Grp Sat Flow(s),veh/h/ln	1448	1520	0	0	1810	1538	1769	1620	1761			
Q Serve(g_s), s	2.1	0.4	0.0	0.0	5.2	2.0	26.0	23.4	23.4			
Cycle Q Clear(g_c), s	2.1	0.4	0.0	0.0	5.2	2.0	26.0	23.4	23.4			
Prop In Lane	1.00		0.00	0.00		1.00	0.12		0.06			
Lane Grp Cap(c), veh/h	474	741	0	0	611	519	679	622	676			
V/C Ratio(X)	0.14	0.27	0.00	0.00	0.27	0.11	0.86	0.79	0.79			
Avail Cap(c_a), veh/h	474	741	0	0	611	519	679	622	676			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	11.8	0.5	0.0	0.0	19.3	18.2	32.9	31.7	31.7			
Incr Delay (d2), s/veh	0.6	0.9	0.0	0.0	1.1	0.4	13.7	9.7	8.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	1.5	0.5	0.0	0.0	5.1	1.6	21.8	17.9	19.0			
LnGrp Delay(d),s/veh	12.4	1.4	0.0	0.0	20.4	18.6	46.6	41.4	40.7			
LnGrp LOS	B	A			C	B	D	D	D			
Approach Vol, veh/h		266			218			1606				
Approach Delay, s/veh		4.2			19.9			43.1				
Approach LOS		A			B			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4				8				
Phs Duration (G+Y+Rc), s		36.0	12.0	32.0				44.0				
Change Period (Y+Rc), s		* 5.3	5.0	5.0				5.0				
Max Green Setting (Gmax), s		* 31	7.0	27.0				39.0				
Max Q Clear Time (g_c+I1), s		28.0	4.1	7.2				2.4				
Green Ext Time (p_c), s		0.8	0.0	0.4				0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			35.7									
HCM 2010 LOS			D									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
51: Michigan St & Donmoyer Ave

Existing Network - 2014 AM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↗			↖↗↘				
Volume (vph)	3	30	0	0	5	106	0	1173	7	0	0	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA			NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	27.0	27.0			27.0		23.9	23.9				
Total Split (s)	32.0	32.0			32.0		48.0	48.0				
Total Split (%)	40.0%	40.0%			40.0%		60.0%	60.0%				
Yellow Time (s)	3.2	3.2			3.2		3.7	3.7				
All-Red Time (s)	1.8	1.8			1.8		1.2	1.2				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.0			5.0			4.9				

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 33.6 (42%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 55


















Control Type: Pretimed

Splits and Phases: 51: Michigan St & Donmoyer Ave



HCM 2010 Signalized Intersection Summary
 51: Michigan St & Donmoyer Ave

Existing Network - 2014 AM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Volume (veh/h)	3	30	0	0	5	106	0	1173	7	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1976	1882	0	0	1810	1900	1976	1780	1976			
Adj Flow Rate, veh/h	4	38	0	0	6	97	0	1466	8			
Adj No. of Lanes	0	1	0	0	1	0	0	3	0			
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80			
Percent Heavy Veh, %	5	5	0	0	5	5	0	11	0			
Cap, veh/h	77	595	0	0	31	493	0	2687	15			
Arrive On Green	0.34	0.34	0.00	0.00	0.34	0.34	0.00	0.18	0.18			
Sat Flow, veh/h	82	1763	0	0	90	1461	0	5148	27			
Grp Volume(v), veh/h	42	0	0	0	0	103	0	952	522			
Grp Sat Flow(s),veh/h/ln	1845	0	0	0	0	1552	0	1620	1775			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	3.8	0.0	21.4	21.4			
Cycle Q Clear(g_c), s	1.2	0.0	0.0	0.0	0.0	3.8	0.0	21.4	21.4			
Prop In Lane	0.10		0.00	0.00		0.94	0.00		0.02			
Lane Grp Cap(c), veh/h	672	0	0	0	0	524	0	1746	956			
V/C Ratio(X)	0.06	0.00	0.00	0.00	0.00	0.20	0.00	0.55	0.55			
Avail Cap(c_a), veh/h	672	0	0	0	0	524	0	1746	956			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00			
Uniform Delay (d), s/veh	18.0	0.0	0.0	0.0	0.0	18.8	0.0	24.0	24.0			
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.8	0.0	1.2	2.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	1.2	0.0	0.0	0.0	0.0	3.1	0.0	15.1	16.6			
LnGrp Delay(d),s/veh	18.1	0.0	0.0	0.0	0.0	19.6	0.0	25.2	26.2			
LnGrp LOS	B					B		C	C			
Approach Vol, veh/h		42			103			1474				
Approach Delay, s/veh		18.1			19.6			25.6				
Approach LOS		B			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		48.0		32.0				32.0				
Change Period (Y+Rc), s		4.9		5.0				5.0				
Max Green Setting (Gmax), s		43.1		27.0				27.0				
Max Q Clear Time (g_c+I1), s		23.4		5.8				3.2				
Green Ext Time (p_c), s		1.9		0.2				0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			25.0									
HCM 2010 LOS			C									

Lanes, Volumes, Timings
52: Michigan St & Chippewa Ave

Existing Network - 2014 AM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖↗↘					
Volume (vph)	45	12	0	26	11	37	28	1061	7	0	0	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8			4			2					
Minimum Split (s)	29.0	29.0		29.0	29.0		29.5	29.5				
Total Split (s)	29.6	29.6		29.6	29.6		50.4	50.4				
Total Split (%)	37.0%	37.0%		37.0%	37.0%		63.0%	63.0%				
Yellow Time (s)	3.2	3.2		3.2	3.2		3.7	3.7				
All-Red Time (s)	1.8	1.8		1.8	1.8		1.6	1.6				
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0				
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.3				

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

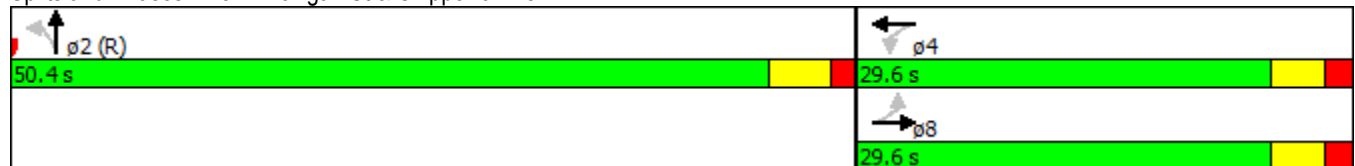
Actuated Cycle Length: 80

Offset: 65.6 (82%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 60



















Control Type: Pretimed

Splits and Phases: 52: Michigan St & Chippewa Ave



HCM 2010 Signalized Intersection Summary
52: Michigan St & Chippewa Ave

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	45	12	0	26	11	37	28	1061	7	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1827	1827	1900	1900	1827	1900	1900	1780	1976			
Adj Flow Rate, veh/h	54	14	-335	31	13	13	33	1263	7			
Adj No. of Lanes	1	1	0	1	1	0	0	3	0			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84			
Percent Heavy Veh, %	4	4	4	4	4	4	0	11	0			
Cap, veh/h	491	0	478	646	258	258	69	2828	16			
Arrive On Green	0.31	0.31	0.00	0.31	0.31	0.31	0.56	0.56	0.56			
Sat Flow, veh/h	1352	1827	0	1810	839	839	123	5017	29			
Grp Volume(v), veh/h	54	-321	-321	31	0	26	475	395	433			
Grp Sat Flow(s),veh/h/ln	1352	1827	1553	1810	0	1679	1774	1620	1775			
Q Serve(g_s), s	2.3	0.0	0.0	1.0	0.0	0.9	12.8	11.3	11.3			
Cycle Q Clear(g_c), s	3.2	0.0	0.0	1.0	0.0	0.9	12.8	11.3	11.3			
Prop In Lane	1.00		0.00	1.00		0.50	0.07		0.02			
Lane Grp Cap(c), veh/h	491	0	0	646	0	516	1000	913	1001			
V/C Ratio(X)	0.11	0.00	0.00	0.05	0.00	0.05	0.48	0.43	0.43			
Avail Cap(c_a), veh/h	491	0	0	646	0	516	1000	913	1001			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	20.6	0.0	0.0	19.5	0.0	19.5	10.4	10.1	10.1			
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.1	0.0	0.2	1.6	1.5	1.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	1.7	0.0	0.0	0.9	0.0	0.8	10.9	9.1	9.7			
LnGrp Delay(d),s/veh	21.1	0.0	0.0	19.7	0.0	19.7	12.0	11.6	11.4			
LnGrp LOS	C			B		B	B	B	B			
Approach Vol, veh/h		-588			57			1303				
Approach Delay, s/veh		-1.9			19.7			11.7				
Approach LOS		A			B			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		50.4		29.6				29.6				
Change Period (Y+Rc), s		* 5.3		5.0				5.0				
Max Green Setting (Gmax), s		* 45		24.6				24.6				
Max Q Clear Time (g_c+I1), s		14.8		3.0				5.2				
Green Ext Time (p_c), s		1.3		0.0				0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				22.6								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
53: Michigan St & Ireland Rd

Existing Network - 2014 AM
2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	87	133	66	162	133	220	138	746	108	90	325	14
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	10%	10%	10%	9%	9%	9%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4					2			6
Detector Phase	3	8		7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	21.0		8.0	21.0		9.0	21.0	21.0	9.0	21.0	21.0
Total Split (s)	10.0	21.0		13.0	24.0		14.0	34.0	34.0	12.0	32.0	32.0
Total Split (%)	12.5%	26.3%		16.3%	30.0%		17.5%	42.5%	42.5%	15.0%	40.0%	40.0%
Yellow Time (s)	3.0	3.2		3.0	3.2		3.2	3.2	3.2	3.2	3.2	3.2
All-Red Time (s)	1.0	1.8		1.0	1.8		1.8	1.8	1.8	1.8	1.8	1.8
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	5.0		4.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max

Intersection Summary

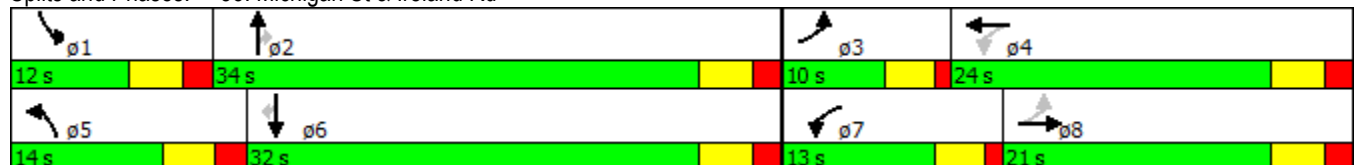
Cycle Length: 80























Actuated Cycle Length: 72.5

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Splits and Phases: 53: Michigan St & Ireland Rd



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	87	133	66	162	133	220	138	746	108	90	325	14
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1727	1900	1743	1743	1900	1712	1712	1780	1712	1712	1780
Adj Flow Rate, veh/h	104	158	14	193	158	56	164	888	22	107	387	0
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	2	2	1
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	10	10	10	9	9	9	11	11	11	11	11	11
Cap, veh/h	329	315	28	376	376	129	249	1408	655	175	1331	619
Arrive On Green	0.07	0.10	0.10	0.13	0.16	0.16	0.08	0.43	0.43	0.06	0.41	0.00
Sat Flow, veh/h	1645	3053	268	1660	2424	829	3163	3252	1513	3163	3252	1513
Grp Volume(v), veh/h	104	84	88	193	106	108	164	888	22	107	387	0
Grp Sat Flow(s),veh/h/ln	1645	1641	1680	1660	1656	1597	1581	1626	1513	1581	1626	1513
Q Serve(g_s), s	3.7	3.2	3.3	6.6	3.9	4.1	3.4	14.3	0.6	2.2	5.3	0.0
Cycle Q Clear(g_c), s	3.7	3.2	3.3	6.6	3.9	4.1	3.4	14.3	0.6	2.2	5.3	0.0
Prop In Lane	1.00		0.16	1.00		0.52	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	329	169	173	376	257	248	249	1408	655	175	1331	619
V/C Ratio(X)	0.32	0.50	0.51	0.51	0.41	0.44	0.66	0.63	0.03	0.61	0.29	0.00
Avail Cap(c_a), veh/h	356	392	401	391	470	453	425	1408	655	330	1331	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.3	28.4	28.4	21.5	25.5	25.6	30.0	14.8	10.9	31.0	13.3	0.0
Incr Delay (d2), s/veh	0.5	2.2	2.3	1.1	1.1	1.2	3.0	2.2	0.1	3.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.1	2.8	3.0	5.6	3.3	3.4	2.8	11.1	0.4	1.9	4.4	0.0
LnGrp Delay(d),s/veh	24.8	30.6	30.7	22.6	26.6	26.8	33.0	17.0	11.0	34.4	13.8	0.0
LnGrp LOS	C	C	C	C	C	C	C	B	B	C	B	
Approach Vol, veh/h		276			407			1074			494	
Approach Delay, s/veh		28.5			24.8			19.3			18.3	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	34.0	8.9	15.4	10.3	32.4	12.4	11.9				
Change Period (Y+Rc), s	5.0	5.0	4.0	5.0	5.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	29.0	6.0	19.0	9.0	27.0	9.0	16.0				
Max Q Clear Time (g_c+I1), s	4.2	16.3	5.7	6.1	5.4	7.3	8.6	5.3				
Green Ext Time (p_c), s	0.1	6.8	0.0	1.8	0.2	8.8	0.0	1.6				
Intersection Summary												
HCM 2010 Ctrl Delay				21.2								
HCM 2010 LOS				C								

Lanes, Volumes, Timings
 54: St. Joseph St & Colfax Ave

Existing Network - 2014 AM
 2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑			↑	↗		↖↗↘↙				
Volume (vph)	25	194	0	0	419	68	99	1043	132	0	0	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8					4	2					
Minimum Split (s)	31.2	31.2			31.2	31.2	36.5	36.5				
Total Split (s)	40.0	40.0			40.0	40.0	40.0	40.0				
Total Split (%)	50.0%	50.0%			50.0%	50.0%	50.0%	50.0%				
Yellow Time (s)	3.2	3.2			3.2	3.2	3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.3	2.3				
Lost Time Adjust (s)	-1.0	0.0			0.0	0.0		0.0				
Total Lost Time (s)	4.2	5.2			5.2	5.2		5.5				

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

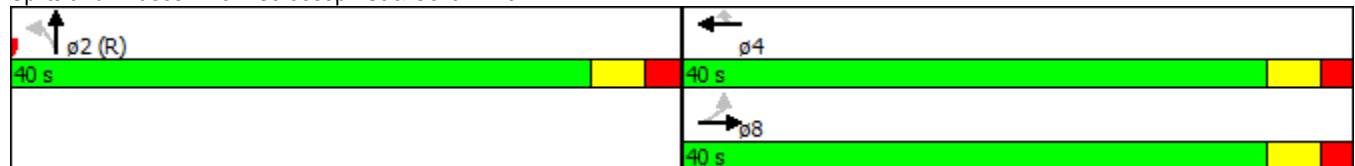
Actuated Cycle Length: 80

Offset: 40.8 (51%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 70


















Control Type: Pretimed

Splits and Phases: 54: St. Joseph St & Colfax Ave



HCM 2010 Signalized Intersection Summary
54: St. Joseph St & Colfax Ave

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	194	0	0	419	68	99	1043	132	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1598	1598	0	0	1598	1598	1778	1602	1778			
Adj Flow Rate, veh/h	30	237	0	0	511	61	121	1272	133			
Adj No. of Lanes	1	1	0	0	1	1	0	4	0			
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82			
Percent Heavy Veh, %	7	7	0	0	7	7	0	11	0			
Cap, veh/h	221	695	0	0	695	591	187	2109	225			
Arrive On Green	0.89	0.87	0.00	0.00	0.44	0.44	0.15	0.14	0.14			
Sat Flow, veh/h	718	1598	0	0	1598	1358	433	4891	522			
Grp Volume(v), veh/h	30	237	0	0	511	61	441	700	385			
Grp Sat Flow(s),veh/h/ln	718	1598	0	0	1598	1358	1581	1378	1510			
Q Serve(g_s), s	2.3	2.2	0.0	0.0	21.2	2.1	21.1	19.0	19.1			
Cycle Q Clear(g_c), s	23.6	2.2	0.0	0.0	21.2	2.1	21.1	19.0	19.1			
Prop In Lane	1.00		0.00	0.00		1.00	0.27		0.35			
Lane Grp Cap(c), veh/h	221	695	0	0	695	591	682	1188	651			
V/C Ratio(X)	0.14	0.34	0.00	0.00	0.74	0.10	0.65	0.59	0.59			
Avail Cap(c_a), veh/h	221	695	0	0	695	591	682	1188	651			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	10.9	3.1	0.0	0.0	18.8	13.4	28.5	27.7	27.7			
Incr Delay (d2), s/veh	1.3	1.3	0.0	0.0	6.8	0.4	4.7	2.1	3.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	1.0	1.9	0.0	0.0	15.9	1.5	15.4	12.1	13.5			
LnGrp Delay(d),s/veh	12.2	4.4	0.0	0.0	25.6	13.7	33.2	29.8	31.6			
LnGrp LOS	B	A			C	B	C	C	C			
Approach Vol, veh/h		267			572			1526				
Approach Delay, s/veh		5.3			24.3			31.3				
Approach LOS		A			C			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		40.0		40.0				40.0				
Change Period (Y+Rc), s		5.5		* 5.2				* 5.2				
Max Green Setting (Gmax), s		34.5		* 35				* 35				
Max Q Clear Time (g_c+I1), s		23.1		23.2				25.6				
Green Ext Time (p_c), s		0.7		0.3				0.3				
Intersection Summary												
HCM 2010 Ctrl Delay				26.6								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
55: St. Joseph St & Washington St

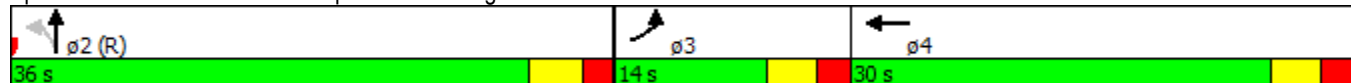
Existing Network - 2014 AM
2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	0	0	0	0	0	76	1244	0	0	0	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)	3											
Shared Lane Traffic (%)												
Turn Type	Prot						Perm	NA				
Protected Phases	3				4			2				
Permitted Phases							2					
Detector Phase	3				4		2	2				
Switch Phase												
Minimum Initial (s)	4.0				5.0		5.0	5.0				
Minimum Split (s)	9.0				30.0		22.2	22.2				
Total Split (s)	14.0				30.0		36.0	36.0				
Total Split (%)	17.5%				37.5%		45.0%	45.0%				
Yellow Time (s)	3.0				3.0		3.2	3.2				
All-Red Time (s)	2.0				2.0		2.0	2.0				
Lost Time Adjust (s)	0.0				0.0		0.0	0.0				
Total Lost Time (s)	5.0				5.0		5.2	5.2				
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Recall Mode	None				None		C-Max	C-Max				

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 55: St. Joseph St & Washington St



HCM 2010 Signalized Intersection Summary
55: St. Joseph St & Washington St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Volume (veh/h)	55	0	0	0	0	0	76	1244	0	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1613	0	0	0	1613	1710	1541	1541	0			
Adj Flow Rate, veh/h	69	0	0	0	0	0	95	1555	0			
Adj No. of Lanes	1	0	0	0	1	0	1	4	0			
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80			
Percent Heavy Veh, %	6	0	0	0	6	6	11	11	0			
Cap, veh/h	84	0	0	0	2	0	1200	4333	0			
Arrive On Green	0.05	0.00	0.00	0.00	0.00	0.00	0.27	0.27	0.00			
Sat Flow, veh/h	1536	69		0	-80660	0	1467	5515	0			
Grp Volume(v), veh/h	69	54.4		0	0	0	95	1555	0			
Grp Sat Flow(s),veh/h/ln	1536	D		0	1613	0	1467	1325	0			
Q Serve(g_s), s	3.6			0.0	0.0	0.0	3.9	19.0	0.0			
Cycle Q Clear(g_c), s	3.6			0.0	0.0	0.0	3.9	19.0	0.0			
Prop In Lane	1.00			0.00		0.00	1.00		0.00			
Lane Grp Cap(c), veh/h	84			0	2	0	1200	4333	0			
V/C Ratio(X)	0.82			0.00	0.00	0.00	0.08	0.36	0.00			
Avail Cap(c_a), veh/h	173			0	504	0	1200	4333	0			
HCM Platoon Ratio	1.00			1.00	1.00	1.00	0.33	0.33	1.00			
Upstream Filter(I)	0.99			0.00	0.00	0.00	0.73	0.73	0.00			
Uniform Delay (d), s/veh	37.4			0.0	0.0	0.0	6.7	12.3	0.0			
Incr Delay (d2), s/veh	17.0			0.0	0.0	0.0	0.1	0.2	0.0			
Initial Q Delay(d3),s/veh	0.0			0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	3.4			0.0	0.0	0.0	2.9	10.7	0.0			
LnGrp Delay(d),s/veh	54.4			0.0	0.0	0.0	6.8	12.4	0.0			
LnGrp LOS	D						A	B				
Approach Vol, veh/h					0			1650				
Approach Delay, s/veh					0.0			12.1				
Approach LOS								B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4								
Phs Duration (G+Y+Rc), s		70.6	9.4	0.0								
Change Period (Y+Rc), s		* 5.2	5.0	5.0								
Max Green Setting (Gmax), s		* 31	9.0	25.0								
Max Q Clear Time (g_c+I1), s		5.9	5.6	0.0								
Green Ext Time (p_c), s		0.1	0.0	0.0								
Intersection Summary												
HCM 2010 Ctrl Delay			13.8									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
56: St. Joseph St & Jefferson Blvd

Existing Network - 2014 AM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↑	↗		↖	↑	↗		
Volume (vph)	43	35	0	0	8	5	109	1289	46	0	0	0
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)	5	5										
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8					4	2					
Minimum Split (s)	29.2	29.2			29.2	29.2	30.2	30.2				
Total Split (s)	31.2	31.2			31.2	31.2	48.8	48.8				
Total Split (%)	39.0%	39.0%			39.0%	39.0%	61.0%	61.0%				
Yellow Time (s)	3.2	3.2			3.2	3.2	3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)		0.0			0.0	0.0		0.0				
Total Lost Time (s)		5.2			5.2	5.2		5.2				

Lead/Lag
Lead-Lag Optimize?

Intersection Summary

















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 17.6 (22%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 56: St. Joseph St & Jefferson Blvd



HCM 2010 Signalized Intersection Summary
56: St. Joseph St & Jefferson Blvd

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	43	35	0	0	8	5	109	1289	46	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1710	1613	0	0	1613	1613	1710	1541	1710			
Adj Flow Rate, veh/h	54	44	0	0	10	0	138	1632	52			
Adj No. of Lanes	0	1	0	0	1	1	0	4	0			
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79			
Percent Heavy Veh, %	6	6	0	0	6	6	0	11	0			
Cap, veh/h	299	219	0	0	524	446	219	2787	91			
Arrive On Green	0.34	0.33	0.00	0.00	0.33	0.00	0.56	0.55	0.55			
Sat Flow, veh/h	707	672	0	0	1613	1371	402	5113	166			
Grp Volume(v), veh/h	98	0	0	0	10	0	522	828	472			
Grp Sat Flow(s),veh/h/ln	1379	0	0	0	1613	1371	1520	1325	1511			
Q Serve(g_s), s	2.2	0.0	0.0	0.0	0.3	0.0	19.0	16.5	16.5			
Cycle Q Clear(g_c), s	3.8	0.0	0.0	0.0	0.3	0.0	19.0	16.5	16.5			
Prop In Lane	0.55		0.00	0.00		1.00	0.26		0.11			
Lane Grp Cap(c), veh/h	539	0	0	0	524	446	829	1444	824			
V/C Ratio(X)	0.18	0.00	0.00	0.00	0.02	0.00	0.63	0.57	0.57			
Avail Cap(c_a), veh/h	539	0	0	0	524	446	829	1444	824			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	19.2	0.0	0.0	0.0	18.3	0.0	12.5	12.0	12.0			
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.0	0.1	0.0	3.6	1.7	2.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	2.9	0.0	0.0	0.0	0.3	0.0	13.5	10.4	12.0			
LnGrp Delay(d),s/veh	20.0	0.0	0.0	0.0	18.4	0.0	16.1	13.7	14.9			
LnGrp LOS	B				B		B	B	B			
Approach Vol, veh/h		98			10			1822				
Approach Delay, s/veh		20.0			18.4			14.7				
Approach LOS		B			B			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		48.8		31.2				31.2				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 44		* 26				* 26				
Max Q Clear Time (g_c+I1), s		21.0		2.3				5.8				
Green Ext Time (p_c), s		0.8		0.0				0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			15.0									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 57: St. Joseph St & Wayne St

Existing Network - 2014 AM
 2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔↔↔				
Volume (vph)	16	64	0	0	225	122	64	1319	227	0	0	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	31.2	31.2			31.2		29.2	29.2				
Total Split (s)	36.0	36.0			36.0		44.0	44.0				
Total Split (%)	45.0%	45.0%			45.0%		55.0%	55.0%				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 4.8 (6%), Referenced to phase 2:NBTL and 6:, Start of Green

Natural Cycle: 65
















Control Type: Pretimed

Splits and Phases: 57: St. Joseph St & Wayne St



HCM 2010 Signalized Intersection Summary
57: St. Joseph St & Wayne St

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	16	64	0	0	225	122	64	1319	227	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1710	1613	0	0	1613	1710	1710	1541	1710			
Adj Flow Rate, veh/h	20	78	0	0	274	136	78	1609	236			
Adj No. of Lanes	0	2	0	0	2	0	0	4	0			
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82			
Percent Heavy Veh, %	6	6	0	0	6	6	0	11	0			
Cap, veh/h	202	792	0	0	772	373	103	2269	342			
Arrive On Green	0.40	0.38	0.00	0.00	0.38	0.38	0.50	0.49	0.49			
Sat Flow, veh/h	359	2131	0	0	2087	969	212	4678	705			
Grp Volume(v), veh/h	49	49	0	0	208	202	563	887	474			
Grp Sat Flow(s),veh/h/ln	1022	1395	0	0	1533	1442	1530	1325	1416			
Q Serve(g_s), s	0.2	1.8	0.0	0.0	7.7	8.0	23.9	20.7	20.7			
Cycle Q Clear(g_c), s	8.3	1.8	0.0	0.0	7.7	8.0	23.9	20.7	20.7			
Prop In Lane	0.41		0.00	0.00		0.67	0.14		0.50			
Lane Grp Cap(c), veh/h	470	537	0	0	590	555	742	1285	687			
V/C Ratio(X)	0.10	0.09	0.00	0.00	0.35	0.36	0.76	0.69	0.69			
Avail Cap(c_a), veh/h	470	537	0	0	590	555	742	1285	687			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	15.6	15.7	0.0	0.0	17.5	17.6	16.7	15.9	15.9			
Incr Delay (d2), s/veh	0.4	0.3	0.0	0.0	1.6	1.8	7.1	3.0	5.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	1.3	1.3	0.0	0.0	6.3	6.3	17.0	12.7	14.0			
LnGrp Delay(d),s/veh	16.1	16.0	0.0	0.0	19.1	19.4	23.9	19.0	21.6			
LnGrp LOS	B	B			B	B	C	B	C			
Approach Vol, veh/h		98			410			1923				
Approach Delay, s/veh		16.1			19.3			21.0				
Approach LOS		B			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		44.0		36.0				36.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 39		* 31				* 31				
Max Q Clear Time (g_c+I1), s		25.9		10.0				10.3				
Green Ext Time (p_c), s		0.9		0.2				0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				20.5								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 58: Michigan St/St. Joseph St & Western Ave

Existing Network - 2014 AM
 2/25/2015

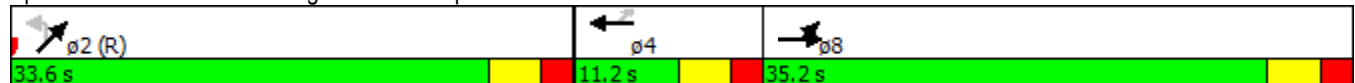


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	280	95	0	0	7	15	183	1336	30	0	0	0
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	1%	3%	0%	0%	0%	0%
Shared Lane Traffic (%)	34%											
Turn Type	Split	NA			NA	Perm	Perm	NA				
Protected Phases	8	8			4			2				
Permitted Phases						4	2					
Detector Phase	8	8			4	4	2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0				
Minimum Split (s)	15.0	15.0			10.0	10.0	31.2	31.2				
Total Split (s)	35.2	35.2			11.2	11.2	33.6	33.6				
Total Split (%)	44.0%	44.0%			14.0%	14.0%	42.0%	42.0%				
Yellow Time (s)	3.2	3.2			3.0	3.0	3.2	3.2				
All-Red Time (s)	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				
Total Lost Time (s)	5.2	5.2			5.0	5.0		5.2				
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max			Max	Max	C-Max	C-Max				

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 71.2 (89%), Referenced to phase 2:NETL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 58: Michigan St/St. Joseph St & Western Ave



HCM 2010 Signalized Intersection Summary
 58: Michigan St/St. Joseph St & Western Ave

Existing Network - 2014 AM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	280	95	0	0	7	15	183	1336	30	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1613	1613	0	0	1613	1613	1710	1665	1710			
Adj Flow Rate, veh/h	240	288	0	0	9	19	235	1713	34			
Adj No. of Lanes	1	1	0	0	1	1	0	4	0			
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78			
Percent Heavy Veh, %	6	6	0	0	6	6	0	3	0			
Cap, veh/h	576	605	0	0	125	106	241	1900	38			
Arrive On Green	0.38	0.38	0.00	0.00	0.08	0.08	0.37	0.35	0.35			
Sat Flow, veh/h	1536	1613	0	0	1613	1371	680	5352	108			
Grp Volume(v), veh/h	240	288	0	0	9	19	564	901	518			
Grp Sat Flow(s),veh/h/ln	1536	1613	0	0	1613	1371	1631	1432	1646			
Q Serve(g_s), s	9.3	10.9	0.0	0.0	0.4	1.0	27.2	23.7	23.7			
Cycle Q Clear(g_c), s	9.3	10.9	0.0	0.0	0.4	1.0	27.2	23.7	23.7			
Prop In Lane	1.00		0.00	0.00		1.00	0.42		0.07			
Lane Grp Cap(c), veh/h	576	605	0	0	125	106	579	1017	584			
V/C Ratio(X)	0.42	0.48	0.00	0.00	0.07	0.18	0.97	0.89	0.89			
Avail Cap(c_a), veh/h	576	605	0	0	125	106	579	1017	584			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	0.58	0.58	0.58			
Uniform Delay (d), s/veh	18.5	19.0	0.0	0.0	34.2	34.5	25.2	24.3	24.3			
Incr Delay (d2), s/veh	2.2	2.7	0.0	0.0	1.1	3.7	22.7	7.0	11.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(95%),veh/ln	7.7	9.0	0.0	0.0	0.4	0.9	20.8	14.2	16.9			
LnGrp Delay(d),s/veh	20.7	21.7	0.0	0.0	35.3	38.2	47.9	31.2	35.6			
LnGrp LOS	C	C			D	D	D	C	D			
Approach Vol, veh/h		528			28			1982				
Approach Delay, s/veh		21.3			37.3			37.1				
Approach LOS		C			D			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		33.6		11.2				35.2				
Change Period (Y+Rc), s		* 5.2		5.0				5.2				
Max Green Setting (Gmax), s		* 28		6.2				30.0				
Max Q Clear Time (g_c+I1), s		29.2		3.0				12.9				
Green Ext Time (p_c), s		0.0		0.0				1.2				
Intersection Summary												
HCM 2010 Ctrl Delay			33.8									
HCM 2010 LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												

Lanes, Volumes, Timings
 59: Chapin St & Lincoln Way & Marion St

Existing Network - 2014 AM
 2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	NBR2	SWL2	SWL	SWR
Lane Configurations		↔↔			↔↔		↖	↗		↖	↗	
Volume (vph)	21	571	25	29	401	0	27	58	37	5	53	12
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	0%	4%	20%	4%	3%	0%	15%	4%	0%	0%	6%	0%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	Prot		Perm	Perm	
Protected Phases		4			8			2				
Permitted Phases	4			8			2			6	6	
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	
Total Split (s)	22.0	22.0		22.0	22.0		20.0	20.0		28.0	28.0	
Total Split (%)	44.0%	44.0%		44.0%	44.0%		40.0%	40.0%		56.0%	56.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 50

Actuated Cycle Length: 50

Offset: 34 (68%), Referenced to phase 2:NBL and 6:SWL, Start of Green

Natural Cycle: 40

Control Type: Pretimed

Splits and Phases: 59: Chapin St & Lincoln Way & Marion St



HCM Signalized Intersection Capacity Analysis
59: Chapin St & Lincoln Way & Marion St

Existing Network - 2014 AM
2/25/2015



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBR	NBR2	SWL2	SWL	SWR
Lane Configurations		↔↔			↔↔		↔	↔		↔	↔	
Volume (vph)	21	571	25	29	401	0	27	58	37	5	53	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Util. Factor		0.95			0.95		1.00	1.00		1.00	1.00	
Frt		0.99			1.00		1.00	0.85		1.00	0.97	
Flt Protected		1.00			1.00		0.95	1.00		0.95	0.96	
Satd. Flow (prot)		3428			3491		1570	1577		1805	1692	
Flt Permitted		0.93			0.88		0.71	1.00		0.68	1.00	
Satd. Flow (perm)		3192			3096		1169	1577		1301	1761	
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	25	672	29	34	472	0	32	68	44	6	62	14
RTOR Reduction (vph)	0	6	0	0	0	0	0	23	0	0	11	0
Lane Group Flow (vph)	0	720	0	0	506	0	32	89	0	6	65	0
Heavy Vehicles (%)	0%	4%	20%	4%	3%	0%	15%	4%	0%	0%	6%	0%
Turn Type	Perm	NA		Perm	NA		Perm	Prot		Perm	Perm	
Protected Phases		4			8			2				
Permitted Phases	4			8			2			6	6	
Actuated Green, G (s)		18.0			18.0		24.0	24.0		24.0	24.0	
Effective Green, g (s)		18.0			18.0		24.0	24.0		24.0	24.0	
Actuated g/C Ratio		0.36			0.36		0.48	0.48		0.48	0.48	
Clearance Time (s)		4.0			4.0		4.0	4.0		4.0	4.0	
Lane Grp Cap (vph)		1149			1114		561	756		624	845	
v/s Ratio Prot								c0.06				
v/s Ratio Perm		c0.23			0.16		0.03			0.00	0.04	
v/c Ratio		0.63			0.45		0.06	0.12		0.01	0.08	
Uniform Delay, d1		13.2			12.2		7.0	7.2		6.8	7.0	
Progression Factor		1.00			1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2		2.6			1.3		0.2	0.3		0.0	0.2	
Delay (s)		15.8			13.6		7.1	7.5		6.8	7.2	
Level of Service		B			B		A	A		A	A	
Approach Delay (s)		15.8			13.6		7.4				7.2	
Approach LOS		B			B		A				A	

Intersection Summary

HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	50.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection

Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Vol, veh/h	0	98	18	0	34	115	0	43	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	4	4	2	9	9	2	9	9
Mvmt Flow	0	107	20	0	37	125	0	47	74
Number of Lanes	0	1	1	0	1	0	0	0	1

Approach

	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	9.2	8	8.5
HCM LOS	A	A	A

Lane

	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	39%
Vol Thru, %	23%	0%	0%	61%
Vol Right, %	77%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	149	98	18	111
LT Vol	0	98	0	43
Through Vol	34	0	0	68
RT Vol	115	0	18	0
Lane Flow Rate	162	107	20	121
Geometry Grp	2	7	7	2
Degree of Util (X)	0.184	0.168	0.024	0.156
Departure Headway (Hd)	4.084	5.691	4.485	4.65
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	881	631	798	773
Service Time	2.098	3.419	2.212	2.666
HCM Lane V/C Ratio	0.184	0.17	0.025	0.157
HCM Control Delay	8	9.6	7.3	8.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.6	0.1	0.6

Lanes, Volumes, Timings
61: William St & Lincoln Way

Existing Network - 2014 AM
2/25/2015

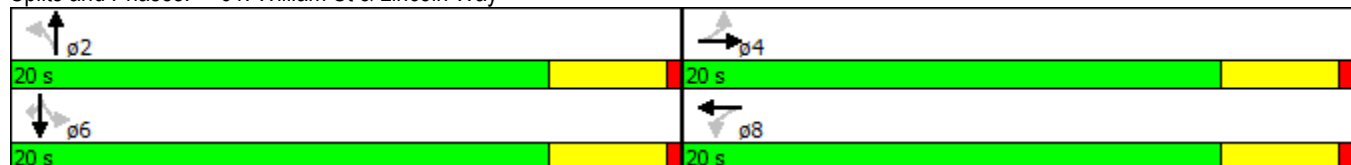


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↗		↖	↗	↖
Volume (vph)	13	545	127	47	532	86	5	20	6	139	349	6
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	9%	9%	9%	9%	9%	9%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	Max

Intersection Summary






















Cycle Length: 40
 Actuated Cycle Length: 37.1
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord

Splits and Phases: 61: William St & Lincoln Way



HCM 2010 Signalized Intersection Summary
61: William St & Lincoln Way

Existing Network - 2014 AM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	13	545	127	47	532	86	5	20	6	139	349	6
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1743	1743	1900	1743	1743	1743
Adj Flow Rate, veh/h	14	592	138	51	578	93	5	22	7	151	379	7
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	9	9	9	9	9	9
Cap, veh/h	357	1052	245	335	1127	181	423	528	168	709	725	616
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.42	0.42	0.42	0.42	0.42	0.42
Sat Flow, veh/h	749	2797	650	709	2997	481	930	1268	404	1287	1743	1482
Grp Volume(v), veh/h	14	367	363	51	334	337	5	0	29	151	379	7
Grp Sat Flow(s),veh/h/ln	749	1736	1712	709	1736	1742	930	0	1672	1287	1743	1482
Q Serve(g_s), s	0.6	6.4	6.5	2.4	5.7	5.8	0.2	0.0	0.4	3.0	6.2	0.1
Cycle Q Clear(g_c), s	6.3	6.4	6.5	8.8	5.7	5.8	6.4	0.0	0.4	3.4	6.2	0.1
Prop In Lane	1.00		0.38	1.00		0.28	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	357	653	644	335	653	655	423	0	696	709	725	616
V/C Ratio(X)	0.04	0.56	0.56	0.15	0.51	0.51	0.01	0.00	0.04	0.21	0.52	0.01
Avail Cap(c_a), veh/h	387	722	712	363	722	725	423	0	696	709	725	616
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.7	9.5	9.5	13.0	9.3	9.3	10.8	0.0	6.7	7.7	8.4	6.6
Incr Delay (d2), s/veh	0.0	0.8	0.8	0.2	0.6	0.6	0.1	0.0	0.1	0.7	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	5.8	5.7	0.9	5.0	5.1	0.1	0.0	0.4	2.1	6.3	0.1
LnGrp Delay(d),s/veh	11.8	10.3	10.3	13.2	9.9	9.9	10.8	0.0	6.8	8.4	11.1	6.6
LnGrp LOS	B	B	B	B	A	A	B		A	A	B	A
Approach Vol, veh/h		744			722			34			537	
Approach Delay, s/veh		10.3			10.1			7.4			10.3	
Approach LOS		B			B			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		18.5		20.0		18.5				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s		8.4		8.5		8.2		10.8				
Green Ext Time (p_c), s		2.0		5.0		2.0		3.6				
Intersection Summary												
HCM 2010 Ctrl Delay			10.2									
HCM 2010 LOS			B									

Lanes, Volumes, Timings
1: William St & Marion St

Existing Network - 2014 PM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖	↕		↖	↕			↕	↗
Volume (vph)	0	0	0	26	80	187	4	265	0	0	299	39
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type				Perm	NA		Perm	NA			NA	Perm
Protected Phases					4			2			6	
Permitted Phases				4			2					6
Detector Phase				4	4		2	2			6	6
Switch Phase												
Minimum Initial (s)				5.0	5.0		5.0	5.0			5.0	5.0
Minimum Split (s)				29.2	29.2		26.2	26.2			26.2	26.2
Total Split (s)				29.6	29.6		50.4	50.4			50.4	50.4
Total Split (%)				37.0%	37.0%		63.0%	63.0%			63.0%	63.0%
Yellow Time (s)				3.2	3.2		3.2	3.2			3.2	3.2
All-Red Time (s)				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)				5.2	5.2		5.2	5.2			5.2	5.2
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode				None	None		C-Max	C-Max			C-Max	C-Max

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 60 (75%), Referenced to phase 2:NBT and 6:SBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 1: William St & Marion St



HCM 2010 Signalized Intersection Summary
 1: William St & Marion St

Existing Network - 2014 PM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	26	80	187	4	265	0	0	299	39
Number				7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1882	1810	1976	1827	1827	0	0	1827	1827
Adj Flow Rate, veh/h				27	83	56	4	276	0	0	311	23
Adj No. of Lanes				1	2	0	1	1	0	0	1	1
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				5	5	5	4	4	0	0	4	4
Cap, veh/h				122	139	86	868	1465	0	0	1465	1245
Arrive On Green				0.07	0.07	0.07	1.00	1.00	0.00	0.00	0.80	0.80
Sat Flow, veh/h				1792	2036	1268	1022	1827	0	0	1827	1553
Grp Volume(v), veh/h				27	69	70	4	276	0	0	311	23
Grp Sat Flow(s),veh/h/ln				1792	1719	1586	1022	1827	0	0	1827	1553
Q Serve(g_s), s				1.1	3.1	3.4	0.0	0.0	0.0	0.0	3.3	0.2
Cycle Q Clear(g_c), s				1.1	3.1	3.4	3.3	0.0	0.0	0.0	3.3	0.2
Prop In Lane				1.00		0.80	1.00		0.00	0.00		1.00
Lane Grp Cap(c), veh/h				122	117	108	868	1465	0	0	1465	1245
V/C Ratio(X)				0.22	0.59	0.65	0.00	0.19	0.00	0.00	0.21	0.02
Avail Cap(c_a), veh/h				547	524	484	868	1465	0	0	1465	1245
HCM Platoon Ratio				1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				0.99	0.99	0.99	0.98	0.98	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh				35.3	36.2	36.3	0.1	0.0	0.0	0.0	1.9	1.6
Incr Delay (d2), s/veh				0.3	1.7	2.4	0.0	0.3	0.0	0.0	0.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.6	1.5	1.6	0.0	0.1	0.0	0.0	1.7	0.1
LnGrp Delay(d),s/veh				35.6	37.9	38.8	0.1	0.3	0.0	0.0	2.2	1.6
LnGrp LOS				D	D	D	A	A			A	A
Approach Vol, veh/h					166			280			334	
Approach Delay, s/veh					37.9			0.3			2.2	
Approach LOS					D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		69.4		10.6		69.4						
Change Period (Y+Rc), s		* 5.2		* 5.2		* 5.2						
Max Green Setting (Gmax), s		* 45		* 24		* 45						
Max Q Clear Time (g_c+I1), s		5.3		5.4		5.3						
Green Ext Time (p_c), s		0.7		0.1		0.7						
Intersection Summary												
HCM 2010 Ctrl Delay				9.1								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
2: William St & Madison St

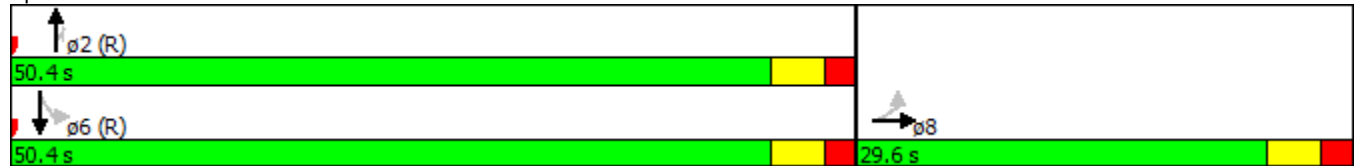
Existing Network - 2014 PM
2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕						↑	↗	↘	↑	
Volume (vph)	55	19	4	0	0	0	0	208	7	19	314	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type	Perm	NA						NA	Perm	Perm	NA	
Protected Phases		8						2			6	
Permitted Phases	8								2	6		
Minimum Split (s)	26.2	26.2						24.2	24.2	24.2	24.2	
Total Split (s)	29.6	29.6						50.4	50.4	50.4	50.4	
Total Split (%)	37.0%	37.0%						63.0%	63.0%	63.0%	63.0%	
Yellow Time (s)	3.2	3.2						3.2	3.2	3.2	3.2	
All-Red Time (s)	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	
Total Lost Time (s)		5.2						5.2	5.2	5.2	5.2	
Lead/Lag												
Lead-Lag Optimize?												

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 72 (90%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 2: William St & Madison St



HCM 2010 Signalized Intersection Summary
 2: William St & Madison St

Existing Network - 2014 PM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	55	19	4	0	0	0	0	208	7	19	314	0
Number	3	8	18				5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1810	1900				0	1827	1827	1827	1827	0
Adj Flow Rate, veh/h	59	20	1				0	224	0	20	338	0
Adj No. of Lanes	0	2	0				0	1	1	1	1	0
Peak Hour Factor	0.93	0.93	0.93				0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	5	0				0	4	4	4	4	0
Cap, veh/h	526	521	26				0	1032	877	660	1032	0
Arrive On Green	0.30	0.30	0.30				0.00	0.56	0.00	1.00	1.00	0.00
Sat Flow, veh/h	1723	1709	85				0	1827	1553	1130	1827	0
Grp Volume(v), veh/h	59	0	21				0	224	0	20	338	0
Grp Sat Flow(s),veh/h/ln	1723	0	1794				0	1827	1553	1130	1827	0
Q Serve(g_s), s	2.0	0.0	0.7				0.0	4.9	0.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	2.0	0.0	0.7				0.0	4.9	0.0	5.0	0.0	0.0
Prop In Lane	1.00		0.05				0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	526	0	547				0	1032	877	660	1032	0
V/C Ratio(X)	0.11	0.00	0.04				0.00	0.22	0.00	0.03	0.33	0.00
Avail Cap(c_a), veh/h	526	0	547				0	1032	877	660	1032	0
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	2.00	2.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.0	0.0	19.6				0.0	8.6	0.0	0.3	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.1				0.0	0.5	0.0	0.1	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.3				0.0	2.6	0.0	0.1	0.2	0.0
LnGrp Delay(d),s/veh	20.4	0.0	19.7				0.0	9.1	0.0	0.4	0.8	0.0
LnGrp LOS	C		B					A		A	A	
Approach Vol, veh/h		80						224			358	
Approach Delay, s/veh		20.2						9.1			0.8	
Approach LOS		C						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		50.4				50.4		29.6				
Change Period (Y+Rc), s		* 5.2				* 5.2		5.2				
Max Green Setting (Gmax), s		* 45				* 45		24.4				
Max Q Clear Time (g_c+I1), s		6.9				7.0		4.0				
Green Ext Time (p_c), s		0.7				0.7		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			6.0									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 3: William St & Washington St

Existing Network - 2014 PM
 2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↗		↘	↗						↕	↕
Volume (vph)	40	113	20	21	114	31	0	0	0	13	273	24
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)												5
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA					Perm	NA	
Protected Phases		8			4							2
Permitted Phases	8			4						2		
Minimum Split (s)	21.2	21.2		24.2	24.2					25.2	25.2	
Total Split (s)	36.0	36.0		36.0	36.0					44.0	44.0	
Total Split (%)	45.0%	45.0%		45.0%	45.0%					55.0%	55.0%	
Yellow Time (s)	3.2	3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)	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	
Total Lost Time (s)	5.2	5.2		5.2	5.2						5.2	

Lead/Lag
 Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 43.2 (54%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 3: William St & Washington St



HCM 2010 Signalized Intersection Summary
 3: William St & Washington St

Existing Network - 2014 PM
 2/25/2015

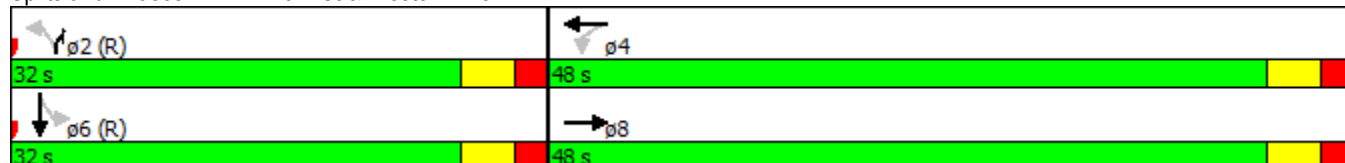
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	40	113	20	21	114	31	0	0	0	13	273	24
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900				1900	1900	1900
Adj Flow Rate, veh/h	45	128	15	24	130	21				15	310	19
Adj No. of Lanes	1	1	0	1	1	0				0	2	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	4	4	4	4	4	4				0	4	0
Cap, veh/h	463	618	72	494	591	95				72	1536	99
Arrive On Green	0.38	0.38	0.38	0.13	0.13	0.13				0.97	0.97	0.97
Sat Flow, veh/h	1208	1606	188	1216	1535	248				148	3168	204
Grp Volume(v), veh/h	45	0	143	24	0	151				192	0	152
Grp Sat Flow(s),veh/h/ln	1208	0	1794	1216	0	1783				1893	0	1627
Q Serve(g_s), s	2.1	0.0	4.3	1.4	0.0	6.1				0.3	0.0	0.3
Cycle Q Clear(g_c), s	8.2	0.0	4.3	5.7	0.0	6.1				0.3	0.0	0.3
Prop In Lane	1.00		0.10	1.00		0.14				0.08		0.13
Lane Grp Cap(c), veh/h	463	0	691	494	0	687				918	0	789
V/C Ratio(X)	0.10	0.00	0.21	0.05	0.00	0.22				0.21	0.00	0.19
Avail Cap(c_a), veh/h	463	0	691	494	0	687				918	0	789
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33				2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	19.8	0.0	16.4	25.9	0.0	24.1				0.6	0.0	0.6
Incr Delay (d2), s/veh	0.4	0.0	0.7	0.2	0.0	0.7				0.5	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	2.2	0.5	0.0	3.2				0.3	0.0	0.2
LnGrp Delay(d),s/veh	20.3	0.0	17.1	26.0	0.0	24.9				1.1	0.0	1.2
LnGrp LOS	C		B	C		C				A		A
Approach Vol, veh/h		188			175						344	
Approach Delay, s/veh		17.9			25.0						1.2	
Approach LOS		B			C						A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		44.0		36.0				36.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 39		* 31				* 31				
Max Q Clear Time (g_c+I1), s		2.3		8.1				10.2				
Green Ext Time (p_c), s		0.4		0.3				0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			11.5									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑		↑		↑	↑	↑	
Volume (vph)	0	475	2	9	629	0	1	0	1	246	4	108
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)										20		20
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA		Perm		Prot	Perm	NA	
Protected Phases		8			4				2			6
Permitted Phases				4			2			6		
Minimum Split (s)		24.2		24.2	24.2		25.2		25.2	25.2		25.2
Total Split (s)		48.0		48.0	48.0		32.0		32.0	32.0		32.0
Total Split (%)		60.0%		60.0%	60.0%		40.0%		40.0%	40.0%		40.0%
Yellow Time (s)		3.2		3.2	3.2		3.2		3.2	3.2		3.2
All-Red Time (s)		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)		5.2			5.2		5.2		5.2	5.2		5.2
Lead/Lag												
Lead-Lag Optimize?												

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 79.2 (99%), Referenced to phase 2:NBL and 6:SBTL, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 4: William St & Western Ave



HCM 2010 Signalized Intersection Summary
4: William St & Western Ave

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	475	2	9	629	0	1	0	1	246	4	108
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.80
Adj Sat Flow, veh/h/ln	0	1827	1976	1900	1827	0	1827	0	1900	1900	1900	1976
Adj Flow Rate, veh/h	0	511	2	10	676	0	1	0	1	265	4	38
Adj No. of Lanes	0	2	0	0	2	0	1	0	1	1	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	4	4	4	4	0	4	0	4	4	4	4
Cap, veh/h	0	1897	7	54	1806	0	0	0	0	572	42	397
Arrive On Green	0.00	0.54	0.54	0.18	0.18	0.00	0.00	0.00	0.00	0.34	0.34	0.34
Sat Flow, veh/h	0	3638	14	15	3458	0		0		1439	125	1186
Grp Volume(v), veh/h	0	250	263	367	319	0		0.0		265	0	42
Grp Sat Flow(s),veh/h/ln	0	1736	1824	1811	1579	0				1439	0	1311
Q Serve(g_s), s	0.0	6.3	6.3	0.0	14.3	0.0				12.0	0.0	1.8
Cycle Q Clear(g_c), s	0.0	6.3	6.3	14.2	14.3	0.0				12.0	0.0	1.8
Prop In Lane	0.00		0.01	0.03		0.00				1.00		0.90
Lane Grp Cap(c), veh/h	0	929	976	1015	845	0				572	0	439
V/C Ratio(X)	0.00	0.27	0.27	0.36	0.38	0.00				0.46	0.00	0.10
Avail Cap(c_a), veh/h	0	929	976	1015	845	0				572	0	439
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.1	10.1	21.1	21.2	0.0				21.7	0.0	18.3
Incr Delay (d2), s/veh	0.0	0.7	0.7	1.0	1.3	0.0				2.7	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	3.2	3.3	7.5	6.5	0.0				5.1	0.0	0.7
LnGrp Delay(d),s/veh	0.0	10.8	10.8	22.1	22.5	0.0				24.4	0.0	18.7
LnGrp LOS		B	B	C	C					C		B
Approach Vol, veh/h		513			686							307
Approach Delay, s/veh		10.8			22.3							23.6
Approach LOS		B			C							C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				48.0		32.0		48.0				
Change Period (Y+Rc), s				* 5.2		* 5.2		* 5.2				
Max Green Setting (Gmax), s				* 43		* 27		* 43				
Max Q Clear Time (g_c+I1), s				16.3		14.0		8.3				
Green Ext Time (p_c), s				1.5		0.1		1.5				
Intersection Summary												
HCM 2010 Ctrl Delay				18.6								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
5: Lafayette Blvd & Marion St

Existing Network - 2014 PM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations					←↑↑			←↑↑			↑	
Volume (vph)	0	0	0	0	97	40	150	194	0	0	86	39
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	8%	8%	8%	8%	8%	8%
Parking (#/hr)				5	5	5					5	5
Shared Lane Traffic (%)												
Turn Type					NA		Perm	NA			NA	
Protected Phases					8			2			6	
Permitted Phases				8			2					
Minimum Split (s)				20.0	20.0		24.0	24.0			24.0	
Total Split (s)				20.0	20.0		52.0	52.0			52.0	
Total Split (%)				27.8%	27.8%		72.2%	72.2%			72.2%	
Yellow Time (s)				3.5	3.5		3.2	3.2			3.2	
All-Red Time (s)				0.5	0.5		1.8	1.8			1.8	
Lost Time Adjust (s)					0.0			0.0			0.0	
Total Lost Time (s)					4.0			5.0			5.0	

Lead/Lag
Lead-Lag Optimize?

Intersection Summary
















Cycle Length: 72
 Actuated Cycle Length: 72
 Offset: 33.6 (47%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 45
 Control Type: Pretimed

Splits and Phases: 5: Lafayette Blvd & Marion St



HCM 2010 Signalized Intersection Summary
5: Lafayette Blvd & Marion St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	0	0	97	40	150	194	0	0	86	39
Number				3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	0.94	0.88	1.00	1.00	1.00	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln				1710	1629	1710	1710	1583	0	0	1583	1710
Adj Flow Rate, veh/h				0	101	13	156	202	0	0	90	25
Adj No. of Lanes				0	3	0	0	2	0	0	1	0
Peak Hour Factor				0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %				0	5	0	8	8	0	0	8	8
Cap, veh/h				0	815	101	702	992	0	0	682	189
Arrive On Green				0.00	0.22	0.22	0.66	0.65	0.00	0.00	0.65	0.65
Sat Flow, veh/h				0	3750	455	932	1591	0	0	1044	290
Grp Volume(v), veh/h				0	76	38	180	178	0	0	0	115
Grp Sat Flow(s),veh/h/ln				0	1389	1345	1083	1369	0	0	0	1334
Q Serve(g_s), s				0.0	1.6	1.6	4.5	3.7	0.0	0.0	0.0	2.4
Cycle Q Clear(g_c), s				0.0	1.6	1.6	6.9	3.7	0.0	0.0	0.0	2.4
Prop In Lane				0.00		0.34	0.87		0.00	0.00		0.22
Lane Grp Cap(c), veh/h				0	618	299	812	894	0	0	0	871
V/C Ratio(X)				0.00	0.12	0.13	0.22	0.20	0.00	0.00	0.00	0.13
Avail Cap(c_a), veh/h				0	618	299	812	894	0	0	0	871
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)				0.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh				0.0	22.4	22.4	5.7	5.0	0.0	0.0	0.0	4.7
Incr Delay (d2), s/veh				0.0	0.4	0.9	0.6	0.5	0.0	0.0	0.0	0.3
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				0.0	0.6	0.7	1.6	1.5	0.0	0.0	0.0	0.9
LnGrp Delay(d),s/veh				0.0	22.8	23.3	6.4	5.5	0.0	0.0	0.0	5.1
LnGrp LOS					C	C	A	A				A
Approach Vol, veh/h					114			358			115	
Approach Delay, s/veh					23.0			5.9			5.1	
Approach LOS					C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2				6		8				
Phs Duration (G+Y+Rc), s		52.0				52.0		20.0				
Change Period (Y+Rc), s		5.0				5.0		4.0				
Max Green Setting (Gmax), s		47.0				47.0		16.0				
Max Q Clear Time (g_c+I1), s		8.9				4.4		3.6				
Green Ext Time (p_c), s		0.2				0.2		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay					9.1							
HCM 2010 LOS					A							

Lanes, Volumes, Timings
6: Lafayette Blvd & Madison St

Existing Network - 2014 PM
2/25/2015

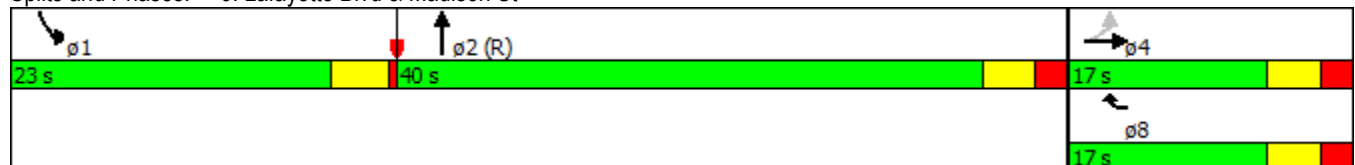


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑				↗		↑↑		↘		
Volume (vph)	8	44	0	0	0	30	0	300	62	94	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	8%	8%	8%	8%	8%	8%
Parking (#/hr)						5						
Shared Lane Traffic (%)												
Turn Type	Perm	NA				Prot		NA		Prot		
Protected Phases		4				8		2		1		
Permitted Phases	4											
Detector Phase	4	4				8		2		1		
Switch Phase												
Minimum Initial (s)	4.0	4.0				4.0		5.0		4.0		
Minimum Split (s)	9.2	9.2				9.2		23.2		8.0		
Total Split (s)	17.0	17.0				17.0		40.0		23.0		
Total Split (%)	21.3%	21.3%				21.3%		50.0%		28.8%		
Yellow Time (s)	3.2	3.2				3.2		3.2		3.5		
All-Red Time (s)	2.0	2.0				2.0		2.0		0.5		
Lost Time Adjust (s)	-1.0	0.0				0.0		0.0		0.0		
Total Lost Time (s)	4.2	5.2				5.2		5.2		4.0		
Lead/Lag								Lag		Lead		
Lead-Lag Optimize?										Yes		
Recall Mode	None	None				None		C-Max		None		

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 45
 Control Type: Actuated-Coordinated

Splits and Phases: 6: Lafayette Blvd & Madison St



HCM 2010 Signalized Intersection Summary
6: Lafayette Blvd & Madison St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	8	44	0	0	0	30	0	300	62	94	0	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1694	1629	0	0	0	1694	0	1583	1710	1647	0	0
Adj Flow Rate, veh/h	9	49	0	0	0	33	0	333	47	104	0	0
Adj No. of Lanes	1	2	0	0	0	1	0	2	0	1	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	0	0	0	5	0	8	8	8	0	0
Cap, veh/h	151	112	0	0	0	0	0	1856	260	131	0	0
Arrive On Green	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.70	0.70	0.08	0.00	0.00
Sat Flow, veh/h	1246	3176	0		0		0	2730	371	1568	104	
Grp Volume(v), veh/h	9	49	0		0.0		0	188	192	104	46.0	
Grp Sat Flow(s),veh/h/ln	1246	1547	0				0	1504	1518	1568	D	
Q Serve(g_s), s	0.6	1.2	0.0				0.0	3.4	3.5	5.2		
Cycle Q Clear(g_c), s	0.6	1.2	0.0				0.0	3.4	3.5	5.2		
Prop In Lane	1.00		0.00				0.00		0.24	1.00		
Lane Grp Cap(c), veh/h	151	112	0				0	1053	1062	131		
V/C Ratio(X)	0.06	0.44	0.00				0.00	0.18	0.18	0.79		
Avail Cap(c_a), veh/h	289	456	0				0	1053	1062	372		
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00				0.00	1.00	1.00	0.99		
Uniform Delay (d), s/veh	36.5	37.8	0.0				0.0	4.1	4.1	36.0		
Incr Delay (d2), s/veh	0.2	2.7	0.0				0.0	0.4	0.4	10.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.0				0.0	1.5	1.6	2.6		
LnGrp Delay(d),s/veh	36.6	40.4	0.0				0.0	4.5	4.5	46.0		
LnGrp LOS	D	D						A	A	D		
Approach Vol, veh/h		58						380				
Approach Delay, s/veh		39.8						4.5				
Approach LOS		D						A				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4								
Phs Duration (G+Y+Rc), s	10.7	61.2		8.1								
Change Period (Y+Rc), s	4.0	* 5.2		* 5.2								
Max Green Setting (Gmax), s	19.0	* 35		* 12								
Max Q Clear Time (g_c+I1), s	7.2	5.5		3.2								
Green Ext Time (p_c), s	0.2	0.1		0.1								
Intersection Summary												
HCM 2010 Ctrl Delay			16.2									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
7: Lafayette Blvd & LaSalle Ave

Existing Network - 2014 PM
2/25/2015

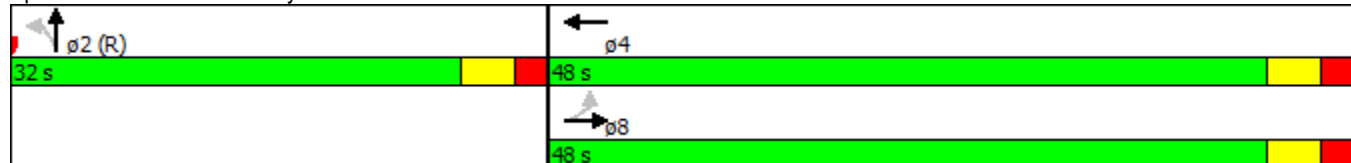


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔↔↔				
Volume (vph)	24	734	0	0	820	58	202	280	109	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)							0		5			
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	27.2	27.2			27.2		26.2	26.2				
Total Split (s)	48.0	48.0			48.0		32.0	32.0				
Total Split (%)	60.0%	60.0%			60.0%		40.0%	40.0%				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				
Lead/Lag												
Lead-Lag Optimize?												

Intersection Summary
















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 10.4 (13%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 7: Lafayette Blvd & LaSalle Ave



HCM 2010 Signalized Intersection Summary
7: Lafayette Blvd & LaSalle Ave

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	24	734	0	0	820	58	202	280	109	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	0.88			
Adj Sat Flow, veh/h/ln	1778	1710	0	0	1710	1778	1710	1647	1710			
Adj Flow Rate, veh/h	27	825	0	0	921	58	227	315	74			
Adj No. of Lanes	0	2	0	0	2	0	0	3	0			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89			
Percent Heavy Veh, %	4	4	0	0	4	4	0	8	0			
Cap, veh/h	73	1624	0	0	1661	105	473	774	179			
Arrive On Green	0.55	0.54	0.00	0.00	0.54	0.54	0.11	0.11	0.11			
Sat Flow, veh/h	47	3113	0	0	3190	196	1411	2310	535			
Grp Volume(v), veh/h	444	408	0	0	482	497	227	203	186			
Grp Sat Flow(s),veh/h/ln	1604	1478	0	0	1624	1675	1411	1498	1346			
Q Serve(g_s), s	0.0	14.2	0.0	0.0	15.7	15.7	12.1	10.1	10.3			
Cycle Q Clear(g_c), s	12.9	14.2	0.0	0.0	15.7	15.7	12.1	10.1	10.3			
Prop In Lane	0.06		0.00	0.00		0.12	1.00		0.40			
Lane Grp Cap(c), veh/h	926	791	0	0	869	896	473	502	451			
V/C Ratio(X)	0.48	0.52	0.00	0.00	0.55	0.55	0.48	0.40	0.41			
Avail Cap(c_a), veh/h	926	791	0	0	869	896	473	502	451			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	11.6	11.9	0.0	0.0	12.3	12.3	28.9	28.1	28.2			
Incr Delay (d2), s/veh	1.8	2.4	0.0	0.0	2.5	2.5	3.5	2.4	2.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.3	6.2	0.0	0.0	7.6	7.8	5.2	4.5	4.2			
LnGrp Delay(d),s/veh	13.4	14.3	0.0	0.0	14.8	14.8	32.3	30.5	31.0			
LnGrp LOS	B	B			B	B	C	C	C			
Approach Vol, veh/h		852			979			616				
Approach Delay, s/veh		13.9			14.8			31.4				
Approach LOS		B			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		32.0		48.0				48.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 27		* 43				* 43				
Max Q Clear Time (g_c+I1), s		14.1		17.7				16.2				
Green Ext Time (p_c), s		0.2		0.6				0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			18.6									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
8: Lafayette Blvd & Colfax Ave

Existing Network - 2014 PM
2/25/2015

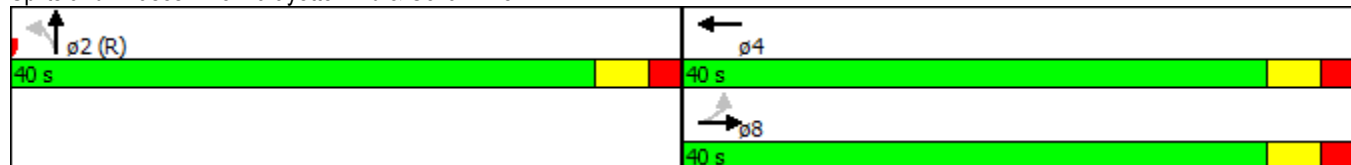


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↗			↖↗↘				
Volume (vph)	21	143	0	0	175	69	20	505	81	0	0	0
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)					5	5	0		5			
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	26.2	26.2			26.2		26.2	26.2				
Total Split (s)	40.0	40.0			40.0		40.0	40.0				
Total Split (%)	50.0%	50.0%			50.0%		50.0%	50.0%				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0		0.0	0.0				
Total Lost Time (s)		5.2			5.2		5.2	5.2				
Lead/Lag												
Lead-Lag Optimize?												

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 78.4 (98%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 8: Lafayette Blvd & Colfax Ave



HCM 2010 Signalized Intersection Summary
8: Lafayette Blvd & Colfax Ave

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Volume (veh/h)	21	143	0	0	175	69	20	505	81	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	0.90	1.00	0.88			
Adj Sat Flow, veh/h/ln	1710	1710	0	0	1710	1710	1710	1647	1710			
Adj Flow Rate, veh/h	26	174	0	0	213	64	24	616	70			
Adj No. of Lanes	0	1	0	0	1	0	0	3	0			
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82			
Percent Heavy Veh, %	4	4	0	0	4	4	0	8	0			
Cap, veh/h	108	646	0	0	481	144	60	1636	190			
Arrive On Green	0.87	0.87	0.00	0.00	0.44	0.44	0.15	0.14	0.14			
Sat Flow, veh/h	132	1485	0	0	1105	332	138	3761	438			
Grp Volume(v), veh/h	200	0	0	0	0	277	256	236	218			
Grp Sat Flow(s),veh/h/ln	1618	0	0	0	0	1438	1475	1498	1364			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	10.8	12.6	11.4	11.6			
Cycle Q Clear(g_c), s	1.6	0.0	0.0	0.0	0.0	10.8	12.6	11.4	11.6			
Prop In Lane	0.13		0.00	0.00		0.23	0.09		0.32			
Lane Grp Cap(c), veh/h	755	0	0	0	0	625	642	652	593			
V/C Ratio(X)	0.27	0.00	0.00	0.00	0.00	0.44	0.40	0.36	0.37			
Avail Cap(c_a), veh/h	755	0	0	0	0	625	642	652	593			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	3.0	0.0	0.0	0.0	0.0	15.8	24.7	24.2	24.3			
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.0	0.0	2.3	1.8	1.6	1.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	0.0	0.0	4.6	5.5	5.0	4.7			
LnGrp Delay(d),s/veh	3.9	0.0	0.0	0.0	0.0	18.1	26.6	25.8	26.1			
LnGrp LOS	A					B	C	C	C			
Approach Vol, veh/h		200			277			710				
Approach Delay, s/veh		3.9			18.1			26.2				
Approach LOS		A			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		40.0		40.0				40.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 35		* 35				* 35				
Max Q Clear Time (g_c+I1), s		14.6		12.8				3.6				
Green Ext Time (p_c), s		0.2		0.2				0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			20.5									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 9: Lafayette Blvd & Washington St

Existing Network - 2014 PM
 2/25/2015



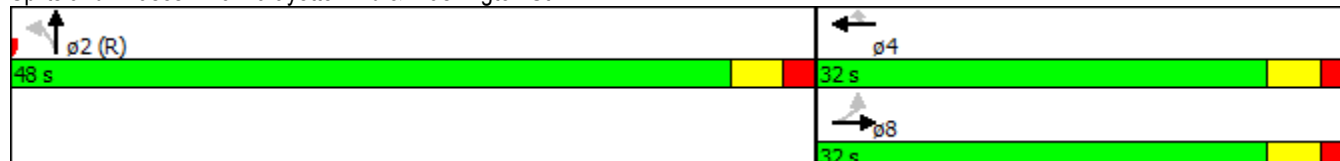
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↑			↑	↗		↖↗↘				
Volume (vph)	43	137	0	0	106	76	44	441	47	0	0	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)					0	0	10		10			
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8					4	2					
Minimum Split (s)	20.0	20.0			26.2	26.2	25.2	25.2				
Total Split (s)	32.0	32.0			32.0	32.0	48.0	48.0				
Total Split (%)	40.0%	40.0%			40.0%	40.0%	60.0%	60.0%				
Yellow Time (s)	3.2	3.2			3.2	3.2	3.2	3.2				
All-Red Time (s)	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				
Total Lost Time (s)	5.2	5.2			5.2	5.2		5.2				

Lead/Lag
 Lead-Lag Optimize?

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 66.4 (83%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 9: Lafayette Blvd & Washington St



HCM 2010 Signalized Intersection Summary
 9: Lafayette Blvd & Washington St

Existing Network - 2014 PM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	43	137	0	0	106	76	44	441	47	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.90	0.85	1.00	0.85			
Adj Sat Flow, veh/h/ln	1644	1644	0	0	1644	1644	1710	1647	1710			
Adj Flow Rate, veh/h	52	165	0	0	128	29	53	531	41			
Adj No. of Lanes	1	1	0	0	1	1	0	3	0			
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83			
Percent Heavy Veh, %	4	4	0	0	4	4	0	8	0			
Cap, veh/h	391	551	0	0	551	421	181	1931	152			
Arrive On Green	0.11	0.11	0.00	0.00	0.34	0.34	0.18	0.18	0.18			
Sat Flow, veh/h	1081	1644	0	0	1644	1258	337	3609	285			
Grp Volume(v), veh/h	52	165	0	0	128	29	217	213	194			
Grp Sat Flow(s),veh/h/ln	1081	1644	0	0	1644	1258	1383	1498	1349			
Q Serve(g_s), s	3.6	7.4	0.0	0.0	4.5	1.3	10.9	9.8	10.0			
Cycle Q Clear(g_c), s	8.0	7.4	0.0	0.0	4.5	1.3	10.9	9.8	10.0			
Prop In Lane	1.00		0.00	0.00		1.00	0.24		0.21			
Lane Grp Cap(c), veh/h	391	551	0	0	551	421	740	802	722			
V/C Ratio(X)	0.13	0.30	0.00	0.00	0.23	0.07	0.29	0.27	0.27			
Avail Cap(c_a), veh/h	391	551	0	0	551	421	740	802	722			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	29.3	26.9	0.0	0.0	19.2	18.1	19.8	19.4	19.4			
Incr Delay (d2), s/veh	0.7	1.4	0.0	0.0	1.0	0.3	1.0	0.8	0.9			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.1	3.6	0.0	0.0	2.2	0.5	4.4	4.3	3.9			
LnGrp Delay(d),s/veh	30.0	28.3	0.0	0.0	20.2	18.4	20.8	20.2	20.3			
LnGrp LOS	C	C			C	B	C	C	C			
Approach Vol, veh/h		217			157			625				
Approach Delay, s/veh		28.7			19.8			20.4				
Approach LOS		C			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		48.0		32.0				32.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 43		* 27				* 27				
Max Q Clear Time (g_c+l1), s		12.9		6.5				10.0				
Green Ext Time (p_c), s		0.2		0.1				0.1				

Intersection Summary												
HCM 2010 Ctrl Delay				22.1								
HCM 2010 LOS				C								

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
 10: Lafayette Blvd & Jefferson Blvd

Existing Network - 2014 PM
 2/25/2015



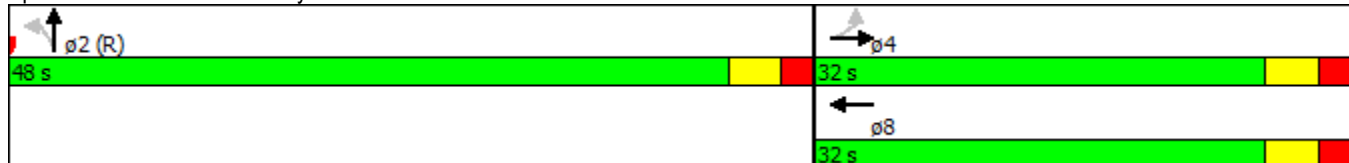
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔↔↔				
Volume (vph)	25	104	0	0	37	76	6	402	26	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)	10	10			10	10	10		10			
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4						2					
Minimum Split (s)	25.2	25.2			25.2		25.2	25.2				
Total Split (s)	32.0	32.0			32.0		48.0	48.0				
Total Split (%)	40.0%	40.0%			40.0%		60.0%	60.0%				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				

Lead/Lag
 Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 54.4 (68%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 10: Lafayette Blvd & Jefferson Blvd



HCM 2010 Signalized Intersection Summary
 10: Lafayette Blvd & Jefferson Blvd

Existing Network - 2014 PM
 2/25/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	25	104	0	0	37	76	6	402	26	0	0	0
Number	7	4	14	3	8	18	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.85	0.85	1.00	0.85			
Adj Sat Flow, veh/h/ln	1710	1710	0	0	1710	1710	1710	1647	1710			
Adj Flow Rate, veh/h	27	113	0	0	40	26	7	437	19			
Adj No. of Lanes	0	1	0	0	1	0	0	3	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	4	0	0	4	4	0	8	0			
Cap, veh/h	127	470	0	0	276	179	32	2152	96			
Arrive On Green	0.35	0.34	0.00	0.00	0.34	0.34	0.18	0.18	0.18			
Sat Flow, veh/h	219	1404	0	0	824	535	61	4023	179			
Grp Volume(v), veh/h	140	0	0	0	0	66	161	157	145			
Grp Sat Flow(s),veh/h/ln	1622	0	0	0	0	1359	1397	1498	1368			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	2.7	7.9	7.2	7.2			
Cycle Q Clear(g_c), s	4.7	0.0	0.0	0.0	0.0	2.7	7.9	7.2	7.2			
Prop In Lane	0.19		0.00	0.00		0.39	0.04		0.13			
Lane Grp Cap(c), veh/h	617	0	0	0	0	455	747	802	732			
V/C Ratio(X)	0.23	0.00	0.00	0.00	0.00	0.14	0.22	0.20	0.20			
Avail Cap(c_a), veh/h	617	0	0	0	0	455	747	802	732			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	19.2	0.0	0.0	0.0	0.0	18.6	18.6	18.3	18.3			
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.0	0.0	0.7	0.7	0.5	0.6			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	0.0	0.0	1.1	3.2	3.1	2.9			
LnGrp Delay(d),s/veh	20.0	0.0	0.0	0.0	0.0	19.3	19.2	18.8	18.9			
LnGrp LOS	C					B	B	B	B			
Approach Vol, veh/h		140			66			463				
Approach Delay, s/veh		20.0			19.3			19.0				
Approach LOS		C			B			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		48.0		32.0				32.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 43		* 27				* 27				
Max Q Clear Time (g_c+l1), s		9.9		6.7				4.7				
Green Ext Time (p_c), s		0.1		0.1				0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			19.2									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
11: Lafayette Blvd & Wayne St

Existing Network - 2014 PM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↑			↑	↗		↔↑↗				
Volume (vph)	7	37	0	0	55	43	2	395	41	0	0	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		0				0	0		0			
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		4			8			2				
Permitted Phases	4					8	2					
Minimum Split (s)	26.2	26.2			26.2	26.2	25.2	25.2				
Total Split (s)	32.0	32.0			32.0	32.0	48.0	48.0				
Total Split (%)	40.0%	40.0%			40.0%	40.0%	60.0%	60.0%				
Yellow Time (s)	3.2	3.2			3.2	3.2	3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)		0.0			0.0	0.0		0.0				
Total Lost Time (s)		5.2			5.2	5.2		5.2				

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 42.4 (53%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 55





















Control Type: Pretimed

Splits and Phases: 11: Lafayette Blvd & Wayne St



HCM 2010 Signalized Intersection Summary
 11: Lafayette Blvd & Wayne St

Existing Network - 2014 PM
 2/25/2015

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		 						  					
Volume (veh/h)	7	37	0	0	55	43	2	395	41	0	0	0	
Number	7	4	14	3	8	18	5	2	12				
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0				
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00				
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.90	0.90	1.00	0.90				
Adj Sat Flow, veh/h/ln	1710	1644	0	0	1644	1644	1710	1647	1710				
Adj Flow Rate, veh/h	8	43	0	0	64	16	2	459	32				
Adj No. of Lanes	0	2	0	0	1	1	0	3	0				
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86				
Percent Heavy Veh, %	4	4	0	0	4	4	0	8	0				
Cap, veh/h	175	862	0	0	551	421	9	2194	157				
Arrive On Green	0.34	0.34	0.00	0.00	0.34	0.34	0.18	0.18	0.18				
Sat Flow, veh/h	348	2647	0	0	1644	1258	17	4100	293				
Grp Volume(v), veh/h	28	23	0	0	64	16	175	161	156				
Grp Sat Flow(s),veh/h/ln	1499	1421	0	0	1644	1258	1481	1498	1430				
Q Serve(g_s), s	0.0	0.9	0.0	0.0	2.2	0.7	8.1	7.4	7.5				
Cycle Q Clear(g_c), s	0.9	0.9	0.0	0.0	2.2	0.7	8.1	7.4	7.5				
Prop In Lane	0.29		0.00	0.00		1.00	0.01		0.20				
Lane Grp Cap(c), veh/h	560	476	0	0	551	421	792	802	765				
V/C Ratio(X)	0.05	0.05	0.00	0.00	0.12	0.04	0.22	0.20	0.20				
Avail Cap(c_a), veh/h	560	476	0	0	551	421	792	802	765				
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33				
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00				
Uniform Delay (d), s/veh	18.0	18.0	0.0	0.0	18.4	17.9	18.7	18.3	18.4				
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.0	0.4	0.2	0.6	0.6	0.6				
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
%ile BackOfQ(50%),veh/ln	0.4	0.4	0.0	0.0	1.0	0.3	3.5	3.2	3.1				
LnGrp Delay(d),s/veh	18.2	18.2	0.0	0.0	18.8	18.1	19.3	18.9	19.0				
LnGrp LOS	B	B			B	B	B	B	B				
Approach Vol, veh/h		51			80			493					
Approach Delay, s/veh		18.2			18.7			19.1					
Approach LOS		B			B			B					
Timer	1	2	3	4	5	6	7	8					
Assigned Phs		2		4				8					
Phs Duration (G+Y+Rc), s		48.0		32.0				32.0					
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2					
Max Green Setting (Gmax), s		* 43		* 27				* 27					
Max Q Clear Time (g_c+I1), s		10.1		2.9				4.2					
Green Ext Time (p_c), s		0.1		0.0				0.0					
Intersection Summary													
HCM 2010 Ctrl Delay				19.0									
HCM 2010 LOS				B									
Notes													
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.													

Lanes, Volumes, Timings
12: Lafayette Blvd & Western Ave

Existing Network - 2014 PM
2/25/2015

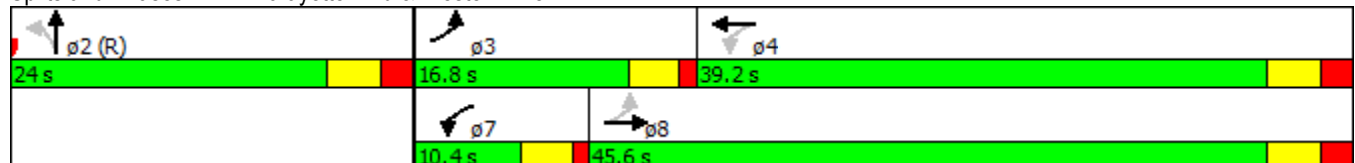


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕	↗	↘	↖	↗
Volume (vph)	84	484	168	12	509	43	129	277	10	0	0	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)								0				
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA				
Protected Phases	3	8		7	4			2				
Permitted Phases	8			4			2					
Minimum Split (s)	10.0	27.2		8.0	20.0		23.2	23.2				
Total Split (s)	16.8	45.6		10.4	39.2		24.0	24.0				
Total Split (%)	21.0%	57.0%		13.0%	49.0%		30.0%	30.0%				
Yellow Time (s)	3.0	3.2		3.0	3.2		3.2	3.2				
All-Red Time (s)	1.0	2.0		1.0	2.0		2.0	2.0				
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0				
Total Lost Time (s)	4.0	5.2		4.0	5.2			5.2				
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?		Yes		Yes								

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 30.4 (38%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 12: Lafayette Blvd & Western Ave



HCM 2010 Signalized Intersection Summary
 12: Lafayette Blvd & Western Ave

Existing Network - 2014 PM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	84	484	168	12	509	43	129	277	10	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1710	1710	1778	1710	1710	1778	1710	1583	1710			
Adj Flow Rate, veh/h	89	515	163	13	541	42	137	295	9			
Adj No. of Lanes	1	1	0	1	1	0	0	2	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	4	4	4	4	4	4	0	8	0			
Cap, veh/h	443	629	199	329	666	52	216	499	16			
Arrive On Green	0.16	0.50	0.50	0.08	0.43	0.43	0.47	0.47	0.47			
Sat Flow, veh/h	1629	1246	394	1629	1567	122	919	2123	67			
Grp Volume(v), veh/h	89	0	678	13	0	583	229	0	212			
Grp Sat Flow(s),veh/h/ln	1629	0	1640	1629	0	1689	1537	0	1572			
Q Serve(g_s), s	1.8	0.0	27.9	0.3	0.0	24.3	9.0	0.0	7.8			
Cycle Q Clear(g_c), s	1.8	0.0	27.9	0.3	0.0	24.3	9.0	0.0	7.8			
Prop In Lane	1.00		0.24	1.00		0.07	0.60		0.04			
Lane Grp Cap(c), veh/h	443	0	828	329	0	718	361	0	369			
V/C Ratio(X)	0.20	0.00	0.82	0.04	0.00	0.81	0.63	0.00	0.57			
Avail Cap(c_a), veh/h	443	0	828	329	0	718	361	0	369			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00			
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00			
Uniform Delay (d), s/veh	11.3	0.0	16.7	12.8	0.0	20.2	18.6	0.0	18.3			
Incr Delay (d2), s/veh	1.0	0.0	8.8	0.2	0.0	9.7	8.2	0.0	6.3			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.9	0.0	14.5	0.2	0.0	13.1	4.5	0.0	3.9			
LnGrp Delay(d),s/veh	12.3	0.0	25.5	13.0	0.0	29.9	26.8	0.0	24.6			
LnGrp LOS	B		C	B		C	C		C			
Approach Vol, veh/h		767			596			441				
Approach Delay, s/veh		24.0			29.6			25.8				
Approach LOS		C			C			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4			7	8				
Phs Duration (G+Y+Rc), s		24.0	16.8	39.2			10.4	45.6				
Change Period (Y+Rc), s		* 5.2	4.0	* 5.2			4.0	* 5.2				
Max Green Setting (Gmax), s		* 19	12.8	* 34			6.4	* 40				
Max Q Clear Time (g_c+I1), s		11.0	3.8	26.3			2.3	29.9				
Green Ext Time (p_c), s		0.1	0.0	0.4			0.0	0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			26.3									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 13: Lafayette Blvd & Monroe St

Existing Network - 2014 PM
 2/25/2015



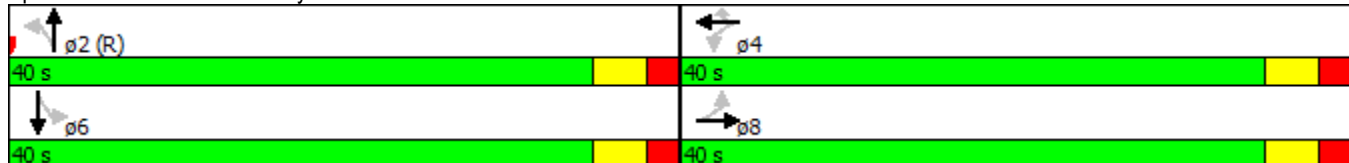
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔		↔			↔	
Volume (vph)	0	0	1	68	33	213	43	115	14	57	93	19
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)						5						
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4		4	2			6		
Minimum Split (s)	29.2	29.2		29.2	29.2	29.2	29.2	29.2		29.2	29.2	
Total Split (s)	40.0	40.0		40.0	40.0	40.0	40.0	40.0		40.0	40.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%	50.0%	50.0%	50.0%		50.0%	50.0%	
Yellow Time (s)	3.2	3.2		3.2	3.2	3.2	3.2	3.2		3.2	3.2	
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	
Total Lost Time (s)		5.2			5.2	5.2		5.2			5.2	

Lead/Lag
 Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 12 (15%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 13: Lafayette Blvd & Monroe St



HCM 2010 Signalized Intersection Summary
 13: Lafayette Blvd & Monroe St

Existing Network - 2014 PM
 2/25/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	0	1	68	33	213	43	115	14	57	93	19
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1827	1900	1759	1900	1900	1759	1900
Adj Flow Rate, veh/h	0	0	1	79	38	106	50	134	8	66	108	9
Adj No. of Lanes	0	1	0	0	1	1	0	2	0	0	2	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	0	0	675	504	228	591	358	950	59	445	784	68
Arrive On Green	0.00	0.00	0.44	0.44	0.44	0.44	0.45	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	0	0	1553	986	525	1359	666	2185	135	847	1802	157
Grp Volume(v), veh/h	0	0	1	117	0	106	99	0	93	93	0	90
Grp Sat Flow(s),veh/h/ln	0	0	1553	1511	0	1359	1409	0	1577	1233	0	1573
Q Serve(g_s), s	0.0	0.0	0.0	2.6	0.0	3.8	0.9	0.0	2.8	2.5	0.0	2.7
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.6	0.0	3.8	3.7	0.0	2.8	5.4	0.0	2.7
Prop In Lane	0.00		1.00	0.68		1.00	0.51		0.09	0.71		0.10
Lane Grp Cap(c), veh/h	0	0	676	733	0	591	704	0	686	613	0	684
V/C Ratio(X)	0.00	0.00	0.00	0.16	0.00	0.18	0.14	0.00	0.14	0.15	0.00	0.13
Avail Cap(c_a), veh/h	0	0	676	733	0	591	704	0	686	613	0	684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	12.8	13.7	0.0	13.8	13.5	0.0	13.6	14.5	0.0	13.5
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.5	0.0	0.7	0.4	0.0	0.4	0.5	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.7	0.0	1.5	1.4	0.0	1.3	1.4	0.0	1.3
LnGrp Delay(d),s/veh	0.0	0.0	12.8	14.2	0.0	14.5	13.9	0.0	14.0	15.0	0.0	13.9
LnGrp LOS			B	B		B	B		B	B		B
Approach Vol, veh/h		1			223			192			183	
Approach Delay, s/veh		12.8			14.4			13.9			14.5	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.0		40.0		40.0		40.0				
Change Period (Y+Rc), s		* 5.2		* 5.2		* 5.2		* 5.2				
Max Green Setting (Gmax), s		* 35		* 35		* 35		* 35				
Max Q Clear Time (g_c+I1), s		5.7		5.8		7.4		2.0				
Green Ext Time (p_c), s		0.1		0.1		0.1		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			14.3									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

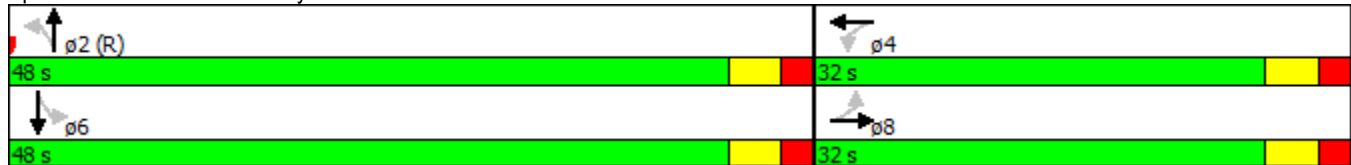
Lanes, Volumes, Timings
 14: Lafayette Blvd & South St

Existing Network - 2014 PM
 2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	55	48	10	6	115	144	40	96	3	19	39	44
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)				0	0	0						
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2			6		
Minimum Split (s)	29.2	29.2		29.2	29.2		25.2	25.2		25.2	25.2	
Total Split (s)	32.0	32.0		32.0	32.0		48.0	48.0		48.0	48.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%		60.0%	60.0%		60.0%	60.0%	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2	3.2	
All-Red Time (s)	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	
Total Lost Time (s)		5.2			5.2			5.2			5.2	
Lead/Lag												
Lead-Lag Optimize?												

















Intersection Summary
 Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 10.4 (13%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 14: Lafayette Blvd & South St



HCM 2010 Signalized Intersection Summary
 14: Lafayette Blvd & South St

Existing Network - 2014 PM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	55	48	10	6	115	144	40	96	3	19	39	44
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1900	1759	1900	1900	1759	1900
Adj Flow Rate, veh/h	65	56	7	7	135	110	47	113	3	22	46	28
Adj No. of Lanes	0	1	0	0	1	0	0	2	0	0	2	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	268	214	24	51	283	223	480	1181	33	384	769	477
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.54	0.54	0.54	0.54	0.54	0.54
Sat Flow, veh/h	598	639	72	13	845	664	767	2207	61	597	1437	891
Grp Volume(v), veh/h	128	0	0	252	0	0	85	0	78	51	0	45
Grp Sat Flow(s),veh/h/ln	1308	0	0	1522	0	0	1444	0	1590	1481	0	1444
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	1.9	0.0	0.0	1.2
Cycle Q Clear(g_c), s	5.6	0.0	0.0	10.5	0.0	0.0	1.9	0.0	1.9	1.1	0.0	1.2
Prop In Lane	0.51		0.05	0.03		0.44	0.56		0.04	0.43		0.62
Lane Grp Cap(c), veh/h	506	0	0	556	0	0	843	0	851	857	0	772
V/C Ratio(X)	0.25	0.00	0.00	0.45	0.00	0.00	0.10	0.00	0.09	0.06	0.00	0.06
Avail Cap(c_a), veh/h	506	0	0	556	0	0	843	0	851	857	0	772
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.3	0.0	0.0	21.2	0.0	0.0	9.1	0.0	9.1	8.9	0.0	8.9
Incr Delay (d2), s/veh	1.2	0.0	0.0	2.7	0.0	0.0	0.2	0.0	0.2	0.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	4.8	0.0	0.0	1.0	0.0	0.9	0.6	0.0	0.5
LnGrp Delay(d),s/veh	20.5	0.0	0.0	23.8	0.0	0.0	9.3	0.0	9.3	9.0	0.0	9.1
LnGrp LOS	C			C			A		A	A		A
Approach Vol, veh/h		128			252			163				96
Approach Delay, s/veh		20.5			23.8			9.3				9.1
Approach LOS		C			C			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		48.0		32.0		48.0		32.0				
Change Period (Y+Rc), s		* 5.2		* 5.2		* 5.2		* 5.2				
Max Green Setting (Gmax), s		* 43		* 27		* 43		* 27				
Max Q Clear Time (g_c+I1), s		3.9		12.5		3.2		7.6				
Green Ext Time (p_c), s		0.1		1.1		0.1		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay				17.2								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
15: Lafayette Blvd & Sample St

Existing Network - 2014 PM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕			↕			↕				↕
Volume (vph)	48	667	25	14	940	33	28	67	26	46	92	30
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2			6		
Minimum Split (s)	26.3	26.3		26.3	26.3		26.1	26.1		26.1	26.1	
Total Split (s)	52.0	52.0		52.0	52.0		28.0	28.0		28.0	28.0	
Total Split (%)	65.0%	65.0%		65.0%	65.0%		35.0%	35.0%		35.0%	35.0%	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.8	1.8		1.8	1.8		1.6	1.6		1.6	1.6	
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			0.0	
Total Lost Time (s)	5.3	5.3			5.3			5.1			5.1	

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 54 (68%), Referenced to phase 4:WBTL and 8:EBTL, Start of Green

Natural Cycle: 60


















Control Type: Pretimed

Splits and Phases: 15: Lafayette Blvd & Sample St



HCM 2010 Signalized Intersection Summary
 15: Lafayette Blvd & Sample St

Existing Network - 2014 PM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	48	667	25	14	940	33	28	67	26	46	92	30
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1900	1827	1900	1900	1759	1900	1900	1759	1900
Adj Flow Rate, veh/h	51	710	24	15	1000	32	30	71	16	49	98	22
Adj No. of Lanes	1	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	402	2000	68	57	1937	61	143	305	62	160	290	59
Arrive On Green	0.58	0.58	0.58	1.00	1.00	1.00	0.30	0.29	0.29	0.30	0.29	0.29
Sat Flow, veh/h	534	3426	116	18	3318	105	303	1066	217	355	1012	205
Grp Volume(v), veh/h	51	360	374	547	0	500	117	0	0	169	0	0
Grp Sat Flow(s),veh/h/ln	534	1736	1806	1798	0	1644	1585	0	0	1571	0	0
Q Serve(g_s), s	3.5	8.7	8.7	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0
Cycle Q Clear(g_c), s	3.5	8.7	8.7	0.0	0.0	0.0	4.1	0.0	0.0	6.4	0.0	0.0
Prop In Lane	1.00		0.06	0.03		0.06	0.26		0.14	0.29		0.13
Lane Grp Cap(c), veh/h	402	1013	1055	1114	0	960	530	0	0	527	0	0
V/C Ratio(X)	0.13	0.35	0.36	0.49	0.00	0.52	0.22	0.00	0.00	0.32	0.00	0.00
Avail Cap(c_a), veh/h	402	1013	1055	1114	0	960	530	0	0	527	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	7.7	8.7	8.7	0.0	0.0	0.0	21.8	0.0	0.0	22.5	0.0	0.0
Incr Delay (d2), s/veh	0.7	1.0	0.9	1.6	0.0	2.0	1.0	0.0	0.0	1.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.4	4.5	0.5	0.0	0.5	2.1	0.0	0.0	3.1	0.0	0.0
LnGrp Delay(d),s/veh	8.3	9.7	9.7	1.6	0.0	2.0	22.7	0.0	0.0	24.1	0.0	0.0
LnGrp LOS	A	A	A	A		A	C			C		
Approach Vol, veh/h		785			1047			117				169
Approach Delay, s/veh		9.6			1.8			22.7				24.1
Approach LOS		A			A			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		28.0		52.0		28.0		52.0				
Change Period (Y+Rc), s		* 5.1		* 5.3		* 5.1		* 5.3				
Max Green Setting (Gmax), s		* 23		* 47		* 23		* 47				
Max Q Clear Time (g_c+I1), s		6.1		2.0		8.4		10.7				
Green Ext Time (p_c), s		0.8		0.7		0.7		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				7.6								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Intersection

Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	21	88	2	0	2	143	17	0	7	38	7
Peak Hour Factor	0.92	0.86	0.86	0.86	0.92	0.86	0.86	0.86	0.92	0.86	0.86	0.86
Heavy Vehicles, %	7	4	4	4	7	4	4	4	7	4	4	4
Mvmt Flow	0	24	102	2	0	2	166	20	0	8	44	8
Number of Lanes	0	1	1	0	0	1	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	2	2	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	2	2
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	1	2
HCM Control Delay	8.7	9.4	8.5
HCM LOS	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	100%	0%	100%	0%	23%
Vol Thru, %	0%	84%	0%	98%	0%	89%	11%
Vol Right, %	0%	16%	0%	2%	0%	11%	66%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	7	45	21	90	2	160	65
LT Vol	7	0	21	0	2	0	15
Through Vol	0	38	0	88	0	143	7
RT Vol	0	7	0	2	0	17	43
Lane Flow Rate	8	52	24	105	2	186	76
Geometry Grp	7	7	7	7	7	7	6
Degree of Util (X)	0.013	0.078	0.038	0.148	0.004	0.257	0.107
Departure Headway (Hd)	5.948	5.335	5.597	5.079	5.551	4.974	5.097
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	602	671	640	706	645	722	703
Service Time	3.684	3.072	3.327	2.809	3.278	2.701	3.132
HCM Lane V/C Ratio	0.013	0.077	0.037	0.149	0.003	0.258	0.108
HCM Control Delay	8.8	8.5	8.5	8.7	8.3	9.4	8.7
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0	0.3	0.1	0.5	0	1	0.4

Intersection

Intersection Delay, s/veh
 Intersection LOS

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	15	7	43
Peak Hour Factor	0.92	0.86	0.86	0.86
Heavy Vehicles, %	7	4	4	4
Mvmt Flow	0	17	8	50
Number of Lanes	0	0	1	0

Approach SB

Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	2
Conflicting Approach Right	EB
Conflicting Lanes Right	2
HCM Control Delay	8.7
HCM LOS	A

Lane















Lane Group	EBL	EBR	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations			↖						↗	↗
Volume (vph)	0	0	121	0	0	0	0	0	922	24
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	5%	5%	7%	7%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)										
Turn Type			Prot						NA	
Protected Phases			4						2	
Permitted Phases										
Minimum Split (s)			24.0						23.0	
Total Split (s)			22.4						57.6	
Total Split (%)			28.0%						72.0%	
Yellow Time (s)			3.2						3.5	
All-Red Time (s)			1.8						2.5	
Lost Time Adjust (s)			0.0						0.0	
Total Lost Time (s)			5.0						6.0	
Lead/Lag										
Lead-Lag Optimize?										

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 7 (9%), Referenced to phase 2:SWT, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 17: Main St & Marion St



										
Movement	EBL	EBR	NWL	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations										
Volume (veh/h)	0	0	121	0	0	0	0	0	922	24
Number			7	14				5	2	12
Initial Q (Qb), veh			0	0				0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00				1.00		1.00
Parking Bus, Adj			1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1847	0				0	1847	1976
Adj Flow Rate, veh/h			127	0				0	971	23
Adj No. of Lanes			1	0				0	2	0
Peak Hour Factor			0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %			7	0				0	7	7
Cap, veh/h			0	0				0	3139	74
Arrive On Green			0.00	0.00				0.00	0.90	0.90
Sat Flow, veh/h			0					0	3596	83
Grp Volume(v), veh/h			0.0					0	486	508
Grp Sat Flow(s),veh/h/ln								0	1754	1832
Q Serve(g_s), s								0.0	2.3	2.3
Cycle Q Clear(g_c), s								0.0	2.3	2.3
Prop In Lane								0.00		0.05
Lane Grp Cap(c), veh/h								0	1572	1641
V/C Ratio(X)								0.00	0.31	0.31
Avail Cap(c_a), veh/h								0	1572	1641
HCM Platoon Ratio								1.00	1.00	1.00
Upstream Filter(I)								0.00	1.00	1.00
Uniform Delay (d), s/veh								0.0	0.4	0.4
Incr Delay (d2), s/veh								0.0	0.5	0.5
Initial Q Delay(d3),s/veh								0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln								0.0	1.2	1.2
LnGrp Delay(d),s/veh								0.0	0.9	0.9
LnGrp LOS									A	A
Approach Vol, veh/h									994	
Approach Delay, s/veh									0.9	
Approach LOS									A	
Timer	1	2	3	4	5	6	7	8		
Assigned Phs		2								
Phs Duration (G+Y+Rc), s		57.6								
Change Period (Y+Rc), s		6.0								
Max Green Setting (Gmax), s		51.6								
Max Q Clear Time (g_c+I1), s		4.3								
Green Ext Time (p_c), s		0.2								
Intersection Summary										
HCM 2010 Ctrl Delay			0.9							
HCM 2010 LOS			A							

Lanes, Volumes, Timings
18: Main St & Madison St

Existing Network - 2014 PM
2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	68	153	37	23	0	0	0	0	15	1071	4
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	7%	7%	7%	7%	7%	7%
Parking (#/hr)		3	3	3	3							
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4							2
Permitted Phases				4						2		
Minimum Split (s)		28.2		28.2	28.2					26.2	26.2	
Total Split (s)		30.4		30.4	30.4					49.6	49.6	
Total Split (%)		38.0%		38.0%	38.0%					62.0%	62.0%	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.0		2.0	2.0					2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0						0.0	
Total Lost Time (s)		5.2		5.2	5.2						5.2	
Lead/Lag												
Lead-Lag Optimize?												

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 53 (66%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 18: Main St & Madison St



HCM 2010 Signalized Intersection Summary
18: Main St & Madison St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	68	153	37	23	0	0	0	0	15	1071	4
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1629	1710	1629	1629	0				1710	1598	1710
Adj Flow Rate, veh/h	0	75	121	41	25	0				16	1177	4
Adj No. of Lanes	0	1	0	1	1	0				0	4	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	5	5	5	5	0				0	7	0
Cap, veh/h	0	157	253	290	513	0				41	3243	11
Arrive On Green	0.00	0.32	0.32	0.32	0.32	0.00				0.57	0.56	0.56
Sat Flow, veh/h	0	497	802	1033	1629	0				74	5843	20
Grp Volume(v), veh/h	0	0	196	41	25	0				344	540	313
Grp Sat Flow(s),veh/h/ln	0	0	1300	1033	1629	0				1594	1374	1595
Q Serve(g_s), s	0.0	0.0	9.7	2.7	0.9	0.0				9.8	8.7	8.7
Cycle Q Clear(g_c), s	0.0	0.0	9.7	12.4	0.9	0.0				9.8	8.7	8.7
Prop In Lane	0.00		0.62	1.00		0.00				0.05		0.01
Lane Grp Cap(c), veh/h	0	0	409	290	513	0				885	1526	885
V/C Ratio(X)	0.00	0.00	0.48	0.14	0.05	0.00				0.39	0.35	0.35
Avail Cap(c_a), veh/h	0	0	409	290	513	0				885	1526	885
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	22.1	27.1	19.1	0.0				10.1	9.9	9.9
Incr Delay (d2), s/veh	0.0	0.0	4.0	1.0	0.2	0.0				1.3	0.6	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	3.9	0.8	0.4	0.0				4.6	3.4	4.1
LnGrp Delay(d),s/veh	0.0	0.0	26.1	28.1	19.2	0.0				11.4	10.5	11.0
LnGrp LOS			C	C	B					B	B	B
Approach Vol, veh/h		196			66						1197	
Approach Delay, s/veh		26.1			24.8						10.9	
Approach LOS		C			C						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		49.6		30.4				30.4				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 44		* 25				* 25				
Max Q Clear Time (g_c+I1), s		11.8		14.4				11.7				
Green Ext Time (p_c), s		0.5		0.1				0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			13.5									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
19: Main St & LaSalle Ave

Existing Network - 2014 PM
2/25/2015

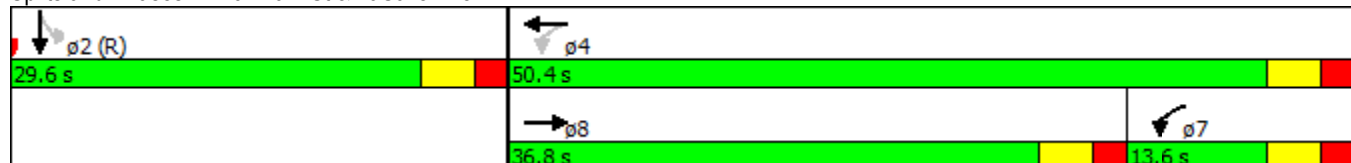


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑						↑↑↑	
Volume (vph)	0	540	305	200	849	0	0	0	0	142	1049	69
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Parking (#/hr)										3		3
Shared Lane Traffic (%)												
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		8		7	4							2
Permitted Phases				4						2		
Minimum Split (s)		28.2		10.2	40.2					28.2	28.2	
Total Split (s)		36.8		13.6	50.4					29.6	29.6	
Total Split (%)		46.0%		17.0%	63.0%					37.0%	37.0%	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.0		2.0	2.0					2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0							0.0
Total Lost Time (s)		5.2		5.2	5.2							5.2
Lead/Lag		Lead		Lag								
Lead-Lag Optimize?		Yes		Yes								

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 69 (86%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 19: Main St & LaSalle Ave



HCM 2010 Signalized Intersection Summary
 19: Main St & LaSalle Ave

Existing Network - 2014 PM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	540	305	200	849	0	0	0	0	142	1049	69
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				0.88	1.00	0.88
Adj Sat Flow, veh/h/ln	0	1644	1710	1644	1644	0				1710	1598	1710
Adj Flow Rate, veh/h	0	581	283	215	913	0				153	1128	63
Adj No. of Lanes	0	2	0	1	2	0				0	4	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	4	4	4	4	0				0	7	0
Cap, veh/h	0	805	392	327	1765	0				178	1420	80
Arrive On Green	0.00	0.39	0.39	0.21	1.00	0.00				0.10	0.10	0.10
Sat Flow, veh/h	0	2121	992	1566	3206	0				584	4654	264
Grp Volume(v), veh/h	0	445	419	215	913	0				363	654	327
Grp Sat Flow(s),veh/h/ln	0	1562	1469	1566	1562	0				1385	1374	1368
Q Serve(g_s), s	0.0	19.3	19.3	0.5	0.0	0.0				20.6	18.6	18.7
Cycle Q Clear(g_c), s	0.0	19.3	19.3	0.5	0.0	0.0				20.6	18.6	18.7
Prop In Lane	0.00		0.68	1.00		0.00				0.42		0.19
Lane Grp Cap(c), veh/h	0	617	580	327	1765	0				422	838	417
V/C Ratio(X)	0.00	0.72	0.72	0.66	0.52	0.00				0.86	0.78	0.78
Avail Cap(c_a), veh/h	0	617	580	327	1765	0				422	838	417
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	20.5	20.5	26.6	0.0	0.0				34.2	33.4	33.4
Incr Delay (d2), s/veh	0.0	7.1	7.6	10.0	1.1	0.0				19.8	7.1	13.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	9.5	9.0	4.6	0.3	0.0				10.3	7.9	8.7
LnGrp Delay(d),s/veh	0.0	27.6	28.1	36.5	1.1	0.0				54.0	40.5	47.0
LnGrp LOS		C	C	D	A					D	D	D
Approach Vol, veh/h		864			1128						1344	
Approach Delay, s/veh		27.8			7.8						45.7	
Approach LOS		C			A						D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		29.6		50.4			13.6	36.8				
Change Period (Y+Rc), s		* 5.2		* 5.2			* 5.2	* 5.2				
Max Green Setting (Gmax), s		* 24		* 45			* 8.4	* 32				
Max Q Clear Time (g_c+I1), s		22.6		2.0			2.5	21.3				
Green Ext Time (p_c), s		0.3		0.6			0.5	0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			28.3									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
20: Main St & Colfax Ave

Existing Network - 2014 PM
2/25/2015

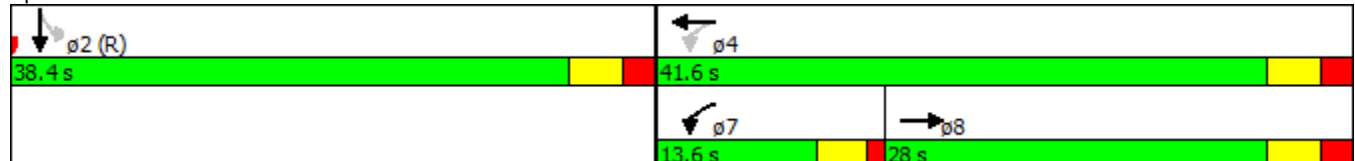


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖						↖↗↘↙	
Volume (vph)	0	189	66	156	206	0	0	0	0	74	1426	42
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Parking (#/hr)		5	5		10					5		10
Shared Lane Traffic (%)												
Turn Type		NA		pm+pt	NA					Perm	NA	
Protected Phases		8		7	4							2
Permitted Phases				4						2		
Minimum Split (s)		27.2		9.0	39.2					26.2	26.2	
Total Split (s)		28.0		13.6	41.6					38.4	38.4	
Total Split (%)		35.0%		17.0%	52.0%					48.0%	48.0%	
Yellow Time (s)		3.2		3.0	3.2					3.2	3.2	
All-Red Time (s)		2.0		1.0	2.0					2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0							0.0
Total Lost Time (s)		5.2		4.0	5.2							5.2
Lead/Lag		Lag		Lead								
Lead-Lag Optimize?				Yes								

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 4 (5%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 20: Main St & Colfax Ave



HCM 2010 Signalized Intersection Summary
20: Main St & Colfax Ave

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	189	66	156	206	0	0	0	0	74	1426	42
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00				0.88	1.00	0.85
Adj Sat Flow, veh/h/ln	0	1710	1778	1644	1644	0				1710	1598	1710
Adj Flow Rate, veh/h	0	217	76	179	237	0				85	1639	48
Adj No. of Lanes	0	1	0	1	1	0				0	4	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87				0.87	0.87	0.87
Percent Heavy Veh, %	0	4	4	4	4	0				0	7	0
Cap, veh/h	0	302	106	374	748	0				102	2104	63
Arrive On Green	0.00	0.28	0.28	0.12	0.46	0.00				0.14	0.14	0.14
Sat Flow, veh/h	0	1060	371	1566	1644	0				245	5070	152
Grp Volume(v), veh/h	0	0	293	179	237	0				482	869	421
Grp Sat Flow(s),veh/h/ln	0	0	1431	1566	1644	0				1386	1374	1332
Q Serve(g_s), s	0.0	0.0	14.7	5.9	7.3	0.0				27.1	24.4	24.4
Cycle Q Clear(g_c), s	0.0	0.0	14.7	5.9	7.3	0.0				27.1	24.4	24.4
Prop In Lane	0.00		0.26	1.00		0.00				0.18		0.11
Lane Grp Cap(c), veh/h	0	0	408	374	748	0				575	1141	553
V/C Ratio(X)	0.00	0.00	0.72	0.48	0.32	0.00				0.84	0.76	0.76
Avail Cap(c_a), veh/h	0	0	408	374	748	0				575	1141	553
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	25.7	16.8	13.9	0.0				31.9	30.7	30.7
Incr Delay (d2), s/veh	0.0	0.0	10.4	4.3	1.1	0.0				13.6	4.8	9.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	7.0	3.0	3.5	0.0				12.6	10.1	10.5
LnGrp Delay(d),s/veh	0.0	0.0	36.1	21.2	15.0	0.0				45.4	35.5	40.3
LnGrp LOS			D	C	B					D	D	D
Approach Vol, veh/h		293			416						1772	
Approach Delay, s/veh		36.1			17.6						39.4	
Approach LOS		D			B						D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		38.4		41.6			13.6	28.0				
Change Period (Y+Rc), s		* 5.2		* 5.2			4.0	* 5.2				
Max Green Setting (Gmax), s		* 33		* 36			9.6	* 23				
Max Q Clear Time (g_c+I1), s		29.1		9.3			7.9	16.7				
Green Ext Time (p_c), s		0.6		0.2			0.0	0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			35.3									
HCM 2010 LOS			D									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
21: Main St & Washington St

Existing Network - 2014 PM
2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	0	99	102	101	93	0	0	0	0	109	1551	86
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Parking (#/hr)		5	5		5					0		3
Shared Lane Traffic (%)												
Turn Type		NA	Perm	Perm	NA					Perm	NA	
Protected Phases		8			4							2
Permitted Phases			8	4						2		
Minimum Split (s)		31.2	31.2	31.2	31.2					25.2	25.2	
Total Split (s)		32.0	32.0	32.0	32.0					48.0	48.0	
Total Split (%)		40.0%	40.0%	40.0%	40.0%					60.0%	60.0%	
Yellow Time (s)		3.2	3.2	3.2	3.2					3.2	3.2	
All-Red Time (s)		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	
Total Lost Time (s)		5.2	5.2	5.2	5.2						5.2	
Lead/Lag												
Lead-Lag Optimize?												

Intersection Summary




















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 19 (24%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 21: Main St & Washington St



HCM 2010 Signalized Intersection Summary
21: Main St & Washington St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	99	102	101	93	0	0	0	0	109	1551	86
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00				0.90	1.00	0.88
Adj Sat Flow, veh/h/ln	0	1710	1644	1644	1644	0				1710	1598	1710
Adj Flow Rate, veh/h	0	119	100	122	112	0				131	1869	104
Adj No. of Lanes	0	1	1	1	1	0				0	4	0
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83				0.83	0.83	0.83
Percent Heavy Veh, %	0	4	4	4	4	0				0	7	0
Cap, veh/h	0	573	410	381	551	0				172	2640	150
Arrive On Green	0.00	0.34	0.34	0.11	0.11	0.00				0.18	0.18	0.18
Sat Flow, veh/h	0	1710	1223	1022	1644	0				322	4934	281
Grp Volume(v), veh/h	0	119	100	122	112	0				579	1019	506
Grp Sat Flow(s),veh/h/ln	0	1710	1223	1022	1644	0				1422	1374	1365
Q Serve(g_s), s	0.0	4.0	4.7	9.0	5.0	0.0				31.0	27.8	27.8
Cycle Q Clear(g_c), s	0.0	4.0	4.7	13.0	5.0	0.0				31.0	27.8	27.8
Prop In Lane	0.00		1.00	1.00		0.00				0.23		0.21
Lane Grp Cap(c), veh/h	0	573	410	381	551	0				761	1471	730
V/C Ratio(X)	0.00	0.21	0.24	0.32	0.20	0.00				0.76	0.69	0.69
Avail Cap(c_a), veh/h	0	573	410	381	551	0				761	1471	730
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.0	19.3	31.3	25.9	0.0				28.0	26.8	26.8
Incr Delay (d2), s/veh	0.0	0.8	1.4	2.2	0.8	0.0				7.1	2.7	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	2.0	1.7	2.8	2.4	0.0				13.7	11.1	11.6
LnGrp Delay(d),s/veh	0.0	19.8	20.7	33.5	26.7	0.0				35.1	29.5	32.1
LnGrp LOS		B	C	C	C					D	C	C
Approach Vol, veh/h		219			234						2104	
Approach Delay, s/veh		20.2			30.3						31.7	
Approach LOS		C			C						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		48.0		32.0				32.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 43		* 27				* 27				
Max Q Clear Time (g_c+I1), s		33.0		15.0				6.7				
Green Ext Time (p_c), s		0.9		0.2				0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			30.6									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
22: Main St & Jefferson Blvd

Existing Network - 2014 PM
2/25/2015



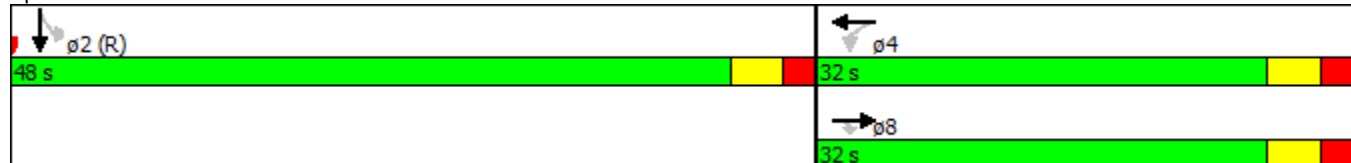
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖						↑↑↑	
Volume (vph)	0	73	98	117	60	0	0	0	0	80	1653	32
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Parking (#/hr)										3		3
Shared Lane Traffic (%)												
Turn Type		NA	Perm	Perm	NA					Perm	NA	
Protected Phases		8			4							2
Permitted Phases			8	4						2		
Minimum Split (s)		31.2	31.2	24.2	24.2					25.2	25.2	
Total Split (s)		32.0	32.0	32.0	32.0					48.0	48.0	
Total Split (%)		40.0%	40.0%	40.0%	40.0%					60.0%	60.0%	
Yellow Time (s)		3.2	3.2	3.2	3.2					3.2	3.2	
All-Red Time (s)		2.0	2.0	2.0	2.0					2.0	2.0	
Lost Time Adjust (s)		0.0	0.0		0.0						0.0	
Total Lost Time (s)		5.2	5.2		5.2						5.2	

Lead/Lag
Lead-Lag Optimize?

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 14 (18%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 22: Main St & Jefferson Blvd



HCM 2010 Signalized Intersection Summary
 22: Main St & Jefferson Blvd

Existing Network - 2014 PM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	73	98	117	60	0	0	0	0	80	1653	32
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				0.88	1.00	0.88
Adj Sat Flow, veh/h/ln	0	1644	1644	1778	1710	0				1710	1598	1710
Adj Flow Rate, veh/h	0	87	94	139	71	0				95	1968	34
Adj No. of Lanes	0	1	1	0	1	0				0	4	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84				0.84	0.84	0.84
Percent Heavy Veh, %	0	4	4	4	4	0				0	7	0
Cap, veh/h	0	551	468	323	148	0				125	2794	49
Arrive On Green	0.00	0.34	0.34	0.35	0.34	0.00				0.18	0.18	0.18
Sat Flow, veh/h	0	1644	1398	740	440	0				234	5223	92
Grp Volume(v), veh/h	0	87	94	210	0	0				568	1013	515
Grp Sat Flow(s),veh/h/ln	0	1644	1398	1180	0	0				1403	1374	1398
Q Serve(g_s), s	0.0	3.0	3.8	9.5	0.0	0.0				30.8	27.6	27.7
Cycle Q Clear(g_c), s	0.0	3.0	3.8	12.4	0.0	0.0				30.8	27.6	27.7
Prop In Lane	0.00		1.00	0.66		0.00				0.17		0.07
Lane Grp Cap(c), veh/h	0	551	468	488	0	0				750	1471	748
V/C Ratio(X)	0.00	0.16	0.20	0.43	0.00	0.00				0.76	0.69	0.69
Avail Cap(c_a), veh/h	0	551	468	488	0	0				750	1471	748
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	18.7	19.0	21.9	0.0	0.0				28.0	26.7	26.7
Incr Delay (d2), s/veh	0.0	0.6	1.0	2.8	0.0	0.0				7.0	2.7	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.4	1.6	4.0	0.0	0.0				13.4	11.1	11.8
LnGrp Delay(d),s/veh	0.0	19.3	19.9	24.7	0.0	0.0				35.0	29.4	31.8
LnGrp LOS		B	B	C						D	C	C
Approach Vol, veh/h		181			210						2097	
Approach Delay, s/veh		19.6			24.7						31.5	
Approach LOS		B			C						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		48.0		32.0				32.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 43		* 27				* 27				
Max Q Clear Time (g_c+I1), s		32.8		14.4				5.8				
Green Ext Time (p_c), s		0.9		0.2				0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			30.1									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
23: Main St & Wayne St

Existing Network - 2014 PM
2/25/2015



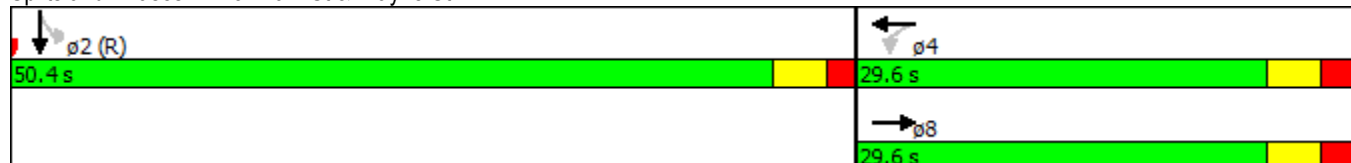
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑						↑↑↑↑	
Volume (vph)	0	45	48	266	77	0	0	0	0	110	1808	18
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Parking (#/hr)			5		5							0
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4							2
Permitted Phases				4						2		
Minimum Split (s)		28.2		28.2	28.2					25.0	25.0	
Total Split (s)		29.6		29.6	29.6					50.4	50.4	
Total Split (%)		37.0%		37.0%	37.0%					63.0%	63.0%	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.0		2.0	2.0					1.8	1.8	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.2			5.2						5.0	

Lead/Lag
Lead-Lag Optimize?

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 30 (38%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 23: Main St & Wayne St



HCM 2010 Signalized Intersection Summary
23: Main St & Wayne St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	45	48	266	77	0	0	0	0	110	1808	18
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00				1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	0	1644	1710	1710	1644	0				1710	1598	1710
Adj Flow Rate, veh/h	0	51	48	302	88	0				125	2055	18
Adj No. of Lanes	0	2	0	0	2	0				0	4	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	4	4	4	0				0	7	0
Cap, veh/h	0	476	373	405	434	0				174	3068	28
Arrive On Green	0.00	0.30	0.30	0.30	0.30	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	1644	1223	1033	1496	0				306	5407	48
Grp Volume(v), veh/h	0	51	48	302	88	0				646	1021	531
Grp Sat Flow(s),veh/h/ln	0	1562	1223	1033	1421	0				1583	1374	1430
Q Serve(g_s), s	0.0	1.9	2.3	20.9	3.7	0.0				30.7	27.5	27.5
Cycle Q Clear(g_c), s	0.0	1.9	2.3	23.1	3.7	0.0				30.7	27.5	27.5
Prop In Lane	0.00		1.00	1.00		0.00				0.19		0.03
Lane Grp Cap(c), veh/h	0	476	373	405	434	0				898	1560	811
V/C Ratio(X)	0.00	0.11	0.13	0.75	0.20	0.00				0.72	0.65	0.65
Avail Cap(c_a), veh/h	0	476	373	405	434	0				898	1560	811
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	20.0	20.1	28.5	20.6	0.0				26.5	25.2	25.2
Incr Delay (d2), s/veh	0.0	0.5	0.7	11.8	1.1	0.0				4.9	2.2	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.9	0.8	7.9	1.6	0.0				14.7	10.9	11.8
LnGrp Delay(d),s/veh	0.0	20.4	20.8	40.3	21.7	0.0				31.4	27.4	29.3
LnGrp LOS		C	C	D	C					C	C	C
Approach Vol, veh/h		99			390						2198	
Approach Delay, s/veh		20.6			36.1						29.1	
Approach LOS		C			D						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		50.4		29.6				29.6				
Change Period (Y+Rc), s		5.0		* 5.2				* 5.2				
Max Green Setting (Gmax), s		45.4		* 24				* 24				
Max Q Clear Time (g_c+I1), s		32.7		25.1				4.3				
Green Ext Time (p_c), s		0.9		0.0				0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				29.8								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
24: Main St & Western Ave

Existing Network - 2014 PM
2/25/2015



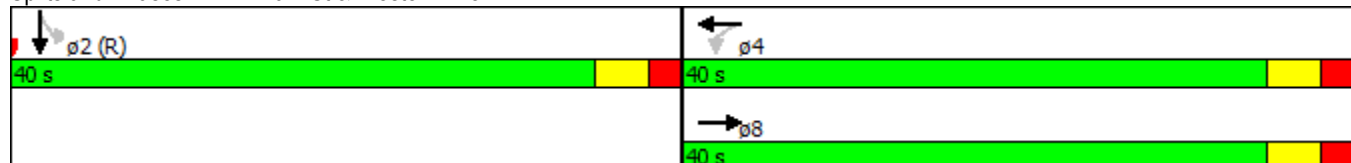
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑						↑↑↑	
Volume (vph)	0	284	272	59	325	0	0	0	0	46	1747	341
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Parking (#/hr)				5	5					5		0
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4							2
Permitted Phases				4						2		
Minimum Split (s)		28.2		34.2	34.2					26.2	26.2	
Total Split (s)		40.0		40.0	40.0					40.0	40.0	
Total Split (%)		50.0%		50.0%	50.0%					50.0%	50.0%	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.0		2.0	2.0					2.0	2.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.2			5.2						5.2	

Lead/Lag
Lead-Lag Optimize?

Intersection Summary
















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 45 (56%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 24: Main St & Western Ave



HCM 2010 Signalized Intersection Summary
 24: Main St & Western Ave

Existing Network - 2014 PM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	284	272	59	325	0	0	0	0	46	1747	341
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				0.88	1.00	0.90
Adj Sat Flow, veh/h/ln	0	1644	1710	1778	1710	0				1710	1598	1710
Adj Flow Rate, veh/h	0	312	298	65	357	0				51	1920	344
Adj No. of Lanes	0	2	0	0	1	0				0	4	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	4	4	4	4	0				0	7	0
Cap, veh/h	0	679	608	115	548	0				49	1956	359
Arrive On Green	0.00	0.44	0.44	0.45	0.44	0.00				0.15	0.14	0.14
Sat Flow, veh/h	0	1644	1398	144	1259	0				112	4497	826
Grp Volume(v), veh/h	0	312	298	422	0	0				635	1141	539
Grp Sat Flow(s),veh/h/ln	0	1562	1398	1403	0	0				1393	1374	1293
Q Serve(g_s), s	0.0	11.3	12.2	7.3	0.0	0.0				34.8	33.0	33.1
Cycle Q Clear(g_c), s	0.0	11.3	12.2	19.5	0.0	0.0				34.8	33.0	33.1
Prop In Lane	0.00		1.00	0.15		0.00				0.08		0.64
Lane Grp Cap(c), veh/h	0	679	608	680	0	0				606	1196	562
V/C Ratio(X)	0.00	0.46	0.49	0.62	0.00	0.00				1.05	0.95	0.96
Avail Cap(c_a), veh/h	0	679	608	680	0	0				606	1196	562
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	16.0	16.2	17.7	0.0	0.0				34.2	33.5	33.5
Incr Delay (d2), s/veh	0.0	2.2	2.8	4.2	0.0	0.0				50.0	17.1	28.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.3	5.2	8.0	0.0	0.0				21.8	15.4	16.4
LnGrp Delay(d),s/veh	0.0	18.2	19.0	21.9	0.0	0.0				84.2	50.6	62.4
LnGrp LOS		B	B	C						F	D	E
Approach Vol, veh/h		610			422						2315	
Approach Delay, s/veh		18.6			21.9						62.6	
Approach LOS		B			C						E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		40.0		40.0				40.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 35		* 35				* 35				
Max Q Clear Time (g_c+I1), s		36.8		21.5				14.2				
Green Ext Time (p_c), s		0.0		0.4				0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			49.4									
HCM 2010 LOS			D									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
25: Main St & Monroe St

Existing Network - 2014 PM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑						↑↑↑↑	
Volume (vph)	0	79	13	87	257	0	0	0	0	546	1477	15
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Parking (#/hr)			3									0
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4							2
Permitted Phases				4						2		
Minimum Split (s)		28.2		28.2	28.2					29.2	29.2	
Total Split (s)		29.6		29.6	29.6					50.4	50.4	
Total Split (%)		37.0%		37.0%	37.0%					63.0%	63.0%	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.0		2.0	2.0					2.0	2.0	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.2			5.2						5.2	
Lead/Lag												
Lead-Lag Optimize?												

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 60 (75%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 25: Main St & Monroe St



HCM 2010 Signalized Intersection Summary
25: Main St & Monroe St

Existing Network - 2014 PM
2/25/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	79	13	87	257	0	0	0	0	546	1477	15
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00				1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	0	1827	1900	1900	1827	0				1900	1776	1900
Adj Flow Rate, veh/h	0	87	4	96	282	0				600	1623	15
Adj No. of Lanes	0	2	0	0	2	0				0	4	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91				0.91	0.91	0.91
Percent Heavy Veh, %	0	4	4	4	4	0				0	7	0
Cap, veh/h	0	970	44	271	747	0				897	2661	25
Arrive On Green	0.00	0.30	0.30	0.41	0.41	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	3273	145	668	2532	0				1587	4711	44
Grp Volume(v), veh/h	0	47	44	198	180	0				641	1050	547
Grp Sat Flow(s),veh/h/ln	0	1736	1591	1538	1579	0				1696	1527	1590
Q Serve(g_s), s	0.0	1.6	1.6	4.9	6.4	0.0				28.1	25.2	25.2
Cycle Q Clear(g_c), s	0.0	1.6	1.6	7.0	6.4	0.0				28.1	25.2	25.2
Prop In Lane	0.00		0.09	0.48		0.00				0.94		0.03
Lane Grp Cap(c), veh/h	0	529	485	536	482	0				958	1726	899
V/C Ratio(X)	0.00	0.09	0.09	0.37	0.37	0.00				0.67	0.61	0.61
Avail Cap(c_a), veh/h	0	529	485	536	482	0				958	1726	899
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.9	19.9	18.5	18.4	0.0				25.5	24.4	24.4
Incr Delay (d2), s/veh	0.0	0.3	0.4	2.0	2.2	0.0				3.7	1.6	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.8	0.7	3.4	3.0	0.0				14.2	11.0	11.9
LnGrp Delay(d),s/veh	0.0	20.2	20.2	20.5	20.6	0.0				29.2	26.0	27.5
LnGrp LOS		C	C	C	C					C	C	C
Approach Vol, veh/h		91			378						2238	
Approach Delay, s/veh		20.2			20.5						27.3	
Approach LOS		C			C						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		50.4		29.6				29.6				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 45		* 24				* 24				
Max Q Clear Time (g_c+I1), s		30.1		9.0				3.6				
Green Ext Time (p_c), s		0.8		0.1				0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				26.1								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
26: Main St & South St

Existing Network - 2014 PM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻			↻						↻↻↻	
Volume (vph)	0	33	18	43	65	0	0	0	0	63	1528	35
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Parking (#/hr)										3		3
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4							2
Permitted Phases				4						2		
Minimum Split (s)		28.2		28.2	28.2					27.0	27.0	
Total Split (s)		32.0		32.0	32.0					48.0	48.0	
Total Split (%)		40.0%		40.0%	40.0%					60.0%	60.0%	
Yellow Time (s)		3.2		3.2	3.2					3.2	3.2	
All-Red Time (s)		2.0		2.0	2.0					1.8	1.8	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.2			5.2						5.0	

Lead/Lag
Lead-Lag Optimize?

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 75 (94%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 26: Main St & South St



HCM 2010 Signalized Intersection Summary
26: Main St & South St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	33	18	43	65	0	0	0	0	63	1528	35
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				0.88	1.00	0.88
Adj Sat Flow, veh/h/ln	0	1827	1900	1900	1827	0				1900	1776	1900
Adj Flow Rate, veh/h	0	35	8	46	70	0				68	1643	35
Adj No. of Lanes	0	1	0	0	1	0				0	4	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	4	4	4	4	0				0	7	0
Cap, veh/h	0	482	110	251	354	0				120	3125	68
Arrive On Green	0.00	0.34	0.34	0.35	0.34	0.00				0.18	0.18	0.18
Sat Flow, veh/h	0	1440	329	562	1056	0				224	5813	127
Grp Volume(v), veh/h	0	0	43	116	0	0				474	844	428
Grp Sat Flow(s),veh/h/ln	0	0	1769	1618	0	0				1560	1527	1549
Q Serve(g_s), s	0.0	0.0	1.3	0.6	0.0	0.0				22.2	20.0	20.0
Cycle Q Clear(g_c), s	0.0	0.0	1.3	3.7	0.0	0.0				22.2	20.0	20.0
Prop In Lane	0.00		0.19	0.40		0.00				0.14		0.08
Lane Grp Cap(c), veh/h	0	0	593	625	0	0				839	1642	833
V/C Ratio(X)	0.00	0.00	0.07	0.19	0.00	0.00				0.57	0.51	0.51
Avail Cap(c_a), veh/h	0	0	593	625	0	0				839	1642	833
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	18.1	18.7	0.0	0.0				24.3	23.4	23.5
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.7	0.0	0.0				2.7	1.2	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.7	1.9	0.0	0.0				10.3	8.7	9.1
LnGrp Delay(d),s/veh	0.0	0.0	18.4	19.4	0.0	0.0				27.1	24.6	25.7
LnGrp LOS			B	B						C	C	C
Approach Vol, veh/h		43			116						1746	
Approach Delay, s/veh		18.4			19.4						25.5	
Approach LOS		B			B						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		48.0		32.0				32.0				
Change Period (Y+Rc), s		5.0		* 5.2				* 5.2				
Max Green Setting (Gmax), s		43.0		* 27				* 27				
Max Q Clear Time (g_c+I1), s		24.2		5.7				3.3				
Green Ext Time (p_c), s		0.6		0.4				0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			25.0									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
27: Main St & Bronson St

Existing Network - 2014 PM
2/25/2015

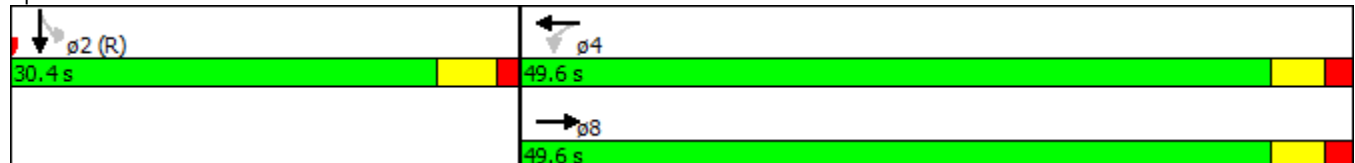


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↻			↻					↻	↻↻↻	
Volume (vph)	0	6	11	33	8	0	0	0	0	10	1515	9
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4						2	
Permitted Phases				4						2		
Detector Phase		8		4	4					2	2	
Switch Phase												
Minimum Initial (s)		5.0		5.0	5.0					5.0	5.0	
Minimum Split (s)		28.0		28.0	28.0					24.1	24.1	
Total Split (s)		49.6		49.6	49.6					30.4	30.4	
Total Split (%)		62.0%		62.0%	62.0%					38.0%	38.0%	
Yellow Time (s)		3.2		3.2	3.2					3.5	3.5	
All-Red Time (s)		1.8		1.8	1.8					1.5	1.5	
Lost Time Adjust (s)		0.0			0.0					-0.6	0.0	
Total Lost Time (s)		5.0			5.0					4.4	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode		None		None	None					C-Max	C-Max	

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 8 (10%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 27: Main St & Bronson St



HCM 2010 Signalized Intersection Summary
27: Main St & Bronson St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	6	11	33	8	0	0	0	0	10	1515	9
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1900	1976	1976	1900	0				1776	1776	1900
Adj Flow Rate, veh/h	0	7	12	38	9	0				11	1722	9
Adj No. of Lanes	0	1	0	0	1	0				1	3	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88				0.88	0.88	0.88
Percent Heavy Veh, %	0	4	4	4	4	0				7	7	7
Cap, veh/h	0	34	58	136	13	0				1401	4086	21
Arrive On Green	0.00	0.05	0.05	0.07	0.05	0.00				0.27	0.27	0.27
Sat Flow, veh/h	0	630	1080	1011	239	0				1691	4977	26
Grp Volume(v), veh/h	0	0	19	47	0	0				11	1118	613
Grp Sat Flow(s),veh/h/ln	0	0	1709	1250	0	0				1691	1616	1771
Q Serve(g_s), s	0.0	0.0	0.9	2.5	0.0	0.0				0.4	22.8	22.8
Cycle Q Clear(g_c), s	0.0	0.0	0.9	3.3	0.0	0.0				0.4	22.8	22.8
Prop In Lane	0.00		0.63	0.81		0.00				1.00		0.01
Lane Grp Cap(c), veh/h	0	0	92	165	0	0				1401	2653	1454
V/C Ratio(X)	0.00	0.00	0.21	0.29	0.00	0.00				0.01	0.42	0.42
Avail Cap(c_a), veh/h	0	0	953	914	0	0				1401	2653	1454
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	0.00	1.00	0.98	0.00	0.00				0.83	0.83	0.83
Uniform Delay (d), s/veh	0.0	0.0	36.2	37.4	0.0	0.0				5.1	13.5	13.5
Incr Delay (d2), s/veh	0.0	0.0	0.8	0.7	0.0	0.0				0.0	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.4	1.0	0.0	0.0				0.2	10.4	11.6
LnGrp Delay(d),s/veh	0.0	0.0	37.0	38.1	0.0	0.0				5.1	13.9	14.3
LnGrp LOS			D	D						A	B	B
Approach Vol, veh/h		19			47						1742	
Approach Delay, s/veh		37.0			38.1						14.0	
Approach LOS		D			D						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		70.7		9.3				9.3				
Change Period (Y+Rc), s		5.0		5.0				5.0				
Max Green Setting (Gmax), s		25.4		44.6				44.6				
Max Q Clear Time (g_c+I1), s		24.8		5.3				2.9				
Green Ext Time (p_c), s		0.1		0.3				0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			14.9									
HCM 2010 LOS			B									

Lanes, Volumes, Timings
28: Main St & Sample St

Existing Network - 2014 PM
2/25/2015

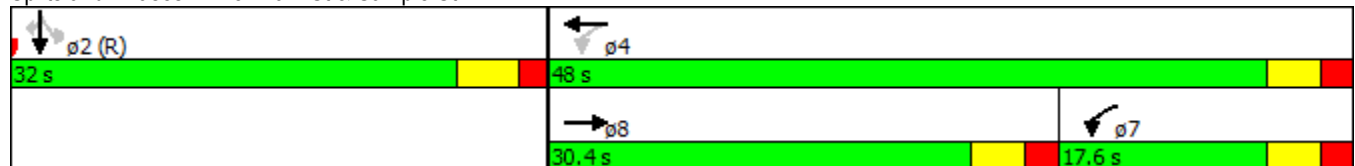


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑		↖	↑↑					↘	↑↑↑	↖
Volume (vph)	0	618	118	381	815	0	0	0	0	262	1148	166
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	13%	13%	13%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type		NA		pm+pt	NA					Perm	NA	Perm
Protected Phases		8		7	4						2	
Permitted Phases				4						2		2
Minimum Split (s)		25.2		10.2	28.2					28.5	28.5	28.5
Total Split (s)		30.4		17.6	48.0					32.0	32.0	32.0
Total Split (%)		38.0%		22.0%	60.0%					40.0%	40.0%	40.0%
Yellow Time (s)		3.2		3.2	3.2					3.7	3.7	3.7
All-Red Time (s)		2.0		2.0	2.0					1.8	1.8	1.8
Lost Time Adjust (s)		0.0		0.0	0.0					0.0	0.0	0.0
Total Lost Time (s)		5.2		5.2	5.2					5.5	5.5	5.5
Lead/Lag		Lead		Lag								
Lead-Lag Optimize?												

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 11.2 (14%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 28: Main St & Sample St



HCM 2010 Signalized Intersection Summary
28: Main St & Sample St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	618	118	381	815	0	0	0	0	262	1148	166
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1681	1900	1827	1827	0				1776	1776	1776
Adj Flow Rate, veh/h	0	657	106	405	867	0				279	1221	96
Adj No. of Lanes	0	2	0	1	2	0				1	3	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94				0.94	0.94	0.94
Percent Heavy Veh, %	0	13	13	4	4	0				7	7	7
Cap, veh/h	0	868	140	411	1857	0				560	1606	500
Arrive On Green	0.00	0.32	0.32	0.31	1.00	0.00				0.11	0.11	0.11
Sat Flow, veh/h	0	2840	444	1740	3563	0				1691	4848	1509
Grp Volume(v), veh/h	0	380	383	405	867	0				279	1221	96
Grp Sat Flow(s),veh/h/ln	0	1597	1603	1740	1736	0				1691	1616	1509
Q Serve(g_s), s	0.0	17.1	17.2	11.8	0.0	0.0				12.4	19.6	4.6
Cycle Q Clear(g_c), s	0.0	17.1	17.2	11.8	0.0	0.0				12.4	19.6	4.6
Prop In Lane	0.00		0.28	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	503	505	411	1857	0				560	1606	500
V/C Ratio(X)	0.00	0.76	0.76	0.98	0.47	0.00				0.50	0.76	0.19
Avail Cap(c_a), veh/h	0	503	505	411	1857	0				560	1606	500
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	24.6	24.7	25.0	0.0	0.0				29.4	32.5	25.9
Incr Delay (d2), s/veh	0.0	10.1	10.2	40.7	0.8	0.0				3.1	3.4	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.9	9.0	13.2	0.2	0.0				6.3	9.3	2.1
LnGrp Delay(d),s/veh	0.0	34.8	34.8	65.6	0.8	0.0				32.5	36.0	26.7
LnGrp LOS		C	C	E	A					C	D	C
Approach Vol, veh/h		763			1272						1596	
Approach Delay, s/veh		34.8			21.5						34.8	
Approach LOS		C			C						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		32.0		48.0			17.6	30.4				
Change Period (Y+Rc), s		5.5		* 5.2			* 5.2	* 5.2				
Max Green Setting (Gmax), s		26.5		* 43			* 12	* 25				
Max Q Clear Time (g_c+I1), s		21.6		2.0			13.8	19.2				
Green Ext Time (p_c), s		0.6		4.7			0.0	1.6				
Intersection Summary												
HCM 2010 Ctrl Delay			30.1									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
29: Main St & Broadway St

Existing Network - 2014 PM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗			↖						↖↗↘	
Volume (vph)	0	14	35	17	9	0	0	0	0	34	1655	10
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles (%)	5%	5%	5%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4						2	
Permitted Phases				4						2		
Minimum Split (s)		24.2		24.2	24.2					23.7	23.7	
Total Split (s)		28.0		28.0	28.0					52.0	52.0	
Total Split (%)		35.0%		35.0%	35.0%					65.0%	65.0%	
Yellow Time (s)		3.2		3.2	3.2					3.7	3.7	
All-Red Time (s)		2.0		2.0	2.0					1.5	1.5	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.2			5.2						5.2	

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 44.8 (56%), Referenced to phase 2:SBTL, Start of Green

Natural Cycle: 55


















Control Type: Pretimed

Splits and Phases: 29: Main St & Broadway St



HCM 2010 Signalized Intersection Summary
29: Main St & Broadway St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	14	35	17	9	0	0	0	0	34	1655	10
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1882	1976	1976	1900	0				1900	1776	1900
Adj Flow Rate, veh/h	0	14	25	17	9	0				35	1689	9
Adj No. of Lanes	0	1	0	0	1	0				0	3	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98				0.98	0.98	0.98
Percent Heavy Veh, %	0	5	5	4	4	0				0	7	0
Cap, veh/h	0	173	309	343	167	0				57	2944	16
Arrive On Green	0.00	0.28	0.28	0.28	0.28	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	607	1084	943	587	0				98	5032	28
Grp Volume(v), veh/h	0	0	39	26	0	0				632	525	575
Grp Sat Flow(s),veh/h/ln	0	0	1691	1530	0	0				1771	1616	1771
Q Serve(g_s), s	0.0	0.0	1.4	0.0	0.0	0.0				26.1	23.5	23.5
Cycle Q Clear(g_c), s	0.0	0.0	1.4	1.4	0.0	0.0				26.1	23.5	23.5
Prop In Lane	0.00		0.64	0.65		0.00				0.06		0.02
Lane Grp Cap(c), veh/h	0	0	482	510	0	0				1036	945	1036
V/C Ratio(X)	0.00	0.00	0.08	0.05	0.00	0.00				0.61	0.56	0.56
Avail Cap(c_a), veh/h	0	0	482	510	0	0				1036	945	1036
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	20.9	20.7	0.0	0.0				23.9	22.9	22.9
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.2	0.0	0.0				2.7	2.4	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.7	0.4	0.0	0.0				13.6	11.1	12.1
LnGrp Delay(d),s/veh	0.0	0.0	21.3	20.9	0.0	0.0				26.6	25.2	25.0
LnGrp LOS			C	C						C	C	C
Approach Vol, veh/h		39			26						1733	
Approach Delay, s/veh		21.3			20.9						25.7	
Approach LOS		C			C						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		52.0		28.0				28.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 47		* 23				* 23				
Max Q Clear Time (g_c+I1), s		28.1		3.4				3.4				
Green Ext Time (p_c), s		1.8		0.1				0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			25.5									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↑	↑	↑						↑↑↑	↑
Volume (vph)	0	226	115	35	177	0	0	0	0	56	1520	137
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	5%	5%	5%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type		NA	Perm	Perm	NA					Perm	NA	Perm
Protected Phases		8			4						2	
Permitted Phases			8	4						2		2
Minimum Split (s)		26.2	26.2	26.2	26.2					23.7	23.7	23.7
Total Split (s)		28.0	28.0	28.0	28.0					52.0	52.0	52.0
Total Split (%)		35.0%	35.0%	35.0%	35.0%					65.0%	65.0%	65.0%
Yellow Time (s)		3.2	3.2	3.2	3.2					3.7	3.7	3.7
All-Red Time (s)		2.0	2.0	2.0	2.0					1.4	1.4	1.4
Lost Time Adjust (s)		0.0	0.0	0.0	0.0						0.0	0.0
Total Lost Time (s)		5.2	5.2	5.2	5.2						5.1	5.1

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

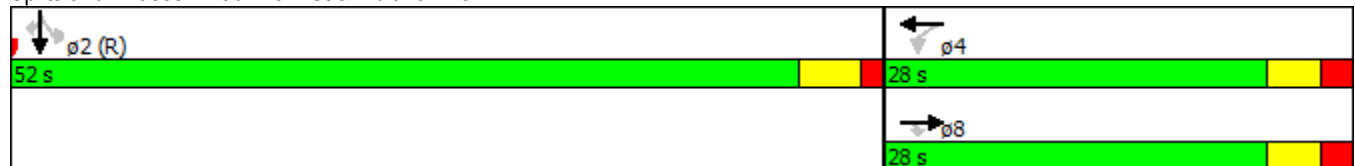
Actuated Cycle Length: 80

Offset: 59.2 (74%), Referenced to phase 2:SBTL, Start of Green

Natural Cycle: 55













Control Type: Pretimed

Splits and Phases: 30: Main St & Indiana Ave



HCM 2010 Signalized Intersection Summary
30: Main St & Indiana Ave

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↑						↑↑↑	↗
Volume (veh/h)	0	226	115	35	177	0	0	0	0	56	1520	137
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1810	1810	1827	1827	0				1900	1776	1776
Adj Flow Rate, veh/h	0	238	100	37	186	0				59	1600	86
Adj No. of Lanes	0	1	1	1	1	0				0	3	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	5	5	4	4	0				7	7	7
Cap, veh/h	0	516	438	270	521	0				98	2833	885
Arrive On Green	0.00	0.28	0.28	0.57	0.57	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	1810	1538	1018	1827	0				167	4832	1509
Grp Volume(v), veh/h	0	238	100	37	186	0				623	1036	86
Grp Sat Flow(s),veh/h/ln	0	1810	1538	1018	1827	0				1767	1616	1509
Q Serve(g_s), s	0.0	8.7	4.0	2.0	4.4	0.0				25.7	23.1	3.7
Cycle Q Clear(g_c), s	0.0	8.7	4.0	10.7	4.4	0.0				25.7	23.1	3.7
Prop In Lane	0.00		1.00	1.00		0.00				0.09		1.00
Lane Grp Cap(c), veh/h	0	516	438	270	521	0				1036	1895	885
V/C Ratio(X)	0.00	0.46	0.23	0.14	0.36	0.00				0.60	0.55	0.10
Avail Cap(c_a), veh/h	0	516	438	270	521	0				1036	1895	885
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	23.5	21.9	17.6	13.2	0.0				23.7	22.7	14.9
Incr Delay (d2), s/veh	0.0	3.0	1.2	1.1	1.9	0.0				2.6	1.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.7	1.8	0.6	2.4	0.0				13.3	10.7	1.6
LnGrp Delay(d),s/veh	0.0	26.5	23.1	18.7	15.2	0.0				26.3	23.8	15.1
LnGrp LOS		C	C	B	B					C	C	B
Approach Vol, veh/h		338			223						1745	
Approach Delay, s/veh		25.5			15.7						24.3	
Approach LOS		C			B						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		52.0		28.0				28.0				
Change Period (Y+Rc), s		* 5.1		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 47		* 23				* 23				
Max Q Clear Time (g_c+I1), s		27.7		12.7				10.7				
Green Ext Time (p_c), s		2.1		0.4				0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			23.6									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
31: Main St & Calvert St

Existing Network - 2014 PM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔						↔↔↔	
Volume (vph)	0	70	26	19	69	0	0	0	0	46	1595	29
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	5%	5%	5%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA					Perm	NA	
Protected Phases		8			4						2	
Permitted Phases				4						2		
Minimum Split (s)		26.2		26.2	26.2					25.7	25.7	
Total Split (s)		28.0		28.0	28.0					52.0	52.0	
Total Split (%)		35.0%		35.0%	35.0%					65.0%	65.0%	
Yellow Time (s)		3.2		3.2	3.2					3.7	3.7	
All-Red Time (s)		2.0		2.0	2.0					1.4	1.4	
Lost Time Adjust (s)		0.0			0.0						0.0	
Total Lost Time (s)		5.2			5.2						5.1	

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

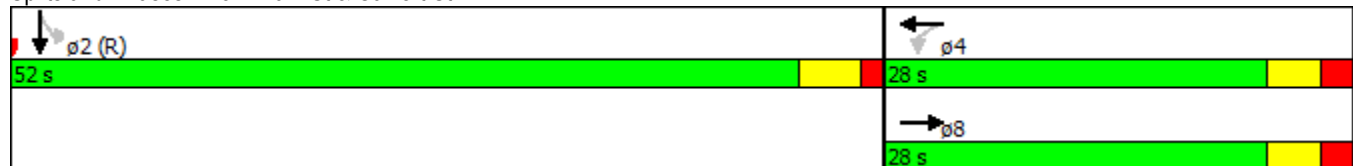
Actuated Cycle Length: 80

Offset: 3.2 (4%), Referenced to phase 2:SBTL, Start of Green

Natural Cycle: 60


















Control Type: Pretimed

Splits and Phases: 31: Main St & Calvert St



HCM 2010 Signalized Intersection Summary
31: Main St & Calvert St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations										  		
Volume (veh/h)	0	70	26	19	69	0	0	0	0	46	1595	29
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1882	1976	1976	1900	0				1900	1776	1900
Adj Flow Rate, veh/h	0	75	14	20	74	0				49	1715	29
Adj No. of Lanes	0	1	0	0	1	0				0	3	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93				0.93	0.93	0.93
Percent Heavy Veh, %	0	5	5	4	4	0				0	7	0
Cap, veh/h	0	440	82	128	436	0				78	2889	50
Arrive On Green	0.00	0.28	0.28	0.09	0.09	0.00				0.19	0.19	0.19
Sat Flow, veh/h	0	1543	288	258	1531	0				132	4927	86
Grp Volume(v), veh/h	0	0	89	94	0	0				655	544	593
Grp Sat Flow(s),veh/h/ln	0	0	1831	1789	0	0				1769	1616	1761
Q Serve(g_s), s	0.0	0.0	2.9	0.0	0.0	0.0				27.2	24.5	24.5
Cycle Q Clear(g_c), s	0.0	0.0	2.9	3.6	0.0	0.0				27.2	24.5	24.5
Prop In Lane	0.00		0.16	0.21		0.00				0.07		0.05
Lane Grp Cap(c), veh/h	0	0	522	564	0	0				1037	947	1032
V/C Ratio(X)	0.00	0.00	0.17	0.17	0.00	0.00				0.63	0.57	0.57
Avail Cap(c_a), veh/h	0	0	522	564	0	0				1037	947	1032
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	21.5	27.6	0.0	0.0				24.3	23.2	23.2
Incr Delay (d2), s/veh	0.0	0.0	0.7	0.6	0.0	0.0				2.9	2.5	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.6	2.0	0.0	0.0				14.2	11.6	12.6
LnGrp Delay(d),s/veh	0.0	0.0	22.2	28.2	0.0	0.0				27.3	25.7	25.5
LnGrp LOS			C	C						C	C	C
Approach Vol, veh/h		89			94						1793	
Approach Delay, s/veh		22.2			28.2						26.2	
Approach LOS		C			C						C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		52.0		28.0				28.0				
Change Period (Y+Rc), s		* 5.1		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 47		* 23				* 23				
Max Q Clear Time (g_c+I1), s		29.2		5.6				4.9				
Green Ext Time (p_c), s		1.8		0.2				0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			26.1									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
32: Main St & Ewing Ave

Existing Network - 2014 PM
2/25/2015

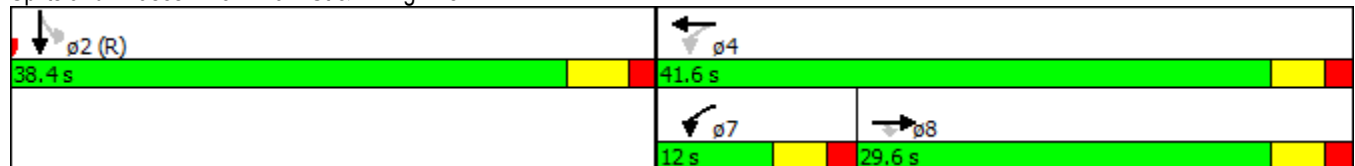


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↑						↖↗	
Volume (vph)	0	211	97	54	230	0	0	0	0	162	1404	48
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	18%	18%	18%	3%	3%	3%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type		NA	Perm	pm+pt	NA					Perm	NA	
Protected Phases		8		7	4							2
Permitted Phases			8	4						2		
Minimum Split (s)		25.0	25.0	10.0	25.0					26.3	26.3	
Total Split (s)		29.6	29.6	12.0	41.6					38.4	38.4	
Total Split (%)		37.0%	37.0%	15.0%	52.0%					48.0%	48.0%	
Yellow Time (s)		3.2	3.2	3.2	3.2					3.7	3.7	
All-Red Time (s)		1.8	1.8	1.8	1.8					1.6	1.6	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0						0.0	
Total Lost Time (s)		5.0	5.0	5.0	5.0						5.3	
Lead/Lag		Lag	Lag	Lead								
Lead-Lag Optimize?		Yes	Yes									

Intersection Summary













Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 0 (0%), Referenced to phase 2:SBTL, Start of Green
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 32: Main St & Ewing Ave



HCM 2010 Signalized Intersection Summary
32: Main St & Ewing Ave

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗	↖	↑						↑↑↑	
Volume (veh/h)	0	211	97	54	230	0	0	0	0	162	1404	48
Number	3	8	18	7	4	14				5	2	12
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1610	1610	1845	1845	0				1900	1776	1900
Adj Flow Rate, veh/h	0	218	29	56	237	0				167	1447	45
Adj No. of Lanes	0	1	1	1	1	0				0	3	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	18	18	3	3	0				0	7	0
Cap, veh/h	0	495	421	466	844	0				201	1858	59
Arrive On Green	0.00	0.31	0.31	0.17	0.91	0.00				0.14	0.14	0.14
Sat Flow, veh/h	0	1610	1369	1757	1845	0				485	4490	144
Grp Volume(v), veh/h	0	218	29	56	237	0				604	507	549
Grp Sat Flow(s),veh/h/ln	0	1610	1369	1757	1845	0				1751	1616	1750
Q Serve(g_s), s	0.0	8.7	1.2	1.4	1.2	0.0				26.9	24.2	24.2
Cycle Q Clear(g_c), s	0.0	8.7	1.2	1.4	1.2	0.0				26.9	24.2	24.2
Prop In Lane	0.00		1.00	1.00		0.00				0.28		0.08
Lane Grp Cap(c), veh/h	0	495	421	466	844	0				725	669	724
V/C Ratio(X)	0.00	0.44	0.07	0.12	0.28	0.00				0.83	0.76	0.76
Avail Cap(c_a), veh/h	0	495	421	466	844	0				725	669	724
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				0.33	0.33	0.33
Upstream Filter(I)	0.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	22.2	19.6	13.2	1.9	0.0				31.8	30.7	30.7
Incr Delay (d2), s/veh	0.0	2.8	0.3	0.5	0.8	0.0				10.8	7.9	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	4.2	0.5	0.7	0.7	0.0				15.2	12.3	13.2
LnGrp Delay(d),s/veh	0.0	25.0	19.9	13.7	2.7	0.0				42.7	38.5	38.0
LnGrp LOS		C	B	B	A					D	D	D
Approach Vol, veh/h		247			293						1659	
Approach Delay, s/veh		24.4			4.8						39.8	
Approach LOS		C			A						D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4			7	8				
Phs Duration (G+Y+Rc), s		38.4		41.6			12.0	29.6				
Change Period (Y+Rc), s		* 5.3		5.0			5.0	5.0				
Max Green Setting (Gmax), s		* 33		36.6			7.0	24.6				
Max Q Clear Time (g_c+I1), s		28.9		3.2			3.4	10.7				
Green Ext Time (p_c), s		1.1		0.5			0.0	0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			33.4									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
33: Main St & Chippewa Ave

Existing Network - 2014 PM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↗		↖	↖		↖		↗	↗↖	↖	↗
Volume (vph)	0	111	20	13	29	0	11	0	71	1025	293	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	7%	7%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA		Prot		Prot	Split	NA	Prot
Protected Phases		8			4		5		5	6	6	6
Permitted Phases				4					5			
Minimum Split (s)		22.2		22.2	22.2		22.9		22.9	24.0	24.0	24.0
Total Split (s)		22.4		22.4	22.4		23.2		23.2	34.4	34.4	34.4
Total Split (%)		28.0%		28.0%	28.0%		29.0%		29.0%	43.0%	43.0%	43.0%
Yellow Time (s)		3.2		3.2	3.2		3.2		3.2	3.7	3.7	3.7
All-Red Time (s)		2.0		2.0	2.0		1.7		1.7	2.3	2.3	2.3
Lost Time Adjust (s)		0.0		0.0	0.0		0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)		5.2		5.2	5.2		4.9		4.9	6.0	6.0	6.0
Lead/Lag							Lead		Lead	Lag	Lag	Lag
Lead-Lag Optimize?												

Intersection Summary





















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 40.8 (51%), Referenced to phase 6:SBTL, Start of Green
 Natural Cycle: 80
 Control Type: Pretimed

Splits and Phases: 33: Main St & Chippewa Ave



HCM 2010 Signalized Intersection Summary
33: Main St & Chippewa Ave

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	111	20	13	29	0	11	0	71	1025	293	62
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1847	1976	1827	1827	0	1776	0	1776	1776	1776	1776
Adj Flow Rate, veh/h	0	121	14	14	32	0	12	0	0	1114	318	4
Adj No. of Lanes	0	1	0	1	1	0	1	0	1	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	7	7	4	4	0	7	0	7	7	7	7
Cap, veh/h	0	492	57	429	553	0	0	0	0	1640	888	755
Arrive On Green	0.00	0.30	0.30	0.30	0.30	0.00	0.00	0.00	0.00	0.50	0.50	0.50
Sat Flow, veh/h	0	1625	188	1225	1827	0		0		3281	1776	1509
Grp Volume(v), veh/h	0	0	135	14	32	0		0.0		1114	318	4
Grp Sat Flow(s),veh/h/ln	0	0	1814	1225	1827	0				1640	1776	1509
Q Serve(g_s), s	0.0	0.0	3.2	0.5	0.7	0.0				14.6	6.2	0.1
Cycle Q Clear(g_c), s	0.0	0.0	3.2	3.7	0.7	0.0				14.6	6.2	0.1
Prop In Lane	0.00		0.10	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	0	549	429	553	0				1640	888	755
V/C Ratio(X)	0.00	0.00	0.25	0.03	0.06	0.00				0.68	0.36	0.01
Avail Cap(c_a), veh/h	0	0	549	429	553	0				1640	888	755
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00				1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	14.9	16.3	14.1	0.0				10.8	8.6	7.1
Incr Delay (d2), s/veh	0.0	0.0	1.1	0.1	0.2	0.0				2.3	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	1.7	0.2	0.4	0.0				7.0	3.3	0.0
LnGrp Delay(d),s/veh	0.0	0.0	16.0	16.4	14.2	0.0				13.0	9.8	7.1
LnGrp LOS			B	B	B					B	A	A
Approach Vol, veh/h		135			46						1436	
Approach Delay, s/veh		16.0			14.9						12.3	
Approach LOS		B			B						B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs				4		6		8				
Phs Duration (G+Y+Rc), s				22.4		34.4		22.4				
Change Period (Y+Rc), s				* 5.2		6.0		* 5.2				
Max Green Setting (Gmax), s				* 17		28.4		* 17				
Max Q Clear Time (g_c+I1), s				5.7		16.6		5.2				
Green Ext Time (p_c), s				0.1		0.4		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			12.7									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
34: Michigan St & North Shore Dr

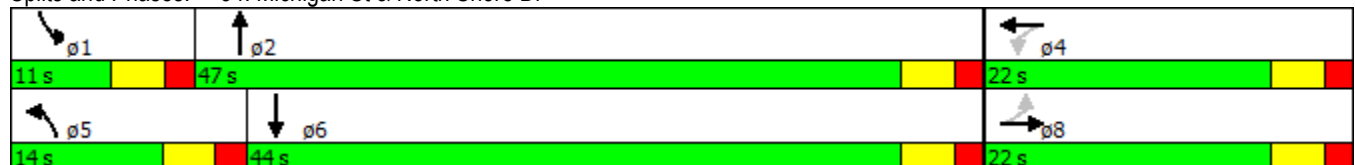
Existing Network - 2014 PM
2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	1	78	37	86	117	71	69	1093	136	48	737	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4								
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		9.0	21.0		9.0	21.0	
Total Split (s)	22.0	22.0		22.0	22.0		14.0	47.0		11.0	44.0	
Total Split (%)	27.5%	27.5%		27.5%	27.5%		17.5%	58.8%		13.8%	55.0%	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2	3.2	
All-Red Time (s)	1.8	1.8		1.8	1.8		1.8	1.8		1.8	1.8	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Max		None	Max	

Intersection Summary





















Cycle Length: 80
 Actuated Cycle Length: 76.1
 Natural Cycle: 60
 Control Type: Semi Act-Uncoord

Splits and Phases: 34: Michigan St & North Shore Dr



HCM 2010 Signalized Intersection Summary
 34: Michigan St & North Shore Dr

Existing Network - 2014 PM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	1	78	37	86	117	71	69	1093	136	48	737	2
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1810	1810	1900	1776	1776	1900	1776	1776	1900
Adj Flow Rate, veh/h	1	83	39	91	124	76	73	1163	145	51	784	2
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	5	5	5	5	5	7	7	7	7	7	7
Cap, veh/h	175	206	97	239	186	114	92	1750	218	63	1940	5
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.05	0.58	0.58	0.04	0.56	0.56
Sat Flow, veh/h	1144	1165	548	1228	1051	644	1691	3021	376	1691	3452	9
Grp Volume(v), veh/h	1	0	122	91	0	200	73	648	660	51	383	403
Grp Sat Flow(s),veh/h/ln	1144	0	1713	1228	0	1696	1691	1687	1709	1691	1687	1774
Q Serve(g_s), s	0.1	0.0	4.6	5.1	0.0	8.0	3.1	19.0	19.2	2.2	9.3	9.3
Cycle Q Clear(g_c), s	8.0	0.0	4.6	9.7	0.0	8.0	3.1	19.0	19.2	2.2	9.3	9.3
Prop In Lane	1.00		0.32	1.00		0.38	1.00		0.22	1.00		0.00
Lane Grp Cap(c), veh/h	175	0	302	239	0	299	92	977	991	63	948	997
V/C Ratio(X)	0.01	0.00	0.40	0.38	0.00	0.67	0.79	0.66	0.67	0.81	0.40	0.40
Avail Cap(c_a), veh/h	242	0	402	310	0	398	210	977	991	140	948	997
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	0.0	26.5	30.8	0.0	27.9	33.9	10.4	10.4	34.7	9.0	9.0
Incr Delay (d2), s/veh	0.0	0.0	0.9	1.0	0.0	2.6	13.9	3.5	3.5	21.6	1.3	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	2.2	1.8	0.0	3.9	1.8	9.6	10.0	1.4	4.6	4.8
LnGrp Delay(d),s/veh	31.6	0.0	27.3	31.8	0.0	30.5	47.8	14.0	14.0	56.3	10.3	10.2
LnGrp LOS	C		C	C		C	D	B	B	E	B	B
Approach Vol, veh/h		123			291			1381			837	
Approach Delay, s/veh		27.4			30.9			15.8			13.1	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	47.0		17.8	9.0	45.7		17.8				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	6.0	42.0		17.0	9.0	39.0		17.0				
Max Q Clear Time (g_c+I1), s	4.2	21.2		11.7	5.1	11.3		10.0				
Green Ext Time (p_c), s	0.0	14.5		1.1	0.0	17.7		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay			17.1									
HCM 2010 LOS			B									

Lanes, Volumes, Timings
35: Michigan St & Bartlett St

Existing Network - 2014 PM
2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	176	7	105	14	16	39	68	1067	3	8	736	61
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	7%	7%	7%	7%	7%	7%
Parking (#/hr)					3	3						
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		8			4		5	2			6	
Permitted Phases	8			4			2			6		6
Detector Phase	8	8		4	4		5	2		6	6	6
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		4.0	7.0		7.0	7.0	7.0
Minimum Split (s)	27.2	27.2		27.2	27.2		8.0	23.5		23.5	23.5	23.5
Total Split (s)	28.8	28.8		28.8	28.8		13.6	51.2		37.6	37.6	37.6
Total Split (%)	36.0%	36.0%		36.0%	36.0%		17.0%	64.0%		47.0%	47.0%	47.0%
Yellow Time (s)	3.2	3.2		3.2	3.2		3.0	3.5		3.5	3.5	3.5
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.8		1.8	1.8	1.8
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.2	5.2		5.2	5.2		4.0	5.3		5.3	5.3	5.3
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max

Intersection Summary






















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 23 (29%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 35: Michigan St & Bartlett St



HCM 2010 Signalized Intersection Summary
35: Michigan St & Bartlett St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	176	7	105	14	16	39	68	1067	3	8	736	61
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1882	1810	1900	1810	1737	1824	1776	1776	1900	1776	1776	1776
Adj Flow Rate, veh/h	196	8	33	16	18	12	76	1186	3	9	818	16
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	5	5	5	5	5	5	7	7	7	7	7	7
Cap, veh/h	323	57	237	307	160	107	448	2359	6	355	1999	894
Arrive On Green	0.19	0.19	0.19	0.19	0.19	0.19	0.08	1.00	1.00	0.59	0.59	0.59
Sat Flow, veh/h	1388	309	1275	1322	862	574	1691	3452	9	447	3374	1509
Grp Volume(v), veh/h	196	0	41	16	0	30	76	580	609	9	818	16
Grp Sat Flow(s),veh/h/ln	1388	0	1584	1322	0	1436	1691	1687	1774	447	1687	1509
Q Serve(g_s), s	10.9	0.0	1.7	0.8	0.0	1.4	1.3	0.0	0.0	0.7	10.4	0.3
Cycle Q Clear(g_c), s	12.3	0.0	1.7	2.6	0.0	1.4	1.3	0.0	0.0	0.7	10.4	0.3
Prop In Lane	1.00		0.80	1.00		0.40	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	323	0	294	307	0	266	448	1153	1212	355	1999	894
V/C Ratio(X)	0.61	0.00	0.14	0.05	0.00	0.11	0.17	0.50	0.50	0.03	0.41	0.02
Avail Cap(c_a), veh/h	475	0	467	451	0	424	582	1153	1212	355	1999	894
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.86	0.86	0.86	0.89	0.89	0.89
Uniform Delay (d), s/veh	32.2	0.0	27.2	28.3	0.0	27.1	5.7	0.0	0.0	6.8	8.8	6.7
Incr Delay (d2), s/veh	1.4	0.0	0.2	0.1	0.0	0.1	0.1	1.4	1.3	0.1	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	0.0	0.8	0.3	0.0	0.6	0.6	0.4	0.4	0.1	4.9	0.2
LnGrp Delay(d),s/veh	33.6	0.0	27.4	28.4	0.0	27.2	5.8	1.4	1.3	6.9	9.3	6.7
LnGrp LOS	C		C	C		C	A	A	A	A	A	A
Approach Vol, veh/h		237			46			1265			843	
Approach Delay, s/veh		32.5			27.6			1.6			9.2	
Approach LOS		C			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		60.0		20.0	7.3	52.7		20.0				
Change Period (Y+Rc), s		* 5.3		* 5.2	4.0	* 5.3		* 5.2				
Max Green Setting (Gmax), s		* 46		* 24	9.6	* 32		* 24				
Max Q Clear Time (g_c+I1), s		2.0		4.6	3.3	12.4		14.3				
Green Ext Time (p_c), s		2.8		0.7	0.0	2.7		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			7.9									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
36: Michigan St & Navarre St

Existing Network - 2014 PM
2/25/2015

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	35	1	22	99	1	20	4	1081	4	14	837	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	7%	7%	7%	7%	7%	7%
Parking (#/hr)				5	5	5						
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		4.0	7.0		4.0	7.0	
Minimum Split (s)	28.0	28.0		28.0	28.0		8.0	22.7		8.0	22.7	
Total Split (s)	29.6	29.6		29.6	29.6		9.6	40.8		9.6	40.8	
Total Split (%)	37.0%	37.0%		37.0%	37.0%		12.0%	51.0%		12.0%	51.0%	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.5		3.0	3.5	
All-Red Time (s)	2.0	2.0		2.0	2.0		1.0	1.8		1.0	1.8	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0			5.0		4.0	5.3		4.0	5.3	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		None	C-Max		None	C-Max	

Intersection Summary




















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 22 (28%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 36: Michigan St & Navarre St



HCM 2010 Signalized Intersection Summary
36: Michigan St & Navarre St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	1	22	99	1	20	4	1081	4	14	837	8
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1976	1882	1976	1776	1776	1900	1776	1776	1900
Adj Flow Rate, veh/h	38	1	7	108	1	12	4	1175	3	15	910	8
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5	7	7	7	7	7	7
Cap, veh/h	282	24	168	217	5	15	493	2364	6	350	2381	21
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	0.00	0.68	0.68	0.03	1.00	1.00
Sat Flow, veh/h	1355	196	1372	1080	40	123	1691	3452	9	1691	3427	30
Grp Volume(v), veh/h	38	0	8	121	0	0	4	574	604	15	448	470
Grp Sat Flow(s),veh/h/ln	1355	0	1567	1243	0	0	1691	1687	1774	1691	1687	1770
Q Serve(g_s), s	0.0	0.0	0.4	7.2	0.0	0.0	0.1	13.0	13.0	0.2	0.0	0.0
Cycle Q Clear(g_c), s	1.7	0.0	0.4	7.6	0.0	0.0	0.1	13.0	13.0	0.2	0.0	0.0
Prop In Lane	1.00		0.88	0.89		0.10	1.00		0.00	1.00		0.02
Lane Grp Cap(c), veh/h	282	0	192	237	0	0	493	1155	1215	350	1172	1230
V/C Ratio(X)	0.13	0.00	0.04	0.51	0.00	0.00	0.01	0.50	0.50	0.04	0.38	0.38
Avail Cap(c_a), veh/h	533	0	482	470	0	0	604	1155	1215	444	1172	1230
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.91	0.91	0.91
Uniform Delay (d), s/veh	31.6	0.0	31.0	34.2	0.0	0.0	3.9	6.0	6.0	4.7	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.6	0.0	0.0	0.0	1.5	1.5	0.0	0.9	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.2	2.6	0.0	0.0	0.0	6.4	6.7	0.1	0.3	0.3
LnGrp Delay(d),s/veh	31.6	0.0	31.0	34.8	0.0	0.0	3.9	7.6	7.5	4.7	0.9	0.8
LnGrp LOS	C		C	C			A	A	A	A	A	A
Approach Vol, veh/h		46			121			1182			933	
Approach Delay, s/veh		31.5			34.8			7.5			0.9	
Approach LOS		C			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	60.1		14.8	4.3	60.9		14.8				
Change Period (Y+Rc), s	4.0	* 5.3		5.0	4.0	* 5.3		5.0				
Max Green Setting (Gmax), s	5.6	* 36		24.6	5.6	* 36		24.6				
Max Q Clear Time (g_c+I1), s	2.2	15.0		9.6	2.1	2.0		3.7				
Green Ext Time (p_c), s	0.0	2.5		0.4	0.0	2.6		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			6.7									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations		↗	↕	↖	↘	
Volume (vph)	0	11	1023	46	2	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	5%	5%	7%	7%	7%	7%
Parking (#/hr)				5		
Shared Lane Traffic (%)						
Turn Type		Prot	NA		Prot	
Protected Phases		3	2		1	
Permitted Phases						
Detector Phase		3	2		1	
Switch Phase						
Minimum Initial (s)		4.0	5.0		5.0	
Minimum Split (s)		9.2	25.2		9.0	
Total Split (s)		22.4	44.8		12.8	
Total Split (%)		28.0%	56.0%		16.0%	
Yellow Time (s)		3.7	3.7		3.0	
All-Red Time (s)		1.5	1.5		1.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.2	5.2		4.0	
Lead/Lag			Lag		Lead	
Lead-Lag Optimize?						
Recall Mode		None	C-Max		Min	

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated

Splits and Phases: 37: Michigan St & Marion St



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Volume (veh/h)	0	11	1023	46	2	0		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00			
Parking Bus, Adj	1.00	1.00	1.00	0.88	1.00	1.00		
Adj Sat Flow, veh/h/ln	0	1629	1598	1710	1662	0		
Adj Flow Rate, veh/h	0	13	1204	54	2	0		
Adj No. of Lanes	0	1	2	0	1	0		
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85		
Percent Heavy Veh, %	0	5	7	7	7	0		
Cap, veh/h	0	0	2279	102	99	0		
Arrive On Green	0.00	0.00	0.82	0.82	0.06	0.00		
Sat Flow, veh/h	0		2850	124	1583	2		
Grp Volume(v), veh/h	0.0		659	599	2	35.2		
Grp Sat Flow(s),veh/h/ln			1518	1376	1583	D		
Q Serve(g_s), s			10.9	10.9	0.1			
Cycle Q Clear(g_c), s			10.9	10.9	0.1			
Prop In Lane				0.09	1.00			
Lane Grp Cap(c), veh/h			1249	1132	99			
V/C Ratio(X)			0.53	0.53	0.02			
Avail Cap(c_a), veh/h			1249	1132	174			
HCM Platoon Ratio			1.00	1.00	1.00			
Upstream Filter(I)			1.00	1.00	1.00			
Uniform Delay (d), s/veh			2.2	2.2	35.2			
Incr Delay (d2), s/veh			1.6	1.8	0.0			
Initial Q Delay(d3),s/veh			0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln			5.0	4.5	0.0			
LnGrp Delay(d),s/veh			3.8	4.0	35.2			
LnGrp LOS			A	A	D			
Approach Vol, veh/h			1258					
Approach Delay, s/veh			3.9					
Approach LOS			A					
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2						
Phs Duration (G+Y+Rc), s	9.0	71.0						
Change Period (Y+Rc), s	4.0	* 5.2						
Max Green Setting (Gmax), s	8.8	* 40						
Max Q Clear Time (g_c+I1), s	2.1	12.9						
Green Ext Time (p_c), s	0.0	1.5						
Intersection Summary								
HCM 2010 Ctrl Delay			4.0					
HCM 2010 LOS			A					
Notes								
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.								

Lanes, Volumes, Timings
 38: St. Joseph St/Michigan St & LaSalle Ave

Existing Network - 2014 PM
 2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖	↗		↖	↗			
Volume (vph)	90	609	0	0	719	91	327	1103	230	0	0	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA			NA		Perm	NA	Perm			
Protected Phases	3	8			4			2				
Permitted Phases	8						2		2			
Detector Phase	3	8			4		2	2	2			
Switch Phase												
Minimum Initial (s)	4.0	5.0			5.0		5.0	5.0	5.0			
Minimum Split (s)	9.2	29.2			29.2		26.2	26.2	26.2			
Total Split (s)	12.0	50.4			38.4		29.6	29.6	29.6			
Total Split (%)	15.0%	63.0%			48.0%		37.0%	37.0%	37.0%			
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2	3.2			
All-Red Time (s)	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			
Total Lost Time (s)	5.2	5.2			5.2			5.2	5.2			
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?												
Recall Mode	None	Max			Max		C-Max	C-Max	C-Max			

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 55.2 (69%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 38: St. Joseph St/Michigan St & LaSalle Ave



HCM 2010 Signalized Intersection Summary
 38: St. Joseph St/Michigan St & LaSalle Ave

Existing Network - 2014 PM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	90	609	0	0	719	91	327	1103	230	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1644	1644	0	0	1710	1710	1710	1598	1598			
Adj Flow Rate, veh/h	106	716	0	0	846	94	385	1298	0			
Adj No. of Lanes	1	2	0	0	2	0	0	4	1			
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85			
Percent Heavy Veh, %	4	4	0	0	4	4	7	7	7			
Cap, veh/h	304	1765	0	0	1224	136	369	1358	414			
Arrive On Green	0.17	1.00	0.00	0.00	0.42	0.42	0.11	0.10	0.00			
Sat Flow, veh/h	1566	3206	0	0	3035	328	1209	4451	1358			
Grp Volume(v), veh/h	106	716	0	0	466	474	489	1194	0			
Grp Sat Flow(s),veh/h/ln	1566	1562	0	0	1624	1652	1538	1374	1358			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	18.8	18.8	24.4	23.0	0.0			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	18.8	18.8	24.4	23.0	0.0			
Prop In Lane	1.00		0.00	0.00		0.20	0.79		1.00			
Lane Grp Cap(c), veh/h	304	1765	0	0	674	686	469	1258	414			
V/C Ratio(X)	0.35	0.41	0.00	0.00	0.69	0.69	1.04	0.95	0.00			
Avail Cap(c_a), veh/h	304	1765	0	0	674	686	469	1258	414			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	0.58	0.58	0.00	0.00	1.00	1.00	0.47	0.47	0.00			
Uniform Delay (d), s/veh	25.6	0.0	0.0	0.0	19.2	19.2	35.8	35.4	0.0			
Incr Delay (d2), s/veh	0.1	0.4	0.0	0.0	5.7	5.6	40.5	9.0	0.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.0	0.1	0.0	0.0	9.5	9.6	15.7	9.8	0.0			
LnGrp Delay(d),s/veh	25.8	0.4	0.0	0.0	24.9	24.8	76.3	44.3	0.0			
LnGrp LOS	C	A			C	C	F	D				
Approach Vol, veh/h		822			940			1683				
Approach Delay, s/veh		3.7			24.9			53.7				
Approach LOS		A			C			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4				8				
Phs Duration (G+Y+Rc), s		29.6	12.0	38.4				50.4				
Change Period (Y+Rc), s		* 5.2	* 5.2	* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 24	* 6.8	* 33				* 45				
Max Q Clear Time (g_c+I1), s		26.4	2.0	20.8				2.0				
Green Ext Time (p_c), s		0.0	0.4	0.3				0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			33.9									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔			↔			↔	
Volume (vph)	0	237	14	60	314	0	51	0	141	3	0	3
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Parking (#/hr)		5	5									
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases				4			2			6		
Minimum Split (s)		20.0		22.6	22.6		25.2	25.2		25.2		25.2
Total Split (s)		36.0		36.0	36.0		44.0	44.0		44.0		44.0
Total Split (%)		45.0%		45.0%	45.0%		55.0%	55.0%		55.0%		55.0%
Yellow Time (s)		3.2		3.2	3.2		3.2	3.2		3.2		3.2
All-Red Time (s)		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
Total Lost Time (s)		5.2		5.2	5.2		5.2	5.2		5.2		5.2

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

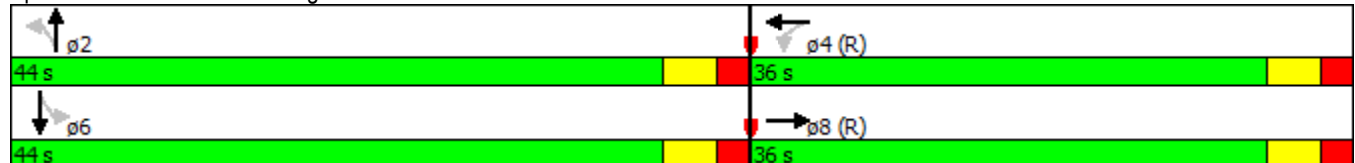
Actuated Cycle Length: 80

Offset: 13.6 (17%), Referenced to phase 4:WBTL and 8:EBT, Start of Green

Natural Cycle: 50


















Control Type: Pretimed

Splits and Phases: 39: Michigan St & Colfax Ave



HCM 2010 Signalized Intersection Summary
39: Michigan St & Colfax Ave

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	0	237	14	60	314	0	51	0	141	3	0	3
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1710	1778	1644	1644	0	1778	1662	1778	1710	1598	1710
Adj Flow Rate, veh/h	0	308	15	78	408	0	66	0	88	4	0	4
Adj No. of Lanes	0	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Percent Heavy Veh, %	0	4	4	4	4	0	7	7	7	7	7	7
Cap, veh/h	0	545	27	289	633	0	324	21	375	356	18	306
Arrive On Green	0.00	0.38	0.38	0.77	0.77	0.00	0.50	0.00	0.49	0.50	0.00	0.49
Sat Flow, veh/h	0	1415	69	929	1644	0	536	43	773	595	37	632
Grp Volume(v), veh/h	0	0	323	78	408	0	154	0	0	8	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1484	929	1644	0	1352	0	0	1263	0	0
Q Serve(g_s), s	0.0	0.0	13.7	4.6	9.1	0.0	2.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	13.7	18.3	9.1	0.0	4.9	0.0	0.0	0.2	0.0	0.0
Prop In Lane	0.00		0.05	1.00		0.00	0.43		0.57	0.50		0.50
Lane Grp Cap(c), veh/h	0	0	571	289	633	0	737	0	0	696	0	0
V/C Ratio(X)	0.00	0.00	0.57	0.27	0.64	0.00	0.21	0.00	0.00	0.01	0.00	0.00
Avail Cap(c_a), veh/h	0	0	571	289	633	0	737	0	0	696	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	19.3	12.5	6.7	0.0	11.7	0.0	0.0	10.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	4.0	2.3	5.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	6.2	1.4	4.7	0.0	2.0	0.0	0.0	0.1	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	23.4	14.8	11.7	0.0	12.4	0.0	0.0	10.6	0.0	0.0
LnGrp LOS			C	B	B		B			B		
Approach Vol, veh/h		323			486			154				8
Approach Delay, s/veh		23.4			12.2			12.4				10.6
Approach LOS		C			B			B				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		44.0		36.0		44.0		36.0				
Change Period (Y+Rc), s		* 5.2		* 5.2		* 5.2		* 5.2				
Max Green Setting (Gmax), s		* 39		* 31		* 39		* 31				
Max Q Clear Time (g_c+I1), s		6.9		20.3		2.2		15.7				
Green Ext Time (p_c), s		0.5		0.3		0.5		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			15.9									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
40: Michigan St & Washington St

Existing Network - 2014 PM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Volume (vph)	53	149	40	6	67	11	37	65	35	13	49	57
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Parking (#/hr)		5	5		5	5						
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2			6		
Minimum Split (s)	22.2	22.2		22.2	22.2		25.2	25.2		25.2	25.2	
Total Split (s)	44.0	44.0		44.0	44.0		36.0	36.0		36.0	36.0	
Total Split (%)	55.0%	55.0%		55.0%	55.0%		45.0%	45.0%		45.0%	45.0%	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2	3.2	
All-Red Time (s)	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)	5.2	5.2		5.2	5.2		5.2	5.2		5.2	5.2	

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

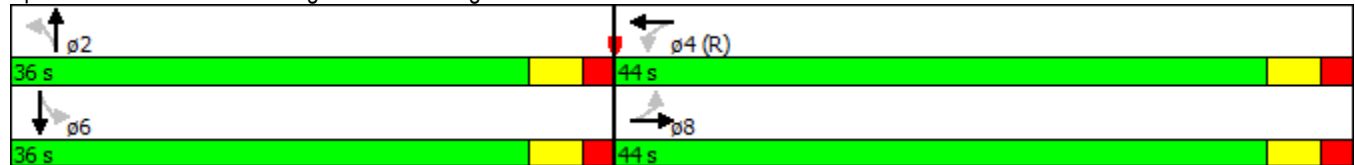
Actuated Cycle Length: 80

Offset: 41 (51%), Referenced to phase 4:WBTL, Start of Green

Natural Cycle: 50



















Control Type: Pretimed

Splits and Phases: 40: Michigan St & Washington St



HCM 2010 Signalized Intersection Summary
40: Michigan St & Washington St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	53	149	40	6	67	11	37	65	35	13	49	57
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1710	1598	1710	1778	1662	1778
Adj Flow Rate, veh/h	65	184	35	7	83	7	46	80	26	16	60	26
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81	0.81
Percent Heavy Veh, %	4	4	4	4	4	4	7	7	7	7	7	7
Cap, veh/h	607	570	108	579	635	54	196	311	92	113	375	149
Arrive On Green	0.97	0.97	0.97	0.49	0.49	0.49	0.39	0.38	0.38	0.39	0.38	0.38
Sat Flow, veh/h	1149	1176	224	1022	1309	110	356	808	240	159	975	388
Grp Volume(v), veh/h	65	0	219	7	0	90	152	0	0	102	0	0
Grp Sat Flow(s),veh/h/ln	1149	0	1399	1022	0	1419	1404	0	0	1522	0	0
Q Serve(g_s), s	0.5	0.0	0.5	0.3	0.0	2.8	0.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.3	0.0	0.5	0.8	0.0	2.8	5.4	0.0	0.0	3.4	0.0	0.0
Prop In Lane	1.00		0.16	1.00		0.08	0.30		0.17	0.16		0.25
Lane Grp Cap(c), veh/h	607	0	679	579	0	688	610	0	0	649	0	0
V/C Ratio(X)	0.11	0.00	0.32	0.01	0.00	0.13	0.25	0.00	0.00	0.16	0.00	0.00
Avail Cap(c_a), veh/h	607	0	679	579	0	688	610	0	0	649	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.8	0.0	0.6	11.0	0.0	11.3	16.7	0.0	0.0	16.1	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	1.3	0.0	0.0	0.4	1.0	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.0	0.4	0.1	0.0	1.2	2.4	0.0	0.0	1.5	0.0	0.0
LnGrp Delay(d),s/veh	1.2	0.0	1.9	11.0	0.0	11.7	17.7	0.0	0.0	16.6	0.0	0.0
LnGrp LOS	A		A	B		B	B			B		
Approach Vol, veh/h		284			97			152			102	
Approach Delay, s/veh		1.7			11.7			17.7			16.6	
Approach LOS		A			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		44.0		36.0		44.0				
Change Period (Y+Rc), s		* 5.2		* 5.2		* 5.2		* 5.2				
Max Green Setting (Gmax), s		* 31		* 39		* 31		* 39				
Max Q Clear Time (g_c+I1), s		7.4		4.8		5.4		5.3				
Green Ext Time (p_c), s		0.8		0.1		0.8		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			9.5									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
41: Michigan St & Jefferson Blvd

Existing Network - 2014 PM
2/25/2015

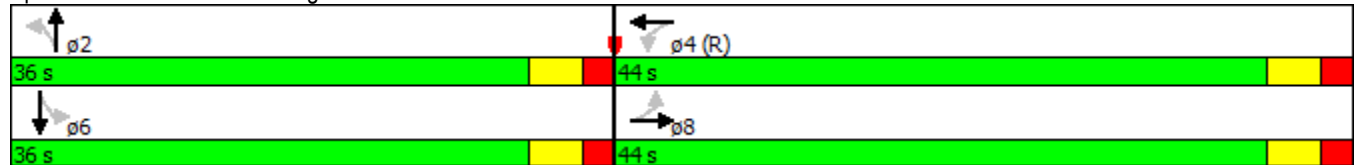


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	24	144	36	8	83	9	19	66	16	11	59	38
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Parking (#/hr)	5	5	5	5	5	5						
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases	8				4		2				6	
Permitted Phases	8				4		2				6	
Minimum Split (s)	22.2	22.2			22.2	22.2	25.2	25.2			25.2	25.2
Total Split (s)	44.0	44.0			44.0	44.0	36.0	36.0			36.0	36.0
Total Split (%)	55.0%	55.0%			55.0%	55.0%	45.0%	45.0%			45.0%	45.0%
Yellow Time (s)	3.2	3.2			3.2	3.2	3.2	3.2			3.2	3.2
All-Red Time (s)	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	
Total Lost Time (s)	5.2				5.2		5.2				5.2	
Lead/Lag												
Lead-Lag Optimize?												

Intersection Summary

















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 79 (99%), Referenced to phase 4:WBTL, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 41: Michigan St & Jefferson Blvd



HCM 2010 Signalized Intersection Summary
41: Michigan St & Jefferson Blvd

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	24	144	36	8	83	9	19	66	16	11	59	38
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1710	1644	1710	1710	1644	1710	1710	1598	1710	1778	1662	1778
Adj Flow Rate, veh/h	27	162	30	9	93	6	21	74	10	12	66	18
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	4	4	4	4	4	4	7	7	7	7	7	7
Cap, veh/h	103	515	90	78	607	37	138	432	54	95	444	113
Arrive On Green	0.97	0.97	0.97	0.97	0.97	0.97	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	109	1063	186	61	1252	77	217	1123	141	115	1153	293
Grp Volume(v), veh/h	219	0	0	108	0	0	105	0	0	96	0	0
Grp Sat Flow(s),veh/h/ln	1358	0	0	1390	0	0	1481	0	0	1561	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	0.0	0.2	0.0	0.0	3.5	0.0	0.0	3.1	0.0	0.0
Prop In Lane	0.12		0.14	0.08		0.06	0.20		0.10	0.12		0.19
Lane Grp Cap(c), veh/h	709	0	0	723	0	0	624	0	0	652	0	0
V/C Ratio(X)	0.31	0.00	0.00	0.15	0.00	0.00	0.17	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	709	0	0	723	0	0	624	0	0	652	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.6	0.0	0.0	0.6	0.0	0.0	16.2	0.0	0.0	16.1	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.4	0.0	0.0	0.6	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	0.0	0.2	0.0	0.0	1.6	0.0	0.0	1.5	0.0	0.0
LnGrp Delay(d),s/veh	1.8	0.0	0.0	1.1	0.0	0.0	16.8	0.0	0.0	16.6	0.0	0.0
LnGrp LOS	A			A			B			B		
Approach Vol, veh/h		219			108			105				96
Approach Delay, s/veh		1.8			1.1			16.8				16.6
Approach LOS		A			A			B				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		44.0		36.0		44.0				
Change Period (Y+Rc), s		* 5.2		* 5.2		* 5.2		* 5.2				
Max Green Setting (Gmax), s		* 31		* 39		* 31		* 39				
Max Q Clear Time (g_c+I1), s		5.5		2.2		5.1		2.5				
Green Ext Time (p_c), s		0.6		0.1		0.6		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				7.3								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												



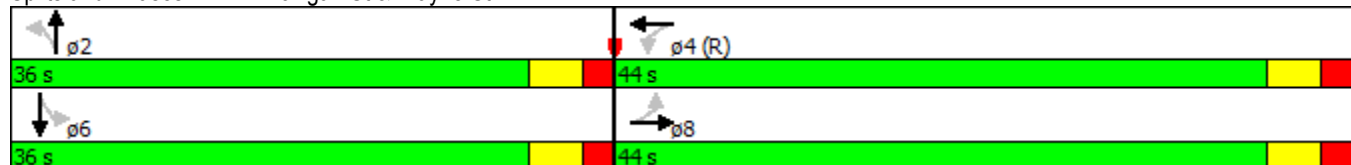
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔			↔	
Volume (vph)	16	136	8	34	316	31	11	52	10	58	28	15
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Parking (#/hr)			5	3								
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2			6		
Minimum Split (s)	22.2	22.2		22.2	22.2		25.2	25.2		25.2		25.2
Total Split (s)	44.0	44.0		44.0	44.0		36.0	36.0		36.0		36.0
Total Split (%)	55.0%	55.0%		55.0%	55.0%		45.0%	45.0%		45.0%		45.0%
Yellow Time (s)	3.2	3.2		3.2	3.2		3.2	3.2		3.2		3.2
All-Red Time (s)	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
Total Lost Time (s)		5.2			5.2			5.2				5.2

Lead/Lag
Lead-Lag Optimize?

Intersection Summary

















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 69 (86%), Referenced to phase 4:WBTL, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 42: Michigan St & Wayne St



HCM 2010 Signalized Intersection Summary
42: Michigan St & Wayne St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	16	136	8	34	316	31	11	52	10	58	28	15
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1710	1644	1710	1710	1644	1710	1710	1598	1710	1778	1662	1778
Adj Flow Rate, veh/h	17	145	5	36	336	24	12	55	5	62	30	9
Adj No. of Lanes	0	2	0	0	2	0	0	1	0	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	4	4	4	4	4	4	7	7	7	7	7	7
Cap, veh/h	152	1202	42	151	1270	90	119	477	41	375	170	46
Arrive On Green	0.97	0.97	0.97	0.32	0.32	0.32	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	204	2478	86	201	2619	185	172	1239	105	785	441	120
Grp Volume(v), veh/h	92	0	75	206	0	190	72	0	0	101	0	0
Grp Sat Flow(s),veh/h/ln	1475	0	1294	1541	0	1464	1516	0	0	1345	0	0
Q Serve(g_s), s	0.0	0.0	0.2	0.0	0.0	7.7	0.0	0.0	0.0	1.1	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.2	7.4	0.0	7.7	2.4	0.0	0.0	3.5	0.0	0.0
Prop In Lane	0.18		0.07	0.18		0.13	0.17		0.07	0.61		0.09
Lane Grp Cap(c), veh/h	768	0	628	800	0	710	636	0	0	591	0	0
V/C Ratio(X)	0.12	0.00	0.12	0.26	0.00	0.27	0.11	0.00	0.00	0.17	0.00	0.00
Avail Cap(c_a), veh/h	768	0	628	800	0	710	636	0	0	591	0	0
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.6	0.0	0.6	16.4	0.0	16.5	15.9	0.0	0.0	16.1	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.4	0.8	0.0	0.9	0.4	0.0	0.0	0.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.1	3.5	0.0	3.3	1.1	0.0	0.0	1.6	0.0	0.0
LnGrp Delay(d),s/veh	0.9	0.0	1.0	17.2	0.0	17.4	16.2	0.0	0.0	16.8	0.0	0.0
LnGrp LOS	A		A	B		B	B			B		
Approach Vol, veh/h		167			396			72			101	
Approach Delay, s/veh		1.0			17.3			16.2			16.8	
Approach LOS		A			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.0		44.0		36.0		44.0				
Change Period (Y+Rc), s		* 5.2		* 5.2		* 5.2		* 5.2				
Max Green Setting (Gmax), s		* 31		* 39		* 31		* 39				
Max Q Clear Time (g_c+I1), s		4.4		9.7		5.5		2.2				
Green Ext Time (p_c), s		0.2		0.2		0.2		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			13.4									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
43: Michigan St & Monroe St

Existing Network - 2014 PM
2/25/2015

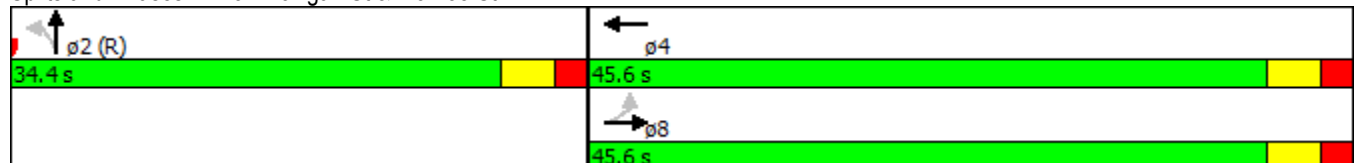


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔↔↔				
Volume (vph)	32	589	0	0	278	308	63	1043	45	0	0	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Parking (#/hr)							5					
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	31.2	31.2			31.2		29.2	29.2				
Total Split (s)	45.6	45.6			45.6		34.4	34.4				
Total Split (%)	57.0%	57.0%			57.0%		43.0%	43.0%				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				
Lead/Lag												
Lead-Lag Optimize?												

Intersection Summary
















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 60 (75%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 43: Michigan St & Monroe St



HCM 2010 Signalized Intersection Summary
 43: Michigan St & Monroe St

Existing Network - 2014 PM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	32	589	0	0	278	308	63	1043	45	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1827	0	0	1827	1900	1900	1776	1900			
Adj Flow Rate, veh/h	34	627	0	0	296	321	67	1110	41			
Adj No. of Lanes	0	2	0	0	2	0	0	4	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	4	4	0	0	4	4	0	7	0			
Cap, veh/h	98	1607	0	0	876	784	118	2112	79			
Arrive On Green	1.00	1.00	0.00	0.00	0.51	0.51	0.13	0.12	0.12			
Sat Flow, veh/h	96	3266	0	0	1827	1553	324	5787	218			
Grp Volume(v), veh/h	345	316	0	0	296	321	318	573	327			
Grp Sat Flow(s),veh/h/ln	1700	1579	0	0	1736	1553	1538	1527	1737			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	8.1	10.3	15.6	14.1	14.1			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	8.1	10.3	15.6	14.1	14.1			
Prop In Lane	0.10		0.00	0.00		1.00	0.21		0.13			
Lane Grp Cap(c), veh/h	908	798	0	0	876	784	561	1115	634			
V/C Ratio(X)	0.38	0.40	0.00	0.00	0.34	0.41	0.57	0.51	0.52			
Avail Cap(c_a), veh/h	908	798	0	0	876	784	561	1115	634			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	11.8	12.4	29.2	28.5	28.6			
Incr Delay (d2), s/veh	1.2	1.5	0.0	0.0	1.0	1.6	4.1	1.7	3.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.3	0.3	0.0	0.0	4.1	4.7	7.3	6.2	7.3			
LnGrp Delay(d),s/veh	1.2	1.5	0.0	0.0	12.9	13.9	33.3	30.2	31.5			
LnGrp LOS	A	A			B	B	C	C	C			
Approach Vol, veh/h		661			617			1218				
Approach Delay, s/veh		1.3			13.4			31.4				
Approach LOS		A			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		34.4		45.6				45.6				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 29		* 40				* 40				
Max Q Clear Time (g_c+I1), s		17.6		12.3				2.0				
Green Ext Time (p_c), s		0.4		0.5				0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				19.0								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
44: Michigan St & South St

Existing Network - 2014 PM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↶			↷		↶	↷				
Volume (vph)	35	65	0	0	39	39	54	1162	20	0	0	0
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Detector Phase	8	8			4		2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	29.2	29.2			29.2		25.2	25.2				
Total Split (s)	32.0	32.0			32.0		48.0	48.0				
Total Split (%)	40.0%	40.0%			40.0%		60.0%	60.0%				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None			None		C-Max	C-Max				

Intersection Summary

















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 48 (60%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 55
 Control Type: Actuated-Coordinated

Splits and Phases: 44: Michigan St & South St



HCM 2010 Signalized Intersection Summary
44: Michigan St & South St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	35	65	0	0	39	39	54	1162	20	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1827	0	0	1827	1900	1900	1776	1900			
Adj Flow Rate, veh/h	39	73	0	0	44	15	61	1306	19			
Adj No. of Lanes	0	1	0	0	1	0	0	4	0			
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89			
Percent Heavy Veh, %	4	4	0	0	4	4	0	7	0			
Cap, veh/h	102	113	0	0	133	45	208	4771	71			
Arrive On Green	0.12	0.10	0.00	0.00	0.10	0.10	0.26	0.25	0.25			
Sat Flow, veh/h	410	1103	0	0	1304	445	270	6213	92			
Grp Volume(v), veh/h	112	0	0	0	0	59	398	627	361			
Grp Sat Flow(s),veh/h/ln	1513	0	0	0	0	1748	1762	1527	1759			
Q Serve(g_s), s	3.4	0.0	0.0	0.0	0.0	2.5	14.6	13.1	13.2			
Cycle Q Clear(g_c), s	5.9	0.0	0.0	0.0	0.0	2.5	14.6	13.1	13.2			
Prop In Lane	0.35		0.00	0.00		0.25	0.15		0.05			
Lane Grp Cap(c), veh/h	238	0	0	0	0	178	1353	2345	1351			
V/C Ratio(X)	0.47	0.00	0.00	0.00	0.00	0.33	0.29	0.27	0.27			
Avail Cap(c_a), veh/h	612	0	0	0	0	586	1353	2345	1351			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	0.98	0.98	0.98			
Uniform Delay (d), s/veh	34.7	0.0	0.0	0.0	0.0	33.4	12.4	11.8	11.8			
Incr Delay (d2), s/veh	1.1	0.0	0.0	0.0	0.0	0.8	0.5	0.3	0.5			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.4	0.0	0.0	0.0	0.0	1.3	7.3	5.7	6.6			
LnGrp Delay(d),s/veh	35.8	0.0	0.0	0.0	0.0	34.2	12.9	12.1	12.3			
LnGrp LOS	D					C	B	B	B			
Approach Vol, veh/h		112			59			1386				
Approach Delay, s/veh		35.8			34.2			12.4				
Approach LOS		D			C			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		66.6		13.4				13.4				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 43		* 27				* 27				
Max Q Clear Time (g_c+I1), s		16.6		4.5				7.9				
Green Ext Time (p_c), s		0.4		0.5				0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			14.9									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
45: Michigan St & Bronson St

Existing Network - 2014 PM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↗			↖↗↘				
Volume (vph)	17	10	0	0	28	5	20	1126	23	0	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Detector Phase	8	8			4		2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0		5.0	5.0				
Minimum Split (s)	30.2	30.2			30.2		25.2	25.2				
Total Split (s)	32.0	32.0			32.0		48.0	48.0				
Total Split (%)	40.0%	40.0%			40.0%		60.0%	60.0%				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None			None		C-Max	C-Max				

Intersection Summary

















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 37.6 (47%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 45: Michigan St & Bronson St



HCM 2010 Signalized Intersection Summary
45: Michigan St & Bronson St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	17	10	0	0	28	5	20	1126	23	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1900	1827	0	0	1827	1900	1900	1776	1900			
Adj Flow Rate, veh/h	18	11	0	0	30	5	22	1211	22			
Adj No. of Lanes	0	1	0	0	1	0	0	4	0			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	4	4	0	0	4	4	0	7	0			
Cap, veh/h	103	25	0	0	72	12	89	5226	97			
Arrive On Green	0.06	0.05	0.00	0.00	0.05	0.05	0.27	0.27	0.27			
Sat Flow, veh/h	643	517	0	0	1527	255	108	6353	118			
Grp Volume(v), veh/h	29	0	0	0	0	35	361	567	326			
Grp Sat Flow(s),veh/h/ln	1160	0	0	0	0	1782	1770	1527	1755			
Q Serve(g_s), s	1.1	0.0	0.0	0.0	0.0	1.5	12.8	11.5	11.5			
Cycle Q Clear(g_c), s	2.6	0.0	0.0	0.0	0.0	1.5	12.8	11.5	11.5			
Prop In Lane	0.62		0.00	0.00		0.14	0.06		0.07			
Lane Grp Cap(c), veh/h	145	0	0	0	0	85	1456	2512	1443			
V/C Ratio(X)	0.20	0.00	0.00	0.00	0.00	0.41	0.25	0.23	0.23			
Avail Cap(c_a), veh/h	574	0	0	0	0	597	1456	2512	1443			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	0.53	0.53	0.53			
Uniform Delay (d), s/veh	37.4	0.0	0.0	0.0	0.0	37.0	9.8	9.4	9.4			
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.0	0.0	2.4	0.2	0.1	0.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.0	0.0	0.8	6.3	4.9	5.7			
LnGrp Delay(d),s/veh	37.9	0.0	0.0	0.0	0.0	39.4	10.0	9.5	9.6			
LnGrp LOS	D					D	B	A	A			
Approach Vol, veh/h		29			35			1255				
Approach Delay, s/veh		37.9			39.4			9.7				
Approach LOS		D			D			A				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		71.0		9.0				9.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 43		* 27				* 27				
Max Q Clear Time (g_c+I1), s		14.8		3.5				4.6				
Green Ext Time (p_c), s		0.4		0.1				0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			11.1									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
46: Michigan St & Sample St

Existing Network - 2014 PM
2/25/2015

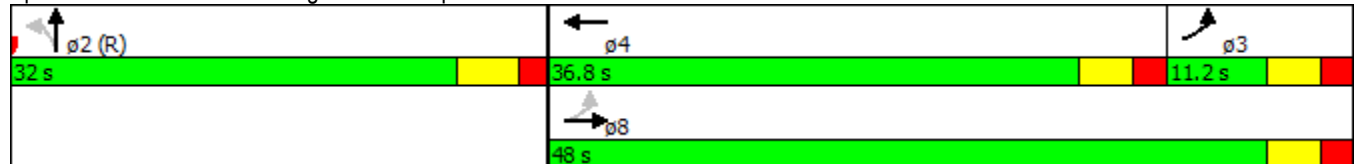


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷			↷			↷				
Volume (vph)	103	785	0	0	994	45	214	954	318	0	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	13%	13%	13%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA			NA		Perm	NA				
Protected Phases	3	8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	10.2	29.2			29.2		27.5	27.5				
Total Split (s)	11.2	48.0			36.8		32.0	32.0				
Total Split (%)	14.0%	60.0%			46.0%		40.0%	40.0%				
Yellow Time (s)	3.2	3.2			3.2		3.7	3.7				
All-Red Time (s)	2.0	2.0			2.0		1.8	1.8				
Lost Time Adjust (s)	0.0	0.0			0.0			0.0				
Total Lost Time (s)	5.2	5.2			5.2			5.5				
Lead/Lag	Lag				Lead							
Lead-Lag Optimize?												

Intersection Summary

















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 21 (26%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 46: Michigan St & Sample St



HCM 2010 Signalized Intersection Summary
46: Michigan St & Sample St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	103	785	0	0	994	45	214	954	318	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1681	1681	0	0	1827	1900	1900	1776	1900			
Adj Flow Rate, veh/h	111	844	0	0	1069	44	230	1026	281			
Adj No. of Lanes	1	2	0	0	2	0	0	4	0			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	13	13	0	0	4	4	0	7	0			
Cap, veh/h	252	1709	0	0	1342	55	294	1416	394			
Arrive On Green	0.15	1.00	0.00	0.00	0.39	0.39	0.11	0.11	0.11			
Sat Flow, veh/h	1601	3279	0	0	3489	140	889	4275	1188			
Grp Volume(v), veh/h	111	844	0	0	546	567	448	719	370			
Grp Sat Flow(s),veh/h/ln	1601	1597	0	0	1736	1802	1731	1527	1566			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	22.2	22.2	20.2	18.2	18.3			
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	22.2	22.2	20.2	18.2	18.3			
Prop In Lane	1.00		0.00	0.00		0.08	0.51		0.76			
Lane Grp Cap(c), veh/h	252	1709	0	0	686	712	573	1012	519			
V/C Ratio(X)	0.44	0.49	0.00	0.00	0.80	0.80	0.78	0.71	0.71			
Avail Cap(c_a), veh/h	252	1709	0	0	686	712	573	1012	519			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	30.1	0.0	0.0	0.0	21.4	21.4	32.7	31.9	32.0			
Incr Delay (d2), s/veh	5.5	1.0	0.0	0.0	9.3	9.0	10.2	4.2	8.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.5	0.2	0.0	0.0	12.4	12.8	11.3	8.3	9.1			
LnGrp Delay(d),s/veh	35.6	1.0	0.0	0.0	30.7	30.4	42.9	36.1	40.1			
LnGrp LOS	D	A			C	C	D	D	D			
Approach Vol, veh/h		955			1113			1537				
Approach Delay, s/veh		5.0			30.5			39.1				
Approach LOS		A			C			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4				8				
Phs Duration (G+Y+Rc), s		32.0	11.2	36.8				48.0				
Change Period (Y+Rc), s		5.5	* 5.2	* 5.2				* 5.2				
Max Green Setting (Gmax), s		26.5	* 6	* 32				* 43				
Max Q Clear Time (g_c+I1), s		22.2	2.0	24.2				2.0				
Green Ext Time (p_c), s		0.4	0.4	0.3				0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			27.4									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
47: Michigan St & Broadway St

Existing Network - 2014 PM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↗		↖	↗	↘			↘
Volume (vph)	21	26	0	0	24	22	17	1255	17	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	29.2	29.2			29.2		23.7	23.7				
Total Split (s)	29.6	29.6			29.6		50.4	50.4				
Total Split (%)	37.0%	37.0%			37.0%		63.0%	63.0%				
Yellow Time (s)	3.2	3.2			3.2		3.7	3.7				
All-Red Time (s)	2.0	2.0			2.0		1.3	1.3				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.0				

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

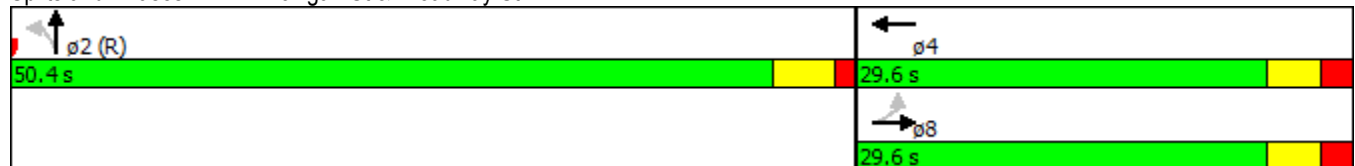
Actuated Cycle Length: 80

Offset: 63.2 (79%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 55


















Control Type: Pretimed

Splits and Phases: 47: Michigan St & Broadway St



HCM 2010 Signalized Intersection Summary
47: Michigan St & Broadway St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Volume (veh/h)	21	26	0	0	24	22	17	1255	17	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1976	1882	0	0	1827	1900	1976	1847	1976			
Adj Flow Rate, veh/h	23	29	0	0	27	6	19	1394	17			
Adj No. of Lanes	0	1	0	0	1	0	0	3	0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	5	5	0	0	4	4	0	7	0			
Cap, veh/h	261	307	0	0	442	98	38	2966	37			
Arrive On Green	0.30	0.30	0.00	0.00	0.30	0.30	0.19	0.19	0.19			
Sat Flow, veh/h	644	1006	0	0	1448	322	67	5226	66			
Grp Volume(v), veh/h	52	0	0	0	0	33	523	434	474			
Grp Sat Flow(s),veh/h/ln	1650	0	0	0	0	1770	1843	1681	1835			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	1.1	20.3	18.3	18.3			
Cycle Q Clear(g_c), s	1.6	0.0	0.0	0.0	0.0	1.1	20.3	18.3	18.3			
Prop In Lane	0.44		0.00	0.00		0.18	0.04		0.04			
Lane Grp Cap(c), veh/h	568	0	0	0	0	540	1046	954	1041			
V/C Ratio(X)	0.09	0.00	0.00	0.00	0.00	0.06	0.50	0.45	0.45			
Avail Cap(c_a), veh/h	568	0	0	0	0	540	1046	954	1041			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	19.9	0.0	0.0	0.0	0.0	19.7	22.3	21.5	21.5			
Incr Delay (d2), s/veh	0.3	0.0	0.0	0.0	0.0	0.2	1.7	1.6	1.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	0.0	0.0	0.5	10.9	8.9	9.7			
LnGrp Delay(d),s/veh	20.2	0.0	0.0	0.0	0.0	19.9	24.0	23.1	22.9			
LnGrp LOS	C					B	C	C	C			
Approach Vol, veh/h		52			33			1430				
Approach Delay, s/veh		20.2			19.9			23.4				
Approach LOS		C			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		50.4		29.6				29.6				
Change Period (Y+Rc), s		5.0		* 5.2				* 5.2				
Max Green Setting (Gmax), s		45.4		* 24				* 24				
Max Q Clear Time (g_c+I1), s		22.3		3.1				3.6				
Green Ext Time (p_c), s		1.4		0.1				0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			23.2									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
48: Michigan St & Indiana Ave

Existing Network - 2014 PM
2/25/2015

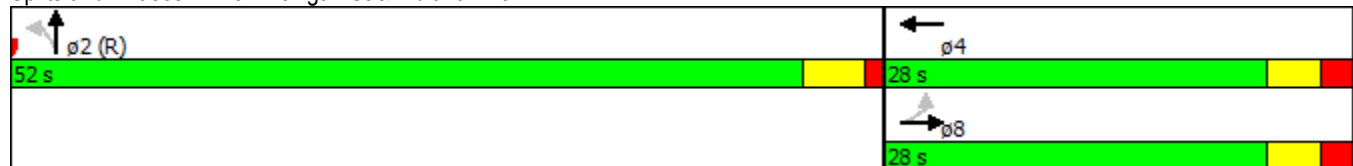
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	133	123	0	0	130	39	93	1115	26	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	26.2	26.2			26.2		21.9	21.9				
Total Split (s)	28.0	28.0			28.0		52.0	52.0				
Total Split (%)	35.0%	35.0%			35.0%		65.0%	65.0%				
Yellow Time (s)	3.2	3.2			3.2		3.7	3.7				
All-Red Time (s)	2.0	2.0			2.0		1.2	1.2				
Lost Time Adjust (s)	0.0	0.0			0.0			0.0				
Total Lost Time (s)	5.2	5.2			5.2			4.9				

Lead/Lag
Lead-Lag Optimize?

Intersection Summary


















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 49.6 (62%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 48: Michigan St & Indiana Ave



HCM 2010 Signalized Intersection Summary
48: Michigan St & Indiana Ave

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	133	123	0	0	130	39	93	1115	26	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1810	1810	0	0	1900	1976	1976	1847	1976			
Adj Flow Rate, veh/h	145	134	0	0	141	28	101	1212	25			
Adj No. of Lanes	1	1	0	0	1	0	0	3	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	5	5	0	0	4	4	0	7	0			
Cap, veh/h	341	516	0	0	439	87	223	2858	61			
Arrive On Green	0.48	0.48	0.00	0.00	0.28	0.28	0.19	0.19	0.19			
Sat Flow, veh/h	1177	1810	0	0	1540	306	379	4855	103			
Grp Volume(v), veh/h	145	134	0	0	0	169	487	408	443			
Grp Sat Flow(s),veh/h/ln	1177	1810	0	0	0	1846	1828	1681	1829			
Q Serve(g_s), s	8.0	3.5	0.0	0.0	0.0	5.8	18.8	17.0	17.0			
Cycle Q Clear(g_c), s	13.8	3.5	0.0	0.0	0.0	5.8	18.8	17.0	17.0			
Prop In Lane	1.00		0.00	0.00		0.17	0.21		0.06			
Lane Grp Cap(c), veh/h	341	516	0	0	0	526	1076	989	1077			
V/C Ratio(X)	0.43	0.26	0.00	0.00	0.00	0.32	0.45	0.41	0.41			
Avail Cap(c_a), veh/h	341	516	0	0	0	526	1076	989	1077			
HCM Platoon Ratio	1.67	1.67	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	20.9	15.9	0.0	0.0	0.0	22.5	20.8	20.1	20.1			
Incr Delay (d2), s/veh	3.9	1.2	0.0	0.0	0.0	1.6	1.4	1.3	1.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.9	1.9	0.0	0.0	0.0	3.1	9.9	8.2	8.9			
LnGrp Delay(d),s/veh	24.8	17.1	0.0	0.0	0.0	24.1	22.2	21.4	21.3			
LnGrp LOS	C	B				C	C	C	C			
Approach Vol, veh/h		279			169			1338				
Approach Delay, s/veh		21.1			24.1			21.6				
Approach LOS		C			C			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		52.0		28.0				28.0				
Change Period (Y+Rc), s		4.9		* 5.2				* 5.2				
Max Green Setting (Gmax), s		47.1		* 23				* 23				
Max Q Clear Time (g_c+I1), s		20.8		7.8				15.8				
Green Ext Time (p_c), s		1.3		0.3				0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			21.8									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
49: Michigan St & Calvert St

Existing Network - 2014 PM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↗			↖↗↘				
Volume (vph)	55	52	0	0	51	21	30	1153	12	0	0	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	5%	5%	5%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	26.2	26.2			26.2		21.9	21.9				
Total Split (s)	28.0	28.0			28.0		52.0	52.0				
Total Split (%)	35.0%	35.0%			35.0%		65.0%	65.0%				
Yellow Time (s)	3.2	3.2			3.2		3.7	3.7				
All-Red Time (s)	2.0	2.0			2.0		1.2	1.2				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			4.9				

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

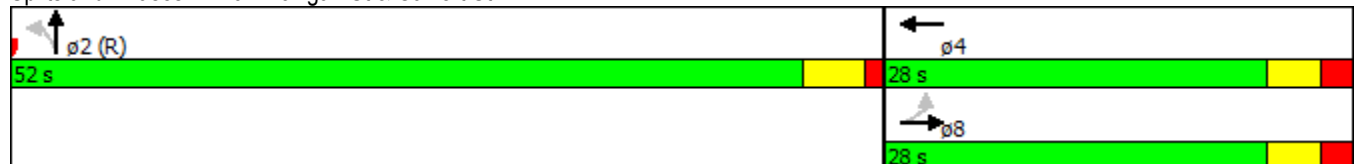
Actuated Cycle Length: 80

Offset: 25.6 (32%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 50

















Control Type: Pretimed

Splits and Phases: 49: Michigan St & Calvert St



HCM 2010 Signalized Intersection Summary
49: Michigan St & Calvert St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	55	52	0	0	51	21	30	1153	12	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1976	1882	0	0	1900	1976	1976	1847	1976			
Adj Flow Rate, veh/h	61	58	0	0	57	5	33	1281	12			
Adj No. of Lanes	0	1	0	0	1	0	0	3	0			
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90			
Percent Heavy Veh, %	5	5	0	0	4	4	0	7	0			
Cap, veh/h	277	243	0	0	491	43	74	3052	30			
Arrive On Green	0.28	0.28	0.00	0.00	0.28	0.28	0.19	0.19	0.19			
Sat Flow, veh/h	733	854	0	0	1722	151	125	5183	50			
Grp Volume(v), veh/h	119	0	0	0	0	62	484	402	440			
Grp Sat Flow(s),veh/h/ln	1587	0	0	0	0	1873	1840	1681	1838			
Q Serve(g_s), s	2.4	0.0	0.0	0.0	0.0	2.0	18.6	16.7	16.7			
Cycle Q Clear(g_c), s	4.4	0.0	0.0	0.0	0.0	2.0	18.6	16.7	16.7			
Prop In Lane	0.51		0.00	0.00		0.08	0.07		0.03			
Lane Grp Cap(c), veh/h	520	0	0	0	0	534	1084	989	1082			
V/C Ratio(X)	0.23	0.00	0.00	0.00	0.00	0.12	0.45	0.41	0.41			
Avail Cap(c_a), veh/h	520	0	0	0	0	534	1084	989	1082			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	21.9	0.0	0.0	0.0	0.0	21.1	20.7	20.0	20.0			
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.0	0.0	0.4	1.3	1.2	1.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	0.0	0.0	1.1	9.9	8.1	8.9			
LnGrp Delay(d),s/veh	23.0	0.0	0.0	0.0	0.0	21.6	22.1	21.2	21.1			
LnGrp LOS	C					C	C	C	C			
Approach Vol, veh/h		119			62			1326				
Approach Delay, s/veh		23.0			21.6			21.5				
Approach LOS		C			C			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		52.0		28.0				28.0				
Change Period (Y+Rc), s		4.9		* 5.2				* 5.2				
Max Green Setting (Gmax), s		47.1		* 23				* 23				
Max Q Clear Time (g_c+I1), s		20.6		4.0				6.4				
Green Ext Time (p_c), s		1.3		0.2				0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			21.6									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
50: Michigan St & Ewing Ave

Existing Network - 2014 PM
2/25/2015

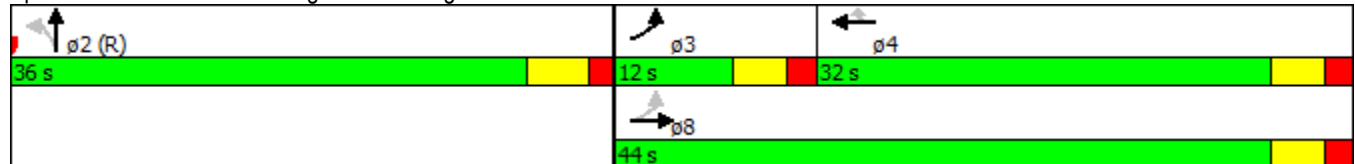


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖	↗		↖↗↘				
Volume (vph)	65	322	0	0	208	100	94	1008	104	0	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	18%	18%	18%	3%	3%	3%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA			NA	Perm	Perm	NA				
Protected Phases	3	8			4			2				
Permitted Phases	8					4	2					
Minimum Split (s)	10.2	22.0			22.0	22.0	22.3	22.3				
Total Split (s)	12.0	44.0			32.0	32.0	36.0	36.0				
Total Split (%)	15.0%	55.0%			40.0%	40.0%	45.0%	45.0%				
Yellow Time (s)	3.2	3.2			3.2	3.2	3.7	3.7				
All-Red Time (s)	1.8	1.8			1.8	1.8	1.6	1.6				
Lost Time Adjust (s)	0.0	0.0			0.0	0.0		0.0				
Total Lost Time (s)	5.0	5.0			5.0	5.0		5.3				
Lead/Lag	Lead				Lag	Lag						
Lead-Lag Optimize?												

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 1.6 (2%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 50: Michigan St & Ewing Ave



HCM 2010 Signalized Intersection Summary
50: Michigan St & Ewing Ave

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	65	322	0	0	208	100	94	1008	104	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1610	1610	0	0	1845	1845	1976	1847	1976			
Adj Flow Rate, veh/h	70	346	0	0	224	35	101	1084	98			
Adj No. of Lanes	1	1	0	0	1	1	0	3	0			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	18	18	0	0	3	3	0	7	0			
Cap, veh/h	461	785	0	0	623	529	150	1716	160			
Arrive On Green	0.17	0.98	0.00	0.00	0.34	0.34	0.13	0.13	0.13			
Sat Flow, veh/h	1533	1610	0	0	1845	1568	391	4473	417			
Grp Volume(v), veh/h	70	346	0	0	224	35	472	395	417			
Grp Sat Flow(s),veh/h/ln	1533	1610	0	0	1845	1568	1827	1681	1773			
Q Serve(g_s), s	2.0	0.8	0.0	0.0	7.3	1.2	19.7	17.8	17.8			
Cycle Q Clear(g_c), s	2.0	0.8	0.0	0.0	7.3	1.2	19.7	17.8	17.8			
Prop In Lane	1.00		0.00	0.00		1.00	0.21		0.24			
Lane Grp Cap(c), veh/h	461	785	0	0	623	529	701	645	680			
V/C Ratio(X)	0.15	0.44	0.00	0.00	0.36	0.07	0.67	0.61	0.61			
Avail Cap(c_a), veh/h	461	785	0	0	623	529	701	645	680			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	12.0	0.5	0.0	0.0	20.0	18.0	30.1	29.3	29.3			
Incr Delay (d2), s/veh	0.7	1.8	0.0	0.0	1.6	0.2	5.1	4.3	4.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	0.9	0.6	0.0	0.0	4.0	0.6	11.0	9.1	9.5			
LnGrp Delay(d),s/veh	12.7	2.3	0.0	0.0	21.6	18.2	35.2	33.6	33.4			
LnGrp LOS	B	A			C	B	D	C	C			
Approach Vol, veh/h		416			259			1283				
Approach Delay, s/veh		4.1			21.1			34.1				
Approach LOS		A			C			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4				8				
Phs Duration (G+Y+Rc), s		36.0	12.0	32.0				44.0				
Change Period (Y+Rc), s		* 5.3	5.0	5.0				5.0				
Max Green Setting (Gmax), s		* 31	7.0	27.0				39.0				
Max Q Clear Time (g_c+I1), s		21.7	4.0	9.3				2.8				
Green Ext Time (p_c), s		1.1	0.0	0.6				0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			26.0									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
51: Michigan St & Donmoyer Ave

Existing Network - 2014 PM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↗			↖↗↘				
Volume (vph)	4	111	0	0	24	72	4	989	35	0	0	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	27.0	27.0			27.0		23.9	23.9				
Total Split (s)	32.0	32.0			32.0		48.0	48.0				
Total Split (%)	40.0%	40.0%			40.0%		60.0%	60.0%				
Yellow Time (s)	3.2	3.2			3.2		3.7	3.7				
All-Red Time (s)	1.8	1.8			1.8		1.2	1.2				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.0			5.0			4.9				

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 33.6 (42%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 55


















Control Type: Pretimed

Splits and Phases: 51: Michigan St & Donmoyer Ave



HCM 2010 Signalized Intersection Summary
51: Michigan St & Donmoyer Ave

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Volume (veh/h)	4	111	0	0	24	72	4	989	35	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1976	1918	0	0	1845	1900	1976	1847	1976			
Adj Flow Rate, veh/h	5	129	0	0	28	28	5	1150	36			
Adj No. of Lanes	0	1	0	0	1	0	0	3	0			
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86			
Percent Heavy Veh, %	3	3	0	0	3	3	0	7	0			
Cap, veh/h	53	639	0	0	286	286	11	2777	90			
Arrive On Green	0.34	0.34	0.00	0.00	0.34	0.34	0.18	0.18	0.18			
Sat Flow, veh/h	19	1892	0	0	848	848	21	5155	167			
Grp Volume(v), veh/h	134	0	0	0	0	56	437	362	392			
Grp Sat Flow(s),veh/h/ln	1911	0	0	0	0	1695	1846	1681	1817			
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	1.8	16.9	15.3	15.3			
Cycle Q Clear(g_c), s	4.0	0.0	0.0	0.0	0.0	1.8	16.9	15.3	15.3			
Prop In Lane	0.04		0.00	0.00		0.50	0.01		0.09			
Lane Grp Cap(c), veh/h	692	0	0	0	0	572	994	905	979			
V/C Ratio(X)	0.19	0.00	0.00	0.00	0.00	0.10	0.44	0.40	0.40			
Avail Cap(c_a), veh/h	692	0	0	0	0	572	994	905	979			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	18.9	0.0	0.0	0.0	0.0	18.2	22.1	21.4	21.4			
Incr Delay (d2), s/veh	0.6	0.0	0.0	0.0	0.0	0.3	1.4	1.3	1.2			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	0.0	0.0	0.9	9.0	7.4	8.0			
LnGrp Delay(d),s/veh	19.5	0.0	0.0	0.0	0.0	18.5	23.5	22.8	22.7			
LnGrp LOS	B					B	C	C	C			
Approach Vol, veh/h		134			56			1191				
Approach Delay, s/veh		19.5			18.5			23.0				
Approach LOS		B			B			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		48.0		32.0				32.0				
Change Period (Y+Rc), s		4.9		5.0				5.0				
Max Green Setting (Gmax), s		43.1		27.0				27.0				
Max Q Clear Time (g_c+I1), s		18.9		3.8				6.0				
Green Ext Time (p_c), s		1.1		0.2				0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				22.5								
HCM 2010 LOS				C								

Lanes, Volumes, Timings
52: Michigan St & Chippewa Ave

Existing Network - 2014 PM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↑↑↑				
Volume (vph)	116	60	0	33	18	17	23	807	54	0	0	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	7%	7%	7%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8			4			2					
Minimum Split (s)	29.0	29.0		29.0	29.0		29.5	29.5				
Total Split (s)	29.6	29.6		29.6	29.6		50.4	50.4				
Total Split (%)	37.0%	37.0%		37.0%	37.0%		63.0%	63.0%				
Yellow Time (s)	3.2	3.2		3.2	3.2		3.7	3.7				
All-Red Time (s)	1.8	1.8		1.8	1.8		1.6	1.6				
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0				
Total Lost Time (s)	5.0	5.0		5.0	5.0			5.3				

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

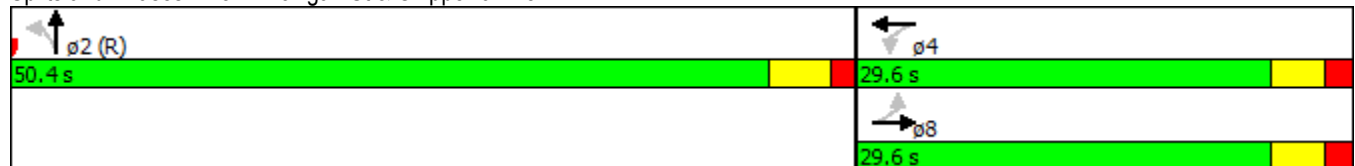
Actuated Cycle Length: 80

Offset: 65.6 (82%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 60




















Control Type: Pretimed

Splits and Phases: 52: Michigan St & Chippewa Ave



HCM 2010 Signalized Intersection Summary
52: Michigan St & Chippewa Ave

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	116	60	0	33	18	17	23	807	54	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1776	1776	1900	1900	1827	1900	1900	1847	1976			
Adj Flow Rate, veh/h	123	64	0	35	19	18	24	859	57			
Adj No. of Lanes	1	1	0	1	1	0	0	3	0			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	7	7	7	4	4	4	0	7	0			
Cap, veh/h	470	546	0	473	266	252	72	2734	187			
Arrive On Green	0.31	0.31	0.00	0.31	0.31	0.31	0.56	0.56	0.56			
Sat Flow, veh/h	1302	1776	0	1359	864	819	128	4849	332			
Grp Volume(v), veh/h	123	64	0	35	0	37	346	287	307			
Grp Sat Flow(s),veh/h/ln	1302	1776	0	1359	0	1682	1840	1681	1788			
Q Serve(g_s), s	5.9	2.1	0.0	1.5	0.0	1.2	8.1	7.2	7.2			
Cycle Q Clear(g_c), s	7.2	2.1	0.0	3.6	0.0	1.2	8.1	7.2	7.2			
Prop In Lane	1.00		0.00	1.00		0.49	0.07		0.19			
Lane Grp Cap(c), veh/h	470	546	0	473	0	517	1037	947	1008			
V/C Ratio(X)	0.26	0.12	0.00	0.07	0.00	0.07	0.33	0.30	0.30			
Avail Cap(c_a), veh/h	470	546	0	473	0	517	1037	947	1008			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	22.1	19.9	0.0	21.2	0.0	19.6	9.4	9.2	9.2			
Incr Delay (d2), s/veh	1.4	0.4	0.0	0.3	0.0	0.3	0.9	0.8	0.8			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.3	1.1	0.0	0.6	0.0	0.6	4.3	3.5	3.7			
LnGrp Delay(d),s/veh	23.5	20.3	0.0	21.5	0.0	19.9	10.2	10.0	10.0			
LnGrp LOS	C	C		C		B	B	B	A			
Approach Vol, veh/h		187			72			940				
Approach Delay, s/veh		22.4			20.7			10.1				
Approach LOS		C			C			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		50.4		29.6				29.6				
Change Period (Y+Rc), s		* 5.3		5.0				5.0				
Max Green Setting (Gmax), s		* 45		24.6				24.6				
Max Q Clear Time (g_c+l1), s		10.1		5.6				9.2				
Green Ext Time (p_c), s		0.9		0.1				0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				12.6								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
53: Michigan St & Ireland Rd

Existing Network - 2014 PM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↕	↗	↖	↕	↗	↖	↕	↗	↖	↕	↗
Volume (vph)	159	413	92	244	371	225	202	519	197	337	719	67
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	10%	10%	10%	3%	3%	3%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA	Perm	Prot	NA	Perm
Protected Phases	3	8		7	4		5	2		1	6	
Permitted Phases	8			4					2			6
Detector Phase	3	8		7	4		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0		8.0	20.0		8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	17.0	29.0		17.0	29.0		17.0	27.0	27.0	17.0	27.0	27.0
Total Split (%)	18.9%	32.2%		18.9%	32.2%		18.9%	30.0%	30.0%	18.9%	30.0%	30.0%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None		None	None		None	Max	Max	None	Max	Max

Intersection Summary

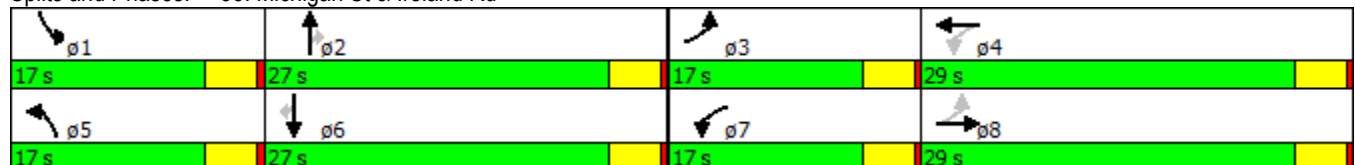
Cycle Length: 90























Actuated Cycle Length: 81.7

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Splits and Phases: 53: Michigan St & Ireland Rd



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	159	413	92	244	371	225	202	519	197	337	719	67
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1727	1900	1845	1845	1900	1776	1776	1847	1776	1776	1847
Adj Flow Rate, veh/h	164	426	72	252	382	121	208	535	28	347	741	0
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	10	10	10	3	3	3	7	7	7	7	7	7
Cap, veh/h	368	641	108	407	688	215	298	1005	468	438	1149	535
Arrive On Green	0.10	0.23	0.23	0.13	0.26	0.26	0.09	0.30	0.30	0.13	0.34	0.00
Sat Flow, veh/h	1645	2813	472	1757	2629	823	3281	3374	1570	3281	3374	1570
Grp Volume(v), veh/h	164	247	251	252	253	250	208	535	28	347	741	0
Grp Sat Flow(s),veh/h/ln	1645	1641	1644	1757	1752	1699	1640	1687	1570	1640	1687	1570
Q Serve(g_s), s	5.7	10.6	10.7	8.2	9.6	9.8	4.8	10.2	1.0	7.9	14.3	0.0
Cycle Q Clear(g_c), s	5.7	10.6	10.7	8.2	9.6	9.8	4.8	10.2	1.0	7.9	14.3	0.0
Prop In Lane	1.00		0.29	1.00		0.48	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	368	374	374	407	459	445	298	1005	468	438	1149	535
V/C Ratio(X)	0.45	0.66	0.67	0.62	0.55	0.56	0.70	0.53	0.06	0.79	0.64	0.00
Avail Cap(c_a), veh/h	481	531	532	468	568	550	553	1005	468	553	1149	535
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.8	27.1	27.2	19.1	24.6	24.7	34.1	22.6	19.4	32.4	21.5	0.0
Incr Delay (d2), s/veh	0.8	2.0	2.1	2.0	1.0	1.1	3.0	2.0	0.2	6.2	2.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	5.0	5.1	4.1	4.8	4.7	2.3	5.0	0.5	3.9	7.1	0.0
LnGrp Delay(d),s/veh	20.7	29.1	29.2	21.0	25.6	25.8	37.0	24.6	19.6	38.6	24.3	0.0
LnGrp LOS	C	C	C	C	C	C	D	C	B	D	C	
Approach Vol, veh/h		662			755			771			1088	
Approach Delay, s/veh		27.1			24.2			27.8			28.9	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.3	27.0	11.7	24.2	11.0	30.3	14.3	21.6				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	13.0	23.0	13.0	25.0	13.0	23.0	13.0	25.0				
Max Q Clear Time (g_c+I1), s	9.9	12.2	7.7	11.8	6.8	16.3	10.2	12.7				
Green Ext Time (p_c), s	0.4	6.0	0.2	5.1	0.3	4.2	0.2	4.9				
Intersection Summary												
HCM 2010 Ctrl Delay			27.2									
HCM 2010 LOS			C									



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗			↖	↗		↑↑↑				
Volume (vph)	67	313	0	0	318	108	58	1371	356	0	0	0
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8					4	2					
Minimum Split (s)	31.2	31.2			31.2	31.2	36.5	36.5				
Total Split (s)	40.0	40.0			40.0	40.0	40.0	40.0				
Total Split (%)	50.0%	50.0%			50.0%	50.0%	50.0%	50.0%				
Yellow Time (s)	3.2	3.2			3.2	3.2	3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.3	2.3				
Lost Time Adjust (s)	-1.0	0.0			0.0	0.0		0.0				
Total Lost Time (s)	4.2	5.2			5.2	5.2		5.5				

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

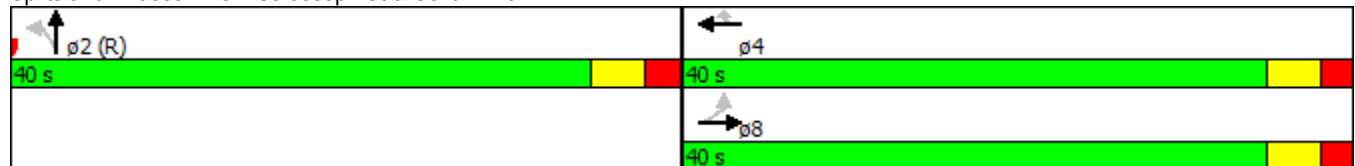
Actuated Cycle Length: 80

Offset: 40.8 (51%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 70



















Control Type: Pretimed

Splits and Phases: 54: St. Joseph St & Colfax Ave



HCM 2010 Signalized Intersection Summary
54: St. Joseph St & Colfax Ave

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	67	313	0	0	318	108	58	1371	356	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1644	1644	0	0	1644	1644	1778	1662	1778			
Adj Flow Rate, veh/h	80	373	0	0	379	108	69	1632	362			
Adj No. of Lanes	1	1	0	0	1	1	0	4	0			
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84			
Percent Heavy Veh, %	4	4	0	0	4	4	0	7	0			
Cap, veh/h	312	715	0	0	715	608	81	2035	465			
Arrive On Green	0.89	0.87	0.00	0.00	0.44	0.44	0.15	0.14	0.14			
Sat Flow, veh/h	799	1644	0	0	1644	1398	187	4718	1078			
Grp Volume(v), veh/h	80	373	0	0	379	108	610	959	494			
Grp Sat Flow(s),veh/h/ln	799	1644	0	0	1644	1398	1653	1429	1472			
Q Serve(g_s), s	4.4	4.3	0.0	0.0	13.5	3.8	28.8	25.9	25.9			
Cycle Q Clear(g_c), s	18.0	4.3	0.0	0.0	13.5	3.8	28.8	25.9	25.9			
Prop In Lane	1.00		0.00	0.00		1.00	0.11		0.73			
Lane Grp Cap(c), veh/h	312	715	0	0	715	608	713	1233	635			
V/C Ratio(X)	0.26	0.52	0.00	0.00	0.53	0.18	0.86	0.78	0.78			
Avail Cap(c_a), veh/h	312	715	0	0	715	608	713	1233	635			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	7.0	3.2	0.0	0.0	16.6	13.8	31.8	30.6	30.6			
Incr Delay (d2), s/veh	2.0	2.7	0.0	0.0	2.8	0.6	12.5	4.9	9.1			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.1	2.2	0.0	0.0	6.7	1.5	15.7	11.1	12.2			
LnGrp Delay(d),s/veh	9.0	5.9	0.0	0.0	19.4	14.5	44.4	35.5	39.8			
LnGrp LOS	A	A			B	B	D	D	D			
Approach Vol, veh/h		453			487			2063				
Approach Delay, s/veh		6.5			18.3			39.1				
Approach LOS		A			B			D				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		40.0		40.0				40.0				
Change Period (Y+Rc), s		5.5		* 5.2				* 5.2				
Max Green Setting (Gmax), s		34.5		* 35				* 35				
Max Q Clear Time (g_c+I1), s		30.8		15.5				20.0				
Green Ext Time (p_c), s		0.7		0.4				0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			30.8									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
55: St. Joseph St & Washington St

Existing Network - 2014 PM
2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖				↗		↖	↑↑↑				
Volume (vph)	197	0	0	0	0	1	79	1497	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Parking (#/hr)	3											
Shared Lane Traffic (%)												
Turn Type	Prot				NA		Perm	NA				
Protected Phases	3				4			2				
Permitted Phases							2					
Detector Phase	3				4		2	2				
Switch Phase												
Minimum Initial (s)	4.0				5.0		5.0	5.0				
Minimum Split (s)	9.0				30.0		22.2	22.2				
Total Split (s)	18.0				30.0		32.0	32.0				
Total Split (%)	22.5%				37.5%		40.0%	40.0%				
Yellow Time (s)	3.0				3.0		3.2	3.2				
All-Red Time (s)	2.0				2.0		2.0	2.0				
Lost Time Adjust (s)	0.0				0.0		0.0	0.0				
Total Lost Time (s)	5.0				5.0		5.2	5.2				
Lead/Lag	Lead				Lag							
Lead-Lag Optimize?	Yes				Yes							
Recall Mode	None				None		C-Max	C-Max				

Intersection Summary



















Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 0 (0%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 55: St. Joseph St & Washington St



HCM 2010 Signalized Intersection Summary
 55: St. Joseph St & Washington St

Existing Network - 2014 PM
 2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								  				
Volume (veh/h)	197	0	0	0	0	1	79	1497	0	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1644	0	0	0	1644	1710	1598	1598	0			
Adj Flow Rate, veh/h	214	0	0	0	0	1	86	1627	0			
Adj No. of Lanes	1	0	0	0	1	0	1	4	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	0	0	0	4	4	7	7	0			
Cap, veh/h	246	0	0	0	0	2	991	3580	0			
Arrive On Green	0.16	0.00	0.00	0.00	0.00	0.00	0.21	0.21	0.00			
Sat Flow, veh/h	1566	214		0	0	1397	1522	5721	0			
Grp Volume(v), veh/h	214	57.2		0	0	1	86	1627	0			
Grp Sat Flow(s),veh/h/ln	1566	E		0	0	1398	1522	1374	0			
Q Serve(g_s), s	10.7			0.0	0.0	0.1	3.6	20.6	0.0			
Cycle Q Clear(g_c), s	10.7			0.0	0.0	0.1	3.6	20.6	0.0			
Prop In Lane	1.00			0.00		1.00	1.00		0.00			
Lane Grp Cap(c), veh/h	246			0	0	2	991	3580	0			
V/C Ratio(X)	0.87			0.00	0.00	0.52	0.09	0.45	0.00			
Avail Cap(c_a), veh/h	254			0	0	437	991	3580	0			
HCM Platoon Ratio	1.00			1.00	1.00	1.00	0.33	0.33	1.00			
Upstream Filter(I)	0.95			0.00	0.00	1.00	0.84	0.84	0.00			
Uniform Delay (d), s/veh	32.9			0.0	0.0	39.9	12.4	19.0	0.0			
Incr Delay (d2), s/veh	24.4			0.0	0.0	108.7	0.1	0.4	0.0			
Initial Q Delay(d3),s/veh	0.0			0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	6.3			0.0	0.0	0.1	1.6	7.9	0.0			
LnGrp Delay(d),s/veh	57.2			0.0	0.0	148.6	12.5	19.4	0.0			
LnGrp LOS	E					F	B	B				
Approach Vol, veh/h					1			1713				
Approach Delay, s/veh					148.6			19.0				
Approach LOS					F			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4								
Phs Duration (G+Y+Rc), s		57.3	17.6	5.1								
Change Period (Y+Rc), s		* 5.2	5.0	5.0								
Max Green Setting (Gmax), s		* 27	13.0	25.0								
Max Q Clear Time (g_c+I1), s		5.6	12.7	2.1								
Green Ext Time (p_c), s		0.1	0.0	0.0								
Intersection Summary												
HCM 2010 Ctrl Delay			23.4									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖			↑	↗		↖	↑	↗		
Volume (vph)	157	8	0	0	31	46	56	1372	44	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Parking (#/hr)	5	5										
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA	Perm	Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8					4	2					
Minimum Split (s)	29.2	29.2			29.2	29.2	30.2	30.2				
Total Split (s)	31.2	31.2			31.2	31.2	48.8	48.8				
Total Split (%)	39.0%	39.0%			39.0%	39.0%	61.0%	61.0%				
Yellow Time (s)	3.2	3.2			3.2	3.2	3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0				
Lost Time Adjust (s)		0.0			0.0	0.0		0.0				
Total Lost Time (s)		5.2			5.2	5.2		5.2				

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

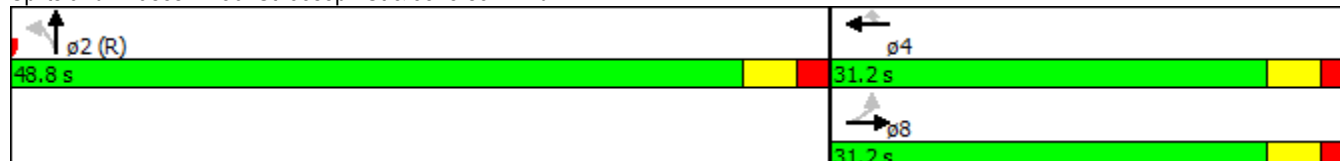
Actuated Cycle Length: 80

Offset: 17.6 (22%), Referenced to phase 2:NBTL, Start of Green

Natural Cycle: 60



















Control Type: Pretimed

Splits and Phases: 56: St. Joseph St & Jefferson Blvd



HCM 2010 Signalized Intersection Summary
56: St. Joseph St & Jefferson Blvd

Existing Network - 2014 PM
2/25/2015

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Volume (veh/h)	157	8	0	0	31	46	56	1372	44	0	0	0	
Number	3	8	18	7	4	14	5	2	12				
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0				
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00				
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Adj Sat Flow, veh/h/ln	1710	1644	0	0	1644	1644	1710	1598	1710				
Adj Flow Rate, veh/h	171	9	0	0	34	29	61	1491	43				
Adj No. of Lanes	0	1	0	0	1	1	0	4	0				
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92				
Percent Heavy Veh, %	4	4	0	0	4	4	0	7	0				
Cap, veh/h	441	21	0	0	534	454	115	3015	89				
Arrive On Green	0.34	0.33	0.00	0.00	0.33	0.33	0.56	0.55	0.55				
Sat Flow, veh/h	1087	64	0	0	1644	1398	211	5531	163				
Grp Volume(v), veh/h	180	0	0	0	34	29	459	723	413				
Grp Sat Flow(s),veh/h/ln	1150	0	0	0	1644	1398	1588	1374	1569				
Q Serve(g_s), s	9.4	0.0	0.0	0.0	1.1	1.1	14.8	13.0	13.0				
Cycle Q Clear(g_c), s	10.6	0.0	0.0	0.0	1.1	1.1	14.8	13.0	13.0				
Prop In Lane	0.95		0.00	0.00		1.00	0.13		0.10				
Lane Grp Cap(c), veh/h	479	0	0	0	534	454	865	1498	855				
V/C Ratio(X)	0.38	0.00	0.00	0.00	0.06	0.06	0.53	0.48	0.48				
Avail Cap(c_a), veh/h	479	0	0	0	534	454	865	1498	855				
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00				
Uniform Delay (d), s/veh	21.7	0.0	0.0	0.0	18.6	18.6	11.6	11.2	11.2				
Incr Delay (d2), s/veh	2.2	0.0	0.0	0.0	0.2	0.3	2.3	1.1	1.9				
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
%ile BackOfQ(50%),veh/ln	3.3	0.0	0.0	0.0	0.6	0.5	6.9	5.2	6.1				
LnGrp Delay(d),s/veh	24.0	0.0	0.0	0.0	18.8	18.9	13.9	12.4	13.2				
LnGrp LOS	C				B	B	B	B	B				
Approach Vol, veh/h		180			63			1595					
Approach Delay, s/veh		24.0			18.9			13.0					
Approach LOS		C			B			B					
Timer	1	2	3	4	5	6	7	8					
Assigned Phs		2		4				8					
Phs Duration (G+Y+Rc), s		48.8		31.2				31.2					
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2					
Max Green Setting (Gmax), s		* 44		* 26				* 26					
Max Q Clear Time (g_c+l1), s		16.8		3.1				12.6					
Green Ext Time (p_c), s		0.6		0.1				0.1					
Intersection Summary													
HCM 2010 Ctrl Delay			14.3										
HCM 2010 LOS			B										
Notes													
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.													

Lanes, Volumes, Timings
 57: St. Joseph St & Wayne St

Existing Network - 2014 PM
 2/25/2015



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔			↔↔↔				
Volume (vph)	62	210	0	0	315	86	21	1375	232	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA				
Protected Phases		8			4			2				
Permitted Phases	8						2					
Minimum Split (s)	31.2	31.2			31.2		29.2	29.2				
Total Split (s)	36.0	36.0			36.0		44.0	44.0				
Total Split (%)	45.0%	45.0%			45.0%		55.0%	55.0%				
Yellow Time (s)	3.2	3.2			3.2		3.2	3.2				
All-Red Time (s)	2.0	2.0			2.0		2.0	2.0				
Lost Time Adjust (s)		0.0			0.0			0.0				
Total Lost Time (s)		5.2			5.2			5.2				

Lead/Lag

Lead-Lag Optimize?

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 80

Offset: 4.8 (6%), Referenced to phase 2:NBTL and 6:, Start of Green

Natural Cycle: 65
















Control Type: Pretimed

Splits and Phases: 57: St. Joseph St & Wayne St



HCM 2010 Signalized Intersection Summary
57: St. Joseph St & Wayne St

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	62	210	0	0	315	86	21	1375	232	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1710	1644	0	0	1644	1710	1710	1598	1710			
Adj Flow Rate, veh/h	67	228	0	0	342	83	23	1495	214			
Adj No. of Lanes	0	2	0	0	2	0	0	4	0			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	4	4	0	0	4	4	0	7	0			
Cap, veh/h	221	766	0	0	963	231	35	2426	357			
Arrive On Green	0.40	0.38	0.00	0.00	0.38	0.38	0.50	0.49	0.49			
Sat Flow, veh/h	403	2064	0	0	2583	599	72	5002	737			
Grp Volume(v), veh/h	142	153	0	0	212	213	508	797	426			
Grp Sat Flow(s),veh/h/ln	971	1421	0	0	1562	1538	1595	1374	1468			
Q Serve(g_s), s	4.4	5.9	0.0	0.0	7.7	7.9	19.3	16.8	16.9			
Cycle Q Clear(g_c), s	12.3	5.9	0.0	0.0	7.7	7.9	19.3	16.8	16.9			
Prop In Lane	0.47		0.00	0.00		0.39	0.05		0.50			
Lane Grp Cap(c), veh/h	452	547	0	0	601	592	773	1333	712			
V/C Ratio(X)	0.31	0.28	0.00	0.00	0.35	0.36	0.66	0.60	0.60			
Avail Cap(c_a), veh/h	452	547	0	0	601	592	773	1333	712			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00			
Uniform Delay (d), s/veh	18.8	17.0	0.0	0.0	17.5	17.6	15.6	14.9	15.0			
Incr Delay (d2), s/veh	1.8	1.3	0.0	0.0	1.6	1.7	4.3	2.0	3.7			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.6	2.5	0.0	0.0	3.6	3.6	9.4	6.7	7.5			
LnGrp Delay(d),s/veh	20.6	18.2	0.0	0.0	19.1	19.3	19.9	16.9	18.6			
LnGrp LOS	C	B			B	B	B	B	B			
Approach Vol, veh/h		295			425			1732				
Approach Delay, s/veh		19.4			19.2			18.2				
Approach LOS		B			B			B				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		44.0		36.0				36.0				
Change Period (Y+Rc), s		* 5.2		* 5.2				* 5.2				
Max Green Setting (Gmax), s		* 39		* 31				* 31				
Max Q Clear Time (g_c+I1), s		21.3		9.9				14.3				
Green Ext Time (p_c), s		0.8		0.3				0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			18.5									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
58: Michigan St/St. Joseph St & Western Ave

Existing Network - 2014 PM
2/25/2015

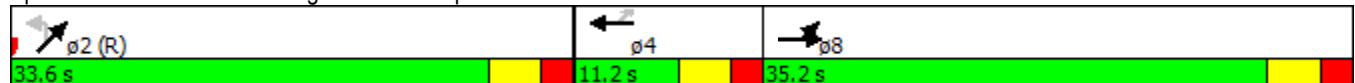


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (vph)	293	59	0	0	56	78	192	1215	8	0	0	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)	40%											
Turn Type	Split	NA			NA	Perm	Perm	NA				
Protected Phases	8	8			4			2				
Permitted Phases						4	2					
Detector Phase	8	8			4	4	2	2				
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0				
Minimum Split (s)	15.0	15.0			10.0	10.0	31.2	31.2				
Total Split (s)	35.2	35.2			11.2	11.2	33.6	33.6				
Total Split (%)	44.0%	44.0%			14.0%	14.0%	42.0%	42.0%				
Yellow Time (s)	3.2	3.2			3.0	3.0	3.2	3.2				
All-Red Time (s)	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				
Total Lost Time (s)	5.2	5.2			5.0	5.0		5.2				
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	Max	Max			Max	Max	C-Max	C-Max				

Intersection Summary

Cycle Length: 80
 Actuated Cycle Length: 80
 Offset: 71.2 (89%), Referenced to phase 2:NETL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 58: Michigan St/St. Joseph St & Western Ave



HCM 2010 Signalized Intersection Summary
 58: Michigan St/St. Joseph St & Western Ave

Existing Network - 2014 PM
 2/25/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Volume (veh/h)	293	59	0	0	56	78	192	1215	8	0	0	0
Number	3	8	18	7	4	14	5	2	12			
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0			
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Adj Sat Flow, veh/h/ln	1644	1644	0	0	1644	1644	1710	1598	1710			
Adj Flow Rate, veh/h	360	0	0	0	60	0	206	1306	8			
Adj No. of Lanes	2	1	0	0	1	1	0	4	0			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93			
Percent Heavy Veh, %	4	4	0	0	4	4	0	7	0			
Cap, veh/h	1174	617	0	0	127	108	265	1819	11			
Arrive On Green	0.38	0.00	0.00	0.00	0.08	0.00	0.37	0.35	0.35			
Sat Flow, veh/h	3132	1644	0	0	1644	1398	746	5124	32			
Grp Volume(v), veh/h	360	0	0	0	60	0	431	690	400			
Grp Sat Flow(s),veh/h/ln	1566	1644	0	0	1644	1398	1561	1374	1593			
Q Serve(g_s), s	6.5	0.0	0.0	0.0	2.8	0.0	19.6	17.3	17.3			
Cycle Q Clear(g_c), s	6.5	0.0	0.0	0.0	2.8	0.0	19.6	17.3	17.3			
Prop In Lane	1.00		0.00	0.00		1.00	0.48		0.02			
Lane Grp Cap(c), veh/h	1174	617	0	0	127	108	554	976	565			
V/C Ratio(X)	0.31	0.00	0.00	0.00	0.47	0.00	0.78	0.71	0.71			
Avail Cap(c_a), veh/h	1174	617	0	0	127	108	554	976	565			
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	1.00	0.00	0.00	0.00	1.00	0.00	0.81	0.81	0.81			
Uniform Delay (d), s/veh	17.7	0.0	0.0	0.0	35.3	0.0	22.8	22.2	22.2			
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.0	12.0	0.0	8.5	3.5	6.0			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	2.9	0.0	0.0	0.0	1.7	0.0	9.7	7.0	8.5			
LnGrp Delay(d),s/veh	18.3	0.0	0.0	0.0	47.3	0.0	31.3	25.7	28.2			
LnGrp LOS	B				D		C	C	C			
Approach Vol, veh/h		360			60			1520				
Approach Delay, s/veh		18.3			47.3			28.0				
Approach LOS		B			D			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4				8				
Phs Duration (G+Y+Rc), s		33.6		11.2				35.2				
Change Period (Y+Rc), s		* 5.2		5.0				5.2				
Max Green Setting (Gmax), s		* 28		6.2				30.0				
Max Q Clear Time (g_c+I1), s		21.6		4.8				8.5				
Green Ext Time (p_c), s		0.5		0.0				1.0				
Intersection Summary												
HCM 2010 Ctrl Delay				26.8								
HCM 2010 LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												

Lanes, Volumes, Timings
59: Chapin St & Lincoln Way

Existing Network - 2014 PM
2/25/2015

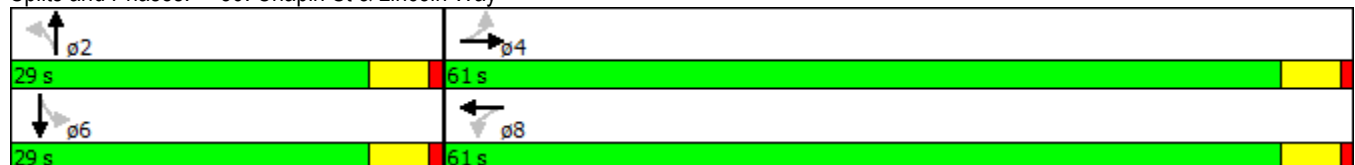


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↗	↘		↗	↘	
Volume (vph)	14	627	57	68	631	2	63	54	35	6	82	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	61.0	61.0		61.0	61.0		29.0	29.0		29.0	29.0	
Total Split (%)	67.8%	67.8%		67.8%	67.8%		32.2%	32.2%		32.2%	32.2%	
Yellow Time (s)	4.0	4.0		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	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	

Intersection Summary



















Cycle Length: 90
Actuated Cycle Length: 56.1
Natural Cycle: 45
Control Type: Semi Act-Uncoord

Splits and Phases: 59: Chapin St & Lincoln Way



HCM 2010 Signalized Intersection Summary
59: Chapin St & Lincoln Way

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	14	627	57	68	631	2	63	54	35	6	82	49
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1810	1900	1900	1810	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	15	682	54	74	686	2	68	59	9	7	89	0
Adj No. of Lanes	0	2	0	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5	4	4	4	4	4	4
Cap, veh/h	71	1410	110	152	1287	4	569	598	91	587	705	0
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.39	0.39	0.39	0.39	0.39	0.00
Sat Flow, veh/h	23	3113	243	181	2840	8	1278	1549	236	1302	1827	0
Grp Volume(v), veh/h	395	0	356	367	0	395	68	0	68	7	89	0
Grp Sat Flow(s),veh/h/ln	1775	0	1604	1385	0	1645	1278	0	1785	1302	1827	0
Q Serve(g_s), s	0.0	0.0	9.7	2.3	0.0	10.8	2.3	0.0	1.5	0.2	2.0	0.0
Cycle Q Clear(g_c), s	9.5	0.0	9.7	12.0	0.0	10.8	4.2	0.0	1.5	1.7	2.0	0.0
Prop In Lane	0.04		0.15	0.20		0.01	1.00		0.13	1.00		0.00
Lane Grp Cap(c), veh/h	864	0	727	697	0	745	569	0	689	587	705	0
V/C Ratio(X)	0.46	0.00	0.49	0.53	0.00	0.53	0.12	0.00	0.10	0.01	0.13	0.00
Avail Cap(c_a), veh/h	1632	0	1445	1310	0	1482	569	0	689	587	705	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	11.9	0.0	12.0	11.9	0.0	12.2	13.7	0.0	12.2	12.7	12.3	0.0
Incr Delay (d2), s/veh	0.4	0.0	0.5	0.6	0.0	0.6	0.4	0.0	0.3	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	4.4	4.7	0.0	5.0	0.9	0.0	0.8	0.1	1.1	0.0
LnGrp Delay(d),s/veh	12.3	0.0	12.5	12.5	0.0	12.8	14.1	0.0	12.5	12.8	12.7	0.0
LnGrp LOS	B		B	B		B	B		B	B	B	
Approach Vol, veh/h		751			762			136				96
Approach Delay, s/veh		12.4			12.7			13.3				12.7
Approach LOS		B			B			B				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		29.0		33.2		29.0		33.2				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		24.0		56.0		24.0		56.0				
Max Q Clear Time (g_c+I1), s		6.2		11.7		4.0		14.0				
Green Ext Time (p_c), s		1.0		14.4		1.0		14.2				
Intersection Summary												
HCM 2010 Ctrl Delay			12.6									
HCM 2010 LOS			B									

Intersection									
Intersection Delay, s/veh	8.9								
Intersection LOS	A								
Movement	WBU	WBL	WBR	NBU	NBT	NBR	SBU	SBL	SBT
Vol, veh/h	0	59	31	0	128	146	0	12	30
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	7	5	5	7	8	8	7	8	8
Mvmt Flow	0	64	34	0	139	159	0	13	33
Number of Lanes	0	1	1	0	1	0	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	8.6	9.1	8
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	29%
Vol Thru, %	47%	0%	0%	71%
Vol Right, %	53%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	274	59	31	42
LT Vol	0	59	0	12
Through Vol	128	0	0	30
RT Vol	146	0	31	0
Lane Flow Rate	298	64	34	46
Geometry Grp	2	7	7	2
Degree of Util (X)	0.334	0.104	0.043	0.059
Departure Headway (Hd)	4.037	5.824	4.616	4.654
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	893	617	777	772
Service Time	2.046	3.546	2.339	2.671
HCM Lane V/C Ratio	0.334	0.104	0.044	0.06
HCM Control Delay	9.1	9.2	7.5	8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1.5	0.3	0.1	0.2

Lanes, Volumes, Timings
61: William St & Lincoln Way

Existing Network - 2014 PM
2/25/2015

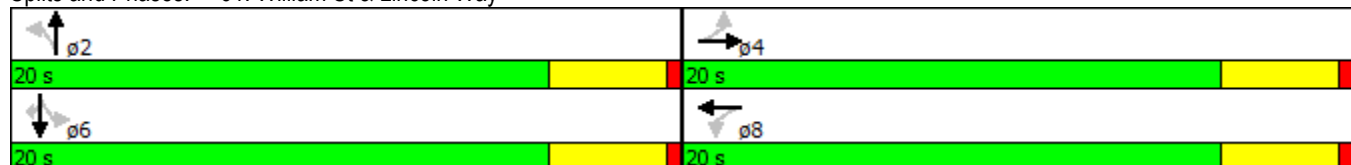


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖		↖	↖	↖
Volume (vph)	12	568	11	43	711	144	14	74	4	106	206	8
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	8%	8%	8%	8%	8%	8%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Detector Phase	4	4		8	8		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (s)	20.0	20.0		20.0	20.0		20.0	20.0		20.0	20.0	20.0
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	50.0%
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	4.0
Lead/Lag												
Lead-Lag Optimize?												
Recall Mode	None	None		None	None		Max	Max		Max	Max	Max

Intersection Summary






















Cycle Length: 40
 Actuated Cycle Length: 39
 Natural Cycle: 40
 Control Type: Semi Act-Uncoord

Splits and Phases: 61: William St & Lincoln Way



HCM 2010 Signalized Intersection Summary
61: William St & Lincoln Way

Existing Network - 2014 PM
2/25/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	12	568	11	43	711	144	14	74	4	106	206	8
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1810	1900	1810	1810	1900	1759	1759	1900	1759	1759	1759
Adj Flow Rate, veh/h	13	617	12	47	773	157	15	80	4	115	224	9
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	5	5	5	5	5	8	8	8	8	8	8
Cap, veh/h	275	1326	26	378	1095	222	535	682	34	655	722	614
Arrive On Green	0.38	0.38	0.38	0.38	0.38	0.38	0.41	0.41	0.41	0.41	0.41	0.41
Sat Flow, veh/h	582	3450	67	771	2848	578	1079	1662	83	1236	1759	1495
Grp Volume(v), veh/h	13	307	322	47	467	463	15	0	84	115	224	9
Grp Sat Flow(s),veh/h/ln	582	1719	1798	771	1719	1707	1079	0	1745	1236	1759	1495
Q Serve(g_s), s	0.8	5.2	5.2	1.9	8.9	8.9	0.4	0.0	1.2	2.5	3.4	0.1
Cycle Q Clear(g_c), s	9.7	5.2	5.2	7.1	8.9	8.9	3.7	0.0	1.2	3.6	3.4	0.1
Prop In Lane	1.00		0.04	1.00		0.34	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	275	661	691	378	661	656	535	0	716	655	722	614
V/C Ratio(X)	0.05	0.47	0.47	0.12	0.71	0.71	0.03	0.00	0.12	0.18	0.31	0.01
Avail Cap(c_a), veh/h	290	705	738	398	705	701	535	0	716	655	722	614
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.2	9.0	9.0	11.7	10.1	10.1	9.0	0.0	7.1	8.2	7.8	6.8
Incr Delay (d2), s/veh	0.1	0.5	0.5	0.1	3.0	3.0	0.1	0.0	0.3	0.6	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.6	2.7	0.4	4.7	4.7	0.1	0.0	0.6	0.9	1.8	0.1
LnGrp Delay(d),s/veh	14.3	9.5	9.5	11.8	13.1	13.2	9.1	0.0	7.5	8.8	8.9	6.9
LnGrp LOS	B	A	A	B	B	B	A		A	A	A	A
Approach Vol, veh/h		642			977			99			348	
Approach Delay, s/veh		9.6			13.1			7.7			8.8	
Approach LOS		A			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		20.0		19.0		20.0		19.0				
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0				
Max Green Setting (Gmax), s		16.0		16.0		16.0		16.0				
Max Q Clear Time (g_c+I1), s		5.7		11.7		5.6		10.9				
Green Ext Time (p_c), s		1.7		3.3		1.7		3.8				
Intersection Summary												
HCM 2010 Ctrl Delay				11.0								
HCM 2010 LOS				B								

Appendix G: Scenario 2 Capacity Analysis

Lanes, Volumes, Timings
1: William St & Marion St

2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	84	64	6	4	31	6	0	64	5	3	309	21
Future Volume (vph)	84	64	6	4	31	6	0	64	5	3	309	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	50		0	150		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		827			455			430			402	
Travel Time (s)		22.6			12.4			11.7			11.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	24.0	24.0		24.0	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	40.0	40.0		40.0	40.0		60.0	60.0		60.0	60.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%		60.0%	60.0%		60.0%	60.0%	
Maximum Green (s)	35.0	35.0		35.0	35.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	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)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 92 (92%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 1: William St & Marion St



HCM 2010 Signalized Intersection Summary
 1: William St & Marion St

2014 2-way
 Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	84	64	6	4	31	6	0	64	5	3	309	21
Future Volume (veh/h)	84	64	6	4	31	6	0	64	5	3	309	21
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1792	1792	1900	1792	1792	1900
Adj Flow Rate, veh/h	91	70	7	4	34	7	0	70	5	3	336	23
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	6	6	6	6	6	6
Cap, veh/h	328	239	22	67	488	95	72	909	65	770	912	62
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.00	1.00	1.00	0.55	0.55	0.55
Sat Flow, veh/h	780	684	64	81	1393	272	980	1654	118	1269	1659	114
Grp Volume(v), veh/h	168	0	0	45	0	0	0	0	75	3	0	359
Grp Sat Flow(s),veh/h/ln	1528	0	0	1746	0	0	980	0	1772	1269	0	1772
Q Serve(g_s), s	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	11.4
Cycle Q Clear(g_c), s	7.7	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.1	0.0	11.4
Prop In Lane	0.54		0.04	0.09		0.16	1.00		0.07	1.00		0.06
Lane Grp Cap(c), veh/h	590	0	0	650	0	0	72	0	974	770	0	975
V/C Ratio(X)	0.28	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.08	0.00	0.00	0.37
Avail Cap(c_a), veh/h	590	0	0	650	0	0	72	0	974	770	0	975
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.5	0.0	0.0	21.7	0.0	0.0	0.0	0.0	0.0	10.1	0.0	12.7
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.4	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.1	0.1	0.0	9.8
LnGrp Delay(d),s/veh	24.8	0.0	0.0	21.9	0.0	0.0	0.0	0.0	0.2	10.2	0.0	13.8
LnGrp LOS	C			C					A	B		B
Approach Vol, veh/h		168			45			75				362
Approach Delay, s/veh		24.8			21.9			0.2				13.7
Approach LOS		C			C			A				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		60.0		40.0		60.0		40.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		55.0		35.0		55.0		35.0				
Max Q Clear Time (g_c+I1), s		2.0		9.7		13.4		3.7				
Green Ext Time (p_c), s		3.2		1.3		3.1		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay				15.6								
HCM 2010 LOS				B								

Lanes, Volumes, Timings
2: William St & Madison St

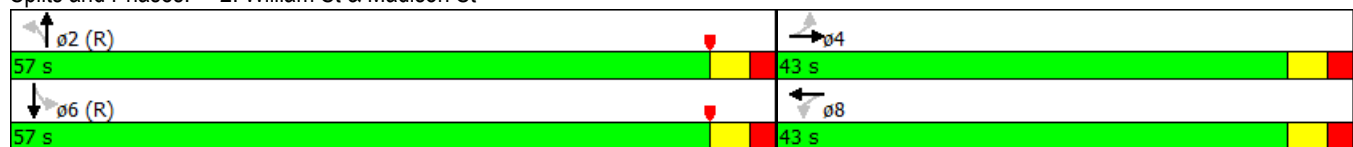
2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	12	6	79	10	9	1	61	7	116	204	0
Future Volume (vph)	0	12	6	79	10	9	1	61	7	116	204	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		0	275		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	50			50			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		884			489			393			430	
Travel Time (s)		24.1			13.3			10.7			11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	24.0	24.0		24.0	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	43.0	43.0		43.0	43.0		57.0	57.0		57.0	57.0	
Total Split (%)	43.0%	43.0%		43.0%	43.0%		57.0%	57.0%		57.0%	57.0%	
Maximum Green (s)	38.0	38.0		38.0	38.0		52.0	52.0		52.0	52.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	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)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary













Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 5 (5%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 2: William St & Madison St



HCM 2010 Signalized Intersection Summary
 2: William St & Madison St

2014 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	0	12	6	79	10	9	1	61	7	116	204	0
Future Volume (veh/h)	0	12	6	79	10	9	1	61	7	116	204	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1792	1792	1900	1792	1792	1900
Adj Flow Rate, veh/h	0	13	7	86	11	10	1	66	8	126	222	0
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	6	6	6	6	6	6
Cap, veh/h	0	425	229	488	62	50	650	816	99	733	932	0
Arrive On Green	0.00	0.38	0.38	0.38	0.38	0.38	1.00	1.00	1.00	1.00	1.00	0.00
Sat Flow, veh/h	0	1118	602	1114	163	132	1111	1569	190	1271	1792	0
Grp Volume(v), veh/h	0	0	20	107	0	0	1	0	74	126	222	0
Grp Sat Flow(s),veh/h/ln	0	0	1721	1409	0	0	1111	0	1759	1271	1792	0
Q Serve(g_s), s	0.0	0.0	0.7	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.7	5.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.00		0.35	0.80		0.09	1.00		0.11	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	654	600	0	0	650	0	915	733	932	0
V/C Ratio(X)	0.00	0.00	0.03	0.18	0.00	0.00	0.00	0.00	0.08	0.17	0.24	0.00
Avail Cap(c_a), veh/h	0	0	654	600	0	0	650	0	915	733	932	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	19.4	20.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.6	0.0	0.0	0.0	0.0	0.2	0.5	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.6	3.8	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.0
LnGrp Delay(d),s/veh	0.0	0.0	19.5	21.5	0.0	0.0	0.0	0.0	0.2	0.5	0.6	0.0
LnGrp LOS			B	C			A		A	A	A	
Approach Vol, veh/h		20			107			75			348	
Approach Delay, s/veh		19.5			21.5			0.2			0.6	
Approach LOS		B			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		57.0		43.0		57.0		43.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		52.0		38.0		52.0		38.0				
Max Q Clear Time (g_c+I1), s		2.0		2.7		2.0		7.2				
Green Ext Time (p_c), s		2.5		0.8		2.5		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			5.3									
HCM 2010 LOS			A									

Lanes, Volumes, Timings
3: William St & Washington St

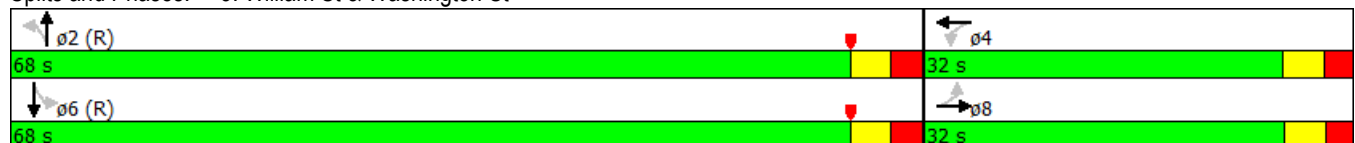
2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	22	23	11	18	2	16	198	21	9	259	36
Future Volume (vph)	25	22	23	11	18	2	16	198	21	9	259	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	400		0	165		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		460			680			497			495	
Travel Time (s)		12.5			18.5			13.6			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Parking (#/hr)								5	5		5	5
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	26.2	26.2		26.3	26.3		26.5	26.5		26.5	26.5	
Total Split (s)	32.0	32.0		32.0	32.0		68.0	68.0		68.0	68.0	
Total Split (%)	32.0%	32.0%		32.0%	32.0%		68.0%	68.0%		68.0%	68.0%	
Maximum Green (s)	26.8	26.8		26.7	26.7		62.5	62.5		62.5	62.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.2	2.2		2.3	2.3		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.2	5.2		5.3	5.3		5.5	5.5		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		14.0	14.0		14.0	14.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 2 (2%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 3: William St & Washington St



HCM 2010 Signalized Intersection Summary
 3: William St & Washington St

2014 2-way
 Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	22	23	11	18	2	16	198	21	9	259	36
Future Volume (veh/h)	25	22	23	11	18	2	16	198	21	9	259	36
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1792	1792	1900	1792	1792	1900
Adj Flow Rate, veh/h	27	24	25	12	20	2	17	215	23	10	282	39
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	6	6	6	6	6	6
Cap, veh/h	423	220	229	397	438	44	605	870	93	755	842	116
Arrive On Green	0.27	0.27	0.27	0.27	0.27	0.27	1.00	1.00	1.00	0.62	0.62	0.62
Sat Flow, veh/h	1357	821	855	1325	1635	163	1015	1393	149	1095	1349	187
Grp Volume(v), veh/h	27	0	49	12	0	22	17	0	238	10	0	321
Grp Sat Flow(s),veh/h/ln	1357	0	1676	1325	0	1798	1015	0	1542	1095	0	1535
Q Serve(g_s), s	1.5	0.0	2.2	0.7	0.0	0.9	0.3	0.0	0.0	0.3	0.0	9.9
Cycle Q Clear(g_c), s	2.4	0.0	2.2	2.9	0.0	0.9	10.2	0.0	0.0	0.3	0.0	9.9
Prop In Lane	1.00		0.51	1.00		0.09	1.00		0.10	1.00		0.12
Lane Grp Cap(c), veh/h	423	0	449	397	0	481	605	0	963	755	0	959
V/C Ratio(X)	0.06	0.00	0.11	0.03	0.00	0.05	0.03	0.00	0.25	0.01	0.00	0.33
Avail Cap(c_a), veh/h	423	0	449	397	0	481	605	0	963	755	0	959
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.1	0.0	27.6	28.7	0.0	27.2	0.8	0.0	0.0	7.1	0.0	8.9
Incr Delay (d2), s/veh	0.3	0.0	0.5	0.1	0.0	0.2	0.1	0.0	0.6	0.0	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	0.0	1.9	0.5	0.0	0.9	0.2	0.0	0.3	0.2	0.0	7.9
LnGrp Delay(d),s/veh	28.4	0.0	28.1	28.9	0.0	27.3	0.9	0.0	0.6	7.2	0.0	9.9
LnGrp LOS	C		C	C		C	A		A	A		A
Approach Vol, veh/h		76			34			255			331	
Approach Delay, s/veh		28.2			27.9			0.6			9.8	
Approach LOS		C			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		68.0		32.1		68.0		32.1				
Change Period (Y+Rc), s		5.5		* 5.3		5.5		* 5.3				
Max Green Setting (Gmax), s		62.5		* 27		62.5		* 27				
Max Q Clear Time (g_c+I1), s		12.2		4.9		11.9		4.4				
Green Ext Time (p_c), s		4.3		0.4		4.3		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			9.3									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
4: William St & Western Ave

2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	136	323	0	0	253	69	0	0	0	85	1	76
Future Volume (vph)	136	323	0	0	253	69	0	0	0	85	1	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	285		0	50		0	225		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30				30
Link Distance (ft)		560			680			208				490
Travel Time (s)		15.3			18.5			4.7				11.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm			Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2			6		
Minimum Split (s)	26.2	26.2		26.2	26.2		26.5	26.5		29.5		29.5
Total Split (s)	67.0	67.0		67.0	67.0		33.0	33.0		33.0		33.0
Total Split (%)	67.0%	67.0%		67.0%	67.0%		33.0%	33.0%		33.0%		33.0%
Maximum Green (s)	61.8	61.8		61.8	61.8		27.5	27.5		27.5		27.5
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		3.0
All-Red Time (s)	2.2	2.2		2.2	2.2		2.5	2.5		2.5		2.5
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0		0.0
Total Lost Time (s)		5.2		5.2	5.2		5.5	5.5		5.5		5.5
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		14.0	14.0		17.0		17.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0		0

Intersection Summary




















Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 49 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 4: William St & Western Ave



















HCM 2010 Signalized Intersection Summary
4: William St & Western Ave

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	323	0	0	253	69	0	0	0	85	1	76
Future Volume (veh/h)	136	323	0	0	253	69	0	0	0	85	1	76
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1792	1900	1792	1792	1900	1792	1792	1900	1792	1792	1900
Adj Flow Rate, veh/h	148	351	0	0	275	75	0	0	0	92	1	83
Adj No. of Lanes	0	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	291	664	0	72	839	229	72	493	0	541	5	415
Arrive On Green	0.62	0.62	0.00	0.00	1.00	1.00	0.00	0.00	0.00	0.28	0.28	0.28
Sat Flow, veh/h	395	1075	0	987	1357	370	1259	1792	0	1707	18	1508
Grp Volume(v), veh/h	499	0	0	0	0	350	0	0	0	92	0	84
Grp Sat Flow(s),veh/h/ln	1471	0	0	987	0	1727	1259	1792	0	1707	0	1526
Q Serve(g_s), s	13.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	4.2
Cycle Q Clear(g_c), s	18.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	4.2
Prop In Lane	0.30		0.00	1.00		0.21	1.00		0.00	1.00		0.99
Lane Grp Cap(c), veh/h	955	0	0	72	0	1067	72	493	0	541	0	420
V/C Ratio(X)	0.52	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.00	0.17	0.00	0.20
Avail Cap(c_a), veh/h	955	0	0	72	0	1067	72	493	0	541	0	420
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.8	0.0	27.8
Incr Delay (d2), s/veh	2.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.7	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	3.7	0.0	3.4
LnGrp Delay(d),s/veh	12.6	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	28.5	0.0	28.9
LnGrp LOS	B					A				C		C
Approach Vol, veh/h		499			350			0				176
Approach Delay, s/veh		12.6			0.8			0.0				28.7
Approach LOS		B			A							C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		33.0		67.0		33.0		67.0				
Change Period (Y+Rc), s		5.5		* 5.2		5.5		* 5.2				
Max Green Setting (Gmax), s		27.5		* 62		27.5		* 62				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				11.3								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
5: Lafayette Blvd & Marion St

2014 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	25	11	4	5	1	1	161	3	1	144	43
Future Volume (vph)	47	25	11	4	5	1	1	161	3	1	144	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	50			50			25			25		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		455			425			515			490	
Travel Time (s)		12.4			11.6			11.7			11.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	9%	9%	9%	9%	9%	9%
Parking (#/hr)		3	3		5	5		5	5		5	5
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

















Intersection Summary

Area Type: CBD

Control Type: Unsignalized

Lanes, Volumes, Timings
6: Lafayette Blvd & Madison St

2014 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	20	112	16	92	2	6	162	20	1	159	0
Future Volume (vph)	2	20	112	16	92	2	6	162	20	1	159	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	100		0	100		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		489			434			485			515	
Travel Time (s)		13.3			11.8			11.0			11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	9%	9%	9%	9%	9%	9%
Parking (#/hr)						5					5	5
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: CBD
Control Type: Unsignalized

Lanes, Volumes, Timings
7: Lafayette Blvd & LaSalle Ave#

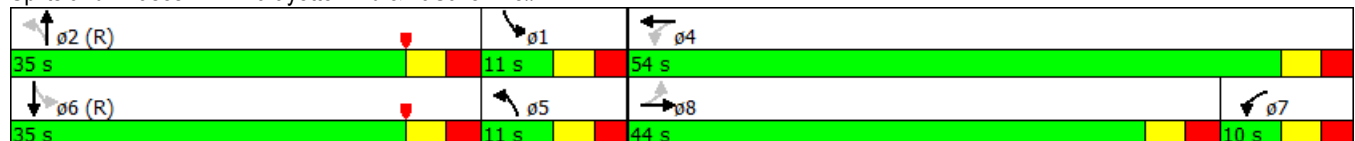
2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	546	254	86	546	42	88	151	72	104	179	1
Future Volume (vph)	5	546	254	86	546	42	88	151	72	104	179	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	11	11	11
Storage Length (ft)	0		0	200		0	190		0	250		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	25			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		236			440			495			485	
Travel Time (s)		6.4			12.0			11.3			11.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	9%	9%	9%	9%	9%	9%
Parking (#/hr)								5	5		0	0
Shared Lane Traffic (%)												
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	28.6	28.6		9.5	28.3		9.6	28.6		9.6	29.6	
Total Split (s)	44.0	44.0		10.0	54.0		11.0	35.0		11.0	35.0	
Total Split (%)	44.0%	44.0%		10.0%	54.0%		11.0%	35.0%		11.0%	35.0%	
Maximum Green (s)	38.4	38.4		4.5	48.5		5.4	29.4		5.4	29.4	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.5	2.5		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.6		5.5	5.5		5.6	5.6		5.6	5.6	
Lead/Lag	Lead	Lead		Lag			Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	
Walk Time (s)	7.0	7.0			7.0			7.0			7.0	
Flash Dont Walk (s)	16.0	16.0			13.0			16.0			17.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	

Intersection Summary





















Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 84 (84%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Pretimed

Splits and Phases: 7: Lafayette Blvd & LaSalle Ave#



HCM 2010 Signalized Intersection Summary
7: Lafayette Blvd & LaSalle Ave#

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	546	254	86	546	42	88	151	72	104	179	1
Future Volume (veh/h)	5	546	254	86	546	42	88	151	72	104	179	1
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1710	1613	1710	1613	1613	1710	1569	1569	1710	1569	1569	1710
Adj Flow Rate, veh/h	5	593	276	93	593	46	96	164	78	113	195	1
Adj No. of Lanes	0	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	9	9	9	9	9	9
Cap, veh/h	38	764	353	196	1398	108	332	259	123	270	413	2
Arrive On Green	0.39	0.38	0.38	0.01	0.16	0.16	0.04	0.20	0.20	0.05	0.29	0.29
Sat Flow, veh/h	4	1989	920	1536	2883	223	1494	880	419	1494	1403	7
Grp Volume(v), veh/h	482	0	392	93	315	324	96	0	242	113	0	196
Grp Sat Flow(s),veh/h/ln	1607	0	1306	1536	1533	1574	1494	0	1299	1494	0	1411
Q Serve(g_s), s	0.0	0.0	26.4	0.0	18.5	18.6	0.0	0.0	17.1	0.0	0.0	11.4
Cycle Q Clear(g_c), s	26.0	0.0	26.4	0.0	18.5	18.6	0.0	0.0	17.1	0.0	0.0	11.4
Prop In Lane	0.01		0.70	1.00		0.14	1.00		0.32	1.00		0.01
Lane Grp Cap(c), veh/h	670	0	501	196	743	763	332	0	382	270	0	415
V/C Ratio(X)	0.72	0.00	0.78	0.47	0.42	0.42	0.29	0.00	0.63	0.42	0.00	0.47
Avail Cap(c_a), veh/h	670	0	501	196	743	763	332	0	382	270	0	415
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.0	0.0	27.1	44.1	29.4	29.4	33.1	0.0	35.2	38.4	0.0	28.9
Incr Delay (d2), s/veh	6.6	0.0	11.5	8.0	1.8	1.7	2.2	0.0	7.8	4.7	0.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.3	0.0	16.5	5.3	12.9	13.2	4.5	0.0	11.3	5.9	0.0	8.5
LnGrp Delay(d),s/veh	33.5	0.0	38.6	52.1	31.2	31.2	35.3	0.0	43.0	43.1	0.0	32.8
LnGrp LOS	C		D	D	C	C	D		D	D		C
Approach Vol, veh/h		874			732			338				309
Approach Delay, s/veh		35.8			33.8			40.8				36.6
Approach LOS		D			C			D				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	35.0		54.0	11.0	35.0	10.0	44.0				
Change Period (Y+Rc), s	5.6	5.6		5.5	5.6	5.6	5.5	5.6				
Max Green Setting (Gmax), s	5.4	29.4		48.5	5.4	29.4	4.5	38.4				
Max Q Clear Time (g_c+I1), s	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			36.0									
HCM 2010 LOS			D									

Lanes, Volumes, Timings
8: Lafayette Blvd & Colfax Ave

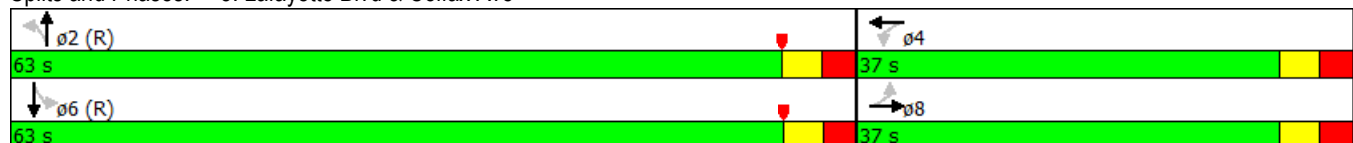
2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	250	36	60	101	24	16	272	14	5	495	18
Future Volume (vph)	21	250	36	60	101	24	16	272	14	5	495	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	200		0	190		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		682			438			495			495	
Travel Time (s)		18.6			11.9			11.3			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	9%	9%	9%	9%	9%	9%
Parking (#/hr)					5	5		5	5		5	5
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	28.6	28.6		28.6	28.6		28.6	28.6		25.5	25.5	
Total Split (s)	37.0	37.0		37.0	37.0		63.0	63.0		63.0	63.0	
Total Split (%)	37.0%	37.0%		37.0%	37.0%		63.0%	63.0%		63.0%	63.0%	
Maximum Green (s)	31.4	31.4		31.4	31.4		57.4	57.4		57.5	57.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	2.6		2.5	2.5	
Lost Time Adjust (s)		0.0		0.0	0.0		-1.0	0.0		0.0	0.0	
Total Lost Time (s)		5.6		5.6	5.6		4.6	5.6		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		16.0	16.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary





















Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 92 (92%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 8: Lafayette Blvd & Colfax Ave



HCM 2010 Signalized Intersection Summary
8: Lafayette Blvd & Colfax Ave

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	250	36	60	101	24	16	272	14	5	495	18
Future Volume (veh/h)	21	250	36	60	101	24	16	272	14	5	495	18
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1710	1598	1710	1598	1598	1710	1569	1569	1710	1569	1569	1710
Adj Flow Rate, veh/h	23	272	39	65	110	26	17	296	15	5	538	20
Adj No. of Lanes	0	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	7	7	7	7	7	7	9	9	9	9	9	9
Cap, veh/h	56	409	56	253	343	81	489	744	38	587	755	28
Arrive On Green	0.31	0.31	0.31	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	56	1302	180	913	1094	259	714	1295	66	896	1315	49
Grp Volume(v), veh/h	334	0	0	65	0	136	17	0	311	5	0	558
Grp Sat Flow(s),veh/h/ln	1539	0	0	913	0	1353	714	0	1361	896	0	1364
Q Serve(g_s), s	4.4	0.0	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	18.8	0.0	0.0	10.8	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.07		0.12	1.00		0.19	1.00		0.05	1.00		0.04
Lane Grp Cap(c), veh/h	521	0	0	253	0	424	489	0	782	587	0	784
V/C Ratio(X)	0.64	0.00	0.00	0.26	0.00	0.32	0.03	0.00	0.40	0.01	0.00	0.71
Avail Cap(c_a), veh/h	521	0	0	253	0	424	489	0	782	587	0	784
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.0	0.0	0.0	14.8	0.0	13.7	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.9	0.0	0.0	2.4	0.0	2.0	0.1	0.0	1.5	0.0	0.0	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.8	0.0	0.0	2.1	0.0	3.5	0.0	0.0	0.6	0.0	0.0	2.1
LnGrp Delay(d),s/veh	35.9	0.0	0.0	17.3	0.0	15.7	0.1	0.0	1.5	0.0	0.0	5.5
LnGrp LOS	D			B		B	A		A	A		A
Approach Vol, veh/h		334			201			328			563	
Approach Delay, s/veh		35.9			16.2			1.4			5.4	
Approach LOS		D			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		63.1		37.0		63.1		37.0				
Change Period (Y+Rc), s		5.6		5.6		* 5.6		5.6				
Max Green Setting (Gmax), s		57.4		31.4		* 58		31.4				
Max Q Clear Time (g_c+I1), s		2.0		12.8		2.0		20.8				
Green Ext Time (p_c), s		4.5		2.3		4.5		1.9				

Intersection Summary

HCM 2010 Ctrl Delay	13.2
HCM 2010 LOS	B

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
 9: Lafayette Blvd & Washington St

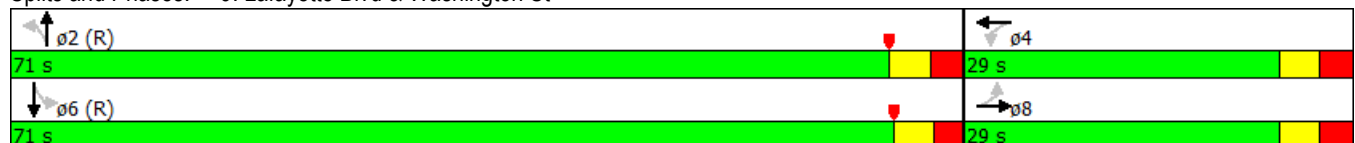
2014 2-way
 Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	46	46	4	12	15	17	289	27	1	514	39
Future Volume (vph)	3	46	46	4	12	15	17	289	27	1	514	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	75		0	245		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		680			438			495			495	
Travel Time (s)		18.5			11.9			11.3			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	9%	9%	9%	9%	9%	9%
Parking (#/hr)					0	0		10	10		0	0
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	28.6	28.6		28.6	28.6		28.6	28.6		25.3	25.3	
Total Split (s)	29.0	29.0		29.0	29.0		71.0	71.0		71.0	71.0	
Total Split (%)	29.0%	29.0%		29.0%	29.0%		71.0%	71.0%		71.0%	71.0%	
Maximum Green (s)	23.4	23.4		23.4	23.4		65.4	65.4		65.7	65.7	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	2.6		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6		5.6	5.6		5.3	5.3	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		16.0	16.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 9: Lafayette Blvd & Washington St



HCM 2010 Signalized Intersection Summary
 9: Lafayette Blvd & Washington St

2014 2-way
 Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	46	46	4	12	15	17	289	27	1	514	39
Future Volume (veh/h)	3	46	46	4	12	15	17	289	27	1	514	39
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.85	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1569	1569	1710	1569	1569	1710
Adj Flow Rate, veh/h	3	50	50	4	13	16	18	314	29	1	559	42
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	9	9	9	9	9	9
Cap, veh/h	335	176	176	276	141	174	521	788	73	642	850	64
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1214	755	755	1138	605	744	686	1203	111	870	1297	97
Grp Volume(v), veh/h	3	0	100	4	0	29	18	0	343	1	0	601
Grp Sat Flow(s),veh/h/ln	1214	0	1511	1138	0	1349	686	0	1314	870	0	1395
Q Serve(g_s), s	0.2	0.0	5.5	0.3	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.9	0.0	5.5	5.7	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.50	1.00		0.55	1.00		0.08	1.00		0.07
Lane Grp Cap(c), veh/h	335	0	352	276	0	315	521	0	861	642	0	914
V/C Ratio(X)	0.01	0.00	0.28	0.01	0.00	0.09	0.03	0.00	0.40	0.00	0.00	0.66
Avail Cap(c_a), veh/h	335	0	352	276	0	315	521	0	861	642	0	914
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.9	0.0	31.6	33.9	0.0	30.1	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	2.0	0.1	0.0	0.6	0.1	0.0	1.4	0.0	0.0	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	4.5	0.2	0.0	1.2	0.0	0.0	0.6	0.0	0.0	1.7
LnGrp Delay(d),s/veh	30.9	0.0	33.6	34.0	0.0	30.7	0.1	0.0	1.4	0.0	0.0	3.7
LnGrp LOS	C		C	C		C	A		A	A		A
Approach Vol, veh/h		103			33			361			602	
Approach Delay, s/veh		33.5			31.1			1.3			3.7	
Approach LOS		C			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		71.3		29.0		71.3		29.0				
Change Period (Y+Rc), s		5.6		5.6		* 5.6		5.6				
Max Green Setting (Gmax), s		65.4		23.4		* 66		23.4				
Max Q Clear Time (g_c+I1), s		2.0		7.7		2.0		7.5				
Green Ext Time (p_c), s		5.0		0.4		5.0		0.4				

Intersection Summary		
HCM 2010 Ctrl Delay		6.5
HCM 2010 LOS		A

Notes
 * HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
10: Lafayette Blvd & Jefferson Blvd

2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	43	33	3	29	31	0	300	25	16	548	9
Future Volume (vph)	4	43	33	3	29	31	0	300	25	16	548	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	200		0	125		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		675			430			474			495	
Travel Time (s)		18.4			11.7			10.8			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	9%	9%	9%	9%	9%	9%
Parking (#/hr)		10	10		10	10		10	10		5	5
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	26.6	26.6		28.5	28.5		28.6	28.6		28.5	28.5	
Total Split (s)	28.8	28.8		28.8	28.8		71.2	71.2		71.2	71.2	
Total Split (%)	28.8%	28.8%		28.8%	28.8%		71.2%	71.2%		71.2%	71.2%	
Maximum Green (s)	23.2	23.2		23.3	23.3		65.6	65.6		65.7	65.7	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.5	2.5		2.6	2.6		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.6			5.5		5.6	5.6		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		16.0	16.0		16.0	16.0		16.0	16.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary













Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 96 (96%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 10: Lafayette Blvd & Jefferson Blvd
























HCM 2010 Signalized Intersection Summary
 10: Lafayette Blvd & Jefferson Blvd

2014 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	4	43	33	3	29	31	0	300	25	16	548	9
Future Volume (veh/h)	4	43	33	3	29	31	0	300	25	16	548	9
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1710	1644	1710	1710	1644	1710	1569	1569	1710	1569	1569	1710
Adj Flow Rate, veh/h	4	47	36	3	32	34	0	326	27	17	596	10
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	9	9	9	9	9	9
Cap, veh/h	41	173	125	41	148	147	72	797	66	637	883	15
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	16	743	536	14	636	631	683	1215	101	862	1346	23
Grp Volume(v), veh/h	87	0	0	69	0	0	0	0	353	17	0	606
Grp Sat Flow(s),veh/h/ln	1296	0	0	1280	0	0	683	0	1316	862	0	1369
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.5	0.0	0.0	4.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.05		0.41	0.04		0.49	1.00		0.08	1.00		0.02
Lane Grp Cap(c), veh/h	339	0	0	335	0	0	72	0	863	637	0	897
V/C Ratio(X)	0.26	0.00	0.00	0.21	0.00	0.00	0.00	0.00	0.41	0.03	0.00	0.68
Avail Cap(c_a), veh/h	339	0	0	335	0	0	72	0	863	637	0	897
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.6	0.0	0.0	31.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.8	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.4	0.1	0.0	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.9	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.8
LnGrp Delay(d),s/veh	33.4	0.0	0.0	32.6	0.0	0.0	0.0	0.0	1.4	0.1	0.0	4.1
LnGrp LOS	C			C					A	A		A
Approach Vol, veh/h		87			69			353				623
Approach Delay, s/veh		33.4			32.6			1.4				3.9
Approach LOS		C			C			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		71.3		28.9		71.3		28.9				
Change Period (Y+Rc), s		5.6		* 5.6		* 5.6		5.6				
Max Green Setting (Gmax), s		65.6		* 23		* 66		23.2				
Max Q Clear Time (g_c+I1), s		2.0		6.4		2.0		7.5				
Green Ext Time (p_c), s		5.0		0.5		5.0		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				7.2								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
11: Lafayette Blvd & Wayne St

2014 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	9	1	14	39	8	0	322	34	9	549	14
Future Volume (vph)	0	9	1	14	39	8	0	322	34	9	549	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	150		200	180		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		680			435			491			474	
Travel Time (s)		18.5			11.9			11.2			10.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	9%	9%	9%	9%	9%	9%
Parking (#/hr)		0	0		0	0		0	0		0	0
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: CBD

Control Type: Unsignalized

Lanes, Volumes, Timings
12: Lafayette Blvd & Western Ave

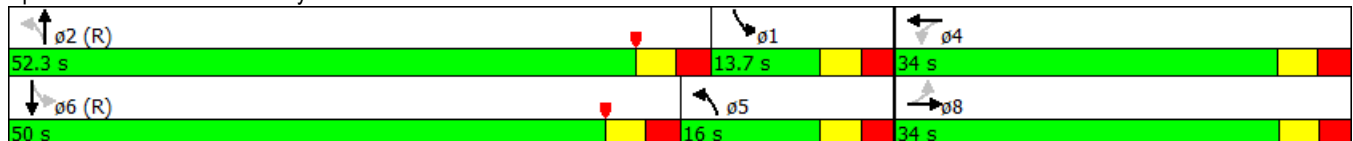
2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	313	13	11	136	11	198	280	0	28	452	18
Future Volume (vph)	68	313	13	11	136	11	198	280	0	28	452	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	285		0	200		0	180		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		680			435			520			491	
Travel Time (s)		18.5			11.9			11.8			11.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	9%	9%	9%	9%	9%	9%
Parking (#/hr)		0	0		0	0		0	0		0	0
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	28.5	28.5		29.6	29.6		13.6	28.6		13.6	28.6	
Total Split (s)	34.0	34.0		34.0	34.0		16.0	52.3		13.7	50.0	
Total Split (%)	34.0%	34.0%		34.0%	34.0%		16.0%	52.3%		13.7%	50.0%	
Maximum Green (s)	28.5	28.5		28.4	28.4		10.4	46.7		8.1	44.4	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.6	2.6		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.6	5.6		5.6	5.6		5.6	5.6	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	16.0	16.0		17.0	17.0			16.0			16.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	

Intersection Summary






















Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 66 (66%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Pretimed

Splits and Phases: 12: Lafayette Blvd & Western Ave



HCM 2010 Signalized Intersection Summary
 12: Lafayette Blvd & Western Ave

2014 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	313	13	11	136	11	198	280	0	28	452	18
Future Volume (veh/h)	68	313	13	11	136	11	198	280	0	28	452	18
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	0.90	1.00	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1743	1743	1900	1743	1743	1900
Adj Flow Rate, veh/h	74	340	14	12	148	12	215	304	0	30	491	20
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	9	9	9	9	9	9
Cap, veh/h	343	438	18	152	419	34	414	732	0	630	664	27
Arrive On Green	0.28	0.28	0.28	0.57	0.57	0.57	0.21	0.93	0.00	0.11	0.59	0.59
Sat Flow, veh/h	1175	1539	63	984	1473	119	1660	1569	0	1660	1497	61
Grp Volume(v), veh/h	74	0	354	12	0	160	215	304	0	30	0	511
Grp Sat Flow(s),veh/h/ln	1175	0	1602	984	0	1592	1660	1569	0	1660	0	1558
Q Serve(g_s), s	5.2	0.0	20.3	1.0	0.0	5.4	0.0	2.1	0.0	0.0	0.0	23.9
Cycle Q Clear(g_c), s	10.6	0.0	20.3	21.4	0.0	5.4	0.0	2.1	0.0	0.0	0.0	23.9
Prop In Lane	1.00		0.04	1.00		0.08	1.00		0.00	1.00		0.04
Lane Grp Cap(c), veh/h	343	0	456	152	0	453	414	732	0	630	0	691
V/C Ratio(X)	0.22	0.00	0.78	0.08	0.00	0.35	0.52	0.42	0.00	0.05	0.00	0.74
Avail Cap(c_a), veh/h	343	0	456	152	0	453	414	732	0	630	0	691
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.6	0.0	32.9	28.7	0.0	16.6	27.4	1.9	0.0	12.3	0.0	16.3
Incr Delay (d2), s/veh	1.4	0.0	12.2	1.0	0.0	2.2	4.6	1.7	0.0	0.1	0.0	7.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.3	0.0	15.8	0.6	0.0	4.6	9.0	1.8	0.0	0.8	0.0	16.9
LnGrp Delay(d),s/veh	33.1	0.0	45.1	29.7	0.0	18.7	32.0	3.6	0.0	12.5	0.0	23.3
LnGrp LOS	C		D	C		B	C	A		B		C
Approach Vol, veh/h		428			172			519			541	
Approach Delay, s/veh		43.0			19.5			15.4			22.7	
Approach LOS		D			B			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.7	52.3		34.1	16.0	50.0		34.1				
Change Period (Y+Rc), s	5.6	5.6		5.6	5.6	5.6		* 5.6				
Max Green Setting (Gmax), s	8.1	46.7		28.4	10.4	44.4		* 29				
Max Q Clear Time (g_c+I1), s	0.0	0.0		0.0	0.0	0.0		0.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				25.3								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
13: Lafayette Blvd & Monroe St

2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	48	0	276	0	202	223	167	308	0
Future Volume (vph)	0	0	0	48	0	276	0	202	223	167	308	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	150		0	200		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	25			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		190			440			490			520	
Travel Time (s)		5.2			12.0			11.1			11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	9%	9%	9%	9%	9%	9%
Parking (#/hr)						5		0	0		0	0
Shared Lane Traffic (%)												
Turn Type				Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		
Minimum Split (s)	31.7	31.7		31.6	31.6	31.6	32.7	32.7		25.5	25.5	
Total Split (s)	38.0	38.0		38.0	38.0	38.0	62.0	62.0		62.0	62.0	
Total Split (%)	38.0%	38.0%		38.0%	38.0%	38.0%	62.0%	62.0%		62.0%	62.0%	
Maximum Green (s)	32.3	32.3		32.4	32.4	32.4	56.3	56.3		56.5	56.5	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.7	2.7		2.6	2.6	2.6	2.7	2.7		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.7			5.6	5.6	5.7	5.7		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	19.0	19.0		19.0	19.0	19.0	20.0	20.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	

Intersection Summary













Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 97 (97%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 13: Lafayette Blvd & Monroe St



HCM 2010 Signalized Intersection Summary
 13: Lafayette Blvd & Monroe St

2014 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	0	0	0	48	0	276	0	202	223	167	308	0
Future Volume (veh/h)	0	0	0	48	0	276	0	202	223	167	308	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.90	1.00	0.90	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1827	1743	1743	1900	1743	1743	1900
Adj Flow Rate, veh/h	0	0	0	52	0	300	0	220	242	182	335	0
Adj No. of Lanes	0	1	0	0	1	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	9	9	9	9	9	9
Cap, veh/h	0	590	0	519	0	439	72	385	424	524	884	0
Arrive On Green	0.00	0.00	0.00	0.32	0.00	0.32	0.00	0.94	0.94	1.00	1.00	0.00
Sat Flow, veh/h	0	1827	0	1385	0	1359	974	684	752	867	1569	0
Grp Volume(v), veh/h	0	0	0	52	0	300	0	0	462	182	335	0
Grp Sat Flow(s),veh/h/ln	0	1827	0	1385	0	1359	974	0	1436	867	1569	0
Q Serve(g_s), s	0.0	0.0	0.0	2.6	0.0	19.2	0.0	0.0	4.1	2.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	2.6	0.0	19.2	0.0	0.0	4.1	6.6	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.52	1.00		0.00
Lane Grp Cap(c), veh/h	0	590	0	519	0	439	72	0	809	524	884	0
V/C Ratio(X)	0.00	0.00	0.00	0.10	0.00	0.68	0.00	0.00	0.57	0.35	0.38	0.00
Avail Cap(c_a), veh/h	0	590	0	519	0	439	72	0	809	524	884	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	23.9	0.0	29.5	0.0	0.0	1.4	0.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.4	0.0	8.4	0.0	0.0	2.9	1.8	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.0	1.9	0.0	12.9	0.0	0.0	3.4	1.3	0.5	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	24.3	0.0	37.9	0.0	0.0	4.3	2.1	1.2	0.0
LnGrp LOS				C		D			A	A	A	
Approach Vol, veh/h		0			352			462			517	
Approach Delay, s/veh		0.0			35.9			4.3			1.5	
Approach LOS					D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		62.2		38.1		62.2		38.1				
Change Period (Y+Rc), s		* 5.7		* 5.7		* 5.7		* 5.7				
Max Green Setting (Gmax), s		* 56		* 32		* 57		* 32				
Max Q Clear Time (g_c+I1), s		6.1		21.2		8.6		0.0				
Green Ext Time (p_c), s		5.7		1.2		5.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				11.6								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
14: Lafayette Blvd & South St

2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	0	4	0	0	7	7	414	2	1	339	14
Future Volume (vph)	3	0	4	0	0	7	7	414	2	1	339	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	250		0	225		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	50			50			100			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		902			435			480			490	
Travel Time (s)		24.6			11.9			10.9			11.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	9%	9%	9%	9%	9%	9%
Parking (#/hr)					0	0					0	0
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	31.7	31.7		31.6	31.6		32.7	32.7		25.5	25.5	
Total Split (s)	32.0	32.0		32.0	32.0		68.0	68.0		68.0	68.0	
Total Split (%)	32.0%	32.0%		32.0%	32.0%		68.0%	68.0%		68.0%	68.0%	
Maximum Green (s)	26.3	26.3		26.4	26.4		62.3	62.3		62.5	62.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.7	2.7		2.6	2.6		2.7	2.7		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.7			5.6			5.7		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	19.0	19.0		19.0	19.0		20.0	20.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary













Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 92 (92%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 14: Lafayette Blvd & South St























HCM 2010 Signalized Intersection Summary
 14: Lafayette Blvd & South St

2014 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔		↕	↕	
Traffic Volume (veh/h)	3	0	4	0	0	7	7	414	2	1	339	14
Future Volume (veh/h)	3	0	4	0	0	7	7	414	2	1	339	14
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1900	1743	1900	1743	1743	1900
Adj Flow Rate, veh/h	3	0	4	0	0	8	8	450	2	1	368	15
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	9	9	9	9	9	9
Cap, veh/h	200	19	224	0	0	368	42	1070	5	617	933	38
Arrive On Green	0.26	0.00	0.26	0.00	0.00	0.26	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	567	72	852	0	0	1398	9	1717	8	875	1497	61
Grp Volume(v), veh/h	7	0	0	0	0	8	460	0	0	1	0	383
Grp Sat Flow(s),veh/h/ln	1490	0	0	0	0	1398	1734	0	0	875	0	1558
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.43		0.57	0.00		1.00	0.02		0.00	1.00		0.04
Lane Grp Cap(c), veh/h	444	0	0	0	0	368	1117	0	0	617	0	971
V/C Ratio(X)	0.02	0.00	0.00	0.00	0.00	0.02	0.41	0.00	0.00	0.00	0.00	0.39
Avail Cap(c_a), veh/h	444	0	0	0	0	368	1117	0	0	617	0	971
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.3	0.0	0.0	0.0	0.0	27.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.1	1.1	0.0	0.0	0.0	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.0	0.0	0.0	0.0	0.3	0.6	0.0	0.0	0.0	0.0	0.6
LnGrp Delay(d),s/veh	27.4	0.0	0.0	0.0	0.0	27.5	1.1	0.0	0.0	0.0	0.0	1.2
LnGrp LOS	C					C	A			A		A
Approach Vol, veh/h		7			8			460			384	
Approach Delay, s/veh		27.4			27.5			1.1			1.2	
Approach LOS		C			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		68.2		32.1		68.2		32.1				
Change Period (Y+Rc), s		* 5.7		* 5.7		* 5.7		* 5.7				
Max Green Setting (Gmax), s		* 62		* 26		* 63		* 26				
Max Q Clear Time (g_c+I1), s		2.0		2.4		2.0		2.3				
Green Ext Time (p_c), s		4.0		0.0		4.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				1.6								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
15: Lafayette Blvd & Sample St

2014 2-way
Timing Plan: AM

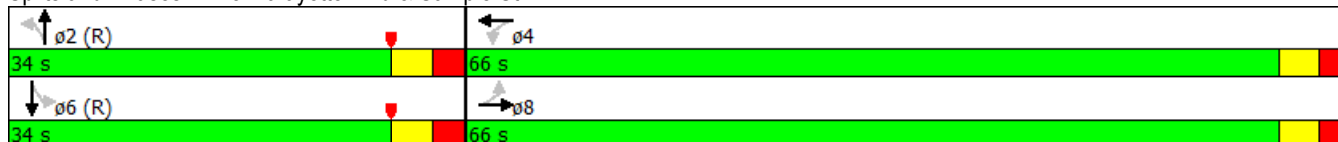
													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	243	571	69	12	433	28	48	156	34	68	133	128	
Future Volume (vph)	243	571	69	12	433	28	48	156	34	68	133	128	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	100		0	0		0	100		0	150		0	
Storage Lanes	1		0	0		0	1		0	1		0	
Taper Length (ft)	75			25			25			25			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		25			25			30				30	
Link Distance (ft)		490			437			457				1160	
Travel Time (s)		13.4			11.9			10.4				26.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	15%	15%	15%	15%	15%	15%	9%	9%	9%	9%	9%	9%	
Shared Lane Traffic (%)													
Number of Detectors	1	1		1	1		1	1		1	1		
Detector Template													
Leading Detector (ft)	50	50		50	50		50	50		50	50		
Trailing Detector (ft)	0	0		0	0		0	0		0	0		
Detector 1 Position(ft)	0	0		0	0		0	0		0	0		
Detector 1 Size(ft)	50	50		50	50		50	50		50	50		
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		8			4			2				6	
Permitted Phases	8			4			2			6			
Detector Phase	8	8		4	4		2	2		6	6		
Switch Phase													
Minimum Initial (s)	20.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0		
Minimum Split (s)	29.5	29.5		28.3	28.3		28.1	28.1		28.1	28.1		
Total Split (s)	66.0	66.0		66.0	66.0		34.0	34.0		34.0	34.0		
Total Split (%)	66.0%	66.0%		66.0%	66.0%		34.0%	34.0%		34.0%	34.0%		
Maximum Green (s)	60.5	60.5		60.5	60.5		28.5	28.5		28.5	28.5		
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
All-Red Time (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5		
Lost Time Adjust (s)	0.0	0.0			0.0		-1.0	0.0		-1.0	0.0		
Total Lost Time (s)	5.5	5.5			5.5		4.5	5.5		4.5	5.5		
Lead/Lag													
Lead-Lag Optimize?													
Vehicle Extension (s)	0.2	0.2		0.2	0.2		2.5	2.5		2.5	2.5		
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max		
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0		
Flash Dont Walk (s)	17.0	17.0		14.0	14.0		14.0	14.0		14.0	14.0		
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0		
Intersection Summary													
Area Type:	Other												
Cycle Length:	100												

Lanes, Volumes, Timings
15: Lafayette Blvd & Sample St

2014 2-way
Timing Plan: AM





















Actuated Cycle Length: 100
Offset: 25 (25%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 15: Lafayette Blvd & Sample St



















HCM 2010 Signalized Intersection Summary
 15: Lafayette Blvd & Sample St

2014 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	243	571	69	12	433	28	48	156	34	68	133	128
Future Volume (veh/h)	243	571	69	12	433	28	48	156	34	68	133	128
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1652	1652	1900	1900	1652	1900	1743	1743	1900	1743	1743	1900
Adj Flow Rate, veh/h	264	621	75	13	471	30	52	170	37	74	145	139
Adj No. of Lanes	1	2	0	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	15	15	15	15	15	15	9	9	9	9	9	9
Cap, veh/h	351	1133	137	50	1152	72	420	678	148	539	400	384
Arrive On Green	0.40	0.40	0.40	0.82	0.80	0.80	0.50	0.49	0.49	0.16	0.16	0.16
Sat Flow, veh/h	793	2822	340	30	2868	180	1021	1388	302	1095	819	785
Grp Volume(v), veh/h	264	345	351	269	0	245	52	0	207	74	0	284
Grp Sat Flow(s),veh/h/ln	793	1570	1592	1607	0	1472	1021	0	1690	1095	0	1605
Q Serve(g_s), s	32.3	16.9	16.9	0.0	0.0	4.9	3.5	0.0	7.1	5.9	0.0	15.8
Cycle Q Clear(g_c), s	37.2	16.9	16.9	4.7	0.0	4.9	19.3	0.0	7.1	13.1	0.0	15.8
Prop In Lane	1.00		0.21	0.05		0.12	1.00		0.18	1.00		0.49
Lane Grp Cap(c), veh/h	351	630	639	696	0	591	420	0	825	539	0	784
V/C Ratio(X)	0.75	0.55	0.55	0.39	0.00	0.41	0.12	0.00	0.25	0.14	0.00	0.36
Avail Cap(c_a), veh/h	513	950	963	1009	0	890	420	0	825	539	0	784
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	0.97	0.00	0.97	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.4	22.9	23.0	6.3	0.0	6.4	22.9	0.0	14.9	29.6	0.0	28.1
Incr Delay (d2), s/veh	1.6	0.3	0.3	0.1	0.0	0.2	0.6	0.0	0.7	0.5	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.6	11.8	11.9	3.7	0.0	3.5	1.9	0.0	6.3	3.4	0.0	11.7
LnGrp Delay(d),s/veh	33.1	23.2	23.2	6.5	0.0	6.5	23.5	0.0	15.6	30.1	0.0	29.4
LnGrp LOS	C	C	C	A		A	C		B	C		C
Approach Vol, veh/h		960			514			259			358	
Approach Delay, s/veh		25.9			6.5			17.2			29.5	
Approach LOS		C			A			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		54.4		45.6		54.4		45.6				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		28.5		60.5		28.5		60.5				
Max Q Clear Time (g_c+I1), s		21.3		6.9		17.8		39.2				
Green Ext Time (p_c), s		1.4		0.9		1.7		0.9				
Intersection Summary												
HCM 2010 Ctrl Delay				20.7								
HCM 2010 LOS				C								

Lanes, Volumes, Timings
16: Main St & Bartlett St

2014 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	218	21	36	236	26	21	2	25	36	5	29
Future Volume (vph)	12	218	21	36	236	26	21	2	25	36	5	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	75		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		377			472			172			391	
Travel Time (s)		8.6			10.7			4.7			10.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		5	5		5	5						
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized






















Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	29	11	26	408	387	28
Future Volume (vph)	29	11	26	408	387	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	1	1			0
Taper Length (ft)	50		50			
Link Speed (mph)	30			30	25	
Link Distance (ft)	192			437	345	
Travel Time (s)	4.4			9.9	9.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: CBD
 Control Type: Unsignalized

Lanes, Volumes, Timings
18: Main St & Madison St

2014 2-way
Timing Plan: AM





















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	26	9	7	14	0	10	473	40	0	311	91
Future Volume (vph)	11	26	9	7	14	0	10	473	40	0	311	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	150		0	100		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		434			433			485			437	
Travel Time (s)		11.8			11.8			11.0			9.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Parking (#/hr)		3	3	3	3	3		5	5			
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: CBD
Control Type: Unsignalized

Lanes, Volumes, Timings
19: Main St & LaSalle Ave#

2014 2-way
Timing Plan: AM

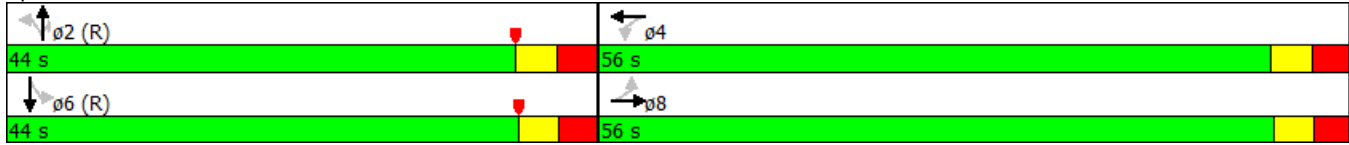
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	651	64	29	637	23	16	508	132	2	299	22
Future Volume (vph)	10	651	64	29	637	23	16	508	132	2	299	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	100		0	250		200	150		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	50			75			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30				30
Link Distance (ft)		440			437			495				485
Travel Time (s)		12.0			11.9			11.3				11.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)								5	5		3	3
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		4	4		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	30.0	30.0		36.0	36.0		32.1	32.1	32.1	33.8	33.8	
Total Split (s)	56.0	56.0		56.0	56.0		44.0	44.0	44.0	44.0	44.0	
Total Split (%)	56.0%	56.0%		56.0%	56.0%		44.0%	44.0%	44.0%	44.0%	44.0%	
Maximum Green (s)	50.3	50.3		50.1	50.1		37.9	37.9	37.9	38.1	38.1	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.7	2.7		2.9	2.9		3.1	3.1	3.1	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	5.7	5.7		5.9	5.9		6.1	6.1	6.1		5.9	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2	0.2	0.2	0.2	
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		23.0	23.0		19.0	19.0	19.0	20.0	20.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	

Intersection Summary

Area Type: CBD






















Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 72 (72%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 19: Main St & LaSalle Ave#



HCM 2010 Signalized Intersection Summary
 19: Main St & LaSalle Ave#

2014 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	651	64	29	637	23	16	508	132	2	299	22
Future Volume (veh/h)	10	651	64	29	637	23	16	508	132	2	299	22
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1613	1613	1710	1613	1613	1710	1541	1541	1541	1710	1541	1710
Adj Flow Rate, veh/h	11	708	70	32	692	25	17	552	143	2	325	24
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	11	11	11	11	11	11
Cap, veh/h	156	908	90	118	972	35	471	860	639	37	698	51
Arrive On Green	0.11	0.11	0.11	0.43	0.43	0.43	1.00	1.00	1.00	0.57	0.56	0.56
Sat Flow, veh/h	633	2818	278	598	3018	109	850	1541	1146	1	1252	92
Grp Volume(v), veh/h	11	385	393	32	351	366	17	552	143	351	0	0
Grp Sat Flow(s),veh/h/ln	633	1533	1564	598	1533	1594	850	1541	1146	1345	0	0
Q Serve(g_s), s	1.7	24.5	24.5	5.2	18.9	18.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	20.5	24.5	24.5	29.7	18.9	18.9	0.0	0.0	0.0	15.5	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.07	1.00		1.00	0.01		0.07
Lane Grp Cap(c), veh/h	156	494	504	118	494	513	471	860	639	800	0	0
V/C Ratio(X)	0.07	0.78	0.78	0.27	0.71	0.71	0.04	0.64	0.22	0.44	0.00	0.00
Avail Cap(c_a), veh/h	271	771	787	225	768	799	471	860	639	800	0	0
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.57	0.57	0.57	0.70	0.70	0.70	0.60	0.60	0.60	1.00	0.00	0.00
Uniform Delay (d), s/veh	48.6	41.2	41.2	39.7	24.8	24.8	0.0	0.0	0.0	13.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.6	0.3	0.5	0.5	0.1	2.2	0.5	1.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	14.5	14.8	1.6	11.9	12.3	0.0	1.0	0.2	10.0	0.0	0.0
LnGrp Delay(d),s/veh	48.6	41.8	41.8	40.0	25.3	25.3	0.1	2.2	0.5	14.9	0.0	0.0
LnGrp LOS	D	D	D	D	C	C	A	A	A	B		
Approach Vol, veh/h		789			749			712			351	
Approach Delay, s/veh		41.9			25.9			1.8			14.9	
Approach LOS		D			C			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		61.9		38.1		61.9		38.1				
Change Period (Y+Rc), s		6.1		5.9		* 6.1		* 5.9				
Max Green Setting (Gmax), s		37.9		50.1		* 38		* 50				
Max Q Clear Time (g_c+I1), s		2.0		31.7		17.5		26.5				
Green Ext Time (p_c), s		0.3		0.5		0.3		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				22.7								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
20: Main St & Colfax Ave

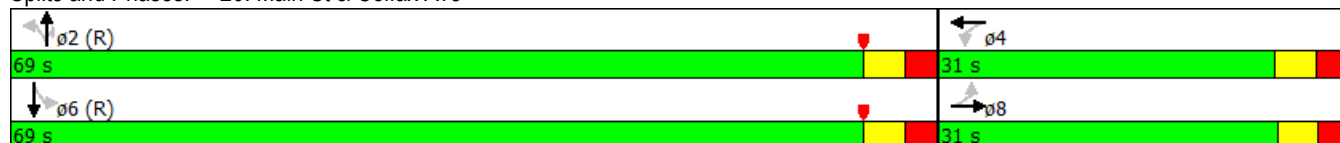
2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	203	45	57	185	10	13	646	22	12	349	23
Future Volume (vph)	28	203	45	57	185	10	13	646	22	12	349	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	100		100	100		150	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		438			440			490			495	
Travel Time (s)		11.9			12.0			11.1			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	11%	11%	11%	11%	11%	11%
Parking (#/hr)		5	5		10	10		5	5		10	10
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2		2	6		
Minimum Split (s)	29.0	29.0		29.0	29.0		28.0	28.0	28.0	28.0	28.0	
Total Split (s)	31.0	31.0		31.0	31.0		69.0	69.0	69.0	69.0	69.0	
Total Split (%)	31.0%	31.0%		31.0%	31.0%		69.0%	69.0%	69.0%	69.0%	69.0%	
Maximum Green (s)	25.3	25.3		25.1	25.1		63.5	63.5	63.5	63.5	63.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.7	2.7		2.9	2.9		2.5	2.5	2.5	2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	-1.0	0.0	
Total Lost Time (s)	5.7	5.7		5.9	5.9		5.5	5.5	5.5	4.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		11.0	11.0		11.0	11.0	11.0	10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	

Intersection Summary























Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 96 (96%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 20: Main St & Colfax Ave



HCM 2010 Signalized Intersection Summary
 20: Main St & Colfax Ave

2014 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	203	45	57	185	10	13	646	22	12	349	23
Future Volume (veh/h)	28	203	45	57	185	10	13	646	22	12	349	23
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.85	1.00	1.00	0.88	1.00	1.00	0.85
Adj Sat Flow, veh/h/ln	1776	1776	1900	1776	1776	1900	1712	1712	1712	1712	1712	1900
Adj Flow Rate, veh/h	30	221	49	62	201	11	14	702	24	13	379	25
Adj No. of Lanes	1	1	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	7	7	7	7	7	7	11	11	11	11	11	11
Cap, veh/h	201	311	69	192	358	20	641	1085	807	501	856	56
Arrive On Green	0.50	0.50	0.50	0.08	0.08	0.08	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1110	1232	273	1053	1418	78	898	1712	1273	667	1350	89
Grp Volume(v), veh/h	30	0	270	62	0	212	14	702	24	13	0	404
Grp Sat Flow(s),veh/h/ln	1110	0	1506	1053	0	1496	898	1712	1273	667	0	1439
Q Serve(g_s), s	2.2	0.0	13.9	5.8	0.0	13.7	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	15.9	0.0	13.9	19.7	0.0	13.7	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.05	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	201	0	380	192	0	378	641	1085	807	501	0	912
V/C Ratio(X)	0.15	0.00	0.71	0.32	0.00	0.56	0.02	0.65	0.03	0.03	0.00	0.44
Avail Cap(c_a), veh/h	201	0	380	192	0	378	641	1085	807	501	0	912
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.0	0.0	22.0	50.1	0.0	40.6	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.6	0.0	10.7	4.4	0.0	5.9	0.1	3.0	0.1	0.1	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	11.1	3.5	0.0	10.4	0.0	1.6	0.0	0.0	0.0	0.7
LnGrp Delay(d),s/veh	29.6	0.0	32.7	54.6	0.0	46.5	0.1	3.0	0.1	0.1	0.0	1.6
LnGrp LOS	C		C	D		D	A	A	A	A		A
Approach Vol, veh/h		300			274			740			417	
Approach Delay, s/veh		32.4			48.3			2.8			1.5	
Approach LOS		C			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		69.0		31.2		69.0		31.2				
Change Period (Y+Rc), s		5.5		5.9		5.5		* 5.9				
Max Green Setting (Gmax), s		63.5		25.1		63.5		* 25				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			14.8									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
21: Main St & Washington St

2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	66	7	4	29	12	1	659	7	37	349	2
Future Volume (vph)	1	66	7	4	29	12	1	659	7	37	349	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			75			50			50		
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		438			437			495			490	
Travel Time (s)		11.9			11.9			11.3			11.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Parking (#/hr)		5	5		5	5		5	5		3	3
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	24.6	24.6		24.6	24.6		25.3	25.3		25.6	25.6	
Total Split (s)	24.8	24.8		24.8	24.8		75.2	75.2		75.2	75.2	
Total Split (%)	24.8%	24.8%		24.8%	24.8%		75.2%	75.2%		75.2%	75.2%	
Maximum Green (s)	19.2	19.2		19.2	19.2		69.9	69.9		69.6	69.6	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.3	2.3		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		-1.2	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6		5.3	5.3		4.4	5.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: CBD

Lanes, Volumes, Timings
21: Main St & Washington St

2014 2-way
Timing Plan: AM





















Cycle Length: 100
Actuated Cycle Length: 100
Offset: 4 (4%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 21: Main St & Washington St






















HCM 2010 Signalized Intersection Summary
 21: Main St & Washington St

2014 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	66	7	4	29	12	1	659	7	37	349	2
Future Volume (veh/h)	1	66	7	4	29	12	1	659	7	37	349	2
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1541	1541	1710	1541	1541	1710
Adj Flow Rate, veh/h	1	72	8	4	32	13	1	716	8	40	379	2
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	11	11	11	11	11	11
Cap, veh/h	152	124	14	125	95	38	725	1052	12	554	1071	6
Arrive On Green	0.19	0.19	0.19	0.10	0.10	0.10	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1196	1272	141	1159	973	395	825	1330	15	601	1355	7
Grp Volume(v), veh/h	1	0	80	4	0	45	1	0	724	40	0	381
Grp Sat Flow(s),veh/h/ln	1196	0	1414	1159	0	1369	825	0	1345	601	0	1362
Q Serve(g_s), s	0.1	0.0	5.1	0.3	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.1	0.0	5.1	5.5	0.0	3.1	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.10	1.00		0.29	1.00		0.01	1.00		0.01
Lane Grp Cap(c), veh/h	152	0	138	125	0	133	725	0	1064	554	0	1077
V/C Ratio(X)	0.01	0.00	0.58	0.03	0.00	0.34	0.00	0.00	0.68	0.07	0.00	0.35
Avail Cap(c_a), veh/h	265	0	271	235	0	263	725	0	1064	554	0	1077
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.98	0.00	0.98	1.00	0.00	1.00	0.64	0.00	0.64	0.90	0.00	0.90
Uniform Delay (d), s/veh	38.9	0.0	38.4	45.7	0.0	42.1	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	3.8	0.1	0.0	1.5	0.0	0.0	2.3	0.2	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	3.9	0.2	0.0	2.2	0.0	0.0	1.2	0.1	0.0	0.4
LnGrp Delay(d),s/veh	39.0	0.0	42.2	45.8	0.0	43.6	0.0	0.0	2.3	0.2	0.0	0.8
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		81			49			725			421	
Approach Delay, s/veh		42.1			43.8			2.3			0.8	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		84.7		15.3		84.7		15.3				
Change Period (Y+Rc), s		* 5.6		5.6		5.6		5.6				
Max Green Setting (Gmax), s		* 70		19.2		69.6		19.2				
Max Q Clear Time (g_c+I1), s		2.0		7.5		2.0		7.1				
Green Ext Time (p_c), s		6.8		0.3		6.8		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			5.9									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
22: Main St & Jefferson Blvd

2014 2-way
Timing Plan: AM

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	1	72	9	12	60	36	1	630	14	43	313	4	
Future Volume (vph)	1	72	9	12	60	36	1	630	14	43	313	4	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		100	0		0	150		0	150		0	
Storage Lanes	0		0	0		0	1		0	1		0	
Taper Length (ft)	25			25			50			50			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		25			25			30				30	
Link Distance (ft)		430			440			470				495	
Travel Time (s)		11.7			12.0			10.7				11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%	
Parking (#/hr)								5	5		3	3	
Shared Lane Traffic (%)													
Number of Detectors	1	1		1	1		1	1		1	1		
Detector Template													
Leading Detector (ft)	50	50		50	50		50	50		50	50		
Trailing Detector (ft)	0	0		0	0		0	0		0	0		
Detector 1 Position(ft)	0	0		0	0		0	0		0	0		
Detector 1 Size(ft)	50	50		50	50		50	50		50	50		
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		8			4			2			6		
Permitted Phases	8			4			2			6			
Detector Phase	8	8		4	4		2	2		6	6		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0		
Minimum Split (s)	25.6	25.6		24.5	24.5		35.5	35.5		35.5	35.5		
Total Split (s)	26.0	26.0		26.0	26.0		74.0	74.0		74.0	74.0		
Total Split (%)	26.0%	26.0%		26.0%	26.0%		74.0%	74.0%		74.0%	74.0%		
Maximum Green (s)	20.4	20.4		20.5	20.5		68.7	68.7		68.7	68.7		
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
All-Red Time (s)	2.6	2.6		2.5	2.5		2.3	2.3		2.3	2.3		
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		-1.0	0.0		
Total Lost Time (s)		5.6			5.5		5.3	5.3		4.3	5.3		
Lead/Lag													
Lead-Lag Optimize?													
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max		
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0		
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0		
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0		

Intersection Summary

Area Type: CBD













Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 22: Main St & Jefferson Blvd



HCM 2010 Signalized Intersection Summary
 22: Main St & Jefferson Blvd

2014 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	1	72	9	12	60	36	1	630	14	43	313	4
Future Volume (veh/h)	1	72	9	12	60	36	1	630	14	43	313	4
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1710	1644	1710	1710	1644	1710	1541	1541	1710	1541	1541	1710
Adj Flow Rate, veh/h	1	78	10	13	65	39	1	685	15	47	340	4
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	11	11	11	11	11	11
Cap, veh/h	37	142	18	50	91	51	748	1040	23	564	1064	13
Arrive On Green	0.20	0.20	0.20	0.11	0.10	0.10	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	5	1425	181	102	912	507	854	1314	29	615	1345	16
Grp Volume(v), veh/h	89	0	0	117	0	0	1	0	700	47	0	344
Grp Sat Flow(s),veh/h/ln	1611	0	0	1520	0	0	854	0	1343	615	0	1361
Q Serve(g_s), s	0.0	0.0	0.0	2.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.0	0.0	0.0	7.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.01		0.11	0.11		0.33	1.00		0.02	1.00		0.01
Lane Grp Cap(c), veh/h	197	0	0	210	0	0	748	0	1063	564	0	1077
V/C Ratio(X)	0.45	0.00	0.00	0.56	0.00	0.00	0.00	0.00	0.66	0.08	0.00	0.32
Avail Cap(c_a), veh/h	364	0	0	366	0	0	748	0	1063	564	0	1077
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.98	0.00	0.00	1.00	0.00	0.00	0.72	0.00	0.72	0.94	0.00	0.94
Uniform Delay (d), s/veh	38.0	0.0	0.0	43.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.6	0.0	0.0	2.3	0.0	0.0	0.0	0.0	2.3	0.3	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.1	0.0	0.0	5.8	0.0	0.0	0.0	0.0	1.2	0.1	0.0	0.4
LnGrp Delay(d),s/veh	39.6	0.0	0.0	46.1	0.0	0.0	0.0	0.0	2.3	0.3	0.0	0.7
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		89			117			701				391
Approach Delay, s/veh		39.6			46.1			2.3				0.7
Approach LOS		D			D			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		84.4		15.6		84.4		15.6				
Change Period (Y+Rc), s		* 5.3		* 5.6		* 5.3		5.6				
Max Green Setting (Gmax), s		* 69		* 21		* 69		20.4				
Max Q Clear Time (g_c+I1), s		2.0		9.3		2.0		7.0				
Green Ext Time (p_c), s		6.3		0.6		6.3		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				8.3								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
23: Main St & Wayne St

2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	37	9	13	49	9	9	635	6	6	311	4
Future Volume (vph)	6	37	9	13	49	9	9	635	6	6	311	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		435			445			495			470	
Travel Time (s)		11.9			12.1			11.3			10.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Parking (#/hr)		5	5		5	5		5	5		5	5
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	24.6	24.6		24.5	24.5		27.0	27.0		27.0	27.0	
Total Split (s)	24.9	24.9		24.9	24.9		75.1	75.1		75.1	75.1	
Total Split (%)	24.9%	24.9%		24.9%	24.9%		75.1%	75.1%		75.1%	75.1%	
Maximum Green (s)	19.3	19.3		19.4	19.4		69.5	69.5		69.5	69.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.5	2.5		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		-1.0	0.0	
Total Lost Time (s)	5.6	5.6		5.5	5.5		5.6	5.6		4.6	5.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2		0.2	0.2	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: CBD

Lanes, Volumes, Timings
 23: Main St & Wayne St

2014 2-way
 Timing Plan: AM






















Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 90 (90%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 23: Main St & Wayne St



HCM 2010 Signalized Intersection Summary
23: Main St & Wayne St

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	37	9	13	49	9	9	635	6	6	311	4
Future Volume (veh/h)	6	37	9	13	49	9	9	635	6	6	311	4
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1541	1541	1710	1541	1541	1710
Adj Flow Rate, veh/h	7	40	10	14	53	10	10	690	7	7	338	4
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	11	11	11	11	11	11
Cap, veh/h	137	108	27	148	115	22	748	1053	11	565	1051	12
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1177	1112	278	1191	1177	222	855	1332	14	616	1329	16
Grp Volume(v), veh/h	7	0	50	14	0	63	10	0	697	7	0	342
Grp Sat Flow(s),veh/h/ln	1177	0	1390	1191	0	1400	855	0	1346	616	0	1345
Q Serve(g_s), s	0.6	0.0	3.4	1.1	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.8	0.0	3.4	4.5	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.20	1.00		0.16	1.00		0.01	1.00		0.01
Lane Grp Cap(c), veh/h	137	0	136	148	0	137	748	0	1064	565	0	1063
V/C Ratio(X)	0.05	0.00	0.37	0.09	0.00	0.46	0.01	0.00	0.66	0.01	0.00	0.32
Avail Cap(c_a), veh/h	249	0	268	263	0	272	748	0	1064	565	0	1063
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.57	0.00	0.57	0.95	0.00	0.95
Uniform Delay (d), s/veh	44.9	0.0	42.2	44.3	0.0	42.6	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.6	0.1	0.0	0.9	0.0	0.0	1.8	0.0	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.0	2.4	0.7	0.0	3.0	0.0	0.0	1.0	0.0	0.0	0.4
LnGrp Delay(d),s/veh	45.0	0.0	42.9	44.4	0.0	43.5	0.0	0.0	1.8	0.0	0.0	0.8
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		57			77			707			349	
Approach Delay, s/veh		43.1			43.7			1.8			0.7	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		84.6		15.4		84.6		15.4				
Change Period (Y+Rc), s		5.6		* 5.6		5.6		5.6				
Max Green Setting (Gmax), s		69.5		* 19		69.5		19.3				
Max Q Clear Time (g_c+I1), s		2.0		6.5		2.0		6.8				
Green Ext Time (p_c), s		0.3		0.0		0.3		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			6.2									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
24: Main St & Western Ave

2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	225	99	7	109	6	32	654	2	0	282	28
Future Volume (vph)	1	225	99	7	109	6	32	654	2	0	282	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	200		0	250		0	150		100
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	25			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		435			425			515			495	
Travel Time (s)		11.9			11.6			11.7			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)					5	5					0	0
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		8			4		5	2			6	
Permitted Phases	8		8	4			2			6		6
Minimum Split (s)	24.9	24.9	24.9	25.1	25.1		14.3	28.0		28.0	28.0	28.0
Total Split (s)	31.0	31.0	31.0	31.0	31.0		14.3	69.0		54.7	54.7	54.7
Total Split (%)	31.0%	31.0%	31.0%	31.0%	31.0%		14.3%	69.0%		54.7%	54.7%	54.7%
Maximum Green (s)	25.1	25.1	25.1	24.9	24.9		8.0	63.4		48.8	48.8	48.8
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.9	2.9	2.9	3.1	3.1		3.3	2.6		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0	0.0	-1.0	0.0		0.0	0.0		-1.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.1	6.1		6.3	5.6		4.9	5.9	5.9
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	14.0	14.0			14.0		16.0	16.0	16.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0		0	0	0

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 27 (27%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 24: Main St & Western Ave



HCM 2010 Signalized Intersection Summary
 24: Main St & Western Ave

2014 2-way
 Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	225	99	7	109	6	32	654	2	0	282	28
Future Volume (veh/h)	1	225	99	7	109	6	32	654	2	0	282	28
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1613	1613	1613	1613	1613	1710	1541	1541	1710	1541	1541	1541
Adj Flow Rate, veh/h	1	245	108	8	118	7	35	711	2	0	307	30
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	11	11	11	11	11	11
Cap, veh/h	252	403	342	205	330	20	602	969	3	72	753	576
Arrive On Green	0.50	0.50	0.50	0.09	0.08	0.08	0.16	1.00	1.00	0.00	0.98	0.98
Sat Flow, veh/h	1092	1613	1371	887	1319	78	1467	1535	4	607	1541	1179
Grp Volume(v), veh/h	1	245	108	8	0	125	35	0	713	0	307	30
Grp Sat Flow(s),veh/h/ln	1092	1613	1371	887	0	1398	1467	0	1540	607	1541	1179
Q Serve(g_s), s	0.1	11.0	4.7	0.9	0.0	8.5	0.9	0.0	0.0	0.0	0.8	0.1
Cycle Q Clear(g_c), s	8.6	11.0	4.7	11.8	0.0	8.5	0.9	0.0	0.0	0.0	0.8	0.1
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	252	403	342	205	0	349	602	0	971	72	753	576
V/C Ratio(X)	0.00	0.61	0.32	0.04	0.00	0.36	0.06	0.00	0.73	0.00	0.41	0.05
Avail Cap(c_a), veh/h	252	403	342	205	0	349	602	0	971	72	753	576
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.9	21.6	20.0	44.7	0.0	38.5	8.0	0.0	0.0	0.0	0.6	0.6
Incr Delay (d2), s/veh	0.0	6.7	2.4	0.4	0.0	2.8	0.2	0.0	4.9	0.0	1.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	9.3	3.5	0.4	0.0	6.4	0.7	0.0	2.4	0.0	1.0	0.1
LnGrp Delay(d),s/veh	23.9	28.3	22.4	45.0	0.0	41.3	8.2	0.0	4.9	0.0	2.2	0.8
LnGrp LOS	C	C	C	D		D	A		A		A	A
Approach Vol, veh/h		354			133			748			337	
Approach Delay, s/veh		26.5			41.6			5.1			2.1	
Approach LOS		C			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		69.3		31.2	14.3	55.0		31.2				
Change Period (Y+Rc), s		* 5.9		6.1	* 6.3	5.9		* 6.1				
Max Green Setting (Gmax), s		* 63		24.9	* 8	48.8		* 25				
Max Q Clear Time (g_c+I1), s		0.0		0.0	0.0	0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				12.3								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
25: Main St & Monroe St

2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	376	12	108	325	163	0	535	88	97	296	0
Future Volume (vph)	2	376	12	108	325	163	0	535	88	97	296	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	200		0	200		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		440			440			490			515	
Travel Time (s)		12.0			12.0			11.1			11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)			3									0
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		pm+pt	NA	
Protected Phases		8		7	4			2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		7	4		2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		4.0	10.0		20.0	20.0		8.0	20.0	
Minimum Split (s)	32.9	32.9		9.0	32.7		31.9	31.9		14.4	31.7	
Total Split (s)	34.0	34.0		9.0	43.0		42.6	42.6		14.4	57.0	
Total Split (%)	34.0%	34.0%		9.0%	43.0%		42.6%	42.6%		14.4%	57.0%	
Maximum Green (s)	28.1	28.1		4.0	37.3		36.7	36.7		8.0	51.3	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.9	2.9		2.0	2.7		2.9	2.9		3.4	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		-1.0	0.0	
Total Lost Time (s)	5.9	5.9		5.0	5.7		5.9	5.9		5.4	5.7	
Lead/Lag	Lead	Lead		Lag			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Vehicle Extension (s)	0.2	0.2		3.0	0.2		0.2	0.2		3.0	0.2	
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0			7.0	
Flash Dont Walk (s)	20.0	20.0			20.0		19.0	19.0			19.0	
Pedestrian Calls (#/hr)	0	0			0		0	0			0	

Intersection Summary

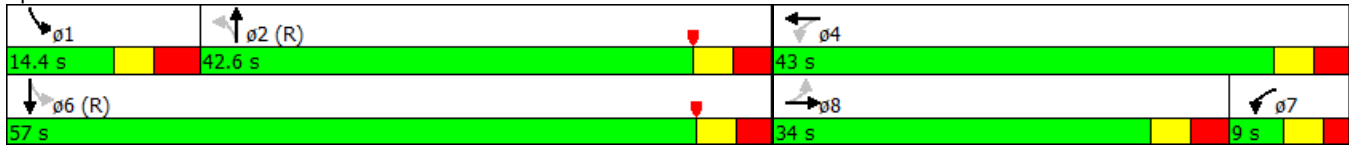
Area Type: Other

Lanes, Volumes, Timings
 25: Main St & Monroe St

2014 2-way
 Timing Plan: AM






















Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 86 (86%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated

Splits and Phases: 25: Main St & Monroe St























HCM 2010 Signalized Intersection Summary
25: Main St & Monroe St

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	376	12	108	325	163	0	535	88	97	296	0
Future Volume (veh/h)	2	376	12	108	325	163	0	535	88	97	296	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1712	1712	1900	1712	1712	1900
Adj Flow Rate, veh/h	2	409	13	117	353	177	0	582	96	105	322	0
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	11	11	11	11	11	11
Cap, veh/h	139	430	14	140	428	215	72	947	156	583	1233	0
Arrive On Green	0.09	0.09	0.09	0.08	0.76	0.76	0.00	0.88	0.88	0.09	0.80	0.00
Sat Flow, veh/h	837	1529	49	1707	1127	565	968	1434	236	1630	1541	0
Grp Volume(v), veh/h	2	0	422	117	0	530	0	0	678	105	322	0
Grp Sat Flow(s),veh/h/ln	837	0	1578	1707	0	1693	968	0	1670	1630	1541	0
Q Serve(g_s), s	0.2	0.0	26.6	2.4	0.0	20.1	0.0	0.0	10.7	1.5	5.3	0.0
Cycle Q Clear(g_c), s	20.3	0.0	26.6	2.4	0.0	20.1	0.0	0.0	10.7	1.5	5.3	0.0
Prop In Lane	1.00		0.03	1.00		0.33	1.00		0.14	1.00		0.00
Lane Grp Cap(c), veh/h	139	0	443	140	0	643	72	0	1103	583	1233	0
V/C Ratio(X)	0.01	0.00	0.95	0.83	0.00	0.82	0.00	0.00	0.61	0.18	0.26	0.00
Avail Cap(c_a), veh/h	139	0	443	140	0	643	72	0	1103	590	1233	0
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.00	0.89	0.36	0.00	0.36	0.00	0.00	0.91	0.92	0.92	0.00
Uniform Delay (d), s/veh	51.6	0.0	44.7	44.5	0.0	9.9	0.0	0.0	2.7	4.1	2.5	0.0
Incr Delay (d2), s/veh	0.0	0.0	28.2	14.4	0.0	3.1	0.0	0.0	2.3	0.1	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	21.1	5.6	0.0	12.4	0.0	0.0	8.8	1.2	4.3	0.0
LnGrp Delay(d),s/veh	51.7	0.0	72.8	58.9	0.0	12.9	0.0	0.0	5.0	4.3	3.0	0.0
LnGrp LOS	D		E	E		B			A	A	A	
Approach Vol, veh/h		424			647			678			427	
Approach Delay, s/veh		72.7			21.2			5.0			3.3	
Approach LOS		E			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	14.0	72.9		43.7		86.8	9.7	34.0				
Change Period (Y+Rc), s	6.4	5.9		* 5.7		* 5.9	5.7	* 5.9				
Max Green Setting (Gmax), s	8.0	36.7		* 37		* 51	4.0	* 28				
Max Q Clear Time (g_c+I1), s	3.5	12.7		22.1		7.3	4.4	28.6				
Green Ext Time (p_c), s	0.1	0.3		0.5		0.3	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				22.7								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
26: Main St & South St

2014 2-way
Timing Plan: AM

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	1	2	0	3	7	4	0	623	8	13	384	0	
Future Volume (vph)	1	2	0	3	7	4	0	623	8	13	384	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	100		155	200		0	
Storage Lanes	0		0	0		0	0		1	1		0	
Taper Length (ft)	25			25			50			50			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		25			25			30			30		
Link Distance (ft)		435			445			485			490		
Travel Time (s)		11.9			12.1			11.0			11.1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%	
Parking (#/hr)												3	3
Shared Lane Traffic (%)													
Number of Detectors	1	1		1	1			1	1	1	1		
Detector Template													
Leading Detector (ft)	50	50		50	50			50	50	50	50		
Trailing Detector (ft)	0	0		0	0			0	0	0	0		
Detector 1 Position(ft)	0	0		0	0			0	0	0	0		
Detector 1 Size(ft)	50	50		50	50			50	50	50	50		
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0		
Turn Type	Perm	NA		Perm	NA			NA	Perm	Perm	NA		
Protected Phases		8			4			2				6	
Permitted Phases	8			4					2	6			
Detector Phase	8	8		4	4			2	2	6	6		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0			20.0	20.0	20.0	20.0		
Minimum Split (s)	29.9	29.9		31.9	31.9			25.6	25.6	26.5	26.5		
Total Split (s)	32.0	32.0		32.0	32.0			68.0	68.0	68.0	68.0		
Total Split (%)	32.0%	32.0%		32.0%	32.0%			68.0%	68.0%	68.0%	68.0%		
Maximum Green (s)	26.1	26.1		26.1	26.1			62.4	62.4	62.5	62.5		
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0		
All-Red Time (s)	2.9	2.9		2.9	2.9			2.6	2.6	2.5	2.5		
Lost Time Adjust (s)		0.0			0.0			0.0	0.0	-1.0	0.0		
Total Lost Time (s)		5.9			5.9			5.6	5.6	4.5	5.5		
Lead/Lag													
Lead-Lag Optimize?													
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0		
Recall Mode	None	None		None	None			C-Max	C-Max	C-Max	C-Max		
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0	7.0	7.0		
Flash Dont Walk (s)	17.0	17.0		19.0	19.0			13.0	13.0	14.0	14.0		
Pedestrian Calls (#/hr)	0	0		0	0			0	0	0	0		

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings
 26: Main St & South St

2014 2-way
 Timing Plan: AM

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 29 (29%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated

Splits and Phases: 26: Main St & South St






















HCM 2010 Signalized Intersection Summary
26: Main St & South St

2014 2-way
Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑	↗	↖	↖	↗
Traffic Volume (veh/h)	1	2	0	3	7	4	0	623	8	13	384	0
Future Volume (veh/h)	1	2	0	3	7	4	0	623	8	13	384	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	0	1712	1712	1712	1712	1900
Adj Flow Rate, veh/h	1	2	0	3	8	4	0	677	9	14	417	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	0	11	11	11	11	11
Cap, veh/h	61	55	0	53	39	18	0	1448	1230	664	1281	0
Arrive On Green	0.04	0.04	0.00	0.05	0.04	0.04	0.00	1.00	1.00	1.00	1.00	0.00
Sat Flow, veh/h	326	1392	0	243	982	445	0	1712	1455	692	1515	0
Grp Volume(v), veh/h	3	0	0	15	0	0	0	677	9	14	417	0
Grp Sat Flow(s),veh/h/ln	1718	0	0	1670	0	0	0	1712	1455	692	1515	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.33		0.00	0.20		0.27	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	116	0	0	126	0	0	0	1448	1230	664	1281	0
V/C Ratio(X)	0.03	0.00	0.00	0.12	0.00	0.00	0.00	0.47	0.01	0.02	0.33	0.00
Avail Cap(c_a), veh/h	480	0	0	490	0	0	0	1448	1230	664	1281	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.90	0.90	0.91	0.91	0.00
Uniform Delay (d), s/veh	46.2	0.0	0.0	46.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.4	0.0	0.0	0.0	1.0	0.0	0.1	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	0.0	0.7	0.0	0.0	0.0	0.7	0.0	0.0	0.4	0.0
LnGrp Delay(d),s/veh	46.3	0.0	0.0	46.9	0.0	0.0	0.0	1.0	0.0	0.1	0.6	0.0
LnGrp LOS	D			D				A	A	A	A	
Approach Vol, veh/h		3			15			686			431	
Approach Delay, s/veh		46.3			46.9			1.0			0.6	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		90.2		9.8		90.2		9.8				
Change Period (Y+Rc), s		5.6		5.9		* 5.6		5.9				
Max Green Setting (Gmax), s		62.4		26.1		* 63		26.1				
Max Q Clear Time (g_c+I1), s		2.0		2.8		2.0		2.2				
Green Ext Time (p_c), s		6.1		0.0		6.1		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				1.6								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
27: Main St & Bronson St

2014 2-way
Timing Plan: AM

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	2	4	0	1	4	5	0	638	6	3	401	0	
Future Volume (vph)	2	4	0	1	4	5	0	638	6	3	401	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	100		0	100		0	
Storage Lanes	0		0	0		0	1		0	1		0	
Taper Length (ft)	25			25			50			50			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		25			25			30				30	
Link Distance (ft)		440			453			810				485	
Travel Time (s)		12.0			12.4			18.4				11.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%	
Shared Lane Traffic (%)													
Number of Detectors	1	1		1	1		1	1		1	1		
Detector Template	Left	Thru			Thru		Left						
Leading Detector (ft)	20	50		50	50		50	50		50	50		
Trailing Detector (ft)	0	0		0	0		0	0		0	0		
Detector 1 Position(ft)	0	0		0	0		0	0		0	0		
Detector 1 Size(ft)	20	50		50	50		50	50		50	50		
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		8			4			2				6	
Permitted Phases	8			4			2			6			
Detector Phase	8	8		4	4		2	2		6	6		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0		
Minimum Split (s)	33.7	33.7		28.9	28.9		24.9	24.9		25.3	25.3		
Total Split (s)	33.7	33.7		33.7	33.7		66.3	66.3		66.3	66.3		
Total Split (%)	33.7%	33.7%		33.7%	33.7%		66.3%	66.3%		66.3%	66.3%		
Maximum Green (s)	28.0	28.0		27.8	27.8		61.4	61.4		61.0	61.0		
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
All-Red Time (s)	2.7	2.7		2.9	2.9		1.9	1.9		2.3	2.3		
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		-0.6	0.0		
Total Lost Time (s)		5.7			5.9		4.9	4.9		4.7	5.3		
Lead/Lag													
Lead-Lag Optimize?													
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max		
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0		
Flash Dont Walk (s)	21.0	21.0		16.0	16.0		11.0	11.0		11.0	11.0		
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0		
Intersection Summary													
Area Type:	Other												
Cycle Length:	100												

Lanes, Volumes, Timings
 27: Main St & Bronson St

2014 2-way
 Timing Plan: AM



















Actuated Cycle Length: 100
 Offset: 40 (40%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 27: Main St & Bronson St



HCM 2010 Signalized Intersection Summary
27: Main St & Bronson St

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	4	0	1	4	5	0	638	6	3	401	0
Future Volume (veh/h)	2	4	0	1	4	5	0	638	6	3	401	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1712	1712	1900	1712	1712	1900
Adj Flow Rate, veh/h	2	4	0	1	4	5	0	693	7	3	436	0
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	11	11	11	11	11	11
Cap, veh/h	62	48	0	44	25	29	72	1441	15	658	1459	0
Arrive On Green	0.04	0.04	0.00	0.05	0.04	0.04	0.00	1.00	1.00	1.00	1.00	0.00
Sat Flow, veh/h	377	1325	0	118	704	822	872	1692	17	683	1712	0
Grp Volume(v), veh/h	6	0	0	10	0	0	0	0	700	3	436	0
Grp Sat Flow(s),veh/h/ln	1702	0	0	1644	0	0	872	0	1709	683	1712	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.33		0.00	0.10		0.50	1.00		0.01	1.00		0.00
Lane Grp Cap(c), veh/h	109	0	0	115	0	0	72	0	1456	658	1459	0
V/C Ratio(X)	0.06	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.48	0.00	0.30	0.00
Avail Cap(c_a), veh/h	511	0	0	510	0	0	72	0	1456	658	1459	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	0.96	0.96	0.00
Uniform Delay (d), s/veh	46.6	0.0	0.0	46.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.3	0.0	0.0	0.0	0.0	1.1	0.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.8	0.0	0.4	0.0
LnGrp Delay(d),s/veh	46.8	0.0	0.0	47.0	0.0	0.0	0.0	0.0	1.1	0.0	0.5	0.0
LnGrp LOS	D			D					A	A	A	
Approach Vol, veh/h		6			10			700			439	
Approach Delay, s/veh		46.8			47.0			1.1			0.5	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		90.5		9.5		90.5		9.5				
Change Period (Y+Rc), s		* 5.3		5.9		* 5.3		* 5.9				
Max Green Setting (Gmax), s		* 61		27.8		* 61		* 28				
Max Q Clear Time (g_c+I1), s		2.0		2.6		2.0		2.3				
Green Ext Time (p_c), s		6.3		0.0		6.3		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				1.5								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
28: Main St & Sample St

2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	593	45	78	367	25	0	590	83	42	242	106
Future Volume (vph)	34	593	45	78	367	25	0	590	83	42	242	106
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	100		385	100		225
Storage Lanes	0		0	1		0	1		1	1		1
Taper Length (ft)	25			75			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30				30
Link Distance (ft)		437			457			1885				325
Travel Time (s)		11.9			12.5			42.8				7.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	15%	15%	15%	15%	15%	15%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	50
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	50
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8		7	4			2			6	
Permitted Phases	8			4			2			6		6
Detector Phase	8	8		7	4		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	20.0
Minimum Split (s)	28.9	28.9		13.9	34.2		30.0	30.0		35.9	35.9	35.9
Total Split (s)	45.0	45.0		14.0	59.0		41.0	41.0		41.0	41.0	41.0
Total Split (%)	45.0%	45.0%		14.0%	59.0%		41.0%	41.0%		41.0%	41.0%	41.0%
Maximum Green (s)	39.1	39.1		8.1	52.8		35.0	35.0		35.1	35.1	35.1
Yellow Time (s)	3.2	3.2		3.0	3.2		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.7	2.7		2.9	3.0		3.0	3.0		2.9	2.9	2.9
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		5.9		5.9	6.2		6.0	6.0		5.9	5.9	5.9
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		3.0	2.5		0.2	0.2		0.2	0.2	0.2
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	16.0	16.0			21.0		17.0	17.0		23.0	23.0	23.0
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	0

Intersection Summary

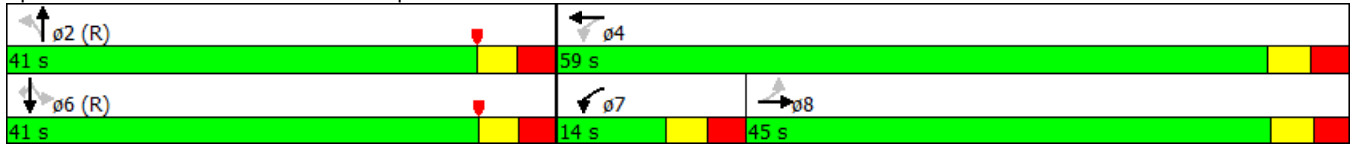
Area Type: Other
Cycle Length: 100

Lanes, Volumes, Timings
 28: Main St & Sample St

2014 2-way
 Timing Plan: AM













Actuated Cycle Length: 100
 Offset: 16 (16%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 28: Main St & Sample St





















HCM 2010 Signalized Intersection Summary
28: Main St & Sample St

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↔	↔↔		↔	↔↔		↔	↔	↔
Traffic Volume (veh/h)	34	593	45	78	367	25	0	590	83	42	242	106
Future Volume (veh/h)	34	593	45	78	367	25	0	590	83	42	242	106
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1652	1900	1652	1652	1900	1712	1712	1900	1712	1712	1712
Adj Flow Rate, veh/h	37	645	49	85	399	27	0	641	90	46	263	115
Adj No. of Lanes	0	2	0	1	2	0	1	2	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	15	15	15	15	15	15	11	11	11	11	11	11
Cap, veh/h	66	739	55	226	1202	81	72	1362	191	287	814	692
Arrive On Green	0.54	0.54	0.54	0.14	0.81	0.81	0.00	0.48	0.48	0.95	0.95	0.95
Sat Flow, veh/h	99	2724	204	1573	2985	201	920	2865	402	663	1712	1455
Grp Volume(v), veh/h	379	0	352	85	209	217	0	363	368	46	263	115
Grp Sat Flow(s),veh/h/ln	1559	0	1467	1573	1570	1617	920	1626	1641	663	1712	1455
Q Serve(g_s), s	12.2	0.0	21.2	3.6	3.5	3.6	0.0	15.1	15.1	2.8	1.1	0.5
Cycle Q Clear(g_c), s	21.3	0.0	21.2	3.6	3.5	3.6	0.0	15.1	15.1	18.0	1.1	0.5
Prop In Lane	0.10		0.14	1.00		0.12	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	462	0	398	226	632	651	72	773	780	287	814	692
V/C Ratio(X)	0.82	0.00	0.89	0.38	0.33	0.33	0.00	0.47	0.47	0.16	0.32	0.17
Avail Cap(c_a), veh/h	643	0	574	239	829	854	72	773	780	287	814	692
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.87	0.00	0.87	0.92	0.92	0.92	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	0.0	21.5	22.5	6.2	6.2	0.0	17.7	17.7	4.8	1.3	1.3
Incr Delay (d2), s/veh	4.5	0.0	9.1	1.0	0.2	0.2	0.0	2.0	2.0	1.2	1.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.4	0.0	14.1	2.8	2.6	2.9	0.0	11.6	11.7	1.1	1.2	0.5
LnGrp Delay(d),s/veh	25.8	0.0	30.6	23.5	6.4	6.4	0.0	19.8	19.8	6.0	2.4	1.8
LnGrp LOS	C		C	C	A	A		B	B	A	A	A
Approach Vol, veh/h		731			511			731			424	
Approach Delay, s/veh		28.1			9.2			19.8			2.6	
Approach LOS		C			A			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		53.5		46.5		53.5	13.1	33.3				
Change Period (Y+Rc), s		6.0		* 6.2		* 6	5.9	* 6.2				
Max Green Setting (Gmax), s		35.0		* 53		* 35	8.1	* 39				
Max Q Clear Time (g_c+I1), s		17.1		5.6		20.0	5.6	23.3				
Green Ext Time (p_c), s		0.4		4.5		0.4	0.1	3.8				
Intersection Summary												
HCM 2010 Ctrl Delay				17.0								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
29: Main St & Broadway St

2014 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	6	9	6	9	32	0	658	17	8	353	0
Future Volume (vph)	0	6	9	6	9	32	0	658	17	8	353	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		461			451			775			1885	
Travel Time (s)		12.6			12.3			17.6			42.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
30: Main St & Indiana Ave

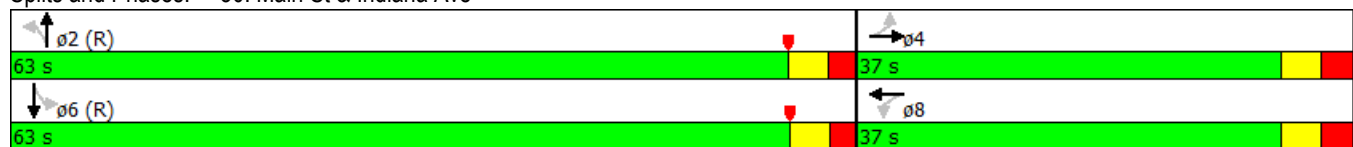
2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	244	72	5	95	19	156	640	8	9	300	59
Future Volume (vph)	17	244	72	5	95	19	156	640	8	9	300	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		0	250		0	250		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			200			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		463			445			1320			775	
Travel Time (s)		12.6			12.1			30.0			17.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	12%	12%	12%	12%	12%	12%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	28.2	28.2		31.5	31.5		25.2	25.2		25.1	25.1	
Total Split (s)	37.0	37.0		37.0	37.0		63.0	63.0		63.0	63.0	
Total Split (%)	37.0%	37.0%		37.0%	37.0%		63.0%	63.0%		63.0%	63.0%	
Maximum Green (s)	31.5	31.5		31.5	31.5		57.8	57.8		58.0	58.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		2.2	2.2		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)	5.5	5.5		5.5	5.5		5.2	5.2		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		19.0	19.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary






















Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 61 (61%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 30: Main St & Indiana Ave





















HCM 2010 Signalized Intersection Summary
30: Main St & Indiana Ave

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	244	72	5	95	19	156	640	8	9	300	59
Future Volume (veh/h)	17	244	72	5	95	19	156	640	8	9	300	59
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1696	1900	1696	1696	1900	1727	1727	1900	1727	1727	1900
Adj Flow Rate, veh/h	18	265	78	5	103	21	170	696	9	10	326	64
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	12	12	12	12	12	12	10	10	10	10	10	10
Cap, veh/h	395	396	117	196	430	88	603	985	13	469	812	159
Arrive On Green	0.31	0.31	0.31	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1149	1260	371	941	1368	279	918	1701	22	686	1403	275
Grp Volume(v), veh/h	18	0	343	5	0	124	170	0	705	10	0	390
Grp Sat Flow(s),veh/h/ln	1149	0	1631	941	0	1647	918	0	1723	686	0	1679
Q Serve(g_s), s	1.1	0.0	18.3	0.4	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.4	0.0	18.3	18.7	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.23	1.00		0.17	1.00		0.01	1.00		0.16
Lane Grp Cap(c), veh/h	395	0	513	196	0	518	603	0	998	469	0	972
V/C Ratio(X)	0.05	0.00	0.67	0.03	0.00	0.24	0.28	0.00	0.71	0.02	0.00	0.40
Avail Cap(c_a), veh/h	395	0	513	196	0	518	603	0	998	469	0	972
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.3	0.0	29.8	23.0	0.0	13.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	6.8	0.2	0.0	1.1	1.2	0.0	4.2	0.1	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	0.0	14.1	0.2	0.0	2.9	0.4	0.0	2.1	0.0	0.0	0.6
LnGrp Delay(d),s/veh	26.5	0.0	36.6	23.3	0.0	14.5	1.2	0.0	4.2	0.1	0.0	1.2
LnGrp LOS	C		D	C		B	A		A	A		A
Approach Vol, veh/h		361			129			875			400	
Approach Delay, s/veh		36.1			14.8			3.6			1.2	
Approach LOS		D			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		63.2		37.0		63.2		37.0				
Change Period (Y+Rc), s		* 5.2		5.5		* 5.2		5.5				
Max Green Setting (Gmax), s		* 58		31.5		* 58		31.5				
Max Q Clear Time (g_c+I1), s		2.0		20.3		2.0		20.7				
Green Ext Time (p_c), s		1.5		0.5		1.5		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			10.5									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
31: Main St & Calvert St

2014 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	3	36	7	11	37	22	671	5	15	328	18
Future Volume (vph)	44	3	36	7	11	37	22	671	5	15	328	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		520			445			1320			1320	
Travel Time (s)		14.2			12.1			30.0			30.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
32: Main St & Ewing Ave

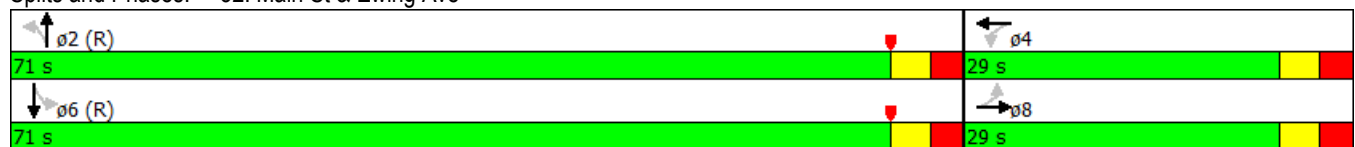
2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	92	30	44	42	48	48	578	15	18	271	89
Future Volume (vph)	82	92	30	44	42	48	48	578	15	18	271	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	125		0	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			100			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		546			440			5282			1320	
Travel Time (s)		12.4			10.0			120.0			30.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	15%	15%	15%	15%	15%	15%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	27.0	27.0		27.0	27.0		28.3	28.3		28.3	28.3	
Total Split (s)	29.0	29.0		29.0	29.0		71.0	71.0		71.0	71.0	
Total Split (%)	29.0%	29.0%		29.0%	29.0%		71.0%	71.0%		71.0%	71.0%	
Maximum Green (s)	23.4	23.4		23.4	23.4		65.5	65.5		65.5	65.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6		5.5	5.5		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		13.0	13.0		11.0	11.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary






















Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 27 (27%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 32: Main St & Ewing Ave



HCM 2010 Signalized Intersection Summary
32: Main St & Ewing Ave

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	92	30	44	42	48	48	578	15	18	271	89
Future Volume (veh/h)	82	92	30	44	42	48	48	578	15	18	271	89
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1652	1652	1900	1652	1652	1900	1727	1727	1900	1727	1727	1900
Adj Flow Rate, veh/h	89	100	33	48	46	52	52	628	16	20	295	97
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	15	15	15	15	15	15	10	10	10	10	10	10
Cap, veh/h	279	278	92	254	166	188	672	1098	28	398	816	268
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.65	0.65	0.65	1.00	1.00	1.00
Sat Flow, veh/h	1146	1190	393	1110	709	802	916	1677	43	726	1245	410
Grp Volume(v), veh/h	89	0	133	48	0	98	52	0	644	20	0	392
Grp Sat Flow(s),veh/h/ln	1146	0	1583	1110	0	1511	916	0	1720	726	0	1655
Q Serve(g_s), s	6.9	0.0	7.0	3.8	0.0	5.3	2.1	0.0	20.7	0.9	0.0	0.0
Cycle Q Clear(g_c), s	12.2	0.0	7.0	10.8	0.0	5.3	2.1	0.0	20.7	21.6	0.0	0.0
Prop In Lane	1.00		0.25	1.00		0.53	1.00		0.02	1.00		0.25
Lane Grp Cap(c), veh/h	279	0	370	254	0	354	672	0	1126	398	0	1084
V/C Ratio(X)	0.32	0.00	0.36	0.19	0.00	0.28	0.08	0.00	0.57	0.05	0.00	0.36
Avail Cap(c_a), veh/h	279	0	370	254	0	354	672	0	1126	398	0	1084
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	32.0	36.5	0.0	31.4	6.3	0.0	9.5	3.4	0.0	0.0
Incr Delay (d2), s/veh	3.0	0.0	2.7	1.6	0.0	1.9	0.2	0.0	2.1	0.2	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.3	0.0	6.0	2.3	0.0	4.3	1.0	0.0	15.6	0.4	0.0	0.5
LnGrp Delay(d),s/veh	39.4	0.0	34.7	38.2	0.0	33.3	6.5	0.0	11.6	3.6	0.0	0.9
LnGrp LOS	D		C	D		C	A		B	A		A
Approach Vol, veh/h		222			146			696			412	
Approach Delay, s/veh		36.6			34.9			11.2			1.1	
Approach LOS		D			C			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		71.0		29.0		71.0		29.0				
Change Period (Y+Rc), s		5.5		5.6		5.5		5.6				
Max Green Setting (Gmax), s		65.5		23.4		65.5		23.4				
Max Q Clear Time (g_c+I1), s		22.7		12.8		23.6		14.2				
Green Ext Time (p_c), s		1.3		0.2		1.3		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			14.6									
HCM 2010 LOS			B									

Lanes, Volumes, Timings
33: Main St & Chippewa Ave

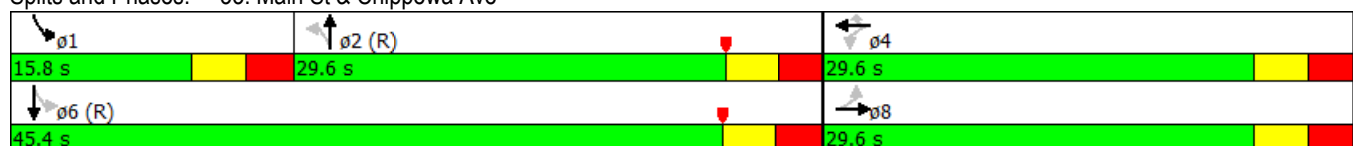
2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	19	9	19	15	382	12	111	65	167	112	40
Future Volume (vph)	16	19	9	19	15	382	12	111	65	167	112	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	50		100	0		0	200		0
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		604			416			627			5282	
Travel Time (s)		13.7			9.5			14.3			120.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	10%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		8			4			2		1	6	
Permitted Phases	8			4		4	2			6		
Minimum Split (s)	25.6	25.6		29.6	29.6	29.6	28.5	28.5		15.7	31.7	
Total Split (s)	29.6	29.6		29.6	29.6	29.6	29.6	29.6		15.8	45.4	
Total Split (%)	39.5%	39.5%		39.5%	39.5%	39.5%	39.5%	39.5%		21.1%	60.5%	
Maximum Green (s)	24.0	24.0		24.0	24.0	24.0	24.1	24.1		10.1	39.7	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.6	2.6	2.6	2.5	2.5		2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6	5.6		5.5		5.7	5.7	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)	13.0	13.0		17.0	17.0	17.0	16.0	16.0			19.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0			0	

Intersection Summary






















Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 33: Main St & Chippewa Ave



HCM 2010 Signalized Intersection Summary
33: Main St & Chippewa Ave

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	19	9	19	15	382	12	111	65	167	112	40
Future Volume (veh/h)	16	19	9	19	15	382	12	111	65	167	112	40
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1727	1900	1727	1900	1727	1727	1900
Adj Flow Rate, veh/h	17	21	10	21	16	415	13	121	71	182	122	43
Adj No. of Lanes	1	1	0	1	1	1	0	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	10	10	10	10	10	10	10
Cap, veh/h	388	374	178	509	583	469	64	324	178	649	648	228
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.13	0.53	0.53
Sat Flow, veh/h	935	1171	558	1346	1827	1468	40	1011	557	1645	1221	430
Grp Volume(v), veh/h	17	0	31	21	16	415	205	0	0	182	0	165
Grp Sat Flow(s),veh/h/ln	935	0	1729	1346	1827	1468	1608	0	0	1645	0	1651
Q Serve(g_s), s	1.0	0.0	0.9	0.8	0.5	20.2	0.0	0.0	0.0	4.9	0.0	3.9
Cycle Q Clear(g_c), s	1.4	0.0	0.9	1.8	0.5	20.2	7.4	0.0	0.0	4.9	0.0	3.9
Prop In Lane	1.00		0.32	1.00		1.00	0.06		0.35	1.00		0.26
Lane Grp Cap(c), veh/h	388	0	552	509	583	469	566	0	0	649	0	876
V/C Ratio(X)	0.04	0.00	0.06	0.04	0.03	0.89	0.36	0.00	0.00	0.28	0.00	0.19
Avail Cap(c_a), veh/h	388	0	552	509	583	469	566	0	0	649	0	876
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.1	0.0	17.7	18.4	17.6	24.3	19.9	0.0	0.0	11.4	0.0	9.2
Incr Delay (d2), s/veh	0.2	0.0	0.2	0.2	0.1	21.1	1.8	0.0	0.0	1.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	0.9	0.6	0.4	16.2	6.5	0.0	0.0	4.2	0.0	3.4
LnGrp Delay(d),s/veh	18.3	0.0	17.9	18.5	17.7	45.4	21.7	0.0	0.0	12.5	0.0	9.7
LnGrp LOS	B		B	B	B	D	C			B		A
Approach Vol, veh/h		48			452			205			347	
Approach Delay, s/veh		18.1			43.2			21.7			11.1	
Approach LOS		B			D			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	15.8	29.8		29.6		45.6		29.6				
Change Period (Y+Rc), s	* 5.7	* 5.7		5.6		* 5.7		5.6				
Max Green Setting (Gmax), s	* 10	* 24		24.0		* 40		24.0				
Max Q Clear Time (g_c+I1), s	6.9	9.4		22.2		5.9		3.4				
Green Ext Time (p_c), s	0.1	1.9		0.4		2.4		1.9				

Intersection Summary

HCM 2010 Ctrl Delay	27.3
HCM 2010 LOS	C

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
 34: Michigan St N & North Shore Dr

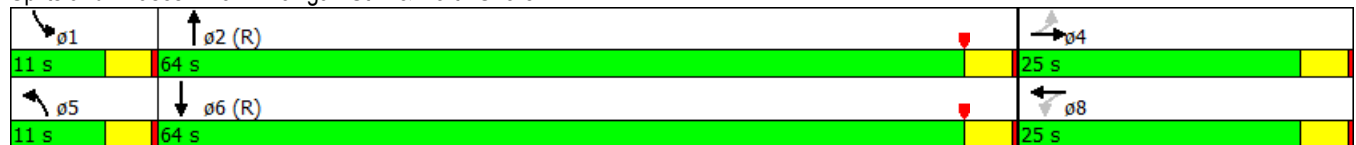
2014 2-way
 Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	82	57	84	47	25	41	718	79	42	1128	3
Future Volume (vph)	1	82	57	84	47	25	41	718	79	42	1128	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	50		0	100		0	75		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			100			100			100		
Right Turn on Red			No			No			No			No
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		476			523			1365			444	
Travel Time (s)		13.0			14.3			31.0			10.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	12%	12%	12%	12%	12%	12%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Minimum Split (s)	23.0	23.0		23.0	23.0		8.0	23.0		8.0	23.0	
Total Split (s)	25.0	25.0		25.0	25.0		11.0	64.0		11.0	64.0	
Total Split (%)	25.0%	25.0%		25.0%	25.0%		11.0%	64.0%		11.0%	64.0%	
Maximum Green (s)	21.0	21.0		21.0	21.0		7.0	60.0		7.0	60.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			12.0			12.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	

Intersection Summary






















Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 34: Michigan St N & North Shore Dr



















HCM 2010 Signalized Intersection Summary
 34: Michigan St N & North Shore Dr

2014 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	82	57	84	47	25	41	718	79	42	1128	3
Future Volume (veh/h)	1	82	57	84	47	25	41	718	79	42	1128	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1696	1696	1900	1696	1696	1900
Adj Flow Rate, veh/h	1	89	62	91	51	27	45	780	86	46	1226	3
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	12	12	12	12	12	12
Cap, veh/h	289	207	144	228	232	123	113	1757	194	113	1979	5
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.07	0.60	0.60	0.07	0.60	0.60
Sat Flow, veh/h	1266	985	686	1185	1105	585	1616	2928	323	1616	3299	8
Grp Volume(v), veh/h	1	0	151	91	0	78	45	429	437	46	599	630
Grp Sat Flow(s),veh/h/ln	1266	0	1671	1185	0	1689	1616	1612	1639	1616	1612	1695
Q Serve(g_s), s	0.1	0.0	7.8	7.2	0.0	3.8	2.7	14.5	14.5	2.7	23.7	23.7
Cycle Q Clear(g_c), s	3.9	0.0	7.8	15.1	0.0	3.8	2.7	14.5	14.5	2.7	23.7	23.7
Prop In Lane	1.00		0.41	1.00		0.35	1.00		0.20	1.00		0.00
Lane Grp Cap(c), veh/h	289	0	351	228	0	355	113	967	984	113	967	1017
V/C Ratio(X)	0.00	0.00	0.43	0.40	0.00	0.22	0.40	0.44	0.44	0.41	0.62	0.62
Avail Cap(c_a), veh/h	289	0	351	228	0	355	113	967	984	113	967	1017
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.3	0.0	34.3	40.8	0.0	32.7	44.5	10.9	10.9	44.5	12.7	12.7
Incr Delay (d2), s/veh	0.0	0.0	3.8	5.2	0.0	1.4	10.1	1.5	1.5	10.5	3.0	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	7.2	4.9	0.0	3.5	2.7	11.1	11.3	2.8	16.8	17.5
LnGrp Delay(d),s/veh	34.3	0.0	38.1	46.0	0.0	34.1	54.6	12.4	12.4	55.0	15.7	15.6
LnGrp LOS	C		D	D		C	D	B	B	E	B	B
Approach Vol, veh/h		152			169			911			1275	
Approach Delay, s/veh		38.1			40.5			14.5			17.1	
Approach LOS		D			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	64.0		25.0	11.0	64.0		25.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	60.0		21.0	7.0	60.0		21.0				
Max Q Clear Time (g_c+I1), s	4.7	16.5		9.8	4.7	25.7		17.1				
Green Ext Time (p_c), s	0.0	22.8		1.3	0.0	20.1		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			19.0									
HCM 2010 LOS			B									

Lanes, Volumes, Timings
 35: Michigan St N & Bartlett St

2014 2-way
 Timing Plan: AM





















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	172	29	84	9	15	6	120	641	25	20	824	298
Future Volume (vph)	172	29	84	9	15	6	120	641	25	20	824	298
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		472			392			645			1365	
Travel Time (s)		10.7			8.9			14.7			31.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	12%	12%	12%	12%	12%	12%
Parking (#/hr)		3	3		3	3						
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary

Area Type: Other
 Control Type: Roundabout

Lanes, Volumes, Timings
36: Michigan St N & Navarre St

2014 2-way
Timing Plan: AM

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	46	0	16	17	0	21	57	720	58	24	814	78	
Future Volume (vph)	46	0	16	17	0	21	57	720	58	24	814	78	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	125		0	125		0	
Storage Lanes	1		0	0		0	1		0	1		0	
Taper Length (ft)	25			25			100			100			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		25			25			30			30		
Link Distance (ft)		230			391			500			645		
Travel Time (s)		6.3			10.7			11.4			14.7		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	12%	12%	12%	12%	12%	12%	
Parking (#/hr)				5	5	5							
Shared Lane Traffic (%)													
Number of Detectors	1	1		1	1		1	1		1	1		
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru		
Leading Detector (ft)	50	50		20	50		50	50		50	50		
Trailing Detector (ft)	0	0		0	0		0	0		0	0		
Detector 1 Position(ft)	0	0		0	0		0	0		0	0		
Detector 1 Size(ft)	50	50		20	50		50	50		50	50		
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA		
Protected Phases		8			4		5	2		1	6		
Permitted Phases	8			4			2			6			
Detector Phase	8	8		4	4		5	2		1	6		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0		8.0	30.0		4.0	30.0		
Minimum Split (s)	29.7	29.7		29.7	29.7		15.0	35.5		9.2	35.5		
Total Split (s)	29.8	29.8		29.8	29.8		15.0	50.9		9.3	45.2		
Total Split (%)	33.1%	33.1%		33.1%	33.1%		16.7%	56.6%		10.3%	50.2%		
Maximum Green (s)	24.1	24.1		24.1	24.1		9.7	45.6		4.1	40.0		
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
All-Red Time (s)	2.7	2.7		2.7	2.7		2.3	2.3		2.2	2.2		
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0		
Total Lost Time (s)	5.7	5.7			5.7		5.3	5.3		5.2	5.2		
Lead/Lag							Lead	Lead		Lag	Lag		
Lead-Lag Optimize?							Yes	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Recall Mode	None	None		None	None		None	Max		None	Max		
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0		
Flash Dont Walk (s)	17.0	17.0		17.0	17.0			11.0			10.0		
Pedestrian Calls (#/hr)	0	0		0	0			0			0		

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings
 36: Michigan St N & Navarre St

2014 2-way
 Timing Plan: AM

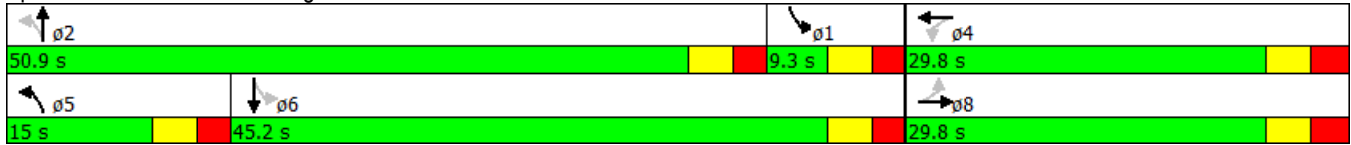
Cycle Length: 90

Actuated Cycle Length: 71.9

Natural Cycle: 85

Control Type: Semi Act-Uncoord

Splits and Phases: 36: Michigan St N & Navarre St




















HCM 2010 Signalized Intersection Summary
 36: Michigan St N & Navarre St

2014 2-way
 Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	0	16	17	0	21	57	720	58	24	814	78
Future Volume (veh/h)	46	0	16	17	0	21	57	720	58	24	814	78
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1900	1827	1900	1696	1696	1900	1696	1696	1900
Adj Flow Rate, veh/h	50	0	17	18	0	23	62	783	63	26	885	85
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	12	12	12	12	12	12
Cap, veh/h	279	0	192	124	21	92	389	1935	156	385	1692	163
Arrive On Green	0.12	0.00	0.12	0.12	0.00	0.12	0.08	0.64	0.64	0.01	0.57	0.57
Sat Flow, veh/h	1356	0	1553	412	171	744	1616	3022	243	1616	2972	285
Grp Volume(v), veh/h	50	0	17	41	0	0	62	417	429	26	480	490
Grp Sat Flow(s),veh/h/ln	1356	0	1553	1327	0	0	1616	1612	1654	1616	1612	1646
Q Serve(g_s), s	0.0	0.0	0.7	0.0	0.0	0.0	1.2	9.0	9.0	0.0	13.0	13.0
Cycle Q Clear(g_c), s	1.9	0.0	0.7	1.8	0.0	0.0	1.2	9.0	9.0	0.0	13.0	13.0
Prop In Lane	1.00		1.00	0.44		0.56	1.00		0.15	1.00		0.17
Lane Grp Cap(c), veh/h	279	0	192	237	0	0	389	1032	1059	385	918	937
V/C Ratio(X)	0.18	0.00	0.09	0.17	0.00	0.00	0.16	0.40	0.40	0.07	0.52	0.52
Avail Cap(c_a), veh/h	570	0	525	512	0	0	481	1032	1059	465	918	937
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	0.0	27.6	28.1	0.0	0.0	7.9	6.2	6.2	10.6	9.4	9.4
Incr Delay (d2), s/veh	0.3	0.0	0.2	0.3	0.0	0.0	0.2	1.2	1.2	0.1	2.1	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	0.0	0.6	1.4	0.0	0.0	0.9	7.7	7.8	0.5	10.4	10.5
LnGrp Delay(d),s/veh	28.4	0.0	27.8	28.5	0.0	0.0	8.1	7.4	7.4	10.7	11.5	11.5
LnGrp LOS	C		C	C			A	A	A	B	B	B
Approach Vol, veh/h		67			41			908			996	
Approach Delay, s/veh		28.3			28.5			7.4			11.5	
Approach LOS		C			C			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	50.9		14.5	11.0	45.7		14.5				
Change Period (Y+Rc), s	* 5.2	* 5.3		* 5.7	* 5.3	* 5.2		* 5.7				
Max Green Setting (Gmax), s	* 4.1	* 46		* 24	* 9.7	* 40		* 24				
Max Q Clear Time (g_c+I1), s	2.0	11.0		3.8	3.2	15.0		3.9				
Green Ext Time (p_c), s	0.0	4.0		0.4	0.1	4.7		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			10.6									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 37: Michigan St N & Main St/Marion St

2014 2-way
 Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	379	30	2	6	9	0	18	462	19	6	461	388
Future Volume (vph)	379	30	2	6	9	0	18	462	19	6	461	388
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	50			25			100			25		
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		345			379			528			500	
Travel Time (s)		7.8			10.3			12.0			11.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	12%	12%	12%	12%	12%	12%
Parking (#/hr)									5			
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary

Area Type: CBD
 Control Type: Roundabout

Lanes, Volumes, Timings
 38: St. Joseph St/Michigan St & LaSalle Ave#

2014 2-way
 Timing Plan: AM



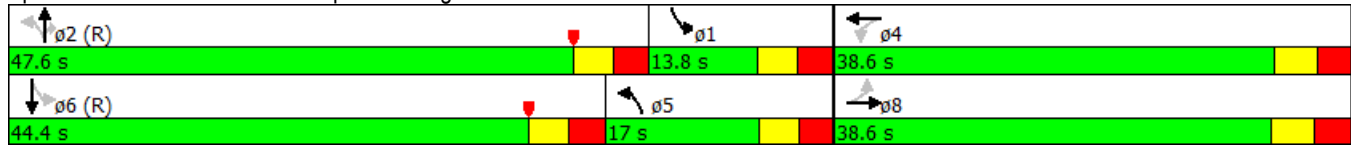
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↗	↖	↗	
Traffic Volume (vph)	46	655	75	39	454	99	211	377	111	15	402	31
Future Volume (vph)	46	655	75	39	454	99	211	377	111	15	402	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	0		0	350		240	200		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	75			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		437			700			614			492	
Travel Time (s)		11.9			19.1			16.7			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	12%	12%	12%	12%	12%	12%
Parking (#/hr)		0										
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template				Left			Left	Thru	Right		Thru	
Leading Detector (ft)	50	50		20	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		20	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		4	4		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		8.0	20.0	20.0	8.0	20.0	
Minimum Split (s)	32.1	32.1		31.2	31.2		13.6	28.6	28.6	13.7	28.7	
Total Split (s)	38.6	38.6		38.6	38.6		17.0	47.6	47.6	13.8	44.4	
Total Split (%)	38.6%	38.6%		38.6%	38.6%		17.0%	47.6%	47.6%	13.8%	44.4%	
Maximum Green (s)	32.5	32.5		32.8	32.8		11.4	42.0	42.0	8.1	38.7	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.9	2.9		2.6	2.6		2.6	2.6	2.6	2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.1	6.1		5.8	5.8		5.6	5.6	5.6	5.7	5.7	
Lead/Lag							Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	19.0	19.0		14.0	14.0			16.0	16.0		16.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	

Intersection Summary

Area Type: CBD























Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 67 (67%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 38: St. Joseph St/Michigan St & LaSalle Ave#



HCM 2010 Signalized Intersection Summary
 38: St. Joseph St/Michigan St & LaSalle Ave#

2014 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	655	75	39	454	99	211	377	111	15	402	31
Future Volume (veh/h)	46	655	75	39	454	99	211	377	111	15	402	31
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1613	1613	1710	1613	1613	1710	1527	1527	1527	1527	1527	1710
Adj Flow Rate, veh/h	50	712	82	42	493	108	229	410	121	16	437	34
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	12	12	12	12	12	12
Cap, veh/h	164	839	97	127	758	165	350	641	545	432	541	42
Arrive On Green	0.61	0.61	0.61	0.30	0.30	0.30	0.27	0.84	0.84	0.10	0.39	0.39
Sat Flow, veh/h	706	2771	319	590	2504	546	1454	1527	1298	1454	1399	109
Grp Volume(v), veh/h	50	394	400	42	301	300	229	410	121	16	0	471
Grp Sat Flow(s),veh/h/ln	706	1533	1557	590	1533	1517	1454	1527	1298	1454	0	1508
Q Serve(g_s), s	6.1	20.8	20.9	7.0	17.0	17.2	1.3	9.3	1.8	0.0	0.0	27.9
Cycle Q Clear(g_c), s	23.3	20.8	20.9	27.8	17.0	17.2	1.3	9.3	1.8	0.0	0.0	27.9
Prop In Lane	1.00		0.20	1.00		0.36	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	164	464	471	127	464	459	350	641	545	432	0	583
V/C Ratio(X)	0.30	0.85	0.85	0.33	0.65	0.65	0.65	0.64	0.22	0.04	0.00	0.81
Avail Cap(c_a), veh/h	180	498	506	142	503	498	350	641	545	432	0	583
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.60	1.00	1.00	1.00	0.78	0.78	0.78	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.8	17.9	17.9	44.2	30.2	30.3	29.6	5.4	4.8	18.6	0.0	27.3
Incr Delay (d2), s/veh	0.2	7.2	7.2	0.6	1.8	2.0	3.4	3.8	0.7	0.0	0.0	11.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.1	13.3	13.5	2.1	11.9	11.9	8.3	7.3	1.3	0.5	0.0	19.4
LnGrp Delay(d),s/veh	26.0	25.1	25.1	44.8	32.1	32.3	33.0	9.2	5.5	18.6	0.0	38.7
LnGrp LOS	C	C	C	D	C	C	C	A	A	B		D
Approach Vol, veh/h		844			643			760			487	
Approach Delay, s/veh		25.1			33.0			15.8			38.1	
Approach LOS		C			C			B			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	16.0	47.6		36.4	19.2	44.4		36.4				
Change Period (Y+Rc), s	5.7	* 5.6		* 6.1	* 5.7	* 5.7		* 6.1				
Max Green Setting (Gmax), s	8.1	* 42		* 33	* 11	* 39		* 33				
Max Q Clear Time (g_c+I1), s	2.0	11.3		29.8	3.3	29.9		25.3				
Green Ext Time (p_c), s	0.5	2.5		0.4	0.6	1.5		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				26.7								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
39: Michigan St# & Colfax Ave

2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	204	30	119	259	0	14	0	48	0	0	0
Future Volume (vph)	0	204	30	119	259	0	14	0	48	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	15	11	11	11	11
Storage Length (ft)	150		0	75		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			75			25			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25				30
Link Distance (ft)		440			340			493				127
Travel Time (s)		12.0			9.3			13.4				2.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Parking (#/hr)		5	5									
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA		Perm	NA				
Protected Phases		8			4			2				6
Permitted Phases				4			2			6		
Minimum Split (s)		26.0		26.0	26.0		26.7	26.7		26.5		26.5
Total Split (s)		65.0		65.0	65.0		35.0	35.0		35.0		35.0
Total Split (%)		65.0%		65.0%	65.0%		35.0%	35.0%		35.0%		35.0%
Maximum Green (s)		60.0		60.0	60.0		29.3	29.3		29.5		29.5
Yellow Time (s)		3.0		3.0	3.0		3.0	3.0		3.0		3.0
All-Red Time (s)		2.0		2.0	2.0		2.7	2.7		2.5		2.5
Lost Time Adjust (s)		0.0		0.0	0.0			0.0				0.0
Total Lost Time (s)		5.0		5.0	5.0			5.7				5.5
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0		14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		0		0	0		10	10		0		0

Intersection Summary


















Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 70 (70%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 39: Michigan St# & Colfax Ave






















HCM 2010 Signalized Intersection Summary
 39: Michigan St# & Colfax Ave

2014 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	204	30	119	259	0	14	0	48	0	0	0
Future Volume (veh/h)	0	204	30	119	259	0	14	0	48	0	0	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1644	1710	1644	1644	0	1710	1678	1710	1710	1613	1710
Adj Flow Rate, veh/h	0	222	33	129	282	0	15	0	52	0	0	0
Adj No. of Lanes	0	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	4	4	4	4	0	6	6	6	6	6	6
Cap, veh/h	0	733	109	664	985	0	115	22	322	0	475	0
Arrive On Green	0.00	1.00	1.00	1.00	1.00	0.00	0.30	0.00	0.29	0.00	0.00	0.00
Sat Flow, veh/h	0	1225	182	989	1644	0	242	74	1093	0	1613	0
Grp Volume(v), veh/h	0	0	255	129	282	0	67	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1407	989	1644	0	1408	0	0	0	1613	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	3.3	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.00		0.13	1.00		0.00	0.22		0.78	0.00		0.00
Lane Grp Cap(c), veh/h	0	0	842	664	985	0	472	0	0	0	475	0
V/C Ratio(X)	0.00	0.00	0.30	0.19	0.29	0.00	0.14	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	0	842	664	985	0	472	0	0	0	475	0
HCM Platoon Ratio	1.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	26.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.9	0.7	0.7	0.0	0.6	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.4	0.2	0.4	0.0	2.6	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.9	0.7	0.7	0.0	26.7	0.0	0.0	0.0	0.0	0.0
LnGrp LOS			A	A	A		C					
Approach Vol, veh/h		255			411			67			0	
Approach Delay, s/veh		0.9			0.7			26.7			0.0	
Approach LOS		A			A			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		35.2		65.0		35.2		65.0				
Change Period (Y+Rc), s		* 5.7		5.0		* 5.7		5.0				
Max Green Setting (Gmax), s		* 29		60.0		* 30		60.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			3.2									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 40: Michigan St# & Washington St

2014 2-way
 Timing Plan: AM

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	12	17	9	18	4	22	14	3	0	39	44
Future Volume (vph)	62	12	17	9	18	4	22	14	3	0	39	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	15	11	11	15	11
Storage Length (ft)	50		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			25			25			25		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		437			422			487			493	
Travel Time (s)		11.9			11.5			13.3			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Parking (#/hr)		5	5		5	5						
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: CBD
 Control Type: Unsignalized

Lanes, Volumes, Timings
41: Michigan St# & Jefferson Blvd

2014 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	86	11	4	106	41	11	12	10	4	30	20
Future Volume (vph)	15	86	11	4	106	41	11	12	10	4	30	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	15	11
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			425			480			487	
Travel Time (s)		12.0			11.6			13.1			13.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Parking (#/hr)	5	5	5	5	5	5						
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	CBD											
Control Type:	Unsignalized											

Lanes, Volumes, Timings
42: Michigan St# & Wayne St

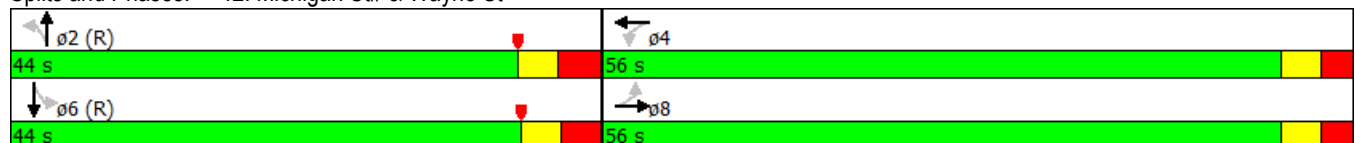
2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	40	4	24	63	16	1	17	7	2	23	7
Future Volume (vph)	6	40	4	24	63	16	1	17	7	2	23	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			50			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			25	
Link Distance (ft)		445			405			488			480	
Travel Time (s)		12.1			11.0			11.1			13.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Parking (#/hr)		5	5		3	3						
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	24.5	24.5		24.5	24.5		30.3	30.3		27.0	27.0	
Total Split (s)	56.0	56.0		56.0	56.0		44.0	44.0		44.0	44.0	
Total Split (%)	56.0%	56.0%		56.0%	56.0%		44.0%	44.0%		44.0%	44.0%	
Maximum Green (s)	50.5	50.5		50.5	50.5		37.7	37.7		38.0	38.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		3.3	3.3		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.3	6.3		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0		9.0	9.0		17.0	17.0		14.0	14.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary




















Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 10 (10%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 42: Michigan St# & Wayne St
























HCM 2010 Signalized Intersection Summary
42: Michigan St# & Wayne St

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	40	4	24	63	16	1	17	7	2	23	7
Future Volume (veh/h)	6	40	4	24	63	16	1	17	7	2	23	7
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1710	1613	1710	1710	1613	1710
Adj Flow Rate, veh/h	7	43	4	26	68	17	1	18	8	2	25	8
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	6	6	6	6	6	6
Cap, veh/h	653	653	61	653	566	142	44	401	171	52	436	133
Arrive On Green	0.50	0.50	0.50	1.00	1.00	1.00	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	1154	1297	121	1194	1124	281	17	1058	453	36	1151	352
Grp Volume(v), veh/h	7	0	47	26	0	85	27	0	0	35	0	0
Grp Sat Flow(s),veh/h/ln	1154	0	1417	1194	0	1406	1527	0	0	1538	0	0
Q Serve(g_s), s	0.3	0.0	1.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	0.0	1.7	1.8	0.0	0.0	1.1	0.0	0.0	1.4	0.0	0.0
Prop In Lane	1.00		0.09	1.00		0.20	0.04		0.30	0.06		0.23
Lane Grp Cap(c), veh/h	653	0	714	653	0	708	616	0	0	621	0	0
V/C Ratio(X)	0.01	0.00	0.07	0.04	0.00	0.12	0.04	0.00	0.00	0.06	0.00	0.00
Avail Cap(c_a), veh/h	653	0	714	653	0	708	616	0	0	621	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	12.4	0.0	12.8	0.0	0.0	0.0	19.7	0.0	0.0	19.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.1	0.0	0.3	0.1	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.0	1.3	0.1	0.0	0.1	0.9	0.0	0.0	1.2	0.0	0.0
LnGrp Delay(d),s/veh	12.5	0.0	13.0	0.1	0.0	0.3	19.8	0.0	0.0	20.0	0.0	0.0
LnGrp LOS	B		B	A		A	B			B		
Approach Vol, veh/h		54			111			27				35
Approach Delay, s/veh		12.9			0.3			19.8				20.0
Approach LOS		B			A			B				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		44.3		56.0		44.3		56.0				
Change Period (Y+Rc), s		* 6.3		5.5		* 6.3		5.5				
Max Green Setting (Gmax), s		* 38		50.5		* 38		50.5				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			8.7									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
43: Michigan St & Monroe St

2014 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	505	14	87	576	135	20	471	118	112	312	0
Future Volume (vph)	30	505	14	87	576	135	20	471	118	112	312	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	250		300	100		0	100		0
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	25			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		440			830			490			539	
Travel Time (s)		12.0			22.6			11.1			12.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)							0		0			
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1	1	1	2		1	1	
Detector Template	Left					Right		Thru		Left	Thru	
Leading Detector (ft)	20	50		50	50	20	50	100		50	50	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	50		50	50	20	50	6		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								94				
Detector 2 Size(ft)								6				
Detector 2 Type								Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)								0.0				
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		8		7	4			2		1	6	
Permitted Phases	8			4		4	2			6		
Detector Phase	8	8		7	4	4	2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		4.0	10.0	10.0	20.0	20.0		4.0	20.0	
Minimum Split (s)	32.2	32.2		9.0	32.2	32.2	32.1	32.1		9.0	32.9	
Total Split (s)	37.1	37.1		9.0	46.1	46.1	44.9	44.9		9.0	53.9	
Total Split (%)	37.1%	37.1%		9.0%	46.1%	46.1%	44.9%	44.9%		9.0%	53.9%	
Maximum Green (s)	31.9	31.9		4.0	39.9	39.9	38.8	38.8		4.0	47.0	
Yellow Time (s)	3.2	3.2		3.0	3.2	3.2	3.2	3.2		3.0	3.2	
All-Red Time (s)	2.0	2.0		2.0	3.0	3.0	2.9	2.9		2.0	3.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	-1.2	0.0		0.0	0.0	
Total Lost Time (s)	5.2	5.2		5.0	6.2	6.2	4.9	6.1		5.0	6.9	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Vehicle Extension (s)	0.2	0.2		3.0	0.2	0.2	0.2	0.2		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		None	C-Max	

Lanes, Volumes, Timings
 43: Michigan St & Monroe St

2014 2-way
 Timing Plan: AM

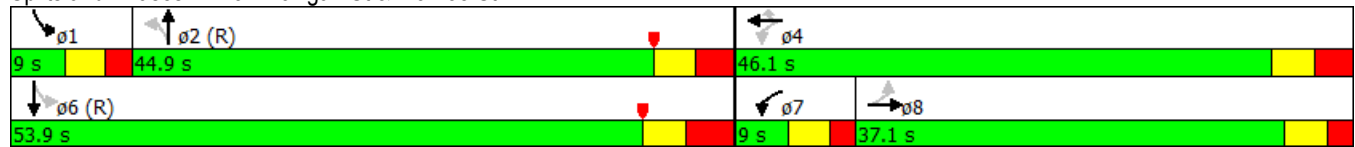


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	7.0	7.0			7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)	20.0	20.0			19.0	19.0	19.0	19.0			19.0	
Pedestrian Calls (#/hr)	0	0			0	0	0	0			0	

Intersection Summary






















Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 78 (78%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 105
 Control Type: Actuated-Coordinated

Splits and Phases: 43: Michigan St & Monroe St



















HCM 2010 Signalized Intersection Summary
43: Michigan St & Monroe St

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	505	14	87	576	135	20	471	118	112	312	0
Future Volume (veh/h)	30	505	14	87	576	135	20	471	118	112	312	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1792	1712	1712	1900	1712	1712	1900
Adj Flow Rate, veh/h	33	549	15	95	626	147	22	512	128	122	339	0
Adj No. of Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	11	11	11	11	11	11
Cap, veh/h	133	554	15	147	733	623	985	1146	286	818	1799	0
Arrive On Green	0.64	0.64	0.64	0.04	0.41	0.41	1.00	1.00	1.00	0.08	1.00	0.00
Sat Flow, veh/h	668	1737	47	1707	1792	1524	953	1190	298	1630	1712	0
Grp Volume(v), veh/h	33	0	564	95	626	147	22	0	640	122	339	0
Grp Sat Flow(s),veh/h/ln	668	0	1784	1707	1792	1524	953	0	1488	1630	1712	0
Q Serve(g_s), s	4.5	0.0	31.1	3.7	31.7	6.3	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	27.2	0.0	31.1	3.7	31.7	6.3	1.7	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.20	1.00		0.00
Lane Grp Cap(c), veh/h	133	0	569	147	733	623	985	0	1432	818	1799	0
V/C Ratio(X)	0.25	0.00	0.99	0.65	0.85	0.24	0.02	0.00	0.45	0.15	0.19	0.00
Avail Cap(c_a), veh/h	133	0	569	147	733	623	985	0	1432	820	1799	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.40	0.00	0.40	1.00	1.00	1.00	1.00	0.00	1.00	0.75	0.75	0.00
Uniform Delay (d), s/veh	27.5	0.0	18.0	26.1	26.8	19.3	0.0	0.0	0.0	0.1	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	21.7	9.5	9.2	0.1	0.0	0.0	1.0	0.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.0	22.6	3.8	24.4	4.8	0.0	0.0	0.7	0.3	0.2	0.0
LnGrp Delay(d),s/veh	27.7	0.0	39.7	35.7	36.0	19.4	0.1	0.0	1.0	0.1	0.2	0.0
LnGrp LOS	C		D	D	D	B	A		A	A	A	
Approach Vol, veh/h		597			868			662			461	
Approach Delay, s/veh		39.0			33.2			1.0			0.2	
Approach LOS		D			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	8.9	104.8		47.1		113.7	9.0	38.1				
Change Period (Y+Rc), s	5.0	* 6.9		* 6.2		6.9	5.0	* 6.2				
Max Green Setting (Gmax), s	4.0	* 39		* 40		47.0	4.0	* 32				
Max Q Clear Time (g_c+I1), s	2.0	3.7		33.7		2.0	5.7	33.1				
Green Ext Time (p_c), s	0.1	2.2		0.4		2.2	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				20.4								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
44: Michigan St & South St

2014 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	4	3	4	3	9	8	602	10	7	410	0
Future Volume (vph)	2	4	3	4	3	9	8	602	10	7	410	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		445			772			486			490	
Travel Time (s)		12.1			21.1			11.0			11.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	




















Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
45: Michigan St & Bronson St

2014 2-way
Timing Plan: AM

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	3	4	1	4	5	8	2	624	10	7	428	0	
Future Volume (vph)	3	4	1	4	5	8	2	624	10	7	428	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	100		0	100		0	
Storage Lanes	0		0	0		0	1		0	1		0	
Taper Length (ft)	25			25			50			50			
Right Turn on Red			Yes			No			Yes			Yes	
Link Speed (mph)		25			25			30				30	
Link Distance (ft)		453			775			780				486	
Travel Time (s)		12.4			21.1			17.7				11.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%	
Parking (#/hr)							0		0				
Shared Lane Traffic (%)													
Number of Detectors	1	1		1	1		1	1		1	1		
Detector Template													
Leading Detector (ft)	50	50		50	50		50	50		50	50		
Trailing Detector (ft)	0	0		0	0		0	0		0	0		
Detector 1 Position(ft)	0	0		0	0		0	0		0	0		
Detector 1 Size(ft)	50	50		50	50		50	50		50	50		
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		8			4			2				6	
Permitted Phases	8			4			2			6			
Detector Phase	8	8		4	4		2	2		6	6		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0		
Minimum Split (s)	32.9	32.9		31.9	31.9		25.2	25.2		25.3	25.3		
Total Split (s)	33.0	33.0		33.0	33.0		67.0	67.0		67.0	67.0		
Total Split (%)	33.0%	33.0%		33.0%	33.0%		67.0%	67.0%		67.0%	67.0%		
Maximum Green (s)	27.1	27.1		27.1	27.1		61.8	61.8		61.7	61.7		
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
All-Red Time (s)	2.9	2.9		2.9	2.9		2.2	2.2		2.3	2.3		
Lost Time Adjust (s)		0.0			0.0		-0.6	0.0		0.0	0.0		
Total Lost Time (s)		5.9			5.9		4.6	5.2		5.3	5.3		
Lead/Lag													
Lead-Lag Optimize?													
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max		
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0		
Flash Dont Walk (s)	20.0	20.0		19.0	19.0		11.0	11.0		13.0	13.0		
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0		

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings
45: Michigan St & Bronson St

2014 2-way
Timing Plan: AM













Cycle Length: 100
Actuated Cycle Length: 100
Offset: 71 (71%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 45: Michigan St & Bronson St



HCM 2010 Signalized Intersection Summary
45: Michigan St & Bronson St

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	3	4	1	4	5	8	2	624	10	7	428	0
Future Volume (veh/h)	3	4	1	4	5	8	2	624	10	7	428	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1712	1712	1900	1712	1712	1900
Adj Flow Rate, veh/h	3	4	1	4	5	9	2	678	11	8	465	0
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	11	11	11	11	11	11
Cap, veh/h	69	55	11	54	31	42	787	1265	21	649	1432	0
Arrive On Green	0.06	0.05	0.05	0.05	0.05	0.05	1.00	1.00	1.00	1.00	1.00	0.00
Sat Flow, veh/h	381	1074	208	204	605	809	849	1512	25	690	1712	0
Grp Volume(v), veh/h	8	0	0	18	0	0	2	0	689	8	465	0
Grp Sat Flow(s),veh/h/ln	1662	0	0	1618	0	0	849	0	1536	690	1712	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.4	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.37		0.12	0.22		0.50	1.00		0.02	1.00		0.00
Lane Grp Cap(c), veh/h	155	0	0	127	0	0	787	0	1285	649	1432	0
V/C Ratio(X)	0.05	0.00	0.00	0.14	0.00	0.00	0.00	0.00	0.54	0.01	0.32	0.00
Avail Cap(c_a), veh/h	504	0	0	473	0	0	787	0	1285	649	1432	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	45.0	0.0	0.0	45.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.5	0.0	0.0	0.0	0.0	1.6	0.0	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	0.0	0.9	0.0	0.0	0.0	0.0	1.0	0.0	0.4	0.0
LnGrp Delay(d),s/veh	45.1	0.0	0.0	46.0	0.0	0.0	0.0	0.0	1.6	0.0	0.6	0.0
LnGrp LOS	D			D			A		A	A	A	
Approach Vol, veh/h		8			18			691				473
Approach Delay, s/veh		45.1			46.0			1.6				0.6
Approach LOS		D			D			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		89.0		11.0		89.0		11.0				
Change Period (Y+Rc), s		* 5.3		5.9		* 5.3		5.9				
Max Green Setting (Gmax), s		* 62		27.1		* 62		27.1				
Max Q Clear Time (g_c+I1), s		2.0		3.0		2.0		2.4				
Green Ext Time (p_c), s		6.5		0.1		6.5		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				2.2								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
46: Michigan St & Sample St

2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	43	616	50	90	388	37	38	556	175	122	271	35
Future Volume (vph)	43	616	50	90	388	37	38	556	175	122	271	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	350		0	250		540	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	50			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		457			875			982			355	
Travel Time (s)		12.5			23.9			22.3			8.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	15%	15%	15%	15%	15%	15%	11%	11%	11%	11%	11%	11%
Parking (#/hr)												0
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases		8		7	4		5	2	7	1	6	
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		7	4		5	2	7	1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		5.0	20.0		5.0	20.0	5.0	8.0	20.0	
Minimum Split (s)	33.0	33.0		11.0	34.0		10.7	29.7	11.0	13.6	29.6	
Total Split (s)	33.0	33.0		11.0	44.0		10.7	42.4	11.0	13.6	45.3	
Total Split (%)	33.0%	33.0%		11.0%	44.0%		10.7%	42.4%	11.0%	13.6%	45.3%	
Maximum Green (s)	27.0	27.0		5.0	38.0		5.0	36.7	5.0	8.0	39.7	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		2.7	2.7	3.0	2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		-1.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.7	5.7	6.0	5.6	5.6	
Lead/Lag	Lag	Lag		Lead			Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	0.2	0.2		3.0	0.2		3.0	0.2	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	None	None	C-Max	
Walk Time (s)	7.0	7.0			7.0			7.0			7.0	
Flash Dont Walk (s)	20.0	20.0			21.0			17.0			17.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	

Intersection Summary

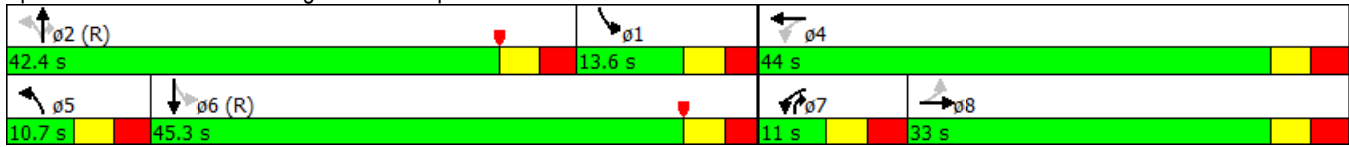
Area Type: Other

Lanes, Volumes, Timings
 46: Michigan St & Sample St

2014 2-way
 Timing Plan: AM























Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 20 (20%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated

Splits and Phases: 46: Michigan St & Sample St





















HCM 2010 Signalized Intersection Summary
46: Michigan St & Sample St

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	616	50	90	388	37	38	556	175	122	271	35
Future Volume (veh/h)	43	616	50	90	388	37	38	556	175	122	271	35
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1652	1652	1900	1652	1652	1900	1712	1712	1712	1712	1712	1900
Adj Flow Rate, veh/h	47	670	54	98	422	40	41	604	190	133	295	38
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	15	15	15	15	15	15	11	11	11	11	11	11
Cap, veh/h	275	727	59	165	1036	98	326	628	894	257	1200	153
Arrive On Green	0.17	0.17	0.17	0.05	0.36	0.36	0.09	0.73	0.73	0.03	0.14	0.14
Sat Flow, veh/h	822	2943	237	1573	2900	274	1630	1712	1455	1630	2754	351
Grp Volume(v), veh/h	47	357	367	98	228	234	41	604	190	133	173	160
Grp Sat Flow(s),veh/h/ln	822	1570	1610	1573	1570	1604	1630	1712	1455	1630	1626	1479
Q Serve(g_s), s	5.0	22.4	22.4	4.5	10.9	11.0	1.6	31.9	2.9	2.5	9.4	9.6
Cycle Q Clear(g_c), s	5.0	22.4	22.4	4.5	10.9	11.0	1.6	31.9	2.9	2.5	9.4	9.6
Prop In Lane	1.00		0.15	1.00		0.17	1.00		1.00	1.00		0.24
Lane Grp Cap(c), veh/h	275	388	398	165	561	573	326	628	894	257	709	644
V/C Ratio(X)	0.17	0.92	0.92	0.59	0.41	0.41	0.13	0.96	0.21	0.52	0.24	0.25
Avail Cap(c_a), veh/h	294	424	435	165	596	609	352	628	894	257	709	644
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	0.51	0.51	0.51	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.5	40.8	40.8	28.3	24.2	24.2	21.3	12.7	3.4	43.5	28.2	28.3
Incr Delay (d2), s/veh	0.1	14.0	13.9	5.6	0.2	0.2	0.2	27.6	0.5	1.8	0.8	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	15.2	15.5	4.0	8.3	8.5	1.3	26.0	3.5	6.7	7.9	7.4
LnGrp Delay(d),s/veh	33.5	54.7	54.7	33.8	24.3	24.4	21.5	40.3	3.9	45.3	29.0	29.2
LnGrp LOS	C	D	D	C	C	C	C	D	A	D	C	C
Approach Vol, veh/h		771			560			835			466	
Approach Delay, s/veh		53.4			26.0			31.1			33.7	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.9	42.4		41.7	9.1	49.2	11.0	30.7				
Change Period (Y+Rc), s	* 5.6	5.7		6.0	* 5.7	5.6	6.0	6.0				
Max Green Setting (Gmax), s	* 8	36.7		38.0	* 5	39.7	5.0	27.0				
Max Q Clear Time (g_c+I1), s	4.5	33.9		13.0	3.6	11.6	6.5	24.4				
Green Ext Time (p_c), s	0.2	0.1		0.4	0.0	1.9	0.0	0.3				
Intersection Summary												
HCM 2010 Ctrl Delay				37.0								
HCM 2010 LOS				D								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
47: Michigan St & Broadway St

2014 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	8	0	13	7	17	4	770	18	26	325	5
Future Volume (vph)	11	8	0	13	7	17	4	770	18	26	325	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		451			562			775			898	
Travel Time (s)		12.3			15.3			17.6			20.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
48: Michigan St & Indiana Ave

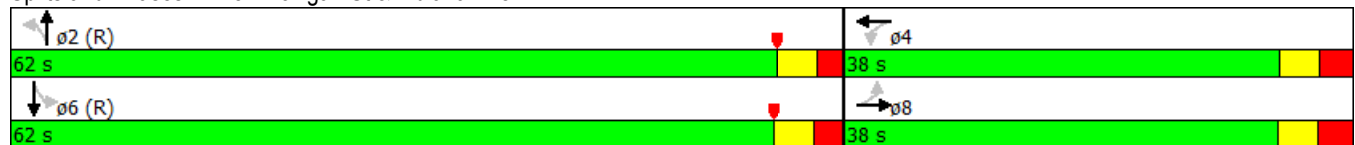
2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	17	203	13	13	11	25	749	12	24	287	26
Future Volume (vph)	33	17	203	13	13	11	25	749	12	24	287	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	250		0	250		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	200			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		445			540			1320			775	
Travel Time (s)		12.1			14.7			30.0			17.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	12%	12%	12%	12%	12%	12%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	29.7	29.7		38.0	38.0		32.0	32.0		35.0	35.0	
Total Split (s)	38.0	38.0		38.0	38.0		62.0	62.0		62.0	62.0	
Total Split (%)	38.0%	38.0%		38.0%	38.0%		62.0%	62.0%		62.0%	62.0%	
Maximum Green (s)	32.3	32.3		32.4	32.4		57.0	57.0		56.8	56.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.7	2.7		2.6	2.6		2.0	2.0		2.2	2.2	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	5.7			5.6		5.0	5.0		5.2	5.2	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	17.0	17.0		16.0	16.0		10.0	10.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		17	17		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 67 (67%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Pretimed

Splits and Phases: 48: Michigan St & Indiana Ave





















HCM 2010 Signalized Intersection Summary
48: Michigan St & Indiana Ave

2014 2-way
Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	17	203	13	13	11	25	749	12	24	287	26
Future Volume (veh/h)	33	17	203	13	13	11	25	749	12	24	287	26
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1696	1900	1900	1696	1900	1727	1727	1900	1727	1727	1900
Adj Flow Rate, veh/h	36	18	221	14	14	12	27	814	13	26	312	28
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	12	12	12	12	12	12	10	10	10	10	10	10
Cap, veh/h	407	35	436	137	130	94	618	963	15	420	888	80
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1256	110	1349	274	403	290	961	1695	27	612	1562	140
Grp Volume(v), veh/h	36	0	239	40	0	0	27	0	827	26	0	340
Grp Sat Flow(s),veh/h/ln	1256	0	1458	968	0	0	961	0	1722	612	0	1703
Q Serve(g_s), s	0.0	0.0	13.3	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.5	0.0	13.3	13.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.92	0.35		0.30	1.00		0.02	1.00		0.08
Lane Grp Cap(c), veh/h	407	0	471	361	0	0	618	0	979	420	0	968
V/C Ratio(X)	0.09	0.00	0.51	0.11	0.00	0.00	0.04	0.00	0.84	0.06	0.00	0.35
Avail Cap(c_a), veh/h	407	0	471	361	0	0	618	0	979	420	0	968
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.2	0.0	27.5	24.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.0	3.9	0.6	0.0	0.0	0.1	0.0	8.9	0.3	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	9.9	1.5	0.0	0.0	0.0	0.0	4.3	0.1	0.0	0.5
LnGrp Delay(d),s/veh	24.6	0.0	31.4	24.7	0.0	0.0	0.1	0.0	8.9	0.3	0.0	1.0
LnGrp LOS	C		C	C			A		A	A		A
Approach Vol, veh/h		275			40			854			366	
Approach Delay, s/veh		30.5			24.7			8.6			1.0	
Approach LOS		C			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		62.2		38.1		62.2		38.1				
Change Period (Y+Rc), s		* 5.2		* 5.7		* 5.2		* 5.7				
Max Green Setting (Gmax), s		* 57		* 32		* 57		* 32				
Max Q Clear Time (g_c+I1), s		2.0		15.6		2.0		15.3				
Green Ext Time (p_c), s		3.3		0.4		3.3		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			11.1									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
49: Michigan St & Calvert St

2014 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	3	6	12	8	16	23	716	14	36	426	7
Future Volume (vph)	15	3	6	12	8	16	23	716	14	36	426	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		445			510			1320			1320	
Travel Time (s)		12.1			13.9			30.0			30.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
50: Michigan St & Ewing Ave

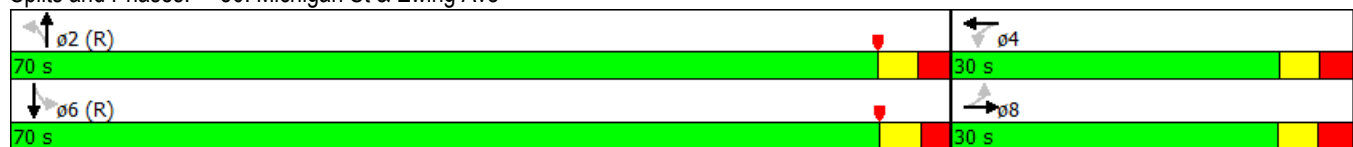
2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	72	5	56	112	85	19	630	28	108	305	14
Future Volume (vph)	50	72	5	56	112	85	19	630	28	108	305	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		150	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		440			540			2640			1320	
Travel Time (s)		10.0			12.3			60.0			30.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	15%	15%	15%	15%	15%	15%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	29.7	29.7		28.6	28.6		25.5	25.5		25.3	25.3	
Total Split (s)	30.0	30.0		30.0	30.0		70.0	70.0		70.0	70.0	
Total Split (%)	30.0%	30.0%		30.0%	30.0%		70.0%	70.0%		70.0%	70.0%	
Maximum Green (s)	24.3	24.3		24.4	24.4		64.5	64.5		64.7	64.7	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.7	2.7		2.6	2.6		2.5	2.5		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	5.7		5.6	5.6		5.5	5.5		5.3	5.3	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		13.0	13.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary






















Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 25 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 50: Michigan St & Ewing Ave





















HCM 2010 Signalized Intersection Summary
50: Michigan St & Ewing Ave

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	72	5	56	112	85	19	630	28	108	305	14
Future Volume (veh/h)	50	72	5	56	112	85	19	630	28	108	305	14
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1652	1652	1900	1652	1652	1900	1727	1727	1900	1727	1727	1900
Adj Flow Rate, veh/h	54	78	5	61	122	92	21	685	30	117	332	15
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	15	15	15	15	15	15	10	10	10	10	10	10
Cap, veh/h	196	374	24	321	213	161	688	1060	46	338	1058	48
Arrive On Green	0.49	0.49	0.49	0.24	0.24	0.24	0.65	0.65	0.65	1.00	1.00	1.00
Sat Flow, veh/h	1031	1536	98	1162	875	660	955	1643	72	679	1640	74
Grp Volume(v), veh/h	54	0	83	61	0	214	21	0	715	117	0	347
Grp Sat Flow(s),veh/h/ln	1031	0	1635	1162	0	1536	955	0	1715	679	0	1714
Q Serve(g_s), s	4.4	0.0	2.9	4.4	0.0	12.3	0.8	0.0	25.5	9.3	0.0	0.0
Cycle Q Clear(g_c), s	16.7	0.0	2.9	7.3	0.0	12.3	0.8	0.0	25.5	34.7	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.43	1.00		0.04	1.00		0.04
Lane Grp Cap(c), veh/h	196	0	398	321	0	374	688	0	1106	338	0	1106
V/C Ratio(X)	0.28	0.00	0.21	0.19	0.00	0.57	0.03	0.00	0.65	0.35	0.00	0.31
Avail Cap(c_a), veh/h	196	0	398	321	0	374	688	0	1106	338	0	1106
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.0	0.0	20.2	32.7	0.0	33.4	6.5	0.0	10.8	6.8	0.0	0.0
Incr Delay (d2), s/veh	3.4	0.0	1.2	1.3	0.0	6.3	0.1	0.0	2.9	2.8	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	0.0	2.5	2.7	0.0	9.9	0.4	0.0	18.7	3.6	0.0	0.4
LnGrp Delay(d),s/veh	32.4	0.0	21.4	34.0	0.0	39.6	6.5	0.0	13.8	9.6	0.0	0.7
LnGrp LOS	C		C	C		D	A		B	A		A
Approach Vol, veh/h		137			275			736			464	
Approach Delay, s/veh		25.8			38.4			13.6			3.0	
Approach LOS		C			D			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		70.2		30.1		70.2		30.1				
Change Period (Y+Rc), s		5.5		* 5.7		* 5.5		* 5.7				
Max Green Setting (Gmax), s		64.5		* 24		* 65		* 24				
Max Q Clear Time (g_c+I1), s		27.5		14.3		36.7		18.7				
Green Ext Time (p_c), s		3.9		0.3		3.9		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				15.8								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
51: Michigan St & Donmoyer Ave

2014 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1	0	11	19	48	0	613	14	22	327	1
Future Volume (vph)	0	1	0	11	19	48	0	613	14	22	327	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		316			461			2619			2640	
Travel Time (s)		8.6			12.6			59.5			60.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	



















Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
52: Michigan St & Chippewa Ave

2014 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	66	3	182	10	17	22	378	495	10	11	303	22
Future Volume (vph)	66	3	182	10	17	22	378	495	10	11	303	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	100		0	200		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			75			150			100		
Link Speed (mph)		30			30			35			30	
Link Distance (ft)		416			504			2638			2619	
Travel Time (s)		9.5			11.5			51.4			59.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary

Area Type: Other

Control Type: Roundabout

Lanes, Volumes, Timings
53: Michigan St & Ireland Rd

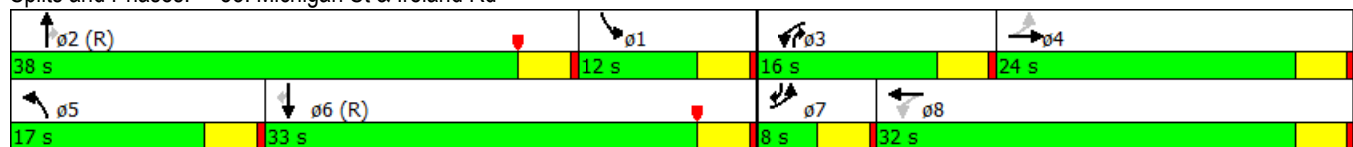
2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	188	87	166	186	213	231	672	123	122	371	0
Future Volume (vph)	5	188	87	166	186	213	231	672	123	122	371	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	200		0	225		0	275		275
Storage Lanes	1		0	1		0	2		1	2		1
Taper Length (ft)	100			100			150			150		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			35			35	
Link Distance (ft)		711			741			651			2638	
Travel Time (s)		13.9			16.8			12.7			51.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8					2			6
Minimum Split (s)	8.0	23.0		8.0	23.0		8.0	23.0	8.0	8.0	23.0	8.0
Total Split (s)	8.0	24.0		16.0	32.0		17.0	38.0	16.0	12.0	33.0	8.0
Total Split (%)	8.9%	26.7%		17.8%	35.6%		18.9%	42.2%	17.8%	13.3%	36.7%	8.9%
Maximum Green (s)	4.0	20.0		12.0	28.0		13.0	34.0	12.0	8.0	29.0	4.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		12.0			12.0			12.0			12.0	
Pedestrian Calls (#/hr)		0			0			0			0	

Intersection Summary























Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 53: Michigan St & Ireland Rd



HCM 2010 Signalized Intersection Summary
53: Michigan St & Ireland Rd

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	188	87	166	186	213	231	672	123	122	371	0
Future Volume (veh/h)	5	188	87	166	186	213	231	672	123	122	371	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1727	1900	1727	1727	1900	1727	1727	1727	1727	1727	1727
Adj Flow Rate, veh/h	5	204	95	180	202	232	251	730	134	133	403	0
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	313	490	220	439	511	457	461	1240	750	284	1057	538
Arrive On Green	0.04	0.22	0.22	0.13	0.31	0.31	0.14	0.38	0.38	0.09	0.32	0.00
Sat Flow, veh/h	1645	2204	989	1645	1641	1468	3191	3282	1468	3191	3282	1468
Grp Volume(v), veh/h	5	150	149	180	202	232	251	730	134	133	403	0
Grp Sat Flow(s),veh/h/ln	1645	1641	1553	1645	1641	1468	1596	1641	1468	1596	1641	1468
Q Serve(g_s), s	0.2	7.0	7.4	6.9	8.7	11.6	6.6	16.0	2.4	3.6	8.5	0.0
Cycle Q Clear(g_c), s	0.2	7.0	7.4	6.9	8.7	11.6	6.6	16.0	2.4	3.6	8.5	0.0
Prop In Lane	1.00		0.64	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	313	365	345	439	511	457	461	1240	750	284	1057	538
V/C Ratio(X)	0.02	0.41	0.43	0.41	0.40	0.51	0.54	0.59	0.18	0.47	0.38	0.00
Avail Cap(c_a), veh/h	313	365	345	439	511	457	461	1240	750	284	1057	538
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.3	30.0	30.1	20.2	24.4	25.4	35.8	22.4	4.4	39.0	23.6	0.0
Incr Delay (d2), s/veh	0.1	3.4	3.9	2.8	2.3	4.0	4.6	2.1	0.5	5.5	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	6.3	6.4	6.1	7.6	9.0	5.7	12.1	1.9	3.2	7.2	0.0
LnGrp Delay(d),s/veh	24.4	33.4	34.0	23.0	26.6	29.4	40.3	24.5	4.9	44.5	24.6	0.0
LnGrp LOS	C	C	C	C	C	C	D	C	A	D	C	
Approach Vol, veh/h		304			614			1115			536	
Approach Delay, s/veh		33.5			26.6			25.7			29.5	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	38.0	16.0	24.0	17.0	33.0	8.0	32.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	8.0	34.0	12.0	20.0	13.0	29.0	4.0	28.0				
Max Q Clear Time (g_c+I1), s	5.6	18.0	8.9	9.4	8.6	10.5	2.2	13.6				
Green Ext Time (p_c), s	0.7	4.9	0.1	3.3	0.3	2.9	0.0	3.9				
Intersection Summary												
HCM 2010 Ctrl Delay				27.6								
HCM 2010 LOS				C								

Lanes, Volumes, Timings
54: St. Joseph St & Colfax Ave

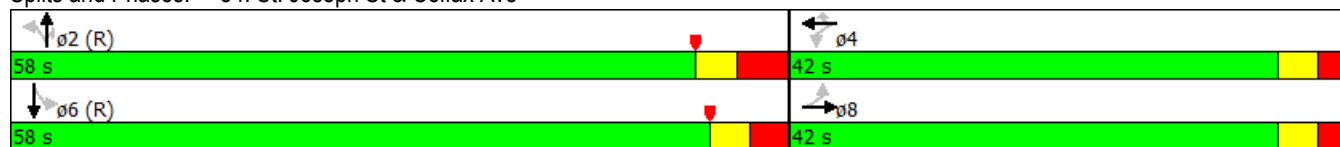
2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	233	5	11	339	199	2	486	22	58	420	37
Future Volume (vph)	14	233	5	11	339	199	2	486	22	58	420	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	0		200	250		80	250		0
Storage Lanes	1		0	0		1	1		1	1		0
Taper Length (ft)	50			25			25			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		340			552			503			614	
Travel Time (s)		9.3			15.1			13.7			16.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	12%	12%	12%	12%	12%	12%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2		2	6		
Minimum Split (s)	25.7	25.7		25.7	25.7	25.7	49.0	49.0	49.0	34.0	34.0	
Total Split (s)	42.0	42.0		42.0	42.0	42.0	58.0	58.0	58.0	58.0	58.0	
Total Split (%)	42.0%	42.0%		42.0%	42.0%	42.0%	58.0%	58.0%	58.0%	58.0%	58.0%	
Maximum Green (s)	36.3	36.3		36.3	36.3	36.3	51.0	51.0	51.0	52.0	52.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.7	2.7		2.7	2.7	2.7	4.0	4.0	4.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	-1.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7	5.7			5.7	5.7	6.0	7.0	7.0	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	9.0	9.0	9.0	7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		13.0	13.0	13.0	33.0	33.0	33.0	21.0	21.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0	0	0	0	

Intersection Summary























Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 66 (66%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 54: St. Joseph St & Colfax Ave




















HCM 2010 Signalized Intersection Summary
54: St. Joseph St & Colfax Ave

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	233	5	11	339	199	2	486	22	58	420	37
Future Volume (veh/h)	14	233	5	11	339	199	2	486	22	58	420	37
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1598	1598	1710	1710	1598	1598	1527	1527	1527	1527	1527	1710
Adj Flow Rate, veh/h	15	253	5	12	368	216	2	528	24	63	457	40
Adj No. of Lanes	1	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	7	7	7	7	7	7	12	12	12	12	12	12
Cap, veh/h	185	561	11	44	563	488	457	786	668	252	713	62
Arrive On Green	0.72	0.72	0.72	0.36	0.36	0.36	0.52	0.51	0.51	1.00	1.00	1.00
Sat Flow, veh/h	710	1562	31	19	1566	1358	735	1527	1298	699	1384	121
Grp Volume(v), veh/h	15	0	258	380	0	216	2	528	24	63	0	497
Grp Sat Flow(s),veh/h/ln	710	0	1593	1585	0	1358	735	1527	1298	699	0	1505
Q Serve(g_s), s	1.5	0.0	6.8	0.0	0.0	12.2	0.1	25.9	0.9	5.5	0.0	0.0
Cycle Q Clear(g_c), s	21.7	0.0	6.8	20.2	0.0	12.2	0.1	25.9	0.9	31.4	0.0	0.0
Prop In Lane	1.00		0.02	0.03		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	185	0	572	607	0	488	457	786	668	252	0	775
V/C Ratio(X)	0.08	0.00	0.45	0.63	0.00	0.44	0.00	0.67	0.04	0.25	0.00	0.64
Avail Cap(c_a), veh/h	185	0	572	607	0	488	457	786	668	252	0	775
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.3	0.0	10.1	27.2	0.0	24.6	11.4	18.2	12.1	7.8	0.0	0.0
Incr Delay (d2), s/veh	0.9	0.0	2.6	4.8	0.0	2.9	0.0	4.5	0.1	2.4	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	6.0	14.8	0.0	8.6	0.1	17.5	0.6	2.2	0.0	1.6
LnGrp Delay(d),s/veh	20.2	0.0	12.6	32.0	0.0	27.5	11.5	22.7	12.2	10.2	0.0	4.0
LnGrp LOS	C		B	C		C	B	C	B	B		A
Approach Vol, veh/h		273			596			554			560	
Approach Delay, s/veh		13.0			30.4			22.2			4.7	
Approach LOS		B			C			C			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		59.0		42.0		59.0		42.0				
Change Period (Y+Rc), s		7.0		* 5.7		* 7		* 5.7				
Max Green Setting (Gmax), s		51.0		* 36		* 52		* 36				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			18.5									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
55: St. Joseph St & Washington St

2014 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	17	0	0	0	25	509	0	0	418	18
Future Volume (vph)	2	0	17	0	0	0	25	509	0	0	418	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	11	11	14	11	11	11	11	11	11	11
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		422			152			490			503	
Travel Time (s)		11.5			4.1			11.1			11.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	12%	12%	12%	12%	12%	12%
Parking (#/hr)	3	3	3									
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1			1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50			50	
Trailing Detector (ft)	0	0		0	0		0	0			0	
Detector 1 Position(ft)	0	0		0	0		0	0			0	
Detector 1 Size(ft)	50	50		50	50		50	50			50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Turn Type	Perm	NA					Perm	NA			NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2					
Detector Phase	8	8		4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0			20.0	
Minimum Split (s)	24.2	24.2		25.9	25.9		26.9	26.9			25.3	
Total Split (s)	25.9	25.9		25.9	25.9		74.1	74.1			74.1	
Total Split (%)	25.9%	25.9%		25.9%	25.9%		74.1%	74.1%			74.1%	
Maximum Green (s)	20.7	20.7		20.4	20.4		68.8	68.8			69.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
All-Red Time (s)	2.2	2.2		2.5	2.5		2.3	2.3			1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	
Total Lost Time (s)		5.2			5.5		5.3	5.3			4.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	None	None		None	None		C-Max	C-Max			C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		6.0	6.0			9.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0			0	

Intersection Summary

Lanes, Volumes, Timings
 55: St. Joseph St & Washington St

2014 2-way
 Timing Plan: AM

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 61 (61%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 55: St. Joseph St & Washington St



HCM 2010 Signalized Intersection Summary
55: St. Joseph St & Washington St

2014 2-way
Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↖	↗			↖	
Traffic Volume (veh/h)	2	0	17	0	0	0	25	509	0	0	418	18
Future Volume (veh/h)	2	0	17	0	0	0	25	509	0	0	418	18
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1710	1644	1710	1710	1710	1710	1527	1527	1710	0	1527	1710
Adj Flow Rate, veh/h	2	0	18	0	0	0	27	553	0	0	454	20
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	12	12	12	0	12	12
Cap, veh/h	43	2	47	0	73	0	710	1297	0	0	1233	54
Arrive On Green	0.04	0.00	0.04	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Sat Flow, veh/h	73	50	1112	0	1710	0	751	1527	0	0	1452	64
Grp Volume(v), veh/h	20	0	0	0	0	0	27	553	0	0	0	474
Grp Sat Flow(s),veh/h/ln	1236	0	0	0	1710	0	751	1527	0	0	0	1516
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.10		0.90	0.00		0.00	1.00		0.00	0.00		0.04
Lane Grp Cap(c), veh/h	92	0	0	0	73	0	710	1297	0	0	0	1287
V/C Ratio(X)	0.22	0.00	0.00	0.00	0.00	0.00	0.04	0.43	0.00	0.00	0.00	0.37
Avail Cap(c_a), veh/h	293	0	0	0	349	0	710	1297	0	0	0	1287
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	0.00	0.86	0.86	0.00	0.00	0.00	0.71
Uniform Delay (d), s/veh	46.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.0	0.0	0.0	0.1	0.9	0.0	0.0	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.4
LnGrp Delay(d),s/veh	47.7	0.0	0.0	0.0	0.0	0.0	0.1	0.9	0.0	0.0	0.0	0.6
LnGrp LOS	D						A	A				A
Approach Vol, veh/h		20			0			580			474	
Approach Delay, s/veh		47.7			0.0			0.8			0.6	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		90.2		9.8		90.2		9.8				
Change Period (Y+Rc), s		* 5.3		5.5		* 5.3		* 5.5				
Max Green Setting (Gmax), s		* 69		20.4		* 70		* 21				
Max Q Clear Time (g_c+I1), s		2.0		0.0		2.0		3.5				
Green Ext Time (p_c), s		5.6		0.0		5.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				1.6								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
56: St. Joseph St & Jefferson Blvd

2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	68	20	31	117	91	7	448	45	52	349	34
Future Volume (vph)	4	68	20	31	117	91	7	448	45	52	349	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		115	100		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		425			424			478			490	
Travel Time (s)		11.6			11.6			10.9			11.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	12%	12%	12%	12%	12%	12%
Parking (#/hr)	5	5	5									
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		4	4		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0	20.0	20.0	20.0	
Minimum Split (s)	24.6	24.6		25.9	25.9		26.9	26.9	26.9	25.3	25.3	
Total Split (s)	37.0	37.0		37.0	37.0		63.0	63.0	63.0	63.0	63.0	
Total Split (%)	37.0%	37.0%		37.0%	37.0%		63.0%	63.0%	63.0%	63.0%	63.0%	
Maximum Green (s)	31.4	31.4		31.1	31.1		57.1	57.1	57.1	57.7	57.7	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.6	2.6		2.9	2.9		2.9	2.9	2.9	2.3	2.3	
Lost Time Adjust (s)		0.0			0.0		-0.8	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.6			5.9		5.1	5.9	5.9	5.3	5.3	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		13.0	13.0		14.0	14.0	14.0	10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	

Intersection Summary

Area Type: CBD

Lanes, Volumes, Timings
 56: St. Joseph St & Jefferson Blvd

2014 2-way
 Timing Plan: AM













Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 16 (16%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 56: St. Joseph St & Jefferson Blvd



HCM 2010 Signalized Intersection Summary
56: St. Joseph St & Jefferson Blvd

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↖	↗	↗	↖	↖
Traffic Volume (veh/h)	4	68	20	31	117	91	7	448	45	52	349	34
Future Volume (veh/h)	4	68	20	31	117	91	7	448	45	52	349	34
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1710	1644	1710	1710	1644	1710	1527	1527	1527	1527	1527	1710
Adj Flow Rate, veh/h	4	74	22	34	127	99	8	487	49	57	379	37
Adj No. of Lanes	0	1	0	0	1	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	12	12	12	12	12	12
Cap, veh/h	41	213	61	66	160	114	618	1040	884	555	933	91
Arrive On Green	0.21	0.20	0.20	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	18	1062	305	127	795	567	792	1527	1298	709	1369	134
Grp Volume(v), veh/h	100	0	0	260	0	0	8	487	49	57	0	416
Grp Sat Flow(s),veh/h/ln	1385	0	0	1489	0	0	792	1527	1298	709	0	1503
Q Serve(g_s), s	0.0	0.0	0.0	10.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.2	0.0	0.0	16.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.04		0.22	0.13		0.38	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	332	0	0	339	0	0	618	1040	884	555	0	1024
V/C Ratio(X)	0.30	0.00	0.00	0.77	0.00	0.00	0.01	0.47	0.06	0.10	0.00	0.41
Avail Cap(c_a), veh/h	485	0	0	501	0	0	618	1040	884	555	0	1024
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.76	0.76	0.76	0.94	0.00	0.94
Uniform Delay (d), s/veh	34.4	0.0	0.0	38.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	4.1	0.0	0.0	0.0	1.1	0.1	0.4	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.3	0.0	0.0	11.8	0.0	0.0	0.0	0.6	0.0	0.1	0.0	0.6
LnGrp Delay(d),s/veh	34.9	0.0	0.0	42.7	0.0	0.0	0.0	1.1	0.1	0.4	0.0	1.1
LnGrp LOS	C			D			A	A	A	A		A
Approach Vol, veh/h		100			260			544			473	
Approach Delay, s/veh		34.9			42.7			1.0			1.0	
Approach LOS		C			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		74.0		26.0		74.0		26.0				
Change Period (Y+Rc), s		5.9		5.9		* 5.9		* 5.9				
Max Green Setting (Gmax), s		57.1		31.1		* 58		* 31				
Max Q Clear Time (g_c+I1), s		2.0		18.8		2.0		8.2				
Green Ext Time (p_c), s		5.5		1.2		5.5		1.5				
Intersection Summary												
HCM 2010 Ctrl Delay				11.4								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
57: St. Joseph St & Wayne St

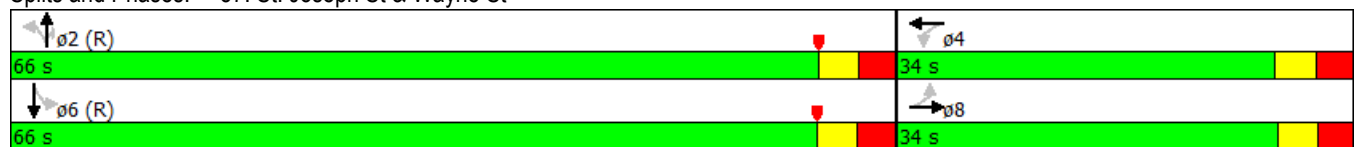
2014 2-way
Timing Plan: AM

	↖	→	↘	↙	←	↖	↘	↑	↖	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↘		↖	↘		↖	↑	↘	↖	↘	
Traffic Volume (vph)	2	31	5	74	86	3	1	501	217	0	387	12
Future Volume (vph)	2	31	5	74	86	3	1	501	217	0	387	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		278	100		200	100		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	50			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		405			839			565			478	
Travel Time (s)		11.0			22.9			12.8			10.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	12%	12%	12%	12%	12%	12%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2		2	6		
Minimum Split (s)	25.7	25.7		32.9	32.9		28.9	28.9	28.9	32.0	32.0	
Total Split (s)	34.0	34.0		34.0	34.0		66.0	66.0	66.0	66.0	66.0	
Total Split (%)	34.0%	34.0%		34.0%	34.0%		66.0%	66.0%	66.0%	66.0%	66.0%	
Maximum Green (s)	28.3	28.3		28.1	28.1		60.1	60.1	60.1	60.0	60.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.7	2.7		2.9	2.9		2.9	2.9	2.9	3.0	3.0	
Lost Time Adjust (s)	-1.0	0.0		0.0	0.0		-1.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.7	5.7		5.9	5.9		4.9	5.9	5.9	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		20.0	20.0		16.0	16.0	16.0	19.0	19.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 5 (5%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 57: St. Joseph St & Wayne St



HCM 2010 Signalized Intersection Summary
57: St. Joseph St & Wayne St

2014 2-way
Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	31	5	74	86	3	1	501	217	0	387	12
Future Volume (veh/h)	2	31	5	74	86	3	1	501	217	0	387	12
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1613	1613	1710	1613	1613	1710	1527	1527	1527	1527	1527	1710
Adj Flow Rate, veh/h	2	34	5	80	93	3	1	545	236	0	421	13
Adj No. of Lanes	1	1	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	12	12	12	12	12	12
Cap, veh/h	348	388	57	383	439	14	546	915	778	72	883	27
Arrive On Green	0.29	0.28	0.28	0.28	0.28	0.28	1.00	1.00	1.00	0.00	1.00	1.00
Sat Flow, veh/h	1121	1375	202	1180	1554	50	779	1527	1298	565	1473	45
Grp Volume(v), veh/h	2	0	39	80	0	96	1	545	236	0	0	434
Grp Sat Flow(s),veh/h/ln	1121	0	1578	1180	0	1604	779	1527	1298	565	0	1519
Q Serve(g_s), s	0.1	0.0	1.8	5.4	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.7	0.0	1.8	7.2	0.0	4.6	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.13	1.00		0.03	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	348	0	445	383	0	453	546	915	778	72	0	910
V/C Ratio(X)	0.01	0.00	0.09	0.21	0.00	0.21	0.00	0.60	0.30	0.00	0.00	0.48
Avail Cap(c_a), veh/h	348	0	445	383	0	453	546	915	778	72	0	910
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	28.5	0.0	26.5	29.1	0.0	27.5	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.4	1.2	0.0	1.1	0.0	2.9	1.0	0.0	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	1.5	3.4	0.0	3.9	0.0	1.3	0.4	0.0	0.0	0.8
LnGrp Delay(d),s/veh	28.6	0.0	26.9	30.4	0.0	28.6	0.0	2.9	1.0	0.0	0.0	1.8
LnGrp LOS	C		C	C		C	A	A	A			A
Approach Vol, veh/h		41			176			782			434	
Approach Delay, s/veh		27.0			29.4			2.3			1.8	
Approach LOS		C			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		66.1		34.2		66.1		34.2				
Change Period (Y+Rc), s		* 6		5.9		6.0		* 5.9				
Max Green Setting (Gmax), s		* 60		28.1		60.0		* 28				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			6.2									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
58: Michigan St/St. Joseph St & Western Ave

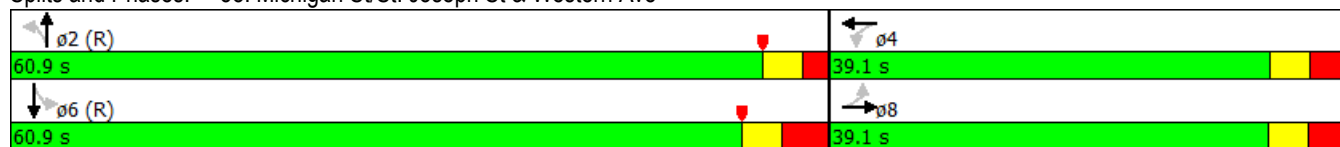
2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	201	11	38	2	11	8	95	510	19	13	399	53
Future Volume (vph)	201	11	38	2	11	8	95	510	19	13	399	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		75	100		0	150		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		145			566			539			565	
Travel Time (s)		4.0			15.4			12.3			12.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	12%	12%	12%	12%	12%	12%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	36.4	36.4		37.3	37.3		24.0	24.0		33.5	33.5	
Total Split (s)	39.1	39.1		39.1	39.1		60.9	60.9		60.9	60.9	
Total Split (%)	39.1%	39.1%		39.1%	39.1%		60.9%	60.9%		60.9%	60.9%	
Maximum Green (s)	32.7	32.7		32.8	32.8		55.9	55.9		54.4	54.4	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.4	3.4		3.3	3.3		2.0	2.0		3.5	3.5	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.4	6.4			6.3		5.0	5.0		6.5	6.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	23.0	23.0		24.0	24.0		12.0	12.0		20.0	20.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary





















Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 96 (96%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 58: Michigan St/St. Joseph St & Western Ave



HCM 2010 Signalized Intersection Summary
58: Michigan St/St. Joseph St & Western Ave

2014 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	201	11	38	2	11	8	95	510	19	13	399	53
Future Volume (veh/h)	201	11	38	2	11	8	95	510	19	13	399	53
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1613	1613	1710	1710	1613	1710	1527	1527	1710	1527	1527	1710
Adj Flow Rate, veh/h	218	12	41	2	12	9	103	554	21	14	434	58
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	12	12	12	12	12	12
Cap, veh/h	462	104	354	59	271	188	477	804	30	447	726	97
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1200	321	1098	64	840	581	739	1462	55	684	1319	176
Grp Volume(v), veh/h	218	0	53	23	0	0	103	0	575	14	0	492
Grp Sat Flow(s),veh/h/ln	1200	0	1419	1486	0	0	739	0	1517	684	0	1496
Q Serve(g_s), s	13.8	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	14.9	0.0	2.7	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.77	0.09		0.39	1.00		0.04	1.00		0.12
Lane Grp Cap(c), veh/h	462	0	458	518	0	0	477	0	835	447	0	823
V/C Ratio(X)	0.47	0.00	0.12	0.04	0.00	0.00	0.22	0.00	0.69	0.03	0.00	0.60
Avail Cap(c_a), veh/h	462	0	458	518	0	0	477	0	835	447	0	823
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.2	0.0	24.2	23.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	3.4	0.0	0.5	0.2	0.0	0.0	1.0	0.0	4.6	0.1	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.3	0.0	2.0	0.8	0.0	0.0	0.2	0.0	1.9	0.0	0.0	1.3
LnGrp Delay(d),s/veh	31.7	0.0	24.7	23.8	0.0	0.0	1.0	0.0	4.6	0.1	0.0	3.2
LnGrp LOS	C		C	C			A		A	A		A
Approach Vol, veh/h		271			23			678			506	
Approach Delay, s/veh		30.3			23.8			4.1			3.1	
Approach LOS		C			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		62.4		39.2		62.4		39.2				
Change Period (Y+Rc), s		* 6.5		* 6.4		6.5		6.4				
Max Green Setting (Gmax), s		* 56		* 33		54.4		32.7				
Max Q Clear Time (g_c+I1), s		2.0		0.0		2.0		0.0				
Green Ext Time (p_c), s		10.7		0.0		10.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			8.9									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
59: Chapin St/Marion St & Lincoln Way

2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	670	14	9	621	0	12	52	1	0	43	23
Future Volume (vph)	58	670	14	9	621	0	12	52	1	0	43	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	75		0	100		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			50			100			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		650			972			577			308	
Travel Time (s)		14.8			22.1			13.1			7.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA			NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Minimum Split (s)	35.5	35.5		35.5	35.5		24.0	24.0		24.0	24.0	
Total Split (s)	75.0	75.0		75.0	75.0		25.0	25.0		25.0	25.0	
Total Split (%)	75.0%	75.0%		75.0%	75.0%		25.0%	25.0%		25.0%	25.0%	
Maximum Green (s)	70.0	70.0		70.0	70.0		20.0	20.0		20.0	20.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 80 (80%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 59: Chapin St/Marion St & Lincoln Way



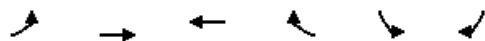
HCM 2010 Signalized Intersection Summary
59: Chapin St/Marion St & Lincoln Way

2014 2-way
Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	670	14	9	621	0	12	52	1	0	43	23
Future Volume (veh/h)	58	670	14	9	621	0	12	52	1	0	43	23
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1900	1792	1900	1900	1792	1900
Adj Flow Rate, veh/h	63	728	15	10	675	0	13	57	1	0	47	25
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	452	1225	25	406	1255	0	80	300	5	0	221	117
Arrive On Green	0.70	0.70	0.70	0.70	0.70	0.00	0.20	0.20	0.20	0.00	0.20	0.20
Sat Flow, veh/h	732	1750	36	687	1792	0	187	1501	24	0	1103	586
Grp Volume(v), veh/h	63	0	743	10	675	0	71	0	0	0	0	72
Grp Sat Flow(s),veh/h/ln	732	0	1786	687	1792	0	1712	0	0	0	0	1689
Q Serve(g_s), s	4.5	0.0	21.4	0.8	18.1	0.0	0.0	0.0	0.0	0.0	0.0	3.6
Cycle Q Clear(g_c), s	22.7	0.0	21.4	22.1	18.1	0.0	3.3	0.0	0.0	0.0	0.0	3.6
Prop In Lane	1.00		0.02	1.00		0.00	0.18		0.01	0.00		0.35
Lane Grp Cap(c), veh/h	452	0	1250	406	1255	0	385	0	0	0	0	338
V/C Ratio(X)	0.14	0.00	0.59	0.02	0.54	0.00	0.18	0.00	0.00	0.00	0.00	0.21
Avail Cap(c_a), veh/h	452	0	1250	406	1255	0	385	0	0	0	0	338
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	12.7	0.0	7.7	13.4	7.2	0.0	33.3	0.0	0.0	0.0	0.0	33.4
Incr Delay (d2), s/veh	0.6	0.0	2.1	0.1	1.7	0.0	1.1	0.0	0.0	0.0	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.0	16.5	0.3	14.4	0.0	3.1	0.0	0.0	0.0	0.0	3.2
LnGrp Delay(d),s/veh	13.3	0.0	9.8	13.5	8.9	0.0	34.4	0.0	0.0	0.0	0.0	34.9
LnGrp LOS	B		A	B	A		C					C
Approach Vol, veh/h		806			685			71				72
Approach Delay, s/veh		10.1			8.9			34.4				34.9
Approach LOS		B			A			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		75.0		25.0		75.0		25.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		70.0		20.0		70.0		20.0				
Max Q Clear Time (g_c+I1), s		24.7		5.6		24.1		5.3				
Green Ext Time (p_c), s		15.8		0.6		15.8		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				11.7								
HCM 2010 LOS				B								

Lanes, Volumes, Timings
60: Lafayette Blvd & Bartlett St

2014 2-way
Timing Plan: AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	262	16	26	0
Future Volume (vph)	0	0	262	16	26	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				50	
Link Speed (mph)		30	30		30	
Link Distance (ft)		770	377		363	
Travel Time (s)		17.5	8.6		8.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	9%	9%
Parking (#/hr)				16		
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Lanes, Volumes, Timings
61: William St & LaSalle Ave

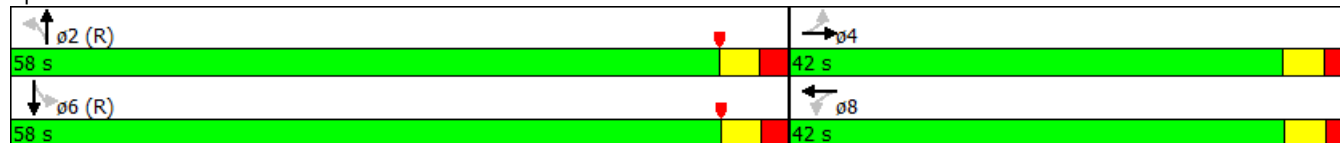
2014 2-way
Timing Plan: AM

	↖	→	↘	↙	←	↖	↘	↑	↖	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	54	41	2	7	0	17	87	10	0	211	0
Future Volume (vph)	0	54	41	2	7	0	17	87	10	0	211	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		343			444			483			227	
Travel Time (s)		7.8			10.1			13.2			6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA		Perm	NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	25.3	25.3		24.0	24.0		25.3	25.3		24.0	24.0	
Total Split (s)	42.0	42.0		42.0	42.0		58.0	58.0		58.0	58.0	
Total Split (%)	42.0%	42.0%		42.0%	42.0%		58.0%	58.0%		58.0%	58.0%	
Maximum Green (s)	36.7	36.7		36.8	36.8		52.7	52.7		52.8	52.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	2.3		2.2	2.2		2.3	2.3		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.3			5.2			5.3			5.2	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		11.0	11.0		13.0	13.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 88 (88%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 61: William St & LaSalle Ave



HCM 2010 Signalized Intersection Summary
61: William St & LaSalle Ave

2014 2-way
Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	0	54	41	2	7	0	17	87	10	0	211	0
Future Volume (veh/h)	0	54	41	2	7	0	17	87	10	0	211	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1792	1900	1900	1792	1900	1900	1792	1900	1900	1792	1900
Adj Flow Rate, veh/h	0	59	45	2	8	0	18	95	11	0	229	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	0	347	265	138	521	0	138	697	77	0	945	0
Arrive On Green	0.00	0.37	0.37	0.37	0.37	0.00	1.00	1.00	1.00	0.00	1.00	0.00
Sat Flow, veh/h	0	945	721	259	1418	0	184	1322	147	0	1792	0
Grp Volume(v), veh/h	0	0	104	10	0	0	124	0	0	0	229	0
Grp Sat Flow(s),veh/h/ln	0	0	1665	1676	0	0	1652	0	0	0	1792	0
Q Serve(g_s), s	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	4.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.00		0.43	0.20		0.00	0.15		0.09	0.00		0.00
Lane Grp Cap(c), veh/h	0	0	612	659	0	0	912	0	0	0	945	0
V/C Ratio(X)	0.00	0.00	0.17	0.02	0.00	0.00	0.14	0.00	0.00	0.00	0.24	0.00
Avail Cap(c_a), veh/h	0	0	612	659	0	0	912	0	0	0	945	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	21.4	20.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.6	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	3.7	0.3	0.0	0.0	0.1	0.0	0.0	0.0	0.3	0.0
LnGrp Delay(d),s/veh	0.0	0.0	22.0	20.2	0.0	0.0	0.3	0.0	0.0	0.0	0.6	0.0
LnGrp LOS			C	C			A				A	
Approach Vol, veh/h		104			10			124			229	
Approach Delay, s/veh		22.0			20.2			0.3			0.6	
Approach LOS		C			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		58.1		42.1		58.1		42.1				
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3				
Max Green Setting (Gmax), s		* 53		* 37		* 53		* 37				
Max Q Clear Time (g_c+I1), s		2.0		6.2		0.0		2.4				
Green Ext Time (p_c), s		0.2		0.6		0.2		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			5.7									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
62: William St & Colfax Ave

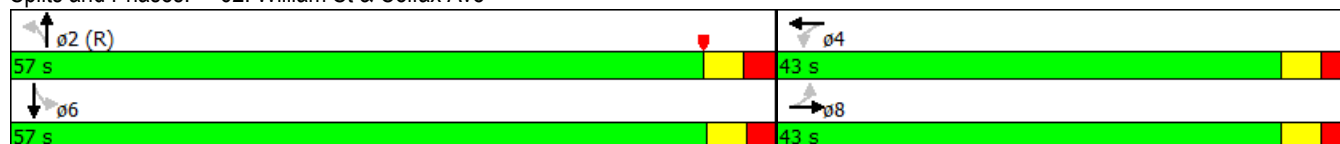
2014 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	121	21	32	59	15	4	60	127	8	247	35
Future Volume (vph)	24	121	21	32	59	15	4	60	127	8	247	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	50			50			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		387			682			495			483	
Travel Time (s)		8.8			15.5			13.5			13.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	25.5	25.5		25.5	25.5		25.5	25.5		25.2	25.2	
Total Split (s)	43.0	43.0		43.0	43.0		57.0	57.0		57.0	57.0	
Total Split (%)	43.0%	43.0%		43.0%	43.0%		57.0%	57.0%		57.0%	57.0%	
Maximum Green (s)	37.5	37.5		37.5	37.5		51.5	51.5		51.8	51.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.5			5.5		5.5	5.5		5.2	5.2	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		13.0	13.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 98 (98%), Referenced to phase 2:NBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 62: William St & Colfax Ave





















HCM 2010 Signalized Intersection Summary
62: William St & Colfax Ave

2014 2-way
Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	24	121	21	32	59	15	4	60	127	8	247	35
Future Volume (veh/h)	24	121	21	32	59	15	4	60	127	8	247	35
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1776	1900	1900	1776	1900	1792	1792	1900	1792	1792	1900
Adj Flow Rate, veh/h	26	132	23	35	64	16	4	65	138	9	268	38
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	7	7	7	7	7	7	6	6	6	6	6	6
Cap, veh/h	103	483	79	199	346	81	530	265	562	630	793	112
Arrive On Green	0.37	0.37	0.37	0.75	0.75	0.75	0.86	0.86	0.86	0.69	0.69	0.69
Sat Flow, veh/h	165	1292	212	407	926	215	1029	512	1088	1130	1536	218
Grp Volume(v), veh/h	181	0	0	115	0	0	4	0	203	9	0	306
Grp Sat Flow(s),veh/h/ln	1669	0	0	1548	0	0	1029	0	1600	1130	0	1754
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	2.2	0.3	0.0	7.1
Cycle Q Clear(g_c), s	7.3	0.0	0.0	1.9	0.0	0.0	7.2	0.0	2.2	2.5	0.0	7.1
Prop In Lane	0.14		0.13	0.30		0.14	1.00		0.68	1.00		0.12
Lane Grp Cap(c), veh/h	665	0	0	626	0	0	530	0	827	630	0	906
V/C Ratio(X)	0.27	0.00	0.00	0.18	0.00	0.00	0.01	0.00	0.25	0.01	0.00	0.34
Avail Cap(c_a), veh/h	665	0	0	626	0	0	530	0	827	630	0	906
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.67	1.67	1.67	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.9	0.0	0.0	8.2	0.0	0.0	4.8	0.0	3.5	8.4	0.0	8.7
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.7	0.0	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.6	0.0	0.0	1.8	0.0	0.0	0.1	0.0	1.9	0.2	0.0	6.6
LnGrp Delay(d),s/veh	23.0	0.0	0.0	8.8	0.0	0.0	4.8	0.0	4.2	8.4	0.0	9.7
LnGrp LOS	C			A			A		A	A		A
Approach Vol, veh/h		181			115			207			315	
Approach Delay, s/veh		23.0			8.8			4.2			9.7	
Approach LOS		C			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		57.3		43.0		57.3		43.0				
Change Period (Y+Rc), s		5.5		5.5		* 5.5		5.5				
Max Green Setting (Gmax), s		51.5		37.5		* 52		37.5				
Max Q Clear Time (g_c+I1), s		9.2		3.9		9.1		9.3				
Green Ext Time (p_c), s		3.9		1.9		3.9		1.8				
Intersection Summary												
HCM 2010 Ctrl Delay				11.1								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
63: William St & Jefferson Blvd

2014 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	3	0	18	0	173	1	20	181	0
Future Volume (vph)	0	0	0	3	0	18	0	173	1	20	181	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	225		0	210		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		331			675			480			497	
Travel Time (s)		9.0			18.4			10.9			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)											5	5
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	




















Intersection Summary

Area Type: Other

Control Type: Unsignalized










Lanes, Volumes, Timings
64: William St & Wayne St

2014 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	150		0	150		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		318			680			490			480	
Travel Time (s)		8.7			18.5			11.1			10.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	5	416	4	2	327
Future Volume (vph)	0	5	416	4	2	327
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		30			30
Link Distance (ft)	440		1160			480
Travel Time (s)	12.0		26.4			10.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free























Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
66: William St & Lincoln Way

2014 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	625	54	22	609	4	21	66	0	132	158	0
Future Volume (vph)	0	625	54	22	609	4	21	66	0	132	158	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	75		0	50		0	100		150
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	50			50			25			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		972			472			227			393	
Travel Time (s)		22.1			10.7			6.2			10.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Number of Detectors	1	0		1	0	1	1	1		1	1	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	0		20	0	20	50	50		50	50	50
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	50	50		50	50	50
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		6
Detector Phase	8	8		4	4	4	2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	26.6	26.6		25.6	25.6	25.6	29.5	29.5		29.9	29.9	29.9
Total Split (s)	67.0	67.0		67.0	67.0	67.0	33.0	33.0		33.0	33.0	33.0
Total Split (%)	67.0%	67.0%		67.0%	67.0%	67.0%	33.0%	33.0%		33.0%	33.0%	33.0%
Maximum Green (s)	61.4	61.4		61.4	61.4	61.4	27.5	27.5		27.1	27.1	27.1
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.6	2.6		2.6	2.6	2.6	2.5	2.5		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6		5.6	5.6	5.6	5.5	5.5		5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		13.0	13.0	13.0	17.0	17.0		17.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	0
Intersection Summary												
Area Type:	Other											
Cycle Length:	100											

Lanes, Volumes, Timings
66: William St & Lincoln Way

2014 2-way
Timing Plan: AM

Actuated Cycle Length: 100
Offset: 90 (90%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated





















Splits and Phases: 66: William St & Lincoln Way



HCM 2010 analysis cannot be performed without detectors for actuated controller type.

Lanes, Volumes, Timings
 67: Michigan St/Michigan St N & Madison St

2014 2-way
 Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	0	6	0	0	0	9	516	0	0	448	22
Future Volume (vph)	24	0	6	0	0	0	9	516	0	0	448	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	50		0	200		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		433			199			492			528	
Travel Time (s)		11.8			5.4			11.2			12.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)		18										
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: CBD
 Control Type: Unsignalized

Lanes, Volumes, Timings
1: William St & Marion St

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	16	9	6	33	25	0	201	20	2	321	37
Future Volume (vph)	115	16	9	6	33	25	0	201	20	2	321	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	50		0	150		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		827			455			430			402	
Travel Time (s)		22.6			12.4			11.7			11.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	24.0	24.0		24.0	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	40.0	40.0		40.0	40.0		60.0	60.0		60.0	60.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%		60.0%	60.0%		60.0%	60.0%	
Maximum Green (s)	35.0	35.0		35.0	35.0		55.0	55.0		55.0	55.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	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)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary













Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 59 (59%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 1: William St & Marion St



HCM 2010 Signalized Intersection Summary
 1: William St & Marion St

2014 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Volume (veh/h)	115	16	9	6	33	25	0	201	20	2	321	37
Future Volume (veh/h)	115	16	9	6	33	25	0	201	20	2	321	37
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	125	17	10	7	36	27	0	218	22	2	349	40
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	461	61	32	72	328	227	72	898	91	684	885	101
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.00	1.00	1.00	0.55	0.55	0.55
Sat Flow, veh/h	1131	175	92	94	938	648	972	1633	165	1114	1610	185
Grp Volume(v), veh/h	152	0	0	70	0	0	0	0	240	2	0	389
Grp Sat Flow(s),veh/h/ln	1397	0	0	1680	0	0	972	0	1798	1114	0	1794
Q Serve(g_s), s	4.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	12.5
Cycle Q Clear(g_c), s	7.2	0.0	0.0	2.8	0.0	0.0	0.0	0.0	0.0	0.1	0.0	12.5
Prop In Lane	0.82		0.07	0.10		0.39	1.00		0.09	1.00		0.10
Lane Grp Cap(c), veh/h	555	0	0	627	0	0	72	0	989	684	0	987
V/C Ratio(X)	0.27	0.00	0.00	0.11	0.00	0.00	0.00	0.00	0.24	0.00	0.00	0.39
Avail Cap(c_a), veh/h	555	0	0	627	0	0	72	0	989	684	0	987
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.3	0.0	0.0	22.0	0.0	0.0	0.0	0.0	0.0	10.1	0.0	12.9
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.6	0.0	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.8	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.3	0.0	0.0	10.7
LnGrp Delay(d),s/veh	24.5	0.0	0.0	22.4	0.0	0.0	0.0	0.0	0.6	10.2	0.0	14.1
LnGrp LOS	C			C					A	B		B
Approach Vol, veh/h		152			70			240				391
Approach Delay, s/veh		24.5			22.4			0.6				14.1
Approach LOS		C			C			A				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		60.0		40.0		60.0		40.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		55.0		35.0		55.0		35.0				
Max Q Clear Time (g_c+I1), s		2.0		9.2		14.5		4.8				
Green Ext Time (p_c), s		4.8		1.4		4.7		1.4				
Intersection Summary												
HCM 2010 Ctrl Delay				12.8								
HCM 2010 LOS				B								

Lanes, Volumes, Timings
2: William St & Madison St

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	14	9	6	16	69	34	151	5	98	248	0
Future Volume (vph)	0	14	9	6	16	69	34	151	5	98	248	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		0	275		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	50			50			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		884			489			393			430	
Travel Time (s)		24.1			13.3			10.7			11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	24.0	24.0		24.0	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	37.0	37.0		37.0	37.0		63.0	63.0		63.0	63.0	
Total Split (%)	37.0%	37.0%		37.0%	37.0%		63.0%	63.0%		63.0%	63.0%	
Maximum Green (s)	32.0	32.0		32.0	32.0		58.0	58.0		58.0	58.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	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)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary













Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 89 (89%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 2: William St & Madison St



HCM 2010 Signalized Intersection Summary
 2: William St & Madison St

2014 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	0	14	9	6	16	69	34	151	5	98	248	0
Future Volume (veh/h)	0	14	9	6	16	69	34	151	5	98	248	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	0	15	10	7	17	75	37	164	5	107	270	0
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	0	328	218	54	108	387	622	1023	31	761	1060	0
Arrive On Green	0.00	0.32	0.32	0.32	0.32	0.32	1.00	1.00	1.00	0.58	0.58	0.00
Sat Flow, veh/h	0	1024	683	48	339	1210	1084	1764	54	1188	1827	0
Grp Volume(v), veh/h	0	0	25	99	0	0	37	0	169	107	270	0
Grp Sat Flow(s),veh/h/ln	0	0	1706	1597	0	0	1084	0	1817	1188	1827	0
Q Serve(g_s), s	0.0	0.0	1.0	0.0	0.0	0.0	0.5	0.0	0.0	4.2	7.3	0.0
Cycle Q Clear(g_c), s	0.0	0.0	1.0	4.5	0.0	0.0	7.7	0.0	0.0	4.2	7.3	0.0
Prop In Lane	0.00		0.40	0.07		0.76	1.00		0.03	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	546	549	0	0	622	0	1054	761	1060	0
V/C Ratio(X)	0.00	0.00	0.05	0.18	0.00	0.00	0.06	0.00	0.16	0.14	0.25	0.00
Avail Cap(c_a), veh/h	0	0	546	549	0	0	622	0	1054	761	1060	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	23.5	24.6	0.0	0.0	0.5	0.0	0.0	9.7	10.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.7	0.0	0.0	0.2	0.0	0.3	0.4	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.9	3.8	0.0	0.0	0.3	0.0	0.2	2.6	6.9	0.0
LnGrp Delay(d),s/veh	0.0	0.0	23.6	25.4	0.0	0.0	0.7	0.0	0.3	10.1	10.9	0.0
LnGrp LOS			C	C			A		A	B	B	
Approach Vol, veh/h		25			99			206			377	
Approach Delay, s/veh		23.6			25.4			0.4			10.7	
Approach LOS		C			C			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		63.0		37.0		63.0		37.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		58.0		32.0		58.0		32.0				
Max Q Clear Time (g_c+I1), s		9.7		3.0		9.3		6.5				
Green Ext Time (p_c), s		3.7		0.7		3.7		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			10.2									
HCM 2010 LOS			B									

Lanes, Volumes, Timings
3: William St & Washington St

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	7	13	12	33	2	11	150	14	0	146	13
Future Volume (vph)	32	7	13	12	33	2	11	150	14	0	146	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	400		0	165		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		460			680			497			495	
Travel Time (s)		12.5			18.5			13.6			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)								5	5		5	5
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	26.2	26.2		26.3	26.3		26.5	26.5		26.5	26.5	
Total Split (s)	38.0	38.0		38.0	38.0		62.0	62.0		62.0	62.0	
Total Split (%)	38.0%	38.0%		38.0%	38.0%		62.0%	62.0%		62.0%	62.0%	
Maximum Green (s)	32.8	32.8		32.7	32.7		56.5	56.5		56.5	56.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.2	2.2		2.3	2.3		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.2	5.2		5.3	5.3		5.5	5.5		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		14.0	14.0		14.0	14.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 22 (22%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 3: William St & Washington St



HCM 2010 Signalized Intersection Summary
 3: William St & Washington St

2014 2-way
 Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	7	13	12	33	2	11	150	14	0	146	13
Future Volume (veh/h)	32	7	13	12	33	2	11	150	14	0	146	13
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	35	8	14	13	36	2	12	163	15	0	159	14
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	491	196	342	504	562	31	676	814	75	72	818	72
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	1.00	1.00	1.00	0.00	0.56	0.56
Sat Flow, veh/h	1338	597	1045	1357	1715	95	1184	1442	133	1178	1449	128
Grp Volume(v), veh/h	35	0	22	13	0	38	12	0	178	0	0	173
Grp Sat Flow(s),veh/h/ln	1338	0	1642	1357	0	1810	1184	0	1575	1178	0	1576
Q Serve(g_s), s	1.8	0.0	0.9	0.7	0.0	1.4	0.1	0.0	0.0	0.0	0.0	5.4
Cycle Q Clear(g_c), s	3.3	0.0	0.9	1.6	0.0	1.4	5.5	0.0	0.0	0.0	0.0	5.4
Prop In Lane	1.00		0.64	1.00		0.05	1.00		0.08	1.00		0.08
Lane Grp Cap(c), veh/h	491	0	538	504	0	593	676	0	889	72	0	890
V/C Ratio(X)	0.07	0.00	0.04	0.03	0.00	0.06	0.02	0.00	0.20	0.00	0.00	0.19
Avail Cap(c_a), veh/h	491	0	538	504	0	593	676	0	889	72	0	890
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	24.2	0.0	22.9	23.5	0.0	23.1	0.3	0.0	0.0	0.0	0.0	10.7
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.1	0.0	0.2	0.0	0.0	0.5	0.0	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	0.0	0.8	0.5	0.0	1.4	0.1	0.0	0.2	0.0	0.0	4.4
LnGrp Delay(d),s/veh	24.5	0.0	23.1	23.6	0.0	23.3	0.3	0.0	0.5	0.0	0.0	11.2
LnGrp LOS	C		C	C		C	A		A			B
Approach Vol, veh/h		57			51			190				173
Approach Delay, s/veh		24.0			23.4			0.5				11.2
Approach LOS		C			C			A				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		62.0		38.1		62.0		38.1				
Change Period (Y+Rc), s		5.5		* 5.3		5.5		* 5.3				
Max Green Setting (Gmax), s		56.5		* 33		56.5		* 33				
Max Q Clear Time (g_c+I1), s		7.5		3.6		7.4		5.3				
Green Ext Time (p_c), s		2.5		0.5		2.5		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			9.7									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
4: William St & Western Ave

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	400	11	14	545	11	3	3	1	52	12	98
Future Volume (vph)	82	400	11	14	545	11	3	3	1	52	12	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	285		0	50		0	225		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		560			680			208			490	
Travel Time (s)		15.3			18.5			5.7			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	26.2	26.2		26.2	26.2		26.5	26.5		29.5	29.5	
Total Split (s)	68.0	68.0		68.0	68.0		32.0	32.0		32.0	32.0	
Total Split (%)	68.0%	68.0%		68.0%	68.0%		32.0%	32.0%		32.0%	32.0%	
Maximum Green (s)	62.8	62.8		62.8	62.8		26.5	26.5		26.5	26.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.2	2.2		2.2	2.2		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.2		5.2	5.2		5.5	5.5		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		14.0	14.0		17.0	17.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary




















Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 87 (87%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 4: William St & Western Ave



















HCM 2010 Signalized Intersection Summary
4: William St & Western Ave

2014 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	400	11	14	545	11	3	3	1	52	12	98
Future Volume (veh/h)	82	400	11	14	545	11	3	3	1	52	12	98
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1827	1827	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	89	435	12	15	592	12	3	3	1	57	13	107
Adj No. of Lanes	0	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	173	820	22	581	1121	23	326	348	116	435	45	373
Arrive On Green	0.63	0.63	0.63	1.00	1.00	1.00	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	209	1306	35	921	1784	36	1242	1312	437	1380	171	1408
Grp Volume(v), veh/h	536	0	0	15	0	604	3	0	4	57	0	120
Grp Sat Flow(s),veh/h/ln	1550	0	0	921	0	1821	1242	0	1750	1380	0	1579
Q Serve(g_s), s	7.4	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	3.2	0.0	6.0
Cycle Q Clear(g_c), s	17.4	0.0	0.0	0.0	0.0	0.0	6.2	0.0	0.2	3.3	0.0	6.0
Prop In Lane	0.17		0.02	1.00		0.02	1.00		0.25	1.00		0.89
Lane Grp Cap(c), veh/h	1016	0	0	581	0	1143	326	0	464	435	0	418
V/C Ratio(X)	0.53	0.00	0.00	0.03	0.00	0.53	0.01	0.00	0.01	0.13	0.00	0.29
Avail Cap(c_a), veh/h	1016	0	0	581	0	1143	326	0	464	435	0	418
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.9	0.0	0.0	0.0	0.0	0.0	31.7	0.0	27.1	28.3	0.0	29.2
Incr Delay (d2), s/veh	2.0	0.0	0.0	0.1	0.0	1.7	0.1	0.0	0.0	0.6	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.2	0.0	0.0	0.0	0.0	1.0	0.1	0.0	0.2	2.3	0.0	5.1
LnGrp Delay(d),s/veh	11.9	0.0	0.0	0.1	0.0	1.7	31.8	0.0	27.1	28.9	0.0	31.0
LnGrp LOS	B			A		A	C		C	C		C
Approach Vol, veh/h		536			619			7				177
Approach Delay, s/veh		11.9			1.7			29.1				30.3
Approach LOS		B			A			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		32.0		68.0		32.0		68.0				
Change Period (Y+Rc), s		5.5		* 5.2		5.5		* 5.2				
Max Green Setting (Gmax), s		26.5		* 63		26.5		* 63				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				9.7								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
5: Lafayette Blvd & Marion St

2014 2-way
Timing Plan: PM

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	7	12	6	18	3	11	217	4	4	196	23
Future Volume (vph)	34	7	12	6	18	3	11	217	4	4	196	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	50			50			25			25		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		455			425			515			490	
Travel Time (s)		12.4			11.6			14.0			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		3	3		5	5		5	5		5	5
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: CBD
Control Type: Unsignalized

Lanes, Volumes, Timings
6: Lafayette Blvd & Madison St

2014 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	28	85	33	35	5	57	217	18	2	218	0
Future Volume (vph)	5	28	85	33	35	5	57	217	18	2	218	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	100		0	100		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		489			434			485			515	
Travel Time (s)		13.3			11.8			13.2			14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)						5					5	5
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: CBD
Control Type: Unsignalized

Lanes, Volumes, Timings
7: Lafayette Blvd & LaSalle Ave#

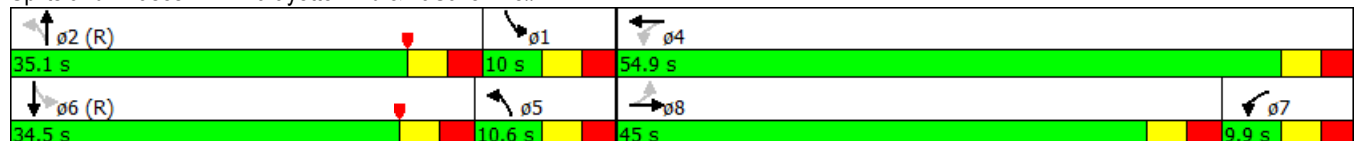
2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	657	224	81	853	29	130	246	41	87	236	3
Future Volume (vph)	7	657	224	81	853	29	130	246	41	87	236	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	11	11	11
Storage Length (ft)	0		0	200		0	190		0	250		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	25			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		236			440			495			485	
Travel Time (s)		6.4			12.0			13.5			13.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)								5	5		0	0
Shared Lane Traffic (%)												
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	28.6	28.6		9.5	28.3		9.6	28.6		9.6	29.6	
Total Split (s)	45.0	45.0		9.9	54.9		10.6	35.1		10.0	34.5	
Total Split (%)	45.0%	45.0%		9.9%	54.9%		10.6%	35.1%		10.0%	34.5%	
Maximum Green (s)	39.4	39.4		4.4	49.4		5.0	29.5		4.4	28.9	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.5	2.5		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.6		5.5	5.5		5.6	5.6		5.6	5.6	
Lead/Lag	Lead	Lead		Lag			Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	
Walk Time (s)	7.0	7.0			7.0			7.0			7.0	
Flash Dont Walk (s)	16.0	16.0			13.0			16.0			17.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	

Intersection Summary





















Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 77 (77%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Pretimed

Splits and Phases: 7: Lafayette Blvd & LaSalle Ave#



HCM 2010 Signalized Intersection Summary
7: Lafayette Blvd & LaSalle Ave#

2014 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	657	224	81	853	29	130	246	41	87	236	3
Future Volume (veh/h)	7	657	224	81	853	29	130	246	41	87	236	3
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1710	1644	1710	1644	1644	1710	1583	1583	1710	1583	1583	1710
Adj Flow Rate, veh/h	8	714	243	88	927	32	141	267	45	95	257	3
Adj No. of Lanes	0	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	40	878	297	185	1522	53	271	341	57	241	406	5
Arrive On Green	0.40	0.39	0.39	0.09	0.99	0.99	0.10	0.59	0.59	0.04	0.29	0.29
Sat Flow, veh/h	8	2229	753	1566	3081	106	1508	1156	195	1508	1406	16
Grp Volume(v), veh/h	525	0	440	88	470	489	141	0	312	95	0	260
Grp Sat Flow(s),veh/h/ln	1627	0	1363	1566	1562	1625	1508	0	1351	1508	0	1422
Q Serve(g_s), s	1.0	0.0	28.9	0.0	0.9	0.9	0.0	0.0	17.6	0.0	0.0	15.9
Cycle Q Clear(g_c), s	28.2	0.0	28.9	0.0	0.9	0.9	0.0	0.0	17.6	0.0	0.0	15.9
Prop In Lane	0.02		0.55	1.00		0.07	1.00		0.14	1.00		0.01
Lane Grp Cap(c), veh/h	694	0	537	185	772	803	271	0	399	241	0	411
V/C Ratio(X)	0.76	0.00	0.82	0.48	0.61	0.61	0.52	0.00	0.78	0.39	0.00	0.63
Avail Cap(c_a), veh/h	694	0	537	185	772	803	271	0	399	241	0	411
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.9	0.0	27.1	41.5	0.3	0.3	37.1	0.0	18.1	39.7	0.0	30.9
Incr Delay (d2), s/veh	7.6	0.0	13.0	8.5	3.6	3.4	7.0	0.0	14.2	4.8	0.0	7.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	20.0	0.0	18.5	4.8	1.7	1.7	7.3	0.0	12.6	5.0	0.0	11.4
LnGrp Delay(d),s/veh	34.4	0.0	40.2	50.0	3.9	3.7	44.1	0.0	32.3	44.5	0.0	38.2
LnGrp LOS	C		D	D	A	A	D		C	D		D
Approach Vol, veh/h		965			1047			453				355
Approach Delay, s/veh		37.0			7.7			36.0				39.9
Approach LOS		D			A			D				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	35.1		54.9	10.6	34.5	9.9	45.0				
Change Period (Y+Rc), s	5.6	5.6		5.5	5.6	5.6	5.5	5.6				
Max Green Setting (Gmax), s	4.4	29.5		49.4	5.0	28.9	4.4	39.4				
Max Q Clear Time (g_c+I1), s	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				26.3								
HCM 2010 LOS				C								

Lanes, Volumes, Timings
8: Lafayette Blvd & Colfax Ave

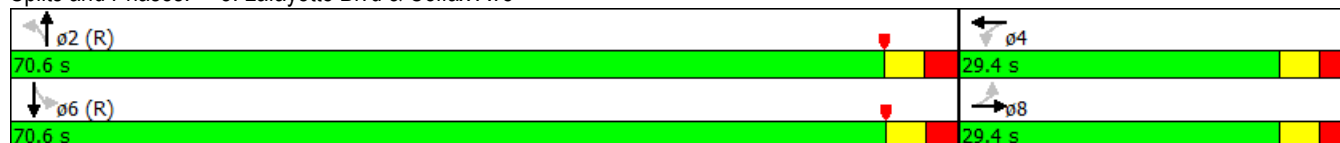
2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	154	21	36	122	35	23	348	41	9	509	32
Future Volume (vph)	13	154	21	36	122	35	23	348	41	9	509	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	200		0	190		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		682			438			495			495	
Travel Time (s)		18.6			11.9			13.5			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)					5	5		5	5		5	5
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2			6		
Minimum Split (s)	28.6	28.6		28.6	28.6		28.6	28.6		25.5	25.5	
Total Split (s)	29.4	29.4		29.4	29.4		70.6	70.6		70.6	70.6	
Total Split (%)	29.4%	29.4%		29.4%	29.4%		70.6%	70.6%		70.6%	70.6%	
Maximum Green (s)	23.8	23.8		23.8	23.8		65.0	65.0		65.1	65.1	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	2.6		2.5	2.5	
Lost Time Adjust (s)		0.0		0.0	0.0		-1.0	0.0		0.0	0.0	
Total Lost Time (s)		5.6		5.6	5.6		4.6	5.6		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		16.0	16.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary




















Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 97 (97%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 8: Lafayette Blvd & Colfax Ave



HCM 2010 Signalized Intersection Summary
8: Lafayette Blvd & Colfax Ave

2014 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	154	21	36	122	35	23	348	41	9	509	32
Future Volume (veh/h)	13	154	21	36	122	35	23	348	41	9	509	32
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1710	1644	1710	1644	1644	1710	1583	1583	1710	1583	1583	1710
Adj Flow Rate, veh/h	14	167	23	39	133	38	25	378	45	10	553	35
Adj No. of Lanes	0	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	50	323	43	269	256	73	535	790	94	603	839	53
Arrive On Green	0.24	0.24	0.24	0.48	0.48	0.48	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	49	1358	179	1049	1077	308	701	1215	145	816	1289	82
Grp Volume(v), veh/h	204	0	0	39	0	171	25	0	423	10	0	588
Grp Sat Flow(s),veh/h/ln	1586	0	0	1049	0	1384	701	0	1360	816	0	1371
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	8.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	11.1	0.0	0.0	4.1	0.0	8.6	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.07		0.11	1.00		0.22	1.00		0.11	1.00		0.06
Lane Grp Cap(c), veh/h	416	0	0	269	0	329	535	0	884	603	0	892
V/C Ratio(X)	0.49	0.00	0.00	0.14	0.00	0.52	0.05	0.00	0.48	0.02	0.00	0.66
Avail Cap(c_a), veh/h	416	0	0	269	0	329	535	0	884	603	0	892
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.3	0.0	0.0	21.1	0.0	22.3	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.1	0.0	0.0	1.1	0.0	5.8	0.2	0.0	1.9	0.1	0.0	3.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.2	0.0	0.0	1.3	0.0	6.8	0.0	0.0	0.8	0.0	0.0	1.7
LnGrp Delay(d),s/veh	37.4	0.0	0.0	22.2	0.0	28.0	0.2	0.0	1.9	0.1	0.0	3.8
LnGrp LOS	D			C		C	A		A	A		A
Approach Vol, veh/h		204			210			448			598	
Approach Delay, s/veh		37.4			26.9			1.8			3.8	
Approach LOS		D			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		70.7		29.4		70.7		29.4				
Change Period (Y+Rc), s		5.6		5.6		* 5.6		5.6				
Max Green Setting (Gmax), s		65.0		23.8		* 65		23.8				
Max Q Clear Time (g_c+I1), s		2.0		10.6		2.0		13.1				
Green Ext Time (p_c), s		5.9		1.5		5.9		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay				11.2								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 9: Lafayette Blvd & Washington St

2014 2-way
 Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	29	63	5	18	54	9	335	9	8	518	30
Future Volume (vph)	1	29	63	5	18	54	9	335	9	8	518	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	75		0	245		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		680			438			495			495	
Travel Time (s)		18.5			11.9			13.5			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)					0	0		10	10		0	0
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	28.6	28.6		28.6	28.6		28.6	28.6		25.3	25.3	
Total Split (s)	29.0	29.0		29.0	29.0		71.0	71.0		71.0	71.0	
Total Split (%)	29.0%	29.0%		29.0%	29.0%		71.0%	71.0%		71.0%	71.0%	
Maximum Green (s)	23.4	23.4		23.4	23.4		65.4	65.4		65.7	65.7	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	2.6		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6		5.6	5.6		5.3	5.3	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		16.0	16.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary






















Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 1 (1%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 9: Lafayette Blvd & Washington St



HCM 2010 Signalized Intersection Summary
 9: Lafayette Blvd & Washington St

2014 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	29	63	5	18	54	9	335	9	8	518	30
Future Volume (veh/h)	1	29	63	5	18	54	9	335	9	8	518	30
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.85	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1583	1583	1710	1583	1583	1710
Adj Flow Rate, veh/h	1	32	68	5	20	59	10	364	10	9	563	33
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	285	110	233	274	77	228	527	854	23	631	873	51
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1160	470	998	1138	331	976	696	1304	36	854	1333	78
Grp Volume(v), veh/h	1	0	100	5	0	79	10	0	374	9	0	596
Grp Sat Flow(s),veh/h/ln	1160	0	1468	1138	0	1307	696	0	1340	854	0	1411
Q Serve(g_s), s	0.1	0.0	5.6	0.4	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.0	0.0	5.6	6.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.68	1.00		0.75	1.00		0.03	1.00		0.06
Lane Grp Cap(c), veh/h	285	0	342	274	0	305	527	0	877	631	0	924
V/C Ratio(X)	0.00	0.00	0.29	0.02	0.00	0.26	0.02	0.00	0.43	0.01	0.00	0.64
Avail Cap(c_a), veh/h	285	0	342	274	0	305	527	0	877	631	0	924
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.4	0.0	31.6	34.1	0.0	31.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	2.2	0.1	0.0	2.0	0.1	0.0	1.5	0.0	0.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	4.5	0.2	0.0	3.5	0.0	0.0	0.7	0.0	0.0	1.6
LnGrp Delay(d),s/veh	33.4	0.0	33.8	34.2	0.0	33.4	0.1	0.0	1.5	0.0	0.0	3.5
LnGrp LOS	C		C	C		C	A		A	A		A
Approach Vol, veh/h		101			84			384			605	
Approach Delay, s/veh		33.8			33.5			1.5			3.4	
Approach LOS		C			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		71.3		29.0		71.3		29.0				
Change Period (Y+Rc), s		5.6		5.6		* 5.6		5.6				
Max Green Setting (Gmax), s		65.4		23.4		* 66		23.4				
Max Q Clear Time (g_c+I1), s		2.0		8.0		2.0		7.6				
Green Ext Time (p_c), s		5.4		0.6		5.4		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay			7.5									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
10: Lafayette Blvd & Jefferson Blvd

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	37	33	6	32	64	30	282	9	71	569	3
Future Volume (vph)	1	37	33	6	32	64	30	282	9	71	569	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	200		0	125		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		675			430			474			495	
Travel Time (s)		18.4			11.7			12.9			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		10	10		10	10		10	10		5	5
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	26.6	26.6		28.5	28.5		28.6	28.6		28.5	28.5	
Total Split (s)	29.0	29.0		29.0	29.0		71.0	71.0		71.0	71.0	
Total Split (%)	29.0%	29.0%		29.0%	29.0%		71.0%	71.0%		71.0%	71.0%	
Maximum Green (s)	23.4	23.4		23.5	23.5		65.4	65.4		65.5	65.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.5	2.5		2.6	2.6		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.6			5.5		5.6	5.6		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		16.0	16.0		16.0	16.0		16.0	16.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary













Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 10: Lafayette Blvd & Jefferson Blvd
























HCM 2010 Signalized Intersection Summary
 10: Lafayette Blvd & Jefferson Blvd

2014 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘		↗	↘	
Traffic Volume (veh/h)	1	37	33	6	32	64	30	282	9	71	569	3
Future Volume (veh/h)	1	37	33	6	32	64	30	282	9	71	569	3
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1710	1644	1710	1710	1644	1710	1583	1583	1710	1583	1583	1710
Adj Flow Rate, veh/h	1	40	36	7	35	70	33	307	10	77	618	3
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	37	160	141	44	104	183	516	847	28	660	900	4
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	3	684	603	27	441	780	680	1296	42	900	1378	7
Grp Volume(v), veh/h	77	0	0	112	0	0	33	0	317	77	0	621
Grp Sat Flow(s),veh/h/ln	1290	0	0	1249	0	0	680	0	1338	900	0	1384
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.9	0.0	0.0	7.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.01		0.47	0.06		0.62	1.00		0.03	1.00		0.00
Lane Grp Cap(c), veh/h	339	0	0	331	0	0	516	0	875	660	0	905
V/C Ratio(X)	0.23	0.00	0.00	0.34	0.00	0.00	0.06	0.00	0.36	0.12	0.00	0.69
Avail Cap(c_a), veh/h	339	0	0	331	0	0	516	0	875	660	0	905
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.2	0.0	0.0	32.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.6	0.0	0.0	2.8	0.0	0.0	0.2	0.0	1.2	0.4	0.0	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.4	0.0	0.0	5.2	0.0	0.0	0.1	0.0	0.5	0.1	0.0	1.9
LnGrp Delay(d),s/veh	32.8	0.0	0.0	35.0	0.0	0.0	0.2	0.0	1.2	0.4	0.0	4.2
LnGrp LOS	C			C			A		A	A		A
Approach Vol, veh/h		77			112			350			698	
Approach Delay, s/veh		32.8			35.0			1.1			3.8	
Approach LOS		C			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		71.1		29.1		71.1		29.1				
Change Period (Y+Rc), s		5.6		* 5.6		* 5.6		5.6				
Max Green Setting (Gmax), s		65.4		* 24		* 66		23.4				
Max Q Clear Time (g_c+I1), s		2.0		9.5		2.0		6.9				
Green Ext Time (p_c), s		6.2		0.6		6.2		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			7.7									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 11: Lafayette Blvd & Wayne St

2014 2-way
 Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	9	2	35	69	12	1	297	27	32	582	10
Future Volume (vph)	1	9	2	35	69	12	1	297	27	32	582	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	150		200	180		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		680			435			491			474	
Travel Time (s)		18.5			11.9			13.4			12.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		0	0		0	0		0	0		0	0
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: CBD
 Control Type: Unsignalized

Lanes, Volumes, Timings
12: Lafayette Blvd & Western Ave

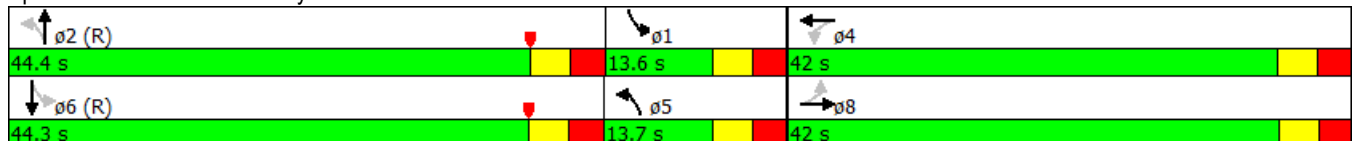
2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	323	81	8	475	2	99	297	0	72	439	28
Future Volume (vph)	40	323	81	8	475	2	99	297	0	72	439	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	285		0	200		0	180		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		680			435			520			491	
Travel Time (s)		18.5			11.9			14.2			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		0	0		0	0		0	0		0	0
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	28.5	28.5		29.6	29.6		13.6	28.6		13.6	28.6	
Total Split (s)	42.0	42.0		42.0	42.0		13.7	44.4		13.6	44.3	
Total Split (%)	42.0%	42.0%		42.0%	42.0%		13.7%	44.4%		13.6%	44.3%	
Maximum Green (s)	36.5	36.5		36.4	36.4		8.1	38.8		8.0	38.7	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.6	2.6		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.6	5.6		5.6	5.6		5.6	5.6	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	16.0	16.0		17.0	17.0			16.0			16.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	

Intersection Summary






















Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 79 (79%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Pretimed

Splits and Phases: 12: Lafayette Blvd & Western Ave



HCM 2010 Signalized Intersection Summary
 12: Lafayette Blvd & Western Ave

2014 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	323	81	8	475	2	99	297	0	72	439	28
Future Volume (veh/h)	40	323	81	8	475	2	99	297	0	72	439	28
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	0.90	1.00	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1759	1759	1900	1759	1759	1900
Adj Flow Rate, veh/h	43	351	88	9	516	2	108	323	0	78	477	30
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	187	463	116	255	597	2	357	614	0	513	570	36
Arrive On Green	0.73	0.73	0.73	0.73	0.73	0.73	0.16	0.78	0.00	0.16	0.77	0.77
Sat Flow, veh/h	863	1270	318	928	1637	6	1675	1583	0	1675	1474	93
Grp Volume(v), veh/h	43	0	439	9	0	518	108	323	0	78	0	507
Grp Sat Flow(s),veh/h/ln	863	0	1588	928	0	1643	1675	1583	0	1675	0	1567
Q Serve(g_s), s	4.1	0.0	16.8	0.6	0.0	23.1	0.0	7.8	0.0	0.0	0.0	20.8
Cycle Q Clear(g_c), s	27.2	0.0	16.8	17.4	0.0	23.1	0.0	7.8	0.0	0.0	0.0	20.8
Prop In Lane	1.00		0.20	1.00		0.00	1.00		0.00	1.00		0.06
Lane Grp Cap(c), veh/h	187	0	579	255	0	599	357	614	0	513	0	606
V/C Ratio(X)	0.23	0.00	0.76	0.04	0.00	0.86	0.30	0.53	0.00	0.15	0.00	0.84
Avail Cap(c_a), veh/h	187	0	579	255	0	599	357	614	0	513	0	606
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.7	0.0	10.9	16.1	0.0	11.7	28.3	7.8	0.0	18.4	0.0	9.3
Incr Delay (d2), s/veh	2.8	0.0	9.0	0.3	0.0	15.3	2.2	3.2	0.0	0.6	0.0	13.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	0.0	13.3	0.3	0.0	18.4	4.5	6.8	0.0	2.5	0.0	16.0
LnGrp Delay(d),s/veh	24.5	0.0	19.9	16.4	0.0	27.1	30.5	11.0	0.0	19.0	0.0	22.3
LnGrp LOS	C		B	B		C	C	B		B		C
Approach Vol, veh/h		482			527			431			585	
Approach Delay, s/veh		20.3			26.9			15.9			21.8	
Approach LOS		C			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.6	44.4		42.1	13.7	44.3		42.1				
Change Period (Y+Rc), s	5.6	5.6		5.6	5.6	5.6		* 5.6				
Max Green Setting (Gmax), s	8.0	38.8		36.4	8.1	38.7		* 37				
Max Q Clear Time (g_c+I1), s	0.0	0.0		0.0	0.0	0.0		0.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			21.5									
HCM 2010 LOS			C									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
13: Lafayette Blvd & Monroe St

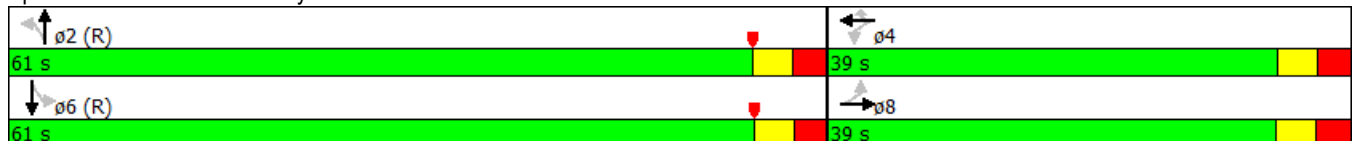
2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	13	0	180	0	220	11	226	291	0
Future Volume (vph)	0	0	0	13	0	180	0	220	11	226	291	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	150		0	200		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	25			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		190			440			490			520	
Travel Time (s)		5.2			12.0			13.4			14.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)						5		0	0		0	0
Shared Lane Traffic (%)												
Turn Type				Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		
Minimum Split (s)	31.7	31.7		31.6	31.6	31.6	32.7	32.7		25.5	25.5	
Total Split (s)	39.0	39.0		39.0	39.0	39.0	61.0	61.0		61.0	61.0	
Total Split (%)	39.0%	39.0%		39.0%	39.0%	39.0%	61.0%	61.0%		61.0%	61.0%	
Maximum Green (s)	33.3	33.3		33.4	33.4	33.4	55.3	55.3		55.5	55.5	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.7	2.7		2.6	2.6	2.6	2.7	2.7		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.7			5.6	5.6	5.7	5.7		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	19.0	19.0		19.0	19.0	19.0	20.0	20.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	

Intersection Summary













Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 93 (93%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 13: Lafayette Blvd & Monroe St



HCM 2010 Signalized Intersection Summary
 13: Lafayette Blvd & Monroe St

2014 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	0	0	0	13	0	180	0	220	11	226	291	0
Future Volume (veh/h)	0	0	0	13	0	180	0	220	11	226	291	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.90	1.00	0.90	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1827	1759	1759	1900	1759	1759	1900
Adj Flow Rate, veh/h	0	0	0	14	0	196	0	239	12	246	316	0
Adj No. of Lanes	0	1	0	0	1	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	0	608	0	533	0	452	72	827	42	659	876	0
Arrive On Green	0.00	0.00	0.00	0.33	0.00	0.33	0.00	1.00	1.00	1.00	1.00	0.00
Sat Flow, veh/h	0	1827	0	1385	0	1359	1000	1495	75	1062	1583	0
Grp Volume(v), veh/h	0	0	0	14	0	196	0	0	251	246	316	0
Grp Sat Flow(s),veh/h/ln	0	1827	0	1385	0	1359	1000	0	1570	1062	1583	0
Q Serve(g_s), s	0.0	0.0	0.0	0.7	0.0	11.3	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.7	0.0	11.3	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		0.05	1.00		0.00
Lane Grp Cap(c), veh/h	0	608	0	533	0	452	72	0	869	659	876	0
V/C Ratio(X)	0.00	0.00	0.00	0.03	0.00	0.43	0.00	0.00	0.29	0.37	0.36	0.00
Avail Cap(c_a), veh/h	0	608	0	533	0	452	72	0	869	659	876	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	0.00	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	22.5	0.0	26.1	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.1	0.0	3.0	0.0	0.0	0.8	1.6	1.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.0	0.5	0.0	8.2	0.0	0.0	0.4	0.5	0.5	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	22.6	0.0	29.1	0.0	0.0	0.8	1.6	1.2	0.0
LnGrp LOS				C		C			A	A	A	
Approach Vol, veh/h		0			210			251			562	
Approach Delay, s/veh		0.0			28.6			0.8			1.4	
Approach LOS					C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		61.2		39.1		61.2		39.1				
Change Period (Y+Rc), s		* 5.7		* 5.7		* 5.7		* 5.7				
Max Green Setting (Gmax), s		* 55		* 33		* 56		* 33				
Max Q Clear Time (g_c+I1), s		2.0		13.3		2.0		0.0				
Green Ext Time (p_c), s		4.4		0.9		4.4		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			6.8									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
14: Lafayette Blvd & South St

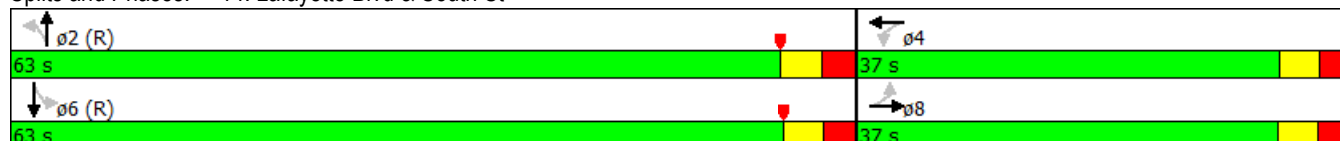
2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	0	19	2	24	38	24	181	0	14	274	16
Future Volume (vph)	11	0	19	2	24	38	24	181	0	14	274	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	250		0	225		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	50			50			100			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		902			435			480			490	
Travel Time (s)		24.6			11.9			13.1			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)					0	0					0	0
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	31.7	31.7		31.6	31.6		32.7	32.7		25.5	25.5	
Total Split (s)	37.0	37.0		37.0	37.0		63.0	63.0		63.0	63.0	
Total Split (%)	37.0%	37.0%		37.0%	37.0%		63.0%	63.0%		63.0%	63.0%	
Maximum Green (s)	31.3	31.3		31.4	31.4		57.3	57.3		57.5	57.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.7	2.7		2.6	2.6		2.7	2.7		2.5	2.5	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.7			5.6			5.7		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	19.0	19.0		19.0	19.0		20.0	20.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary













Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 98 (98%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 14: Lafayette Blvd & South St



HCM 2010 Signalized Intersection Summary
 14: Lafayette Blvd & South St

2014 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔		↔	↔	↔
Traffic Volume (veh/h)	11	0	19	2	24	38	24	181	0	14	274	16
Future Volume (veh/h)	11	0	19	2	24	38	24	181	0	14	274	16
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1900	1759	1900	1759	1759	1900
Adj Flow Rate, veh/h	12	0	21	2	26	41	26	197	0	15	298	17
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	196	21	293	40	186	276	120	867	0	663	851	49
Arrive On Green	0.31	0.00	0.31	0.31	0.31	0.31	0.19	0.19	0.00	1.00	1.00	1.00
Sat Flow, veh/h	469	67	937	9	594	883	140	1513	0	1115	1484	85
Grp Volume(v), veh/h	33	0	0	69	0	0	223	0	0	15	0	315
Grp Sat Flow(s),veh/h/ln	1473	0	0	1485	0	0	1653	0	0	1115	0	1568
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.4	0.0	0.0	3.3	0.0	0.0	10.8	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.36		0.64	0.03		0.59	0.12		0.00	1.00		0.05
Lane Grp Cap(c), veh/h	510	0	0	502	0	0	988	0	0	663	0	899
V/C Ratio(X)	0.06	0.00	0.00	0.14	0.00	0.00	0.23	0.00	0.00	0.02	0.00	0.35
Avail Cap(c_a), veh/h	510	0	0	502	0	0	988	0	0	663	0	899
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.2	0.0	0.0	24.8	0.0	0.0	21.7	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.6	0.0	0.0	0.5	0.0	0.0	0.1	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	0.0	0.0	2.6	0.0	0.0	9.2	0.0	0.0	0.0	0.0	0.5
LnGrp Delay(d),s/veh	24.4	0.0	0.0	25.4	0.0	0.0	22.2	0.0	0.0	0.1	0.0	1.1
LnGrp LOS	C			C			C			A		A
Approach Vol, veh/h		33			69			223				330
Approach Delay, s/veh		24.4			25.4			22.2				1.0
Approach LOS		C			C			C				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		63.2		37.1		63.2		37.1				
Change Period (Y+Rc), s		* 5.7		* 5.7		* 5.7		* 5.7				
Max Green Setting (Gmax), s		* 57		* 31		* 58		* 31				
Max Q Clear Time (g_c+I1), s		12.8		5.3		2.0		3.4				
Green Ext Time (p_c), s		2.5		0.4		2.6		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay				12.0								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
15: Lafayette Blvd & Sample St

2014 2-way
Timing Plan: PM

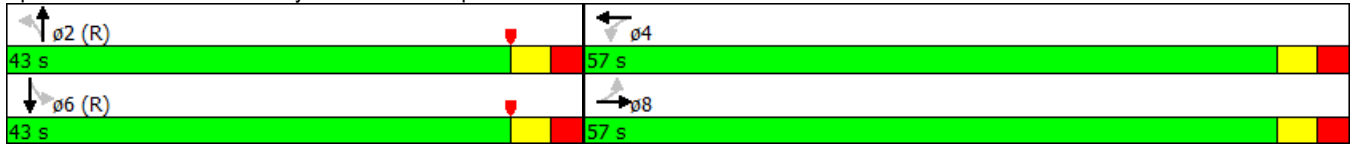
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	639	56	1	774	22	115	143	22	58	140	108
Future Volume (vph)	34	639	56	1	774	22	115	143	22	58	140	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	100		0	150		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	75			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		490			437			457			1160	
Travel Time (s)		13.4			11.9			12.5			31.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	29.5	29.5		28.3	28.3		28.1	28.1		28.1	28.1	
Total Split (s)	57.0	57.0		57.0	57.0		43.0	43.0		43.0	43.0	
Total Split (%)	57.0%	57.0%		57.0%	57.0%		43.0%	43.0%		43.0%	43.0%	
Maximum Green (s)	51.5	51.5		51.5	51.5		37.5	37.5		37.5	37.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0			0.0		-1.0	0.0		-1.0	0.0	
Total Lost Time (s)	5.5	5.5			5.5		4.5	5.5		4.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2		0.2	0.2		2.5	2.5		2.5	2.5	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	17.0	17.0		14.0	14.0		14.0	14.0		14.0	14.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Intersection Summary												
Area Type:	Other											
Cycle Length:	100											

Lanes, Volumes, Timings
15: Lafayette Blvd & Sample St

2014 2-way
Timing Plan: PM





















Actuated Cycle Length: 100
Offset: 18 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 15: Lafayette Blvd & Sample St



















HCM 2010 Signalized Intersection Summary
 15: Lafayette Blvd & Sample St

2014 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	639	56	1	774	22	115	143	22	58	140	108
Future Volume (veh/h)	34	639	56	1	774	22	115	143	22	58	140	108
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1900	1900	1759	1900	1759	1759	1900	1759	1759	1900
Adj Flow Rate, veh/h	37	695	61	1	841	24	125	155	24	63	152	117
Adj No. of Lanes	1	2	0	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	124	935	82	36	977	28	694	877	136	697	544	419
Arrive On Green	0.30	0.30	0.30	0.62	0.60	0.60	0.60	0.59	0.59	1.00	0.98	0.98
Sat Flow, veh/h	602	3110	273	1	3250	93	1044	1488	230	1134	923	711
Grp Volume(v), veh/h	37	373	383	456	0	410	125	0	179	63	0	269
Grp Sat Flow(s),veh/h/ln	602	1671	1711	1758	0	1585	1044	0	1719	1134	0	1634
Q Serve(g_s), s	6.0	20.1	20.1	0.0	0.0	21.4	5.5	0.0	4.8	0.5	0.0	0.4
Cycle Q Clear(g_c), s	27.4	20.1	20.1	20.8	0.0	21.4	5.9	0.0	4.8	5.3	0.0	0.4
Prop In Lane	1.00		0.16	0.00		0.06	1.00		0.13	1.00		0.43
Lane Grp Cap(c), veh/h	124	503	515	579	0	477	694	0	1013	697	0	963
V/C Ratio(X)	0.30	0.74	0.74	0.79	0.00	0.86	0.18	0.00	0.18	0.09	0.00	0.28
Avail Cap(c_a), veh/h	253	861	881	955	0	816	694	0	1013	697	0	963
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	0.74	0.00	0.74	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.4	31.5	31.5	18.1	0.0	18.2	9.3	0.0	9.4	0.2	0.0	0.3
Incr Delay (d2), s/veh	0.5	0.8	0.8	0.7	0.0	1.5	0.6	0.0	0.4	0.3	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	14.4	14.7	14.1	0.0	13.6	3.0	0.0	4.2	0.3	0.0	0.6
LnGrp Delay(d),s/veh	44.9	32.3	32.3	18.8	0.0	19.7	9.9	0.0	9.8	0.5	0.0	1.1
LnGrp LOS	D	C	C	B		B	A		A	A		A
Approach Vol, veh/h		793			866			304			332	
Approach Delay, s/veh		32.9			19.2			9.8			0.9	
Approach LOS		C			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		64.5		35.5		64.5		35.5				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		37.5		51.5		37.5		51.5				
Max Q Clear Time (g_c+I1), s		7.9		23.4		7.3		29.4				
Green Ext Time (p_c), s		2.5		0.6		2.5		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				20.0								
HCM 2010 LOS				C								

Lanes, Volumes, Timings
16: Main St & Bartlett St

2014 2-way
Timing Plan: PM












												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	193	37	48	186	16	32	2	31	63	5	8
Future Volume (vph)	4	193	37	48	186	16	32	2	31	63	5	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	75		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		377			472			172			391	
Travel Time (s)		10.3			12.9			4.7			10.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		5	5		5	5						
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Lanes, Volumes, Timings
17: Main St & Marion St

2014 2-way
Timing Plan: PM




















						
Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	23	43	19	499	360	22
Future Volume (vph)	23	43	19	499	360	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	1	1			0
Taper Length (ft)	50		50			
Link Speed (mph)	25			25	25	
Link Distance (ft)	192			437	345	
Travel Time (s)	5.2			11.9	9.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: CBD
Control Type: Unsignalized

Lanes, Volumes, Timings
18: Main St & Madison St

2014 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	30	24	13	24	0	9	525	32	0	419	17
Future Volume (vph)	18	30	24	13	24	0	9	525	32	0	419	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	150		0	100		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		434			433			485			437	
Travel Time (s)		11.8			11.8			13.2			11.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		3	3	3	3	3		5	5			
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	






















Intersection Summary

Area Type: CBD

Control Type: Unsignalized

Lanes, Volumes, Timings
19: Main St & LaSalle Ave#

2014 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	689	81	47	918	13	17	564	124	7	449	26
Future Volume (vph)	15	689	81	47	918	13	17	564	124	7	449	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		150	100		0	250		200	150		0
Storage Lanes	1		0	1		0	1		1	0		0
Taper Length (ft)	50			75			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			437			495			485	
Travel Time (s)		12.0			11.9			13.5			13.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)								5	5		3	3
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		8		7	4			2			6	
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		7	4		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		8.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	30.0	30.0		13.9	36.0		32.1	32.1	32.1	33.8	33.8	
Total Split (s)	33.1	33.1		13.9	47.0		53.0	53.0	53.0	53.0	53.0	
Total Split (%)	33.1%	33.1%		13.9%	47.0%		53.0%	53.0%	53.0%	53.0%	53.0%	
Maximum Green (s)	27.4	27.4		8.0	41.1		46.9	46.9	46.9	47.1	47.1	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.7	2.7		2.9	2.9		3.1	3.1	3.1	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0		0.0	
Total Lost Time (s)	5.7	5.7		5.9	5.9		6.1	6.1	6.1		5.9	
Lead/Lag	Lead	Lead		Lag								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	0.2	0.2		3.0	0.2		0.2	0.2	0.2	0.2	0.2	
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	
Walk Time (s)	7.0	7.0			7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	16.0	16.0			23.0		19.0	19.0	19.0	20.0	20.0	
Pedestrian Calls (#/hr)	0	0			0		0	0	0	0	0	

Intersection Summary

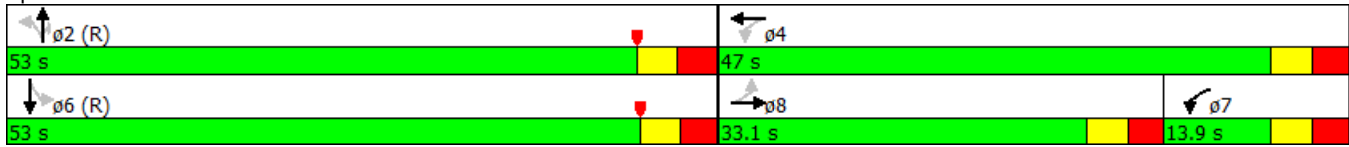
Area Type: CBD

Lanes, Volumes, Timings
 19: Main St & LaSalle Ave#

2014 2-way
 Timing Plan: PM






















Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 83 (83%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 19: Main St & LaSalle Ave#



HCM 2010 Signalized Intersection Summary
 19: Main St & LaSalle Ave#

2014 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	689	81	47	918	13	17	564	124	7	449	26
Future Volume (veh/h)	15	689	81	47	918	13	17	564	124	7	449	26
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1583	1583	1583	1710	1583	1710
Adj Flow Rate, veh/h	16	749	88	51	998	14	18	613	135	8	488	28
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	115	772	91	167	1235	17	269	773	575	40	633	36
Arrive On Green	0.55	0.55	0.55	0.12	0.78	0.78	0.98	0.98	0.98	0.50	0.49	0.49
Sat Flow, veh/h	490	2817	331	1566	3154	44	749	1583	1178	7	1296	74
Grp Volume(v), veh/h	16	415	422	51	494	518	18	613	135	524	0	0
Grp Sat Flow(s),veh/h/ln	490	1562	1586	1566	1562	1636	749	1583	1178	1377	0	0
Q Serve(g_s), s	2.9	25.6	25.7	0.0	18.7	18.7	0.0	4.0	0.3	0.0	0.0	0.0
Cycle Q Clear(g_c), s	21.6	25.6	25.7	0.0	18.7	18.7	0.3	4.0	0.3	30.6	0.0	0.0
Prop In Lane	1.00		0.21	1.00		0.03	1.00		1.00	0.02		0.05
Lane Grp Cap(c), veh/h	115	428	435	167	612	641	269	773	575	723	0	0
V/C Ratio(X)	0.14	0.97	0.97	0.31	0.81	0.81	0.07	0.79	0.23	0.72	0.00	0.00
Avail Cap(c_a), veh/h	115	428	435	197	642	673	269	773	575	723	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.46	0.46	0.46	0.38	0.38	0.38	0.65	0.65	0.65	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.5	22.2	22.2	41.3	8.6	8.6	0.6	0.6	0.6	20.9	0.0	0.0
Incr Delay (d2), s/veh	0.1	22.2	22.2	0.4	2.6	2.5	0.3	5.5	0.6	6.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	17.5	17.8	2.3	10.7	11.1	0.1	3.3	0.3	18.5	0.0	0.0
LnGrp Delay(d),s/veh	29.6	44.4	44.4	41.7	11.2	11.1	0.9	6.1	1.2	27.2	0.0	0.0
LnGrp LOS	C	D	D	D	B	B	A	A	A	C		
Approach Vol, veh/h		853			1063			766			524	
Approach Delay, s/veh		44.1			12.6			5.2			27.2	
Approach LOS		D			B			A			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		54.9		45.1		54.9	12.0	33.1				
Change Period (Y+Rc), s		6.1		5.9		* 6.1	* 5.9	5.7				
Max Green Setting (Gmax), s		46.9		41.1		* 47	* 8	27.4				
Max Q Clear Time (g_c+I1), s		6.0		20.7		32.6	2.0	27.7				
Green Ext Time (p_c), s		0.4		0.4		0.4	0.3	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				21.6								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
20: Main St & Colfax Ave

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	102	95	37	51	202	18	12	629	92	5	567	5
Future Volume (vph)	102	95	37	51	202	18	12	629	92	5	567	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	100		100	100		150	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		438			440			490			495	
Travel Time (s)		11.9			12.0			13.4			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		5	5		10	10		5	5		10	10
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2		2	6		
Minimum Split (s)	29.0	29.0		29.0	29.0		28.0	28.0	28.0	28.0		28.0
Total Split (s)	31.0	31.0		31.0	31.0		69.0	69.0	69.0	69.0		69.0
Total Split (%)	31.0%	31.0%		31.0%	31.0%		69.0%	69.0%	69.0%	69.0%		69.0%
Maximum Green (s)	25.3	25.3		25.1	25.1		63.5	63.5	63.5	63.5		63.5
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0		3.0
All-Red Time (s)	2.7	2.7		2.9	2.9		2.5	2.5	2.5	2.5		2.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	-1.0		0.0
Total Lost Time (s)	5.7	5.7		5.9	5.9		5.5	5.5	5.5	4.5		5.5
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0		7.0
Flash Dont Walk (s)	14.0	14.0		11.0	11.0		11.0	11.0	11.0	10.0		10.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0		0

Intersection Summary























Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 98 (98%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 20: Main St & Colfax Ave



HCM 2010 Signalized Intersection Summary
20: Main St & Colfax Ave

2014 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	102	95	37	51	202	18	12	629	92	5	567	5
Future Volume (veh/h)	102	95	37	51	202	18	12	629	92	5	567	5
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.85	1.00	1.00	0.88	1.00	1.00	0.85
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1759	1759	1759	1759	1759	1900
Adj Flow Rate, veh/h	111	103	40	55	220	20	13	684	100	5	616	5
Adj No. of Lanes	1	1	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	184	277	108	301	354	32	550	1115	829	490	939	8
Arrive On Green	0.42	0.42	0.42	0.08	0.08	0.08	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1114	1097	426	1216	1403	128	755	1759	1308	649	1481	12
Grp Volume(v), veh/h	111	0	143	55	0	240	13	684	100	5	0	621
Grp Sat Flow(s),veh/h/ln	1114	0	1523	1216	0	1530	755	1759	1308	649	0	1493
Q Serve(g_s), s	10.0	0.0	6.5	4.3	0.0	15.2	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	25.2	0.0	6.5	10.8	0.0	15.2	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.28	1.00		0.08	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	184	0	385	301	0	386	550	1115	829	490	0	946
V/C Ratio(X)	0.60	0.00	0.37	0.18	0.00	0.62	0.02	0.61	0.12	0.01	0.00	0.66
Avail Cap(c_a), veh/h	184	0	385	301	0	386	550	1115	829	490	0	946
HCM Platoon Ratio	1.67	1.67	1.67	0.33	0.33	0.33	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.5	0.0	23.5	42.3	0.0	41.3	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	13.8	0.0	2.7	1.3	0.0	7.3	0.1	2.5	0.3	0.0	0.0	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.7	0.0	5.4	2.8	0.0	11.7	0.0	1.4	0.1	0.0	0.0	1.7
LnGrp Delay(d),s/veh	50.3	0.0	26.3	43.7	0.0	48.6	0.1	2.5	0.3	0.0	0.0	3.5
LnGrp LOS	D		C	D		D	A	A	A	A		A
Approach Vol, veh/h		254			295			797			626	
Approach Delay, s/veh		36.8			47.7			2.2			3.5	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		69.0		31.2		69.0		31.2				
Change Period (Y+Rc), s		5.5		5.9		5.5		* 5.9				
Max Green Setting (Gmax), s		63.5		25.1		63.5		* 25				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				13.9								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
21: Main St & Washington St

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	42	3	14	65	27	10	678	10	53	590	1
Future Volume (vph)	1	42	3	14	65	27	10	678	10	53	590	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			75			50			50		
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		438			437			495			490	
Travel Time (s)		11.9			11.9			13.5			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		5	5		5	5		5	5		3	3
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	24.6	24.6		24.6	24.6		25.3	25.3		25.6	25.6	
Total Split (s)	24.6	24.6		24.6	24.6		75.4	75.4		75.4	75.4	
Total Split (%)	24.6%	24.6%		24.6%	24.6%		75.4%	75.4%		75.4%	75.4%	
Maximum Green (s)	19.0	19.0		19.0	19.0		70.1	70.1		69.8	69.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.3	2.3		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		-1.2	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6		5.3	5.3		4.4	5.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: CBD

Lanes, Volumes, Timings
21: Main St & Washington St

2014 2-way
Timing Plan: PM





















Cycle Length: 100
Actuated Cycle Length: 100
Offset: 3 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 21: Main St & Washington St





















HCM 2010 Signalized Intersection Summary
 21: Main St & Washington St

2014 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	42	3	14	65	27	10	678	10	53	590	1
Future Volume (veh/h)	1	42	3	14	65	27	10	678	10	53	590	1
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1583	1583	1710	1583	1583	1710
Adj Flow Rate, veh/h	1	46	3	15	71	29	11	737	11	58	641	1
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	104	132	9	152	96	39	598	1074	16	556	1104	2
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1138	1336	87	1192	972	397	667	1362	20	604	1399	2
Grp Volume(v), veh/h	1	0	49	15	0	100	11	0	748	58	0	642
Grp Sat Flow(s),veh/h/ln	1138	0	1423	1192	0	1369	667	0	1382	604	0	1401
Q Serve(g_s), s	0.1	0.0	3.2	1.2	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.2	0.0	3.2	4.4	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.06	1.00		0.29	1.00		0.01	1.00		0.00
Lane Grp Cap(c), veh/h	104	0	141	152	0	135	598	0	1090	556	0	1105
V/C Ratio(X)	0.01	0.00	0.35	0.10	0.00	0.74	0.02	0.00	0.69	0.10	0.00	0.58
Avail Cap(c_a), veh/h	207	0	270	260	0	260	598	0	1090	556	0	1105
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	0.98	0.00	0.98	1.00	0.00	1.00	0.56	0.00	0.56	0.73	0.00	0.73
Uniform Delay (d), s/veh	47.3	0.0	42.0	44.1	0.0	43.8	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.4	0.3	0.0	7.6	0.0	0.0	2.0	0.3	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	2.4	0.7	0.0	5.4	0.0	0.0	1.1	0.1	0.0	0.9
LnGrp Delay(d),s/veh	47.3	0.0	43.5	44.4	0.0	51.4	0.0	0.0	2.0	0.3	0.0	1.6
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		50			115			759			700	
Approach Delay, s/veh		43.6			50.5			2.0			1.5	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		84.5		15.5		84.5		15.5				
Change Period (Y+Rc), s		* 5.6		5.6		5.6		5.6				
Max Green Setting (Gmax), s		* 70		19.0		69.8		19.0				
Max Q Clear Time (g_c+I1), s		2.0		9.1		2.0		9.2				
Green Ext Time (p_c), s		10.5		0.4		10.5		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			6.5									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
22: Main St & Jefferson Blvd

2014 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	112	26	22	87	24	5	674	23	0	599	8
Future Volume (vph)	1	112	26	22	87	24	5	674	23	0	599	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	150		0	150		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		430			440			470			495	
Travel Time (s)		11.7			12.0			12.8			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)								5	5		3	3
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	25.6	25.6		24.5	24.5		35.5	35.5		35.5	35.5	
Total Split (s)	26.0	26.0		26.0	26.0		74.0	74.0		74.0	74.0	
Total Split (%)	26.0%	26.0%		26.0%	26.0%		74.0%	74.0%		74.0%	74.0%	
Maximum Green (s)	20.4	20.4		20.5	20.5		68.7	68.7		68.7	68.7	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.5	2.5		2.3	2.3		2.3	2.3	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		-1.0	0.0	
Total Lost Time (s)		5.6			5.5		5.3	5.3		4.3	5.3	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: CBD

Lanes, Volumes, Timings
22: Main St & Jefferson Blvd

2014 2-way
Timing Plan: PM













Cycle Length: 100
Actuated Cycle Length: 100
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow, Master Intersection
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 22: Main St & Jefferson Blvd



HCM 2010 Signalized Intersection Summary
 22: Main St & Jefferson Blvd

2014 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	1	112	26	22	87	24	5	674	23	0	599	8
Future Volume (veh/h)	1	112	26	22	87	24	5	674	23	0	599	8
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1710	1644	1710	1710	1644	1710	1583	1583	1710	1583	1583	1710
Adj Flow Rate, veh/h	1	122	28	24	95	26	5	733	25	0	651	9
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	37	152	35	62	128	32	579	1030	35	72	1066	15
Arrive On Green	0.24	0.24	0.24	0.13	0.12	0.12	1.00	1.00	1.00	0.00	1.00	1.00
Sat Flow, veh/h	3	1294	295	173	1091	276	656	1332	45	598	1379	19
Grp Volume(v), veh/h	151	0	0	145	0	0	5	0	758	0	0	660
Grp Sat Flow(s),veh/h/ln	1592	0	0	1540	0	0	656	0	1377	598	0	1398
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.9	0.0	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.01		0.19	0.17		0.18	1.00		0.03	1.00		0.01
Lane Grp Cap(c), veh/h	223	0	0	242	0	0	579	0	1065	72	0	1081
V/C Ratio(X)	0.68	0.00	0.00	0.60	0.00	0.00	0.01	0.00	0.71	0.00	0.00	0.61
Avail Cap(c_a), veh/h	361	0	0	370	0	0	579	0	1065	72	0	1081
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.99	0.00	0.00	1.00	0.00	0.00	0.63	0.00	0.63	0.00	0.00	0.79
Uniform Delay (d), s/veh	37.2	0.0	0.0	42.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	3.5	0.0	0.0	2.4	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.5	0.0	0.0	7.1	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.1
LnGrp Delay(d),s/veh	40.7	0.0	0.0	45.1	0.0	0.0	0.0	0.0	2.6	0.0	0.0	2.0
LnGrp LOS	D			D			A		A			A
Approach Vol, veh/h		151			145			763			660	
Approach Delay, s/veh		40.7			45.1			2.6			2.0	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		82.6		17.4		82.6		17.4				
Change Period (Y+Rc), s		* 5.3		* 5.6		* 5.3		5.6				
Max Green Setting (Gmax), s		* 69		* 21		* 69		20.4				
Max Q Clear Time (g_c+I1), s		2.0		10.9		2.0		10.9				
Green Ext Time (p_c), s		9.5		0.8		9.5		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				9.3								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
23: Main St & Wayne St

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	40	26	19	108	10	8	661	8	26	641	0
Future Volume (vph)	3	40	26	19	108	10	8	661	8	26	641	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		435			445			495			470	
Travel Time (s)		11.9			12.1			13.5			12.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		5	5		5	5		5	5		5	5
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	24.6	24.6		24.5	24.5		27.0	27.0		27.0	27.0	
Total Split (s)	24.6	24.6		24.6	24.6		75.4	75.4		75.4	75.4	
Total Split (%)	24.6%	24.6%		24.6%	24.6%		75.4%	75.4%		75.4%	75.4%	
Maximum Green (s)	19.0	19.0		19.1	19.1		69.8	69.8		69.8	69.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.5	2.5		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		-1.0	0.0	
Total Lost Time (s)	5.6	5.6		5.5	5.5		5.6	5.6		4.6	5.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2		0.2	0.2	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: CBD

Lanes, Volumes, Timings
23: Main St & Wayne St

2014 2-way
Timing Plan: PM






















Cycle Length: 100
Actuated Cycle Length: 100
Offset: 8 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 23: Main St & Wayne St



HCM 2010 Signalized Intersection Summary
23: Main St & Wayne St

2014 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	40	26	19	108	10	8	661	8	26	641	0
Future Volume (veh/h)	3	40	26	19	108	10	8	661	8	26	641	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	0.88	1.00	0.88	1.00
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1583	1583	1710	1583	1583	1710
Adj Flow Rate, veh/h	3	43	28	21	117	11	9	718	9	28	697	0
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	98	89	58	142	141	13	565	1063	13	558	1079	0
Arrive On Green	0.11	0.11	0.11	0.22	0.22	0.22	1.00	1.00	1.00	1.00	1.00	0.00
Sat Flow, veh/h	1110	815	530	1169	1295	122	633	1365	17	616	1385	0
Grp Volume(v), veh/h	3	0	71	21	0	128	9	0	727	28	697	0
Grp Sat Flow(s),veh/h/ln	1110	0	1345	1169	0	1417	633	0	1382	616	1385	0
Q Serve(g_s), s	0.3	0.0	5.0	1.6	0.0	8.6	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.9	0.0	5.0	6.6	0.0	8.6	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.39	1.00		0.09	1.00		0.01	1.00		0.00
Lane Grp Cap(c), veh/h	98	0	147	142	0	155	565	0	1077	558	1079	0
V/C Ratio(X)	0.03	0.00	0.48	0.15	0.00	0.83	0.02	0.00	0.68	0.05	0.65	0.00
Avail Cap(c_a), veh/h	187	0	256	237	0	271	565	0	1077	558	1079	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	0.99	0.00	0.99	0.52	0.00	0.52	0.71	0.71	0.00
Uniform Delay (d), s/veh	47.9	0.0	41.9	39.7	0.0	38.2	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.9	0.2	0.0	4.2	0.0	0.0	1.8	0.1	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	3.4	1.0	0.0	6.3	0.0	0.0	1.0	0.0	1.1	0.0
LnGrp Delay(d),s/veh	47.9	0.0	42.8	39.8	0.0	42.4	0.0	0.0	1.8	0.1	2.1	0.0
LnGrp LOS	D		D	D		D	A		A	A	A	
Approach Vol, veh/h		74			149			736			725	
Approach Delay, s/veh		43.0			42.0			1.8			2.0	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		83.5		16.5		83.5		16.5				
Change Period (Y+Rc), s		5.6		* 5.6		5.6		5.6				
Max Green Setting (Gmax), s		69.8		* 19		69.8		19.0				
Max Q Clear Time (g_c+I1), s		2.0		10.6		2.0		10.9				
Green Ext Time (p_c), s		0.5		0.1		0.5		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			7.3									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
24: Main St & Western Ave

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	300	65	28	305	6	78	673	1	0	614	141
Future Volume (vph)	0	300	65	28	305	6	78	673	1	0	614	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	200		0	250		0	150		100
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	25			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		435			425			515			495	
Travel Time (s)		11.9			11.6			14.0			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)					5	5					0	0
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		8			4		5	2			6	
Permitted Phases	8		8	4			2			6		6
Minimum Split (s)	24.9	24.9	24.9	25.1	25.1		14.3	28.0		28.0	28.0	28.0
Total Split (s)	33.7	33.7	33.7	33.7	33.7		14.3	66.3		52.0	52.0	52.0
Total Split (%)	33.7%	33.7%	33.7%	33.7%	33.7%		14.3%	66.3%		52.0%	52.0%	52.0%
Maximum Green (s)	27.8	27.8	27.8	27.6	27.6		8.0	60.7		46.1	46.1	46.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.9	2.9	2.9	3.1	3.1		3.3	2.6		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0	0.0	-1.0	0.0		0.0	0.0		-1.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.1	6.1		6.3	5.6		4.9	5.9	5.9
Lead/Lag							Lead			Lag	Lag	Lag
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	14.0	14.0			14.0		16.0	16.0	16.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0		0	0	0

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 28 (28%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 100
 Control Type: Pretimed

Splits and Phases: 24: Main St & Western Ave



HCM 2010 Signalized Intersection Summary
 24: Main St & Western Ave

2014 2-way
 Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	300	65	28	305	6	78	673	1	0	614	141
Future Volume (veh/h)	0	300	65	28	305	6	78	673	1	0	614	141
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1644	1644	1644	1644	1644	1710	1583	1583	1710	1583	1583	1583
Adj Flow Rate, veh/h	0	326	71	30	332	7	85	732	1	0	667	153
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	72	455	387	193	388	8	337	955	1	72	731	559
Arrive On Green	0.00	0.55	0.55	0.09	0.09	0.09	0.16	1.00	1.00	0.00	0.92	0.92
Sat Flow, veh/h	915	1644	1398	868	1404	30	1508	1581	2	613	1583	1211
Grp Volume(v), veh/h	0	326	71	30	0	339	85	0	733	0	667	153
Grp Sat Flow(s),veh/h/ln	915	1644	1398	868	0	1433	1508	0	1583	613	1583	1211
Q Serve(g_s), s	0.0	14.8	2.5	3.4	0.0	23.4	2.6	0.0	0.0	0.0	20.6	1.3
Cycle Q Clear(g_c), s	0.0	14.8	2.5	18.1	0.0	23.4	2.6	0.0	0.0	0.0	20.6	1.3
Prop In Lane	1.00		1.00	1.00		0.02	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	72	455	387	193	0	397	337	0	956	72	731	559
V/C Ratio(X)	0.00	0.72	0.18	0.16	0.00	0.85	0.25	0.00	0.77	0.00	0.91	0.27
Avail Cap(c_a), veh/h	72	455	387	193	0	397	337	0	956	72	731	559
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.5	16.8	47.8	0.0	43.7	12.0	0.0	0.0	0.0	2.9	2.1
Incr Delay (d2), s/veh	0.0	9.3	1.0	1.7	0.0	20.4	1.8	0.0	5.9	0.0	17.7	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	12.2	2.0	1.6	0.0	17.1	2.1	0.0	2.8	0.0	15.9	1.1
LnGrp Delay(d),s/veh	0.0	28.9	17.9	49.5	0.0	64.1	13.8	0.0	5.9	0.0	20.6	3.3
LnGrp LOS		C	B	D		E	B		A		C	A
Approach Vol, veh/h		397			369			818			820	
Approach Delay, s/veh		26.9			62.9			6.7			17.3	
Approach LOS		C			E			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		66.6		33.9	14.3	52.3		33.9				
Change Period (Y+Rc), s		* 5.9		6.1	* 6.3	5.9		* 6.1				
Max Green Setting (Gmax), s		* 61		27.6	* 8	46.1		* 28				
Max Q Clear Time (g_c+I1), s		0.0		0.0	0.0	0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				22.3								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
25: Main St & Monroe St

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	230	3	28	185	213	8	538	38	149	544	0
Future Volume (vph)	3	230	3	28	185	213	8	538	38	149	544	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	200		0	200		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			440			490			515	
Travel Time (s)		12.0			12.0			13.4			14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)			3									0
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		8			4			2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		8.0	20.0	
Minimum Split (s)	32.9	32.9		32.7	32.7		31.9	31.9		14.4	31.7	
Total Split (s)	35.6	35.6		35.6	35.6		49.7	49.7		14.7	64.4	
Total Split (%)	35.6%	35.6%		35.6%	35.6%		49.7%	49.7%		14.7%	64.4%	
Maximum Green (s)	29.7	29.7		29.9	29.9		43.8	43.8		8.3	58.7	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.9	2.9		2.7	2.7		2.9	2.9		3.4	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		-1.0	0.0	
Total Lost Time (s)	5.9	5.9		5.7	5.7		5.9	5.9		5.4	5.7	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2		3.0	0.2	
Recall Mode	None	None		None	None		C-Max	C-Max		None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Flash Dont Walk (s)	20.0	20.0		20.0	20.0		19.0	19.0			19.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0			0	

Intersection Summary

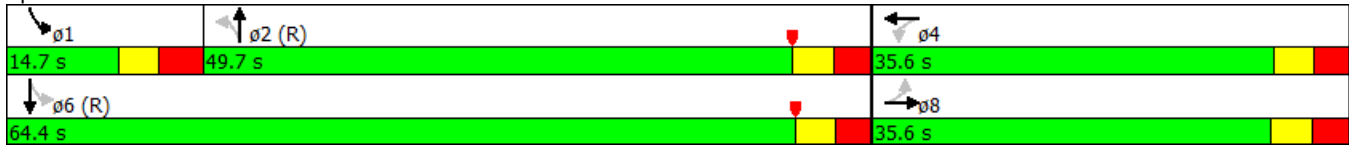
Area Type: Other

Lanes, Volumes, Timings
 25: Main St & Monroe St

2014 2-way
 Timing Plan: PM





















Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 79 (79%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 25: Main St & Monroe St






















HCM 2010 Signalized Intersection Summary
25: Main St & Monroe St

2014 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	230	3	28	185	213	8	538	38	149	544	0
Future Volume (veh/h)	3	230	3	28	185	213	8	538	38	149	544	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1759	1759	1900	1759	1759	1900
Adj Flow Rate, veh/h	3	250	3	30	201	232	9	585	41	162	591	0
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	95	436	5	215	212	244	364	757	53	512	964	0
Arrive On Green	0.18	0.18	0.18	0.46	0.46	0.46	0.93	0.93	0.93	0.09	0.61	0.00
Sat Flow, veh/h	933	1594	19	1100	775	894	777	1625	114	1675	1583	0
Grp Volume(v), veh/h	3	0	253	30	0	433	9	0	626	162	591	0
Grp Sat Flow(s),veh/h/ln	933	0	1613	1100	0	1669	777	0	1739	1675	1583	0
Q Serve(g_s), s	0.3	0.0	14.3	2.2	0.0	24.9	0.3	0.0	8.9	4.4	23.3	0.0
Cycle Q Clear(g_c), s	25.2	0.0	14.3	16.5	0.0	24.9	9.3	0.0	8.9	4.4	23.3	0.0
Prop In Lane	1.00		0.01	1.00		0.54	1.00		0.07	1.00		0.00
Lane Grp Cap(c), veh/h	95	0	441	215	0	456	364	0	810	512	964	0
V/C Ratio(X)	0.03	0.00	0.57	0.14	0.00	0.95	0.02	0.00	0.77	0.32	0.61	0.00
Avail Cap(c_a), veh/h	117	0	479	244	0	499	364	0	810	519	964	0
HCM Platoon Ratio	0.67	0.67	0.67	1.67	1.67	1.67	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.00	0.90	0.76	0.00	0.76	0.90	0.00	0.90	0.24	0.24	0.00
Uniform Delay (d), s/veh	52.2	0.0	35.5	30.1	0.0	26.5	3.3	0.0	2.1	10.3	12.2	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.6	0.1	0.0	21.8	0.1	0.0	6.4	0.1	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	10.4	1.2	0.0	19.3	0.1	0.0	7.9	3.2	12.8	0.0
LnGrp Delay(d),s/veh	52.3	0.0	36.2	30.2	0.0	48.3	3.4	0.0	8.6	10.4	12.9	0.0
LnGrp LOS	D		D	C		D	A		A	B	B	
Approach Vol, veh/h		256			463			635			753	
Approach Delay, s/veh		36.4			47.1			8.5			12.4	
Approach LOS		D			D			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	14.3	52.5		33.2		66.8		33.2				
Change Period (Y+Rc), s	6.4	5.9		* 5.9		* 5.9		5.9				
Max Green Setting (Gmax), s	8.3	43.8		* 30		* 59		29.7				
Max Q Clear Time (g_c+I1), s	6.4	11.3		26.9		25.3		27.2				
Green Ext Time (p_c), s	0.1	0.4		0.2		0.4		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				21.8								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
26: Main St & South St

2014 2-way
Timing Plan: PM

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	0	14	0	3	57	7	7	547	8	14	529	1	
Future Volume (vph)	0	14	0	3	57	7	7	547	8	14	529	1	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	100		155	200		0	
Storage Lanes	0		0	0		0	0		1	1		0	
Taper Length (ft)	25			25			50			50			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		25			25			25			25		
Link Distance (ft)		435			445			485			490		
Travel Time (s)		11.9			12.1			13.2			13.4		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%	
Parking (#/hr)												3	3
Shared Lane Traffic (%)													
Number of Detectors	1	1		1	1		1	1	1	1	1		
Detector Template													
Leading Detector (ft)	50	50		50	50		50	50	50	50	50		
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0		
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0		
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50		
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0		
Turn Type		NA		Perm	NA		Perm	NA	Perm	Perm	NA		
Protected Phases		8			4			2				6	
Permitted Phases	8			4			2		2	6			
Detector Phase	8	8		4	4		2	2	2	6	6		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0	20.0	20.0	20.0		
Minimum Split (s)	29.9	29.9		31.9	31.9		25.6	25.6	25.6	26.5	26.5		
Total Split (s)	32.0	32.0		32.0	32.0		68.0	68.0	68.0	68.0	68.0		
Total Split (%)	32.0%	32.0%		32.0%	32.0%		68.0%	68.0%	68.0%	68.0%	68.0%		
Maximum Green (s)	26.1	26.1		26.1	26.1		62.4	62.4	62.4	62.5	62.5		
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0		
All-Red Time (s)	2.9	2.9		2.9	2.9		2.6	2.6	2.6	2.5	2.5		
Lost Time Adjust (s)		0.0			0.0			0.0	0.0	-1.0	0.0		
Total Lost Time (s)		5.9			5.9			5.6	5.6	4.5	5.5		
Lead/Lag													
Lead-Lag Optimize?													
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0		
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max		
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0		
Flash Dont Walk (s)	17.0	17.0		19.0	19.0		13.0	13.0	13.0	14.0	14.0		
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0		

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings
26: Main St & South St

2014 2-way
Timing Plan: PM













Cycle Length: 100
Actuated Cycle Length: 100
Offset: 97 (97%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated

Splits and Phases: 26: Main St & South St



HCM 2010 Signalized Intersection Summary
 26: Main St & South St

2014 2-way
 Timing Plan: PM




















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↑	↗	↘	↕	
Traffic Volume (veh/h)	0	14	0	3	57	7	7	547	8	14	529	1
Future Volume (veh/h)	0	14	0	3	57	7	7	547	8	14	529	1
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1900	1759	1759	1759	1759	1900
Adj Flow Rate, veh/h	0	15	0	3	62	8	8	595	9	15	575	1
Adj No. of Lanes	0	1	0	0	1	0	0	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	0	167	0	40	142	18	42	1385	1187	689	1233	2
Arrive On Green	0.00	0.09	0.00	0.10	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	0	1827	0	32	1554	195	7	1745	1495	767	1554	3
Grp Volume(v), veh/h	0	15	0	73	0	0	603	0	9	15	0	576
Grp Sat Flow(s),veh/h/ln	0	1827	0	1782	0	0	1751	0	1495	767	0	1556
Q Serve(g_s), s	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.8	0.0	3.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.00		0.00	0.04		0.11	0.01		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	0	167	0	218	0	0	1426	0	1187	689	0	1235
V/C Ratio(X)	0.00	0.09	0.00	0.33	0.00	0.00	0.42	0.00	0.01	0.02	0.00	0.47
Avail Cap(c_a), veh/h	0	477	0	518	0	0	1426	0	1187	689	0	1235
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	0.00	0.00	0.91	0.00	0.91	0.83	0.00	0.83
Uniform Delay (d), s/veh	0.0	41.6	0.0	43.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.7	0.0	3.5	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.7
LnGrp Delay(d),s/veh	0.0	41.9	0.0	43.9	0.0	0.0	0.8	0.0	0.0	0.0	0.0	1.1
LnGrp LOS		D		D			A		A	A		A
Approach Vol, veh/h		15			73			612			591	
Approach Delay, s/veh		41.9			43.9			0.8			1.0	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		85.0		15.0		85.0		15.0				
Change Period (Y+Rc), s		5.6		5.9		* 5.6		5.9				
Max Green Setting (Gmax), s		62.4		26.1		* 63		26.1				
Max Q Clear Time (g_c+I1), s		2.0		5.8		2.0		2.8				
Green Ext Time (p_c), s		7.1		0.3		7.1		0.3				

Intersection Summary	
HCM 2010 Ctrl Delay	3.8
HCM 2010 LOS	A

Notes
 * HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
27: Main St & Bronson St

2014 2-way
Timing Plan: PM

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	5	2	0	7	10	18	8	572	7	5	549	2	
Future Volume (vph)	5	2	0	7	10	18	8	572	7	5	549	2	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	100		0	100		0	
Storage Lanes	0		0	0		0	1		0	1		0	
Taper Length (ft)	25			25			50			50			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		25			25			25			25		
Link Distance (ft)		440			453			810			485		
Travel Time (s)		12.0			12.4			22.1			13.2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%	
Shared Lane Traffic (%)													
Number of Detectors	1	1		1	1		1	1		1	1		
Detector Template	Left	Thru			Thru		Left						
Leading Detector (ft)	20	50		50	50		50	50		50	50		
Trailing Detector (ft)	0	0		0	0		0	0		0	0		
Detector 1 Position(ft)	0	0		0	0		0	0		0	0		
Detector 1 Size(ft)	20	50		50	50		50	50		50	50		
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		8			4			2			6		
Permitted Phases	8			4			2			6			
Detector Phase	8	8		4	4		2	2		6	6		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0		
Minimum Split (s)	33.7	33.7		28.9	28.9		24.9	24.9		25.3	25.3		
Total Split (s)	33.7	33.7		33.7	33.7		66.3	66.3		66.3	66.3		
Total Split (%)	33.7%	33.7%		33.7%	33.7%		66.3%	66.3%		66.3%	66.3%		
Maximum Green (s)	28.0	28.0		27.8	27.8		61.4	61.4		61.0	61.0		
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
All-Red Time (s)	2.7	2.7		2.9	2.9		1.9	1.9		2.3	2.3		
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		-0.6	0.0		
Total Lost Time (s)		5.7			5.9		4.9	4.9		4.7	5.3		
Lead/Lag													
Lead-Lag Optimize?													
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max		
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0		
Flash Dont Walk (s)	21.0	21.0		16.0	16.0		11.0	11.0		11.0	11.0		
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0		
Intersection Summary													
Area Type:	Other												
Cycle Length:	100												

Lanes, Volumes, Timings
27: Main St & Bronson St

2014 2-way
Timing Plan: PM













Actuated Cycle Length: 100
Offset: 23 (23%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 65
Control Type: Actuated-Coordinated

Splits and Phases: 27: Main St & Bronson St


























HCM 2010 Signalized Intersection Summary
 27: Main St & Bronson St

2014 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	5	2	0	7	10	18	8	572	7	5	549	2
Future Volume (veh/h)	5	2	0	7	10	18	8	572	7	5	549	2
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1759	1759	1900	1759	1759	1900
Adj Flow Rate, veh/h	5	2	0	8	11	20	9	622	8	5	597	2
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	132	42	0	58	42	60	701	1414	18	688	1430	5
Arrive On Green	0.07	0.07	0.00	0.08	0.07	0.07	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	969	588	0	199	588	829	771	1733	22	749	1752	6
Grp Volume(v), veh/h	7	0	0	39	0	0	9	0	630	5	0	599
Grp Sat Flow(s),veh/h/ln	1557	0	0	1617	0	0	771	0	1755	749	0	1758
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.4	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.71		0.00	0.21		0.51	1.00		0.01	1.00		0.00
Lane Grp Cap(c), veh/h	174	0	0	176	0	0	701	0	1432	688	0	1434
V/C Ratio(X)	0.04	0.00	0.00	0.22	0.00	0.00	0.01	0.00	0.44	0.01	0.00	0.42
Avail Cap(c_a), veh/h	477	0	0	501	0	0	701	0	1432	688	0	1434
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.99	0.00	0.00	1.00	0.00	1.00	0.88	0.00	0.88
Uniform Delay (d), s/veh	43.2	0.0	0.0	44.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.6	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.6
LnGrp Delay(d),s/veh	43.3	0.0	0.0	44.6	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.8
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		7			39			639				604
Approach Delay, s/veh		43.3			44.6			1.0				0.8
Approach LOS		D			D			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		86.9		13.1		86.9		13.1				
Change Period (Y+Rc), s		* 5.3		5.9		* 5.3		* 5.9				
Max Green Setting (Gmax), s		* 61		27.8		* 61		* 28				
Max Q Clear Time (g_c+I1), s		2.0		4.2		2.0		2.4				
Green Ext Time (p_c), s		7.4		0.1		7.4		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				2.4								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
28: Main St & Sample St

2014 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 				
Traffic Volume (vph)	13	660	47	124	780	38	0	493	92	49	493	17
Future Volume (vph)	13	660	47	124	780	38	0	493	92	49	493	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	100		385	100		225
Storage Lanes	0		0	1		0	1		1	1		1
Taper Length (ft)	25			75			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		437			457			1885			325	
Travel Time (s)		11.9			12.5			51.4			8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	50
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	50
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8		7	4			2			6	
Permitted Phases	8			4			2			6		6
Detector Phase	8	8		7	4		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	20.0
Minimum Split (s)	28.9	28.9		13.9	34.2		30.0	30.0		35.9	35.9	35.9
Total Split (s)	38.0	38.0		14.0	52.0		48.0	48.0		48.0	48.0	48.0
Total Split (%)	38.0%	38.0%		14.0%	52.0%		48.0%	48.0%		48.0%	48.0%	48.0%
Maximum Green (s)	32.1	32.1		8.1	45.8		42.0	42.0		42.1	42.1	42.1
Yellow Time (s)	3.2	3.2		3.0	3.2		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.7	2.7		2.9	3.0		3.0	3.0		2.9	2.9	2.9
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)		5.9		5.9	6.2		6.0	6.0		5.9	5.9	5.9
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		3.0	2.5		0.2	0.2		0.2	0.2	0.2
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	16.0	16.0			21.0		17.0	17.0		23.0	23.0	23.0
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	0

Intersection Summary

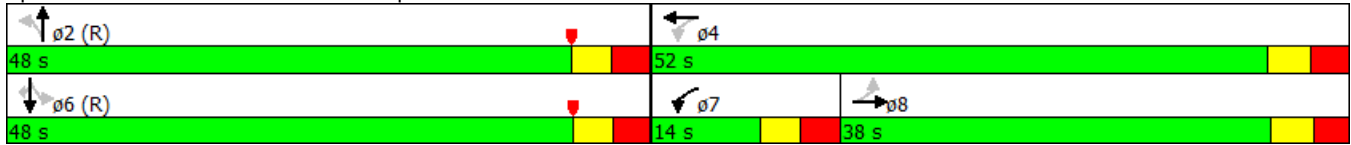
Area Type: Other
Cycle Length: 100

Lanes, Volumes, Timings
 28: Main St & Sample St

2014 2-way
 Timing Plan: PM

Actuated Cycle Length: 100
 Offset: 8 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 28: Main St & Sample St





















HCM 2010 Signalized Intersection Summary
28: Main St & Sample St

2014 2-way
Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔		↔	↔↔		↔	↔↔		↔	↔	↔
Traffic Volume (veh/h)	13	660	47	124	780	38	0	493	92	49	493	17
Future Volume (veh/h)	13	660	47	124	780	38	0	493	92	49	493	17
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1759	1900	1759	1759	1900	1759	1759	1900	1759	1759	1759
Adj Flow Rate, veh/h	14	717	51	135	848	41	0	536	100	53	536	18
Adj No. of Lanes	0	2	0	1	2	0	1	2	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	44	826	58	245	1328	64	72	1320	245	407	825	701
Arrive On Green	0.54	0.54	0.54	0.10	0.54	0.54	0.00	0.94	0.94	0.62	0.62	0.62
Sat Flow, veh/h	24	3035	214	1675	3246	157	804	2815	523	745	1759	1495
Grp Volume(v), veh/h	409	0	373	135	437	452	0	317	319	53	536	18
Grp Sat Flow(s),veh/h/ln	1710	0	1563	1675	1671	1732	804	1671	1667	745	1759	1495
Q Serve(g_s), s	5.0	0.0	20.8	5.5	18.2	18.2	0.0	1.9	1.9	3.2	19.3	0.5
Cycle Q Clear(g_c), s	20.4	0.0	20.8	5.5	18.2	18.2	0.0	1.9	1.9	5.1	19.3	0.5
Prop In Lane	0.03		0.14	1.00		0.09	1.00		0.31	1.00		1.00
Lane Grp Cap(c), veh/h	503	0	425	245	684	709	72	784	781	407	825	701
V/C Ratio(X)	0.81	0.00	0.88	0.55	0.64	0.64	0.00	0.41	0.41	0.13	0.65	0.03
Avail Cap(c_a), veh/h	583	0	502	250	765	793	72	784	781	407	825	701
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	2.00	2.00	2.00	1.33	1.33	1.33
Upstream Filter(I)	0.71	0.00	0.71	0.68	0.68	0.68	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.1	0.0	21.3	24.1	17.6	17.6	0.0	1.7	1.7	11.4	13.6	10.1
Incr Delay (d2), s/veh	5.2	0.0	10.2	1.7	0.9	0.8	0.0	1.6	1.6	0.7	4.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.7	0.0	14.2	4.7	12.3	12.7	0.0	1.9	1.9	1.3	15.2	0.4
LnGrp Delay(d),s/veh	26.4	0.0	31.6	25.8	18.5	18.5	0.0	3.3	3.3	12.0	17.6	10.2
LnGrp LOS	C		C	C	B	B		A	A	B	B	B
Approach Vol, veh/h		782			1024			636			607	
Approach Delay, s/veh		28.8			19.4			3.3			16.9	
Approach LOS		C			B			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		52.9		47.1		52.9	13.7	33.4				
Change Period (Y+Rc), s		6.0		* 6.2		* 6	5.9	* 6.2				
Max Green Setting (Gmax), s		42.0		* 46		* 42	8.1	* 32				
Max Q Clear Time (g_c+I1), s		3.9		20.2		21.3	7.5	22.8				
Green Ext Time (p_c), s		0.4		6.8		0.4	0.0	4.4				
Intersection Summary												
HCM 2010 Ctrl Delay				18.0								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
29: Main St & Broadway St

2014 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	9	1	24	12	20	0	569	10	3	620	0
Future Volume (vph)	0	9	1	24	12	20	0	569	10	3	620	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		461			451			775			1885	
Travel Time (s)		12.6			12.3			21.1			51.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
30: Main St & Indiana Ave

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	247	120	9	150	13	135	560	8	9	595	39
Future Volume (vph)	5	247	120	9	150	13	135	560	8	9	595	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		0	250		0	250		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			200			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		463			445			1320			775	
Travel Time (s)		12.6			12.1			36.0			21.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	28.2	28.2		31.5	31.5		25.2	25.2		25.1	25.1	
Total Split (s)	38.0	38.0		38.0	38.0		62.0	62.0		62.0	62.0	
Total Split (%)	38.0%	38.0%		38.0%	38.0%		62.0%	62.0%		62.0%	62.0%	
Maximum Green (s)	32.5	32.5		32.5	32.5		56.8	56.8		57.0	57.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		2.2	2.2		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)	5.5	5.5		5.5	5.5		5.2	5.2		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		19.0	19.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary






















Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 63 (63%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 30: Main St & Indiana Ave





















HCM 2010 Signalized Intersection Summary
30: Main St & Indiana Ave

2014 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	247	120	9	150	13	135	560	8	9	595	39
Future Volume (veh/h)	5	247	120	9	150	13	135	560	8	9	595	39
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1776	1776	1900	1776	1776	1900
Adj Flow Rate, veh/h	5	268	130	10	163	14	147	609	9	10	647	42
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	7	7	7	7	7	7
Cap, veh/h	404	377	183	189	538	46	479	993	15	507	938	61
Arrive On Green	0.32	0.32	0.32	0.65	0.65	0.65	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1179	1163	564	964	1659	143	716	1745	26	764	1650	107
Grp Volume(v), veh/h	5	0	398	10	0	177	147	0	618	10	0	689
Grp Sat Flow(s),veh/h/ln	1179	0	1727	964	0	1802	716	0	1771	764	0	1757
Q Serve(g_s), s	0.3	0.0	20.3	0.8	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.6	0.0	20.3	21.1	0.0	4.3	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.33	1.00		0.08	1.00		0.01	1.00		0.06
Lane Grp Cap(c), veh/h	404	0	560	189	0	584	479	0	1008	507	0	999
V/C Ratio(X)	0.01	0.00	0.71	0.05	0.00	0.30	0.31	0.00	0.61	0.02	0.00	0.69
Avail Cap(c_a), veh/h	404	0	560	189	0	584	479	0	1008	507	0	999
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.0	0.0	29.7	23.4	0.0	12.6	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	7.5	0.5	0.0	1.3	1.7	0.0	2.8	0.1	0.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.0	16.2	0.4	0.0	4.1	0.4	0.0	1.4	0.0	0.0	1.9
LnGrp Delay(d),s/veh	26.0	0.0	37.2	23.9	0.0	14.0	1.7	0.0	2.8	0.1	0.0	3.9
LnGrp LOS	C		D	C		B	A		A	A		A
Approach Vol, veh/h		403			187			765			699	
Approach Delay, s/veh		37.0			14.5			2.6			3.8	
Approach LOS		D			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		62.2		38.0		62.2		38.0				
Change Period (Y+Rc), s		* 5.2		5.5		* 5.2		5.5				
Max Green Setting (Gmax), s		* 57		32.5		* 57		32.5				
Max Q Clear Time (g_c+I1), s		2.0		22.3		2.0		23.1				
Green Ext Time (p_c), s		2.3		0.7		2.3		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				10.9								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
31: Main St & Calvert St

2014 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	4	23	7	19	30	17	580	3	13	650	26
Future Volume (vph)	28	4	23	7	19	30	17	580	3	13	650	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		520			445			1320			1320	
Travel Time (s)		14.2			12.1			36.0			36.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
32: Main St & Ewing Ave

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	114	35	31	69	56	55	523	40	45	571	62
Future Volume (vph)	26	114	35	31	69	56	55	523	40	45	571	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		150	125		0	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			100			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		546			440			5282			1320	
Travel Time (s)		14.9			12.0			144.1			36.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	27.0	27.0		27.0	27.0		28.3	28.3		28.3	28.3	
Total Split (s)	29.0	29.0		29.0	29.0		71.0	71.0		71.0	71.0	
Total Split (%)	29.0%	29.0%		29.0%	29.0%		71.0%	71.0%		71.0%	71.0%	
Maximum Green (s)	23.4	23.4		23.4	23.4		65.5	65.5		65.5	65.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6		5.5	5.5		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		13.0	13.0		11.0	11.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 23 (23%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 32: Main St & Ewing Ave



HCM 2010 Signalized Intersection Summary
32: Main St & Ewing Ave

2014 2-way
Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	114	35	31	69	56	55	523	40	45	571	62
Future Volume (veh/h)	26	114	35	31	69	56	55	523	40	45	571	62
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1727	1900	1727	1727	1900	1776	1776	1900	1776	1776	1900
Adj Flow Rate, veh/h	28	124	38	34	75	61	60	568	43	49	621	67
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	10	10	10	10	10	7	7	7	7	7	7
Cap, veh/h	273	297	91	243	207	168	541	1068	81	434	1032	111
Arrive On Green	0.23	0.23	0.23	0.39	0.39	0.39	0.65	0.65	0.65	1.00	1.00	1.00
Sat Flow, veh/h	1157	1270	389	1130	883	718	716	1630	123	769	1576	170
Grp Volume(v), veh/h	28	0	162	34	0	136	60	0	611	49	0	688
Grp Sat Flow(s),veh/h/ln	1157	0	1659	1130	0	1601	716	0	1754	769	0	1746
Q Serve(g_s), s	2.0	0.0	8.3	2.4	0.0	6.0	3.2	0.0	18.4	2.0	0.0	0.0
Cycle Q Clear(g_c), s	8.1	0.0	8.3	10.7	0.0	6.0	3.2	0.0	18.4	20.4	0.0	0.0
Prop In Lane	1.00		0.23	1.00		0.45	1.00		0.07	1.00		0.10
Lane Grp Cap(c), veh/h	273	0	388	243	0	375	541	0	1149	434	0	1143
V/C Ratio(X)	0.10	0.00	0.42	0.14	0.00	0.36	0.11	0.00	0.53	0.11	0.00	0.60
Avail Cap(c_a), veh/h	273	0	388	243	0	375	541	0	1149	434	0	1143
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	32.5	29.8	0.0	25.2	6.5	0.0	9.1	2.9	0.0	0.0
Incr Delay (d2), s/veh	0.8	0.0	3.3	1.2	0.0	2.7	0.4	0.0	1.8	0.5	0.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	0.0	7.4	1.5	0.0	5.3	1.2	0.0	14.4	0.8	0.0	1.3
LnGrp Delay(d),s/veh	35.7	0.0	35.8	31.0	0.0	27.9	6.9	0.0	10.9	3.4	0.0	2.3
LnGrp LOS	D		D	C		C	A		B	A		A
Approach Vol, veh/h		190			170			671			737	
Approach Delay, s/veh		35.8			28.5			10.5			2.4	
Approach LOS		D			C			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		71.0		29.0		71.0		29.0				
Change Period (Y+Rc), s		5.5		5.6		5.5		5.6				
Max Green Setting (Gmax), s		65.5		23.4		65.5		23.4				
Max Q Clear Time (g_c+I1), s		20.4		12.7		22.4		10.3				
Green Ext Time (p_c), s		2.1		0.3		2.1		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			11.6									
HCM 2010 LOS			B									

Lanes, Volumes, Timings
33: Main St & Chippewa Ave

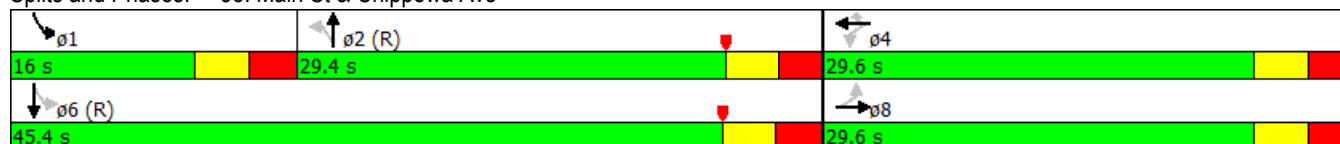
2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	50	16	42	25	325	20	155	55	334	224	46
Future Volume (vph)	24	50	16	42	25	325	20	155	55	334	224	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	50		100	0		0	200		0
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		604			416			627			5282	
Travel Time (s)		16.5			11.3			17.1			144.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		8			4			2		1	6	
Permitted Phases	8			4		4	2			6		
Minimum Split (s)	25.6	25.6		29.6	29.6	29.6	28.5	28.5		15.7	31.7	
Total Split (s)	29.6	29.6		29.6	29.6	29.6	29.4	29.4		16.0	45.4	
Total Split (%)	39.5%	39.5%		39.5%	39.5%	39.5%	39.2%	39.2%		21.3%	60.5%	
Maximum Green (s)	24.0	24.0		24.0	24.0	24.0	23.9	23.9		10.3	39.7	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.6	2.6	2.6	2.5	2.5		2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6	5.6		5.5		5.7	5.7	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)	13.0	13.0		17.0	17.0	17.0	16.0	16.0			19.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0			0	

Intersection Summary






















Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 33: Main St & Chippewa Ave



HCM 2010 Signalized Intersection Summary
 33: Main St & Chippewa Ave

2014 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	50	16	42	25	325	20	155	55	334	224	46
Future Volume (veh/h)	24	50	16	42	25	325	20	155	55	334	224	46
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1900	1776	1776	1776	1900	1776	1900	1776	1776	1900
Adj Flow Rate, veh/h	26	54	17	46	27	353	22	168	60	363	243	50
Adj No. of Lanes	1	1	0	1	1	1	0	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	7	7	7	7	7	7	7	7	7	7	7	7
Cap, veh/h	390	414	130	461	567	482	74	378	126	640	759	156
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.14	0.53	0.53
Sat Flow, veh/h	952	1296	408	1262	1776	1509	70	1188	397	1691	1430	294
Grp Volume(v), veh/h	26	0	71	46	27	353	250	0	0	363	0	293
Grp Sat Flow(s),veh/h/ln	952	0	1704	1262	1776	1509	1655	0	0	1691	0	1724
Q Serve(g_s), s	1.5	0.0	2.2	2.0	0.8	15.6	0.0	0.0	0.0	10.3	0.0	7.2
Cycle Q Clear(g_c), s	2.2	0.0	2.2	4.2	0.8	15.6	8.8	0.0	0.0	10.3	0.0	7.2
Prop In Lane	1.00		0.24	1.00		1.00	0.09		0.24	1.00		0.17
Lane Grp Cap(c), veh/h	390	0	544	461	567	482	578	0	0	640	0	915
V/C Ratio(X)	0.07	0.00	0.13	0.10	0.05	0.73	0.43	0.00	0.00	0.57	0.00	0.32
Avail Cap(c_a), veh/h	390	0	544	461	567	482	578	0	0	640	0	915
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.5	0.0	18.2	19.7	17.7	22.8	20.5	0.0	0.0	12.9	0.0	10.0
Incr Delay (d2), s/veh	0.3	0.0	0.5	0.4	0.2	9.5	2.4	0.0	0.0	3.6	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	0.0	2.0	1.4	0.7	12.3	7.9	0.0	0.0	1.4	0.0	6.6
LnGrp Delay(d),s/veh	18.8	0.0	18.7	20.1	17.9	32.2	22.9	0.0	0.0	16.5	0.0	10.9
LnGrp LOS	B		B	C	B	C	C			B		B
Approach Vol, veh/h		97			426			250			656	
Approach Delay, s/veh		18.7			30.0			22.9			14.0	
Approach LOS		B			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	16.0	29.6		29.6		45.6		29.6				
Change Period (Y+Rc), s	* 5.7	* 5.7		5.6		* 5.7		5.6				
Max Green Setting (Gmax), s	* 10	* 24		24.0		* 40		24.0				
Max Q Clear Time (g_c+I1), s	12.3	10.8		17.6		9.2		4.2				
Green Ext Time (p_c), s	0.0	2.9		1.2		3.9		2.1				
Intersection Summary												
HCM 2010 Ctrl Delay				20.7								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 34: Michigan St N/Michigan St & North Shore Dr

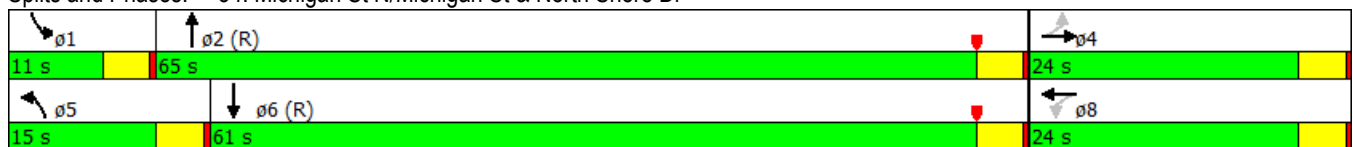
2014 2-way
 Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	75	46	89	95	52	71	1025	130	38	777	3
Future Volume (vph)	1	75	46	89	95	52	71	1025	130	38	777	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	50		0	100		0	75		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			100			100			100		
Right Turn on Red			No			No			No			No
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		476			523			1365			444	
Travel Time (s)		13.0			14.3			37.2			12.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Minimum Split (s)	23.0	23.0		23.0	23.0		8.0	23.0		8.0	23.0	
Total Split (s)	24.0	24.0		24.0	24.0		15.0	65.0		11.0	61.0	
Total Split (%)	24.0%	24.0%		24.0%	24.0%		15.0%	65.0%		11.0%	61.0%	
Maximum Green (s)	20.0	20.0		20.0	20.0		11.0	61.0		7.0	57.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			12.0			12.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 65 (65%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 34: Michigan St N/Michigan St & North Shore Dr



















HCM 2010 Signalized Intersection Summary
 34: Michigan St N/Michigan St & North Shore Dr

2014 2-way
 Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	75	46	89	95	52	71	1025	130	38	777	3
Future Volume (veh/h)	1	75	46	89	95	52	71	1025	130	38	777	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1759	1759	1900	1759	1759	1900
Adj Flow Rate, veh/h	1	82	50	97	103	57	77	1114	141	41	845	3
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	213	213	130	236	221	122	184	1822	230	117	1947	7
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.11	0.61	0.61	0.07	0.57	0.57
Sat Flow, veh/h	1198	1064	649	1229	1107	612	1675	2987	377	1675	3416	12
Grp Volume(v), veh/h	1	0	132	97	0	160	77	623	632	41	413	435
Grp Sat Flow(s),veh/h/ln	1198	0	1712	1229	0	1719	1675	1671	1693	1675	1671	1757
Q Serve(g_s), s	0.1	0.0	6.7	7.4	0.0	8.2	4.3	23.1	23.3	2.3	14.1	14.1
Cycle Q Clear(g_c), s	8.3	0.0	6.7	14.1	0.0	8.2	4.3	23.1	23.3	2.3	14.1	14.1
Prop In Lane	1.00		0.38	1.00		0.36	1.00		0.22	1.00		0.01
Lane Grp Cap(c), veh/h	213	0	342	236	0	344	184	1019	1033	117	953	1002
V/C Ratio(X)	0.00	0.00	0.39	0.41	0.00	0.47	0.42	0.61	0.61	0.35	0.43	0.43
Avail Cap(c_a), veh/h	213	0	342	236	0	344	184	1019	1033	117	953	1002
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.9	0.0	34.7	40.8	0.0	35.3	41.5	12.1	12.1	44.3	12.3	12.3
Incr Delay (d2), s/veh	0.0	0.0	3.3	5.2	0.0	4.5	6.8	2.7	2.7	8.0	1.4	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	6.2	5.2	0.0	7.8	4.2	16.8	17.1	2.4	11.1	11.5
LnGrp Delay(d),s/veh	39.0	0.0	37.9	46.0	0.0	39.8	48.3	14.8	14.9	52.4	13.7	13.7
LnGrp LOS	D		D	D		D	D	B	B	D	B	B
Approach Vol, veh/h		133			257			1332			889	
Approach Delay, s/veh		37.9			42.1			16.8			15.5	
Approach LOS		D			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	65.0		24.0	15.0	61.0		24.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	61.0		20.0	11.0	57.0		20.0				
Max Q Clear Time (g_c+I1), s	4.3	25.3		10.3	6.3	16.1		16.1				
Green Ext Time (p_c), s	0.0	21.6		1.5	0.1	23.4		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				19.9								
HCM 2010 LOS				B								

Lanes, Volumes, Timings
 35: Michigan St N & Bartlett St

2014 2-way
 Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	291	7	51	24	11	18	93	892	9	3	683	181
Future Volume (vph)	291	7	51	24	11	18	93	892	9	3	683	181
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		472			392			645			1365	
Travel Time (s)		12.9			10.7			17.6			37.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		3	3		3	3						
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary

Area Type: Other
 Control Type: Roundabout

Lanes, Volumes, Timings
36: Michigan St N & Navarre St

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	0	21	43	0	20	16	924	13	11	735	12
Future Volume (vph)	50	0	21	43	0	20	16	924	13	11	735	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	125		0	125		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		230			391			500			645	
Travel Time (s)		6.3			10.7			13.6			17.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)				5	5	5						
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	50	50		20	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		20	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		8.0	30.0		4.0	30.0	
Minimum Split (s)	29.7	29.7		29.7	29.7		15.0	35.5		9.2	35.5	
Total Split (s)	31.0	31.0		31.0	31.0		15.0	49.0		10.0	44.0	
Total Split (%)	34.4%	34.4%		34.4%	34.4%		16.7%	54.4%		11.1%	48.9%	
Maximum Green (s)	25.3	25.3		25.3	25.3		9.7	43.7		4.8	38.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.7	2.7		2.7	2.7		2.3	2.3		2.2	2.2	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	5.7			5.7		5.3	5.3		5.2	5.2	
Lead/Lag							Lead	Lead		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0			11.0			10.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings
 36: Michigan St N & Navarre St

2014 2-way
 Timing Plan: PM

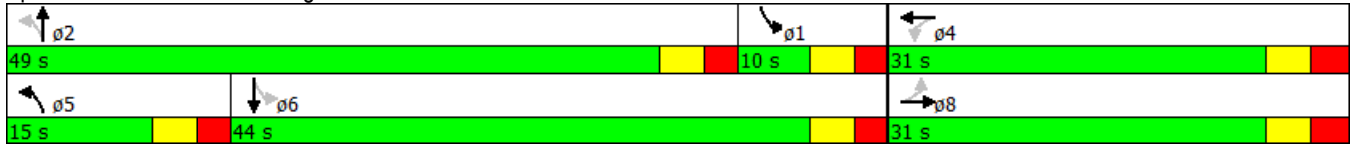
Cycle Length: 90

Actuated Cycle Length: 70

Natural Cycle: 85

Control Type: Semi Act-Uncoord

Splits and Phases: 36: Michigan St N & Navarre St




















HCM 2010 Signalized Intersection Summary
 36: Michigan St N & Navarre St

2014 2-way
 Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	0	21	43	0	20	16	924	13	11	735	12
Future Volume (veh/h)	50	0	21	43	0	20	16	924	13	11	735	12
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1900	1827	1900	1759	1759	1900	1759	1759	1900
Adj Flow Rate, veh/h	54	0	23	47	0	22	17	1004	14	12	799	13
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	307	0	211	191	14	55	410	2137	30	341	2009	33
Arrive On Green	0.14	0.00	0.14	0.14	0.00	0.14	0.03	0.63	0.63	0.00	0.60	0.60
Sat Flow, veh/h	1357	0	1553	759	102	403	1675	3375	47	1675	3366	55
Grp Volume(v), veh/h	54	0	23	69	0	0	17	497	521	12	397	415
Grp Sat Flow(s),veh/h/ln	1357	0	1553	1264	0	0	1675	1671	1751	1675	1671	1750
Q Serve(g_s), s	0.0	0.0	0.9	2.4	0.0	0.0	0.3	10.7	10.7	0.0	8.7	8.7
Cycle Q Clear(g_c), s	1.9	0.0	0.9	3.3	0.0	0.0	0.3	10.7	10.7	0.0	8.7	8.7
Prop In Lane	1.00		1.00	0.68		0.32	1.00		0.03	1.00		0.03
Lane Grp Cap(c), veh/h	307	0	211	260	0	0	410	1058	1109	341	998	1044
V/C Ratio(X)	0.18	0.00	0.11	0.27	0.00	0.00	0.04	0.47	0.47	0.04	0.40	0.40
Avail Cap(c_a), veh/h	620	0	569	545	0	0	592	1058	1109	455	998	1044
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.6	0.0	26.1	27.1	0.0	0.0	6.8	6.6	6.6	10.7	7.4	7.4
Incr Delay (d2), s/veh	0.3	0.0	0.2	0.5	0.0	0.0	0.0	1.5	1.4	0.0	1.2	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.7	0.0	0.7	2.2	0.0	0.0	0.2	9.0	9.4	0.2	7.7	8.0
LnGrp Delay(d),s/veh	26.9	0.0	26.4	27.7	0.0	0.0	6.9	8.1	8.0	10.7	8.5	8.5
LnGrp LOS	C		C	C			A	A	A	B	A	A
Approach Vol, veh/h		77			69			1035			824	
Approach Delay, s/veh		26.7			27.7			8.1			8.5	
Approach LOS		C			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.9	49.0		15.1	7.5	46.4		15.1				
Change Period (Y+Rc), s	* 5.2	* 5.3		* 5.7	* 5.3	* 5.2		* 5.7				
Max Green Setting (Gmax), s	* 4.8	* 44		* 25	* 9.7	* 39		* 25				
Max Q Clear Time (g_c+I1), s	2.0	12.7		5.3	2.3	10.7		3.9				
Green Ext Time (p_c), s	0.0	5.2		0.5	0.0	3.9		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			9.6									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 37: Michigan St N & Main St/Marion St

2014 2-way
 Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	466	11	4	4	5	0	13	489	19	3	436	364
Future Volume (vph)	466	11	4	4	5	0	13	489	19	3	436	364
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	50			25			100			25		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		345			379			528			500	
Travel Time (s)		9.4			10.3			14.4			13.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)									5			
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary

Area Type: CBD
 Control Type: Roundabout

Lanes, Volumes, Timings
 38: St. Joseph St/Michigan St N & LaSalle Ave#

2014 2-way
 Timing Plan: PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑	↗	↖	↗	
Traffic Volume (vph)	37	653	130	64	740	84	199	403	102	40	402	39
Future Volume (vph)	37	653	130	64	740	84	199	403	102	40	402	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	100		0	350		240	200		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	75			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		437			700			614			492	
Travel Time (s)		11.9			19.1			16.7			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		0										
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template				Left			Left	Thru	Right		Thru	
Leading Detector (ft)	50	50		20	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	50	50		20	50		50	50	50	50	50	50
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		4	4		5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		8.0	20.0	20.0	8.0	20.0	
Minimum Split (s)	32.1	32.1		31.2	31.2		13.6	28.6	28.6	13.7	28.7	
Total Split (s)	41.0	41.0		41.0	41.0		15.0	45.3	45.3	13.7	44.0	
Total Split (%)	41.0%	41.0%		41.0%	41.0%		15.0%	45.3%	45.3%	13.7%	44.0%	
Maximum Green (s)	34.9	34.9		35.2	35.2		9.4	39.7	39.7	8.0	38.3	
Yellow Time (s)	3.2	3.2		3.2	3.2		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.9	2.9		2.6	2.6		2.6	2.6	2.6	2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.1	6.1		5.8	5.8		5.6	5.6	5.6	5.7	5.7	
Lead/Lag							Lag	Lead	Lead	Lag	Lead	
Lead-Lag Optimize?							Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	C-Max	None	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0		7.0	
Flash Dont Walk (s)	19.0	19.0		14.0	14.0			16.0	16.0		16.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0		0	

Intersection Summary

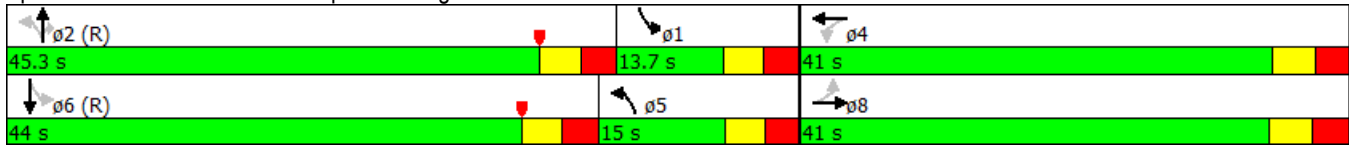
Area Type: CBD

Lanes, Volumes, Timings
 38: St. Joseph St/Michigan St N & LaSalle Ave#

2014 2-way
 Timing Plan: PM

Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 65 (65%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 38: St. Joseph St/Michigan St N & LaSalle Ave#



HCM 2010 Signalized Intersection Summary
 38: St. Joseph St/Michigan St N & LaSalle Ave#

2014 2-way
 Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	653	130	64	740	84	199	403	102	40	402	39
Future Volume (veh/h)	37	653	130	64	740	84	199	403	102	40	402	39
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1583	1583	1583	1583	1583	1710
Adj Flow Rate, veh/h	40	710	141	70	804	91	216	438	111	43	437	42
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	121	907	180	167	987	112	297	629	534	378	545	52
Arrive On Green	0.70	0.70	0.70	0.35	0.35	0.35	0.19	0.79	0.79	0.08	0.38	0.38
Sat Flow, veh/h	547	2599	516	570	2830	320	1508	1583	1346	1508	1422	137
Grp Volume(v), veh/h	40	427	424	70	444	451	216	438	111	43	0	479
Grp Sat Flow(s),veh/h/ln	547	1562	1553	570	1562	1588	1508	1583	1346	1508	0	1559
Q Serve(g_s), s	7.0	18.2	18.2	11.7	25.8	25.9	1.8	12.8	2.0	0.0	0.0	27.4
Cycle Q Clear(g_c), s	32.9	18.2	18.2	29.9	25.8	25.9	1.8	12.8	2.0	0.0	0.0	27.4
Prop In Lane	1.00		0.33	1.00		0.20	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	121	545	542	167	545	554	297	629	534	378	0	597
V/C Ratio(X)	0.33	0.78	0.78	0.42	0.81	0.81	0.73	0.70	0.21	0.11	0.00	0.80
Avail Cap(c_a), veh/h	121	545	542	169	550	559	299	629	534	378	0	597
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.32	0.32	0.32	1.00	1.00	1.00	0.79	0.79	0.79	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.2	12.6	12.6	39.6	29.6	29.6	34.8	7.5	6.4	23.5	0.0	27.5
Incr Delay (d2), s/veh	0.2	2.2	2.3	0.6	8.5	8.4	6.8	5.0	0.7	0.1	0.0	10.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	10.5	10.5	3.3	18.2	18.4	9.1	9.6	1.5	1.5	0.0	19.5
LnGrp Delay(d),s/veh	27.4	14.8	14.9	40.2	38.1	38.0	41.7	12.6	7.1	23.6	0.0	38.4
LnGrp LOS	C	B	B	D	D	D	D	B	A	C		D
Approach Vol, veh/h		891			965			765			522	
Approach Delay, s/veh		15.4			38.2			20.0			37.1	
Approach LOS		B			D			B			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.7	45.3		41.0	15.0	44.0		41.0				
Change Period (Y+Rc), s	5.7	* 5.6		* 6.1	* 5.7	* 5.7		* 6.1				
Max Green Setting (Gmax), s	8.0	* 40		* 35	* 9.4	* 38		* 35				
Max Q Clear Time (g_c+I1), s	2.0	14.8		31.9	3.8	29.4		34.9				
Green Ext Time (p_c), s	0.5	2.5		0.6	0.5	1.5		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				27.1								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
39: Michigan St # & Colfax Ave

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	193	10	36	249	0	24	0	71	0	0	0
Future Volume (vph)	0	193	10	36	249	0	24	0	71	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	15	11	11	11	11
Storage Length (ft)	150		0	75		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			75			25			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25				25
Link Distance (ft)		440			340			493				127
Travel Time (s)		12.0			9.3			13.4				3.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		5	5									
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA		Perm	NA				
Protected Phases		8			4			2				6
Permitted Phases				4			2			6		
Minimum Split (s)		26.0		26.0	26.0		26.7	26.7		26.5		26.5
Total Split (s)		62.0		62.0	62.0		38.0	38.0		38.0		38.0
Total Split (%)		62.0%		62.0%	62.0%		38.0%	38.0%		38.0%		38.0%
Maximum Green (s)		57.0		57.0	57.0		32.3	32.3		32.5		32.5
Yellow Time (s)		3.0		3.0	3.0		3.0	3.0		3.0		3.0
All-Red Time (s)		2.0		2.0	2.0		2.7	2.7		2.5		2.5
Lost Time Adjust (s)		0.0		0.0	0.0			0.0				0.0
Total Lost Time (s)		5.0		5.0	5.0			5.7				5.5
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0		14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		0		0	0		10	10		0		0

Intersection Summary


















Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 78 (78%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 39: Michigan St # & Colfax Ave






















HCM 2010 Signalized Intersection Summary
 39: Michigan St # & Colfax Ave

2014 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	193	10	36	249	0	24	0	71	0	0	0
Future Volume (veh/h)	0	193	10	36	249	0	24	0	71	0	0	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1644	1710	1644	1644	0	1710	1710	1710	1710	1644	1710
Adj Flow Rate, veh/h	0	210	11	39	271	0	26	0	77	0	0	0
Adj No. of Lanes	0	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	4	4	4	4	0	4	4	4	4	4	4
Cap, veh/h	0	771	40	652	935	0	140	22	346	0	533	0
Arrive On Green	0.00	1.00	1.00	1.00	1.00	0.00	0.33	0.00	0.32	0.00	0.00	0.00
Sat Flow, veh/h	0	1355	71	1020	1644	0	294	67	1067	0	1644	0
Grp Volume(v), veh/h	0	0	221	39	271	0	103	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1426	1020	1644	0	1428	0	0	0	1644	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	4.9	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.00		0.05	1.00		0.00	0.25		0.75	0.00		0.00
Lane Grp Cap(c), veh/h	0	0	811	652	935	0	522	0	0	0	533	0
V/C Ratio(X)	0.00	0.00	0.27	0.06	0.29	0.00	0.20	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	0	811	652	935	0	522	0	0	0	533	0
HCM Platoon Ratio	1.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	24.4	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.8	0.2	0.8	0.0	0.8	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.3	0.1	0.4	0.0	3.9	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.8	0.2	0.8	0.0	25.3	0.0	0.0	0.0	0.0	0.0
LnGrp LOS			A	A	A		C					
Approach Vol, veh/h		221			310			103				0
Approach Delay, s/veh		0.8			0.7			25.3				0.0
Approach LOS		A			A			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		38.2		62.0		38.2		62.0				
Change Period (Y+Rc), s		* 5.7		5.0		* 5.7		5.0				
Max Green Setting (Gmax), s		* 32		57.0		* 33		57.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			4.7									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 40: Michigan St # & Washington St

2014 2-way
 Timing Plan: PM

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	45	58	5	36	8	42	45	21	2	17	42
Future Volume (vph)	39	45	58	5	36	8	42	45	21	2	17	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	15	11	11	15	11
Storage Length (ft)	50		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			25			25			25		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		437			422			487			493	
Travel Time (s)		11.9			11.5			13.3			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		5	5		5	5						
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: CBD
 Control Type: Unsignalized

Lanes, Volumes, Timings
 41: Michigan St # & Jefferson Blvd

2014 2-way
 Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	138	27	7	110	30	18	36	22	11	35	22
Future Volume (vph)	23	138	27	7	110	30	18	36	22	11	35	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	15	11
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			425			480			487	
Travel Time (s)		12.0			11.6			13.1			13.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)	5	5	5	5	5	5						
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: CBD
 Control Type: Unsignalized

Lanes, Volumes, Timings
42: Michigan St # & Wayne St

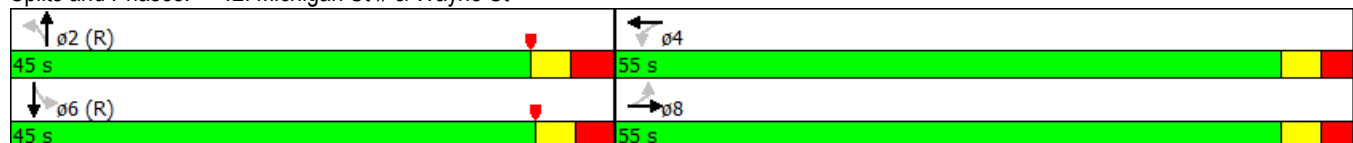
2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	63	6	13	122	13	1	19	13	4	56	13
Future Volume (vph)	4	63	6	13	122	13	1	19	13	4	56	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			50			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		445			405			488			480	
Travel Time (s)		12.1			11.0			13.3			13.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		5	5		3	3						
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	24.5	24.5		24.5	24.5		30.3	30.3		27.0	27.0	
Total Split (s)	55.0	55.0		55.0	55.0		45.0	45.0		45.0	45.0	
Total Split (%)	55.0%	55.0%		55.0%	55.0%		45.0%	45.0%		45.0%	45.0%	
Maximum Green (s)	49.5	49.5		49.5	49.5		38.7	38.7		39.0	39.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		3.3	3.3		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.3	6.3		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0		9.0	9.0		17.0	17.0		14.0	14.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 96 (96%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 42: Michigan St # & Wayne St

























HCM 2010 Signalized Intersection Summary
42: Michigan St # & Wayne St

2014 2-way
Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	63	6	13	122	13	1	19	13	4	56	13
Future Volume (veh/h)	4	63	6	13	122	13	1	19	13	4	56	13
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1710	1644	1710	1710	1644	1710
Adj Flow Rate, veh/h	4	68	7	14	133	14	1	21	14	4	61	14
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	513	633	65	646	639	67	41	361	232	50	495	109
Arrive On Green	0.99	0.99	0.99	0.16	0.16	0.16	0.39	0.39	0.39	0.39	0.39	0.39
Sat Flow, veh/h	1091	1283	132	1164	1295	136	10	928	597	31	1272	281
Grp Volume(v), veh/h	4	0	75	14	0	147	36	0	0	79	0	0
Grp Sat Flow(s),veh/h/ln	1091	0	1415	1164	0	1431	1535	0	0	1584	0	0
Q Serve(g_s), s	0.1	0.0	0.1	1.0	0.0	8.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	9.0	0.0	0.1	1.1	0.0	8.9	1.5	0.0	0.0	3.2	0.0	0.0
Prop In Lane	1.00		0.09	1.00		0.10	0.03		0.39	0.05		0.18
Lane Grp Cap(c), veh/h	513	0	699	646	0	706	634	0	0	653	0	0
V/C Ratio(X)	0.01	0.00	0.11	0.02	0.00	0.21	0.06	0.00	0.00	0.12	0.00	0.00
Avail Cap(c_a), veh/h	513	0	699	646	0	706	634	0	0	653	0	0
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	1.2	0.0	0.3	21.8	0.0	25.0	19.2	0.0	0.0	19.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.1	0.0	0.7	0.2	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.2	0.6	0.0	6.6	1.2	0.0	0.0	2.7	0.0	0.0
LnGrp Delay(d),s/veh	1.3	0.0	0.6	21.8	0.0	25.7	19.4	0.0	0.0	20.1	0.0	0.0
LnGrp LOS	A		A	C		C	B			C		
Approach Vol, veh/h		79			161			36			79	
Approach Delay, s/veh		0.7			25.3			19.4			20.1	
Approach LOS		A			C			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		45.3		55.0		45.3		55.0				
Change Period (Y+Rc), s		* 6.3		5.5		* 6.3		5.5				
Max Green Setting (Gmax), s		* 39		49.5		* 39		49.5				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				18.1								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

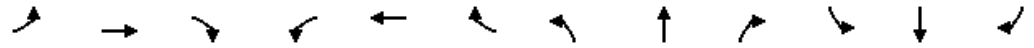
Lanes, Volumes, Timings
43: Michigan St & Monroe St

2014 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	327	20	82	351	109	44	455	35	142	555	10
Future Volume (vph)	13	327	20	82	351	109	44	455	35	142	555	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	250		300	100		0	100		0
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	25			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			830			490			539	
Travel Time (s)		12.0			22.6			13.4			14.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)							0		0			
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1	1	1	2		1	1	
Detector Template	Left					Right		Thru		Left	Thru	
Leading Detector (ft)	20	50		50	50	20	50	100		50	50	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	50		50	50	20	50	6		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)								94				
Detector 2 Size(ft)								6				
Detector 2 Type								Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)								0.0				
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		8		7	4			2		1	6	
Permitted Phases	8			4		4	2			6		
Detector Phase	8	8		7	4	4	2	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		5.0	10.0	10.0	20.0	20.0		10.0	20.0	
Minimum Split (s)	32.2	32.2		13.0	32.2	32.2	32.1	32.1		16.7	32.9	
Total Split (s)	32.2	32.2		13.0	45.2	45.2	38.0	38.0		16.8	54.8	
Total Split (%)	32.2%	32.2%		13.0%	45.2%	45.2%	38.0%	38.0%		16.8%	54.8%	
Maximum Green (s)	27.0	27.0		8.0	39.0	39.0	31.9	31.9		10.1	47.9	
Yellow Time (s)	3.2	3.2		3.0	3.2	3.2	3.2	3.2		3.0	3.2	
All-Red Time (s)	2.0	2.0		2.0	3.0	3.0	2.9	2.9		3.7	3.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	-1.2	0.0		0.0	0.0	
Total Lost Time (s)	5.2	5.2		5.0	6.2	6.2	4.9	6.1		6.7	6.9	
Lead/Lag	Lag	Lag		Lead			Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes		
Vehicle Extension (s)	0.2	0.2		3.0	0.2	0.2	0.2	0.2		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		None	C-Max	

Lanes, Volumes, Timings
 43: Michigan St & Monroe St

2014 2-way
 Timing Plan: PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	7.0	7.0			7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)	20.0	20.0			19.0	19.0	19.0	19.0			19.0	
Pedestrian Calls (#/hr)	0	0			0	0	0	0			0	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 69 (69%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated

Splits and Phases: 43: Michigan St & Monroe St





















HCM 2010 Signalized Intersection Summary
43: Michigan St & Monroe St

2014 2-way
Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	327	20	82	351	109	44	455	35	142	555	10
Future Volume (veh/h)	13	327	20	82	351	109	44	455	35	142	555	10
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1759	1759	1900	1759	1759	1900
Adj Flow Rate, veh/h	14	355	22	89	382	118	48	495	38	154	603	11
Adj No. of Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	200	377	23	187	593	504	369	550	42	334	937	17
Arrive On Green	0.44	0.44	0.44	0.05	0.32	0.32	0.78	0.76	0.76	0.20	1.00	1.00
Sat Flow, veh/h	877	1703	106	1740	1827	1553	760	1452	111	1675	1722	31
Grp Volume(v), veh/h	14	0	377	89	382	118	48	0	533	154	0	614
Grp Sat Flow(s),veh/h/ln	877	0	1808	1740	1827	1553	760	0	1564	1675	0	1754
Q Serve(g_s), s	1.2	0.0	19.9	3.8	17.8	5.6	1.6	0.0	26.0	5.0	0.0	0.0
Cycle Q Clear(g_c), s	8.7	0.0	19.9	3.8	17.8	5.6	1.6	0.0	26.0	5.0	0.0	0.0
Prop In Lane	1.00		0.06	1.00		1.00	1.00		0.07	1.00		0.02
Lane Grp Cap(c), veh/h	200	0	400	187	593	504	369	0	592	334	0	954
V/C Ratio(X)	0.07	0.00	0.94	0.48	0.64	0.23	0.13	0.00	0.90	0.46	0.00	0.64
Avail Cap(c_a), veh/h	243	0	488	233	713	606	369	0	592	338	0	954
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.84	0.00	0.84	1.00	1.00	1.00	1.00	0.00	1.00	0.38	0.00	0.38
Uniform Delay (d), s/veh	26.9	0.0	27.3	28.8	28.8	24.7	6.8	0.0	10.7	16.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	20.1	1.9	0.8	0.1	0.7	0.0	19.2	0.4	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	17.3	3.4	14.1	4.3	0.7	0.0	19.9	3.9	0.0	0.6
LnGrp Delay(d),s/veh	26.9	0.0	47.4	30.7	29.6	24.8	7.6	0.0	30.0	17.0	0.0	1.3
LnGrp LOS	C		D	C	C	C	A		C	B		A
Approach Vol, veh/h		391			589			581			768	
Approach Delay, s/veh		46.6			28.8			28.1			4.4	
Approach LOS		D			C			C			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6	7	8				
Phs Duration (G+Y+Rc), s	16.6	44.8		38.7		61.3	10.4	28.3				
Change Period (Y+Rc), s	* 6.7	* 6.9		* 6.2		6.9	5.0	* 6.2				
Max Green Setting (Gmax), s	* 10	* 32		* 39		47.9	8.0	* 27				
Max Q Clear Time (g_c+I1), s	7.0	28.0		19.8		2.0	5.8	21.9				
Green Ext Time (p_c), s	0.1	1.6		0.2		3.9	0.0	0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				23.6								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
44: Michigan St & South St

2014 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	4	0	5	11	7	17	493	12	10	609	7
Future Volume (vph)	2	4	0	5	11	7	17	493	12	10	609	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		445			772			486			490	
Travel Time (s)		12.1			21.1			13.3			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	



















Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
45: Michigan St & Bronson St

2014 2-way
Timing Plan: PM

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	3	4	1	7	10	7	5	546	12	10	623	7	
Future Volume (vph)	3	4	1	7	10	7	5	546	12	10	623	7	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	100		0	100		0	
Storage Lanes	0		0	0		0	1		0	1		0	
Taper Length (ft)	25			25			50			50			
Right Turn on Red			Yes			No			Yes			Yes	
Link Speed (mph)		25			25			25			25		
Link Distance (ft)		453			775			780			486		
Travel Time (s)		12.4			21.1			21.3			13.3		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%	
Parking (#/hr)							0		0				
Shared Lane Traffic (%)													
Number of Detectors	1	1		1	1		1	1		1	1		
Detector Template													
Leading Detector (ft)	50	50		50	50		50	50		50	50		
Trailing Detector (ft)	0	0		0	0		0	0		0	0		
Detector 1 Position(ft)	0	0		0	0		0	0		0	0		
Detector 1 Size(ft)	50	50		50	50		50	50		50	50		
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		8			4			2			6		
Permitted Phases	8			4			2			6			
Detector Phase	8	8		4	4		2	2		6	6		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0		
Minimum Split (s)	32.9	32.9		31.9	31.9		25.2	25.2		25.3	25.3		
Total Split (s)	33.0	33.0		33.0	33.0		67.0	67.0		67.0	67.0		
Total Split (%)	33.0%	33.0%		33.0%	33.0%		67.0%	67.0%		67.0%	67.0%		
Maximum Green (s)	27.1	27.1		27.1	27.1		61.8	61.8		61.7	61.7		
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
All-Red Time (s)	2.9	2.9		2.9	2.9		2.2	2.2		2.3	2.3		
Lost Time Adjust (s)		0.0			0.0		-0.6	0.0		0.0	0.0		
Total Lost Time (s)		5.9			5.9		4.6	5.2		5.3	5.3		
Lead/Lag													
Lead-Lag Optimize?													
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max		
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0		
Flash Dont Walk (s)	20.0	20.0		19.0	19.0		11.0	11.0		13.0	13.0		
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0		

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings
45: Michigan St & Bronson St

2014 2-way
Timing Plan: PM













Cycle Length: 100
Actuated Cycle Length: 100
Offset: 90 (90%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 45: Michigan St & Bronson St



HCM 2010 Signalized Intersection Summary
45: Michigan St & Bronson St

2014 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	3	4	1	7	10	7	5	546	12	10	623	7
Future Volume (veh/h)	3	4	1	7	10	7	5	546	12	10	623	7
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1759	1759	1900	1759	1759	1900
Adj Flow Rate, veh/h	3	4	1	8	11	8	5	593	13	11	677	8
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	73	67	13	64	54	30	664	1275	28	704	1433	17
Arrive On Green	0.07	0.06	0.06	0.06	0.06	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	375	1080	208	285	874	488	712	1544	34	766	1735	21
Grp Volume(v), veh/h	8	0	0	27	0	0	5	0	606	11	0	685
Grp Sat Flow(s),veh/h/ln	1662	0	0	1648	0	0	712	0	1577	766	0	1756
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.4	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.37		0.12	0.30		0.30	1.00		0.02	1.00		0.01
Lane Grp Cap(c), veh/h	173	0	0	149	0	0	664	0	1303	704	0	1450
V/C Ratio(X)	0.05	0.00	0.00	0.18	0.00	0.00	0.01	0.00	0.47	0.02	0.00	0.47
Avail Cap(c_a), veh/h	504	0	0	481	0	0	664	0	1303	704	0	1450
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.0	0.0	0.0	44.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.6	0.0	0.0	0.0	0.0	1.2	0.0	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	0.0	1.3	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.8
LnGrp Delay(d),s/veh	44.1	0.0	0.0	45.2	0.0	0.0	0.0	0.0	1.2	0.0	0.0	1.1
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		8			27			611			696	
Approach Delay, s/veh		44.1			45.2			1.2			1.1	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		87.9		12.1		87.9		12.1				
Change Period (Y+Rc), s		* 5.3		5.9		* 5.3		5.9				
Max Green Setting (Gmax), s		* 62		27.1		* 62		27.1				
Max Q Clear Time (g_c+I1), s		2.0		3.5		2.0		2.4				
Green Ext Time (p_c), s		8.1		0.1		8.1		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			2.3									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
46: Michigan St & Sample St

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	723	46	186	810	40	113	484	200	137	470	19
Future Volume (vph)	27	723	46	186	810	40	113	484	200	137	470	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	350		0	250		540	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	50			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		457			875			982			355	
Travel Time (s)		12.5			23.9			26.8			9.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Parking (#/hr)												0
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases		8		7	4		5	2	7	1	6	
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		7	4		5	2	7	1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		5.0	20.0		5.0	20.0	5.0	8.0	20.0	
Minimum Split (s)	33.0	33.0		11.0	34.0		10.7	29.7	11.0	13.6	29.6	
Total Split (s)	33.0	33.0		14.0	47.0		15.5	39.4	14.0	13.6	37.5	
Total Split (%)	33.0%	33.0%		14.0%	47.0%		15.5%	39.4%	14.0%	13.6%	37.5%	
Maximum Green (s)	27.0	27.0		8.0	41.0		9.8	33.7	8.0	8.0	31.9	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		2.7	2.7	3.0	2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		-1.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.7	5.7	6.0	5.6	5.6	
Lead/Lag	Lag	Lag		Lead			Lead	Lead	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	0.2	0.2		3.0	0.2		3.0	0.2	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	None	None	C-Max	
Walk Time (s)	7.0	7.0			7.0			7.0			7.0	
Flash Dont Walk (s)	20.0	20.0			21.0			17.0			17.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	

Intersection Summary

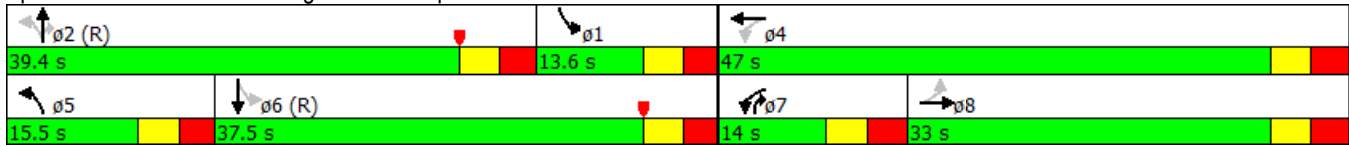
Area Type: Other

Lanes, Volumes, Timings
 46: Michigan St & Sample St

2014 2-way
 Timing Plan: PM























Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 3 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 46: Michigan St & Sample St





















HCM 2010 Signalized Intersection Summary
46: Michigan St & Sample St

2014 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	723	46	186	810	40	113	484	200	137	470	19
Future Volume (veh/h)	27	723	46	186	810	40	113	484	200	137	470	19
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1759	1759	1900	1759	1759	1900	1759	1759	1759	1759	1759	1900
Adj Flow Rate, veh/h	29	786	50	202	880	43	123	526	217	149	511	21
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	174	834	53	220	1302	64	262	593	895	271	1099	45
Arrive On Green	0.35	0.35	0.35	0.08	0.40	0.40	0.16	0.67	0.67	0.03	0.12	0.12
Sat Flow, veh/h	570	3192	203	1675	3244	159	1675	1759	1495	1675	3105	127
Grp Volume(v), veh/h	29	411	425	202	453	470	123	526	217	149	275	257
Grp Sat Flow(s),veh/h/ln	570	1671	1723	1675	1671	1731	1675	1759	1495	1675	1671	1561
Q Serve(g_s), s	4.2	23.9	23.9	8.0	22.3	22.3	5.3	24.2	4.0	1.4	15.3	15.4
Cycle Q Clear(g_c), s	12.5	23.9	23.9	8.0	22.3	22.3	5.3	24.2	4.0	1.4	15.3	15.4
Prop In Lane	1.00		0.12	1.00		0.09	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	174	437	450	220	671	695	262	593	895	271	592	553
V/C Ratio(X)	0.17	0.94	0.94	0.92	0.68	0.68	0.47	0.89	0.24	0.55	0.46	0.47
Avail Cap(c_a), veh/h	179	451	465	220	685	710	306	593	895	271	592	553
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	0.44	0.44	0.44	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.6	31.9	31.9	28.6	24.6	24.6	24.3	14.8	4.4	43.1	35.3	35.3
Incr Delay (d2), s/veh	0.1	15.4	15.1	39.1	2.1	2.0	1.3	17.7	0.6	2.4	2.6	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.2	16.7	17.1	10.4	15.9	16.4	4.6	20.5	5.1	7.6	12.1	11.5
LnGrp Delay(d),s/veh	31.6	47.3	47.0	67.7	26.7	26.6	25.6	32.5	5.0	45.4	37.9	38.1
LnGrp LOS	C	D	D	E	C	C	C	C	A	D	D	D
Approach Vol, veh/h		865			1125			866			681	
Approach Delay, s/veh		46.7			34.0			24.6			39.6	
Approach LOS		D			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.5	39.4		46.1	12.9	41.0	14.0	32.1				
Change Period (Y+Rc), s	* 5.6	5.7		6.0	* 5.7	5.6	6.0	6.0				
Max Green Setting (Gmax), s	* 8	33.7		41.0	* 9.8	31.9	8.0	27.0				
Max Q Clear Time (g_c+I1), s	3.4	26.2		24.3	7.3	17.4	10.0	25.9				
Green Ext Time (p_c), s	0.3	0.2		0.6	0.1	2.6	0.0	0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				35.9								
HCM 2010 LOS				D								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
47: Michigan St & Broadway St

2014 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	6	0	22	18	25	6	644	15	22	677	10
Future Volume (vph)	20	6	0	22	18	25	6	644	15	22	677	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		451			562			775			898	
Travel Time (s)		12.3			15.3			21.1			24.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
48: Michigan St & Indiana Ave

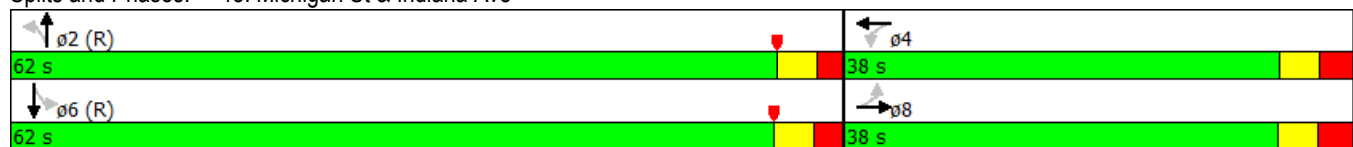
2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	28	211	24	30	12	88	604	18	43	613	44
Future Volume (vph)	49	28	211	24	30	12	88	604	18	43	613	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	250		0	250		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	200			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		445			540			1320			775	
Travel Time (s)		12.1			14.7			36.0			21.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	29.7	29.7		38.0	38.0		32.0	32.0		35.0	35.0	
Total Split (s)	38.0	38.0		38.0	38.0		62.0	62.0		62.0	62.0	
Total Split (%)	38.0%	38.0%		38.0%	38.0%		62.0%	62.0%		62.0%	62.0%	
Maximum Green (s)	32.3	32.3		32.4	32.4		57.0	57.0		56.8	56.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.7	2.7		2.6	2.6		2.0	2.0		2.2	2.2	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	5.7			5.6		5.0	5.0		5.2	5.2	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	17.0	17.0		16.0	16.0		10.0	10.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		17	17		0	0	

Intersection Summary





















Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 69 (69%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Pretimed

Splits and Phases: 48: Michigan St & Indiana Ave





















HCM 2010 Signalized Intersection Summary
48: Michigan St & Indiana Ave

2014 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	28	211	24	30	12	88	604	18	43	613	44
Future Volume (veh/h)	49	28	211	24	30	12	88	604	18	43	613	44
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1900	1827	1900	1792	1792	1900	1792	1792	1900
Adj Flow Rate, veh/h	53	30	229	26	33	13	96	657	20	47	666	48
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	6	6	6	6	6	6
Cap, veh/h	429	59	451	147	176	61	473	983	30	487	939	68
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1328	183	1397	305	546	188	706	1730	53	731	1652	119
Grp Volume(v), veh/h	53	0	259	72	0	0	96	0	677	47	0	714
Grp Sat Flow(s),veh/h/ln	1328	0	1580	1038	0	0	706	0	1783	731	0	1771
Q Serve(g_s), s	0.0	0.0	13.3	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.8	0.0	13.3	13.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.88	0.36		0.18	1.00		0.03	1.00		0.07
Lane Grp Cap(c), veh/h	429	0	510	384	0	0	473	0	1013	487	0	1007
V/C Ratio(X)	0.12	0.00	0.51	0.19	0.00	0.00	0.20	0.00	0.67	0.10	0.00	0.71
Avail Cap(c_a), veh/h	429	0	510	384	0	0	473	0	1013	487	0	1007
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.6	0.0	27.5	24.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.6	0.0	3.6	1.1	0.0	0.0	1.0	0.0	3.5	0.4	0.0	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	0.0	10.5	2.7	0.0	0.0	0.2	0.0	1.8	0.1	0.0	2.1
LnGrp Delay(d),s/veh	25.2	0.0	31.1	25.5	0.0	0.0	1.0	0.0	3.5	0.4	0.0	4.2
LnGrp LOS	C		C	C			A		A	A		A
Approach Vol, veh/h		312			72			773			761	
Approach Delay, s/veh		30.1			25.5			3.2			4.0	
Approach LOS		C			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		62.2		38.1		62.2		38.1				
Change Period (Y+Rc), s		* 5.2		* 5.7		* 5.2		* 5.7				
Max Green Setting (Gmax), s		* 57		* 32		* 57		* 32				
Max Q Clear Time (g_c+I1), s		2.0		15.8		2.0		15.3				
Green Ext Time (p_c), s		8.2		0.4		8.2		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			8.7									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
49: Michigan St & Calvert St

2014 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	3	5	11	9	12	26	599	12	29	728	34
Future Volume (vph)	40	3	5	11	9	12	26	599	12	29	728	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		445			510			1320			1320	
Travel Time (s)		12.1			13.9			36.0			36.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
50: Michigan St & Ewing Ave

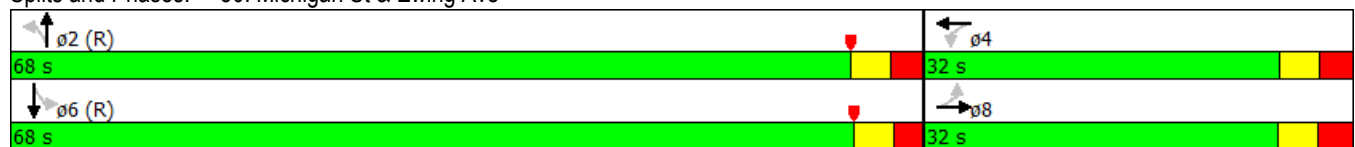
2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	146	18	76	131	77	30	525	59	159	564	6
Future Volume (vph)	41	146	18	76	131	77	30	525	59	159	564	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		150	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			540			2640			1320	
Travel Time (s)		12.0			14.7			72.0			36.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	29.7	29.7		28.6	28.6		25.5	25.5		25.3	25.3	
Total Split (s)	32.0	32.0		32.0	32.0		68.0	68.0		68.0	68.0	
Total Split (%)	32.0%	32.0%		32.0%	32.0%		68.0%	68.0%		68.0%	68.0%	
Maximum Green (s)	26.3	26.3		26.4	26.4		62.5	62.5		62.7	62.7	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.7	2.7		2.6	2.6		2.5	2.5		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	5.7		5.6	5.6		5.5	5.5		5.3	5.3	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		13.0	13.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary






















Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 24 (24%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 50: Michigan St & Ewing Ave





















HCM 2010 Signalized Intersection Summary
50: Michigan St & Ewing Ave

2014 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	146	18	76	131	77	30	525	59	159	564	6
Future Volume (veh/h)	41	146	18	76	131	77	30	525	59	159	564	6
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1727	1900	1727	1727	1900	1792	1792	1900	1792	1792	1900
Adj Flow Rate, veh/h	45	159	20	83	142	84	33	571	64	173	613	7
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	10	10	10	10	10	6	6	6	6	6	6
Cap, veh/h	225	396	50	294	268	159	553	990	111	386	1106	13
Arrive On Green	0.53	0.53	0.53	0.26	0.26	0.26	0.63	0.63	0.63	1.00	1.00	1.00
Sat Flow, veh/h	1066	1505	189	1113	1018	602	770	1584	177	760	1769	20
Grp Volume(v), veh/h	45	0	179	83	0	226	33	0	635	173	0	620
Grp Sat Flow(s),veh/h/ln	1066	0	1694	1113	0	1621	770	0	1761	760	0	1789
Q Serve(g_s), s	3.3	0.0	6.4	6.5	0.0	12.0	1.7	0.0	21.2	12.2	0.0	0.0
Cycle Q Clear(g_c), s	15.3	0.0	6.4	12.8	0.0	12.0	1.7	0.0	21.2	33.4	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.37	1.00		0.10	1.00		0.01
Lane Grp Cap(c), veh/h	225	0	446	294	0	427	553	0	1101	386	0	1118
V/C Ratio(X)	0.20	0.00	0.40	0.28	0.00	0.53	0.06	0.00	0.58	0.45	0.00	0.55
Avail Cap(c_a), veh/h	225	0	446	294	0	427	553	0	1101	386	0	1118
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.8	0.0	19.0	34.7	0.0	31.6	7.4	0.0	11.0	5.6	0.0	0.0
Incr Delay (d2), s/veh	2.0	0.0	2.7	2.4	0.0	4.6	0.2	0.0	2.2	3.7	0.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	0.0	5.8	3.9	0.0	9.9	0.7	0.0	16.3	5.2	0.0	1.1
LnGrp Delay(d),s/veh	27.8	0.0	21.7	37.1	0.0	36.3	7.6	0.0	13.2	9.4	0.0	2.0
LnGrp LOS	C		C	D		D	A		B	A		A
Approach Vol, veh/h		224			309			668			793	
Approach Delay, s/veh		22.9			36.5			12.9			3.6	
Approach LOS		C			D			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		68.2		32.1		68.2		32.1				
Change Period (Y+Rc), s		5.5		* 5.7		* 5.5		* 5.7				
Max Green Setting (Gmax), s		62.5		* 26		* 63		* 26				
Max Q Clear Time (g_c+I1), s		23.2		14.8		35.4		17.3				
Green Ext Time (p_c), s		7.7		0.5		7.2		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				14.0								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 51: Michigan St & Donmoyer Ave

2014 2-way
 Timing Plan: PM




















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	21	2	22	15	44	0	544	36	49	586	2
Future Volume (vph)	0	21	2	22	15	44	0	544	36	49	586	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		316			461			2619			2640	
Travel Time (s)		8.6			12.6			71.4			72.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Lanes, Volumes, Timings
52: Michigan St & Chippewa Ave

2014 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	22	361	19	14	14	326	493	34	38	482	51
Future Volume (vph)	57	22	361	19	14	14	326	493	34	38	482	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	100		0	200		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			75			150			100		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		416			504			2638			2619	
Travel Time (s)		11.3			13.7			71.9			71.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary

Area Type: Other

Control Type: Roundabout

Lanes, Volumes, Timings
53: Michigan St & Ireland Rd

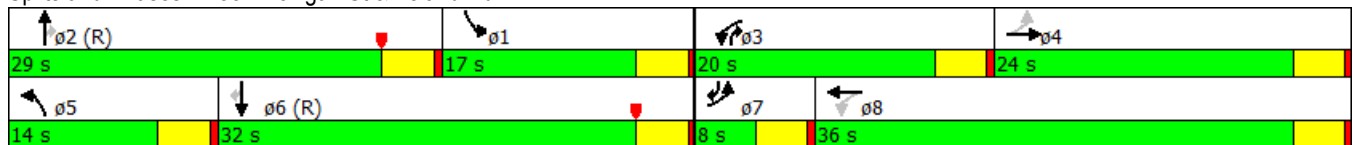
2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	419	112	243	405	270	229	545	203	291	575	4
Future Volume (vph)	7	419	112	243	405	270	229	545	203	291	575	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	200		0	225		0	275		275
Storage Lanes	1		0	1		0	2		1	2		1
Taper Length (ft)	100			100			150			150		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		711			741			651			2638	
Travel Time (s)		19.4			20.2			17.8			71.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8					2			6
Minimum Split (s)	8.0	23.0		8.0	23.0		8.0	23.0	8.0	8.0	23.0	8.0
Total Split (s)	8.0	24.0		20.0	36.0		14.0	29.0	20.0	17.0	32.0	8.0
Total Split (%)	8.9%	26.7%		22.2%	40.0%		15.6%	32.2%	22.2%	18.9%	35.6%	8.9%
Maximum Green (s)	4.0	20.0		16.0	32.0		10.0	25.0	16.0	13.0	28.0	4.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		12.0			12.0			12.0			12.0	
Pedestrian Calls (#/hr)		0			0			0			0	

Intersection Summary























Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 88 (98%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 53: Michigan St & Ireland Rd



HCM 2010 Signalized Intersection Summary
53: Michigan St & Ireland Rd

2014 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	419	112	243	405	270	229	545	203	291	575	4
Future Volume (veh/h)	7	419	112	243	405	270	229	545	203	291	575	4
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1792	1792	1792	1792	1792	1792
Adj Flow Rate, veh/h	8	455	122	264	440	293	249	592	221	316	625	4
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	272	592	157	432	699	462	368	946	694	478	1060	542
Arrive On Green	0.04	0.22	0.22	0.18	0.36	0.36	0.11	0.28	0.28	0.14	0.31	0.31
Sat Flow, veh/h	1707	2662	708	1707	1966	1300	3312	3406	1524	3312	3406	1524
Grp Volume(v), veh/h	8	290	287	264	381	352	249	592	221	316	625	4
Grp Sat Flow(s),veh/h/ln	1707	1703	1667	1707	1703	1563	1656	1703	1524	1656	1703	1524
Q Serve(g_s), s	0.3	14.4	14.6	9.5	16.7	16.9	6.5	13.7	4.1	8.1	13.9	0.2
Cycle Q Clear(g_c), s	0.3	14.4	14.6	9.5	16.7	16.9	6.5	13.7	4.1	8.1	13.9	0.2
Prop In Lane	1.00		0.42	1.00		0.83	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	272	378	371	432	605	556	368	946	694	478	1060	542
V/C Ratio(X)	0.03	0.77	0.77	0.61	0.63	0.63	0.68	0.63	0.32	0.66	0.59	0.01
Avail Cap(c_a), veh/h	272	378	371	432	605	556	368	946	694	478	1060	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	32.8	32.9	20.0	24.1	24.1	38.4	28.4	5.6	36.4	26.2	18.7
Incr Delay (d2), s/veh	0.2	13.8	14.6	6.3	4.9	5.4	9.6	3.1	1.2	7.0	2.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	12.9	12.9	8.9	13.5	12.7	6.2	11.1	3.4	7.6	11.2	0.1
LnGrp Delay(d),s/veh	24.6	46.6	47.5	26.3	29.0	29.6	48.0	31.5	6.8	43.4	28.6	18.8
LnGrp LOS	C	D	D	C	C	C	D	C	A	D	C	B
Approach Vol, veh/h		585			997			1062			945	
Approach Delay, s/veh		46.7			28.5			30.3			33.5	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	29.0	20.0	24.0	14.0	32.0	8.0	36.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	13.0	25.0	16.0	20.0	10.0	28.0	4.0	32.0				
Max Q Clear Time (g_c+I1), s	10.1	15.7	11.5	16.6	8.5	15.9	2.3	18.9				
Green Ext Time (p_c), s	1.5	3.4	0.3	2.4	0.1	4.5	0.0	7.1				
Intersection Summary												
HCM 2010 Ctrl Delay				33.3								
HCM 2010 LOS				C								

Lanes, Volumes, Timings
54: St. Joseph St & Colfax Ave

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	225	4	0	278	143	6	526	156	99	495	1
Future Volume (vph)	35	225	4	0	278	143	6	526	156	99	495	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	0		200	250		80	250		0
Storage Lanes	1		0	0		1	1		1	1		0
Taper Length (ft)	50			25			25			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		340			552			503			614	
Travel Time (s)		9.3			15.1			13.7			16.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2		2	6		
Minimum Split (s)	25.7	25.7		25.7	25.7	25.7	49.0	49.0	49.0	34.0	34.0	
Total Split (s)	38.2	38.2		38.2	38.2	38.2	61.8	61.8	61.8	61.8	61.8	
Total Split (%)	38.2%	38.2%		38.2%	38.2%	38.2%	61.8%	61.8%	61.8%	61.8%	61.8%	
Maximum Green (s)	32.5	32.5		32.5	32.5	32.5	54.8	54.8	54.8	55.8	55.8	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.7	2.7		2.7	2.7	2.7	4.0	4.0	4.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	-1.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7	5.7			5.7	5.7	6.0	7.0	7.0	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	9.0	9.0	9.0	7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		13.0	13.0	13.0	33.0	33.0	33.0	21.0	21.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0	0	0	0	

Intersection Summary























Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 75 (75%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 54: St. Joseph St & Colfax Ave




















HCM 2010 Signalized Intersection Summary
54: St. Joseph St & Colfax Ave

2014 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	225	4	0	278	143	6	526	156	99	495	1
Future Volume (veh/h)	35	225	4	0	278	143	6	526	156	99	495	1
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1644	1644	1710	1710	1644	1644	1583	1583	1583	1583	1583	1710
Adj Flow Rate, veh/h	38	245	4	0	302	155	7	572	170	108	538	1
Adj No. of Lanes	1	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	210	519	8	0	529	450	484	875	744	407	873	2
Arrive On Green	0.64	0.64	0.64	0.00	0.32	0.32	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	821	1613	26	0	1644	1398	733	1583	1346	607	1580	3
Grp Volume(v), veh/h	38	0	249	0	302	155	7	572	170	108	0	539
Grp Sat Flow(s),veh/h/ln	821	0	1640	0	1644	1398	733	1583	1346	607	0	1583
Q Serve(g_s), s	3.4	0.0	7.9	0.0	15.4	8.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	18.8	0.0	7.9	0.0	15.4	8.5	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.02	0.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	210	0	528	0	529	450	484	875	744	407	0	874
V/C Ratio(X)	0.18	0.00	0.47	0.00	0.57	0.34	0.01	0.65	0.23	0.27	0.00	0.62
Avail Cap(c_a), veh/h	210	0	528	0	529	450	484	875	744	407	0	874
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.2	0.0	13.6	0.0	28.5	26.1	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.0	3.0	0.0	4.4	2.1	0.1	3.8	0.7	1.6	0.0	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	0.0	6.9	0.0	12.1	6.4	0.0	1.7	0.3	0.3	0.0	1.4
LnGrp Delay(d),s/veh	23.1	0.0	16.6	0.0	32.9	28.2	0.1	3.8	0.7	1.6	0.0	3.2
LnGrp LOS	C		B		C	C	A	A	A	A		A
Approach Vol, veh/h		287			457			749			647	
Approach Delay, s/veh		17.5			31.3			3.1			3.0	
Approach LOS		B			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		62.8		38.2		62.8		38.2				
Change Period (Y+Rc), s		7.0		* 5.7		* 7		* 5.7				
Max Green Setting (Gmax), s		54.8		* 33		* 56		* 33				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				11.0								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
55: St. Joseph St & Washington St

2014 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	0	11	0	0	0	12	672	0	0	496	4
Future Volume (vph)	17	0	11	0	0	0	12	672	0	0	496	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	11	11	14	11	11	11	11	11	11	11
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		422			152			490			503	
Travel Time (s)		11.5			4.1			13.4			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)	3	3	3									
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1			1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50			50	
Trailing Detector (ft)	0	0		0	0		0	0			0	
Detector 1 Position(ft)	0	0		0	0		0	0			0	
Detector 1 Size(ft)	50	50		50	50		50	50			50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Turn Type	Perm	NA					Perm	NA			NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2					
Detector Phase	8	8		4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0			20.0	
Minimum Split (s)	24.2	24.2		25.9	25.9		26.9	26.9			25.3	
Total Split (s)	25.9	25.9		25.9	25.9		74.1	74.1			74.1	
Total Split (%)	25.9%	25.9%		25.9%	25.9%		74.1%	74.1%			74.1%	
Maximum Green (s)	20.7	20.7		20.4	20.4		68.8	68.8			69.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
All-Red Time (s)	2.2	2.2		2.5	2.5		2.3	2.3			1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	
Total Lost Time (s)		5.2			5.5		5.3	5.3			4.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	None	None		None	None		C-Max	C-Max			C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		6.0	6.0			9.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0			0	

Intersection Summary

Lanes, Volumes, Timings
 55: St. Joseph St & Washington St

2014 2-way
 Timing Plan: PM













Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 7 (7%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated

Splits and Phases: 55: St. Joseph St & Washington St



HCM 2010 Signalized Intersection Summary
 55: St. Joseph St & Washington St

2014 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↖	↗			↕	
Traffic Volume (veh/h)	17	0	11	0	0	0	12	672	0	0	496	4
Future Volume (veh/h)	17	0	11	0	0	0	12	672	0	0	496	4
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1710	1644	1710	1710	1710	1710	1583	1583	1710	0	1583	1710
Adj Flow Rate, veh/h	18	0	12	0	0	0	13	730	0	0	539	4
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	0	8	8
Cap, veh/h	88	10	27	0	97	0	682	1323	0	0	1311	10
Arrive On Green	0.06	0.00	0.06	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Sat Flow, veh/h	541	178	479	0	1710	0	731	1583	0	0	1570	12
Grp Volume(v), veh/h	30	0	0	0	0	0	13	730	0	0	0	543
Grp Sat Flow(s),veh/h/ln	1198	0	0	0	1710	0	731	1583	0	0	0	1581
Q Serve(g_s), s	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.60		0.40	0.00		0.00	1.00		0.00	0.00		0.01
Lane Grp Cap(c), veh/h	125	0	0	0	97	0	682	1323	0	0	0	1321
V/C Ratio(X)	0.24	0.00	0.00	0.00	0.00	0.00	0.02	0.55	0.00	0.00	0.00	0.41
Avail Cap(c_a), veh/h	299	0	0	0	349	0	682	1323	0	0	0	1321
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	0.00	0.81	0.81	0.00	0.00	0.00	0.73
Uniform Delay (d), s/veh	45.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.5
LnGrp Delay(d),s/veh	46.5	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.7
LnGrp LOS	D						A	A				A
Approach Vol, veh/h		30			0			743			543	
Approach Delay, s/veh		46.5			0.0			1.3			0.7	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		88.8		11.2		88.8		11.2				
Change Period (Y+Rc), s		* 5.3		5.5		* 5.3		* 5.5				
Max Green Setting (Gmax), s		* 69		20.4		* 70		* 21				
Max Q Clear Time (g_c+I1), s		2.0		0.0		2.0		4.3				
Green Ext Time (p_c), s		8.0		0.0		8.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				2.1								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
56: St. Joseph St & Jefferson Blvd

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	40	82	11	28	77	58	7	559	30	11	454	9
Future Volume (vph)	40	82	11	28	77	58	7	559	30	11	454	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		115	100		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		425			424			478			490	
Travel Time (s)		11.6			11.6			13.0			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)	5	5	5									
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		4	4		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0	20.0	20.0	20.0	
Minimum Split (s)	24.6	24.6		25.9	25.9		26.9	26.9	26.9	25.3	25.3	
Total Split (s)	30.0	30.0		30.0	30.0		70.0	70.0	70.0	70.0	70.0	
Total Split (%)	30.0%	30.0%		30.0%	30.0%		70.0%	70.0%	70.0%	70.0%	70.0%	
Maximum Green (s)	24.4	24.4		24.1	24.1		64.1	64.1	64.1	64.7	64.7	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.6	2.6		2.9	2.9		2.9	2.9	2.9	2.3	2.3	
Lost Time Adjust (s)		0.0			0.0		-0.8	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.6			5.9		5.1	5.9	5.9	5.3	5.3	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		13.0	13.0		14.0	14.0	14.0	10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	

Intersection Summary

Area Type: CBD

Lanes, Volumes, Timings
56: St. Joseph St & Jefferson Blvd

2014 2-way
Timing Plan: PM

Cycle Length: 100
Actuated Cycle Length: 100
Offset: 1 (1%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 56: St. Joseph St & Jefferson Blvd



HCM 2010 Signalized Intersection Summary
56: St. Joseph St & Jefferson Blvd

2014 2-way
Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗	↖	↖	↗	↖
Traffic Volume (veh/h)	40	82	11	28	77	58	7	559	30	11	454	9
Future Volume (veh/h)	40	82	11	28	77	58	7	559	30	11	454	9
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1710	1644	1710	1710	1644	1710	1583	1583	1583	1583	1583	1710
Adj Flow Rate, veh/h	43	89	12	30	84	63	8	608	33	12	493	10
Adj No. of Lanes	0	1	0	0	1	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	85	122	15	66	115	77	637	1168	993	564	1141	23
Arrive On Green	0.16	0.14	0.14	0.14	0.14	0.14	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	268	847	101	168	796	533	758	1583	1346	667	1546	31
Grp Volume(v), veh/h	144	0	0	177	0	0	8	608	33	12	0	503
Grp Sat Flow(s),veh/h/ln	1217	0	0	1498	0	0	758	1583	1346	667	0	1578
Q Serve(g_s), s	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	11.4	0.0	0.0	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.30		0.08	0.17		0.36	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	237	0	0	258	0	0	637	1168	993	564	0	1164
V/C Ratio(X)	0.61	0.00	0.00	0.69	0.00	0.00	0.01	0.52	0.03	0.02	0.00	0.43
Avail Cap(c_a), veh/h	360	0	0	398	0	0	637	1168	993	564	0	1164
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.68	0.68	0.68	0.92	0.00	0.92
Uniform Delay (d), s/veh	41.0	0.0	0.0	41.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	2.5	0.0	0.0	3.2	0.0	0.0	0.0	1.1	0.0	0.1	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.1	0.0	0.0	8.6	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.6
LnGrp Delay(d),s/veh	43.6	0.0	0.0	44.6	0.0	0.0	0.0	1.1	0.0	0.1	0.0	1.1
LnGrp LOS	D			D			A	A	A	A		A
Approach Vol, veh/h		144			177			649			515	
Approach Delay, s/veh		43.6			44.6			1.1			1.1	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		79.7		20.3		79.7		20.3				
Change Period (Y+Rc), s		5.9		5.9		* 5.9		* 5.9				
Max Green Setting (Gmax), s		64.1		24.1		* 65		* 24				
Max Q Clear Time (g_c+I1), s		2.0		13.3		2.0		13.4				
Green Ext Time (p_c), s		6.7		1.0		6.7		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay				10.4								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
57: St. Joseph St & Wayne St

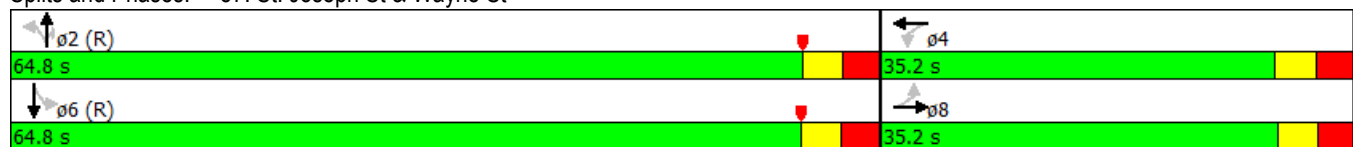
2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	63	7	178	123	0	0	572	220	0	499	4
Future Volume (vph)	13	63	7	178	123	0	0	572	220	0	499	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		278	100		200	100		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	50			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		405			839			565			478	
Travel Time (s)		11.0			22.9			15.4			13.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2		2	6		
Minimum Split (s)	25.7	25.7		32.9	32.9		28.9	28.9	28.9	32.0	32.0	
Total Split (s)	35.2	35.2		35.2	35.2		64.8	64.8	64.8	64.8	64.8	
Total Split (%)	35.2%	35.2%		35.2%	35.2%		64.8%	64.8%	64.8%	64.8%	64.8%	
Maximum Green (s)	29.5	29.5		29.3	29.3		58.9	58.9	58.9	58.8	58.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.7	2.7		2.9	2.9		2.9	2.9	2.9	3.0	3.0	
Lost Time Adjust (s)	-1.0	0.0		0.0	0.0		-1.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.7	5.7		5.9	5.9		4.9	5.9	5.9	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		20.0	20.0		16.0	16.0	16.0	19.0	19.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 86 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 57: St. Joseph St & Wayne St



HCM 2010 Signalized Intersection Summary
57: St. Joseph St & Wayne St

2014 2-way
Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	63	7	178	123	0	0	572	220	0	499	4
Future Volume (veh/h)	13	63	7	178	123	0	0	572	220	0	499	4
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1583	1583	1583	1583	1583	1710
Adj Flow Rate, veh/h	14	68	8	193	134	0	0	622	239	0	542	4
Adj No. of Lanes	1	1	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	338	425	50	389	484	0	72	930	790	72	922	7
Arrive On Green	0.61	0.59	0.59	0.29	0.29	0.00	0.00	1.00	1.00	0.00	1.00	1.00
Sat Flow, veh/h	1104	1444	170	1163	1644	0	729	1583	1346	543	1570	12
Grp Volume(v), veh/h	14	0	76	193	134	0	0	622	239	0	0	546
Grp Sat Flow(s),veh/h/ln	1104	0	1614	1163	1644	0	729	1583	1346	543	0	1581
Q Serve(g_s), s	0.7	0.0	2.1	14.5	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.0	0.0	2.1	16.7	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	338	0	475	389	484	0	72	930	790	72	0	929
V/C Ratio(X)	0.04	0.00	0.16	0.50	0.28	0.00	0.00	0.67	0.30	0.00	0.00	0.59
Avail Cap(c_a), veh/h	338	0	475	389	484	0	72	930	790	72	0	929
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	16.7	0.0	15.0	31.8	27.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.7	4.5	1.4	0.0	0.0	3.8	1.0	0.0	0.0	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	1.8	8.9	5.4	0.0	0.0	1.8	0.4	0.0	0.0	1.3
LnGrp Delay(d),s/veh	16.9	0.0	15.7	36.3	28.6	0.0	0.0	3.8	1.0	0.0	0.0	2.7
LnGrp LOS	B		B	D	C			A	A			A
Approach Vol, veh/h		90			327			861			546	
Approach Delay, s/veh		15.9			33.1			3.0			2.7	
Approach LOS		B			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		64.9		35.4		64.9		35.4				
Change Period (Y+Rc), s		* 6		5.9		6.0		* 5.9				
Max Green Setting (Gmax), s		* 59		29.3		58.8		* 30				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			9.0									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
58: Michigan St/St. Joseph St & Western Ave

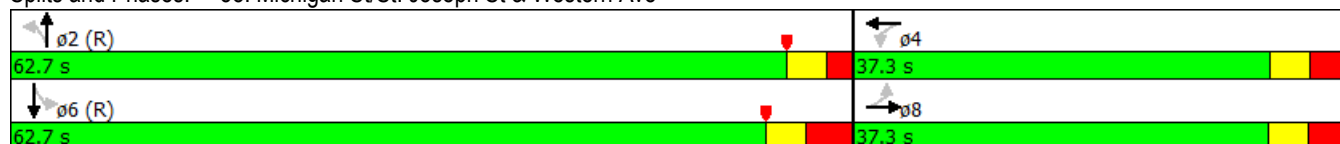
2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	248	11	85	7	13	15	88	529	3	4	647	33
Future Volume (vph)	248	11	85	7	13	15	88	529	3	4	647	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		75	100		0	150		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		145			566			539			565	
Travel Time (s)		4.0			15.4			14.7			15.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	36.4	36.4		37.3	37.3		24.0	24.0		33.5	33.5	
Total Split (s)	37.3	37.3		37.3	37.3		62.7	62.7		62.7	62.7	
Total Split (%)	37.3%	37.3%		37.3%	37.3%		62.7%	62.7%		62.7%	62.7%	
Maximum Green (s)	30.9	30.9		31.0	31.0		57.7	57.7		56.2	56.2	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.4	3.4		3.3	3.3		2.0	2.0		3.5	3.5	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.4	6.4			6.3		5.0	5.0		6.5	6.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	23.0	23.0		24.0	24.0		12.0	12.0		20.0	20.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: CBD
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 98 (98%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Pretimed

Splits and Phases: 58: Michigan St/St. Joseph St & Western Ave



HCM 2010 Signalized Intersection Summary
 58: Michigan St/St. Joseph St & Western Ave

2014 2-way
 Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	248	11	85	7	13	15	88	529	3	4	647	33
Future Volume (veh/h)	248	11	85	7	13	15	88	529	3	4	647	33
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1644	1644	1710	1710	1644	1710	1583	1583	1710	1583	1583	1710
Adj Flow Rate, veh/h	270	12	92	8	14	16	96	575	3	4	703	36
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	447	50	384	112	185	184	417	894	5	473	848	43
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1213	164	1258	226	605	605	609	1574	8	707	1493	76
Grp Volume(v), veh/h	270	0	104	38	0	0	96	0	578	4	0	739
Grp Sat Flow(s),veh/h/ln	1213	0	1422	1436	0	0	609	0	1582	707	0	1570
Q Serve(g_s), s	17.7	0.0	5.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	19.5	0.0	5.6	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.88	0.21		0.42	1.00		0.01	1.00		0.05
Lane Grp Cap(c), veh/h	447	0	434	481	0	0	417	0	898	473	0	892
V/C Ratio(X)	0.60	0.00	0.24	0.08	0.00	0.00	0.23	0.00	0.64	0.01	0.00	0.83
Avail Cap(c_a), veh/h	447	0	434	481	0	0	417	0	898	473	0	892
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.1	0.0	26.5	25.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.9	0.0	1.3	0.3	0.0	0.0	1.3	0.0	3.5	0.0	0.0	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.9	0.0	4.2	1.4	0.0	0.0	0.3	0.0	1.6	0.0	0.0	3.9
LnGrp Delay(d),s/veh	37.1	0.0	27.8	25.5	0.0	0.0	1.3	0.0	3.5	0.0	0.0	8.8
LnGrp LOS	D		C	C			A		A	A		A
Approach Vol, veh/h		374			38			674			743	
Approach Delay, s/veh		34.5			25.5			3.2			8.7	
Approach LOS		C			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		64.2		37.4		64.2		37.4				
Change Period (Y+Rc), s		* 6.5		* 6.4		6.5		6.4				
Max Green Setting (Gmax), s		* 58		* 31		56.2		30.9				
Max Q Clear Time (g_c+I1), s		2.0		0.0		2.0		0.0				
Green Ext Time (p_c), s		16.6		0.0		16.5		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				12.3								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
59: Chapin St/Marion St & Lincoln Way

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	639	24	14	916	0	17	63	27	0	63	31
Future Volume (vph)	14	639	24	14	916	0	17	63	27	0	63	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	75		0	100		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			50			100			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		650			972			577			308	
Travel Time (s)		17.7			26.5			15.7			8.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA			NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Minimum Split (s)	35.5	35.5		35.5	35.5		24.0	24.0		24.0	24.0	
Total Split (s)	76.0	76.0		76.0	76.0		24.0	24.0		24.0	24.0	
Total Split (%)	76.0%	76.0%		76.0%	76.0%		24.0%	24.0%		24.0%	24.0%	
Maximum Green (s)	71.0	71.0		71.0	71.0		19.0	19.0		19.0	19.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary




















Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 87 (87%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Pretimed

Splits and Phases: 59: Chapin St/Marion St & Lincoln Way



HCM 2010 Signalized Intersection Summary
59: Chapin St/Marion St & Lincoln Way

2014 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	639	24	14	916	0	17	63	27	0	63	31
Future Volume (veh/h)	14	639	24	14	916	0	17	63	27	0	63	31
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1900	1827	1900	1900	1827	1900
Adj Flow Rate, veh/h	15	695	26	15	996	0	18	68	29	0	68	34
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	272	1242	46	443	1297	0	68	213	81	0	219	109
Arrive On Green	0.71	0.71	0.71	0.71	0.71	0.00	0.19	0.19	0.19	0.00	0.19	0.19
Sat Flow, veh/h	552	1750	65	715	1827	0	140	1123	426	0	1150	575
Grp Volume(v), veh/h	15	0	721	15	996	0	115	0	0	0	0	102
Grp Sat Flow(s),veh/h/ln	552	0	1815	715	1827	0	1689	0	0	0	0	1725
Q Serve(g_s), s	1.8	0.0	19.1	1.0	34.8	0.0	0.0	0.0	0.0	0.0	0.0	5.1
Cycle Q Clear(g_c), s	36.5	0.0	19.1	20.1	34.8	0.0	5.7	0.0	0.0	0.0	0.0	5.1
Prop In Lane	1.00		0.04	1.00		0.00	0.16		0.25	0.00		0.33
Lane Grp Cap(c), veh/h	272	0	1289	443	1297	0	363	0	0	0	0	328
V/C Ratio(X)	0.06	0.00	0.56	0.03	0.77	0.00	0.32	0.00	0.00	0.00	0.00	0.31
Avail Cap(c_a), veh/h	272	0	1289	443	1297	0	363	0	0	0	0	328
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	7.0	11.8	9.2	0.0	35.1	0.0	0.0	0.0	0.0	34.9
Incr Delay (d2), s/veh	0.4	0.0	1.8	0.1	4.4	0.0	2.3	0.0	0.0	0.0	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	15.2	0.4	25.8	0.0	5.4	0.0	0.0	0.0	0.0	4.8
LnGrp Delay(d),s/veh	21.3	0.0	8.7	12.0	13.6	0.0	37.4	0.0	0.0	0.0	0.0	37.3
LnGrp LOS	C		A	B	B		D					D
Approach Vol, veh/h		736			1011			115				102
Approach Delay, s/veh		9.0			13.6			37.4				37.3
Approach LOS		A			B			D				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		76.0		24.0		76.0		24.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		71.0		19.0		71.0		19.0				
Max Q Clear Time (g_c+I1), s		38.5		7.1		36.8		7.7				
Green Ext Time (p_c), s		19.2		0.9		19.9		0.9				
Intersection Summary												
HCM 2010 Ctrl Delay			14.5									
HCM 2010 LOS			B									

Lanes, Volumes, Timings
60: Lafayette Blvd & Bartlett St

2014 2-way
Timing Plan: PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	16	10	25
Future Volume (vph)	0	0	0	16	10	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				50	
Link Speed (mph)		25	25		25	
Link Distance (ft)		770	377		363	
Travel Time (s)		21.0	10.3		9.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Parking (#/hr)				16		
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Lanes, Volumes, Timings
61: William St & LaSalle Ave

2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	66	32	9	22	0	30	174	9	0	118	3
Future Volume (vph)	0	66	32	9	22	0	30	174	9	0	118	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		343			444			483			227	
Travel Time (s)		9.4			12.1			13.2			6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA		Perm	NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	25.3	25.3		24.0	24.0		25.3	25.3		24.0	24.0	
Total Split (s)	40.0	40.0		40.0	40.0		60.0	60.0		60.0	60.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%		60.0%	60.0%		60.0%	60.0%	
Maximum Green (s)	34.7	34.7		34.8	34.8		54.7	54.7		54.8	54.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	2.3		2.2	2.2		2.3	2.3		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.3			5.2			5.3			5.2	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		11.0	11.0		13.0	13.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 6 (6%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 61: William St & LaSalle Ave



HCM 2010 Signalized Intersection Summary
61: William St & LaSalle Ave

2014 2-way
Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	0	66	32	9	22	0	30	174	9	0	118	3
Future Volume (veh/h)	0	66	32	9	22	0	30	174	9	0	118	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	72	35	10	24	0	33	189	10	0	128	3
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	412	200	191	436	0	146	813	41	0	991	23
Arrive On Green	0.00	0.35	0.35	0.35	0.35	0.00	1.00	1.00	1.00	0.00	1.00	1.00
Sat Flow, veh/h	0	1185	576	417	1257	0	193	1487	76	0	1813	42
Grp Volume(v), veh/h	0	0	107	34	0	0	232	0	0	0	0	131
Grp Sat Flow(s),veh/h/ln	0	0	1761	1674	0	0	1756	0	0	0	0	1855
Q Serve(g_s), s	0.0	0.0	4.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	4.2	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.00		0.33	0.29		0.00	0.14		0.04	0.00		0.02
Lane Grp Cap(c), veh/h	0	0	612	628	0	0	1001	0	0	0	0	1015
V/C Ratio(X)	0.00	0.00	0.17	0.05	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.13
Avail Cap(c_a), veh/h	0	0	612	628	0	0	1001	0	0	0	0	1015
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	22.7	21.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.6	0.2	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	3.9	1.2	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.1
LnGrp Delay(d),s/veh	0.0	0.0	23.3	21.9	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.3
LnGrp LOS			C	C			A					A
Approach Vol, veh/h		107			34			232				131
Approach Delay, s/veh		23.3			21.9			0.5				0.3
Approach LOS		C			C			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		60.1		40.1		60.1		40.1				
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3				
Max Green Setting (Gmax), s		* 55		* 35		* 55		* 35				
Max Q Clear Time (g_c+I1), s		2.0		6.2		0.0		3.2				
Green Ext Time (p_c), s		0.9		0.8		0.9		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			6.8									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
62: William St & Colfax Ave

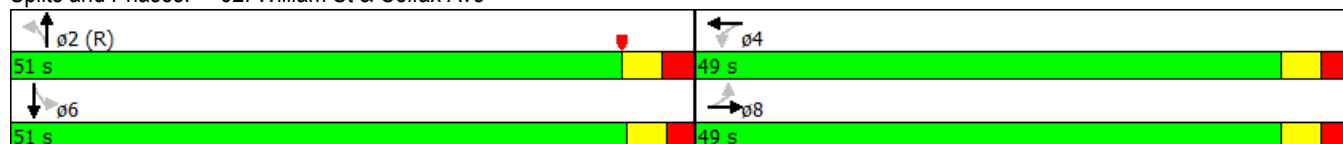
2014 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	68	58	10	15	110	24	0	80	82	8	128	60
Future Volume (vph)	68	58	10	15	110	24	0	80	82	8	128	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	50			50			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		387			682			495			483	
Travel Time (s)		10.6			18.6			13.5			13.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	25.5	25.5		25.5	25.5		25.5	25.5		25.2	25.2	
Total Split (s)	49.0	49.0		49.0	49.0		51.0	51.0		51.0	51.0	
Total Split (%)	49.0%	49.0%		49.0%	49.0%		51.0%	51.0%		51.0%	51.0%	
Maximum Green (s)	43.5	43.5		43.5	43.5		45.5	45.5		45.8	45.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.5			5.5		5.5	5.5		5.2	5.2	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		13.0	13.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 100
 Offset: 90 (90%), Referenced to phase 2:NBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 62: William St & Colfax Ave





















HCM 2010 Signalized Intersection Summary
62: William St & Colfax Ave

2014 2-way
Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	68	58	10	15	110	24	0	80	82	8	128	60
Future Volume (veh/h)	68	58	10	15	110	24	0	80	82	8	128	60
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	74	63	11	16	120	26	0	87	89	9	139	65
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	352	287	47	85	586	121	72	379	387	575	538	252
Arrive On Green	0.43	0.43	0.43	0.87	0.87	0.87	0.00	0.76	0.76	0.91	0.91	0.91
Sat Flow, veh/h	688	663	108	105	1351	278	1151	829	848	1180	1179	551
Grp Volume(v), veh/h	148	0	0	162	0	0	0	0	176	9	0	204
Grp Sat Flow(s),veh/h/ln	1460	0	0	1735	0	0	1151	0	1677	1180	0	1730
Q Serve(g_s), s	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.1	0.0	1.3
Cycle Q Clear(g_c), s	5.9	0.0	0.0	1.5	0.0	0.0	0.0	0.0	3.0	3.1	0.0	1.3
Prop In Lane	0.50		0.07	0.10		0.16	1.00		0.51	1.00		0.32
Lane Grp Cap(c), veh/h	687	0	0	792	0	0	72	0	766	575	0	790
V/C Ratio(X)	0.22	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.23	0.02	0.00	0.26
Avail Cap(c_a), veh/h	687	0	0	792	0	0	72	0	766	575	0	790
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.67	1.67	1.67	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.7	0.0	0.0	3.9	0.0	0.0	0.0	0.0	6.8	2.7	0.0	2.4
Incr Delay (d2), s/veh	0.7	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.8	0.0	0.0	1.5	0.0	0.0	0.0	0.0	2.7	0.1	0.0	1.3
LnGrp Delay(d),s/veh	18.4	0.0	0.0	4.4	0.0	0.0	0.0	0.0	7.5	2.8	0.0	3.2
LnGrp LOS	B			A					A	A		A
Approach Vol, veh/h		148			162			176			213	
Approach Delay, s/veh		18.4			4.4			7.5			3.2	
Approach LOS		B			A			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		51.3		49.0		51.3		49.0				
Change Period (Y+Rc), s		5.5		5.5		* 5.5		5.5				
Max Green Setting (Gmax), s		45.5		43.5		* 46		43.5				
Max Q Clear Time (g_c+I1), s		5.0		3.5		5.1		7.9				
Green Ext Time (p_c), s		2.7		2.2		2.7		2.1				
Intersection Summary												
HCM 2010 Ctrl Delay				7.8								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
63: William St & Jefferson Blvd

2014 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	5	0	42	0	87	1	19	105	0
Future Volume (vph)	0	0	0	5	0	42	0	87	1	19	105	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	225		0	210		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		331			675			480			497	
Travel Time (s)		9.0			18.4			13.1			13.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)											5	5
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	




















Intersection Summary

Area Type: Other

Control Type: Unsignalized










Lanes, Volumes, Timings
64: William St & Wayne St

2014 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	150		0	150		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		318			680			490			480	
Travel Time (s)		8.7			18.5			13.4			13.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	
Intersection Summary												
Area Type:	Other											
Control Type:	Unsignalized											























Lanes, Volumes, Timings
 65: Lafayette Blvd & Bronson St

2014 2-way
 Timing Plan: PM

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	14	186	7	0	294
Future Volume (vph)	0	14	186	7	0	294
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		25			25
Link Distance (ft)	440		1160			480
Travel Time (s)	12.0		31.6			13.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Lanes, Volumes, Timings
66: William St & Lincoln Way

2014 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	626	50	40	896	50	34	140	0	192	71	0
Future Volume (vph)	0	626	50	40	896	50	34	140	0	192	71	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	75		0	50		0	100		150
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	50			50			25			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		972			472			227			393	
Travel Time (s)		26.5			12.9			6.2			10.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Number of Detectors	1	0		1	0	1	1	1		1	1	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	0		20	0	20	50	50		50	50	50
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	50	50		50	50	50
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		6
Detector Phase	8	8		4	4	4	2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	26.6	26.6		25.6	25.6	25.6	29.5	29.5		29.9	29.9	29.9
Total Split (s)	68.2	68.2		68.2	68.2	68.2	31.8	31.8		31.8	31.8	31.8
Total Split (%)	68.2%	68.2%		68.2%	68.2%	68.2%	31.8%	31.8%		31.8%	31.8%	31.8%
Maximum Green (s)	62.6	62.6		62.6	62.6	62.6	26.3	26.3		25.9	25.9	25.9
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.6	2.6		2.6	2.6	2.6	2.5	2.5		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6		5.6	5.6	5.6	5.5	5.5		5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		13.0	13.0	13.0	17.0	17.0		17.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	0
Intersection Summary												
Area Type:	Other											
Cycle Length:	100											

Lanes, Volumes, Timings
66: William St & Lincoln Way

2014 2-way
Timing Plan: PM

Actuated Cycle Length: 100
Offset: 90 (90%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated






















Splits and Phases: 66: William St & Lincoln Way



HCM 2010 analysis cannot be performed without detectors for actuated controller type.

Lanes, Volumes, Timings
67: Michigan St N & Madison St

2014 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	0	20	0	0	0	15	516	0	0	438	5
Future Volume (vph)	29	0	20	0	0	0	15	516	0	0	438	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	50		0	200		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		433			199			492			528	
Travel Time (s)		11.8			5.4			13.4			14.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)		18										
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: CBD

Control Type: Unsignalized

Appendix H: Scenario 3 Capacity Analysis

Lanes, Volumes, Timings
1: William St & Marion St

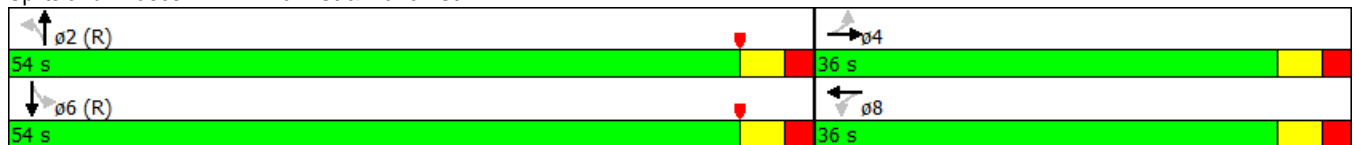
2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	94	72	6	5	35	6	0	73	8	4	346	24
Future Volume (vph)	94	72	6	5	35	6	0	73	8	4	346	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	50		0	150		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		827			455			430			402	
Travel Time (s)		22.6			12.4			11.7			11.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	24.0	24.0		24.0	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	36.0	36.0		36.0	36.0		54.0	54.0		54.0	54.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%		60.0%	60.0%		60.0%	60.0%	
Maximum Green (s)	31.0	31.0		31.0	31.0		49.0	49.0		49.0	49.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	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)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary













Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 63 (70%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 1: William St & Marion St



HCM 2010 Signalized Intersection Summary
 1: William St & Marion St

2038 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	94	72	6	5	35	6	0	73	8	4	346	24
Future Volume (veh/h)	94	72	6	5	35	6	0	73	8	4	346	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1792	1792	1900	1792	1792	1900
Adj Flow Rate, veh/h	102	78	7	5	38	7	0	79	9	4	376	26
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	6	6	6	6	6	6
Cap, veh/h	330	238	20	75	486	84	80	861	98	763	902	62
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.00	1.00	1.00	0.54	0.54	0.54
Sat Flow, veh/h	779	690	57	91	1410	244	942	1581	180	1255	1658	115
Grp Volume(v), veh/h	187	0	0	50	0	0	0	0	88	4	0	402
Grp Sat Flow(s),veh/h/ln	1526	0	0	1745	0	0	942	0	1761	1255	0	1772
Q Serve(g_s), s	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	12.0
Cycle Q Clear(g_c), s	8.0	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	0.1	0.0	12.0
Prop In Lane	0.55		0.04	0.10		0.14	1.00		0.10	1.00		0.06
Lane Grp Cap(c), veh/h	587	0	0	645	0	0	80	0	959	763	0	965
V/C Ratio(X)	0.32	0.00	0.00	0.08	0.00	0.00	0.00	0.00	0.09	0.01	0.00	0.42
Avail Cap(c_a), veh/h	587	0	0	645	0	0	80	0	959	763	0	965
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.8	0.0	0.0	19.9	0.0	0.0	0.0	0.0	0.0	9.4	0.0	12.1
Incr Delay (d2), s/veh	1.4	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.6	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.1	0.1	0.0	10.2
LnGrp Delay(d),s/veh	23.3	0.0	0.0	20.1	0.0	0.0	0.0	0.0	0.2	9.4	0.0	13.4
LnGrp LOS	C			C					A	A		B
Approach Vol, veh/h		187			50			88				406
Approach Delay, s/veh		23.3			20.1			0.2				13.4
Approach LOS		C			C			A				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		54.0		36.0		54.0		36.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		49.0		31.0		49.0		31.0				
Max Q Clear Time (g_c+I1), s		2.0		10.0		14.0		3.7				
Green Ext Time (p_c), s		3.7		1.4		3.6		1.5				
Intersection Summary												
HCM 2010 Ctrl Delay				14.8								
HCM 2010 LOS				B								

Lanes, Volumes, Timings
2: William St & Madison St

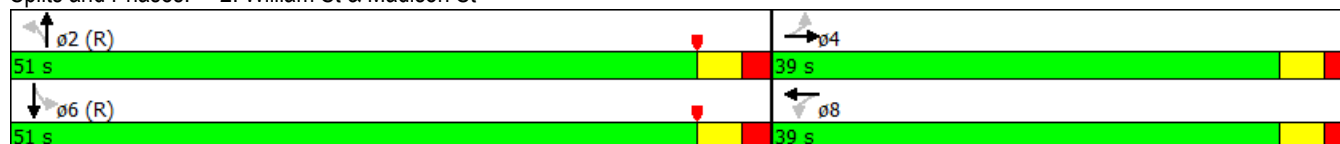
2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	14	6	89	11	10	1	71	5	128	231	0
Future Volume (vph)	0	14	6	89	11	10	1	71	5	128	231	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		0	275		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	50			50			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		884			489			393			430	
Travel Time (s)		24.1			13.3			10.7			11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	24.0	24.0		24.0	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	39.0	39.0		39.0	39.0		51.0	51.0		51.0	51.0	
Total Split (%)	43.3%	43.3%		43.3%	43.3%		56.7%	56.7%		56.7%	56.7%	
Maximum Green (s)	34.0	34.0		34.0	34.0		46.0	46.0		46.0	46.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	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)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary













Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 75 (83%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 2: William St & Madison St



HCM 2010 Signalized Intersection Summary
 2: William St & Madison St

2038 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	0	14	6	89	11	10	1	71	5	128	231	0
Future Volume (veh/h)	0	14	6	89	11	10	1	71	5	128	231	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1792	1792	1900	1792	1792	1900
Adj Flow Rate, veh/h	0	15	7	97	12	11	1	77	5	139	251	0
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	6	6	6	6	6	6
Cap, veh/h	0	446	208	494	61	49	633	851	55	725	916	0
Arrive On Green	0.00	0.38	0.38	0.38	0.38	0.38	1.00	1.00	1.00	1.00	1.00	0.00
Sat Flow, veh/h	0	1179	550	1115	161	129	1082	1665	108	1261	1792	0
Grp Volume(v), veh/h	0	0	22	120	0	0	1	0	82	139	251	0
Grp Sat Flow(s),veh/h/ln	0	0	1730	1405	0	0	1082	0	1773	1261	1792	0
Q Serve(g_s), s	0.0	0.0	0.7	4.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.7	5.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.00		0.32	0.81		0.09	1.00		0.06	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	653	603	0	0	633	0	906	725	916	0
V/C Ratio(X)	0.00	0.00	0.03	0.20	0.00	0.00	0.00	0.00	0.09	0.19	0.27	0.00
Avail Cap(c_a), veh/h	0	0	653	603	0	0	633	0	906	725	916	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	17.6	19.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.7	0.0	0.0	0.0	0.0	0.2	0.6	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.6	3.9	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.0
LnGrp Delay(d),s/veh	0.0	0.0	17.7	19.8	0.0	0.0	0.0	0.0	0.2	0.6	0.7	0.0
LnGrp LOS			B	B			A		A	A	A	
Approach Vol, veh/h		22			120			83			390	
Approach Delay, s/veh		17.7			19.8			0.2			0.7	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		51.0		39.0		51.0		39.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		46.0		34.0		46.0		34.0				
Max Q Clear Time (g_c+I1), s		2.0		2.7		2.0		7.3				
Green Ext Time (p_c), s		2.8		0.9		2.8		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay			5.0									
HCM 2010 LOS			A									

Lanes, Volumes, Timings
3: William St & Washington St

2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	25	24	15	18	3	20	230	24	10	298	41
Future Volume (vph)	28	25	24	15	18	3	20	230	24	10	298	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	400		0	165		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		460			680			497			495	
Travel Time (s)		12.5			18.5			13.6			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Parking (#/hr)								5	5		5	5
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2			6		
Minimum Split (s)	26.2	26.2		26.3	26.3		26.5	26.5		26.5	26.5	
Total Split (s)	30.0	30.0		30.0	30.0		60.0	60.0		60.0	60.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		66.7%	66.7%		66.7%	66.7%	
Maximum Green (s)	24.8	24.8		24.7	24.7		54.5	54.5		54.5	54.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.2	2.2		2.3	2.3		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.2	5.2		5.3	5.3		5.5	5.5		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		14.0	14.0		14.0	14.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 14 (16%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 3: William St & Washington St



HCM 2010 Signalized Intersection Summary
 3: William St & Washington St

2038 2-way
 Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	25	24	15	18	3	20	230	24	10	298	41
Future Volume (veh/h)	28	25	24	15	18	3	20	230	24	10	298	41
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1792	1792	1900	1792	1792	1900
Adj Flow Rate, veh/h	30	27	26	16	20	3	22	250	26	11	324	45
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	6	6	6	6	6	6
Cap, veh/h	440	236	227	412	427	64	546	845	88	559	815	113
Arrive On Green	0.28	0.28	0.28	0.28	0.28	0.28	0.20	0.20	0.20	0.60	0.60	0.60
Sat Flow, veh/h	1356	857	825	1320	1553	233	971	1397	145	1057	1348	187
Grp Volume(v), veh/h	30	0	53	16	0	23	22	0	276	11	0	369
Grp Sat Flow(s),veh/h/ln	1356	0	1681	1320	0	1786	971	0	1543	1057	0	1535
Q Serve(g_s), s	1.5	0.0	2.1	0.8	0.0	0.9	1.7	0.0	13.7	0.5	0.0	11.3
Cycle Q Clear(g_c), s	2.3	0.0	2.1	3.0	0.0	0.9	13.0	0.0	13.7	14.2	0.0	11.3
Prop In Lane	1.00		0.49	1.00		0.13	1.00		0.09	1.00		0.12
Lane Grp Cap(c), veh/h	440	0	463	412	0	492	546	0	933	559	0	929
V/C Ratio(X)	0.07	0.00	0.11	0.04	0.00	0.05	0.04	0.00	0.30	0.02	0.00	0.40
Avail Cap(c_a), veh/h	440	0	463	412	0	492	546	0	933	559	0	929
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.8	0.0	24.4	25.5	0.0	24.0	24.2	0.0	19.7	13.6	0.0	9.3
Incr Delay (d2), s/veh	0.3	0.0	0.5	0.2	0.0	0.2	0.1	0.0	0.8	0.1	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	0.0	1.9	0.6	0.0	0.8	0.9	0.0	10.1	0.3	0.0	8.7
LnGrp Delay(d),s/veh	25.1	0.0	24.9	25.7	0.0	24.2	24.4	0.0	20.5	13.7	0.0	10.5
LnGrp LOS	C		C	C		C	C		C	B		B
Approach Vol, veh/h		83			39			298			380	
Approach Delay, s/veh		25.0			24.8			20.8			10.6	
Approach LOS		C			C			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		60.0		30.1		60.0		30.1				
Change Period (Y+Rc), s		5.5		* 5.3		5.5		* 5.3				
Max Green Setting (Gmax), s		54.5		* 25		54.5		* 25				
Max Q Clear Time (g_c+I1), s		15.7		5.0		16.2		4.3				
Green Ext Time (p_c), s		5.1		0.5		5.0		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			16.6									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
4: William St & Western Ave

2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	154	367	0	0	279	87	0	1	0	98	1	89
Future Volume (vph)	154	367	0	0	279	87	0	1	0	98	1	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	285		0	50		0	225		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		560			680			208			490	
Travel Time (s)		15.3			18.5			5.7			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	26.2	26.2		26.2	26.2		26.5	26.5		29.5	29.5	
Total Split (s)	60.0	60.0		60.0	60.0		30.0	30.0		30.0	30.0	
Total Split (%)	66.7%	66.7%		66.7%	66.7%		33.3%	33.3%		33.3%	33.3%	
Maximum Green (s)	54.8	54.8		54.8	54.8		24.5	24.5		24.5	24.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.2	2.2		2.2	2.2		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.2		5.2	5.2		5.5	5.5		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		14.0	14.0		17.0	17.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary




















Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 4: William St & Western Ave



















HCM 2010 Signalized Intersection Summary
4: William St & Western Ave

2038 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	154	367	0	0	279	87	0	1	0	98	1	89
Future Volume (veh/h)	154	367	0	0	279	87	0	1	0	98	1	89
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1792	1900	1792	1792	1900	1792	1792	1900	1792	1792	1900
Adj Flow Rate, veh/h	167	399	0	0	303	95	0	1	0	107	1	97
Adj No. of Lanes	0	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	257	583	0	80	797	250	80	488	0	449	4	411
Arrive On Green	0.61	0.61	0.00	0.00	0.61	0.61	0.00	0.27	0.00	0.27	0.27	0.27
Sat Flow, veh/h	337	957	0	945	1309	411	1243	1792	0	1357	16	1510
Grp Volume(v), veh/h	566	0	0	0	0	398	0	1	0	107	0	98
Grp Sat Flow(s),veh/h/ln	1295	0	0	945	0	1720	1243	1792	0	1357	0	1526
Q Serve(g_s), s	20.7	0.0	0.0	0.0	0.0	10.6	0.0	0.0	0.0	5.6	0.0	4.5
Cycle Q Clear(g_c), s	31.3	0.0	0.0	0.0	0.0	10.6	0.0	0.0	0.0	5.6	0.0	4.5
Prop In Lane	0.30		0.00	1.00		0.24	1.00		0.00	1.00		0.99
Lane Grp Cap(c), veh/h	840	0	0	80	0	1047	80	488	0	449	0	415
V/C Ratio(X)	0.67	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.00	0.24	0.00	0.24
Avail Cap(c_a), veh/h	840	0	0	80	0	1047	80	488	0	449	0	415
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.9	0.0	0.0	0.0	0.0	9.0	0.0	23.8	0.0	25.9	0.0	25.5
Incr Delay (d2), s/veh	4.3	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	1.3	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.7	0.0	0.0	0.0	0.0	9.0	0.0	0.0	0.0	4.1	0.0	3.7
LnGrp Delay(d),s/veh	18.2	0.0	0.0	0.0	0.0	10.0	0.0	23.9	0.0	27.2	0.0	26.8
LnGrp LOS	B					B		C		C		C
Approach Vol, veh/h		566			398			1				205
Approach Delay, s/veh		18.2			10.0			23.9				27.0
Approach LOS		B			B			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		60.0		30.0		60.0				
Change Period (Y+Rc), s		5.5		* 5.2		5.5		* 5.2				
Max Green Setting (Gmax), s		24.5		* 55		24.5		* 55				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				16.9								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
5: Lafayette Blvd & Marion St

2038 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	28	13	5	5	1	2	184	3	1	160	49
Future Volume (vph)	56	28	13	5	5	1	2	184	3	1	160	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	50			50			25			25		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		455			425			515			490	
Travel Time (s)		12.4			11.6			14.0			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	9%	9%	9%	9%	9%	9%
Parking (#/hr)		3	3		5	5		5	5		5	5
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

















Intersection Summary

Area Type: CBD

Control Type: Unsignalized

Lanes, Volumes, Timings
6: Lafayette Blvd & Madison St

2038 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	23	124	16	104	2	7	188	36	2	177	0
Future Volume (vph)	0	23	124	16	104	2	7	188	36	2	177	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	100		0	100		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		489			434			485			515	
Travel Time (s)		13.3			11.8			13.2			14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	9%	9%	9%	9%	9%	9%
Parking (#/hr)						5					5	5
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: CBD

Control Type: Unsignalized

Lanes, Volumes, Timings
7: Lafayette Blvd & LaSalle Ave#

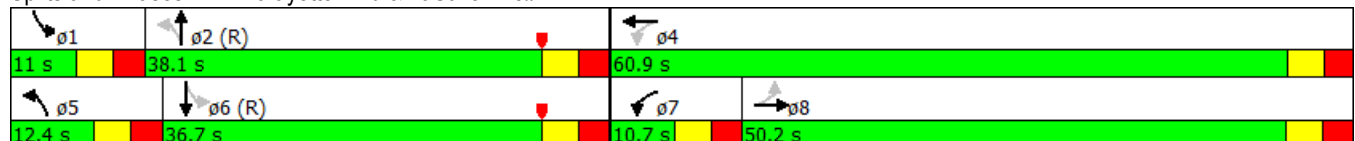
2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	609	286	92	618	47	91	190	89	114	197	1
Future Volume (vph)	6	609	286	92	618	47	91	190	89	114	197	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	11	11	11
Storage Length (ft)	0		0	200		0	190		0	250		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	25			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		236			440			495			485	
Travel Time (s)		6.4			12.0			13.5			13.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	9%	9%	9%	9%	9%	9%
Parking (#/hr)								5	5		0	0
Shared Lane Traffic (%)												
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	28.6	28.6		9.5	28.3		9.6	28.6		9.6	29.6	
Total Split (s)	50.2	50.2		10.7	60.9		12.4	38.1		11.0	36.7	
Total Split (%)	45.6%	45.6%		9.7%	55.4%		11.3%	34.6%		10.0%	33.4%	
Maximum Green (s)	44.6	44.6		5.2	55.4		6.8	32.5		5.4	31.1	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.5	2.5		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.6		5.5	5.5		5.6	5.6		5.6	5.6	
Lead/Lag	Lag	Lag		Lead			Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	
Walk Time (s)	7.0	7.0			7.0			7.0			7.0	
Flash Dont Walk (s)	16.0	16.0			13.0			16.0			17.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	

Intersection Summary
























Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 101.8 (93%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Pretimed

Splits and Phases: 7: Lafayette Blvd & LaSalle Ave#



HCM 2010 Signalized Intersection Summary
7: Lafayette Blvd & LaSalle Ave#

2038 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	609	286	92	618	47	91	190	89	114	197	1
Future Volume (veh/h)	6	609	286	92	618	47	91	190	89	114	197	1
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1710	1613	1710	1613	1613	1710	1569	1569	1710	1569	1569	1710
Adj Flow Rate, veh/h	7	662	311	100	672	51	99	207	97	124	214	1
Adj No. of Lanes	0	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	9	9	9	9	9	9
Cap, veh/h	36	803	375	190	1453	110	308	261	122	199	397	2
Arrive On Green	0.42	0.41	0.41	0.06	0.67	0.67	0.02	0.10	0.10	0.05	0.28	0.28
Sat Flow, veh/h	6	1979	923	1536	2888	219	1494	885	415	1494	1404	7
Grp Volume(v), veh/h	540	0	440	100	356	367	99	0	304	124	0	215
Grp Sat Flow(s),veh/h/ln	1603	0	1305	1536	1533	1575	1494	0	1300	1494	0	1411
Q Serve(g_s), s	1.2	0.0	33.2	4.1	12.3	12.3	5.1	0.0	25.2	5.4	0.0	14.2
Cycle Q Clear(g_c), s	32.6	0.0	33.2	4.1	12.3	12.3	5.1	0.0	25.2	5.4	0.0	14.2
Prop In Lane	0.01		0.71	1.00		0.14	1.00		0.32	1.00		0.00
Lane Grp Cap(c), veh/h	699	0	530	190	771	792	308	0	384	199	0	399
V/C Ratio(X)	0.77	0.00	0.83	0.53	0.46	0.46	0.32	0.00	0.79	0.62	0.00	0.54
Avail Cap(c_a), veh/h	699	0	530	190	771	792	308	0	384	199	0	399
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.1	0.0	29.3	23.1	11.1	11.1	27.5	0.0	46.4	33.4	0.0	33.4
Incr Delay (d2), s/veh	8.2	0.0	14.0	10.1	2.0	1.9	2.7	0.0	15.4	13.9	0.0	5.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	22.4	0.0	20.2	4.0	9.4	9.6	4.2	0.0	16.1	6.2	0.0	10.2
LnGrp Delay(d),s/veh	37.2	0.0	43.3	33.2	13.1	13.0	30.3	0.0	61.8	47.3	0.0	38.6
LnGrp LOS	D		D	C	B	B	C		E	D		D
Approach Vol, veh/h		980			823			403			339	
Approach Delay, s/veh		40.0			15.5			54.0			41.8	
Approach LOS		D			B			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	38.1		61.0	12.4	36.7	10.7	50.3				
Change Period (Y+Rc), s	5.6	5.6		* 5.6	5.6	5.6	5.5	5.6				
Max Green Setting (Gmax), s	5.4	32.5		* 55	6.8	31.1	5.2	44.6				
Max Q Clear Time (g_c+I1), s	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				34.5								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
8: Lafayette Blvd & Colfax Ave

2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	280	40	67	114	26	18	326	16	6	547	20
Future Volume (vph)	24	280	40	67	114	26	18	326	16	6	547	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	200		0	190		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		682			438			495			495	
Travel Time (s)		18.6			11.9			13.5			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	9%	9%	9%	9%	9%	9%
Parking (#/hr)					5	5		5	5		5	5
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2			6		
Minimum Split (s)	28.6	28.6		28.6	28.6		28.6	28.6		25.5	25.5	
Total Split (s)	41.0	41.0		41.0	41.0		69.0	69.0		69.0	69.0	
Total Split (%)	37.3%	37.3%		37.3%	37.3%		62.7%	62.7%		62.7%	62.7%	
Maximum Green (s)	35.4	35.4		35.4	35.4		63.4	63.4		63.5	63.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	2.6		2.5	2.5	
Lost Time Adjust (s)		0.0		0.0	0.0		-1.0	0.0		0.0	0.0	
Total Lost Time (s)		5.6		5.6	5.6		4.6	5.6		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		16.0	16.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary





















Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 96 (87%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 8: Lafayette Blvd & Colfax Ave
























HCM 2010 Signalized Intersection Summary
 8: Lafayette Blvd & Colfax Ave

2038 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	280	40	67	114	26	18	326	16	6	547	20
Future Volume (veh/h)	24	280	40	67	114	26	18	326	16	6	547	20
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1710	1598	1710	1598	1598	1710	1569	1569	1710	1569	1569	1710
Adj Flow Rate, veh/h	26	304	43	73	124	28	20	354	17	7	595	22
Adj No. of Lanes	0	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	7	7	7	7	7	7	9	9	9	9	9	9
Cap, veh/h	55	417	57	222	355	80	283	749	36	555	759	28
Arrive On Green	0.32	0.32	0.32	0.64	0.64	0.64	1.00	1.00	1.00	0.77	0.77	0.77
Sat Flow, veh/h	61	1297	177	883	1105	249	676	1299	62	848	1315	49
Grp Volume(v), veh/h	373	0	0	73	0	152	20	0	371	7	0	617
Grp Sat Flow(s),veh/h/ln	1535	0	0	883	0	1354	676	0	1362	848	0	1364
Q Serve(g_s), s	8.9	0.0	0.0	0.0	0.0	5.7	1.5	0.0	0.0	0.2	0.0	29.1
Cycle Q Clear(g_c), s	23.7	0.0	0.0	19.4	0.0	5.7	30.7	0.0	0.0	0.2	0.0	29.1
Prop In Lane	0.07		0.12	1.00		0.18	1.00		0.05	1.00		0.04
Lane Grp Cap(c), veh/h	529	0	0	222	0	435	283	0	785	555	0	787
V/C Ratio(X)	0.71	0.00	0.00	0.33	0.00	0.35	0.07	0.00	0.47	0.01	0.00	0.78
Avail Cap(c_a), veh/h	529	0	0	222	0	435	283	0	785	555	0	787
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.3	0.0	0.0	16.8	0.0	14.3	6.9	0.0	0.0	5.5	0.0	8.8
Incr Delay (d2), s/veh	7.7	0.0	0.0	3.9	0.0	2.2	0.5	0.0	2.0	0.0	0.0	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.8	0.0	0.0	3.2	0.0	4.3	0.6	0.0	0.8	0.1	0.0	18.1
LnGrp Delay(d),s/veh	41.0	0.0	0.0	20.7	0.0	16.5	7.4	0.0	2.0	5.5	0.0	16.5
LnGrp LOS	D			C		B	A		A	A		B
Approach Vol, veh/h		373			225			391			624	
Approach Delay, s/veh		41.0			17.9			2.3			16.4	
Approach LOS		D			B			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		69.1		41.0		69.1		41.0				
Change Period (Y+Rc), s		5.6		5.6		* 5.6		5.6				
Max Green Setting (Gmax), s		63.4		35.4		* 64		35.4				
Max Q Clear Time (g_c+I1), s		32.7		21.4		31.1		25.7				
Green Ext Time (p_c), s		5.4		2.4		5.5		2.0				
Intersection Summary												
HCM 2010 Ctrl Delay				18.9								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 9: Lafayette Blvd & Washington St

2038 2-way
 Timing Plan: AM



















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	51	52	5	17	16	17	345	29	1	569	43
Future Volume (vph)	4	51	52	5	17	16	17	345	29	1	569	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	75		0	245		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			50			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		680			438			495			495	
Travel Time (s)		18.5			11.9			13.5			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	9%	9%	9%	9%	9%	9%
Parking (#/hr)					0	0		10	10		0	0
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: CBD
 Control Type: Unsignalized

Lanes, Volumes, Timings
 10: Lafayette Blvd & Jefferson Blvd

2038 2-way
 Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	45	36	3	33	35	0	353	31	17	612	6
Future Volume (vph)	5	45	36	3	33	35	0	353	31	17	612	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	200		0	125		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		675			430			474			495	
Travel Time (s)		18.4			11.7			12.9			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	9%	9%	9%	9%	9%	9%
Parking (#/hr)		10	10		10	10		10	10		5	5
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	





















Intersection Summary

Area Type: CBD

Control Type: Unsignalized

Lanes, Volumes, Timings
 11: Lafayette Blvd & Wayne St

2038 2-way
 Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	10	1	16	44	10	0	380	34	10	612	16
Future Volume (vph)	0	10	1	16	44	10	0	380	34	10	612	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	150		200	180		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		680			435			491			474	
Travel Time (s)		18.5			11.9			13.4			12.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	9%	9%	9%	9%	9%	9%
Parking (#/hr)		0	0		0	0		0	0		0	0
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: CBD
 Control Type: Unsignalized

Lanes, Volumes, Timings
12: Lafayette Blvd & Western Ave

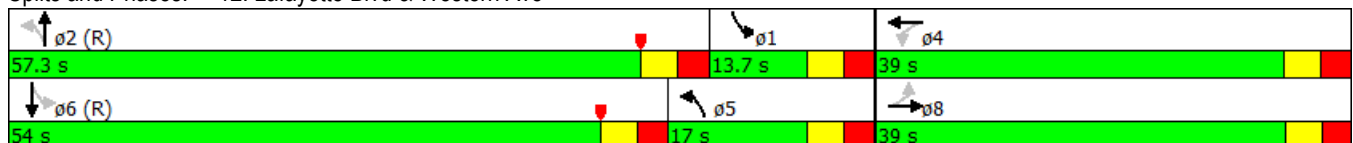
2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	72	365	14	13	161	12	220	334	0	31	506	17
Future Volume (vph)	72	365	14	13	161	12	220	334	0	31	506	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	285		0	200		0	180		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		680			435			520			491	
Travel Time (s)		18.5			11.9			14.2			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	9%	9%	9%	9%	9%	9%
Parking (#/hr)		0	0		0	0		0	0		0	0
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	28.5	28.5		29.6	29.6		13.6	28.6		13.6	28.6	
Total Split (s)	39.0	39.0		39.0	39.0		17.0	57.3		13.7	54.0	
Total Split (%)	35.5%	35.5%		35.5%	35.5%		15.5%	52.1%		12.5%	49.1%	
Maximum Green (s)	33.5	33.5		33.4	33.4		11.4	51.7		8.1	48.4	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.6	2.6		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.6	5.6		5.6	5.6		5.6	5.6	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	16.0	16.0		17.0	17.0			16.0			16.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	

Intersection Summary






















Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 59 (54%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Pretimed

Splits and Phases: 12: Lafayette Blvd & Western Ave






















HCM 2010 Signalized Intersection Summary
 12: Lafayette Blvd & Western Ave

2038 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	72	365	14	13	161	12	220	334	0	31	506	17
Future Volume (veh/h)	72	365	14	13	161	12	220	334	0	31	506	17
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	0.90	1.00	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1743	1743	1900	1743	1743	1900
Adj Flow Rate, veh/h	78	397	15	14	175	13	239	363	0	34	550	18
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	9	9	9	9	9	9
Cap, veh/h	345	470	18	125	451	34	305	737	0	580	664	22
Arrive On Green	0.30	0.30	0.30	0.61	0.61	0.61	0.21	0.94	0.00	0.02	0.15	0.15
Sat Flow, veh/h	1146	1545	58	933	1484	110	1660	1569	0	1660	1511	49
Grp Volume(v), veh/h	78	0	412	14	0	188	239	363	0	34	0	568
Grp Sat Flow(s),veh/h/ln	1146	0	1603	933	0	1594	1660	1569	0	1660	0	1560
Q Serve(g_s), s	6.1	0.0	26.5	1.5	0.0	6.7	5.3	2.9	0.0	0.0	0.0	39.0
Cycle Q Clear(g_c), s	12.7	0.0	26.5	28.0	0.0	6.7	5.3	2.9	0.0	0.0	0.0	39.0
Prop In Lane	1.00		0.04	1.00		0.07	1.00		0.00	1.00		0.03
Lane Grp Cap(c), veh/h	345	0	488	125	0	485	305	737	0	580	0	686
V/C Ratio(X)	0.23	0.00	0.84	0.11	0.00	0.39	0.78	0.49	0.00	0.06	0.00	0.83
Avail Cap(c_a), veh/h	345	0	488	125	0	485	305	737	0	580	0	686
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.8	0.0	35.9	32.4	0.0	16.3	38.4	1.9	0.0	15.9	0.0	43.0
Incr Delay (d2), s/veh	1.5	0.0	16.3	1.8	0.0	2.3	18.1	2.3	0.0	0.2	0.0	11.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.7	0.0	20.0	0.8	0.0	5.6	12.5	2.7	0.0	1.1	0.0	26.1
LnGrp Delay(d),s/veh	35.3	0.0	52.2	34.2	0.0	18.6	56.5	4.2	0.0	16.1	0.0	54.1
LnGrp LOS	D		D	C		B	E	A		B		D
Approach Vol, veh/h		490			202			602			602	
Approach Delay, s/veh		49.5			19.7			25.0			51.9	
Approach LOS		D			B			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.7	57.3		39.1	17.0	54.0		39.1				
Change Period (Y+Rc), s	5.6	5.6		5.6	5.6	5.6		* 5.6				
Max Green Setting (Gmax), s	8.1	51.7		33.4	11.4	48.4		* 34				
Max Q Clear Time (g_c+I1), s	0.0	0.0		0.0	0.0	0.0		0.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				39.3								
HCM 2010 LOS				D								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
13: Lafayette Blvd & Monroe St

2038 2-way
Timing Plan: AM


















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	60	0	298	0	257	248	187	345	0
Future Volume (vph)	0	0	0	60	0	298	0	257	248	187	345	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	150		0	200		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	25			50			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		190			440			490			520	
Travel Time (s)		5.2			12.0			13.4			14.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	9%	9%	9%	9%	9%	9%
Parking (#/hr)						5		0	0		0	0
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Lanes, Volumes, Timings
 14: Lafayette Blvd & South St

2038 2-way
 Timing Plan: AM




















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	0	4	0	0	8	8	493	4	1	387	16
Future Volume (vph)	4	0	4	0	0	8	8	493	4	1	387	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	250		0	225		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	50			50			100			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		902			435			480			490	
Travel Time (s)		24.6			11.9			13.1			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	9%	9%	9%	9%	9%	9%
Parking (#/hr)					0	0					0	0
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Lanes, Volumes, Timings
15: Lafayette Blvd & Sample St

2038 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	274	642	94	41	482	32	53	202	39	75	144	157
Future Volume (vph)	274	642	94	41	482	32	53	202	39	75	144	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	100		0	150		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	75			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		490			437			457			1160	
Travel Time (s)		13.4			11.9			12.5			31.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	15%	15%	15%	15%	15%	15%	9%	9%	9%	9%	9%	9%
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	29.5	29.5		28.3	28.3		28.1	28.1		28.1	28.1	
Total Split (s)	74.0	74.0		74.0	74.0		36.0	36.0		36.0	36.0	
Total Split (%)	67.3%	67.3%		67.3%	67.3%		32.7%	32.7%		32.7%	32.7%	
Maximum Green (s)	68.5	68.5		68.5	68.5		30.5	30.5		30.5	30.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		-1.0	0.0		-1.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		4.5	5.5		4.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2		0.2	0.2		2.5	2.5		2.5	2.5	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	17.0	17.0		14.0	14.0		14.0	14.0		14.0	14.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Intersection Summary												
Area Type:	Other											
Cycle Length:	110											

Lanes, Volumes, Timings
15: Lafayette Blvd & Sample St

2038 2-way
Timing Plan: AM

Actuated Cycle Length: 110
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 15: Lafayette Blvd & Sample St



















HCM 2010 Signalized Intersection Summary
 15: Lafayette Blvd & Sample St

2038 2-way
 Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	274	642	94	41	482	32	53	202	39	75	144	157
Future Volume (veh/h)	274	642	94	41	482	32	53	202	39	75	144	157
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1652	1652	1900	1900	1652	1900	1743	1743	1900	1743	1743	1900
Adj Flow Rate, veh/h	298	698	102	45	524	35	58	220	42	82	157	171
Adj No. of Lanes	1	2	0	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	15	15	15	15	15	15	9	9	9	9	9	9
Cap, veh/h	376	1239	181	91	1042	75	439	640	122	439	343	374
Arrive On Green	0.45	0.45	0.45	0.92	0.90	0.90	0.46	0.45	0.45	0.77	0.75	0.75
Sat Flow, veh/h	751	2749	401	118	2313	165	980	1423	272	1041	764	832
Grp Volume(v), veh/h	298	398	402	292	0	312	58	0	262	82	0	328
Grp Sat Flow(s),veh/h/ln	751	1570	1581	1122	0	1474	980	0	1695	1041	0	1596
Q Serve(g_s), s	42.4	20.5	20.6	7.8	0.0	4.0	4.3	0.0	11.1	4.0	0.0	8.6
Cycle Q Clear(g_c), s	46.5	20.5	20.6	28.5	0.0	4.0	12.8	0.0	11.1	15.0	0.0	8.6
Prop In Lane	1.00		0.25	0.15		0.11	1.00		0.16	1.00		0.52
Lane Grp Cap(c), veh/h	376	707	712	552	0	664	439	0	762	439	0	717
V/C Ratio(X)	0.79	0.56	0.56	0.53	0.00	0.47	0.13	0.00	0.34	0.19	0.00	0.46
Avail Cap(c_a), veh/h	505	977	985	776	0	918	439	0	762	439	0	717
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.00	0.95	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.4	22.2	22.3	4.6	0.0	3.2	22.4	0.0	19.7	11.3	0.0	8.6
Incr Delay (d2), s/veh	4.3	0.3	0.3	0.3	0.0	0.2	0.6	0.0	1.2	0.9	0.0	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.2	13.8	13.9	4.7	0.0	2.5	2.2	0.0	9.2	2.2	0.0	7.3
LnGrp Delay(d),s/veh	35.7	22.5	22.5	4.9	0.0	3.4	23.0	0.0	21.0	12.2	0.0	10.7
LnGrp LOS	D	C	C	A		A	C		C	B		B
Approach Vol, veh/h		1098			604			320				410
Approach Delay, s/veh		26.1			4.1			21.3				11.0
Approach LOS		C			A			C				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		54.9		55.1		54.9		55.1				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		30.5		68.5		30.5		68.5				
Max Q Clear Time (g_c+I1), s		14.8		30.5		17.0		48.5				
Green Ext Time (p_c), s		2.6		1.2		2.4		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay				17.5								
HCM 2010 LOS				B								

Lanes, Volumes, Timings
16: Main St & Bartlett St

2038 2-way
Timing Plan: AM












												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	252	24	41	263	29	23	2	28	40	5	32
Future Volume (vph)	14	252	24	41	263	29	23	2	28	40	5	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	75		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		377			472			172			391	
Travel Time (s)		10.3			12.9			4.7			10.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		5	5		5	5						
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Lanes, Volumes, Timings
17: Main St & Marion St

2038 2-way
Timing Plan: AM




















						
Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	33	12	29	479	441	31
Future Volume (vph)	33	12	29	479	441	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	1	1			0
Taper Length (ft)	50		50			
Link Speed (mph)	25			25	25	
Link Distance (ft)	192			437	345	
Travel Time (s)	5.2			11.9	9.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: CBD
Control Type: Unsignalized

Lanes, Volumes, Timings
18: Main St & Madison St

2038 2-way
Timing Plan: AM


























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	37	10	8	16	0	11	537	37	0	357	100
Future Volume (vph)	18	37	10	8	16	0	11	537	37	0	357	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	150		0	100		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		434			433			485			437	
Travel Time (s)		11.8			11.8			13.2			11.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Parking (#/hr)		3	3	3	3	3		5	5			
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: CBD
Control Type: Unsignalized

Lanes, Volumes, Timings
19: Main St & LaSalle Ave#

2038 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (vph)	11	734	69	31	713	26	21	581	148	2	344	25
Future Volume (vph)	11	734	69	31	713	26	21	581	148	2	344	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	11	11	11	11	11	11	11	11
Storage Length (ft)	150		150	100		0	250		200	150		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	50			75			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			437			495			485	
Travel Time (s)		12.0			11.9			13.5			13.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)								5	5		3	3
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		4	4		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	
Minimum Split (s)	30.0	30.0		36.0	36.0		32.1	32.1	32.1	33.8	33.8	
Total Split (s)	49.0	49.0		49.0	49.0		61.0	61.0	61.0	61.0	61.0	
Total Split (%)	44.5%	44.5%		44.5%	44.5%		55.5%	55.5%	55.5%	55.5%	55.5%	
Maximum Green (s)	43.3	43.3		43.1	43.1		54.9	54.9	54.9	55.1	55.1	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.7	2.7		2.9	2.9		3.1	3.1	3.1	2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	-1.0	0.0	
Total Lost Time (s)	5.7	5.7		5.9	5.9		6.1	6.1	6.1	4.9	5.9	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2	0.2	0.2	0.2	
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		23.0	23.0		19.0	19.0	19.0	20.0	20.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	

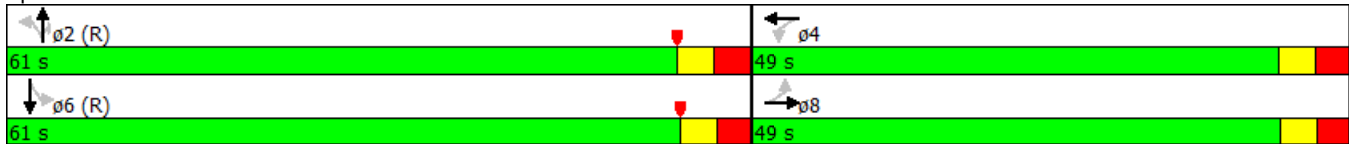
Intersection Summary

Lanes, Volumes, Timings
 19: Main St & LaSalle Ave#

2038 2-way
 Timing Plan: AM

Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 90 (82%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 19: Main St & LaSalle Ave#



HCM 2010 Signalized Intersection Summary
 19: Main St & LaSalle Ave#

2038 2-way
 Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	734	69	31	713	26	21	581	148	2	344	25
Future Volume (veh/h)	11	734	69	31	713	26	21	581	148	2	344	25
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1613	1613	1710	1613	1613	1710	1541	1541	1541	1541	1541	1710
Adj Flow Rate, veh/h	12	798	75	34	775	28	23	632	161	2	374	27
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	11	11	11	11	11	11
Cap, veh/h	105	902	85	113	961	35	382	882	656	393	720	52
Arrive On Green	0.64	0.64	0.64	0.11	0.11	0.11	1.00	1.00	1.00	0.58	0.57	0.57
Sat Flow, veh/h	585	2833	266	548	3018	109	810	1541	1146	564	1257	91
Grp Volume(v), veh/h	12	432	441	34	394	409	23	632	161	2	0	401
Grp Sat Flow(s),veh/h/ln	585	1533	1566	548	1533	1594	810	1541	1146	564	0	1347
Q Serve(g_s), s	2.0	25.8	25.8	6.8	27.6	27.6	1.0	0.0	0.0	0.2	0.0	19.9
Cycle Q Clear(g_c), s	29.6	25.8	25.8	32.3	27.6	27.6	21.1	0.0	0.0	0.2	0.0	19.9
Prop In Lane	1.00		0.17	1.00		0.07	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	105	488	499	113	488	507	382	882	656	393	0	771
V/C Ratio(X)	0.11	0.88	0.89	0.30	0.81	0.81	0.06	0.72	0.25	0.01	0.00	0.52
Avail Cap(c_a), veh/h	149	603	617	153	600	625	382	882	656	393	0	771
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.46	0.46	0.46	0.64	0.64	0.64	0.50	0.50	0.50	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.4	18.3	18.3	60.7	45.9	45.9	3.4	0.0	0.0	9.7	0.0	14.3
Incr Delay (d2), s/veh	0.1	5.6	5.5	0.4	3.5	3.4	0.2	2.5	0.4	0.0	0.0	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	15.1	15.3	1.9	16.8	17.4	0.4	1.1	0.1	0.1	0.0	12.5
LnGrp Delay(d),s/veh	31.5	23.9	23.8	61.0	49.4	49.3	3.5	2.5	0.4	9.7	0.0	16.8
LnGrp LOS	C	C	C	E	D	D	A	A	A	A		B
Approach Vol, veh/h		885			837			816			403	
Approach Delay, s/veh		24.0			49.8			2.2			16.8	
Approach LOS		C			D			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		69.1		40.9		69.1		40.9				
Change Period (Y+Rc), s		6.1		5.9		* 6.1		* 5.9				
Max Green Setting (Gmax), s		54.9		43.1		* 55		* 43				
Max Q Clear Time (g_c+I1), s		23.1		34.3		21.9		31.6				
Green Ext Time (p_c), s		0.4		0.6		0.4		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				24.3								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
20: Main St & Colfax Ave

2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	228	49	64	207	12	14	706	24	13	396	26
Future Volume (vph)	32	228	49	64	207	12	14	706	24	13	396	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	100		100	100		150	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		438			440			490			495	
Travel Time (s)		11.9			12.0			13.4			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	11%	11%	11%	11%	11%	11%
Parking (#/hr)		5	5		10	10		5	5		10	10
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2		2	6		
Minimum Split (s)	29.0	29.0		29.0	29.0		28.0	28.0	28.0	28.0	28.0	
Total Split (s)	34.0	34.0		34.0	34.0		76.0	76.0	76.0	76.0	76.0	
Total Split (%)	30.9%	30.9%		30.9%	30.9%		69.1%	69.1%	69.1%	69.1%	69.1%	
Maximum Green (s)	28.3	28.3		28.1	28.1		70.5	70.5	70.5	70.5	70.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.7	2.7		2.9	2.9		2.5	2.5	2.5	2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	-1.0	0.0	
Total Lost Time (s)	5.7	5.7		5.9	5.9		5.5	5.5	5.5	4.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		11.0	11.0		11.0	11.0	11.0	10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	

Intersection Summary























Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 109 (99%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Pretimed

Splits and Phases: 20: Main St & Colfax Ave



HCM 2010 Signalized Intersection Summary
20: Main St & Colfax Ave

2038 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	228	49	64	207	12	14	706	24	13	396	26
Future Volume (veh/h)	32	228	49	64	207	12	14	706	24	13	396	26
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.85	1.00	1.00	0.88	1.00	1.00	0.85
Adj Sat Flow, veh/h/ln	1776	1776	1900	1776	1776	1900	1712	1712	1712	1712	1712	1900
Adj Flow Rate, veh/h	35	248	53	70	225	13	15	767	26	14	430	28
Adj No. of Lanes	1	1	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	7	7	7	7	7	7	11	11	11	11	11	11
Cap, veh/h	200	319	68	145	363	21	612	1095	814	472	865	56
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1084	1242	265	1024	1413	82	854	1712	1273	626	1351	88
Grp Volume(v), veh/h	35	0	301	70	0	238	15	767	26	14	0	458
Grp Sat Flow(s),veh/h/ln	1084	0	1507	1024	0	1495	854	1712	1273	626	0	1439
Q Serve(g_s), s	3.1	0.0	19.7	7.4	0.0	14.7	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	17.8	0.0	19.7	27.2	0.0	14.7	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.18	1.00		0.05	1.00		1.00	1.00		0.06
Lane Grp Cap(c), veh/h	200	0	387	145	0	384	612	1095	814	472	0	921
V/C Ratio(X)	0.18	0.00	0.78	0.48	0.00	0.62	0.02	0.70	0.03	0.03	0.00	0.50
Avail Cap(c_a), veh/h	200	0	387	145	0	384	612	1095	814	472	0	921
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.2	0.0	33.5	45.6	0.0	31.8	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.0	14.3	11.1	0.0	7.3	0.1	3.7	0.1	0.1	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	0.0	14.8	4.6	0.0	11.1	0.0	2.0	0.0	0.0	0.0	0.9
LnGrp Delay(d),s/veh	41.1	0.0	47.7	56.7	0.0	39.1	0.1	3.7	0.1	0.1	0.0	1.9
LnGrp LOS	D		D	E		D	A	A	A	A		A
Approach Vol, veh/h		336			308			808			472	
Approach Delay, s/veh		47.0			43.1			3.6			1.9	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		76.0		34.2		76.0		34.2				
Change Period (Y+Rc), s		5.5		5.9		5.5		* 5.9				
Max Green Setting (Gmax), s		70.5		28.1		70.5		* 28				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				17.1								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
21: Main St & Washington St

2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	74	7	3	34	14	1	719	8	42	394	3
Future Volume (vph)	1	74	7	3	34	14	1	719	8	42	394	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			75			50			50		
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		438			437			495			490	
Travel Time (s)		11.9			11.9			13.5			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Parking (#/hr)		5	5		5	5		5	5		3	3
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	24.6	24.6		24.6	24.6		25.3	25.3		25.6	25.6	
Total Split (s)	24.8	24.8		24.8	24.8		85.2	85.2		85.2	85.2	
Total Split (%)	22.5%	22.5%		22.5%	22.5%		77.5%	77.5%		77.5%	77.5%	
Maximum Green (s)	19.2	19.2		19.2	19.2		79.9	79.9		79.6	79.6	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.3	2.3		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		-1.2	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6		5.3	5.3		4.4	5.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: CBD

Lanes, Volumes, Timings
21: Main St & Washington St

2038 2-way
Timing Plan: AM

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 102 (93%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 21: Main St & Washington St





















HCM 2010 Signalized Intersection Summary
21: Main St & Washington St

2038 2-way
Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	74	7	3	34	14	1	719	8	42	394	3
Future Volume (veh/h)	1	74	7	3	34	14	1	719	8	42	394	3
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1541	1541	1710	1541	1541	1710
Adj Flow Rate, veh/h	1	80	8	3	37	15	1	782	9	46	428	3
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	11	11	11	11	11	11
Cap, veh/h	129	116	12	99	87	35	703	1075	12	528	1093	8
Arrive On Green	0.09	0.09	0.09	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1189	1287	129	1151	974	395	788	1330	15	565	1352	9
Grp Volume(v), veh/h	1	0	88	3	0	52	1	0	791	46	0	431
Grp Sat Flow(s),veh/h/ln	1189	0	1416	1151	0	1369	788	0	1345	565	0	1362
Q Serve(g_s), s	0.1	0.0	6.6	0.3	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.0	0.0	6.6	6.9	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.09	1.00		0.29	1.00		0.01	1.00		0.01
Lane Grp Cap(c), veh/h	129	0	127	99	0	123	703	0	1088	528	0	1101
V/C Ratio(X)	0.01	0.00	0.69	0.03	0.00	0.42	0.00	0.00	0.73	0.09	0.00	0.39
Avail Cap(c_a), veh/h	230	0	247	197	0	239	703	0	1088	528	0	1101
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.57	0.00	0.57	0.86	0.00	0.86
Uniform Delay (d), s/veh	49.3	0.0	48.6	51.9	0.0	47.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	6.6	0.1	0.0	2.3	0.0	0.0	2.4	0.3	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	5.1	0.2	0.0	2.8	0.0	0.0	1.3	0.1	0.0	0.5
LnGrp Delay(d),s/veh	49.3	0.0	55.2	52.1	0.0	49.7	0.0	0.0	2.4	0.3	0.0	0.9
LnGrp LOS	D		E	D		D	A		A	A		A
Approach Vol, veh/h		89			55			792				477
Approach Delay, s/veh		55.1			49.8			2.4				0.8
Approach LOS		E			D			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		94.5		15.5		94.5		15.5				
Change Period (Y+Rc), s		* 5.6		5.6		5.6		5.6				
Max Green Setting (Gmax), s		* 80		19.2		79.6		19.2				
Max Q Clear Time (g_c+I1), s		2.0		8.9		2.0		8.6				
Green Ext Time (p_c), s		8.5		0.3		8.5		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			7.1									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
22: Main St & Jefferson Blvd

2038 2-way
Timing Plan: AM

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	1	80	10	13	68	40	1	687	14	47	352	4	
Future Volume (vph)	1	80	10	13	68	40	1	687	14	47	352	4	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		100	0		0	150		0	150		0	
Storage Lanes	0		0	0		0	1		0	1		0	
Taper Length (ft)	25			25			50			50			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		25			25			25			25		
Link Distance (ft)		430			440			470			495		
Travel Time (s)		11.7			12.0			12.8			13.5		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%	
Parking (#/hr)								5	5		3	3	
Shared Lane Traffic (%)													
Number of Detectors	1	1		1	1		1	1		1	1		
Detector Template													
Leading Detector (ft)	50	50		50	50		50	50		50	50		
Trailing Detector (ft)	0	0		0	0		0	0		0	0		
Detector 1 Position(ft)	0	0		0	0		0	0		0	0		
Detector 1 Size(ft)	50	50		50	50		50	50		50	50		
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		8			4			2			6		
Permitted Phases	8			4			2			6			
Detector Phase	8	8		4	4		2	2		6	6		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0		
Minimum Split (s)	25.6	25.6		24.5	24.5		35.5	35.5		35.5	35.5		
Total Split (s)	25.9	25.9		25.9	25.9		84.1	84.1		84.1	84.1		
Total Split (%)	23.5%	23.5%		23.5%	23.5%		76.5%	76.5%		76.5%	76.5%		
Maximum Green (s)	20.3	20.3		20.4	20.4		78.8	78.8		78.8	78.8		
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
All-Red Time (s)	2.6	2.6		2.5	2.5		2.3	2.3		2.3	2.3		
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		-1.0	0.0		
Total Lost Time (s)		5.6			5.5		5.3	5.3		4.3	5.3		
Lead/Lag													
Lead-Lag Optimize?													
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max		
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0		
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0		
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0		

Intersection Summary

Area Type: CBD

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 106 (96%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 22: Main St & Jefferson Blvd



HCM 2010 Signalized Intersection Summary
 22: Main St & Jefferson Blvd

2038 2-way
 Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	1	80	10	13	68	40	1	687	14	47	352	4
Future Volume (veh/h)	1	80	10	13	68	40	1	687	14	47	352	4
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1710	1644	1710	1710	1644	1710	1541	1541	1710	1541	1541	1710
Adj Flow Rate, veh/h	1	87	11	14	74	43	1	747	15	51	383	4
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	11	11	11	11	11	11
Cap, veh/h	34	151	19	47	98	53	718	1048	21	532	1071	11
Arrive On Green	0.11	0.11	0.11	0.12	0.11	0.11	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	4	1429	179	99	929	502	821	1317	26	580	1347	14
Grp Volume(v), veh/h	99	0	0	131	0	0	1	0	762	51	0	387
Grp Sat Flow(s),veh/h/ln	1612	0	0	1530	0	0	821	0	1343	580	0	1361
Q Serve(g_s), s	0.0	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.4	0.0	0.0	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.01		0.11	0.11		0.33	1.00		0.02	1.00		0.01
Lane Grp Cap(c), veh/h	203	0	0	214	0	0	718	0	1069	532	0	1083
V/C Ratio(X)	0.49	0.00	0.00	0.61	0.00	0.00	0.00	0.00	0.71	0.10	0.00	0.36
Avail Cap(c_a), veh/h	330	0	0	333	0	0	718	0	1069	532	0	1083
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.66	0.00	0.66	0.92	0.00	0.92
Uniform Delay (d), s/veh	46.9	0.0	0.0	48.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.8	0.0	0.0	2.8	0.0	0.0	0.0	0.0	2.7	0.3	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.3	0.0	0.0	7.2	0.0	0.0	0.0	0.0	1.4	0.1	0.0	0.5
LnGrp Delay(d),s/veh	48.7	0.0	0.0	50.8	0.0	0.0	0.0	0.0	2.7	0.3	0.0	0.9
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		99			131			763				438
Approach Delay, s/veh		48.7			50.8			2.7				0.8
Approach LOS		D			D			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		92.8		17.2		92.8		17.2				
Change Period (Y+Rc), s		* 5.3		* 5.6		* 5.3		5.6				
Max Green Setting (Gmax), s		* 79		* 20		* 79		20.3				
Max Q Clear Time (g_c+I1), s		2.0		11.0		2.0		8.4				
Green Ext Time (p_c), s		7.8		0.6		7.8		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				9.7								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
23: Main St & Wayne St

2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	39	10	15	55	10	11	693	9	7	350	5
Future Volume (vph)	4	39	10	15	55	10	11	693	9	7	350	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		435			445			495			470	
Travel Time (s)		11.9			12.1			13.5			12.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Parking (#/hr)		5	5		5	5		5	5		5	5
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	24.6	24.6		24.5	24.5		27.0	27.0		27.0	27.0	
Total Split (s)	24.9	24.9		24.9	24.9		85.1	85.1		85.1	85.1	
Total Split (%)	22.6%	22.6%		22.6%	22.6%		77.4%	77.4%		77.4%	77.4%	
Maximum Green (s)	19.3	19.3		19.4	19.4		79.5	79.5		79.5	79.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.5	2.5		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		-1.0	0.0	
Total Lost Time (s)	5.6	5.6		5.5	5.5		5.6	5.6		4.6	5.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2		0.2	0.2	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: CBD

Lanes, Volumes, Timings
 23: Main St & Wayne St

2038 2-way
 Timing Plan: AM

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 7 (6%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 23: Main St & Wayne St



HCM 2010 Signalized Intersection Summary
 23: Main St & Wayne St

2038 2-way
 Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	39	10	15	55	10	11	693	9	7	350	5
Future Volume (veh/h)	4	39	10	15	55	10	11	693	9	7	350	5
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1541	1541	1710	1541	1541	1710
Adj Flow Rate, veh/h	4	42	11	16	60	11	12	753	10	8	380	5
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	11	11	11	11	11	11
Cap, veh/h	116	99	26	129	106	19	730	1073	14	539	1073	14
Arrive On Green	0.09	0.09	0.09	0.18	0.18	0.18	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1169	1100	288	1188	1183	217	822	1327	18	580	1327	17
Grp Volume(v), veh/h	4	0	53	16	0	71	12	0	763	8	0	385
Grp Sat Flow(s),veh/h/ln	1169	0	1388	1188	0	1400	822	0	1345	580	0	1345
Q Serve(g_s), s	0.4	0.0	4.0	1.4	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	5.5	0.0	4.0	5.3	0.0	5.1	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.21	1.00		0.15	1.00		0.01	1.00		0.01
Lane Grp Cap(c), veh/h	116	0	125	129	0	126	730	0	1087	539	0	1087
V/C Ratio(X)	0.03	0.00	0.43	0.12	0.00	0.56	0.02	0.00	0.70	0.01	0.00	0.35
Avail Cap(c_a), veh/h	216	0	244	232	0	247	730	0	1087	539	0	1087
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.48	0.00	0.48	0.93	0.00	0.93
Uniform Delay (d), s/veh	50.5	0.0	47.4	45.1	0.0	43.2	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.9	0.2	0.0	1.5	0.0	0.0	1.9	0.0	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.0	2.8	0.8	0.0	3.6	0.0	0.0	1.0	0.0	0.0	0.5
LnGrp Delay(d),s/veh	50.5	0.0	48.2	45.2	0.0	44.6	0.0	0.0	1.9	0.0	0.0	0.8
LnGrp LOS	D		D	D		D	A		A	A		A
Approach Vol, veh/h		57			87			775				393
Approach Delay, s/veh		48.4			44.7			1.8				0.8
Approach LOS		D			D			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		94.5		15.5		94.5		15.5				
Change Period (Y+Rc), s		5.6		* 5.6		5.6		5.6				
Max Green Setting (Gmax), s		79.5		* 19		79.5		19.3				
Max Q Clear Time (g_c+I1), s		2.0		7.3		2.0		7.5				
Green Ext Time (p_c), s		0.4		0.0		0.4		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			6.4									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
24: Main St & Western Ave

2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	261	114	8	120	5	47	717	3	0	319	30
Future Volume (vph)	1	261	114	8	120	5	47	717	3	0	319	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	200		0	250		0	150		100
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	25			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		435			425			515			495	
Travel Time (s)		11.9			11.6			14.0			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)					5	5					0	0
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		8			4		5	2			6	
Permitted Phases	8		8	4			2			6		6
Minimum Split (s)	24.9	24.9	24.9	25.1	25.1		14.3	28.0		28.0	28.0	28.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0		14.3	77.0		62.7	62.7	62.7
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%		13.0%	70.0%		57.0%	57.0%	57.0%
Maximum Green (s)	27.1	27.1	27.1	26.9	26.9		8.0	71.4		56.8	56.8	56.8
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.9	2.9	2.9	3.1	3.1		3.3	2.6		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0	0.0	-1.0	0.0		0.0	0.0		-1.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.1	6.1		6.3	5.6		4.9	5.9	5.9
Lead/Lag							Lag			Lead	Lead	Lead
Lead-Lag Optimize?							Yes			Yes	Yes	Yes
Walk Time (s)	5.0	5.0	5.0	5.0	5.0			5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	14.0	14.0			14.0		16.0	16.0	16.0
Pedestrian Calls (#/hr)	0	0	0	0	0			0		0	0	0

Intersection Summary

Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 20 (18%), Referenced to phase 2:NBTL, Start of Green
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 24: Main St & Western Ave



HCM 2010 Signalized Intersection Summary
 24: Main St & Western Ave

2038 2-way
 Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	261	114	8	120	5	47	717	3	0	319	30
Future Volume (veh/h)	1	261	114	8	120	5	47	717	3	0	319	30
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1613	1613	1613	1613	1613	1710	1541	1541	1710	1541	1541	1541
Adj Flow Rate, veh/h	1	284	124	9	130	5	51	779	3	0	347	33
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	11	11	11	11	11	11
Cap, veh/h	263	394	335	161	330	13	588	987	4	65	789	604
Arrive On Green	0.49	0.49	0.49	0.51	0.49	0.49	0.16	1.00	1.00	0.00	1.00	1.00
Sat Flow, veh/h	1082	1613	1371	843	1350	52	1467	1534	6	569	1541	1179
Grp Volume(v), veh/h	1	284	124	9	0	135	51	0	782	0	347	33
Grp Sat Flow(s),veh/h/ln	1082	1613	1371	843	0	1402	1467	0	1539	569	1541	1179
Q Serve(g_s), s	0.1	15.4	6.3	0.9	0.0	6.8	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.8	15.4	6.3	16.3	0.0	6.8	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.04	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	263	394	335	161	0	343	588	0	991	65	789	604
V/C Ratio(X)	0.00	0.72	0.37	0.06	0.00	0.39	0.09	0.00	0.79	0.00	0.44	0.05
Avail Cap(c_a), veh/h	263	394	335	161	0	343	588	0	991	65	789	604
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	25.4	23.0	30.5	0.0	23.2	9.8	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	10.8	3.1	0.7	0.0	3.4	0.3	0.0	6.4	0.0	1.8	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	12.5	4.7	0.4	0.0	5.2	1.3	0.0	3.2	0.0	0.7	0.1
LnGrp Delay(d),s/veh	25.3	36.2	26.1	31.2	0.0	26.5	10.1	0.0	6.4	0.0	1.8	0.2
LnGrp LOS	C	D	C	C		C	B		A		A	A
Approach Vol, veh/h		409			144			833			380	
Approach Delay, s/veh		33.1			26.8			6.6			1.6	
Approach LOS		C			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		77.7		33.2	15.0	62.7		33.2				
Change Period (Y+Rc), s		* 6.3		6.1	6.3	* 5.9		* 6.1				
Max Green Setting (Gmax), s		* 71		26.9	8.0	* 57		* 27				
Max Q Clear Time (g_c+I1), s		0.0		0.0	0.0	0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				13.3								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
25: Main St & Monroe St

2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	434	0	112	358	193	0	585	97	109	338	0
Future Volume (vph)	1	434	0	112	358	193	0	585	97	109	338	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	200		0	200		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			440			490			515	
Travel Time (s)		12.0			12.0			13.4			14.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)			3									0
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	32.9	32.9		32.7	32.7		31.9	31.9		31.7	31.7	
Total Split (s)	49.0	49.0		49.0	49.0		61.0	61.0		61.0	61.0	
Total Split (%)	44.5%	44.5%		44.5%	44.5%		55.5%	55.5%		55.5%	55.5%	
Maximum Green (s)	43.1	43.1		43.3	43.3		55.1	55.1		55.3	55.3	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.9	2.9		2.7	2.7		2.9	2.9		2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		-1.0	0.0	
Total Lost Time (s)	5.9	5.9		5.7	5.7		5.9	5.9		4.7	5.7	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2		0.2	0.2	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	20.0	20.0		20.0	20.0		19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

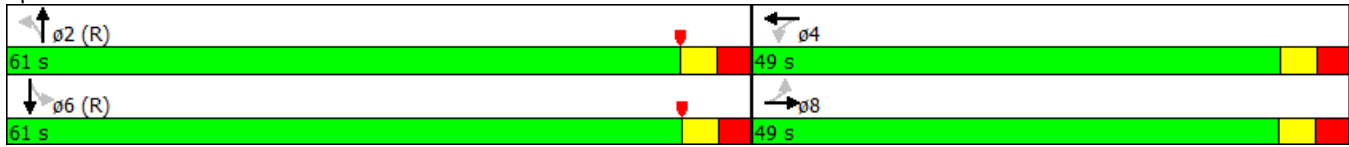
Area Type: Other

Lanes, Volumes, Timings
 25: Main St & Monroe St

2038 2-way
 Timing Plan: AM

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 80 (73%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 25: Main St & Monroe St





















HCM 2010 Signalized Intersection Summary
 25: Main St & Monroe St

2038 2-way
 Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	434	0	112	358	193	0	585	97	109	338	0
Future Volume (veh/h)	1	434	0	112	358	193	0	585	97	109	338	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1712	1712	1900	1712	1712	1900
Adj Flow Rate, veh/h	1	472	0	122	389	210	0	636	105	118	367	0
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	11	11	11	11	11	11
Cap, veh/h	170	624	0	186	432	233	65	893	147	478	959	0
Arrive On Green	0.39	0.39	0.00	0.79	0.79	0.79	0.00	1.00	1.00	0.63	0.62	0.00
Sat Flow, veh/h	785	1586	0	883	1096	592	929	1433	237	657	1541	0
Grp Volume(v), veh/h	1	472	0	122	0	599	0	0	741	118	367	0
Grp Sat Flow(s),veh/h/ln	785	1586	0	883	0	1688	929	0	1670	657	1541	0
Q Serve(g_s), s	0.1	28.3	0.0	15.0	0.0	28.6	0.0	0.0	0.0	8.9	13.0	0.0
Cycle Q Clear(g_c), s	28.7	28.3	0.0	43.3	0.0	28.6	0.0	0.0	0.0	9.4	13.0	0.0
Prop In Lane	1.00		0.00	1.00		0.35	1.00		0.14	1.00		0.00
Lane Grp Cap(c), veh/h	170	624	0	186	0	664	65	0	1040	478	959	0
V/C Ratio(X)	0.01	0.76	0.00	0.65	0.00	0.90	0.00	0.00	0.71	0.25	0.38	0.00
Avail Cap(c_a), veh/h	170	624	0	186	0	664	65	0	1040	478	959	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.32	0.00	0.32	0.00	0.00	0.87	0.90	0.90	0.00
Uniform Delay (d), s/veh	41.3	28.8	0.0	25.9	0.0	10.1	0.0	0.0	0.0	9.3	10.3	0.0
Incr Delay (d2), s/veh	0.0	4.7	0.0	2.1	0.0	5.7	0.0	0.0	3.6	1.1	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	19.1	0.0	5.6	0.0	17.1	0.0	0.0	1.9	3.2	9.5	0.0
LnGrp Delay(d),s/veh	41.3	33.5	0.0	28.0	0.0	15.8	0.0	0.0	3.6	10.4	11.3	0.0
LnGrp LOS	D	C		C		B			A	B	B	
Approach Vol, veh/h		473			721			741			485	
Approach Delay, s/veh		33.5			17.9			3.6			11.1	
Approach LOS		C			B			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		74.8		49.2		74.8		49.2				
Change Period (Y+Rc), s		5.9		* 5.9		* 5.9		5.9				
Max Green Setting (Gmax), s		55.1		* 43		* 55		43.1				
Max Q Clear Time (g_c+I1), s		2.0		45.3		15.0		30.7				
Green Ext Time (p_c), s		0.6		0.0		0.6		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				15.2								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
26: Main St & South St

2038 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	2	0	4	8	4	0	682	9	15	427	0
Future Volume (vph)	2	2	0	4	8	4	0	682	9	15	427	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		155	200		0
Storage Lanes	0		0	0		0	0		1	1		0
Taper Length (ft)	25			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		435			445			485			490	
Travel Time (s)		11.9			12.1			13.2			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Parking (#/hr)											3	3
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1			1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50			50	50	50	50	
Trailing Detector (ft)	0	0		0	0			0	0	0	0	
Detector 1 Position(ft)	0	0		0	0			0	0	0	0	
Detector 1 Size(ft)	50	50		50	50			50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		Perm	NA			NA	Perm	Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4					2	6		
Detector Phase	8	8		4	4			2	2	6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0			20.0	20.0	20.0	20.0	
Minimum Split (s)	29.9	29.9		31.9	31.9			25.6	25.6	26.5	26.5	
Total Split (s)	32.0	32.0		32.0	32.0			78.0	78.0	78.0	78.0	
Total Split (%)	29.1%	29.1%		29.1%	29.1%			70.9%	70.9%	70.9%	70.9%	
Maximum Green (s)	26.1	26.1		26.1	26.1			72.4	72.4	72.5	72.5	
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	
All-Red Time (s)	2.9	2.9		2.9	2.9			2.6	2.6	2.5	2.5	
Lost Time Adjust (s)		0.0			0.0			0.0	0.0	-1.0	0.0	
Total Lost Time (s)		5.9			5.9			5.6	5.6	4.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None			C-Max	C-Max	C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	17.0	17.0		19.0	19.0			13.0	13.0	14.0	14.0	
Pedestrian Calls (#/hr)	0	0		0	0			0	0	0	0	

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings
26: Main St & South St

2038 2-way
Timing Plan: AM













Cycle Length: 110
Actuated Cycle Length: 110
Offset: 103 (94%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 26: Main St & South St






















HCM 2010 Signalized Intersection Summary
 26: Main St & South St

2038 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↑	↗	↘	↕	
Traffic Volume (veh/h)	2	2	0	4	8	4	0	682	9	15	427	0
Future Volume (veh/h)	2	2	0	4	8	4	0	682	9	15	427	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	0	1712	1712	1712	1712	1900
Adj Flow Rate, veh/h	2	2	0	4	9	4	0	741	10	16	464	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	0	11	11	11	11	11
Cap, veh/h	71	49	0	52	44	17	0	1459	1240	626	1291	0
Arrive On Green	0.04	0.04	0.00	0.05	0.04	0.04	0.00	1.00	1.00	1.00	1.00	0.00
Sat Flow, veh/h	516	1138	0	266	1012	393	0	1712	1455	651	1515	0
Grp Volume(v), veh/h	4	0	0	17	0	0	0	741	10	16	464	0
Grp Sat Flow(s),veh/h/ln	1654	0	0	1672	0	0	0	1712	1455	651	1515	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.50		0.00	0.24		0.24	0.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	120	0	0	128	0	0	0	1459	1240	626	1291	0
V/C Ratio(X)	0.03	0.00	0.00	0.13	0.00	0.00	0.00	0.51	0.01	0.03	0.36	0.00
Avail Cap(c_a), veh/h	424	0	0	445	0	0	0	1459	1240	626	1291	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.85	0.85	0.86	0.86	0.00
Uniform Delay (d), s/veh	50.5	0.0	0.0	50.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.5	0.0	0.0	0.0	1.1	0.0	0.1	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.0	0.0	0.9	0.0	0.0	0.0	0.8	0.0	0.0	0.4	0.0
LnGrp Delay(d),s/veh	50.6	0.0	0.0	51.2	0.0	0.0	0.0	1.1	0.0	0.1	0.7	0.0
LnGrp LOS	D			D				A	A	A	A	
Approach Vol, veh/h		4			17			751			480	
Approach Delay, s/veh		50.6			51.2			1.1			0.7	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		99.4		10.6		99.4		10.6				
Change Period (Y+Rc), s		5.6		5.9		* 5.6		5.9				
Max Green Setting (Gmax), s		72.4		26.1		* 73		26.1				
Max Q Clear Time (g_c+I1), s		2.0		3.0		2.0		2.2				
Green Ext Time (p_c), s		7.6		0.0		7.6		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				1.7								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
27: Main St & Bronson St

2038 2-way
Timing Plan: AM

													
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	2	4	0	2	5	6	1	700	7	4	446	0	
Future Volume (vph)	2	4	0	2	5	6	1	700	7	4	446	0	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Storage Length (ft)	0		0	0		0	100		0	100		0	
Storage Lanes	0		0	0		0	1		0	1		0	
Taper Length (ft)	25			25			50			50			
Right Turn on Red			Yes			Yes			Yes			Yes	
Link Speed (mph)		25			25			25			25		
Link Distance (ft)		440			453			810			485		
Travel Time (s)		12.0			12.4			22.1			13.2		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%	
Shared Lane Traffic (%)													
Number of Detectors	1	1		1	1		1	1		1	1		
Detector Template	Left	Thru			Thru		Left						
Leading Detector (ft)	20	50		50	50		50	50		50	50		
Trailing Detector (ft)	0	0		0	0		0	0		0	0		
Detector 1 Position(ft)	0	0		0	0		0	0		0	0		
Detector 1 Size(ft)	20	50		50	50		50	50		50	50		
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		
Detector 1 Channel													
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0		
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA		
Protected Phases		8			4			2			6		
Permitted Phases	8			4			2			6			
Detector Phase	8	8		4	4		2	2		6	6		
Switch Phase													
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0		
Minimum Split (s)	33.7	33.7		28.9	28.9		24.9	24.9		25.3	25.3		
Total Split (s)	33.7	33.7		33.7	33.7		76.3	76.3		76.3	76.3		
Total Split (%)	30.6%	30.6%		30.6%	30.6%		69.4%	69.4%		69.4%	69.4%		
Maximum Green (s)	28.0	28.0		27.8	27.8		71.4	71.4		71.0	71.0		
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
All-Red Time (s)	2.7	2.7		2.9	2.9		1.9	1.9		2.3	2.3		
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		-0.6	0.0		
Total Lost Time (s)		5.7			5.9		4.9	4.9		4.7	5.3		
Lead/Lag													
Lead-Lag Optimize?													
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max		
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0		
Flash Dont Walk (s)	21.0	21.0		16.0	16.0		11.0	11.0		11.0	11.0		
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0		
Intersection Summary													
Area Type:	Other												
Cycle Length:	110												

Lanes, Volumes, Timings
27: Main St & Bronson St

2038 2-way
Timing Plan: AM

Actuated Cycle Length: 110
Offset: 91 (83%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 27: Main St & Bronson St



HCM 2010 Signalized Intersection Summary
 27: Main St & Bronson St

2038 2-way
 Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	2	4	0	2	5	6	1	700	7	4	446	0
Future Volume (veh/h)	2	4	0	2	5	6	1	700	7	4	446	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1712	1712	1900	1712	1712	1900
Adj Flow Rate, veh/h	2	4	0	2	5	7	1	761	8	4	485	0
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	11	11	11	11	11	11
Cap, veh/h	57	58	0	44	28	34	779	1448	15	617	1466	0
Arrive On Green	0.04	0.04	0.00	0.05	0.04	0.04	1.00	1.00	1.00	1.00	1.00	0.00
Sat Flow, veh/h	315	1407	0	150	667	817	833	1691	18	640	1712	0
Grp Volume(v), veh/h	6	0	0	14	0	0	1	0	769	4	485	0
Grp Sat Flow(s),veh/h/ln	1722	0	0	1634	0	0	833	0	1709	640	1712	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.33		0.00	0.14		0.50	1.00		0.01	1.00		0.00
Lane Grp Cap(c), veh/h	115	0	0	120	0	0	779	0	1464	617	1466	0
V/C Ratio(X)	0.05	0.00	0.00	0.12	0.00	0.00	0.00	0.00	0.53	0.01	0.33	0.00
Avail Cap(c_a), veh/h	465	0	0	460	0	0	779	0	1464	617	1466	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.99	0.00	0.00	1.00	0.00	1.00	0.95	0.95	0.00
Uniform Delay (d), s/veh	50.7	0.0	0.0	50.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.4	0.0	0.0	0.0	0.0	1.4	0.0	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.0	0.0	0.8	0.0	0.0	0.0	0.0	1.0	0.0	0.4	0.0
LnGrp Delay(d),s/veh	50.9	0.0	0.0	51.3	0.0	0.0	0.0	0.0	1.4	0.0	0.6	0.0
LnGrp LOS	D			D			A		A	A	A	
Approach Vol, veh/h		6			14			770			489	
Approach Delay, s/veh		50.9			51.3			1.4			0.6	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		99.5		10.5		99.5		10.5				
Change Period (Y+Rc), s		* 5.3		5.9		* 5.3		* 5.9				
Max Green Setting (Gmax), s		* 71		27.8		* 71		* 28				
Max Q Clear Time (g_c+I1), s		2.0		2.9		2.0		2.3				
Green Ext Time (p_c), s		7.9		0.0		7.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				1.8								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
28: Main St & Sample St

2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	660	58	100	438	27	1	648	92	45	272	117
Future Volume (vph)	38	660	58	100	438	27	1	648	92	45	272	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	100		385	100		225
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			75			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		437			457			1885			325	
Travel Time (s)		11.9			12.5			51.4			8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	15%	15%	15%	15%	15%	15%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	50
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	50
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8		7	4			2			6	
Permitted Phases	8			4			2			6		6
Detector Phase	8	8		7	4		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	20.0
Minimum Split (s)	28.9	28.9		13.9	34.2		30.0	30.0		35.9	35.9	35.9
Total Split (s)	45.0	45.0		17.4	62.4		47.6	47.6		47.6	47.6	47.6
Total Split (%)	40.9%	40.9%		15.8%	56.7%		43.3%	43.3%		43.3%	43.3%	43.3%
Maximum Green (s)	39.1	39.1		11.5	56.2		41.6	41.6		41.7	41.7	41.7
Yellow Time (s)	3.2	3.2		3.0	3.2		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.7	2.7		2.9	3.0		3.0	3.0		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9		5.9	6.2		6.0	6.0		5.9	5.9	5.9
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		3.0	2.5		0.2	0.2		0.2	0.2	0.2
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	16.0	16.0			21.0		17.0	17.0		23.0	23.0	23.0
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	0

Intersection Summary

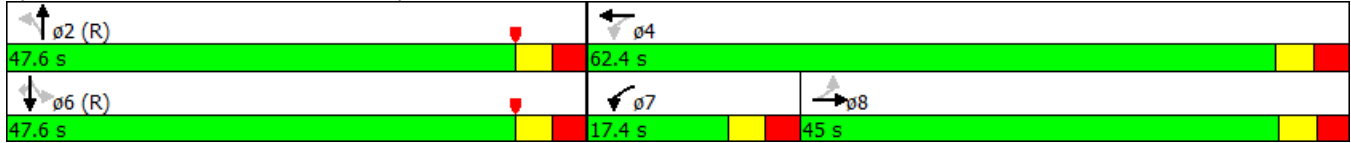
Area Type: Other
Cycle Length: 110

Lanes, Volumes, Timings
 28: Main St & Sample St

2038 2-way
 Timing Plan: AM

Actuated Cycle Length: 110
 Offset: 93 (85%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 28: Main St & Sample St





















HCM 2010 Signalized Intersection Summary
28: Main St & Sample St

2038 2-way
Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	660	58	100	438	27	1	648	92	45	272	117
Future Volume (veh/h)	38	660	58	100	438	27	1	648	92	45	272	117
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1652	1652	1900	1652	1652	1900	1712	1712	1900	1712	1712	1712
Adj Flow Rate, veh/h	41	717	63	109	476	29	1	704	100	49	296	127
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	15	15	15	15	15	15	11	11	11	11	11	11
Cap, veh/h	282	801	70	210	1197	73	494	1404	199	247	840	714
Arrive On Green	0.55	0.55	0.55	0.07	0.40	0.40	0.33	0.33	0.33	0.98	0.98	0.98
Sat Flow, veh/h	790	2920	256	1573	3007	183	882	2860	406	620	1712	1455
Grp Volume(v), veh/h	41	385	395	109	248	257	1	400	404	49	296	127
Grp Sat Flow(s),veh/h/ln	790	1570	1607	1573	1570	1620	882	1626	1640	620	1712	1455
Q Serve(g_s), s	2.9	23.9	24.0	5.2	12.4	12.5	0.1	21.7	21.8	4.3	0.5	0.2
Cycle Q Clear(g_c), s	2.9	23.9	24.0	5.2	12.4	12.5	0.6	21.7	21.8	26.1	0.5	0.2
Prop In Lane	1.00		0.16	1.00		0.11	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	282	431	441	210	625	645	494	798	805	247	840	714
V/C Ratio(X)	0.15	0.89	0.90	0.52	0.40	0.40	0.00	0.50	0.50	0.20	0.35	0.18
Avail Cap(c_a), veh/h	346	558	571	265	802	828	494	798	805	247	840	714
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00
Upstream Filter(l)	0.88	0.88	0.88	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.6	23.4	23.4	27.7	23.7	23.7	19.2	26.1	26.1	6.1	0.5	0.5
Incr Delay (d2), s/veh	0.2	11.9	11.8	1.7	0.3	0.3	0.0	2.2	2.2	1.8	1.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	16.7	17.0	4.2	9.0	9.3	0.0	15.5	15.6	1.5	0.8	0.3
LnGrp Delay(d),s/veh	18.8	35.3	35.2	29.5	23.9	23.9	19.2	28.3	28.3	7.9	1.7	1.1
LnGrp LOS	B	D	D	C	C	C	B	C	C	A	A	A
Approach Vol, veh/h		821			614			805			472	
Approach Delay, s/veh		34.4			24.9			28.3			2.2	
Approach LOS		C			C			C			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		60.0		50.0		60.0	13.6	36.4				
Change Period (Y+Rc), s		6.0		* 6.2		* 6	5.9	* 6.2				
Max Green Setting (Gmax), s		41.6		* 56		* 42	11.5	* 39				
Max Q Clear Time (g_c+I1), s		23.8		14.5		28.1	7.2	26.0				
Green Ext Time (p_c), s		0.5		5.4		0.5	0.1	4.2				
Intersection Summary												
HCM 2010 Ctrl Delay				24.8								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
29: Main St & Broadway St

2038 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	7	7	7	11	36	0	724	21	9	387	0
Future Volume (vph)	0	7	7	7	11	36	0	724	21	9	387	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		461			451			775			1885	
Travel Time (s)		12.6			12.3			21.1			51.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
30: Main St & Indiana Ave

2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	270	76	6	117	24	199	701	9	10	332	59
Future Volume (vph)	19	270	76	6	117	24	199	701	9	10	332	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		0	250		0	250		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			200			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		463			445			1320			775	
Travel Time (s)		12.6			12.1			36.0			21.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	12%	12%	12%	12%	12%	12%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	28.2	28.2		31.5	31.5		25.2	25.2		25.1	25.1	
Total Split (s)	40.0	40.0		40.0	40.0		70.0	70.0		70.0	70.0	
Total Split (%)	36.4%	36.4%		36.4%	36.4%		63.6%	63.6%		63.6%	63.6%	
Maximum Green (s)	34.5	34.5		34.5	34.5		64.8	64.8		65.0	65.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		2.2	2.2		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)	5.5	5.5		5.5	5.5		5.2	5.2		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		19.0	19.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary






















Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 34 (31%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Pretimed

Splits and Phases: 30: Main St & Indiana Ave





















HCM 2010 Signalized Intersection Summary
 30: Main St & Indiana Ave

2038 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	270	76	6	117	24	199	701	9	10	332	59
Future Volume (veh/h)	19	270	76	6	117	24	199	701	9	10	332	59
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1696	1900	1696	1696	1900	1727	1727	1900	1727	1727	1900
Adj Flow Rate, veh/h	21	293	83	7	127	26	216	762	10	11	361	64
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	12	12	12	12	12	12	10	10	10	10	10	10
Cap, veh/h	368	398	113	164	428	88	590	1003	13	445	843	149
Arrive On Green	0.31	0.31	0.31	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1119	1272	360	913	1367	280	889	1701	22	644	1429	253
Grp Volume(v), veh/h	21	0	376	7	0	153	216	0	772	11	0	425
Grp Sat Flow(s),veh/h/ln	1119	0	1633	913	0	1647	889	0	1723	644	0	1683
Q Serve(g_s), s	1.5	0.0	22.6	0.7	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.2	0.0	22.6	23.3	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.22	1.00		0.17	1.00		0.01	1.00		0.15
Lane Grp Cap(c), veh/h	368	0	511	164	0	516	590	0	1016	445	0	992
V/C Ratio(X)	0.06	0.00	0.74	0.04	0.00	0.30	0.37	0.00	0.76	0.02	0.00	0.43
Avail Cap(c_a), veh/h	368	0	511	164	0	516	590	0	1016	445	0	992
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.9	0.0	33.8	27.5	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	9.1	0.5	0.0	1.5	1.8	0.0	5.3	0.1	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.0	17.1	0.3	0.0	4.2	0.5	0.0	2.7	0.0	0.0	0.7
LnGrp Delay(d),s/veh	30.2	0.0	42.9	28.0	0.0	16.5	1.8	0.0	5.3	0.1	0.0	1.4
LnGrp LOS	C		D	C		B	A		A	A		A
Approach Vol, veh/h		397			160			988				436
Approach Delay, s/veh		42.2			17.0			4.5				1.3
Approach LOS		D			B			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		70.2		40.0		70.2		40.0				
Change Period (Y+Rc), s		* 5.2		5.5		* 5.2		5.5				
Max Green Setting (Gmax), s		* 65		34.5		* 65		34.5				
Max Q Clear Time (g_c+I1), s		2.0		24.6		2.0		25.3				
Green Ext Time (p_c), s		2.0		0.6		2.0		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				12.4								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
31: Main St & Calvert St

2038 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	5	41	8	16	42	22	760	6	16	359	20
Future Volume (vph)	47	5	41	8	16	42	22	760	6	16	359	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		520			445			1320			1320	
Travel Time (s)		14.2			12.1			36.0			36.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
32: Main St & Ewing Ave

2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	91	103	35	49	48	53	53	655	15	26	304	85
Future Volume (vph)	91	103	35	49	48	53	53	655	15	26	304	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	125		0	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			100			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		546			440			5282			1320	
Travel Time (s)		14.9			12.0			144.1			36.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	15%	15%	15%	15%	15%	15%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	27.0	27.0		27.0	27.0		28.3	28.3		28.3	28.3	
Total Split (s)	29.0	29.0		29.0	29.0		81.0	81.0		81.0	81.0	
Total Split (%)	26.4%	26.4%		26.4%	26.4%		73.6%	73.6%		73.6%	73.6%	
Maximum Green (s)	23.4	23.4		23.4	23.4		75.5	75.5		75.5	75.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6		5.5	5.5		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		13.0	13.0		11.0	11.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 101 (92%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 32: Main St & Ewing Ave



HCM 2010 Signalized Intersection Summary
32: Main St & Ewing Ave

2038 2-way
Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	103	35	49	48	53	53	655	15	26	304	85
Future Volume (veh/h)	91	103	35	49	48	53	53	655	15	26	304	85
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1652	1652	1900	1652	1652	1900	1727	1727	1900	1727	1727	1900
Adj Flow Rate, veh/h	99	112	38	53	52	58	58	712	16	28	330	92
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	15	15	15	15	15	15	10	10	10	10	10	10
Cap, veh/h	237	251	85	208	152	170	677	1155	26	372	893	249
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.69	0.69	0.69	1.00	1.00	1.00
Sat Flow, veh/h	1134	1181	401	1093	715	797	891	1683	38	671	1301	363
Grp Volume(v), veh/h	99	0	150	53	0	110	58	0	728	28	0	422
Grp Sat Flow(s),veh/h/ln	1134	0	1581	1093	0	1512	891	0	1721	671	0	1663
Q Serve(g_s), s	8.9	0.0	9.1	4.9	0.0	6.8	2.4	0.0	25.3	1.6	0.0	0.0
Cycle Q Clear(g_c), s	15.7	0.0	9.1	13.9	0.0	6.8	2.4	0.0	25.3	26.9	0.0	0.0
Prop In Lane	1.00		0.25	1.00		0.53	1.00		0.02	1.00		0.22
Lane Grp Cap(c), veh/h	237	0	336	208	0	322	677	0	1181	372	0	1142
V/C Ratio(X)	0.42	0.00	0.45	0.26	0.00	0.34	0.09	0.00	0.62	0.08	0.00	0.37
Avail Cap(c_a), veh/h	237	0	336	208	0	322	677	0	1181	372	0	1142
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.4	0.0	37.7	43.7	0.0	36.8	5.8	0.0	9.4	4.5	0.0	0.0
Incr Delay (d2), s/veh	5.4	0.0	4.2	2.9	0.0	2.9	0.2	0.0	2.4	0.4	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.7	0.0	7.8	3.0	0.0	5.6	1.1	0.0	18.6	0.6	0.0	0.5
LnGrp Delay(d),s/veh	48.8	0.0	41.9	46.7	0.0	39.6	6.0	0.0	11.8	4.9	0.0	0.9
LnGrp LOS	D		D	D		D	A		B	A		A
Approach Vol, veh/h		249			163			786			450	
Approach Delay, s/veh		44.6			41.9			11.4			1.2	
Approach LOS		D			D			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		81.0		29.0		81.0		29.0				
Change Period (Y+Rc), s		5.5		5.6		5.5		5.6				
Max Green Setting (Gmax), s		75.5		23.4		75.5		23.4				
Max Q Clear Time (g_c+I1), s		27.3		15.9		28.9		17.7				
Green Ext Time (p_c), s		1.8		0.3		1.8		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay			16.6									
HCM 2010 LOS			B									

Lanes, Volumes, Timings
33: Main St & Chippewa Ave

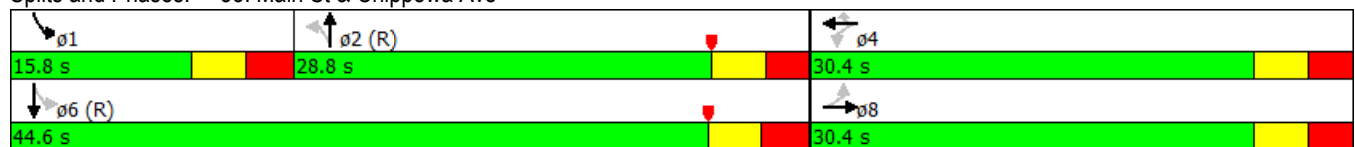
2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	21	10	20	17	420	13	135	60	187	126	45
Future Volume (vph)	19	21	10	20	17	420	13	135	60	187	126	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	50		100	0		0	200		0
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25				25
Link Distance (ft)		604			416			627				5282
Travel Time (s)		16.5			11.3			17.1				144.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	10%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		8			4			2		1	6	
Permitted Phases	8			4		4	2			6		
Minimum Split (s)	25.6	25.6		29.6	29.6	29.6	28.5	28.5		15.7	31.7	
Total Split (s)	30.4	30.4		30.4	30.4	30.4	28.8	28.8		15.8	44.6	
Total Split (%)	40.5%	40.5%		40.5%	40.5%	40.5%	38.4%	38.4%		21.1%	59.5%	
Maximum Green (s)	24.8	24.8		24.8	24.8	24.8	23.3	23.3		10.1	38.9	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.6	2.6	2.6	2.5	2.5		2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6	5.6		5.5		5.7	5.7	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)	13.0	13.0		17.0	17.0	17.0	16.0	16.0			19.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0			0	

Intersection Summary

Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 33: Main St & Chippewa Ave



HCM 2010 Signalized Intersection Summary
33: Main St & Chippewa Ave

2038 2-way
Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	19	21	10	20	17	420	13	135	60	187	126	45
Future Volume (veh/h)	19	21	10	20	17	420	13	135	60	187	126	45
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1727	1900	1727	1900	1727	1727	1900
Adj Flow Rate, veh/h	21	23	11	22	18	457	14	147	65	203	137	49
Adj No. of Lanes	1	1	0	1	1	1	0	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	10	10	10	10	10	10	10
Cap, veh/h	386	386	184	521	602	484	63	345	145	620	632	226
Arrive On Green	0.33	0.33	0.33	0.33	0.33	0.33	0.31	0.31	0.31	0.13	0.52	0.52
Sat Flow, veh/h	898	1169	559	1343	1827	1468	41	1115	467	1645	1216	435
Grp Volume(v), veh/h	21	0	34	22	18	457	226	0	0	203	0	186
Grp Sat Flow(s),veh/h/ln	898	0	1728	1343	1827	1468	1622	0	0	1645	0	1651
Q Serve(g_s), s	1.2	0.0	1.0	0.9	0.5	22.8	0.0	0.0	0.0	5.6	0.0	4.6
Cycle Q Clear(g_c), s	1.7	0.0	1.0	1.9	0.5	22.8	8.3	0.0	0.0	5.6	0.0	4.6
Prop In Lane	1.00		0.32	1.00		1.00	0.06		0.29	1.00		0.26
Lane Grp Cap(c), veh/h	386	0	570	521	602	484	553	0	0	620	0	858
V/C Ratio(X)	0.05	0.00	0.06	0.04	0.03	0.94	0.41	0.00	0.00	0.33	0.00	0.22
Avail Cap(c_a), veh/h	386	0	570	521	602	484	553	0	0	620	0	858
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.6	0.0	17.2	17.9	17.1	24.5	20.8	0.0	0.0	12.0	0.0	9.8
Incr Delay (d2), s/veh	0.3	0.0	0.2	0.2	0.1	29.1	2.2	0.0	0.0	1.4	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	0.0	0.9	0.6	0.5	19.0	7.4	0.0	0.0	4.9	0.0	4.0
LnGrp Delay(d),s/veh	17.9	0.0	17.4	18.0	17.1	53.6	23.0	0.0	0.0	13.4	0.0	10.3
LnGrp LOS	B		B	B	B	D	C			B		B
Approach Vol, veh/h		55			497			226			389	
Approach Delay, s/veh		17.6			50.7			23.0			12.0	
Approach LOS		B			D			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	15.8	29.0		30.4		44.8		30.4				
Change Period (Y+Rc), s	* 5.7	* 5.7		5.6		* 5.7		5.6				
Max Green Setting (Gmax), s	* 10	* 23		24.8		* 39		24.8				
Max Q Clear Time (g_c+I1), s	7.6	10.3		24.8		6.6		3.7				
Green Ext Time (p_c), s	0.1	2.1		0.0		2.9		2.2				
Intersection Summary												
HCM 2010 Ctrl Delay				30.9								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 34: Michigan St N & North Shore Dr

2038 2-way
 Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	91	64	94	53	28	46	802	88	47	1264	3
Future Volume (vph)	2	91	64	94	53	28	46	802	88	47	1264	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	50		0	100		0	75		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			100			100			100		
Right Turn on Red			No			No			No			No
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		476			523			1365			444	
Travel Time (s)		13.0			14.3			37.2			12.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	12%	12%	12%	12%	12%	12%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Minimum Split (s)	23.0	23.0		23.0	23.0		8.0	23.0		8.0	23.0	
Total Split (s)	24.0	24.0		24.0	24.0		11.0	55.0		11.0	55.0	
Total Split (%)	26.7%	26.7%		26.7%	26.7%		12.2%	61.1%		12.2%	61.1%	
Maximum Green (s)	20.0	20.0		20.0	20.0		7.0	51.0		7.0	51.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			12.0			12.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	

Intersection Summary






















Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 70.6 (78%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 34: Michigan St N & North Shore Dr

φ1	φ2 (R)	φ4
11 s	55 s	24 s
φ5	φ6 (R)	φ8
11 s	55 s	24 s

















HCM 2010 Signalized Intersection Summary
 34: Michigan St N & North Shore Dr

2038 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	91	64	94	53	28	46	802	88	47	1264	3
Future Volume (veh/h)	2	91	64	94	53	28	46	802	88	47	1264	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1696	1696	1900	1696	1696	1900
Adj Flow Rate, veh/h	2	99	70	102	58	30	50	872	96	51	1374	3
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	12	12	12	12	12	12
Cap, veh/h	305	217	154	237	248	128	126	1660	183	126	1870	4
Arrive On Green	0.22	0.22	0.22	0.22	0.22	0.22	0.08	0.57	0.57	0.08	0.57	0.57
Sat Flow, veh/h	1255	978	692	1166	1114	576	1616	2929	322	1616	3300	7
Grp Volume(v), veh/h	2	0	169	102	0	88	50	480	488	51	671	706
Grp Sat Flow(s),veh/h/ln	1255	0	1670	1166	0	1691	1616	1612	1640	1616	1612	1695
Q Serve(g_s), s	0.1	0.0	7.9	7.5	0.0	3.8	2.7	16.5	16.5	2.7	27.8	27.8
Cycle Q Clear(g_c), s	4.0	0.0	7.9	15.3	0.0	3.8	2.7	16.5	16.5	2.7	27.8	27.8
Prop In Lane	1.00		0.41	1.00		0.34	1.00		0.20	1.00		0.00
Lane Grp Cap(c), veh/h	305	0	371	237	0	376	126	913	929	126	913	961
V/C Ratio(X)	0.01	0.00	0.46	0.43	0.00	0.23	0.40	0.53	0.53	0.41	0.73	0.73
Avail Cap(c_a), veh/h	305	0	371	237	0	376	126	913	929	126	913	961
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	0.0	30.3	36.9	0.0	28.7	39.5	12.0	12.0	39.5	14.5	14.5
Incr Delay (d2), s/veh	0.0	0.0	4.0	5.6	0.0	1.5	9.2	2.2	2.1	9.5	5.2	5.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	7.2	5.0	0.0	3.5	2.7	12.5	12.6	2.8	19.7	20.5
LnGrp Delay(d),s/veh	30.4	0.0	34.3	42.5	0.0	30.2	48.7	14.2	14.2	49.0	19.7	19.5
LnGrp LOS	C		C	D		C	D	B	B	D	B	B
Approach Vol, veh/h		171			190			1018			1428	
Approach Delay, s/veh		34.2			36.8			15.9			20.6	
Approach LOS		C			D			B			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	55.0		24.0	11.0	55.0		24.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	51.0		20.0	7.0	51.0		20.0				
Max Q Clear Time (g_c+I1), s	4.7	18.5		9.9	4.7	29.8		17.3				
Green Ext Time (p_c), s	0.0	23.1		1.4	0.0	16.6		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				20.8								
HCM 2010 LOS				C								

Lanes, Volumes, Timings
35: Michigan St N & Bartlett St

2038 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	199	34	94	10	17	7	135	710	27	23	924	333
Future Volume (vph)	199	34	94	10	17	7	135	710	27	23	924	333
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		472			392			645			1365	
Travel Time (s)		12.9			10.7			17.6			37.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	12%	12%	12%	12%	12%	12%
Parking (#/hr)		3	3		3	3						
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary

Area Type: Other
Control Type: Roundabout

Lanes, Volumes, Timings
36: Michigan St N & Navarre St

2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	0	18	19	1	24	64	798	65	27	913	87
Future Volume (vph)	51	0	18	19	1	24	64	798	65	27	913	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	125		0	125		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		230			391			500			645	
Travel Time (s)		6.3			10.7			13.6			17.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	12%	12%	12%	12%	12%	12%
Parking (#/hr)				5	5	5						
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	50	50		20	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		20	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		8.0	30.0		4.0	30.0	
Minimum Split (s)	29.7	29.7		29.7	29.7		15.0	35.5		9.2	35.5	
Total Split (s)	29.8	29.8		29.8	29.8		15.0	50.9		9.3	45.2	
Total Split (%)	33.1%	33.1%		33.1%	33.1%		16.7%	56.6%		10.3%	50.2%	
Maximum Green (s)	24.1	24.1		24.1	24.1		9.7	45.6		4.1	40.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.7	2.7		2.7	2.7		2.3	2.3		2.2	2.2	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	5.7			5.7		5.3	5.3		5.2	5.2	
Lead/Lag							Lead	Lead		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0			11.0			10.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	

Intersection Summary

Area Type: Other

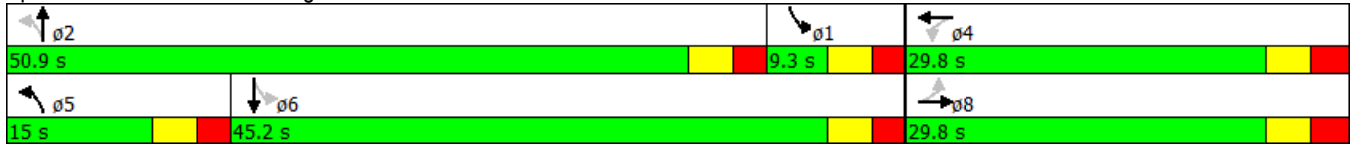
Cycle Length: 90

Actuated Cycle Length: 71.7

Natural Cycle: 85





















Control Type: Semi Act-Uncoord

Splits and Phases: 36: Michigan St N & Navarre St




















HCM 2010 Signalized Intersection Summary
 36: Michigan St N & Navarre St

2038 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	0	18	19	1	24	64	798	65	27	913	87
Future Volume (veh/h)	51	0	18	19	1	24	64	798	65	27	913	87
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1900	1827	1900	1696	1696	1900	1696	1696	1900
Adj Flow Rate, veh/h	55	0	20	21	1	26	70	867	71	29	992	95
Adj No. of Lanes	1	1	0	0	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	12	12	12	12	12	12
Cap, veh/h	285	0	198	125	25	92	359	1923	158	359	1671	160
Arrive On Green	0.13	0.00	0.13	0.13	0.13	0.13	0.08	0.64	0.64	0.01	0.56	0.56
Sat Flow, veh/h	1351	0	1553	415	194	720	1616	3017	247	1616	2973	285
Grp Volume(v), veh/h	55	0	20	48	0	0	70	463	475	29	538	549
Grp Sat Flow(s),veh/h/ln	1351	0	1553	1329	0	0	1616	1612	1653	1616	1612	1646
Q Serve(g_s), s	0.0	0.0	0.8	0.0	0.0	0.0	1.3	10.5	10.5	0.0	15.7	15.7
Cycle Q Clear(g_c), s	2.0	0.0	0.8	2.1	0.0	0.0	1.3	10.5	10.5	0.0	15.7	15.7
Prop In Lane	1.00		1.00	0.44		0.54	1.00		0.15	1.00		0.17
Lane Grp Cap(c), veh/h	285	0	198	242	0	0	359	1027	1054	359	906	925
V/C Ratio(X)	0.19	0.00	0.10	0.20	0.00	0.00	0.20	0.45	0.45	0.08	0.59	0.59
Avail Cap(c_a), veh/h	567	0	523	510	0	0	442	1027	1054	438	906	925
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.1	0.0	27.6	28.1	0.0	0.0	8.8	6.6	6.6	11.0	10.3	10.3
Incr Delay (d2), s/veh	0.3	0.0	0.2	0.4	0.0	0.0	0.3	1.4	1.4	0.1	2.9	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	0.0	0.7	1.6	0.0	0.0	1.1	8.7	8.9	0.6	12.1	12.3
LnGrp Delay(d),s/veh	28.4	0.0	27.8	28.5	0.0	0.0	9.1	8.0	8.0	11.1	13.2	13.1
LnGrp LOS	C		C	C			A	A	A	B	B	B
Approach Vol, veh/h		75			48			1008			1116	
Approach Delay, s/veh		28.3			28.5			8.1			13.1	
Approach LOS		C			C			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	50.9		14.8	11.3	45.4		14.8				
Change Period (Y+Rc), s	* 5.2	* 5.3		* 5.7	* 5.3	* 5.2		* 5.7				
Max Green Setting (Gmax), s	* 4.1	* 46		* 24	* 9.7	* 40		* 24				
Max Q Clear Time (g_c+I1), s	2.0	12.5		4.1	3.3	17.7		4.0				
Green Ext Time (p_c), s	0.0	4.8		0.4	0.1	5.6		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay				11.7								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 37: Michigan St N & Main St/Marion St

2038 2-way
 Timing Plan: AM























												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	425	34	4	7	11	0	20	509	21	6	511	441
Future Volume (vph)	425	34	4	7	11	0	20	509	21	6	511	441
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	50			25			100			25		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		345			379			528			500	
Travel Time (s)		9.4			10.3			14.4			13.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	12%	12%	12%	12%	12%	12%
Parking (#/hr)									5			
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary

Area Type: CBD
 Control Type: Roundabout

Lanes, Volumes, Timings
 38: St. Joseph St/Michigan St N & LaSalle Ave#

2038 2-way
 Timing Plan: AM

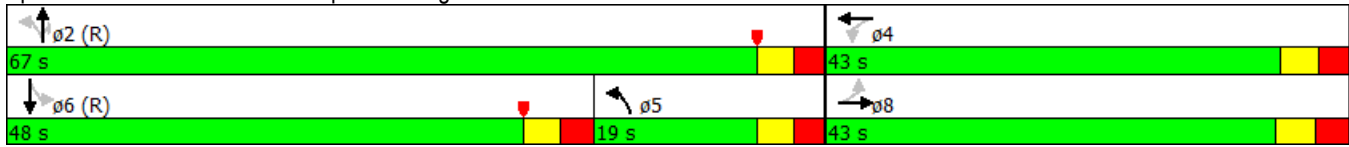
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	750	82	44	509	111	235	412	123	17	445	35
Future Volume (vph)	52	750	82	44	509	111	235	412	123	17	445	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	0		0	350		240	200		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	75			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		437			700			614			492	
Travel Time (s)		11.9			19.1			16.7			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	12%	12%	12%	12%	12%	12%
Parking (#/hr)		0										
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template				Left			Left	Thru	Right			Thru
Leading Detector (ft)	50	50		20	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	50	50		20	50		50	50	50	50	50	50
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA		Perm	NA		pm+pt	NA	Perm	Perm	NA	NA
Protected Phases		8			4		5	2				6
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		4	4		5	2	2	6		6
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		8.0	20.0	20.0	20.0	20.0	20.0
Minimum Split (s)	32.1	32.1		31.2	31.2		13.6	28.6	28.6	28.7	28.7	28.7
Total Split (s)	43.0	43.0		43.0	43.0		19.0	67.0	67.0	48.0	48.0	48.0
Total Split (%)	39.1%	39.1%		39.1%	39.1%		17.3%	60.9%	60.9%	43.6%	43.6%	43.6%
Maximum Green (s)	36.9	36.9		37.2	37.2		13.4	61.4	61.4	42.3	42.3	42.3
Yellow Time (s)	3.2	3.2		3.2	3.2		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.9	2.9		2.6	2.6		2.6	2.6	2.6	2.7	2.7	2.7
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1		5.8	5.8		5.6	5.6	5.6	5.7	5.7	5.7
Lead/Lag							Lag			Lead	Lead	
Lead-Lag Optimize?							Yes			Yes	Yes	
Vehicle Extension (s)	0.2	0.2		0.2	0.2		3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	None	None		None	None		None	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0			7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	19.0	19.0		14.0	14.0			16.0	16.0	16.0	16.0	16.0
Pedestrian Calls (#/hr)	0	0		0	0			0	0	0	0	0

Intersection Summary

Area Type: CBD























Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 88 (80%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 38: St. Joseph St/Michigan St N & LaSalle Ave#



HCM 2010 Signalized Intersection Summary
 38: St. Joseph St/Michigan St N & LaSalle Ave#

2038 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	750	82	44	509	111	235	412	123	17	445	35
Future Volume (veh/h)	52	750	82	44	509	111	235	412	123	17	445	35
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1613	1613	1710	1613	1613	1710	1527	1527	1527	1527	1527	1710
Adj Flow Rate, veh/h	57	815	89	48	553	121	255	448	134	18	484	38
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	12	12	12	12	12	12
Cap, veh/h	164	943	103	100	847	185	402	990	841	327	537	42
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.42	1.00	1.00	0.38	0.38	0.38
Sat Flow, veh/h	659	2788	304	532	2504	546	1454	1527	1298	680	1398	110
Grp Volume(v), veh/h	57	448	456	48	338	336	255	448	134	18	0	522
Grp Sat Flow(s),veh/h/ln	659	1533	1559	532	1533	1517	1454	1527	1298	680	0	1507
Q Serve(g_s), s	8.9	30.1	30.1	7.1	20.6	20.7	6.1	0.0	0.0	1.8	0.0	35.9
Cycle Q Clear(g_c), s	29.6	30.1	30.1	37.2	20.6	20.7	6.1	0.0	0.0	1.8	0.0	35.9
Prop In Lane	1.00		0.20	1.00		0.36	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	164	518	527	100	518	513	402	990	841	327	0	580
V/C Ratio(X)	0.35	0.86	0.86	0.48	0.65	0.66	0.63	0.45	0.16	0.06	0.00	0.90
Avail Cap(c_a), veh/h	164	518	527	100	518	513	402	990	841	327	0	580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.49	1.00	1.00	1.00	0.72	0.72	0.72	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.5	34.0	34.0	52.4	30.9	31.0	25.4	0.0	0.0	21.4	0.0	31.9
Incr Delay (d2), s/veh	0.2	7.3	7.2	1.3	2.3	2.4	2.3	1.1	0.3	0.3	0.0	19.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	18.0	18.3	2.7	14.0	14.0	8.8	0.5	0.1	0.7	0.0	25.1
LnGrp Delay(d),s/veh	43.8	41.3	41.2	53.8	33.2	33.4	27.7	1.1	0.3	21.7	0.0	51.4
LnGrp LOS	D	D	D	D	C	C	C	A	A	C		D
Approach Vol, veh/h		961			722			837			540	
Approach Delay, s/veh		41.4			34.6			9.1			50.4	
Approach LOS		D			C			A			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		77.2		43.3	29.2	48.0		43.3				
Change Period (Y+Rc), s		5.6		* 6.1	* 5.6	5.7		* 6.1				
Max Green Setting (Gmax), s		61.4		* 37	* 13	42.3		* 37				
Max Q Clear Time (g_c+I1), s		2.0		39.2	8.1	37.9		32.1				
Green Ext Time (p_c), s		4.2		0.0	1.9	1.1		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				32.6								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
39: Michigan St# & Colfax Ave

2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	229	34	134	290	0	16	0	54	0	0	0
Future Volume (vph)	0	229	34	134	290	0	16	0	54	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	15	11	11	11	11
Storage Length (ft)	150		0	75		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			75			25			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25				25
Link Distance (ft)		440			340			493				127
Travel Time (s)		12.0			9.3			13.4				3.5
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Parking (#/hr)		5	5									
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA		Perm	NA				
Protected Phases		8			4			2				6
Permitted Phases				4			2			6		
Minimum Split (s)		26.0		26.0	26.0		26.7	26.7		26.5		26.5
Total Split (s)		74.0		74.0	74.0		36.0	36.0		36.0		36.0
Total Split (%)		67.3%		67.3%	67.3%		32.7%	32.7%		32.7%		32.7%
Maximum Green (s)		69.0		69.0	69.0		30.3	30.3		30.5		30.5
Yellow Time (s)		3.0		3.0	3.0		3.0	3.0		3.0		3.0
All-Red Time (s)		2.0		2.0	2.0		2.7	2.7		2.5		2.5
Lost Time Adjust (s)		0.0		0.0	0.0			0.0				0.0
Total Lost Time (s)		5.0		5.0	5.0			5.7				5.5
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0		14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		0		0	0		10	10		0		0

Intersection Summary

Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 98 (89%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 39: Michigan St# & Colfax Ave






















HCM 2010 Signalized Intersection Summary
 39: Michigan St# & Colfax Ave

2038 2-way
 Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	229	34	134	290	0	16	0	54	0	0	0
Future Volume (veh/h)	0	229	34	134	290	0	16	0	54	0	0	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1644	1710	1644	1644	0	1710	1678	1710	1710	1613	1710
Adj Flow Rate, veh/h	0	249	37	146	315	0	17	0	59	0	0	0
Adj No. of Lanes	0	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	4	4	4	4	0	6	6	6	6	6	6
Cap, veh/h	0	767	114	667	1030	0	107	20	302	0	446	0
Arrive On Green	0.00	1.00	1.00	1.00	1.00	0.00	0.29	0.00	0.28	0.00	0.00	0.00
Sat Flow, veh/h	0	1225	182	961	1644	0	243	71	1092	0	1613	0
Grp Volume(v), veh/h	0	0	286	146	315	0	76	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1407	961	1644	0	1407	0	0	0	1613	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.00		0.13	1.00		0.00	0.22		0.78	0.00		0.00
Lane Grp Cap(c), veh/h	0	0	881	667	1030	0	442	0	0	0	446	0
V/C Ratio(X)	0.00	0.00	0.32	0.22	0.31	0.00	0.17	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	0	881	667	1030	0	442	0	0	0	446	0
HCM Platoon Ratio	1.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	30.3	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.0	0.8	0.8	0.0	0.8	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.4	0.3	0.4	0.0	3.3	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	1.0	0.8	0.8	0.0	31.1	0.0	0.0	0.0	0.0	0.0
LnGrp LOS			A	A	A		C					
Approach Vol, veh/h		286			461			76				0
Approach Delay, s/veh		1.0			0.8			31.1				0.0
Approach LOS		A			A			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.2		74.0		36.2		74.0				
Change Period (Y+Rc), s		* 5.7		5.0		* 5.7		5.0				
Max Green Setting (Gmax), s		* 30		69.0		* 31		69.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			3.6									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 40: Michigan St# & Washington St

2038 2-way
 Timing Plan: AM

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	70	13	20	10	21	4	24	16	3	0	44	49
Future Volume (vph)	70	13	20	10	21	4	24	16	3	0	44	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	15	11	11	15	11
Storage Length (ft)	50		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			25			25			25		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		437			422			487			493	
Travel Time (s)		11.9			11.5			13.3			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Parking (#/hr)		5	5		5	5						
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: CBD
 Control Type: Unsignalized

Lanes, Volumes, Timings
 41: Michigan St# & Jefferson Blvd

2038 2-way
 Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	93	12	4	120	46	12	14	12	5	34	22
Future Volume (vph)	17	93	12	4	120	46	12	14	12	5	34	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	15	11
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			425			480			487	
Travel Time (s)		12.0			11.6			13.1			13.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Parking (#/hr)	5	5	5	5	5	5						
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	
Intersection Summary												
Area Type:	CBD											
Control Type:	Unsignalized											

Lanes, Volumes, Timings
42: Michigan St# & Wayne St

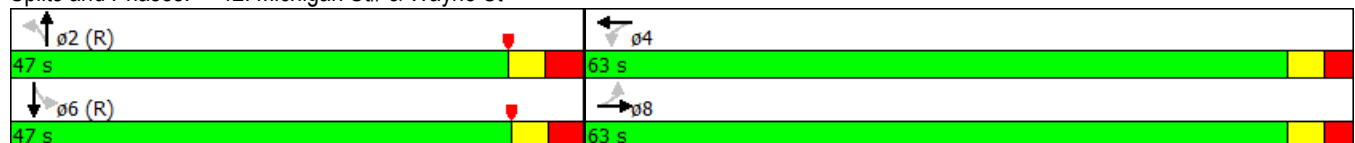
2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	44	4	26	71	18	1	20	9	2	26	8
Future Volume (vph)	7	44	4	26	71	18	1	20	9	2	26	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			50			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		445			405			488			480	
Travel Time (s)		12.1			11.0			13.3			13.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Parking (#/hr)		5	5		3	3						
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	24.5	24.5		24.5	24.5		30.3	30.3		27.0	27.0	
Total Split (s)	63.0	63.0		63.0	63.0		47.0	47.0		47.0	47.0	
Total Split (%)	57.3%	57.3%		57.3%	57.3%		42.7%	42.7%		42.7%	42.7%	
Maximum Green (s)	57.5	57.5		57.5	57.5		40.7	40.7		41.0	41.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		3.3	3.3		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.3	6.3		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0		9.0	9.0		17.0	17.0		14.0	14.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary




















Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 42: Michigan St# & Wayne St



HCM 2010 Signalized Intersection Summary
42: Michigan St# & Wayne St

2038 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	44	4	26	71	18	1	20	9	2	26	8
Future Volume (veh/h)	7	44	4	26	71	18	1	20	9	2	26	8
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1710	1613	1710	1710	1613	1710
Adj Flow Rate, veh/h	8	48	4	28	77	20	1	22	10	2	28	9
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	6	6	6	6	6	6
Cap, veh/h	594	683	57	663	581	151	38	391	172	46	428	132
Arrive On Green	0.52	0.52	0.52	0.17	0.17	0.17	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1141	1310	109	1189	1115	289	12	1052	463	32	1152	355
Grp Volume(v), veh/h	8	0	52	28	0	97	33	0	0	39	0	0
Grp Sat Flow(s),veh/h/ln	1141	0	1419	1189	0	1404	1527	0	0	1539	0	0
Q Serve(g_s), s	0.4	0.0	2.0	2.2	0.0	6.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.9	0.0	2.0	4.2	0.0	6.5	1.5	0.0	0.0	1.8	0.0	0.0
Prop In Lane	1.00		0.08	1.00		0.21	0.03		0.30	0.05		0.23
Lane Grp Cap(c), veh/h	594	0	740	663	0	732	601	0	0	606	0	0
V/C Ratio(X)	0.01	0.00	0.07	0.04	0.00	0.13	0.05	0.00	0.00	0.06	0.00	0.00
Avail Cap(c_a), veh/h	594	0	740	663	0	732	601	0	0	606	0	0
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	16.0	0.0	13.1	24.4	0.0	24.5	22.3	0.0	0.0	22.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.1	0.0	0.4	0.2	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.0	1.5	1.3	0.0	4.7	1.2	0.0	0.0	1.4	0.0	0.0
LnGrp Delay(d),s/veh	16.1	0.0	13.3	24.6	0.0	24.9	22.4	0.0	0.0	22.5	0.0	0.0
LnGrp LOS	B		B	C		C	C			C		
Approach Vol, veh/h		60			125			33			39	
Approach Delay, s/veh		13.7			24.8			22.4			22.5	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		47.3		63.0		47.3		63.0				
Change Period (Y+Rc), s		* 6.3		5.5		* 6.3		5.5				
Max Green Setting (Gmax), s		* 41		57.5		* 41		57.5				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				21.6								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
43: Michigan St & Monroe St

2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	557	31	86	642	152	22	507	128	122	347	0
Future Volume (vph)	33	557	31	86	642	152	22	507	128	122	347	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	250		300	100		0	100		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			830			490			536	
Travel Time (s)		12.0			22.6			13.4			14.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	11%	11%	11%	11%	11%	11%
Parking (#/hr)							0		0			
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	50	50		50	50	50	50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		8		7	4			2			6	
Permitted Phases	8			4		4	2			6		
Detector Phase	8	8		7	4	4	2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		4.0	10.0	10.0	20.0	20.0		20.0	20.0	
Minimum Split (s)	32.2	32.2		9.0	32.2	32.2	32.1	32.1		32.9	32.9	
Total Split (s)	45.0	45.0		9.0	54.0	54.0	56.0	56.0		56.0	56.0	
Total Split (%)	40.9%	40.9%		8.2%	49.1%	49.1%	50.9%	50.9%		50.9%	50.9%	
Maximum Green (s)	39.8	39.8		4.0	47.8	47.8	49.9	49.9		49.1	49.1	
Yellow Time (s)	3.2	3.2		3.0	3.2	3.2	3.2	3.2		3.2	3.2	
All-Red Time (s)	2.0	2.0		2.0	3.0	3.0	2.9	2.9		3.7	3.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	-1.2	0.0		0.0	0.0	
Total Lost Time (s)	5.2	5.2		5.0	6.2	6.2	4.9	6.1		6.9	6.9	
Lead/Lag	Lead	Lead		Lag								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	0.2	0.2		3.0	0.2	0.2	0.2	0.2		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0			7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	20.0	20.0			19.0	19.0	19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	0	0			0	0	0	0		0	0	

Intersection Summary

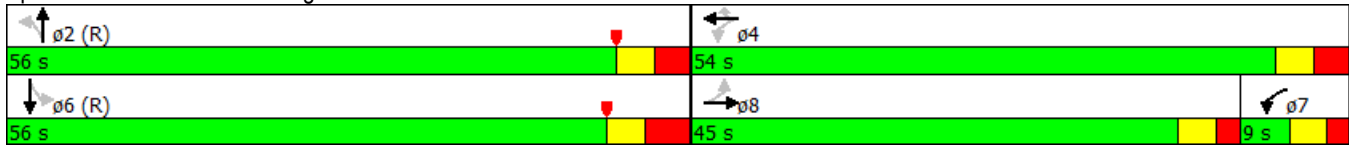
Area Type: Other

Lanes, Volumes, Timings
 43: Michigan St & Monroe St

2038 2-way
 Timing Plan: AM

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 83 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated

Splits and Phases: 43: Michigan St & Monroe St





















HCM 2010 Signalized Intersection Summary
43: Michigan St & Monroe St

2038 2-way
Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	557	31	86	642	152	22	507	128	122	347	0
Future Volume (veh/h)	33	557	31	86	642	152	22	507	128	122	347	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1792	1712	1712	1900	1712	1712	1900
Adj Flow Rate, veh/h	36	605	34	93	698	165	24	551	139	133	377	0
Adj No. of Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	11	11	11	11	11	11
Cap, veh/h	69	608	34	123	794	675	951	1148	290	460	1654	0
Arrive On Green	0.72	0.72	0.72	0.03	0.44	0.44	0.32	0.32	0.32	1.00	1.00	0.00
Sat Flow, veh/h	614	1681	94	1707	1792	1524	920	1188	300	689	1712	0
Grp Volume(v), veh/h	36	0	639	93	698	165	24	0	690	133	377	0
Grp Sat Flow(s),veh/h/ln	614	0	1776	1707	1792	1524	920	0	1488	689	1712	0
Q Serve(g_s), s	0.7	0.0	39.0	1.7	39.1	7.4	2.0	0.0	41.0	10.8	0.0	0.0
Cycle Q Clear(g_c), s	39.8	0.0	39.0	1.7	39.1	7.4	3.7	0.0	41.0	54.2	0.0	0.0
Prop In Lane	1.00		0.05	1.00		1.00	1.00		0.20	1.00		0.00
Lane Grp Cap(c), veh/h	69	0	643	123	794	675	951	0	1438	460	1654	0
V/C Ratio(X)	0.52	0.00	0.99	0.75	0.88	0.24	0.03	0.00	0.48	0.29	0.23	0.00
Avail Cap(c_a), veh/h	69	0	643	128	794	675	951	0	1438	460	1654	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(I)	0.60	0.00	0.60	1.00	1.00	1.00	1.00	0.00	1.00	0.69	0.69	0.00
Uniform Delay (d), s/veh	35.1	0.0	15.1	51.6	28.0	19.1	2.7	0.0	15.2	11.1	0.0	0.0
Incr Delay (d2), s/veh	1.9	0.0	26.0	21.6	10.7	0.1	0.0	0.0	1.2	1.1	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	0.0	28.8	6.3	29.2	5.6	1.0	0.0	24.7	3.9	0.2	0.0
LnGrp Delay(d),s/veh	36.9	0.0	41.1	73.2	38.7	19.2	2.7	0.0	16.4	12.2	0.2	0.0
LnGrp LOS	D		D	E	D	B	A		B	B	A	
Approach Vol, veh/h		675			956			714			510	
Approach Delay, s/veh		40.9			38.7			15.9			3.3	
Approach LOS		D			D			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		114.9		54.9		114.9	9.9	45.0				
Change Period (Y+Rc), s		* 6.9		* 6.2		6.9	* 6.2	* 5.2				
Max Green Setting (Gmax), s		* 50		* 48		49.1	* 4	* 40				
Max Q Clear Time (g_c+I1), s		43.0		41.1		56.2	3.7	41.8				
Green Ext Time (p_c), s		1.8		0.4		0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				27.2								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
44: Michigan St & South St

2038 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	5	3	5	3	11	9	649	11	8	447	1
Future Volume (vph)	3	5	3	5	3	11	9	649	11	8	447	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		445			772			486			490	
Travel Time (s)		12.1			21.1			13.3			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
45: Michigan St & Bronson St

2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	4	1	5	6	9	2	673	11	8	468	0
Future Volume (vph)	3	4	1	5	6	9	2	673	11	8	468	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Right Turn on Red			Yes			No			Yes			Yes
Link Speed (mph)		25			25			25				25
Link Distance (ft)		453			775			780				486
Travel Time (s)		12.4			21.1			21.3				13.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	11%	11%	11%	11%	11%	11%
Parking (#/hr)							0		0			
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	32.9	32.9		31.9	31.9		25.2	25.2		25.3	25.3	
Total Split (s)	33.0	33.0		33.0	33.0		77.0	77.0		77.0	77.0	
Total Split (%)	30.0%	30.0%		30.0%	30.0%		70.0%	70.0%		70.0%	70.0%	
Maximum Green (s)	27.1	27.1		27.1	27.1		71.8	71.8		71.7	71.7	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.2	2.2		2.3	2.3	
Lost Time Adjust (s)		0.0			0.0		-0.6	0.0		0.0	0.0	
Total Lost Time (s)		5.9			5.9		4.6	5.2		5.3	5.3	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	20.0	20.0		19.0	19.0		11.0	11.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 21 (19%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 45: Michigan St & Bronson St



HCM 2010 Signalized Intersection Summary
45: Michigan St & Bronson St

2038 2-way
Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↖	↗		↖	↗	
Traffic Volume (veh/h)	3	4	1	5	6	9	2	673	11	8	468	0
Future Volume (veh/h)	3	4	1	5	6	9	2	673	11	8	468	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1712	1712	1900	1712	1712	1900
Adj Flow Rate, veh/h	3	4	1	5	7	10	2	732	12	9	509	0
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	11	11	11	11	11	11
Cap, veh/h	65	59	11	51	37	40	758	1275	21	618	1444	0
Arrive On Green	0.07	0.05	0.05	0.05	0.05	0.05	1.00	1.00	1.00	1.00	1.00	0.00
Sat Flow, veh/h	371	1085	208	203	686	741	815	1511	25	655	1712	0
Grp Volume(v), veh/h	8	0	0	22	0	0	2	0	744	9	509	0
Grp Sat Flow(s),veh/h/ln	1664	0	0	1630	0	0	815	0	1536	655	1712	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.37		0.12	0.23		0.45	1.00		0.02	1.00		0.00
Lane Grp Cap(c), veh/h	154	0	0	129	0	0	758	0	1296	618	1444	0
V/C Ratio(X)	0.05	0.00	0.00	0.17	0.00	0.00	0.00	0.00	0.57	0.01	0.35	0.00
Avail Cap(c_a), veh/h	459	0	0	433	0	0	758	0	1296	618	1444	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.2	0.0	0.0	49.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.6	0.0	0.0	0.0	0.0	1.9	0.0	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	0.0	1.2	0.0	0.0	0.0	0.0	1.2	0.0	0.5	0.0
LnGrp Delay(d),s/veh	49.3	0.0	0.0	50.4	0.0	0.0	0.0	0.0	1.9	0.0	0.7	0.0
LnGrp LOS	D			D			A		A	A	A	
Approach Vol, veh/h		8			22			746			518	
Approach Delay, s/veh		49.3			50.4			1.8			0.7	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		98.1		11.9		98.1		11.9				
Change Period (Y+Rc), s		* 5.3		5.9		* 5.3		5.9				
Max Green Setting (Gmax), s		* 72		27.1		* 72		27.1				
Max Q Clear Time (g_c+I1), s		2.0		3.4		2.0		2.5				
Green Ext Time (p_c), s		7.9		0.1		7.9		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			2.5									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
46: Michigan St & Sample St

2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	699	53	102	498	43	42	598	194	142	300	25
Future Volume (vph)	45	699	53	102	498	43	42	598	194	142	300	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	350		0	250		540	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	50			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		457			875			982			355	
Travel Time (s)		12.5			23.9			26.8			9.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	15%	15%	15%	15%	15%	15%	11%	11%	11%	11%	11%	11%
Parking (#/hr)							0		0			
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases		8		7	4		5	2	7	1	6	
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		7	4		5	2	7	1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		6.0	20.0		6.0	20.0	6.0	6.0	20.0	
Minimum Split (s)	33.0	33.0		12.0	34.0		11.7	29.7	12.0	11.6	29.6	
Total Split (s)	37.3	37.3		12.0	49.3		11.7	48.7	12.0	12.0	49.0	
Total Split (%)	33.9%	33.9%		10.9%	44.8%		10.6%	44.3%	10.9%	10.9%	44.5%	
Maximum Green (s)	31.3	31.3		6.0	43.3		6.0	43.0	6.0	6.4	43.4	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		2.7	2.7	3.0	2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		-1.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.7	5.7	6.0	5.6	5.6	
Lead/Lag	Lead	Lead		Lag			Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	0.2	0.2		3.0	0.2		3.0	0.2	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	None	None	C-Max	
Walk Time (s)	7.0	7.0			7.0			7.0			7.0	
Flash Dont Walk (s)	20.0	20.0			21.0			17.0			17.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	

Intersection Summary

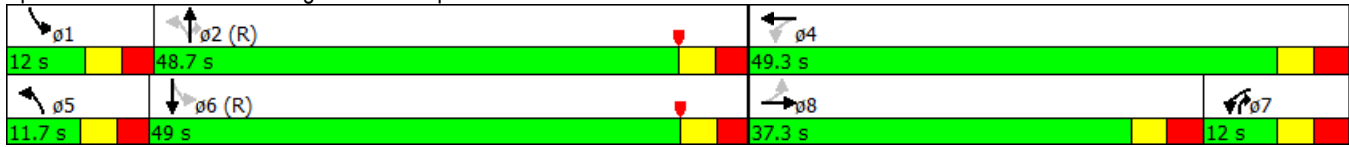
Area Type: Other

Lanes, Volumes, Timings
 46: Michigan St & Sample St

2038 2-way
 Timing Plan: AM

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 9.1 (8%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated

Splits and Phases: 46: Michigan St & Sample St





















HCM 2010 Signalized Intersection Summary
46: Michigan St & Sample St

2038 2-way
Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	699	53	102	498	43	42	598	194	142	300	25
Future Volume (veh/h)	45	699	53	102	498	43	42	598	194	142	300	25
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1652	1652	1900	1652	1652	1900	1712	1712	1712	1712	1712	1900
Adj Flow Rate, veh/h	49	760	58	111	541	47	46	650	211	154	326	27
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	15	15	15	15	15	15	11	11	11	11	11	11
Cap, veh/h	163	812	62	149	1117	97	529	689	887	178	1274	105
Arrive On Green	0.09	0.09	0.09	0.05	0.38	0.38	0.03	0.27	0.27	0.12	0.84	0.84
Sat Flow, veh/h	731	2956	226	1573	2924	253	1630	1712	1309	1630	3043	251
Grp Volume(v), veh/h	49	403	415	111	290	298	46	650	211	154	173	180
Grp Sat Flow(s),veh/h/ln	731	1570	1612	1573	1570	1607	1630	1712	1309	1630	1626	1667
Q Serve(g_s), s	7.2	28.1	28.1	2.9	15.4	15.5	1.7	40.9	7.8	6.4	2.4	2.5
Cycle Q Clear(g_c), s	22.7	28.1	28.1	2.9	15.4	15.5	1.7	40.9	7.8	6.4	2.4	2.5
Prop In Lane	1.00		0.14	1.00		0.16	1.00		1.00	1.00		0.15
Lane Grp Cap(c), veh/h	163	431	443	149	600	614	529	689	887	178	681	698
V/C Ratio(X)	0.30	0.94	0.94	0.74	0.48	0.49	0.09	0.94	0.24	0.86	0.25	0.26
Avail Cap(c_a), veh/h	171	447	459	152	618	633	551	689	887	178	681	698
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00
Upstream Filter(l)	0.48	0.48	0.48	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.2	49.0	49.1	49.9	25.8	25.8	16.7	38.9	8.5	25.1	5.4	5.4
Incr Delay (d2), s/veh	0.2	15.5	15.3	17.7	0.2	0.2	0.1	22.9	0.6	32.8	0.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.6	18.3	18.7	7.3	11.0	11.2	1.4	31.8	9.2	7.9	2.2	2.3
LnGrp Delay(d),s/veh	54.3	64.5	64.3	67.5	26.0	26.0	16.7	61.8	9.2	57.9	6.3	6.3
LnGrp LOS	D	E	E	E	C	C	B	E	A	E	A	A
Approach Vol, veh/h		867			699			907			507	
Approach Delay, s/veh		63.9			32.6			47.3			22.0	
Approach LOS		E			C			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	50.0		48.0	10.2	51.8	11.8	36.2				
Change Period (Y+Rc), s	5.6	* 5.7		6.0	* 5.7	* 5.7	6.0	6.0				
Max Green Setting (Gmax), s	6.4	* 43		43.3	* 6	* 43	6.0	31.3				
Max Q Clear Time (g_c+I1), s	8.4	42.9		17.5	3.7	4.5	4.9	30.1				
Green Ext Time (p_c), s	0.0	0.0		0.5	0.0	1.3	0.1	0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				44.4								
HCM 2010 LOS				D								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
47: Michigan St & Broadway St

2038 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	11	0	14	9	18	5	837	18	30	359	6
Future Volume (vph)	13	11	0	14	9	18	5	837	18	30	359	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		451			562			775			898	
Travel Time (s)		12.3			15.3			21.1			24.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
48: Michigan St & Indiana Ave

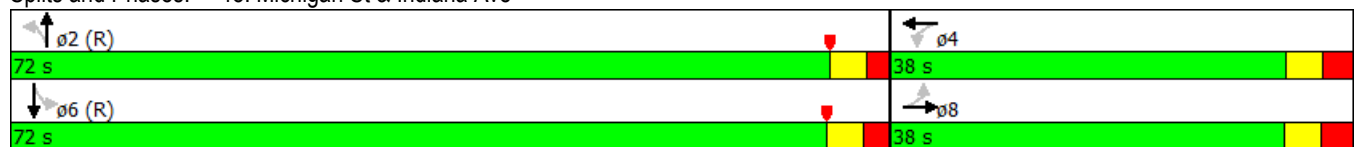
2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	18	227	14	79	11	36	818	14	27	314	32
Future Volume (vph)	32	18	227	14	79	11	36	818	14	27	314	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	250		0	250		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	200			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		445			540			1320			775	
Travel Time (s)		12.1			14.7			36.0			21.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	12%	12%	12%	12%	12%	12%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	29.7	29.7		38.0	38.0		32.0	32.0		35.0	35.0	
Total Split (s)	38.0	38.0		38.0	38.0		72.0	72.0		72.0	72.0	
Total Split (%)	34.5%	34.5%		34.5%	34.5%		65.5%	65.5%		65.5%	65.5%	
Maximum Green (s)	32.3	32.3		32.4	32.4		67.0	67.0		66.8	66.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.7	2.7		2.6	2.6		2.0	2.0		2.2	2.2	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	5.7			5.6		5.0	5.0		5.2	5.2	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	17.0	17.0		16.0	16.0		10.0	10.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		17	17		0	0	

Intersection Summary




















Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 46 (42%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Pretimed

Splits and Phases: 48: Michigan St & Indiana Ave





















HCM 2010 Signalized Intersection Summary
48: Michigan St & Indiana Ave

2038 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	18	227	14	79	11	36	818	14	27	314	32
Future Volume (veh/h)	32	18	227	14	79	11	36	818	14	27	314	32
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1696	1696	1900	1900	1696	1900	1727	1727	1900	1727	1727	1900
Adj Flow Rate, veh/h	35	20	247	15	86	12	39	889	15	29	341	35
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	12	12	12	12	12	12	10	10	10	10	10	10
Cap, veh/h	292	32	396	64	316	41	574	1029	17	411	936	96
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	1.00	1.00	1.00	0.81	0.81	0.81
Sat Flow, veh/h	1177	109	1349	94	1077	139	930	1694	29	569	1541	158
Grp Volume(v), veh/h	35	0	267	113	0	0	39	0	904	29	0	376
Grp Sat Flow(s),veh/h/ln	1177	0	1458	1310	0	0	930	0	1722	569	0	1699
Q Serve(g_s), s	0.0	0.0	17.5	0.5	0.0	0.0	0.5	0.0	0.0	1.2	0.0	6.6
Cycle Q Clear(g_c), s	6.7	0.0	17.5	17.9	0.0	0.0	7.1	0.0	0.0	1.2	0.0	6.6
Prop In Lane	1.00		0.93	0.13		0.11	1.00		0.02	1.00		0.09
Lane Grp Cap(c), veh/h	292	0	428	422	0	0	574	0	1046	411	0	1032
V/C Ratio(X)	0.12	0.00	0.62	0.27	0.00	0.00	0.07	0.00	0.86	0.07	0.00	0.36
Avail Cap(c_a), veh/h	292	0	428	422	0	0	574	0	1046	411	0	1032
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.9	0.0	33.7	29.7	0.0	0.0	0.4	0.0	0.0	4.3	0.0	4.8
Incr Delay (d2), s/veh	0.8	0.0	6.7	1.6	0.0	0.0	0.2	0.0	9.5	0.3	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	0.0	12.4	5.0	0.0	0.0	0.3	0.0	5.0	0.4	0.0	5.9
LnGrp Delay(d),s/veh	30.7	0.0	40.4	31.2	0.0	0.0	0.6	0.0	9.5	4.6	0.0	5.8
LnGrp LOS	C		D	C			A		A	A		A
Approach Vol, veh/h		302			113			943				405
Approach Delay, s/veh		39.2			31.2			9.1				5.7
Approach LOS		D			C			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		72.2		38.1		72.2		38.1				
Change Period (Y+Rc), s		* 5.2		* 5.7		* 5.2		* 5.7				
Max Green Setting (Gmax), s		* 67		* 32		* 67		* 32				
Max Q Clear Time (g_c+I1), s		9.1		19.9		8.6		19.5				
Green Ext Time (p_c), s		4.3		0.5		4.3		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			14.9									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
49: Michigan St & Calvert St

2038 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	3	7	14	10	17	29	791	16	40	469	7
Future Volume (vph)	19	3	7	14	10	17	29	791	16	40	469	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		445			510			1320			1320	
Travel Time (s)		12.1			13.9			36.0			36.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
50: Michigan St & Ewing Ave

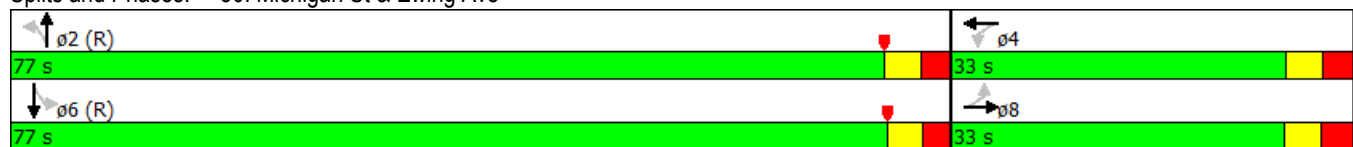
2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	86	5	62	125	97	23	695	31	115	338	17
Future Volume (vph)	57	86	5	62	125	97	23	695	31	115	338	17
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		150	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			540			2640			1320	
Travel Time (s)		12.0			14.7			72.0			36.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	15%	15%	15%	15%	15%	15%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	29.7	29.7		28.6	28.6		25.5	25.5		25.3	25.3	
Total Split (s)	33.0	33.0		33.0	33.0		77.0	77.0		77.0	77.0	
Total Split (%)	30.0%	30.0%		30.0%	30.0%		70.0%	70.0%		70.0%	70.0%	
Maximum Green (s)	27.3	27.3		27.4	27.4		71.5	71.5		71.7	71.7	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.7	2.7		2.6	2.6		2.5	2.5		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	5.7		5.6	5.6		5.5	5.5		5.3	5.3	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		13.0	13.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 99 (90%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 50: Michigan St & Ewing Ave





















HCM 2010 Signalized Intersection Summary
50: Michigan St & Ewing Ave

2038 2-way
Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	86	5	62	125	97	23	695	31	115	338	17
Future Volume (veh/h)	57	86	5	62	125	97	23	695	31	115	338	17
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1652	1652	1900	1652	1652	1900	1727	1727	1900	1727	1727	1900
Adj Flow Rate, veh/h	62	93	5	67	136	105	25	755	34	125	367	18
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	15	15	15	15	15	15	10	10	10	10	10	10
Cap, veh/h	174	386	21	311	215	166	665	1066	48	288	1062	52
Arrive On Green	0.50	0.50	0.50	0.25	0.25	0.25	0.65	0.65	0.65	1.00	1.00	1.00
Sat Flow, veh/h	1006	1554	84	1146	866	668	922	1640	74	634	1633	80
Grp Volume(v), veh/h	62	0	98	67	0	241	25	0	789	125	0	385
Grp Sat Flow(s),veh/h/ln	1006	0	1637	1146	0	1534	922	0	1714	634	0	1713
Q Serve(g_s), s	6.1	0.0	3.8	5.4	0.0	15.4	1.1	0.0	32.9	14.3	0.0	0.0
Cycle Q Clear(g_c), s	21.5	0.0	3.8	9.2	0.0	15.4	1.1	0.0	32.9	47.2	0.0	0.0
Prop In Lane	1.00		0.05	1.00		0.44	1.00		0.04	1.00		0.05
Lane Grp Cap(c), veh/h	174	0	407	311	0	381	665	0	1114	288	0	1114
V/C Ratio(X)	0.36	0.00	0.24	0.22	0.00	0.63	0.04	0.00	0.71	0.43	0.00	0.35
Avail Cap(c_a), veh/h	174	0	407	311	0	381	665	0	1114	288	0	1114
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.2	0.0	21.8	36.2	0.0	37.0	6.9	0.0	12.5	10.8	0.0	0.0
Incr Delay (d2), s/veh	5.6	0.0	1.4	1.6	0.0	7.8	0.1	0.0	3.8	4.7	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	0.0	3.3	3.3	0.0	11.8	0.5	0.0	23.2	5.1	0.0	0.5
LnGrp Delay(d),s/veh	38.8	0.0	23.2	37.8	0.0	44.7	7.0	0.0	16.3	15.5	0.0	0.9
LnGrp LOS	D		C	D		D	A		B	B		A
Approach Vol, veh/h		160			308			814			510	
Approach Delay, s/veh		29.2			43.2			16.0			4.5	
Approach LOS		C			D			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		77.2		33.1		77.2		33.1				
Change Period (Y+Rc), s		5.5		* 5.7		* 5.5		* 5.7				
Max Green Setting (Gmax), s		71.5		* 27		* 72		* 27				
Max Q Clear Time (g_c+I1), s		34.9		17.4		49.2		23.5				
Green Ext Time (p_c), s		5.1		0.4		4.8		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay			18.6									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
51: Michigan St & Donmoyer Ave

2038 2-way
Timing Plan: AM




















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	0	13	25	50	0	680	16	25	362	1
Future Volume (vph)	1	1	0	13	25	50	0	680	16	25	362	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		316			461			2619			2640	
Travel Time (s)		8.6			12.6			71.4			72.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	5%	5%	5%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Lanes, Volumes, Timings
52: Michigan St & Chippewa Ave

2038 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	3	204	11	19	24	415	562	12	12	336	23
Future Volume (vph)	61	3	204	11	19	24	415	562	12	12	336	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	100		0	200		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			75			150			100		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		416			504			2638			2619	
Travel Time (s)		11.3			13.7			71.9			71.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary

Area Type: Other

Control Type: Roundabout

Lanes, Volumes, Timings
53: Michigan St & Ireland Rd

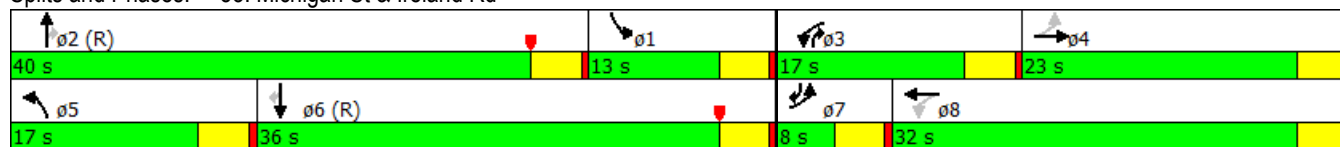
2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	211	98	185	204	239	257	752	137	136	413	0
Future Volume (vph)	5	211	98	185	204	239	257	752	137	136	413	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	200		0	225		0	275		275
Storage Lanes	1		0	1		0	2		1	2		1
Taper Length (ft)	100			100			150			150		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		711			741			651			2638	
Travel Time (s)		19.4			20.2			17.8			71.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8					2			6
Minimum Split (s)	8.0	23.0		8.0	23.0		8.0	23.0	8.0	8.0	23.0	8.0
Total Split (s)	8.0	23.0		17.0	32.0		17.0	40.0	17.0	13.0	36.0	8.0
Total Split (%)	8.6%	24.7%		18.3%	34.4%		18.3%	43.0%	18.3%	14.0%	38.7%	8.6%
Maximum Green (s)	4.0	19.0		13.0	28.0		13.0	36.0	13.0	9.0	32.0	4.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		12.0			12.0			12.0			12.0	
Pedestrian Calls (#/hr)		0			0			0			0	

Intersection Summary























Area Type: Other
 Cycle Length: 93
 Actuated Cycle Length: 93
 Offset: 19 (20%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 53: Michigan St & Ireland Rd



HCM 2010 Signalized Intersection Summary
53: Michigan St & Ireland Rd

2038 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	211	98	185	204	239	257	752	137	136	413	0
Future Volume (veh/h)	5	211	98	185	204	239	257	752	137	136	413	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1727	1900	1727	1727	1900	1727	1727	1727	1727	1727	1727
Adj Flow Rate, veh/h	5	229	107	201	222	260	279	817	149	148	449	0
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	10	10	10	10	10	10	10	10	10	10	10
Cap, veh/h	275	449	203	412	494	442	446	1270	774	309	1129	568
Arrive On Green	0.04	0.20	0.20	0.14	0.30	0.30	0.14	0.39	0.39	0.10	0.34	0.00
Sat Flow, veh/h	1645	2199	994	1645	1641	1468	3191	3282	1468	3191	3282	1468
Grp Volume(v), veh/h	5	169	167	201	222	260	279	817	149	148	449	0
Grp Sat Flow(s),veh/h/ln	1645	1641	1552	1645	1641	1468	1596	1641	1468	1596	1641	1468
Q Serve(g_s), s	0.2	8.5	8.9	8.2	10.2	14.0	7.7	18.9	2.6	4.1	9.7	0.0
Cycle Q Clear(g_c), s	0.2	8.5	8.9	8.2	10.2	14.0	7.7	18.9	2.6	4.1	9.7	0.0
Prop In Lane	1.00		0.64	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	275	335	317	412	494	442	446	1270	774	309	1129	568
V/C Ratio(X)	0.02	0.50	0.53	0.49	0.45	0.59	0.63	0.64	0.19	0.48	0.40	0.00
Avail Cap(c_a), veh/h	275	335	317	412	494	442	446	1270	774	309	1129	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	26.6	32.8	33.0	22.1	26.3	27.6	37.7	23.3	4.2	39.8	23.2	0.0
Incr Delay (d2), s/veh	0.1	5.3	6.1	4.1	2.9	5.6	6.5	2.5	0.6	5.2	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	7.8	7.8	7.5	8.7	10.5	6.8	13.9	2.1	3.7	8.0	0.0
LnGrp Delay(d),s/veh	26.7	38.1	39.1	26.2	29.2	33.2	44.2	25.8	4.7	45.0	24.2	0.0
LnGrp LOS	C	D	D	C	C	C	D	C	A	D	C	
Approach Vol, veh/h		341			683			1245			597	
Approach Delay, s/veh		38.5			29.9			27.4			29.4	
Approach LOS		D			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.0	40.0	17.0	23.0	17.0	36.0	8.0	32.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	9.0	36.0	13.0	19.0	13.0	32.0	4.0	28.0				
Max Q Clear Time (g_c+I1), s	6.1	20.9	10.2	10.9	9.7	11.7	2.2	16.0				
Green Ext Time (p_c), s	1.0	5.8	0.2	3.3	0.3	3.6	0.0	4.3				
Intersection Summary												
HCM 2010 Ctrl Delay				29.7								
HCM 2010 LOS				C								

Lanes, Volumes, Timings
54: St. Joseph St & Colfax Ave

2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	262	5	12	380	223	2	531	24	65	464	42
Future Volume (vph)	16	262	5	12	380	223	2	531	24	65	464	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	0		200	250		80	250		0
Storage Lanes	1		0	0		1	1		1	1		0
Taper Length (ft)	50			25			25			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		340			552			503			614	
Travel Time (s)		9.3			15.1			13.7			16.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	12%	12%	12%	12%	12%	12%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4		4	2		2	6		
Minimum Split (s)	25.7	25.7		25.7	25.7	25.7	49.0	49.0	49.0	34.0	34.0	
Total Split (s)	47.0	47.0		47.0	47.0	47.0	63.0	63.0	63.0	63.0	63.0	
Total Split (%)	42.7%	42.7%		42.7%	42.7%	42.7%	57.3%	57.3%	57.3%	57.3%	57.3%	
Maximum Green (s)	41.3	41.3		41.3	41.3	41.3	56.0	56.0	56.0	57.0	57.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.7	2.7		2.7	2.7	2.7	4.0	4.0	4.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	-1.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7	5.7			5.7	5.7	6.0	7.0	7.0	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	9.0	9.0	9.0	7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		13.0	13.0	13.0	33.0	33.0	33.0	21.0	21.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0	0	0	0	

Intersection Summary

Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 101 (92%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Pretimed

Splits and Phases: 54: St. Joseph St & Colfax Ave




















HCM 2010 Signalized Intersection Summary
54: St. Joseph St & Colfax Ave

2038 2-way
Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	262	5	12	380	223	2	531	24	65	464	42
Future Volume (veh/h)	16	262	5	12	380	223	2	531	24	65	464	42
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1598	1598	1710	1710	1598	1598	1527	1527	1527	1527	1527	1710
Adj Flow Rate, veh/h	17	285	5	13	413	242	2	577	26	71	504	46
Adj No. of Lanes	1	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	7	7	7	7	7	7	12	12	12	12	12	12
Cap, veh/h	160	583	10	41	582	505	431	784	666	407	708	65
Arrive On Green	0.74	0.74	0.74	0.37	0.37	0.37	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	665	1566	27	20	1564	1358	700	1527	1298	666	1379	126
Grp Volume(v), veh/h	17	0	290	426	0	242	2	577	26	71	0	550
Grp Sat Flow(s),veh/h/ln	665	0	1593	1584	0	1358	700	1527	1298	666	0	1505
Q Serve(g_s), s	2.1	0.0	8.1	1.2	0.0	15.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	27.5	0.0	8.1	25.4	0.0	15.1	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.02	0.03		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	160	0	593	623	0	505	431	784	666	407	0	773
V/C Ratio(X)	0.11	0.00	0.49	0.68	0.00	0.48	0.00	0.74	0.04	0.17	0.00	0.71
Avail Cap(c_a), veh/h	160	0	593	623	0	505	431	784	666	407	0	773
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.0	0.0	10.0	29.8	0.0	26.6	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.3	0.0	2.9	6.0	0.0	3.2	0.0	6.1	0.1	0.9	0.0	5.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	0.0	7.1	17.9	0.0	10.2	0.0	2.4	0.0	0.2	0.0	2.1
LnGrp Delay(d),s/veh	23.3	0.0	12.8	35.8	0.0	29.9	0.0	6.1	0.1	0.9	0.0	5.5
LnGrp LOS	C		B	D		C	A	A	A	A		A
Approach Vol, veh/h		307			668			605			621	
Approach Delay, s/veh		13.4			33.7			5.8			5.0	
Approach LOS		B			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		64.0		47.0		64.0		47.0				
Change Period (Y+Rc), s		7.0		* 5.7		* 7		* 5.7				
Max Green Setting (Gmax), s		56.0		* 41		* 57		* 41				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				15.1								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
55: St. Joseph St & Washington St

2038 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	19	0	0	0	28	556	0	0	461	20
Future Volume (vph)	2	0	19	0	0	0	28	556	0	0	461	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	11	11	14	11	11	11	11	11	11	11
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		422			152			490			503	
Travel Time (s)		11.5			4.1			13.4			13.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	12%	12%	12%	12%	12%	12%
Parking (#/hr)	3	3	3									
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1			1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50			50	
Trailing Detector (ft)	0	0		0	0		0	0			0	
Detector 1 Position(ft)	0	0		0	0		0	0			0	
Detector 1 Size(ft)	50	50		50	50		50	50			50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Turn Type	Perm	NA					Perm	NA			NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2					
Detector Phase	8	8		4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0			20.0	
Minimum Split (s)	24.2	24.2		25.9	25.9		26.9	26.9			25.3	
Total Split (s)	26.0	26.0		26.0	26.0		84.0	84.0			84.0	
Total Split (%)	23.6%	23.6%		23.6%	23.6%		76.4%	76.4%			76.4%	
Maximum Green (s)	20.8	20.8		20.5	20.5		78.7	78.7			79.4	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
All-Red Time (s)	2.2	2.2		2.5	2.5		2.3	2.3			1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	
Total Lost Time (s)		5.2			5.5		5.3	5.3			4.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	None	None		None	None		C-Max	C-Max			C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		6.0	6.0			9.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0			0	

Intersection Summary

Lanes, Volumes, Timings
 55: St. Joseph St & Washington St

2038 2-way
 Timing Plan: AM













Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow, Master Intersection
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 55: St. Joseph St & Washington St



HCM 2010 Signalized Intersection Summary
 55: St. Joseph St & Washington St

2038 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗				↗
Traffic Volume (veh/h)	2	0	19	0	0	0	28	556	0	0	461	20
Future Volume (veh/h)	2	0	19	0	0	0	28	556	0	0	461	20
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1710	1644	1710	1710	1710	1710	1527	1527	1710	0	1527	1710
Adj Flow Rate, veh/h	2	0	21	0	0	0	30	604	0	0	501	22
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	12	12	12	0	12	12
Cap, veh/h	38	2	52	0	78	0	680	1307	0	0	1243	55
Arrive On Green	0.05	0.00	0.05	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Sat Flow, veh/h	57	51	1130	0	1710	0	718	1527	0	0	1452	64
Grp Volume(v), veh/h	23	0	0	0	0	0	30	604	0	0	0	523
Grp Sat Flow(s),veh/h/ln	1238	0	0	0	1710	0	718	1527	0	0	0	1516
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.09		0.91	0.00		0.00	1.00		0.00	0.00		0.04
Lane Grp Cap(c), veh/h	92	0	0	0	78	0	680	1307	0	0	0	1297
V/C Ratio(X)	0.25	0.00	0.00	0.00	0.00	0.00	0.04	0.46	0.00	0.00	0.00	0.40
Avail Cap(c_a), veh/h	268	0	0	0	319	0	680	1307	0	0	0	1297
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	0.00	0.82	0.82	0.00	0.00	0.00	0.61
Uniform Delay (d), s/veh	51.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.4	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.4
LnGrp Delay(d),s/veh	52.4	0.0	0.0	0.0	0.0	0.0	0.1	1.0	0.0	0.0	0.0	0.6
LnGrp LOS	D						A	A				A
Approach Vol, veh/h		23			0			634			523	
Approach Delay, s/veh		52.4			0.0			0.9			0.6	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		99.5		10.5		99.5		10.5				
Change Period (Y+Rc), s		* 5.3		5.5		* 5.3		* 5.5				
Max Green Setting (Gmax), s		* 79		20.5		* 79		* 21				
Max Q Clear Time (g_c+I1), s		2.0		0.0		2.0		4.0				
Green Ext Time (p_c), s		6.8		0.0		6.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				1.8								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
56: St. Joseph St & Jefferson Blvd

2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	73	22	34	133	100	7	488	56	57	386	38
Future Volume (vph)	5	73	22	34	133	100	7	488	56	57	386	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		115	100		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		425			424			478			490	
Travel Time (s)		11.6			11.6			13.0			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	12%	12%	12%	12%	12%	12%
Parking (#/hr)	5	5	5									
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		4	4		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0	20.0	20.0	20.0	
Minimum Split (s)	24.6	24.6		25.9	25.9		26.9	26.9	26.9	25.3	25.3	
Total Split (s)	41.0	41.0		41.0	41.0		69.0	69.0	69.0	69.0	69.0	
Total Split (%)	37.3%	37.3%		37.3%	37.3%		62.7%	62.7%	62.7%	62.7%	62.7%	
Maximum Green (s)	35.4	35.4		35.1	35.1		63.1	63.1	63.1	63.7	63.7	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.6	2.6		2.9	2.9		2.9	2.9	2.9	2.3	2.3	
Lost Time Adjust (s)		0.0			0.0		-0.8	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.6			5.9		5.1	5.9	5.9	5.3	5.3	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		13.0	13.0		14.0	14.0	14.0	10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	

Intersection Summary

Area Type: CBD

Lanes, Volumes, Timings
 56: St. Joseph St & Jefferson Blvd

2038 2-way
 Timing Plan: AM













Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 103 (94%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated

Splits and Phases: 56: St. Joseph St & Jefferson Blvd



HCM 2010 Signalized Intersection Summary
56: St. Joseph St & Jefferson Blvd

2038 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↖	↗	↗	↖	↖
Traffic Volume (veh/h)	5	73	22	34	133	100	7	488	56	57	386	38
Future Volume (veh/h)	5	73	22	34	133	100	7	488	56	57	386	38
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1710	1644	1710	1710	1644	1710	1527	1527	1527	1527	1527	1710
Adj Flow Rate, veh/h	5	79	24	37	145	109	8	530	61	62	420	41
Adj No. of Lanes	0	1	0	0	1	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	12	12	12	12	12	12
Cap, veh/h	39	232	68	65	176	123	582	1027	873	519	922	90
Arrive On Green	0.23	0.22	0.22	0.22	0.22	0.22	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	22	1055	308	128	803	558	760	1527	1298	674	1370	134
Grp Volume(v), veh/h	108	0	0	291	0	0	8	530	61	62	0	461
Grp Sat Flow(s),veh/h/ln	1385	0	0	1488	0	0	760	1527	1298	674	0	1503
Q Serve(g_s), s	0.0	0.0	0.0	13.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.2	0.0	0.0	20.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.05		0.22	0.13		0.37	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	354	0	0	364	0	0	582	1027	873	519	0	1012
V/C Ratio(X)	0.31	0.00	0.00	0.80	0.00	0.00	0.01	0.52	0.07	0.12	0.00	0.46
Avail Cap(c_a), veh/h	491	0	0	509	0	0	582	1027	873	519	0	1012
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.73	0.73	0.73	0.93	0.00	0.93
Uniform Delay (d), s/veh	36.3	0.0	0.0	41.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	6.0	0.0	0.0	0.0	1.4	0.1	0.4	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.0	0.0	0.0	14.1	0.0	0.0	0.0	0.7	0.0	0.1	0.0	0.7
LnGrp Delay(d),s/veh	36.8	0.0	0.0	47.5	0.0	0.0	0.0	1.4	0.1	0.4	0.0	1.4
LnGrp LOS	D			D			A	A	A	A		A
Approach Vol, veh/h		108			291			599				523
Approach Delay, s/veh		36.8			47.5			1.2				1.3
Approach LOS		D			D			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		79.9		30.1		79.9		30.1				
Change Period (Y+Rc), s		5.9		5.9		* 5.9		* 5.9				
Max Green Setting (Gmax), s		63.1		35.1		* 64		* 35				
Max Q Clear Time (g_c+I1), s		2.0		22.8		2.0		9.2				
Green Ext Time (p_c), s		6.7		1.4		6.7		1.8				
Intersection Summary												
HCM 2010 Ctrl Delay				12.6								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
57: St. Joseph St & Wayne St

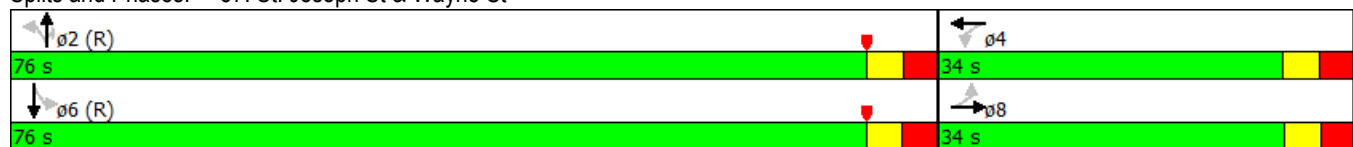
2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	34	5	84	96	4	0	553	242	0	428	13
Future Volume (vph)	2	34	5	84	96	4	0	553	242	0	428	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		278	0		200	100		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	50			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		405			839			565			478	
Travel Time (s)		11.0			22.9			15.4			13.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	12%	12%	12%	12%	12%	12%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2		2	6		
Minimum Split (s)	25.7	25.7		32.9	32.9		28.9	28.9	28.9	32.0	32.0	
Total Split (s)	34.0	34.0		34.0	34.0		76.0	76.0	76.0	76.0	76.0	
Total Split (%)	30.9%	30.9%		30.9%	30.9%		69.1%	69.1%	69.1%	69.1%	69.1%	
Maximum Green (s)	28.3	28.3		28.1	28.1		70.1	70.1	70.1	70.0	70.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.7	2.7		2.9	2.9		2.9	2.9	2.9	3.0	3.0	
Lost Time Adjust (s)	-1.0	0.0		0.0	0.0		-1.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.7	5.7		5.9	5.9		4.9	5.9	5.9	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		20.0	20.0		16.0	16.0	16.0	19.0	19.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	

Intersection Summary























Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 99 (90%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 57: St. Joseph St & Wayne St



HCM 2010 Signalized Intersection Summary
57: St. Joseph St & Wayne St

2038 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	34	5	84	96	4	0	553	242	0	428	13
Future Volume (veh/h)	2	34	5	84	96	4	0	553	242	0	428	13
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1613	1613	1710	1613	1613	1710	1527	1527	1527	1527	1527	1710
Adj Flow Rate, veh/h	2	37	5	91	104	4	0	601	263	0	465	14
Adj No. of Lanes	1	1	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	12	12	12	12	12	12
Cap, veh/h	300	357	48	343	396	15	65	970	825	65	937	28
Arrive On Green	0.27	0.26	0.26	0.26	0.26	0.26	0.00	1.00	1.00	0.00	1.00	1.00
Sat Flow, veh/h	1109	1392	188	1177	1543	59	747	1527	1298	523	1475	44
Grp Volume(v), veh/h	2	0	42	91	0	108	0	601	263	0	0	479
Grp Sat Flow(s),veh/h/ln	1109	0	1580	1177	0	1603	747	1527	1298	523	0	1519
Q Serve(g_s), s	0.2	0.0	2.2	7.1	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.1	0.0	2.2	9.3	0.0	5.9	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.12	1.00		0.04	1.00		1.00	1.00		0.03
Lane Grp Cap(c), veh/h	300	0	405	343	0	411	65	970	825	65	0	965
V/C Ratio(X)	0.01	0.00	0.10	0.27	0.00	0.26	0.00	0.62	0.32	0.00	0.00	0.50
Avail Cap(c_a), veh/h	300	0	405	343	0	411	65	970	825	65	0	965
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	34.3	0.0	31.3	34.9	0.0	32.7	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.5	1.9	0.0	1.6	0.0	3.0	1.0	0.0	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	1.9	4.5	0.0	5.0	0.0	1.4	0.4	0.0	0.0	0.9
LnGrp Delay(d),s/veh	34.4	0.0	31.8	36.7	0.0	34.2	0.0	3.0	1.0	0.0	0.0	1.8
LnGrp LOS	C		C	D		C		A	A			A
Approach Vol, veh/h		44			199			864				479
Approach Delay, s/veh		31.9			35.4			2.4				1.8
Approach LOS		C			D			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		76.1		34.2		76.1		34.2				
Change Period (Y+Rc), s		* 6		5.9		6.0		* 5.9				
Max Green Setting (Gmax), s		* 70		28.1		70.0		* 28				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				7.2								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
58: Michigan St/St. Joseph St & Western Ave

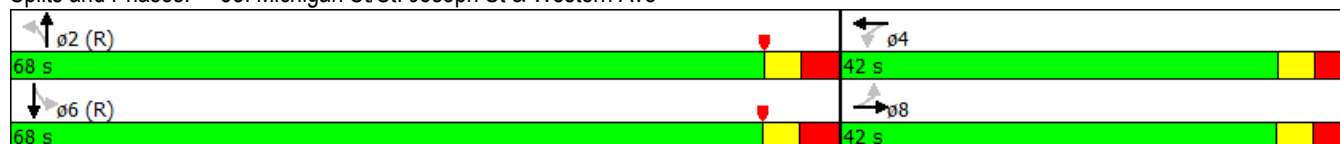
2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	234	13	43	2	13	9	104	554	20	15	441	60
Future Volume (vph)	234	13	43	2	13	9	104	554	20	15	441	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		75	150		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		145			566			536			565	
Travel Time (s)		4.0			15.4			14.6			15.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	12%	12%	12%	12%	12%	12%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	36.4	36.4		37.3	37.3		37.3	37.3		33.5	33.5	
Total Split (s)	42.0	42.0		42.0	42.0		68.0	68.0		68.0	68.0	
Total Split (%)	38.2%	38.2%		38.2%	38.2%		61.8%	61.8%		61.8%	61.8%	
Maximum Green (s)	35.6	35.6		35.7	35.7		61.7	61.7		61.5	61.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.4	3.4		3.3	3.3		3.3	3.3		3.5	3.5	
Lost Time Adjust (s)	0.0	0.0			0.0		-1.0	0.0		0.0	0.0	
Total Lost Time (s)	6.4	6.4			6.3		5.3	6.3		6.5	6.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	23.0	23.0		24.0	24.0		24.0	24.0		20.0	20.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary





















Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 96 (87%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Pretimed

Splits and Phases: 58: Michigan St/St. Joseph St & Western Ave



HCM 2010 Signalized Intersection Summary
 58: Michigan St/St. Joseph St & Western Ave

2038 2-way
 Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	234	13	43	2	13	9	104	554	20	15	441	60
Future Volume (veh/h)	234	13	43	2	13	9	104	554	20	15	441	60
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1613	1613	1710	1710	1613	1710	1527	1527	1710	1527	1527	1710
Adj Flow Rate, veh/h	254	14	47	2	14	10	113	602	22	16	479	65
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	12	12	12	12	12	12
Cap, veh/h	457	105	354	53	279	186	465	819	30	431	736	100
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1196	326	1094	55	862	573	704	1464	53	654	1317	179
Grp Volume(v), veh/h	254	0	61	26	0	0	113	0	624	16	0	544
Grp Sat Flow(s),veh/h/ln	1196	0	1420	1490	0	0	704	0	1517	654	0	1495
Q Serve(g_s), s	18.3	0.0	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	19.6	0.0	3.3	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.77	0.08		0.38	1.00		0.04	1.00		0.12
Lane Grp Cap(c), veh/h	457	0	460	517	0	0	465	0	849	431	0	836
V/C Ratio(X)	0.56	0.00	0.13	0.05	0.00	0.00	0.24	0.00	0.74	0.04	0.00	0.65
Avail Cap(c_a), veh/h	457	0	460	517	0	0	465	0	849	431	0	836
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.7	0.0	26.4	25.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.8	0.0	0.6	0.2	0.0	0.0	1.2	0.0	5.6	0.2	0.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.6	0.0	2.5	1.0	0.0	0.0	0.3	0.0	2.4	0.0	0.0	1.6
LnGrp Delay(d),s/veh	36.5	0.0	27.0	25.9	0.0	0.0	1.2	0.0	5.6	0.2	0.0	3.9
LnGrp LOS	D		C	C			A		A	A		A
Approach Vol, veh/h		315			26			737			560	
Approach Delay, s/veh		34.7			25.9			4.9			3.8	
Approach LOS		C			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		68.2		42.1		68.2		42.1				
Change Period (Y+Rc), s		* 6.5		* 6.4		6.5		6.4				
Max Green Setting (Gmax), s		* 62		* 36		61.5		35.6				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			10.6									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
59: Chapin St/Marion St & Lincoln Way

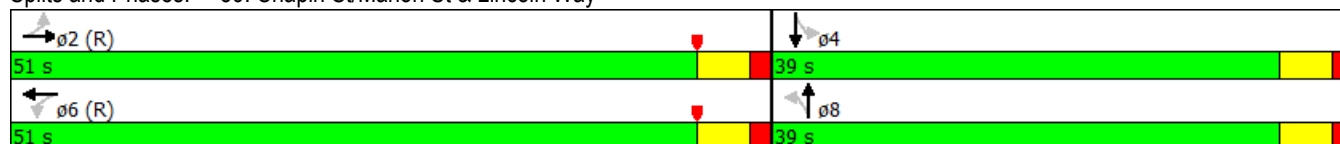
2038 2-way
Timing Plan: AM

	↖	→	↘	↙	←	↖	↙	↑	↘	↙	↓	↘
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗			↕			↕	
Traffic Volume (vph)	65	702	16	10	690	0	14	59	1	1	48	26
Future Volume (vph)	65	702	16	10	690	0	14	59	1	1	48	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	75		0	100		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			50			100			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		650			972			577			308	
Travel Time (s)		17.7			26.5			15.7			8.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Minimum Split (s)	35.5	35.5		35.5	35.5		24.0	24.0		24.0	24.0	
Total Split (s)	51.0	51.0		51.0	51.0		39.0	39.0		39.0	39.0	
Total Split (%)	56.7%	56.7%		56.7%	56.7%		43.3%	43.3%		43.3%	43.3%	
Maximum Green (s)	46.0	46.0		46.0	46.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 76.6 (85%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Pretimed

Splits and Phases: 59: Chapin St/Marion St & Lincoln Way



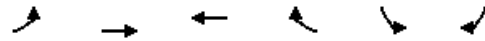
HCM 2010 Signalized Intersection Summary
 59: Chapin St/Marion St & Lincoln Way

2038 2-way
 Timing Plan: AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	702	16	10	690	0	14	59	1	1	48	26
Future Volume (veh/h)	65	702	16	10	690	0	14	59	1	1	48	26
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1900	1792	1900	1900	1792	1900
Adj Flow Rate, veh/h	71	763	17	11	750	0	15	64	1	1	52	28
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	189	893	20	168	916	0	136	542	8	42	416	220
Arrive On Green	0.51	0.51	0.51	0.51	0.51	0.00	0.38	0.38	0.38	0.38	0.38	0.38
Sat Flow, veh/h	683	1747	39	664	1792	0	234	1436	21	3	1102	584
Grp Volume(v), veh/h	71	0	780	11	750	0	80	0	0	81	0	0
Grp Sat Flow(s),veh/h/ln	683	0	1786	664	1792	0	1691	0	0	1688	0	0
Q Serve(g_s), s	8.8	0.0	34.1	1.3	31.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	40.4	0.0	34.1	35.4	31.7	0.0	2.6	0.0	0.0	2.8	0.0	0.0
Prop In Lane	1.00		0.02	1.00		0.00	0.19		0.01	0.01		0.35
Lane Grp Cap(c), veh/h	189	0	913	168	916	0	686	0	0	678	0	0
V/C Ratio(X)	0.38	0.00	0.85	0.07	0.82	0.00	0.12	0.00	0.00	0.12	0.00	0.00
Avail Cap(c_a), veh/h	189	0	913	168	916	0	686	0	0	678	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	35.5	0.0	19.1	34.5	18.5	0.0	18.2	0.0	0.0	18.3	0.0	0.0
Incr Delay (d2), s/veh	5.6	0.0	10.1	0.8	8.1	0.0	0.3	0.0	0.0	0.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	0.0	26.4	0.5	24.3	0.0	2.4	0.0	0.0	2.5	0.0	0.0
LnGrp Delay(d),s/veh	41.1	0.0	29.2	35.2	26.6	0.0	18.6	0.0	0.0	18.7	0.0	0.0
LnGrp LOS	D		C	D	C		B			B		
Approach Vol, veh/h		851			761			80			81	
Approach Delay, s/veh		30.2			26.7			18.6			18.7	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		51.0		39.0		51.0		39.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		46.0		34.0		46.0		34.0				
Max Q Clear Time (g_c+I1), s		42.4		4.8		37.4		4.6				
Green Ext Time (p_c), s		2.9		1.0		6.5		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay				27.6								
HCM 2010 LOS				C								

Lanes, Volumes, Timings
60: Lafayette Blvd & Bartlett St

2038 2-way
Timing Plan: AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	18	29	55
Future Volume (vph)	0	0	0	18	29	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				50	
Link Speed (mph)		25	25		25	
Link Distance (ft)		770	377		363	
Travel Time (s)		21.0	10.3		9.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	9%	9%
Parking (#/hr)				16		
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Lanes, Volumes, Timings
61: William St & LaSalle Ave

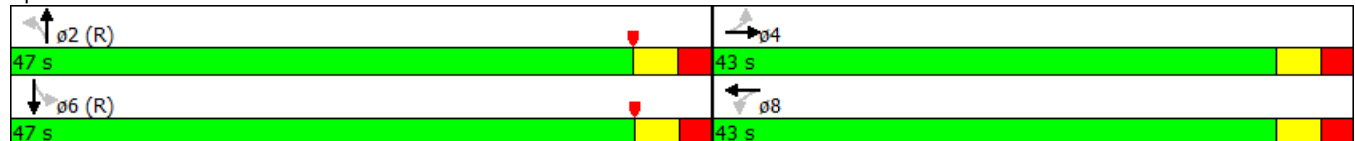
2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	117	93	3	10	1	25	98	11	0	238	0
Future Volume (vph)	0	117	93	3	10	1	25	98	11	0	238	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		343			444			483			227	
Travel Time (s)		9.4			12.1			13.2			6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA		Perm	NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	25.3	25.3		24.0	24.0		25.3	25.3		24.0	24.0	
Total Split (s)	43.0	43.0		43.0	43.0		47.0	47.0		47.0	47.0	
Total Split (%)	47.8%	47.8%		47.8%	47.8%		52.2%	52.2%		52.2%	52.2%	
Maximum Green (s)	37.7	37.7		37.8	37.8		41.7	41.7		41.8	41.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	2.3		2.2	2.2		2.3	2.3		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.3			5.2			5.3			5.2	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		11.0	11.0		13.0	13.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary













Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 62 (69%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 61: William St & LaSalle Ave



HCM 2010 Signalized Intersection Summary
61: William St & LaSalle Ave

2038 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	0	117	93	3	10	1	25	98	11	0	238	0
Future Volume (veh/h)	0	117	93	3	10	1	25	98	11	0	238	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	127	101	3	11	1	27	107	12	0	259	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	403	321	156	548	47	158	603	64	0	863	0
Arrive On Green	0.00	0.42	0.42	0.42	0.42	0.42	0.93	0.93	0.93	0.00	0.93	0.00
Sat Flow, veh/h	0	962	765	259	1307	112	240	1300	138	0	1863	0
Grp Volume(v), veh/h	0	0	228	15	0	0	146	0	0	0	259	0
Grp Sat Flow(s),veh/h/ln	0	0	1728	1678	0	0	1678	0	0	0	1863	0
Q Serve(g_s), s	0.0	0.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0
Cycle Q Clear(g_c), s	0.0	0.0	8.0	8.0	0.0	0.0	0.6	0.0	0.0	0.0	1.3	0.0
Prop In Lane	0.00		0.44	0.20		0.07	0.18		0.08	0.00		0.00
Lane Grp Cap(c), veh/h	0	0	724	751	0	0	825	0	0	0	863	0
V/C Ratio(X)	0.00	0.00	0.31	0.02	0.00	0.00	0.18	0.00	0.00	0.00	0.30	0.00
Avail Cap(c_a), veh/h	0	0	724	751	0	0	825	0	0	0	863	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	17.5	15.3	0.0	0.0	1.8	0.0	0.0	0.0	1.8	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.1	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	7.3	0.4	0.0	0.0	0.7	0.0	0.0	0.0	1.4	0.0
LnGrp Delay(d),s/veh	0.0	0.0	18.7	15.4	0.0	0.0	2.3	0.0	0.0	0.0	2.7	0.0
LnGrp LOS			B	B			A				A	
Approach Vol, veh/h		228			15			146			259	
Approach Delay, s/veh		18.7			15.4			2.3			2.7	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		47.1		43.1		47.1		43.1				
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3				
Max Green Setting (Gmax), s		* 42		* 38		* 42		* 38				
Max Q Clear Time (g_c+I1), s		2.6		10.0		0.0		10.0				
Green Ext Time (p_c), s		0.2		1.6		0.2		1.6				
Intersection Summary												
HCM 2010 Ctrl Delay			8.5									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
62: William St & Colfax Ave

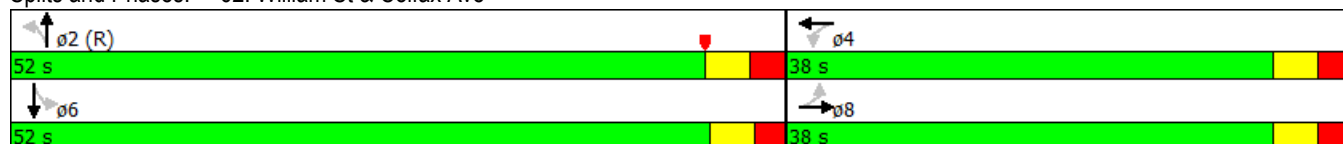
2038 2-way
Timing Plan: AM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	135	24	36	66	16	5	75	144	9	284	40
Future Volume (vph)	27	135	24	36	66	16	5	75	144	9	284	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	50			50			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		387			682			495			483	
Travel Time (s)		10.6			18.6			13.5			13.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	25.5	25.5		25.5	25.5		25.5	25.5		25.2	25.2	
Total Split (s)	38.0	38.0		38.0	38.0		52.0	52.0		52.0	52.0	
Total Split (%)	42.2%	42.2%		42.2%	42.2%		57.8%	57.8%		57.8%	57.8%	
Maximum Green (s)	32.5	32.5		32.5	32.5		46.5	46.5		46.8	46.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.5			5.5		5.5	5.5		5.2	5.2	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		13.0	13.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary













Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 62: William St & Colfax Ave





















HCM 2010 Signalized Intersection Summary
62: William St & Colfax Ave

2038 2-way
Timing Plan: AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	27	135	24	36	66	16	5	75	144	9	284	40
Future Volume (veh/h)	27	135	24	36	66	16	5	75	144	9	284	40
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1776	1900	1900	1776	1900	1792	1792	1900	1792	1792	1900
Adj Flow Rate, veh/h	29	147	26	39	72	17	5	82	157	10	309	43
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	7	7	7	7	7	7	6	6	6	6	6	6
Cap, veh/h	102	468	77	195	341	74	507	286	547	617	798	111
Arrive On Green	0.36	0.36	0.36	0.36	0.36	0.36	0.87	0.87	0.87	0.69	0.69	0.69
Sat Flow, veh/h	156	1300	215	399	947	206	986	551	1055	1094	1540	214
Grp Volume(v), veh/h	202	0	0	128	0	0	5	0	239	10	0	352
Grp Sat Flow(s),veh/h/ln	1671	0	0	1551	0	0	986	0	1606	1094	0	1755
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	2.4	0.3	0.0	7.7
Cycle Q Clear(g_c), s	7.6	0.0	0.0	4.6	0.0	0.0	7.8	0.0	2.4	2.7	0.0	7.7
Prop In Lane	0.14		0.13	0.30		0.13	1.00		0.66	1.00		0.12
Lane Grp Cap(c), veh/h	647	0	0	610	0	0	507	0	832	617	0	909
V/C Ratio(X)	0.31	0.00	0.00	0.21	0.00	0.00	0.01	0.00	0.29	0.02	0.00	0.39
Avail Cap(c_a), veh/h	647	0	0	610	0	0	507	0	832	617	0	909
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.9	0.0	0.0	20.0	0.0	0.0	4.5	0.0	3.1	7.6	0.0	8.0
Incr Delay (d2), s/veh	1.3	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.0	0.0	0.0	4.2	0.0	0.0	0.1	0.0	2.1	0.2	0.0	7.0
LnGrp Delay(d),s/veh	22.2	0.0	0.0	20.8	0.0	0.0	4.6	0.0	4.0	7.6	0.0	9.2
LnGrp LOS	C			C			A		A	A		A
Approach Vol, veh/h		202			128			244			362	
Approach Delay, s/veh		22.2			20.8			4.0			9.2	
Approach LOS		C			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		52.3		38.0		52.3		38.0				
Change Period (Y+Rc), s		5.5		5.5		* 5.5		5.5				
Max Green Setting (Gmax), s		46.5		32.5		* 47		32.5				
Max Q Clear Time (g_c+I1), s		9.8		6.6		9.7		9.6				
Green Ext Time (p_c), s		4.6		2.1		4.6		2.1				
Intersection Summary												
HCM 2010 Ctrl Delay				12.2								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
63: William St & Jefferson Blvd

2038 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	4	0	21	0	204	1	21	209	0
Future Volume (vph)	0	0	0	4	0	21	0	204	1	21	209	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	225		0	210		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		331			675			480			497	
Travel Time (s)		9.0			18.4			13.1			13.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)											5	5
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	




















Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
64: William St & Wayne St










2038 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	150		0	150		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		318			680			490			480	
Travel Time (s)		8.7			18.5			13.4			13.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	6	496	4	2	373
Future Volume (vph)	0	6	496	4	2	373
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		25			25
Link Distance (ft)	440		1160			480
Travel Time (s)	12.0		31.6			13.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Lanes, Volumes, Timings
66: William St & Lincoln Way

2038 2-way
Timing Plan: AM

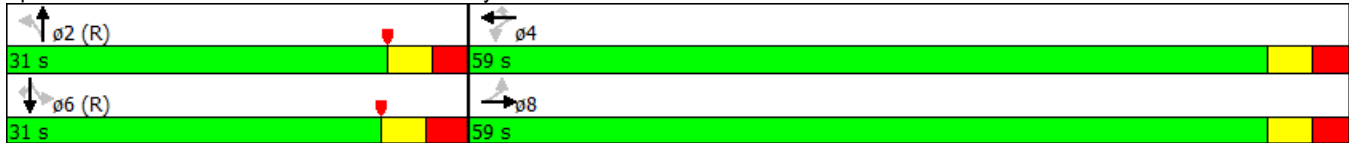
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	644	60	30	676	4	24	74	0	149	178	0
Future Volume (vph)	0	644	60	30	676	4	24	74	0	149	178	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	75		0	50		0	100		150
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	50			50			25			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		972			472			227			393	
Travel Time (s)		26.5			12.9			6.2			10.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Number of Detectors	1	0		1	0	1	1	1		1	1	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	0		20	0	20	50	50		50	50	50
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	50	50		50	50	50
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		6
Detector Phase	8	8		4	4	4	2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	26.6	26.6		25.6	25.6	25.6	29.5	29.5		29.9	29.9	29.9
Total Split (s)	59.0	59.0		59.0	59.0	59.0	31.0	31.0		31.0	31.0	31.0
Total Split (%)	65.6%	65.6%		65.6%	65.6%	65.6%	34.4%	34.4%		34.4%	34.4%	34.4%
Maximum Green (s)	53.4	53.4		53.4	53.4	53.4	25.5	25.5		25.1	25.1	25.1
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.6	2.6		2.6	2.6	2.6	2.5	2.5		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6		5.6	5.6	5.6	5.5	5.5		5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		13.0	13.0	13.0	17.0	17.0		17.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	0
Intersection Summary												
Area Type:	Other											
Cycle Length:	90											

Lanes, Volumes, Timings
 66: William St & Lincoln Way

2038 2-way
 Timing Plan: AM

Actuated Cycle Length: 90
 Offset: 56 (62%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated





















Splits and Phases: 66: William St & Lincoln Way



HCM 2010 analysis cannot be performed without detectors for actuated controller type.

Lanes, Volumes, Timings
67: Michigan St N & Madison St

2038 2-way
Timing Plan: AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	0	8	0	0	0	10	568	0	0	496	24
Future Volume (vph)	27	0	8	0	0	0	10	568	0	0	496	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	50		0	200		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		433			199			492			528	
Travel Time (s)		11.8			5.4			13.4			14.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)		18										
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: CBD
Control Type: Unsignalized



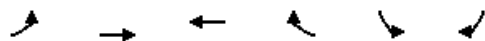
Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			100	100	0
Storage Lanes	0			0	0	0
Taper Length (ft)	50				50	
Link Speed (mph)		25	25		25	
Link Distance (ft)		308	884		827	
Travel Time (s)		8.4	24.1		22.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Stop		Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Lanes, Volumes, Timings
85: Marion St & Main St










2038 2-way
Timing Plan: AM









Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↕	
Traffic Volume (vph)	1	29	6	37	6	3
Future Volume (vph)	1	29	6	37	6	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25	25		25	
Link Distance (ft)		425	192		491	
Travel Time (s)		11.6	5.2		13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)		18				
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary









Area Type: Other
Control Type: Unsignalized

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	25	235	0	37	232
Future Volume (vph)	0	25	235	0	37	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		25			25
Link Distance (ft)	439		490			770
Travel Time (s)	12.0		13.4			21.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Stop			Stop
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			↑↑			↑
Traffic Volume (vph)	0	0	713	0	0	434
Future Volume (vph)	0	0	713	0	0	434
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		25			25
Link Distance (ft)	453		325			810
Travel Time (s)	12.4		8.9			22.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					







Lanes, Volumes, Timings
101: Michigan St

2038 2-way
Timing Plan: AM

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	686	467	0
Future Volume (vph)	0	0	0	686	467	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	453			355	780	
Travel Time (s)	12.4			9.7	21.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

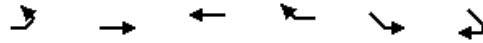
Lanes, Volumes, Timings
102: Michigan St

2038 2-way
Timing Plan: AM

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations				↑	↑↑	
Traffic Volume (vph)	0	0	0	834	455	0
Future Volume (vph)	0	0	0	834	455	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25			25	25	
Link Distance (ft)	76			898	982	
Travel Time (s)	2.1			24.5	26.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					

Lanes, Volumes, Timings
 118: LaSalle Ave/LaSalle Ave# & Lincoln Way

2038 2-way
 Timing Plan: AM



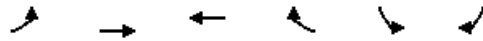
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations		↑		↑↑	↑↑	
Traffic Volume (vph)	0	108	0	710	793	0
Future Volume (vph)	0	108	0	710	793	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			0	200	0
Storage Lanes	0			2	1	0
Taper Length (ft)	50				50	
Link Speed (mph)		25	25		25	
Link Distance (ft)		444	236		472	
Travel Time (s)		12.1	6.4		12.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Stop	Free		Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Lanes, Volumes, Timings
 119: Western Ave & Michigan St#

2038 2-way
 Timing Plan: AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↕	↔↕		↔↕	
Traffic Volume (vph)	2	261	128	49	29	6
Future Volume (vph)	2	261	128	49	29	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		25	25		25	
Link Distance (ft)		425	145		488	
Travel Time (s)		11.6	4.0		13.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	1%	2%	2%	2%
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Lanes, Volumes, Timings
1: William St & Marion St

2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	129	49	10	7	106	23	0	231	24	2	331	42
Future Volume (vph)	129	49	10	7	106	23	0	231	24	2	331	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	50		0	150		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		827			455			430			402	
Travel Time (s)		22.6			12.4			11.7			11.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	24.0	24.0		24.0	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	40.0	40.0		40.0	40.0		50.0	50.0		50.0	50.0	
Total Split (%)	44.4%	44.4%		44.4%	44.4%		55.6%	55.6%		55.6%	55.6%	
Maximum Green (s)	35.0	35.0		35.0	35.0		45.0	45.0		45.0	45.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	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)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary













Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 47 (52%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 1: William St & Marion St



HCM 2010 Signalized Intersection Summary
 1: William St & Marion St

2038 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Volume (veh/h)	129	49	10	7	106	23	0	231	24	2	331	42
Future Volume (veh/h)	129	49	10	7	106	23	0	231	24	2	331	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	140	53	11	8	115	25	0	251	26	2	360	46
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	429	154	29	56	555	116	80	814	84	618	794	101
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.00	1.00	1.00	0.50	0.50	0.50
Sat Flow, veh/h	930	397	76	36	1427	297	957	1628	169	1077	1588	203
Grp Volume(v), veh/h	204	0	0	148	0	0	0	0	277	2	0	406
Grp Sat Flow(s),veh/h/ln	1402	0	0	1760	0	0	957	0	1797	1077	0	1791
Q Serve(g_s), s	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	13.2
Cycle Q Clear(g_c), s	8.3	0.0	0.0	5.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	13.2
Prop In Lane	0.69		0.05	0.05		0.17	1.00		0.09	1.00		0.11
Lane Grp Cap(c), veh/h	613	0	0	727	0	0	80	0	899	618	0	896
V/C Ratio(X)	0.33	0.00	0.00	0.20	0.00	0.00	0.00	0.00	0.31	0.00	0.00	0.45
Avail Cap(c_a), veh/h	613	0	0	727	0	0	80	0	899	618	0	896
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.2	0.0	0.0	18.3	0.0	0.0	0.0	0.0	0.0	11.3	0.0	14.5
Incr Delay (d2), s/veh	1.5	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.9	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.4	0.0	0.0	11.1
LnGrp Delay(d),s/veh	20.6	0.0	0.0	19.0	0.0	0.0	0.0	0.0	0.9	11.3	0.0	16.2
LnGrp LOS	C			B					A	B		B
Approach Vol, veh/h		204			148			277				408
Approach Delay, s/veh		20.6			19.0			0.9				16.2
Approach LOS		C			B			A				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		50.0		40.0		50.0		40.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		45.0		35.0		45.0		35.0				
Max Q Clear Time (g_c+I1), s		2.0		10.3		15.2		7.0				
Green Ext Time (p_c), s		5.3		2.3		5.0		2.4				
Intersection Summary												
HCM 2010 Ctrl Delay				13.4								
HCM 2010 LOS				B								

Lanes, Volumes, Timings
2: William St & Madison St

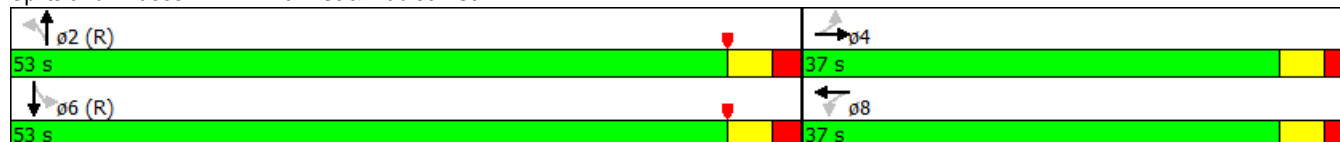
2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	18	10	17	18	83	39	170	6	97	262	0
Future Volume (vph)	0	18	10	17	18	83	39	170	6	97	262	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	100		0	275		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	50			50			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		884			489			393			430	
Travel Time (s)		24.1			13.3			10.7			11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	24.0	24.0		24.0	24.0		24.0	24.0		24.0	24.0	
Total Split (s)	37.0	37.0		37.0	37.0		53.0	53.0		53.0	53.0	
Total Split (%)	41.1%	41.1%		41.1%	41.1%		58.9%	58.9%		58.9%	58.9%	
Maximum Green (s)	32.0	32.0		32.0	32.0		48.0	48.0		48.0	48.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	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)		5.0			5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 58 (64%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 50
 Control Type: Pretimed

Splits and Phases: 2: William St & Madison St



HCM 2010 Signalized Intersection Summary
 2: William St & Madison St

2038 2-way
 Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	0	18	10	17	18	83	39	170	6	97	262	0
Future Volume (veh/h)	0	18	10	17	18	83	39	170	6	97	262	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	0	20	11	18	20	90	42	185	7	105	285	0
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	0	394	217	96	116	395	650	933	35	700	974	0
Arrive On Green	0.00	0.36	0.36	0.36	0.36	0.36	1.00	1.00	1.00	1.00	1.00	0.00
Sat Flow, veh/h	0	1109	610	143	326	1111	1069	1749	66	1163	1827	0
Grp Volume(v), veh/h	0	0	31	128	0	0	42	0	192	105	285	0
Grp Sat Flow(s),veh/h/ln	0	0	1719	1580	0	0	1069	0	1815	1163	1827	0
Q Serve(g_s), s	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	1.1	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.00		0.35	0.14		0.70	1.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	0	0	611	607	0	0	650	0	968	700	974	0
V/C Ratio(X)	0.00	0.00	0.05	0.21	0.00	0.00	0.06	0.00	0.20	0.15	0.29	0.00
Avail Cap(c_a), veh/h	0	0	611	607	0	0	650	0	968	700	974	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	19.0	20.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.2	0.8	0.0	0.0	0.2	0.0	0.5	0.5	0.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	1.0	4.2	0.0	0.0	0.1	0.0	0.2	0.2	0.4	0.0
LnGrp Delay(d),s/veh	0.0	0.0	19.2	21.1	0.0	0.0	0.2	0.0	0.5	0.5	0.8	0.0
LnGrp LOS			B	C			A		A	A	A	
Approach Vol, veh/h		31			128			234			390	
Approach Delay, s/veh		19.2			21.1			0.4			0.7	
Approach LOS		B			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		53.0		37.0		53.0		37.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		48.0		32.0		48.0		32.0				
Max Q Clear Time (g_c+I1), s		2.0		3.1		2.0		7.0				
Green Ext Time (p_c), s		4.0		1.0		4.0		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay			4.7									
HCM 2010 LOS			A									

Lanes, Volumes, Timings
3: William St & Washington St

2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	8	15	15	33	3	14	177	20	0	186	18
Future Volume (vph)	36	8	15	15	33	3	14	177	20	0	186	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	400		0	165		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		460			680			497			495	
Travel Time (s)		12.5			18.5			13.6			13.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)								5	5		5	5
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	26.2	26.2		26.3	26.3		26.5	26.5		26.5	26.5	
Total Split (s)	34.0	34.0		34.0	34.0		56.0	56.0		56.0	56.0	
Total Split (%)	37.8%	37.8%		37.8%	37.8%		62.2%	62.2%		62.2%	62.2%	
Maximum Green (s)	28.8	28.8		28.7	28.7		50.5	50.5		50.5	50.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.2	2.2		2.3	2.3		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.2	5.2		5.3	5.3		5.5	5.5		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		14.0	14.0		14.0	14.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 46 (51%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 3: William St & Washington St



HCM 2010 Signalized Intersection Summary
 3: William St & Washington St

2038 2-way
 Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	36	8	15	15	33	3	14	177	20	0	186	18
Future Volume (veh/h)	36	8	15	15	33	3	14	177	20	0	186	18
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	39	9	16	16	36	3	15	192	22	0	202	20
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	487	189	336	498	532	44	633	790	90	80	802	79
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	1.00	1.00	1.00	0.00	0.56	0.56
Sat Flow, veh/h	1337	591	1051	1354	1664	139	1132	1409	161	1140	1432	142
Grp Volume(v), veh/h	39	0	25	16	0	39	15	0	214	0	0	222
Grp Sat Flow(s),veh/h/ln	1337	0	1642	1354	0	1802	1132	0	1570	1140	0	1574
Q Serve(g_s), s	1.9	0.0	0.9	0.7	0.0	1.4	0.2	0.0	0.0	0.0	0.0	6.5
Cycle Q Clear(g_c), s	3.2	0.0	0.9	1.7	0.0	1.4	6.7	0.0	0.0	0.0	0.0	6.5
Prop In Lane	1.00		0.64	1.00		0.08	1.00		0.10	1.00		0.09
Lane Grp Cap(c), veh/h	487	0	525	498	0	576	633	0	880	80	0	882
V/C Ratio(X)	0.08	0.00	0.05	0.03	0.00	0.07	0.02	0.00	0.24	0.00	0.00	0.25
Avail Cap(c_a), veh/h	487	0	525	498	0	576	633	0	880	80	0	882
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	22.4	0.0	21.2	21.8	0.0	21.3	0.4	0.0	0.0	0.0	0.0	10.1
Incr Delay (d2), s/veh	0.3	0.0	0.2	0.1	0.0	0.2	0.1	0.0	0.7	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	0.0	0.8	0.5	0.0	1.3	0.1	0.0	0.3	0.0	0.0	5.3
LnGrp Delay(d),s/veh	22.8	0.0	21.3	21.9	0.0	21.5	0.5	0.0	0.7	0.0	0.0	10.8
LnGrp LOS	C		C	C		C	A		A			B
Approach Vol, veh/h		64			55			229			222	
Approach Delay, s/veh		22.2			21.6			0.6			10.8	
Approach LOS		C			C			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		56.0		34.1		56.0		34.1				
Change Period (Y+Rc), s		5.5		* 5.3		5.5		* 5.3				
Max Green Setting (Gmax), s		50.5		* 29		50.5		* 29				
Max Q Clear Time (g_c+I1), s		8.7		3.7		8.5		5.2				
Green Ext Time (p_c), s		3.1		0.5		3.1		0.5				

Intersection Summary

HCM 2010 Ctrl Delay	9.1
HCM 2010 LOS	A

Notes

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
4: William St & Western Ave

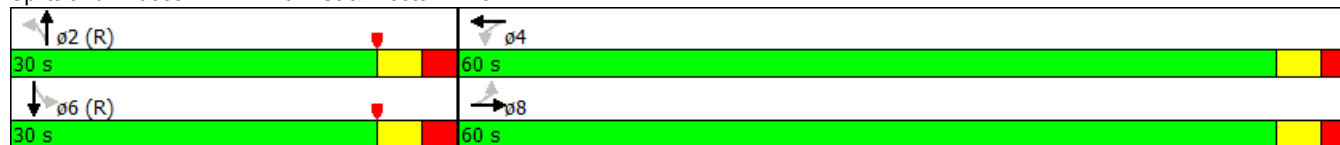
2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	112	424	13	16	608	9	4	4	1	81	13	112
Future Volume (vph)	112	424	13	16	608	9	4	4	1	81	13	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	285		0	50		0	225		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30				30
Link Distance (ft)		560			680			208				490
Travel Time (s)		15.3			18.5			4.7				11.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2			6		
Minimum Split (s)	26.2	26.2		26.2	26.2		26.5	26.5		29.5		29.5
Total Split (s)	60.0	60.0		60.0	60.0		30.0	30.0		30.0		30.0
Total Split (%)	66.7%	66.7%		66.7%	66.7%		33.3%	33.3%		33.3%		33.3%
Maximum Green (s)	54.8	54.8		54.8	54.8		24.5	24.5		24.5		24.5
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0		3.0
All-Red Time (s)	2.2	2.2		2.2	2.2		2.5	2.5		2.5		2.5
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0		0.0
Total Lost Time (s)		5.2		5.2	5.2		5.5	5.5		5.5		5.5
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		14.0	14.0		17.0		17.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0		0

Intersection Summary




















Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Pretimed

Splits and Phases: 4: William St & Western Ave



















HCM 2010 Signalized Intersection Summary
4: William St & Western Ave

2038 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	112	424	13	16	608	9	4	4	1	81	13	112
Future Volume (veh/h)	112	424	13	16	608	9	4	4	1	81	13	112
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1827	1827	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	122	461	14	17	661	10	4	4	1	88	14	122
Adj No. of Lanes	0	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	158	565	16	380	1093	17	329	384	96	452	44	385
Arrive On Green	0.61	0.61	0.61	0.61	0.61	0.61	0.27	0.27	0.27	0.27	0.27	0.27
Sat Flow, veh/h	180	928	27	898	1795	27	1224	1412	353	1378	162	1415
Grp Volume(v), veh/h	597	0	0	17	0	671	4	0	5	88	0	136
Grp Sat Flow(s),veh/h/ln	1135	0	0	898	0	1822	1224	0	1765	1378	0	1577
Q Serve(g_s), s	23.8	0.0	0.0	0.0	0.0	20.5	0.2	0.0	0.2	4.5	0.0	6.2
Cycle Q Clear(g_c), s	44.3	0.0	0.0	1.6	0.0	20.5	6.4	0.0	0.2	4.7	0.0	6.2
Prop In Lane	0.20		0.02	1.00		0.01	1.00		0.20	1.00		0.90
Lane Grp Cap(c), veh/h	739	0	0	380	0	1109	329	0	480	452	0	429
V/C Ratio(X)	0.81	0.00	0.00	0.04	0.00	0.60	0.01	0.00	0.01	0.19	0.00	0.32
Avail Cap(c_a), veh/h	739	0	0	380	0	1109	329	0	480	452	0	429
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.2	0.0	0.0	7.2	0.0	10.9	28.6	0.0	23.9	25.6	0.0	26.1
Incr Delay (d2), s/veh	9.2	0.0	0.0	0.2	0.0	2.4	0.1	0.0	0.0	1.0	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	21.1	0.0	0.0	0.3	0.0	16.4	0.2	0.0	0.2	3.3	0.0	5.2
LnGrp Delay(d),s/veh	26.4	0.0	0.0	7.4	0.0	13.3	28.7	0.0	23.9	26.6	0.0	28.0
LnGrp LOS	C			A		B	C		C	C		C
Approach Vol, veh/h		597			688			9			224	
Approach Delay, s/veh		26.4			13.2			26.1			27.4	
Approach LOS		C			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		30.0		60.0		30.0		60.0				
Change Period (Y+Rc), s		5.5		* 5.2		5.5		* 5.2				
Max Green Setting (Gmax), s		24.5		* 55		24.5		* 55				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				20.6								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
5: Lafayette Blvd & Marion St

2038 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	75	7	11	9	15	5	13	277	5	4	225	94
Future Volume (vph)	75	7	11	9	15	5	13	277	5	4	225	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	50			50			25			25		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		455			425			515			490	
Travel Time (s)		12.4			11.6			11.7			11.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		3	3		5	5		5	5		5	5
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

















Intersection Summary

Area Type: CBD

Control Type: Unsignalized

Lanes, Volumes, Timings
6: Lafayette Blvd & Madison St

2038 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	31	84	42	54	6	63	277	20	2	248	0
Future Volume (vph)	5	31	84	42	54	6	63	277	20	2	248	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		0	100		0	100		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		489			434			485			515	
Travel Time (s)		13.3			11.8			11.0			11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)						5					5	5
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: CBD
Control Type: Unsignalized

Lanes, Volumes, Timings
7: Lafayette Blvd & LaSalle Ave#

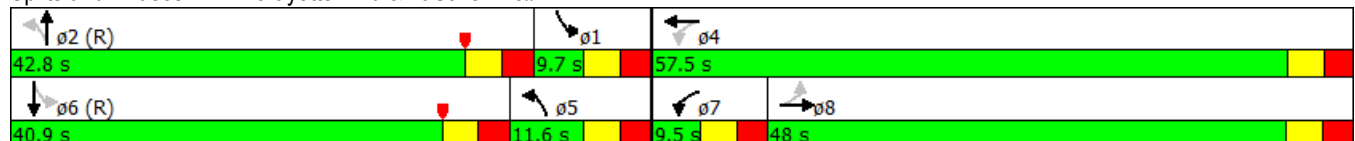
2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	673	251	80	869	30	145	310	51	82	275	3
Future Volume (vph)	7	673	251	80	869	30	145	310	51	82	275	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	10	10	10	11	11	11	11	11	11
Storage Length (ft)	0		0	200		0	190		0	250		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	25			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		236			440			495			485	
Travel Time (s)		6.4			12.0			11.3			11.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)								5	5		0	0
Shared Lane Traffic (%)												
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8		7	4		5	2		1	6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	28.6	28.6		9.5	28.3		9.6	28.6		9.6	29.6	
Total Split (s)	48.0	48.0		9.5	57.5		11.6	42.8		9.7	40.9	
Total Split (%)	43.6%	43.6%		8.6%	52.3%		10.5%	38.9%		8.8%	37.2%	
Maximum Green (s)	42.4	42.4		4.0	52.0		6.0	37.2		4.1	35.3	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.5	2.5		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.6		5.5	5.5		5.6	5.6		5.6	5.6	
Lead/Lag	Lag	Lag		Lead			Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes		Yes	Yes	
Walk Time (s)	7.0	7.0			7.0			7.0			7.0	
Flash Dont Walk (s)	16.0	16.0			13.0			16.0			17.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	

Intersection Summary





















Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 92 (84%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Pretimed

Splits and Phases: 7: Lafayette Blvd & LaSalle Ave#



HCM 2010 Signalized Intersection Summary
7: Lafayette Blvd & LaSalle Ave#

2038 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	673	251	80	869	30	145	310	51	82	275	3
Future Volume (veh/h)	7	673	251	80	869	30	145	310	51	82	275	3
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1710	1644	1710	1644	1644	1710	1583	1583	1710	1583	1583	1710
Adj Flow Rate, veh/h	8	732	273	87	945	33	158	337	55	89	299	3
Adj No. of Lanes	0	2	0	1	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	36	838	310	157	1455	51	273	393	64	164	452	5
Arrive On Green	0.40	0.39	0.39	0.07	0.94	0.94	0.05	0.34	0.34	0.04	0.32	0.32
Sat Flow, veh/h	8	2170	804	1566	3080	108	1508	1162	190	1508	1408	14
Grp Volume(v), veh/h	553	0	460	87	479	499	158	0	392	89	0	302
Grp Sat Flow(s),veh/h/ln	1627	0	1354	1566	1562	1625	1508	0	1352	1508	0	1423
Q Serve(g_s), s	5.3	0.0	34.8	3.7	4.8	4.8	0.0	0.0	29.8	0.0	0.0	20.2
Cycle Q Clear(g_c), s	34.1	0.0	34.8	3.7	4.8	4.8	0.0	0.0	29.8	0.0	0.0	20.2
Prop In Lane	0.01		0.59	1.00		0.07	1.00		0.14	1.00		0.01
Lane Grp Cap(c), veh/h	676	0	523	157	738	768	273	0	457	164	0	456
V/C Ratio(X)	0.82	0.00	0.88	0.55	0.65	0.65	0.58	0.00	0.86	0.54	0.00	0.66
Avail Cap(c_a), veh/h	676	0	523	157	738	768	273	0	457	164	0	456
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.2	0.0	31.4	24.7	1.7	1.7	43.2	0.0	34.0	49.7	0.0	32.3
Incr Delay (d2), s/veh	10.6	0.0	18.7	13.4	4.4	4.2	8.7	0.0	18.5	12.3	0.0	7.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	23.9	0.0	22.1	3.9	4.5	4.6	9.0	0.0	19.5	5.7	0.0	13.7
LnGrp Delay(d),s/veh	41.8	0.0	50.2	38.1	6.1	6.0	51.9	0.0	52.5	62.1	0.0	39.6
LnGrp LOS	D		D	D	A	A	D		D	E		D
Approach Vol, veh/h		1013			1065			550			391	
Approach Delay, s/veh		45.6			8.7			52.3			44.7	
Approach LOS		D			A			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.7	42.8		57.6	11.6	40.9	9.5	48.1				
Change Period (Y+Rc), s	5.6	5.6		* 5.6	5.6	5.6	5.5	5.6				
Max Green Setting (Gmax), s	4.1	37.2		* 52	6.0	35.3	4.0	42.4				
Max Q Clear Time (g_c+I1), s	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				33.7								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
8: Lafayette Blvd & Colfax Ave

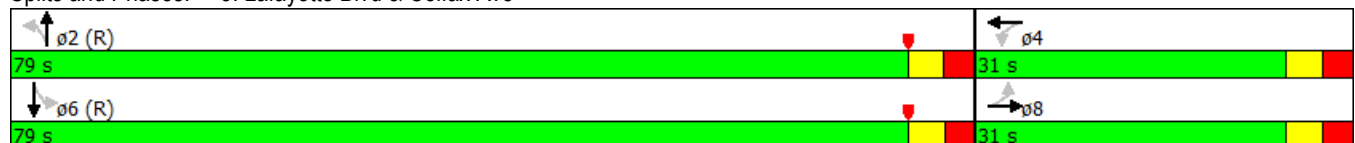
2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	172	8	45	139	39	25	429	49	11	573	34
Future Volume (vph)	14	172	8	45	139	39	25	429	49	11	573	34
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	200		0	190		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30				30
Link Distance (ft)		682			438			495				495
Travel Time (s)		18.6			11.9			11.3				11.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)					5	5		5	5		5	5
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2			6		
Minimum Split (s)	28.6	28.6		28.6	28.6		28.6	28.6		25.5	25.5	
Total Split (s)	31.0	31.0		31.0	31.0		79.0	79.0		79.0	79.0	
Total Split (%)	28.2%	28.2%		28.2%	28.2%		71.8%	71.8%		71.8%	71.8%	
Maximum Green (s)	25.4	25.4		25.4	25.4		73.4	73.4		73.5	73.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.6	2.6		2.5	2.5	
Lost Time Adjust (s)		0.0		0.0	0.0		-1.0	0.0		0.0	0.0	
Total Lost Time (s)		5.6		5.6	5.6		4.6	5.6		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		16.0	16.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 105 (95%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Pretimed

Splits and Phases: 8: Lafayette Blvd & Colfax Ave
























HCM 2010 Signalized Intersection Summary
 8: Lafayette Blvd & Colfax Ave

2038 2-way
 Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	172	8	45	139	39	25	429	49	11	573	34
Future Volume (veh/h)	14	172	8	45	139	39	25	429	49	11	573	34
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1710	1644	1710	1644	1644	1710	1583	1583	1710	1583	1583	1710
Adj Flow Rate, veh/h	15	187	9	49	151	42	27	466	53	12	623	37
Adj No. of Lanes	0	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	48	341	16	246	250	70	509	816	93	564	864	51
Arrive On Green	0.23	0.23	0.23	0.46	0.46	0.46	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	54	1478	68	1043	1084	302	656	1222	139	747	1295	77
Grp Volume(v), veh/h	211	0	0	49	0	193	27	0	519	12	0	660
Grp Sat Flow(s),veh/h/ln	1601	0	0	1043	0	1385	656	0	1361	747	0	1372
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	12.6	0.0	0.0	7.0	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.07		0.04	1.00		0.22	1.00		0.10	1.00		0.06
Lane Grp Cap(c), veh/h	404	0	0	246	0	320	509	0	908	564	0	916
V/C Ratio(X)	0.52	0.00	0.00	0.20	0.00	0.60	0.05	0.00	0.57	0.02	0.00	0.72
Avail Cap(c_a), veh/h	404	0	0	246	0	320	509	0	908	564	0	916
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.4	0.0	0.0	24.7	0.0	25.9	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.8	0.0	0.0	1.8	0.0	8.2	0.2	0.0	2.6	0.1	0.0	4.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.3	0.0	0.0	2.0	0.0	8.7	0.1	0.0	1.2	0.0	0.0	2.2
LnGrp Delay(d),s/veh	42.2	0.0	0.0	26.5	0.0	34.1	0.2	0.0	2.6	0.1	0.0	4.9
LnGrp LOS	D			C		C	A		A	A		A
Approach Vol, veh/h		211			242			546				672
Approach Delay, s/veh		42.2			32.6			2.5				4.8
Approach LOS		D			C			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		79.1		31.0		79.1		31.0				
Change Period (Y+Rc), s		5.6		5.6		* 5.6		5.6				
Max Green Setting (Gmax), s		73.4		25.4		* 74		25.4				
Max Q Clear Time (g_c+I1), s		2.0		13.5		2.0		14.6				
Green Ext Time (p_c), s		7.1		1.6		7.1		1.5				
Intersection Summary												
HCM 2010 Ctrl Delay			12.8									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 9: Lafayette Blvd & Washington St

2038 2-way
 Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	37	69	5	20	62	8	416	6	14	570	31
Future Volume (vph)	1	37	69	5	20	62	8	416	6	14	570	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	75		0	245		0	175		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			50			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		680			438			495			495	
Travel Time (s)		18.5			11.9			11.3			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)					0	0		10	10		0	0
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	



















Intersection Summary

Area Type: CBD

Control Type: Unsignalized

Lanes, Volumes, Timings
 10: Lafayette Blvd & Jefferson Blvd

2038 2-way
 Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	61	21	6	45	70	38	352	2	67	639	2
Future Volume (vph)	2	61	21	6	45	70	38	352	2	67	639	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	200		0	200		0	125		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		675			430			474			495	
Travel Time (s)		18.4			11.7			10.8			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		10	10		10	10		10	10		5	5
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	






















Intersection Summary

Area Type: CBD

Control Type: Unsignalized

Lanes, Volumes, Timings
11: Lafayette Blvd & Wayne St

2038 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	20	3	40	79	12	1	367	16	38	635	11
Future Volume (vph)	2	20	3	40	79	12	1	367	16	38	635	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	150		200	180		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		680			435			491			474	
Travel Time (s)		18.5			11.9			11.2			10.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		0	0		0	0		0	0		0	0
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: CBD

Control Type: Unsignalized

Lanes, Volumes, Timings
12: Lafayette Blvd & Western Ave

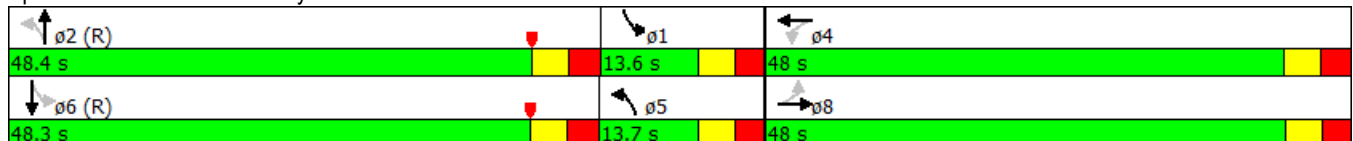
2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	364	113	11	526	3	112	381	0	78	481	29
Future Volume (vph)	17	364	113	11	526	3	112	381	0	78	481	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	285		0	200		0	180		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		680			435			520			491	
Travel Time (s)		18.5			11.9			11.8			11.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		0	0		0	0		0	0		0	0
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	28.5	28.5		29.6	29.6		13.6	28.6		13.6	28.6	
Total Split (s)	48.0	48.0		48.0	48.0		13.7	48.4		13.6	48.3	
Total Split (%)	43.6%	43.6%		43.6%	43.6%		12.5%	44.0%		12.4%	43.9%	
Maximum Green (s)	42.5	42.5		42.4	42.4		8.1	42.8		8.0	42.7	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.6	2.6		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.6	5.6		5.6	5.6		5.6	5.6	
Lead/Lag							Lag	Lead		Lag	Lead	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	16.0	16.0		17.0	17.0			16.0			16.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 47 (43%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Pretimed

Splits and Phases: 12: Lafayette Blvd & Western Ave






















HCM 2010 Signalized Intersection Summary
 12: Lafayette Blvd & Western Ave

2038 2-way
 Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	364	113	11	526	3	112	381	0	78	481	29
Future Volume (veh/h)	17	364	113	11	526	3	112	381	0	78	481	29
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	0.90	1.00	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1759	1759	1900	1759	1759	1900
Adj Flow Rate, veh/h	18	396	123	12	572	3	122	414	0	85	523	32
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	164	465	144	139	631	3	219	616	0	430	573	35
Arrive On Green	0.39	0.39	0.39	0.77	0.77	0.77	0.15	0.78	0.00	0.02	0.13	0.13
Sat Flow, veh/h	818	1204	374	862	1634	9	1675	1583	0	1675	1477	90
Grp Volume(v), veh/h	18	0	519	12	0	575	122	414	0	85	0	555
Grp Sat Flow(s),veh/h/ln	818	0	1578	862	0	1643	1675	1583	0	1675	0	1567
Q Serve(g_s), s	2.2	0.0	33.1	1.3	0.0	29.3	0.6	13.4	0.0	0.0	0.0	38.5
Cycle Q Clear(g_c), s	31.5	0.0	33.1	34.4	0.0	29.3	0.6	13.4	0.0	0.0	0.0	38.5
Prop In Lane	1.00		0.24	1.00		0.01	1.00		0.00	1.00		0.06
Lane Grp Cap(c), veh/h	164	0	609	139	0	634	219	616	0	430	0	608
V/C Ratio(X)	0.11	0.00	0.85	0.09	0.00	0.91	0.56	0.67	0.00	0.20	0.00	0.91
Avail Cap(c_a), veh/h	164	0	609	139	0	634	219	616	0	430	0	608
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.6	0.0	30.9	25.8	0.0	11.0	43.0	9.0	0.0	28.1	0.0	46.2
Incr Delay (d2), s/veh	1.4	0.0	14.0	1.2	0.0	19.0	9.8	5.8	0.0	1.0	0.0	20.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	0.0	23.5	0.6	0.0	22.3	6.8	10.7	0.0	3.8	0.0	27.5
LnGrp Delay(d),s/veh	44.9	0.0	45.0	27.0	0.0	30.0	52.8	14.8	0.0	29.1	0.0	66.6
LnGrp LOS	D		D	C		C	D	B		C		E
Approach Vol, veh/h		537			587			536			640	
Approach Delay, s/veh		45.0			30.0			23.4			61.6	
Approach LOS		D			C			C			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	13.6	48.4		48.1	13.7	48.3		48.1				
Change Period (Y+Rc), s	5.6	5.6		5.6	5.6	5.6		* 5.6				
Max Green Setting (Gmax), s	8.0	42.8		42.4	8.1	42.7		* 43				
Max Q Clear Time (g_c+I1), s	0.0	0.0		0.0	0.0	0.0		0.0				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				40.8								
HCM 2010 LOS				D								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 13: Lafayette Blvd & Monroe St

2038 2-way
 Timing Plan: PM


















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	66	0	207	0	290	61	257	335	0
Future Volume (vph)	0	0	0	66	0	207	0	290	61	257	335	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	150		0	200		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	25			50			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		190			440			490			520	
Travel Time (s)		5.2			12.0			11.1			11.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)						5		0	0		0	0
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Lanes, Volumes, Timings
 14: Lafayette Blvd & South St

2038 2-way
 Timing Plan: PM




















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	0	20	3	27	44	26	293	1	15	366	19
Future Volume (vph)	14	0	20	3	27	44	26	293	1	15	366	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	250		0	225		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	50			50			100			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		902			435			480			490	
Travel Time (s)		24.6			11.9			10.9			11.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)					0	0					0	0
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Lanes, Volumes, Timings
15: Lafayette Blvd & Sample St

2038 2-way
Timing Plan: PM

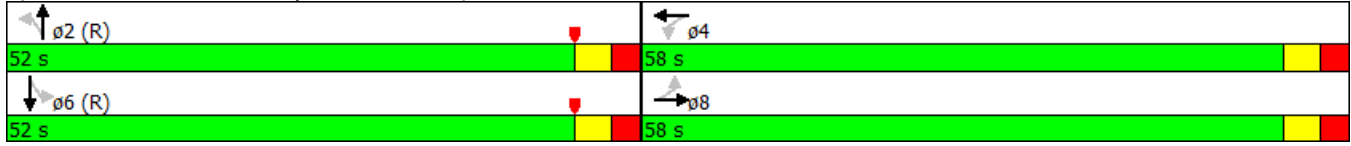
												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	82	670	61	1	797	24	148	204	24	58	171	171
Future Volume (vph)	82	670	61	1	797	24	148	204	24	58	171	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	100		0	150		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	75			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30				30
Link Distance (ft)		490			437			457				1160
Travel Time (s)		13.4			11.9			10.4				26.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		20.0	20.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	29.5	29.5		28.3	28.3		28.1	28.1		28.1	28.1	
Total Split (s)	58.0	58.0		58.0	58.0		52.0	52.0		52.0	52.0	
Total Split (%)	52.7%	52.7%		52.7%	52.7%		47.3%	47.3%		47.3%	47.3%	
Maximum Green (s)	52.5	52.5		52.5	52.5		46.5	46.5		46.5	46.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0			0.0		-1.0	0.0		-1.0	0.0	
Total Lost Time (s)	5.5	5.5			5.5		4.5	5.5		4.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2		0.2	0.2		2.5	2.5		2.5	2.5	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	17.0	17.0		14.0	14.0		14.0	14.0		14.0	14.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Intersection Summary												
Area Type:	Other											
Cycle Length:	110											

Lanes, Volumes, Timings
15: Lafayette Blvd & Sample St

2038 2-way
Timing Plan: PM





















Actuated Cycle Length: 110
Offset: 107 (97%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 15: Lafayette Blvd & Sample St



















HCM 2010 Signalized Intersection Summary
 15: Lafayette Blvd & Sample St

2038 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	670	61	1	797	24	148	204	24	58	171	171
Future Volume (veh/h)	82	670	61	1	797	24	148	204	24	58	171	171
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1900	1900	1759	1900	1759	1759	1900	1759	1759	1900
Adj Flow Rate, veh/h	89	728	66	1	866	26	161	222	26	63	186	186
Adj No. of Lanes	1	2	0	0	2	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	169	1086	98	33	1137	34	569	850	100	581	444	444
Arrive On Green	0.35	0.35	0.35	0.72	0.70	0.70	0.56	0.55	0.55	0.93	0.92	0.92
Sat Flow, veh/h	587	3100	281	1	3244	97	950	1546	181	1065	808	808
Grp Volume(v), veh/h	89	392	402	470	0	423	161	0	248	63	0	372
Grp Sat Flow(s),veh/h/ln	587	1671	1710	1758	0	1584	950	0	1727	1065	0	1617
Q Serve(g_s), s	16.2	21.9	21.9	0.0	0.0	18.9	10.5	0.0	8.3	1.4	0.0	3.4
Cycle Q Clear(g_c), s	35.4	21.9	21.9	18.4	0.0	18.9	13.7	0.0	8.3	9.6	0.0	3.4
Prop In Lane	1.00		0.16	0.00		0.06	1.00		0.10	1.00		0.50
Lane Grp Cap(c), veh/h	169	586	599	662	0	555	569	0	949	581	0	889
V/C Ratio(X)	0.53	0.67	0.67	0.71	0.00	0.76	0.28	0.00	0.26	0.11	0.00	0.42
Avail Cap(c_a), veh/h	243	798	816	884	0	756	569	0	949	581	0	889
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	1.00	1.00	0.71	0.00	0.71	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.0	30.3	30.3	13.5	0.0	13.5	14.6	0.0	13.0	2.8	0.0	2.2
Incr Delay (d2), s/veh	0.9	0.5	0.5	0.7	0.0	1.4	1.2	0.0	0.7	0.4	0.0	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.8	15.5	15.8	12.6	0.0	12.2	5.3	0.0	7.4	0.8	0.0	3.1
LnGrp Delay(d),s/veh	45.0	30.8	30.8	14.1	0.0	14.9	15.9	0.0	13.7	3.2	0.0	3.6
LnGrp LOS	D	C	C	B		B	B		B	A		A
Approach Vol, veh/h		883			893			409			435	
Approach Delay, s/veh		32.3			14.5			14.6			3.6	
Approach LOS		C			B			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		66.2		43.8		66.2		43.8				
Change Period (Y+Rc), s		5.5		5.5		5.5		5.5				
Max Green Setting (Gmax), s		46.5		52.5		46.5		52.5				
Max Q Clear Time (g_c+I1), s		15.7		20.9		11.6		37.4				
Green Ext Time (p_c), s		3.4		0.7		3.5		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				18.7								
HCM 2010 LOS				B								

Lanes, Volumes, Timings
16: Main St & Bartlett St

2038 2-way
Timing Plan: PM













												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	320	39	54	284	18	37	2	34	10	8	9
Future Volume (vph)	4	320	39	54	284	18	37	2	34	10	8	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	75		0	0		0	0		0
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		377			472			172			391	
Travel Time (s)		8.6			10.7			4.7			10.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		5	5		5	5						
Shared Lane Traffic (%)												
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized




















Lanes, Volumes, Timings
17: Main St & Marion St

2038 2-way
Timing Plan: PM

						
Lane Group	SEL	SER	NEL	NET	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	23	46	20	527	426	19
Future Volume (vph)	23	46	20	527	426	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	100			0
Storage Lanes	1	1	1			0
Taper Length (ft)	50		50			
Link Speed (mph)	30			30	25	
Link Distance (ft)	192			437	345	
Travel Time (s)	4.4			9.9	9.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	
Intersection Summary						
Area Type:	CBD					
Control Type:	Unsignalized					

Lanes, Volumes, Timings
18: Main St & Madison St

2038 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	37	23	16	33	0	10	559	41	1	477	29
Future Volume (vph)	17	37	23	16	33	0	10	559	41	1	477	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	150		0	100		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		434			433			485			437	
Travel Time (s)		11.8			11.8			11.0			9.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		3	3	3	3	3		5	5			
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	


























Intersection Summary

Area Type: CBD

Control Type: Unsignalized

Lanes, Volumes, Timings
19: Main St & LaSalle Ave#

2038 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (vph)	16	710	89	47	935	12	17	605	137	6	513	24
Future Volume (vph)	16	710	89	47	935	12	17	605	137	6	513	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	11	11	11	11	11	11	11	11
Storage Length (ft)	150		150	100		0	250		200	150		0
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	50			75			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		440			437			495			485	
Travel Time (s)		12.0			11.9			11.3			11.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)								5	5		3	3
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	50
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2		2	6		6
Detector Phase	8	8		4	4		2	2	2	6	6	6
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0	10.0	10.0	10.0	10.0
Minimum Split (s)	30.0	30.0		36.0	36.0		32.1	32.1	32.1	33.8	33.8	33.8
Total Split (s)	46.0	46.0		46.0	46.0		64.0	64.0	64.0	64.0	64.0	64.0
Total Split (%)	41.8%	41.8%		41.8%	41.8%		58.2%	58.2%	58.2%	58.2%	58.2%	58.2%
Maximum Green (s)	40.3	40.3		40.1	40.1		57.9	57.9	57.9	58.1	58.1	58.1
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
All-Red Time (s)	2.7	2.7		2.9	2.9		3.1	3.1	3.1	2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	-1.0	0.0	0.0
Total Lost Time (s)	5.7	5.7		5.9	5.9		6.1	6.1	6.1	4.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2	0.2	0.2	0.2	0.2
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	7.0
Flash Dont Walk (s)	16.0	16.0		23.0	23.0		19.0	19.0	19.0	20.0	20.0	20.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	0

Intersection Summary

Lanes, Volumes, Timings
 19: Main St & LaSalle Ave#

2038 2-way
 Timing Plan: PM























Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 89 (81%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 19: Main St & LaSalle Ave#



HCM 2010 Signalized Intersection Summary
 19: Main St & LaSalle Ave#

2038 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	710	89	47	935	12	17	605	137	6	513	24
Future Volume (veh/h)	16	710	89	47	935	12	17	605	137	6	513	24
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1583	1583	1583	1583	1583	1583
Adj Flow Rate, veh/h	17	772	97	51	1016	13	18	658	149	7	558	26
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	90	1023	129	178	1157	15	372	1013	753	434	1013	762
Arrive On Green	0.73	0.73	0.73	0.12	0.12	0.12	1.00	1.00	1.00	0.65	0.64	0.64
Sat Flow, veh/h	482	2793	351	560	3159	40	703	1583	1178	572	1583	1191
Grp Volume(v), veh/h	17	432	437	51	502	527	18	658	149	7	558	26
Grp Sat Flow(s),veh/h/ln	482	1562	1582	560	1562	1637	703	1583	1178	572	1583	1191
Q Serve(g_s), s	3.8	18.2	18.2	9.6	34.8	34.8	0.9	0.0	0.0	0.5	21.6	0.9
Cycle Q Clear(g_c), s	38.6	18.2	18.2	27.8	34.8	34.8	23.4	0.0	0.0	0.9	21.6	0.9
Prop In Lane	1.00		0.22	1.00		0.02	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	90	572	580	178	572	600	372	1013	753	434	1013	762
V/C Ratio(X)	0.19	0.75	0.75	0.29	0.88	0.88	0.05	0.65	0.20	0.02	0.55	0.03
Avail Cap(c_a), veh/h	90	572	580	178	572	600	372	1013	753	434	1013	762
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.34	0.34	0.34	0.26	0.26	0.26	0.56	0.56	0.56	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	11.7	11.7	51.6	45.9	45.9	3.7	0.0	0.0	7.0	11.0	7.3
Incr Delay (d2), s/veh	0.1	1.7	1.7	0.1	4.2	4.0	0.1	1.8	0.3	0.1	2.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	10.3	10.4	2.5	19.1	19.9	0.3	0.9	0.1	0.2	15.1	0.6
LnGrp Delay(d),s/veh	31.4	13.5	13.5	51.7	50.1	49.9	3.9	1.8	0.3	7.1	13.2	7.4
LnGrp LOS	C	B	B	D	D	D	A	A	A	A	B	A
Approach Vol, veh/h		886			1080			825			591	
Approach Delay, s/veh		13.8			50.1			1.6			12.9	
Approach LOS		B			D			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		76.8		46.2		76.8		46.2				
Change Period (Y+Rc), s		6.1		5.9		* 6.1		* 5.9				
Max Green Setting (Gmax), s		57.9		40.1		* 58		* 40				
Max Q Clear Time (g_c+I1), s		25.4		36.8		23.6		40.6				
Green Ext Time (p_c), s		0.4		0.6		0.4		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				22.3								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
20: Main St & Colfax Ave

2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	115	109	37	57	227	20	13	681	105	5	634	8
Future Volume (vph)	115	109	37	57	227	20	13	681	105	5	634	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	100		100	100		150	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		438			440			490			495	
Travel Time (s)		11.9			12.0			11.1			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		5	5		10	10		5	5		10	10
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2		2	6		
Minimum Split (s)	29.0	29.0		29.0	29.0		28.0	28.0	28.0	28.0	28.0	
Total Split (s)	35.0	35.0		35.0	35.0		75.0	75.0	75.0	75.0	75.0	
Total Split (%)	31.8%	31.8%		31.8%	31.8%		68.2%	68.2%	68.2%	68.2%	68.2%	
Maximum Green (s)	29.3	29.3		29.1	29.1		69.5	69.5	69.5	69.5	69.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.7	2.7		2.9	2.9		2.5	2.5	2.5	2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	-1.0	0.0	
Total Lost Time (s)	5.7	5.7		5.9	5.9		5.5	5.5	5.5	4.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		11.0	11.0		11.0	11.0	11.0	10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	

Intersection Summary























Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 101 (92%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 20: Main St & Colfax Ave



HCM 2010 Signalized Intersection Summary
 20: Main St & Colfax Ave

2038 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	115	109	37	57	227	20	13	681	105	5	634	8
Future Volume (veh/h)	115	109	37	57	227	20	13	681	105	5	634	8
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.85	1.00	1.00	0.88	1.00	1.00	0.85
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1759	1759	1759	1759	1759	1900
Adj Flow Rate, veh/h	125	118	40	62	247	22	14	740	114	5	689	9
Adj No. of Lanes	1	1	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	193	304	103	301	374	33	509	1110	825	454	929	12
Arrive On Green	0.44	0.44	0.44	0.35	0.35	0.35	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1085	1143	387	1200	1406	125	703	1759	1308	608	1473	19
Grp Volume(v), veh/h	125	0	158	62	0	269	14	740	114	5	0	698
Grp Sat Flow(s),veh/h/ln	1085	0	1530	1200	0	1531	703	1759	1308	608	0	1492
Q Serve(g_s), s	12.6	0.0	7.6	4.5	0.0	16.3	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	29.0	0.0	7.6	12.2	0.0	16.3	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.25	1.00		0.08	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	193	0	407	301	0	407	509	1110	825	454	0	941
V/C Ratio(X)	0.65	0.00	0.39	0.21	0.00	0.66	0.03	0.67	0.14	0.01	0.00	0.74
Avail Cap(c_a), veh/h	193	0	407	301	0	407	509	1110	825	454	0	941
HCM Platoon Ratio	1.67	1.67	1.67	1.33	1.33	1.33	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.7	0.0	24.6	33.1	0.0	31.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	15.6	0.0	2.8	1.5	0.0	8.2	0.1	3.2	0.3	0.0	0.0	5.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.1	0.0	6.3	2.9	0.0	12.3	0.0	1.8	0.1	0.0	0.0	2.5
LnGrp Delay(d),s/veh	54.3	0.0	27.4	34.7	0.0	39.6	0.1	3.2	0.3	0.0	0.0	5.3
LnGrp LOS	D		C	C		D	A	A	A	A		A
Approach Vol, veh/h		283			331			868			703	
Approach Delay, s/veh		39.3			38.7			2.8			5.2	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		75.0		35.2		75.0		35.2				
Change Period (Y+Rc), s		5.5		5.9		5.5		* 5.9				
Max Green Setting (Gmax), s		69.5		29.1		69.5		* 29				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				13.7								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
21: Main St & Washington St

2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	51	5	13	74	29	11	741	12	55	657	1
Future Volume (vph)	1	51	5	13	74	29	11	741	12	55	657	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	100		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			75			50			50		
Right Turn on Red			Yes			Yes			Yes			No
Link Speed (mph)		25			25			30				30
Link Distance (ft)		438			437			495				490
Travel Time (s)		11.9			11.9			11.3				11.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		5	5		5	5		5	5		3	3
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	24.6	24.6		24.6	24.6		25.3	25.3		25.6	25.6	
Total Split (s)	24.6	24.6		24.6	24.6		85.4	85.4		85.4	85.4	
Total Split (%)	22.4%	22.4%		22.4%	22.4%		77.6%	77.6%		77.6%	77.6%	
Maximum Green (s)	19.0	19.0		19.0	19.0		80.1	80.1		79.8	79.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.3	2.3		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		-1.2	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6		5.3	5.3		4.4	5.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: CBD

Lanes, Volumes, Timings
21: Main St & Washington St

2038 2-way
Timing Plan: PM






















Cycle Length: 110
Actuated Cycle Length: 110
Offset: 99 (90%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 21: Main St & Washington St



HCM 2010 Signalized Intersection Summary
 21: Main St & Washington St

2038 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	51	5	13	74	29	11	741	12	55	657	1
Future Volume (veh/h)	1	51	5	13	74	29	11	741	12	55	657	1
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1583	1583	1710	1583	1583	1710
Adj Flow Rate, veh/h	1	55	5	14	80	32	12	805	13	60	714	1
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	91	133	12	139	100	40	561	1082	17	522	1113	2
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1126	1300	118	1180	978	391	623	1360	22	566	1399	2
Grp Volume(v), veh/h	1	0	60	14	0	112	12	0	818	60	0	715
Grp Sat Flow(s),veh/h/ln	1126	0	1418	1180	0	1370	623	0	1382	566	0	1401
Q Serve(g_s), s	0.1	0.0	4.4	1.2	0.0	8.8	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.9	0.0	4.4	5.6	0.0	8.8	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.08	1.00		0.29	1.00		0.02	1.00		0.00
Lane Grp Cap(c), veh/h	91	0	145	139	0	140	561	0	1099	522	0	1115
V/C Ratio(X)	0.01	0.00	0.41	0.10	0.00	0.80	0.02	0.00	0.74	0.11	0.00	0.64
Avail Cap(c_a), veh/h	170	0	245	223	0	237	561	0	1099	522	0	1115
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.46	0.00	0.46	0.62	0.00	0.62
Uniform Delay (d), s/veh	52.6	0.0	46.3	48.9	0.0	48.3	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	1.9	0.3	0.0	9.9	0.0	0.0	2.1	0.3	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	3.2	0.7	0.0	6.7	0.0	0.0	1.2	0.1	0.0	1.0
LnGrp Delay(d),s/veh	52.7	0.0	48.1	49.2	0.0	58.2	0.0	0.0	2.1	0.3	0.0	1.8
LnGrp LOS	D		D	D		E	A		A	A		A
Approach Vol, veh/h		61			126			830			775	
Approach Delay, s/veh		48.2			57.2			2.1			1.7	
Approach LOS		D			E			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		93.1		16.9		93.1		16.9				
Change Period (Y+Rc), s		* 5.6		5.6		5.6		5.6				
Max Green Setting (Gmax), s		* 80		19.0		79.8		19.0				
Max Q Clear Time (g_c+I1), s		2.0		10.8		2.0		10.9				
Green Ext Time (p_c), s		12.1		0.4		12.1		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			7.4									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
22: Main St & Jefferson Blvd

2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	123	30	23	103	26	5	737	25	0	666	9
Future Volume (vph)	1	123	30	23	103	26	5	737	25	0	666	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	150		0	150		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30				30
Link Distance (ft)		430			440			470				495
Travel Time (s)		11.7			12.0			10.7				11.3
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)								5	5		3	3
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	25.6	25.6		24.5	24.5		35.5	35.5		35.5	35.5	
Total Split (s)	26.0	26.0		26.0	26.0		84.0	84.0		84.0	84.0	
Total Split (%)	23.6%	23.6%		23.6%	23.6%		76.4%	76.4%		76.4%	76.4%	
Maximum Green (s)	20.4	20.4		20.5	20.5		78.7	78.7		78.7	78.7	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.5	2.5		2.3	2.3		2.3	2.3	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		-1.0	0.0	
Total Lost Time (s)		5.6			5.5		5.3	5.3		4.3	5.3	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: CBD

Lanes, Volumes, Timings
 22: Main St & Jefferson Blvd

2038 2-way
 Timing Plan: PM













Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 101 (92%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 22: Main St & Jefferson Blvd



HCM 2010 Signalized Intersection Summary
 22: Main St & Jefferson Blvd

2038 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	1	123	30	23	103	26	5	737	25	0	666	9
Future Volume (veh/h)	1	123	30	23	103	26	5	737	25	0	666	9
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1710	1644	1710	1710	1644	1710	1583	1583	1710	1583	1583	1710
Adj Flow Rate, veh/h	1	134	33	25	112	28	5	801	27	0	724	10
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	33	166	41	58	143	33	537	1028	35	65	1063	15
Arrive On Green	0.13	0.13	0.13	0.14	0.13	0.13	1.00	1.00	1.00	0.00	1.00	1.00
Sat Flow, veh/h	2	1276	312	153	1104	257	612	1333	45	561	1379	19
Grp Volume(v), veh/h	168	0	0	165	0	0	5	0	828	0	0	734
Grp Sat Flow(s),veh/h/ln	1590	0	0	1514	0	0	612	0	1377	561	0	1398
Q Serve(g_s), s	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	11.3	0.0	0.0	11.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.01		0.20	0.15		0.17	1.00		0.03	1.00		0.01
Lane Grp Cap(c), veh/h	239	0	0	251	0	0	537	0	1062	65	0	1078
V/C Ratio(X)	0.70	0.00	0.00	0.66	0.00	0.00	0.01	0.00	0.78	0.00	0.00	0.68
Avail Cap(c_a), veh/h	328	0	0	334	0	0	537	0	1062	65	0	1078
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.54	0.00	0.54	0.00	0.00	0.69
Uniform Delay (d), s/veh	46.6	0.0	0.0	46.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	4.1	0.0	0.0	2.9	0.0	0.0	0.0	0.0	3.1	0.0	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.0	0.0	0.0	8.6	0.0	0.0	0.0	0.0	1.7	0.0	0.0	1.3
LnGrp Delay(d),s/veh	50.6	0.0	0.0	49.4	0.0	0.0	0.0	0.0	3.1	0.0	0.0	2.4
LnGrp LOS	D			D			A		A			A
Approach Vol, veh/h		168			165			833				734
Approach Delay, s/veh		50.6			49.4			3.1				2.4
Approach LOS		D			D			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		90.1		19.9		90.1		19.9				
Change Period (Y+Rc), s		* 5.3		* 5.6		* 5.3		5.6				
Max Green Setting (Gmax), s		* 79		* 21		* 79		20.4				
Max Q Clear Time (g_c+I1), s		2.0		13.5		2.0		13.3				
Green Ext Time (p_c), s		11.0		0.8		11.0		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				11.1								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
23: Main St & Wayne St

2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	38	34	19	122	10	9	724	10	29	712	0
Future Volume (vph)	1	38	34	19	122	10	9	724	10	29	712	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		0	150		0	150		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		435			445			495			470	
Travel Time (s)		11.9			12.1			11.3			10.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		5	5		5	5		5	5		5	5
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	24.6	24.6		24.5	24.5		27.0	27.0		27.0	27.0	
Total Split (s)	24.6	24.6		24.6	24.6		85.4	85.4		85.4	85.4	
Total Split (%)	22.4%	22.4%		22.4%	22.4%		77.6%	77.6%		77.6%	77.6%	
Maximum Green (s)	19.0	19.0		19.1	19.1		79.8	79.8		79.8	79.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.5	2.5		2.6	2.6		2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		-1.0	0.0	
Total Lost Time (s)	5.6	5.6		5.5	5.5		5.6	5.6		4.6	5.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2		0.2	0.2	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: CBD

Lanes, Volumes, Timings
 23: Main St & Wayne St

2038 2-way
 Timing Plan: PM

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 91 (83%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 23: Main St & Wayne St



HCM 2010 Signalized Intersection Summary
 23: Main St & Wayne St

2038 2-way
 Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	38	34	19	122	10	9	724	10	29	712	0
Future Volume (veh/h)	1	38	34	19	122	10	9	724	10	29	712	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	0.88	1.00	0.88	1.00
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1583	1583	1710	1583	1583	1710
Adj Flow Rate, veh/h	1	41	37	21	133	11	10	787	11	32	774	0
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	87	83	75	140	156	13	525	1062	15	520	1080	0
Arrive On Green	0.12	0.12	0.12	0.12	0.12	0.12	1.00	1.00	1.00	1.00	1.00	0.00
Sat Flow, veh/h	1094	698	630	1161	1311	108	590	1363	19	576	1385	0
Grp Volume(v), veh/h	1	0	78	21	0	144	10	0	798	32	774	0
Grp Sat Flow(s),veh/h/ln	1094	0	1328	1161	0	1420	590	0	1382	576	1385	0
Q Serve(g_s), s	0.1	0.0	6.0	1.9	0.0	10.9	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	11.0	0.0	6.0	7.9	0.0	10.9	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.47	1.00		0.08	1.00		0.01	1.00		0.00
Lane Grp Cap(c), veh/h	87	0	158	140	0	169	525	0	1077	520	1080	0
V/C Ratio(X)	0.01	0.00	0.49	0.15	0.00	0.85	0.02	0.00	0.74	0.06	0.72	0.00
Avail Cap(c_a), veh/h	146	0	229	203	0	246	525	0	1077	520	1080	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	0.98	0.00	0.98	0.35	0.00	0.35	0.62	0.62	0.00
Uniform Delay (d), s/veh	52.9	0.0	45.4	49.1	0.0	47.5	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.9	0.2	0.0	12.1	0.0	0.0	1.6	0.1	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	4.0	1.1	0.0	8.4	0.0	0.0	0.9	0.0	1.4	0.0
LnGrp Delay(d),s/veh	52.9	0.0	46.2	49.3	0.0	59.6	0.0	0.0	1.6	0.1	2.6	0.0
LnGrp LOS	D		D	D		E	A		A	A	A	
Approach Vol, veh/h		79			165			808			806	
Approach Delay, s/veh		46.3			58.3			1.6			2.5	
Approach LOS		D			E			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		91.3		18.7		91.3		18.7				
Change Period (Y+Rc), s		5.6		* 5.6		5.6		5.6				
Max Green Setting (Gmax), s		79.8		* 19		79.8		19.0				
Max Q Clear Time (g_c+I1), s		2.0		12.9		2.0		13.0				
Green Ext Time (p_c), s		0.5		0.1		0.5		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			8.9									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
24: Main St & Western Ave

2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	339	70	33	340	4	83	739	0	1	680	161
Future Volume (vph)	0	339	70	33	340	4	83	739	0	1	680	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	200		0	250		0	150		100
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	25			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		435			425			515			495	
Travel Time (s)		11.9			11.6			11.7			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)					5	5					0	0
Shared Lane Traffic (%)												
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8			4			2			6	
Permitted Phases	8		8	4			2			6		6
Minimum Split (s)	24.9	24.9	24.9	25.1	25.1		28.0	28.0		28.0	28.0	28.0
Total Split (s)	39.0	39.0	39.0	39.0	39.0		71.0	71.0		71.0	71.0	71.0
Total Split (%)	35.5%	35.5%	35.5%	35.5%	35.5%		64.5%	64.5%		64.5%	64.5%	64.5%
Maximum Green (s)	33.1	33.1	33.1	32.9	32.9		65.4	65.4		65.1	65.1	65.1
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.9	2.9	2.9	3.1	3.1		2.6	2.6		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0	0.0	-1.0	0.0		0.0	0.0		-1.0	0.0	0.0
Total Lost Time (s)	5.9	5.9	5.9	5.1	6.1		5.6	5.6		4.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	14.0	14.0		14.0	14.0		16.0	16.0	16.0
Pedestrian Calls (#/hr)	0	0	0	0	0		0	0		0	0	0

Intersection Summary

Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 4 (4%), Referenced to phase 2:NBT, Start of Green
 Natural Cycle: 90
 Control Type: Pretimed

Splits and Phases: 24: Main St & Western Ave



HCM 2010 Signalized Intersection Summary
 24: Main St & Western Ave

2038 2-way
 Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	339	70	33	340	4	83	739	0	1	680	161
Future Volume (veh/h)	0	339	70	33	340	4	83	739	0	1	680	161
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1644	1644	1644	1644	1644	1710	1583	1583	1710	1583	1583	1583
Adj Flow Rate, veh/h	0	368	76	36	370	4	90	803	0	1	739	175
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	65	493	419	187	426	5	371	937	0	410	937	717
Arrive On Green	0.00	0.60	0.60	0.10	0.10	0.10	1.00	1.00	0.00	1.00	1.00	1.00
Sat Flow, veh/h	887	1644	1398	831	1421	15	517	1583	0	574	1583	1211
Grp Volume(v), veh/h	0	368	76	36	0	374	90	803	0	1	739	175
Grp Sat Flow(s),veh/h/ln	887	1644	1398	831	0	1436	517	1583	0	574	1583	1211
Q Serve(g_s), s	0.0	17.9	2.7	4.6	0.0	28.4	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	17.9	2.7	22.6	0.0	28.4	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.00	1.00		1.00
Lane Grp Cap(c), veh/h	65	493	419	187	0	430	371	937	0	410	937	717
V/C Ratio(X)	0.00	0.75	0.18	0.19	0.00	0.87	0.24	0.86	0.00	0.00	0.79	0.24
Avail Cap(c_a), veh/h	65	493	419	187	0	430	371	937	0	410	937	717
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	19.1	16.1	53.1	0.0	47.7	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	9.9	1.0	2.3	0.0	20.6	1.5	10.0	0.0	0.0	6.7	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	14.3	2.0	2.1	0.0	19.8	0.3	4.7	0.0	0.0	3.1	0.3
LnGrp Delay(d),s/veh	0.0	29.0	17.0	55.4	0.0	68.3	1.5	10.0	0.0	0.0	6.7	0.8
LnGrp LOS		C	B	E		E	A	A		A	A	A
Approach Vol, veh/h		444			410			893			915	
Approach Delay, s/veh		27.0			67.2			9.1			5.6	
Approach LOS		C			E			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		71.3		39.2		71.3		39.2				
Change Period (Y+Rc), s		* 5.9		6.1		5.9		* 6.1				
Max Green Setting (Gmax), s		* 65		32.9		65.1		* 33				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				19.8								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
25: Main St & Monroe St

2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	310	4	37	261	236	11	585	50	165	603	0
Future Volume (vph)	4	310	4	37	261	236	11	585	50	165	603	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	200		0	200		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		440			440			490			515	
Travel Time (s)		12.0			12.0			11.1			11.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)			3									0
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	32.9	32.9		32.7	32.7		31.9	31.9		31.7	31.7	
Total Split (s)	44.0	44.0		44.0	44.0		66.0	66.0		66.0	66.0	
Total Split (%)	40.0%	40.0%		40.0%	40.0%		60.0%	60.0%		60.0%	60.0%	
Maximum Green (s)	38.1	38.1		38.3	38.3		60.1	60.1		60.3	60.3	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.9	2.9		2.7	2.7		2.9	2.9		2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		-1.0	0.0	
Total Lost Time (s)	5.9	5.9		5.7	5.7		5.9	5.9		4.7	5.7	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2		0.2	0.2		0.2	0.2		0.2	0.2	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	20.0	20.0		20.0	20.0		19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

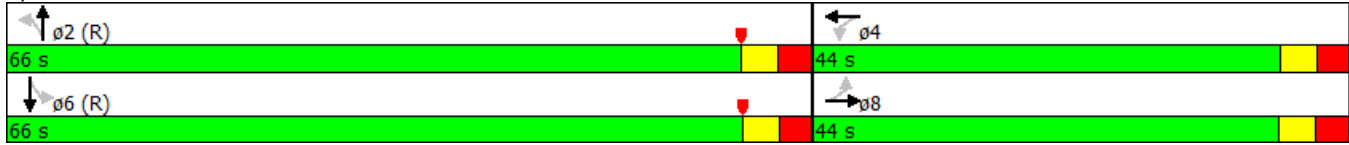
Area Type: Other

Lanes, Volumes, Timings
25: Main St & Monroe St

2038 2-way
Timing Plan: PM






















Cycle Length: 110
Actuated Cycle Length: 110
Offset: 71 (65%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 25: Main St & Monroe St





















HCM 2010 Signalized Intersection Summary
 25: Main St & Monroe St

2038 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	310	4	37	261	236	11	585	50	165	603	0
Future Volume (veh/h)	4	310	4	37	261	236	11	585	50	165	603	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1759	1759	1900	1759	1759	1900
Adj Flow Rate, veh/h	4	337	4	40	284	257	12	636	54	179	655	0
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	86	530	6	221	294	266	249	897	76	469	887	0
Arrive On Green	0.33	0.33	0.33	0.55	0.55	0.55	1.00	1.00	1.00	0.57	0.56	0.00
Sat Flow, veh/h	845	1595	19	1015	885	801	732	1599	136	708	1583	0
Grp Volume(v), veh/h	4	0	341	40	0	541	12	0	690	179	655	0
Grp Sat Flow(s),veh/h/ln	845	0	1613	1015	0	1686	732	0	1735	708	1583	0
Q Serve(g_s), s	0.5	0.0	19.7	3.5	0.0	33.9	1.0	0.0	0.0	16.0	34.1	0.0
Cycle Q Clear(g_c), s	34.4	0.0	19.7	23.1	0.0	33.9	35.1	0.0	0.0	16.0	34.1	0.0
Prop In Lane	1.00		0.01	1.00		0.48	1.00		0.08	1.00		0.00
Lane Grp Cap(c), veh/h	86	0	536	221	0	560	249	0	973	469	887	0
V/C Ratio(X)	0.05	0.00	0.64	0.18	0.00	0.97	0.05	0.00	0.71	0.38	0.74	0.00
Avail Cap(c_a), veh/h	98	0	559	237	0	587	249	0	973	469	887	0
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	0.51	0.00	0.51	0.88	0.00	0.88	0.48	0.48	0.00
Uniform Delay (d), s/veh	52.6	0.0	31.1	29.3	0.0	23.9	9.7	0.0	0.0	13.6	18.1	0.0
Incr Delay (d2), s/veh	0.1	0.0	1.6	0.1	0.0	18.3	0.3	0.0	3.8	1.1	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.2	0.0	13.9	1.7	0.0	23.4	0.4	0.0	1.9	5.3	19.8	0.0
LnGrp Delay(d),s/veh	52.7	0.0	32.7	29.4	0.0	42.2	10.0	0.0	3.8	14.8	20.8	0.0
LnGrp LOS	D		C	C		D	B		A	B	C	
Approach Vol, veh/h		345			581			702			834	
Approach Delay, s/veh		33.0			41.3			3.9			19.5	
Approach LOS		C			D			A			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		67.6		42.4		67.6		42.4				
Change Period (Y+Rc), s		5.9		* 5.9		* 5.9		5.9				
Max Green Setting (Gmax), s		60.1		* 38		* 60		38.1				
Max Q Clear Time (g_c+I1), s		37.1		35.9		36.1		36.4				
Green Ext Time (p_c), s		0.7		0.2		0.7		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				22.1								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
26: Main St & South St

2038 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	16	0	4	65	6	8	605	9	16	593	1
Future Volume (vph)	0	16	0	4	65	6	8	605	9	16	593	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		155	200		0
Storage Lanes	0		0	0		0	0		1	1		0
Taper Length (ft)	25			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		435			445			485			490	
Travel Time (s)		11.9			12.1			11.0			11.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)											3	3
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type		NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		4	4		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0	20.0	20.0	20.0	
Minimum Split (s)	29.9	29.9		31.9	31.9		25.6	25.6	25.6	26.5	26.5	
Total Split (s)	32.0	32.0		32.0	32.0		78.0	78.0	78.0	78.0	78.0	
Total Split (%)	29.1%	29.1%		29.1%	29.1%		70.9%	70.9%	70.9%	70.9%	70.9%	
Maximum Green (s)	26.1	26.1		26.1	26.1		72.4	72.4	72.4	72.5	72.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.6	2.6	2.6	2.5	2.5	
Lost Time Adjust (s)		0.0			0.0			0.0	0.0	-1.0	0.0	
Total Lost Time (s)		5.9			5.9			5.6	5.6	4.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	17.0	17.0		19.0	19.0		13.0	13.0	13.0	14.0	14.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings
 26: Main St & South St

2038 2-way
 Timing Plan: PM













Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 83 (75%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 26: Main St & South St





















HCM 2010 Signalized Intersection Summary
26: Main St & South St

2038 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↑	↗	↘	↖	↘
Traffic Volume (veh/h)	0	16	0	4	65	6	8	605	9	16	593	1
Future Volume (veh/h)	0	16	0	4	65	6	8	605	9	16	593	1
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.88
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1900	1759	1759	1759	1759	1900
Adj Flow Rate, veh/h	0	17	0	4	71	7	9	658	10	17	645	1
Adj No. of Lanes	0	1	0	0	1	0	0	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	0	158	0	38	138	13	39	1409	1210	657	1257	2
Arrive On Green	0.00	0.09	0.00	0.10	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	0	1827	0	41	1593	152	7	1742	1495	723	1554	2
Grp Volume(v), veh/h	0	17	0	82	0	0	667	0	10	17	0	646
Grp Sat Flow(s),veh/h/ln	0	1827	0	1786	0	0	1749	0	1495	723	0	1557
Q Serve(g_s), s	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.9	0.0	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.00		0.00	0.05		0.09	0.01		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	0	158	0	205	0	0	1448	0	1210	657	0	1259
V/C Ratio(X)	0.00	0.11	0.00	0.40	0.00	0.00	0.46	0.00	0.01	0.03	0.00	0.51
Avail Cap(c_a), veh/h	0	433	0	472	0	0	1448	0	1210	657	0	1259
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	0.00	1.00	0.00	1.00	0.00	0.00	0.88	0.00	0.88	0.72	0.00	0.72
Uniform Delay (d), s/veh	0.0	46.3	0.0	48.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.0	1.3	0.0	0.0	0.9	0.0	0.0	0.1	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.9	0.0	4.4	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.7
LnGrp Delay(d),s/veh	0.0	46.6	0.0	49.3	0.0	0.0	0.9	0.0	0.0	0.1	0.0	1.1
LnGrp LOS		D		D			A		A	A		A
Approach Vol, veh/h		17			82			677				663
Approach Delay, s/veh		46.6			49.3			0.9				1.1
Approach LOS		D			D			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		94.6		15.4		94.6		15.4				
Change Period (Y+Rc), s		5.6		5.9		* 5.6		5.9				
Max Green Setting (Gmax), s		72.4		26.1		* 73		26.1				
Max Q Clear Time (g_c+I1), s		2.0		6.8		2.0		2.9				
Green Ext Time (p_c), s		8.1		0.3		8.1		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay				4.3								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
27: Main St & Bronson St

2038 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	2	0	7	12	19	9	635	8	5	616	2
Future Volume (vph)	4	2	0	7	12	19	9	635	8	5	616	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		440			453			810			485	
Travel Time (s)		12.0			12.4			18.4			11.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template	Left	Thru			Thru		Left					
Leading Detector (ft)	20	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	33.7	33.7		28.9	28.9		24.9	24.9		25.3	25.3	
Total Split (s)	33.7	33.7		33.7	33.7		76.3	76.3		76.3	76.3	
Total Split (%)	30.6%	30.6%		30.6%	30.6%		69.4%	69.4%		69.4%	69.4%	
Maximum Green (s)	28.0	28.0		27.8	27.8		71.4	71.4		71.0	71.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.7	2.7		2.9	2.9		1.9	1.9		2.3	2.3	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		-0.6	0.0	
Total Lost Time (s)		5.7			5.9		4.9	4.9		4.7	5.3	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	21.0	21.0		16.0	16.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Intersection Summary												
Area Type:	Other											
Cycle Length:	110											

Lanes, Volumes, Timings
 27: Main St & Bronson St

2038 2-way
 Timing Plan: PM













Actuated Cycle Length: 110
 Offset: 99 (90%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 27: Main St & Bronson St
























HCM 2010 Signalized Intersection Summary
 27: Main St & Bronson St

2038 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	4	2	0	7	12	19	9	635	8	5	616	2
Future Volume (veh/h)	4	2	0	7	12	19	9	635	8	5	616	2
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1759	1759	1900	1759	1759	1900
Adj Flow Rate, veh/h	4	2	0	8	13	21	10	690	9	5	670	2
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	117	48	0	52	44	57	662	1435	19	651	1452	4
Arrive On Green	0.07	0.07	0.00	0.08	0.07	0.07	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	898	683	0	184	628	812	720	1733	23	702	1753	5
Grp Volume(v), veh/h	6	0	0	42	0	0	10	0	699	5	0	672
Grp Sat Flow(s),veh/h/ln	1581	0	0	1624	0	0	720	0	1755	702	0	1758
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.67		0.00	0.19		0.50	1.00		0.01	1.00		0.00
Lane Grp Cap(c), veh/h	165	0	0	167	0	0	662	0	1454	651	0	1456
V/C Ratio(X)	0.04	0.00	0.00	0.25	0.00	0.00	0.02	0.00	0.48	0.01	0.00	0.46
Avail Cap(c_a), veh/h	437	0	0	458	0	0	662	0	1454	651	0	1456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.99	0.00	0.00	1.00	0.00	1.00	0.85	0.00	0.85
Uniform Delay (d), s/veh	47.7	0.0	0.0	48.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.8	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.6
LnGrp Delay(d),s/veh	47.8	0.0	0.0	49.5	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.9
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		6			42			709			677	
Approach Delay, s/veh		47.8			49.5			1.1			0.9	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		96.4		13.6		96.4		13.6				
Change Period (Y+Rc), s		* 5.3		5.9		* 5.3		* 5.9				
Max Green Setting (Gmax), s		* 71		27.8		* 71		* 28				
Max Q Clear Time (g_c+I1), s		2.0		4.6		2.0		2.3				
Green Ext Time (p_c), s		8.6		0.1		8.6		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				2.6								
HCM 2010 LOS				A								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
28: Main St & Sample St

2038 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	680	53	158	804	41	0	545	95	49	558	18
Future Volume (vph)	17	680	53	158	804	41	0	545	95	49	558	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	100		385	100		225
Storage Lanes	1		0	1		0	1		1	1		1
Taper Length (ft)	25			75			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		437			457			1885			325	
Travel Time (s)		11.9			12.5			42.8			7.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	1
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	50
Trailing Detector (ft)	0	0		0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	0
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	50
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA		pm+pt	NA		Perm	NA		Perm	NA	Perm
Protected Phases		8		7	4			2			6	
Permitted Phases	8			4			2			6		6
Detector Phase	8	8		7	4		2	2		6	6	6
Switch Phase												
Minimum Initial (s)	20.0	20.0		8.0	20.0		20.0	20.0		20.0	20.0	20.0
Minimum Split (s)	28.9	28.9		13.9	34.2		30.0	30.0		35.9	35.9	35.9
Total Split (s)	37.4	37.4		18.0	55.4		54.6	54.6		54.6	54.6	54.6
Total Split (%)	34.0%	34.0%		16.4%	50.4%		49.6%	49.6%		49.6%	49.6%	49.6%
Maximum Green (s)	31.5	31.5		12.1	49.2		48.6	48.6		48.7	48.7	48.7
Yellow Time (s)	3.2	3.2		3.0	3.2		3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.7	2.7		2.9	3.0		3.0	3.0		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.9	5.9		5.9	6.2		6.0	6.0		5.9	5.9	5.9
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?												
Vehicle Extension (s)	2.5	2.5		3.0	2.5		0.2	0.2		0.2	0.2	0.2
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0			7.0		7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	16.0	16.0			21.0		17.0	17.0		23.0	23.0	23.0
Pedestrian Calls (#/hr)	0	0			0		0	0		0	0	0

Intersection Summary

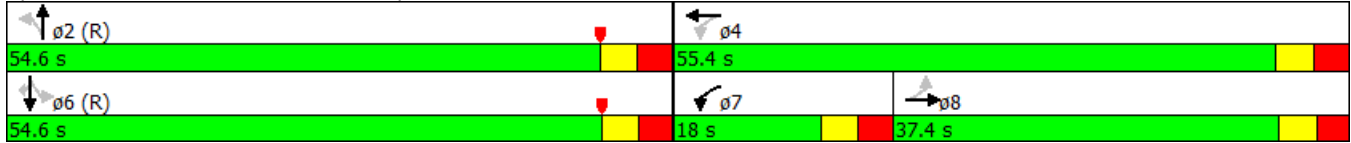
Area Type: Other
Cycle Length: 110

Lanes, Volumes, Timings
 28: Main St & Sample St

2038 2-way
 Timing Plan: PM






















Actuated Cycle Length: 110
 Offset: 96 (87%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated

Splits and Phases: 28: Main St & Sample St





















HCM 2010 Signalized Intersection Summary
28: Main St & Sample St

2038 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	17	680	53	158	804	41	0	545	95	49	558	18
Future Volume (veh/h)	17	680	53	158	804	41	0	545	95	49	558	18
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1900	1759	1759	1900	1759	1759	1900	1759	1759	1759
Adj Flow Rate, veh/h	18	739	58	172	874	45	0	592	103	53	607	20
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	172	822	64	250	1314	68	65	1376	239	273	849	722
Arrive On Green	0.52	0.52	0.52	0.09	0.41	0.41	0.00	0.16	0.16	0.97	0.97	0.97
Sat Flow, veh/h	572	3141	246	1675	3235	167	751	2849	494	705	1759	1495
Grp Volume(v), veh/h	18	393	404	172	452	467	0	347	348	53	607	20
Grp Sat Flow(s),veh/h/ln	572	1671	1716	1675	1671	1730	751	1671	1672	705	1759	1495
Q Serve(g_s), s	2.3	23.3	23.3	7.9	24.2	24.2	0.0	20.6	20.7	4.0	4.2	0.1
Cycle Q Clear(g_c), s	10.6	23.3	23.3	7.9	24.2	24.2	0.0	20.6	20.7	24.7	4.2	0.1
Prop In Lane	1.00		0.14	1.00		0.10	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	172	437	449	250	679	703	65	807	807	273	849	722
V/C Ratio(X)	0.10	0.90	0.90	0.69	0.67	0.67	0.00	0.43	0.43	0.19	0.71	0.03
Avail Cap(c_a), veh/h	186	479	491	282	748	774	65	807	807	273	849	722
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	0.33	0.33	0.33	2.00	2.00	2.00
Upstream Filter(l)	0.69	0.69	0.69	0.60	0.60	0.60	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.6	24.9	24.9	28.1	26.6	26.6	0.0	32.6	32.6	6.4	1.0	1.0
Incr Delay (d2), s/veh	0.1	13.6	13.4	3.7	1.1	1.0	0.0	1.7	1.7	1.6	5.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.7	16.9	17.2	6.4	15.7	16.1	0.0	15.1	15.1	1.6	4.0	0.1
LnGrp Delay(d),s/veh	24.8	38.5	38.3	31.7	27.6	27.6	0.0	34.2	34.3	8.0	6.1	1.0
LnGrp LOS	C	D	D	C	C	C		C	C	A	A	A
Approach Vol, veh/h		815			1091			695			680	
Approach Delay, s/veh		38.1			28.3			34.3			6.1	
Approach LOS		D			C			C			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		59.1		50.9		59.1	15.9	35.0				
Change Period (Y+Rc), s		6.0		* 6.2		* 6	5.9	* 6.2				
Max Green Setting (Gmax), s		48.6		* 49		* 49	12.1	* 32				
Max Q Clear Time (g_c+I1), s		22.7		26.2		26.7	9.9	25.3				
Green Ext Time (p_c), s		0.4		7.0		0.4	0.1	3.5				
Intersection Summary												
HCM 2010 Ctrl Delay				27.4								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 29: Main St & Broadway St

2038 2-way
 Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	10	1	27	14	23	0	623	12	3	693	0
Future Volume (vph)	0	10	1	27	14	23	0	623	12	3	693	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		461			451			775			1885	
Travel Time (s)		12.6			12.3			17.6			42.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Lanes, Volumes, Timings
30: Main St & Indiana Ave

2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	292	127	11	181	13	180	614	9	11	669	41
Future Volume (vph)	7	292	127	11	181	13	180	614	9	11	669	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		100	100		0	250		0	250		150
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			200			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		463			445			1320			775	
Travel Time (s)		12.6			12.1			30.0			17.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	28.2	28.2		31.5	31.5		25.2	25.2		25.1	25.1	
Total Split (s)	37.0	37.0		37.0	37.0		73.0	73.0		73.0	73.0	
Total Split (%)	33.6%	33.6%		33.6%	33.6%		66.4%	66.4%		66.4%	66.4%	
Maximum Green (s)	31.5	31.5		31.5	31.5		67.8	67.8		68.0	68.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		2.2	2.2		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)	5.5	5.5		5.5	5.5		5.2	5.2		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		19.0	19.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 46 (42%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Pretimed

Splits and Phases: 30: Main St & Indiana Ave





















HCM 2010 Signalized Intersection Summary
30: Main St & Indiana Ave

2038 2-way
Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	292	127	11	181	13	180	614	9	11	669	41
Future Volume (veh/h)	7	292	127	11	181	13	180	614	9	11	669	41
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1776	1776	1900	1776	1776	1900
Adj Flow Rate, veh/h	8	317	138	12	197	14	196	667	10	12	727	45
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	7	7	7	7	7	7
Cap, veh/h	318	345	150	94	482	34	474	1077	16	512	1021	63
Arrive On Green	0.29	0.29	0.29	0.57	0.57	0.57	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1143	1208	526	914	1686	120	662	1745	26	724	1655	102
Grp Volume(v), veh/h	8	0	455	12	0	211	196	0	677	12	0	772
Grp Sat Flow(s),veh/h/ln	1143	0	1734	914	0	1806	662	0	1771	724	0	1758
Q Serve(g_s), s	0.6	0.0	28.0	1.4	0.0	7.2	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.8	0.0	28.0	29.4	0.0	7.2	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.30	1.00		0.07	1.00		0.01	1.00		0.06
Lane Grp Cap(c), veh/h	318	0	496	94	0	516	474	0	1093	512	0	1085
V/C Ratio(X)	0.03	0.00	0.92	0.13	0.00	0.41	0.41	0.00	0.62	0.02	0.00	0.71
Avail Cap(c_a), veh/h	318	0	496	94	0	516	474	0	1093	512	0	1085
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.7	0.0	38.1	36.6	0.0	18.4	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	24.4	2.8	0.0	2.4	2.6	0.0	2.6	0.1	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	23.5	0.8	0.0	6.9	0.6	0.0	1.4	0.0	0.0	2.2
LnGrp Delay(d),s/veh	33.9	0.0	62.5	39.4	0.0	20.8	2.6	0.0	2.6	0.1	0.0	4.0
LnGrp LOS	C		E	D		C	A		A	A		A
Approach Vol, veh/h		463			223			873			784	
Approach Delay, s/veh		62.0			21.8			2.6			3.9	
Approach LOS		E			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		73.2		37.0		73.2		37.0				
Change Period (Y+Rc), s		* 5.2		5.5		* 5.2		5.5				
Max Green Setting (Gmax), s		* 68		31.5		* 68		31.5				
Max Q Clear Time (g_c+I1), s		2.0		30.0		2.0		31.4				
Green Ext Time (p_c), s		2.5		0.2		2.5		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			16.6									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
31: Main St & Calvert St

2038 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	3	26	7	24	37	16	659	3	13	724	30
Future Volume (vph)	31	3	26	7	24	37	16	659	3	13	724	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			30				30
Link Distance (ft)		520			445			1320				1320
Travel Time (s)		14.2			12.1			30.0				30.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free				Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
32: Main St & Ewing Ave

2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	133	34	36	72	67	67	587	45	50	642	65
Future Volume (vph)	28	133	34	36	72	67	67	587	45	50	642	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		150	125		0	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	25			100			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		546			440			5282			1320	
Travel Time (s)		12.4			10.0			120.0			30.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	27.0	27.0		27.0	27.0		28.3	28.3		28.3	28.3	
Total Split (s)	29.0	29.0		29.0	29.0		81.0	81.0		81.0	81.0	
Total Split (%)	26.4%	26.4%		26.4%	26.4%		73.6%	73.6%		73.6%	73.6%	
Maximum Green (s)	23.4	23.4		23.4	23.4		75.5	75.5		75.5	75.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.6	2.6		2.5	2.5		2.5	2.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6		5.5	5.5		5.5	5.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	14.0	14.0		13.0	13.0		11.0	11.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary






















Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 106 (96%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Pretimed

Splits and Phases: 32: Main St & Ewing Ave



HCM 2010 Signalized Intersection Summary
 32: Main St & Ewing Ave

2038 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	133	34	36	72	67	67	587	45	50	642	65
Future Volume (veh/h)	28	133	34	36	72	67	67	587	45	50	642	65
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1727	1900	1727	1727	1900	1776	1776	1900	1776	1776	1900
Adj Flow Rate, veh/h	30	145	37	39	78	73	73	638	49	54	698	71
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	10	10	10	10	10	7	7	7	7	7	7
Cap, veh/h	225	283	72	195	175	164	521	1118	86	413	1089	111
Arrive On Green	0.21	0.21	0.21	0.36	0.36	0.36	0.69	0.69	0.69	1.00	1.00	1.00
Sat Flow, veh/h	1142	1328	339	1110	822	769	664	1629	125	717	1586	161
Grp Volume(v), veh/h	30	0	182	39	0	151	73	0	687	54	0	769
Grp Sat Flow(s),veh/h/ln	1142	0	1667	1110	0	1591	664	0	1754	717	0	1747
Q Serve(g_s), s	2.6	0.0	10.6	3.3	0.0	8.0	4.3	0.0	22.2	2.7	0.0	0.0
Cycle Q Clear(g_c), s	10.5	0.0	10.6	13.9	0.0	8.0	4.3	0.0	22.2	25.0	0.0	0.0
Prop In Lane	1.00		0.20	1.00		0.48	1.00		0.07	1.00		0.09
Lane Grp Cap(c), veh/h	225	0	355	195	0	339	521	0	1204	413	0	1199
V/C Ratio(X)	0.13	0.00	0.51	0.20	0.00	0.45	0.14	0.00	0.57	0.13	0.00	0.64
Avail Cap(c_a), veh/h	225	0	355	195	0	339	521	0	1204	413	0	1199
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.8	0.0	38.3	36.9	0.0	30.5	6.1	0.0	8.9	3.7	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	5.2	2.3	0.0	4.2	0.6	0.0	2.0	0.7	0.0	2.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.6	0.0	9.2	2.0	0.0	7.0	1.5	0.0	16.9	1.1	0.0	1.6
LnGrp Delay(d),s/veh	43.0	0.0	43.5	39.3	0.0	34.7	6.6	0.0	10.9	4.3	0.0	2.6
LnGrp LOS	D		D	D		C	A		B	A		A
Approach Vol, veh/h		212			190			760			823	
Approach Delay, s/veh		43.4			35.6			10.5			2.8	
Approach LOS		D			D			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		81.0		29.0		81.0		29.0				
Change Period (Y+Rc), s		5.5		5.6		5.5		5.6				
Max Green Setting (Gmax), s		75.5		23.4		75.5		23.4				
Max Q Clear Time (g_c+I1), s		24.2		15.9		27.0		12.6				
Green Ext Time (p_c), s		2.2		0.3		2.2		0.3				
Intersection Summary												
HCM 2010 Ctrl Delay				13.2								
HCM 2010 LOS				B								

Lanes, Volumes, Timings
33: Main St & Chippewa Ave

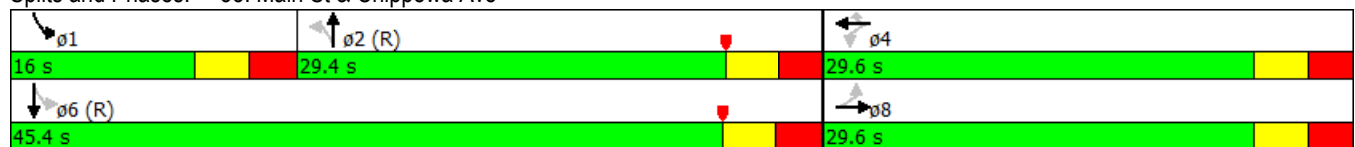
2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	28	55	18	43	26	363	22	176	54	364	254	53
Future Volume (vph)	28	55	18	43	26	363	22	176	54	364	254	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	50		100	0		0	200		0
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	25			25			25			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		604			416			627			5282	
Travel Time (s)		13.7			9.5			14.3			120.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%	7%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		8			4			2		1	6	
Permitted Phases	8			4		4	2			6		
Minimum Split (s)	25.6	25.6		29.6	29.6	29.6	28.5	28.5		15.7	31.7	
Total Split (s)	29.6	29.6		29.6	29.6	29.6	29.4	29.4		16.0	45.4	
Total Split (%)	39.5%	39.5%		39.5%	39.5%	39.5%	39.2%	39.2%		21.3%	60.5%	
Maximum Green (s)	24.0	24.0		24.0	24.0	24.0	23.9	23.9		10.3	39.7	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	2.6	2.6		2.6	2.6	2.6	2.5	2.5		2.7	2.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	5.6	5.6		5.6	5.6	5.6		5.5		5.7	5.7	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)	13.0	13.0		17.0	17.0	17.0	16.0	16.0			19.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0			0	

Intersection Summary






















Area Type: Other
 Cycle Length: 75
 Actuated Cycle Length: 75
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 33: Main St & Chippewa Ave



HCM 2010 Signalized Intersection Summary
 33: Main St & Chippewa Ave

2038 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	55	18	43	26	363	22	176	54	364	254	53
Future Volume (veh/h)	28	55	18	43	26	363	22	176	54	364	254	53
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1776	1776	1900	1776	1776	1776	1900	1776	1900	1776	1776	1900
Adj Flow Rate, veh/h	30	60	20	47	28	395	24	191	59	396	276	58
Adj No. of Lanes	1	1	0	1	1	1	0	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	7	7	7	7	7	7	7	7	7	7	7	7
Cap, veh/h	378	407	136	453	567	482	75	390	113	623	755	159
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.32	0.14	0.53	0.53
Sat Flow, veh/h	915	1276	425	1252	1776	1509	72	1228	357	1691	1424	299
Grp Volume(v), veh/h	30	0	80	47	28	395	274	0	0	396	0	334
Grp Sat Flow(s),veh/h/ln	915	0	1701	1252	1776	1509	1656	0	0	1691	0	1723
Q Serve(g_s), s	1.8	0.0	2.5	2.1	0.8	18.1	0.0	0.0	0.0	10.3	0.0	8.5
Cycle Q Clear(g_c), s	2.6	0.0	2.5	4.6	0.8	18.1	9.8	0.0	0.0	10.3	0.0	8.5
Prop In Lane	1.00		0.25	1.00		1.00	0.09		0.22	1.00		0.17
Lane Grp Cap(c), veh/h	378	0	543	453	567	482	578	0	0	623	0	914
V/C Ratio(X)	0.08	0.00	0.15	0.10	0.05	0.82	0.47	0.00	0.00	0.64	0.00	0.37
Avail Cap(c_a), veh/h	378	0	543	453	567	482	578	0	0	623	0	914
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.6	0.0	18.3	19.9	17.7	23.6	20.8	0.0	0.0	13.5	0.0	10.3
Incr Delay (d2), s/veh	0.4	0.0	0.6	0.5	0.2	14.4	2.8	0.0	0.0	4.9	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.9	0.0	2.3	1.4	0.8	14.4	8.7	0.0	0.0	4.2	0.0	7.7
LnGrp Delay(d),s/veh	19.0	0.0	18.9	20.4	17.9	38.1	23.6	0.0	0.0	18.4	0.0	11.4
LnGrp LOS	B		B	C	B	D	C			B		B
Approach Vol, veh/h		110			470			274			730	
Approach Delay, s/veh		18.9			35.1			23.6			15.2	
Approach LOS		B			D			C			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	16.0	29.6		29.6		45.6		29.6				
Change Period (Y+Rc), s	* 5.7	* 5.7		5.6		* 5.7		5.6				
Max Green Setting (Gmax), s	* 10	* 24		24.0		* 40		24.0				
Max Q Clear Time (g_c+I1), s	12.3	11.8		20.1		10.5		4.6				
Green Ext Time (p_c), s	0.0	3.1		1.0		4.2		2.3				
Intersection Summary												
HCM 2010 Ctrl Delay				22.8								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 34: Michigan St N/Michigan St & North Shore Dr

2038 2-way
 Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	84	51	99	107	59	79	1250	145	44	985	4
Future Volume (vph)	2	84	51	99	107	59	79	1250	145	44	985	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	50		0	100		0	75		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			100			100			100		
Right Turn on Red			No			No			No			No
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		476			523			1365			444	
Travel Time (s)		13.0			14.3			31.0			10.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Minimum Split (s)	23.0	23.0		23.0	23.0		8.0	23.0		8.0	23.0	
Total Split (s)	23.0	23.0		23.0	23.0		14.0	58.0		9.0	53.0	
Total Split (%)	25.6%	25.6%		25.6%	25.6%		15.6%	64.4%		10.0%	58.9%	
Maximum Green (s)	19.0	19.0		19.0	19.0		10.0	54.0		5.0	49.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5		0.5	0.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Lead/Lag							Lead	Lag		Lead	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			12.0			12.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 70
 Control Type: Pretimed

Splits and Phases: 34: Michigan St N/Michigan St & North Shore Dr

φ1 9 s	φ2 (R) 58 s	φ4 23 s
φ5 14 s	φ6 (R) 53 s	φ8 23 s

















HCM 2010 Signalized Intersection Summary
 34: Michigan St N/Michigan St & North Shore Dr

2038 2-way
 Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	84	51	99	107	59	79	1250	145	44	985	4
Future Volume (veh/h)	2	84	51	99	107	59	79	1250	145	44	985	4
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1759	1759	1900	1759	1759	1900
Adj Flow Rate, veh/h	2	91	55	108	116	64	86	1359	158	48	1071	4
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	220	225	136	247	234	129	186	1812	209	93	1860	7
Arrive On Green	0.21	0.21	0.21	0.21	0.21	0.21	0.11	0.60	0.60	0.06	0.54	0.54
Sat Flow, veh/h	1176	1068	645	1213	1108	611	1675	3020	349	1675	3416	13
Grp Volume(v), veh/h	2	0	146	108	0	180	86	748	769	48	524	551
Grp Sat Flow(s),veh/h/ln	1176	0	1713	1213	0	1719	1675	1671	1698	1675	1671	1757
Q Serve(g_s), s	0.1	0.0	6.6	7.6	0.0	8.3	4.3	29.2	29.8	2.5	18.7	18.7
Cycle Q Clear(g_c), s	8.4	0.0	6.6	14.2	0.0	8.3	4.3	29.2	29.8	2.5	18.7	18.7
Prop In Lane	1.00		0.38	1.00		0.36	1.00		0.21	1.00		0.01
Lane Grp Cap(c), veh/h	220	0	362	247	0	363	186	1003	1019	93	910	957
V/C Ratio(X)	0.01	0.00	0.40	0.44	0.00	0.50	0.46	0.75	0.75	0.52	0.58	0.58
Avail Cap(c_a), veh/h	220	0	362	247	0	363	186	1003	1019	93	910	957
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.0	0.0	30.6	36.7	0.0	31.3	37.5	13.0	13.2	41.3	13.6	13.6
Incr Delay (d2), s/veh	0.1	0.0	3.3	5.5	0.0	4.8	8.0	5.1	5.2	18.9	2.6	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	0.0	6.2	5.3	0.0	7.9	4.4	21.0	21.5	3.0	14.2	14.8
LnGrp Delay(d),s/veh	35.1	0.0	33.9	42.3	0.0	36.1	45.5	18.1	18.3	60.3	16.3	16.1
LnGrp LOS	D		C	D		D	D	B	B	E	B	B
Approach Vol, veh/h		148			288			1603			1123	
Approach Delay, s/veh		34.0			38.4			19.7			18.1	
Approach LOS		C			D			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.0	58.0		23.0	14.0	53.0		23.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	54.0		19.0	10.0	49.0		19.0				
Max Q Clear Time (g_c+I1), s	4.5	31.8		10.4	6.3	20.7		16.2				
Green Ext Time (p_c), s	0.0	18.2		1.6	0.1	22.2		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay			21.5									
HCM 2010 LOS			C									

Lanes, Volumes, Timings
35: Michigan St N & Bartlett St

2038 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	369	9	54	27	13	21	100	995	9	4	799	281
Future Volume (vph)	369	9	54	27	13	21	100	995	9	4	799	281
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		472			392			645			1365	
Travel Time (s)		10.7			8.9			14.7			31.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		3	3		3	3						
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	




















Intersection Summary

Area Type: Other

Control Type: Roundabout

Lanes, Volumes, Timings
36: Michigan St N & Navarre St

2038 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	1	23	48	0	22	16	1026	15	13	852	15
Future Volume (vph)	57	1	23	48	0	22	16	1026	15	13	852	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	125		0	125		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			100			100		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		230			391			500			645	
Travel Time (s)		6.3			10.7			11.4			14.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)				5	5	5						
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	0		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	50	50		20	50		50	0		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		20	50		50	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)											94	
Detector 2 Size(ft)											6	
Detector 2 Type											Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)											0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		5	2		1	6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		5	2		1	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		8.0	30.0		4.0	30.0	
Minimum Split (s)	29.7	29.7		29.7	29.7		15.0	35.5		9.2	35.5	
Total Split (s)	30.0	30.0		30.0	30.0		15.0	50.6		9.4	45.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		16.7%	56.2%		10.4%	50.0%	
Maximum Green (s)	24.3	24.3		24.3	24.3		9.7	45.3		4.2	39.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.7	2.7		2.7	2.7		2.3	2.3		2.2	2.2	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	5.7		5.7	5.7		5.3	5.3		5.2	5.2	
Lead/Lag							Lead	Lead		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	Max		None	Max	

Lanes, Volumes, Timings
 36: Michigan St N & Navarre St

2038 2-way
 Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	7.0	7.0		7.0	7.0			7.0			7.0	
Flash Dont Walk (s)	17.0	17.0		17.0	17.0			11.0			10.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 70.9
 Natural Cycle: 85
 Control Type: Semi Act-Uncoord


















Splits and Phases: 36: Michigan St N & Navarre St



HCM 2010 analysis cannot be performed without detectors for actuated controller type.

Lanes, Volumes, Timings
 37: Michigan St N & Main St/Marion St

2038 2-way
 Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	493	13	4	4	6	0	9	566	20	4	492	431
Future Volume (vph)	493	13	4	4	6	0	9	566	20	4	492	431
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	150		0	0		0
Storage Lanes	0		0	0		0	1		0	0		1
Taper Length (ft)	50			25			100			25		
Link Speed (mph)		30			25			30			30	
Link Distance (ft)		345			379			528			500	
Travel Time (s)		7.8			10.3			12.0			11.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)									5			
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary

Area Type: CBD
 Control Type: Roundabout

Lanes, Volumes, Timings
 38: St. Joseph St/Michigan St N & LaSalle Ave#

2038 2-way
 Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	62	634	146	65	704	82	211	443	101	40	444	51
Future Volume (vph)	62	634	146	65	704	82	211	443	101	40	444	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	100		0	350		240	200		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	75			50			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25				25
Link Distance (ft)		437			700			614				492
Travel Time (s)		11.9			19.1			16.7				13.4
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)		0										
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1	1	1	1	1
Detector Template				Left			Left	Thru	Right			Thru
Leading Detector (ft)	50	50		20	50		50	50	50	50	50	50
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	0
Detector 1 Size(ft)	50	50		20	50		50	50	50	50	50	50
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	Perm		NA
Protected Phases	3	8		7	4		5	2				6
Permitted Phases	8			4			2		2	6		
Detector Phase	3	8		7	4		5	2	2	6		6
Switch Phase												
Minimum Initial (s)	4.0	10.0		4.0	10.0		8.0	20.0	20.0	20.0		20.0
Minimum Split (s)	9.0	32.1		9.0	31.2		13.6	28.6	28.6	28.7		28.7
Total Split (s)	9.0	38.0		9.0	38.0		18.2	63.0	63.0	44.8		44.8
Total Split (%)	8.2%	34.5%		8.2%	34.5%		16.5%	57.3%	57.3%	40.7%		40.7%
Maximum Green (s)	4.0	31.9		4.0	32.2		12.6	57.4	57.4	39.1		39.1
Yellow Time (s)	3.0	3.2		3.0	3.2		3.0	3.0	3.0	3.0		3.0
All-Red Time (s)	2.0	2.9		2.0	2.6		2.6	2.6	2.6	2.7		2.7
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	5.0	6.1		5.0	5.8		5.6	5.6	5.6	5.7		5.7
Lead/Lag	Lag	Lag		Lead	Lead		Lead			Lag		Lag
Lead-Lag Optimize?	Yes	Yes		Yes			Yes			Yes		Yes
Vehicle Extension (s)	3.0	0.2		3.0	0.2		3.0	3.0	3.0	3.0		3.0
Recall Mode	None	None		None	None		None	C-Max	C-Max	C-Max		C-Max
Walk Time (s)		7.0			7.0			7.0	7.0	7.0		7.0
Flash Dont Walk (s)		19.0			14.0			16.0	16.0	16.0		16.0
Pedestrian Calls (#/hr)		0			0			0	0	0		0

Intersection Summary

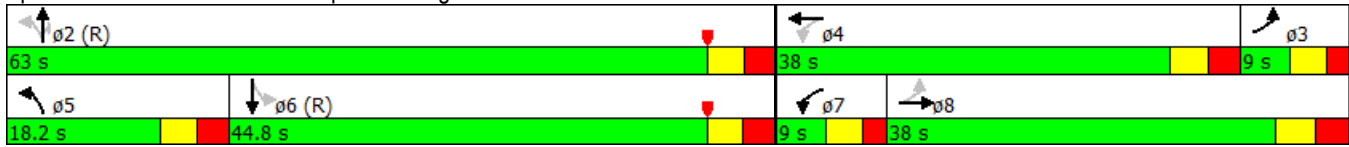
Area Type: CBD

Lanes, Volumes, Timings
 38: St. Joseph St/Michigan St N & LaSalle Ave#

2038 2-way
 Timing Plan: PM

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 115
 Control Type: Actuated-Coordinated

Splits and Phases: 38: St. Joseph St/Michigan St N & LaSalle Ave#



HCM 2010 Signalized Intersection Summary
 38: St. Joseph St/Michigan St N & LaSalle Ave#

2038 2-way
 Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	634	146	65	704	82	211	443	101	40	444	51
Future Volume (veh/h)	62	634	146	65	704	82	211	443	101	40	444	51
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1583	1583	1583	1583	1583	1710
Adj Flow Rate, veh/h	67	689	159	71	765	89	229	482	110	43	483	55
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	119	731	169	122	804	93	277	870	739	338	546	62
Arrive On Green	0.01	0.10	0.10	0.04	0.29	0.29	0.14	0.73	0.73	0.39	0.39	0.39
Sat Flow, veh/h	1566	2522	582	1566	2820	328	1508	1583	1346	698	1396	159
Grp Volume(v), veh/h	67	427	421	71	424	430	229	482	110	43	0	538
Grp Sat Flow(s),veh/h/ln	1566	1562	1542	1566	1562	1586	1508	1583	1346	698	0	1555
Q Serve(g_s), s	0.0	29.9	29.9	3.9	29.3	29.3	9.7	15.2	2.7	4.4	0.0	35.4
Cycle Q Clear(g_c), s	0.0	29.9	29.9	3.9	29.3	29.3	9.7	15.2	2.7	4.5	0.0	35.4
Prop In Lane	1.00		0.38	1.00		0.21	1.00		1.00	1.00		0.10
Lane Grp Cap(c), veh/h	119	453	447	122	445	452	277	870	739	338	0	608
V/C Ratio(X)	0.56	0.94	0.94	0.58	0.95	0.95	0.83	0.55	0.15	0.13	0.00	0.88
Avail Cap(c_a), veh/h	123	453	447	122	457	464	287	870	739	338	0	608
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	0.57	0.57	0.57	1.00	1.00	1.00	0.76	0.76	0.76	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.5	48.8	48.8	34.4	38.6	38.6	22.7	8.7	7.0	21.8	0.0	31.2
Incr Delay (d2), s/veh	3.2	19.1	19.5	6.7	29.3	29.1	13.8	1.9	0.3	0.8	0.0	17.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.8	20.2	20.1	3.4	22.8	23.1	8.2	10.8	1.9	1.7	0.0	24.9
LnGrp Delay(d),s/veh	55.7	67.9	68.3	41.1	67.8	67.7	36.5	10.7	7.4	22.6	0.0	48.3
LnGrp LOS	E	E	E	D	E	E	D	B	A	C		D
Approach Vol, veh/h		915			925			821			581	
Approach Delay, s/veh		67.2			65.7			17.4			46.4	
Approach LOS		E			E			B			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s		66.2	9.8	37.2	17.4	48.8	9.0	38.0				
Change Period (Y+Rc), s		* 5.7	* 6.1	* 5.8	5.6	* 5.7	5.0	* 6.1				
Max Green Setting (Gmax), s		* 57	* 4	* 32	12.6	* 39	4.0	* 32				
Max Q Clear Time (g_c+I1), s		17.2	2.0	31.3	11.7	37.4	5.9	31.9				
Green Ext Time (p_c), s		6.7	0.2	0.1	0.1	1.0	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			50.4									
HCM 2010 LOS			D									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
39: Michigan St# & Colfax Ave

2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	220	12	41	278	0	27	0	79	0	0	0
Future Volume (vph)	0	220	12	41	278	0	27	0	79	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	15	11	11	11	11
Storage Length (ft)	150		0	75		0	0		0	0		0
Storage Lanes	0		0	1		0	0		0	0		0
Taper Length (ft)	25			75			25			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25				30
Link Distance (ft)		440			340			493				127
Travel Time (s)		12.0			9.3			13.4				2.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		5	5									
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA		Perm	NA				
Protected Phases		8			4			2				6
Permitted Phases				4			2			6		
Minimum Split (s)		26.0		26.0	26.0		26.7	26.7		26.5		26.5
Total Split (s)		71.0		71.0	71.0		39.0	39.0		39.0		39.0
Total Split (%)		64.5%		64.5%	64.5%		35.5%	35.5%		35.5%		35.5%
Maximum Green (s)		66.0		66.0	66.0		33.3	33.3		33.5		33.5
Yellow Time (s)		3.0		3.0	3.0		3.0	3.0		3.0		3.0
All-Red Time (s)		2.0		2.0	2.0		2.7	2.7		2.5		2.5
Lost Time Adjust (s)		0.0		0.0	0.0			0.0				0.0
Total Lost Time (s)		5.0		5.0	5.0			5.7				5.5
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)		7.0		7.0	7.0		7.0	7.0		7.0		7.0
Flash Dont Walk (s)		10.0		10.0	10.0		14.0	14.0		14.0		14.0
Pedestrian Calls (#/hr)		0		0	0		10	10		0		0

Intersection Summary

Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 80 (73%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 39: Michigan St# & Colfax Ave






















HCM 2010 Signalized Intersection Summary
 39: Michigan St# & Colfax Ave

2038 2-way
 Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↑			↔			↔	
Traffic Volume (veh/h)	0	220	12	41	278	0	27	0	79	0	0	0
Future Volume (veh/h)	0	220	12	41	278	0	27	0	79	0	0	0
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1644	1710	1644	1644	0	1710	1710	1710	1710	1644	1710
Adj Flow Rate, veh/h	0	239	13	45	302	0	29	0	86	0	0	0
Adj No. of Lanes	0	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	4	4	4	4	0	4	4	4	4	4	4
Cap, veh/h	0	810	44	659	985	0	131	20	324	0	500	0
Arrive On Green	0.00	1.00	1.00	1.00	1.00	0.00	0.31	0.00	0.30	0.00	0.00	0.00
Sat Flow, veh/h	0	1352	74	991	1644	0	295	65	1067	0	1644	0
Grp Volume(v), veh/h	0	0	252	45	302	0	115	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	0	0	1426	991	1644	0	1427	0	0	0	1644	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.00		0.05	1.00		0.00	0.25		0.75	0.00		0.00
Lane Grp Cap(c), veh/h	0	0	854	659	985	0	488	0	0	0	500	0
V/C Ratio(X)	0.00	0.00	0.30	0.07	0.31	0.00	0.24	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	0	0	854	659	985	0	488	0	0	0	500	0
HCM Platoon Ratio	1.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	28.8	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.9	0.2	0.8	0.0	1.1	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.4	0.1	0.4	0.0	4.9	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.9	0.2	0.8	0.0	29.9	0.0	0.0	0.0	0.0	0.0
LnGrp LOS			A	A	A		C					
Approach Vol, veh/h		252			347			115				0
Approach Delay, s/veh		0.9			0.7			29.9				0.0
Approach LOS		A			A			C				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		39.2		71.0		39.2		71.0				
Change Period (Y+Rc), s		* 5.7		5.0		* 5.7		5.0				
Max Green Setting (Gmax), s		* 33		66.0		* 34		66.0				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			5.5									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 40: Michigan St# & Washington St

2038 2-way
 Timing Plan: PM

















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	50	68	6	40	9	47	50	23	3	20	47
Future Volume (vph)	44	50	68	6	40	9	47	50	23	3	20	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	15	11	11	15	11
Storage Length (ft)	50		0	75		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			25			25			25		
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		437			422			487			493	
Travel Time (s)		11.9			11.5			13.3			13.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		5	5		5	5						
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: CBD
 Control Type: Unsignalized

Lanes, Volumes, Timings
41: Michigan St# & Jefferson Blvd

2038 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	153	31	8	128	34	20	41	25	12	43	25
Future Volume (vph)	25	153	31	8	128	34	20	41	25	12	43	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	11	11	11	11	15	11
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		440			425			480			487	
Travel Time (s)		12.0			11.6			13.1			13.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)	5	5	5	5	5	5						
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: CBD
Control Type: Unsignalized

Lanes, Volumes, Timings
42: Michigan St# & Wayne St

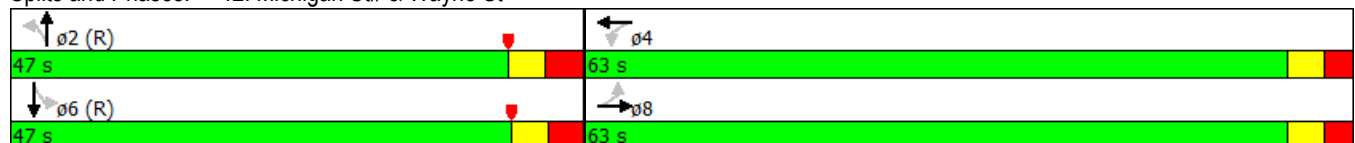
2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	63	9	14	136	14	1	21	16	4	67	14
Future Volume (vph)	6	63	9	14	136	14	1	21	16	4	67	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	100		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			50			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30				25
Link Distance (ft)		445			405			488				480
Travel Time (s)		12.1			11.0			11.1				13.1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Parking (#/hr)		5	5		3	3						
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4			2			6		
Minimum Split (s)	24.5	24.5		24.5	24.5		30.3	30.3		27.0	27.0	
Total Split (s)	63.0	63.0		63.0	63.0		47.0	47.0		47.0	47.0	
Total Split (%)	57.3%	57.3%		57.3%	57.3%		42.7%	42.7%		42.7%	42.7%	
Maximum Green (s)	57.5	57.5		57.5	57.5		40.7	40.7		41.0	41.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		3.3	3.3		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.5	5.5		5.5	5.5		6.3	6.3		6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	9.0	9.0		9.0	9.0		17.0	17.0		14.0	14.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary




















Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 91 (83%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 42: Michigan St# & Wayne St



HCM 2010 Signalized Intersection Summary
42: Michigan St# & Wayne St

2038 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	63	9	14	136	14	1	21	16	4	67	14
Future Volume (veh/h)	6	63	9	14	136	14	1	21	16	4	67	14
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1710	1644	1710	1710	1644	1710
Adj Flow Rate, veh/h	7	68	10	15	148	15	1	23	17	4	73	15
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	626	639	94	671	678	69	37	330	236	43	485	96
Arrive On Green	1.00	1.00	1.00	1.00	1.00	1.00	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	1075	1227	180	1161	1300	132	8	887	634	25	1306	259
Grp Volume(v), veh/h	7	0	78	15	0	163	41	0	0	92	0	0
Grp Sat Flow(s),veh/h/ln	1075	0	1407	1161	0	1432	1529	0	0	1589	0	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	4.2	0.0	0.0
Prop In Lane	1.00		0.13	1.00		0.09	0.02		0.41	0.04		0.16
Lane Grp Cap(c), veh/h	626	0	733	671	0	746	602	0	0	625	0	0
V/C Ratio(X)	0.01	0.00	0.11	0.02	0.00	0.22	0.07	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	626	0	733	671	0	746	602	0	0	625	0	0
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	22.4	0.0	0.0	23.1	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.1	0.0	0.7	0.2	0.0	0.0	0.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	0.1	0.0	0.0	0.3	1.5	0.0	0.0	3.5	0.0	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.3	0.1	0.0	0.7	22.6	0.0	0.0	23.6	0.0	0.0
LnGrp LOS	A		A	A		A	C			C		
Approach Vol, veh/h		85			178			41				92
Approach Delay, s/veh		0.3			0.6			22.6				23.6
Approach LOS		A			A			C				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		47.3		63.0		47.3		63.0				
Change Period (Y+Rc), s		* 6.3		5.5		* 6.3		5.5				
Max Green Setting (Gmax), s		* 41		57.5		* 41		57.5				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay			8.2									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
43: Michigan St & Monroe St

2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	458	18	105	454	120	48	480	58	164	607	11
Future Volume (vph)	16	458	18	105	454	120	48	480	58	164	607	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	200		0	250		300	100		0	100		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		440			830			490			536	
Travel Time (s)		12.0			22.6			11.1			12.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)							0		0			
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1	1	1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50	50	50	50		50	50	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	50	50		50	50	50	50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		
Detector Phase	8	8		4	4	4	2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0	10.0	20.0	20.0		20.0	20.0	
Minimum Split (s)	32.2	32.2		32.2	32.2	32.2	32.1	32.1		32.9	32.9	
Total Split (s)	47.0	47.0		47.0	47.0	47.0	63.0	63.0		63.0	63.0	
Total Split (%)	42.7%	42.7%		42.7%	42.7%	42.7%	57.3%	57.3%		57.3%	57.3%	
Maximum Green (s)	41.8	41.8		40.8	40.8	40.8	56.9	56.9		56.1	56.1	
Yellow Time (s)	3.2	3.2		3.2	3.2	3.2	3.2	3.2		3.2	3.2	
All-Red Time (s)	2.0	2.0		3.0	3.0	3.0	2.9	2.9		3.7	3.7	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	-1.2	0.0		0.0	0.0	
Total Lost Time (s)	5.2	5.2		6.2	6.2	6.2	4.9	6.1		6.9	6.9	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	0.2	0.2		0.2	0.2	0.2	0.2	0.2		3.0	3.0	
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	20.0	20.0		19.0	19.0	19.0	19.0	19.0		19.0	19.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	

Intersection Summary

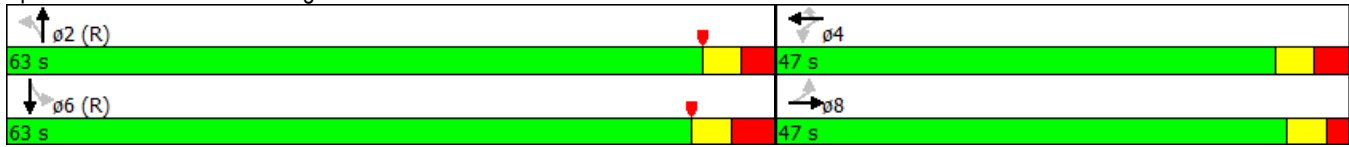
Area Type: Other

Lanes, Volumes, Timings
43: Michigan St & Monroe St

2038 2-way
Timing Plan: PM






















Cycle Length: 110
Actuated Cycle Length: 110
Offset: 69 (63%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 43: Michigan St & Monroe St





















HCM 2010 Signalized Intersection Summary
 43: Michigan St & Monroe St

2038 2-way
 Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	458	18	105	454	120	48	480	58	164	607	11
Future Volume (veh/h)	16	458	18	105	454	120	48	480	58	164	607	11
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1827	1759	1759	1900	1759	1759	1900
Adj Flow Rate, veh/h	17	498	20	114	493	130	52	522	63	178	660	12
Adj No. of Lanes	1	1	0	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	151	609	24	195	638	542	456	738	89	227	916	17
Arrive On Green	0.70	0.70	0.70	0.35	0.35	0.35	0.36	0.36	0.36	1.00	1.00	1.00
Sat Flow, veh/h	783	1744	70	863	1827	1553	720	1386	167	781	1722	31
Grp Volume(v), veh/h	17	0	518	114	493	130	52	0	585	178	0	672
Grp Sat Flow(s),veh/h/ln	783	0	1815	863	1827	1553	720	0	1554	781	0	1754
Q Serve(g_s), s	2.0	0.0	22.1	14.2	26.5	6.5	5.3	0.0	35.6	22.8	0.0	0.0
Cycle Q Clear(g_c), s	28.3	0.0	22.1	36.1	26.5	6.5	5.4	0.0	35.6	58.5	0.0	0.0
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.11	1.00		0.02
Lane Grp Cap(c), veh/h	151	0	633	195	638	542	456	0	827	227	0	933
V/C Ratio(X)	0.11	0.00	0.82	0.58	0.77	0.24	0.11	0.00	0.71	0.78	0.00	0.72
Avail Cap(c_a), veh/h	175	0	690	214	678	576	456	0	827	227	0	933
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	0.67	0.67	0.67	2.00	2.00	2.00
Upstream Filter(I)	0.73	0.00	0.73	1.00	1.00	1.00	1.00	0.00	1.00	0.32	0.00	0.32
Uniform Delay (d), s/veh	25.9	0.0	14.2	45.8	31.9	25.4	17.7	0.0	28.0	18.9	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	4.8	1.8	4.6	0.1	0.5	0.0	5.1	8.5	0.0	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	0.0	16.2	6.3	20.3	5.1	2.0	0.0	23.1	8.1	0.0	0.7
LnGrp Delay(d),s/veh	25.9	0.0	18.9	47.6	36.5	25.5	18.2	0.0	33.1	27.4	0.0	1.6
LnGrp LOS	C		B	D	D	C	B		C	C		A
Approach Vol, veh/h		535			737			637			850	
Approach Delay, s/veh		19.1			36.3			31.9			7.0	
Approach LOS		B			D			C			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		65.4		44.6		65.4		44.6				
Change Period (Y+Rc), s		* 6.9		* 6.2		6.9		* 6.2				
Max Green Setting (Gmax), s		* 57		* 41		56.1		* 42				
Max Q Clear Time (g_c+I1), s		37.6		38.1		60.5		30.3				
Green Ext Time (p_c), s		4.2		0.3		0.0		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				22.9								
HCM 2010 LOS				C								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
44: Michigan St & South St

2038 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	4	0	6	13	8	19	541	13	11	676	8
Future Volume (vph)	2	4	0	6	13	8	19	541	13	11	676	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		445			772			486			490	
Travel Time (s)		12.1			21.1			11.0			11.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	



















Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
45: Michigan St & Bronson St

2038 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	3	4	1	7	12	8	4	600	14	11	691	7
Future Volume (vph)	3	4	1	7	12	8	4	600	14	11	691	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Right Turn on Red			Yes			No			Yes			Yes
Link Speed (mph)		25			25			30				30
Link Distance (ft)		453			775			780				486
Travel Time (s)		12.4			21.1			17.7				11.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)							0		0			
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1		1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	50	50		50	50		50	50		50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Detector Phase	8	8		4	4		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0		20.0	20.0	
Minimum Split (s)	32.9	32.9		31.9	31.9		25.2	25.2		25.3	25.3	
Total Split (s)	33.0	33.0		33.0	33.0		77.0	77.0		77.0	77.0	
Total Split (%)	30.0%	30.0%		30.0%	30.0%		70.0%	70.0%		70.0%	70.0%	
Maximum Green (s)	27.1	27.1		27.1	27.1		71.8	71.8		71.7	71.7	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.9	2.9		2.9	2.9		2.2	2.2		2.3	2.3	
Lost Time Adjust (s)		0.0			0.0		-0.6	0.0		0.0	0.0	
Total Lost Time (s)		5.9			5.9		4.6	5.2		5.3	5.3	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max		C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	20.0	20.0		19.0	19.0		11.0	11.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other

Lanes, Volumes, Timings
45: Michigan St & Bronson St

2038 2-way
Timing Plan: PM

Cycle Length: 110
Actuated Cycle Length: 110
Offset: 11 (10%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 80
Control Type: Actuated-Coordinated

Splits and Phases: 45: Michigan St & Bronson St



HCM 2010 Signalized Intersection Summary
45: Michigan St & Bronson St

2038 2-way
Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗		↖	↗	
Traffic Volume (veh/h)	3	4	1	7	12	8	4	600	14	11	691	7
Future Volume (veh/h)	3	4	1	7	12	8	4	600	14	11	691	7
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1759	1759	1900	1759	1759	1900
Adj Flow Rate, veh/h	3	4	1	8	13	9	4	652	15	12	751	8
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	69	66	13	57	57	31	624	1288	30	670	1452	15
Arrive On Green	0.07	0.06	0.06	0.06	0.06	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	386	1064	207	252	908	497	664	1542	35	724	1737	19
Grp Volume(v), veh/h	8	0	0	30	0	0	4	0	667	12	0	759
Grp Sat Flow(s),veh/h/ln	1657	0	0	1657	0	0	664	0	1577	724	0	1756
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.37		0.12	0.27		0.30	1.00		0.02	1.00		0.01
Lane Grp Cap(c), veh/h	167	0	0	145	0	0	624	0	1318	670	0	1468
V/C Ratio(X)	0.05	0.00	0.00	0.21	0.00	0.00	0.01	0.00	0.51	0.02	0.00	0.52
Avail Cap(c_a), veh/h	458	0	0	440	0	0	624	0	1318	670	0	1468
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.4	0.0	0.0	49.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.7	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.9	0.0	0.0	1.0
LnGrp Delay(d),s/veh	48.5	0.0	0.0	49.9	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.3
LnGrp LOS	D			D			A		A	A		A
Approach Vol, veh/h		8			30			671			771	
Approach Delay, s/veh		48.5			49.9			1.4			1.3	
Approach LOS		D			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		97.2		12.8		97.2		12.8				
Change Period (Y+Rc), s		* 5.3		5.9		* 5.3		5.9				
Max Green Setting (Gmax), s		* 72		27.1		* 72		27.1				
Max Q Clear Time (g_c+I1), s		2.0		3.8		2.0		2.5				
Green Ext Time (p_c), s		9.3		0.1		9.3		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			2.6									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
46: Michigan St & Sample St

2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	740	50	171	872	46	107	528	207	150	521	24
Future Volume (vph)	31	740	50	171	872	46	107	528	207	150	521	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	350		0	250		540	250		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	50			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		457			875			982			355	
Travel Time (s)		12.5			23.9			22.3			8.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%	8%
Parking (#/hr)							0		0			
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases		8		7	4		5	2	7	1	6	
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		7	4		5	2	7	1	6	
Switch Phase												
Minimum Initial (s)	20.0	20.0		6.0	20.0		8.0	20.0	6.0	8.0	20.0	
Minimum Split (s)	33.0	33.0		12.0	34.0		13.7	29.7	12.0	13.6	29.6	
Total Split (s)	34.0	34.0		16.0	50.0		13.8	46.4	16.0	13.6	46.2	
Total Split (%)	30.9%	30.9%		14.5%	45.5%		12.5%	42.2%	14.5%	12.4%	42.0%	
Maximum Green (s)	28.0	28.0		10.0	44.0		8.1	40.7	10.0	8.0	40.6	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	3.0	3.0		3.0	3.0		2.7	2.7	3.0	2.6	2.6	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		-1.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0		4.7	5.7	6.0	5.6	5.6	
Lead/Lag	Lead	Lead		Lag			Lag	Lead	Lag	Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes			Yes	Yes	Yes	Yes	Yes	
Vehicle Extension (s)	0.2	0.2		3.0	0.2		3.0	0.2	3.0	3.0	3.0	
Recall Mode	None	None		None	None		None	C-Max	None	None	C-Max	
Walk Time (s)	7.0	7.0			7.0			7.0			7.0	
Flash Dont Walk (s)	20.0	20.0			21.0			17.0			17.0	
Pedestrian Calls (#/hr)	0	0			0			0			0	

Intersection Summary

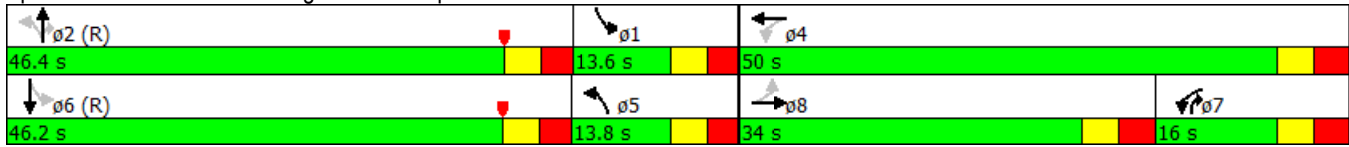
Area Type: Other

Lanes, Volumes, Timings
 46: Michigan St & Sample St

2038 2-way
 Timing Plan: PM

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 100 (91%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated

Splits and Phases: 46: Michigan St & Sample St





















HCM 2010 Signalized Intersection Summary
46: Michigan St & Sample St

2038 2-way
Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	740	50	171	872	46	107	528	207	150	521	24
Future Volume (veh/h)	31	740	50	171	872	46	107	528	207	150	521	24
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1759	1759	1900	1759	1759	1900	1759	1759	1759	1759	1759	1900
Adj Flow Rate, veh/h	34	804	54	186	948	50	116	574	225	163	566	26
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	8	8	8	8	8	8	8	8	8	8	8	8
Cap, veh/h	68	809	54	214	1284	68	447	651	841	231	1201	55
Arrive On Green	0.25	0.25	0.25	0.09	0.40	0.40	0.09	0.37	0.37	0.15	0.74	0.74
Sat Flow, veh/h	531	3179	214	1675	3230	170	1675	1759	1346	1675	3255	149
Grp Volume(v), veh/h	34	423	435	186	491	507	116	574	225	163	290	302
Grp Sat Flow(s),veh/h/ln	531	1671	1722	1675	1671	1729	1675	1759	1346	1675	1671	1733
Q Serve(g_s), s	0.5	27.7	27.8	7.7	27.5	27.5	0.0	33.6	8.3	2.6	7.7	7.7
Cycle Q Clear(g_c), s	28.0	27.7	27.8	7.7	27.5	27.5	0.0	33.6	8.3	2.6	7.7	7.7
Prop In Lane	1.00		0.12	1.00		0.10	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	68	425	438	214	664	687	447	651	841	231	617	640
V/C Ratio(X)	0.50	0.99	0.99	0.87	0.74	0.74	0.26	0.88	0.27	0.71	0.47	0.47
Avail Cap(c_a), veh/h	68	425	438	218	669	692	447	651	841	231	617	640
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.39	0.39	0.39	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.0	40.9	40.9	47.9	28.3	28.3	23.8	32.4	9.3	42.7	10.1	10.1
Incr Delay (d2), s/veh	0.9	25.4	25.1	29.2	3.8	3.7	0.3	15.9	0.8	9.4	2.6	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	19.8	20.3	11.7	19.4	19.9	4.6	26.3	9.2	8.7	6.9	7.1
LnGrp Delay(d),s/veh	55.8	66.3	66.0	77.0	32.0	31.9	24.1	48.3	10.1	52.1	12.7	12.6
LnGrp LOS	E	E	E	E	C	C	C	D	B	D	B	B
Approach Vol, veh/h		892			1184			915			755	
Approach Delay, s/veh		65.7			39.1			35.8			21.1	
Approach LOS		E			D			D			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.9	46.4		49.7	14.1	46.2	15.7	34.0				
Change Period (Y+Rc), s	* 5.7	* 5.7		6.0	5.7	* 5.6	6.0	6.0				
Max Green Setting (Gmax), s	* 8	* 41		44.0	8.1	* 41	10.0	28.0				
Max Q Clear Time (g_c+I1), s	4.6	35.6		29.5	2.0	9.7	9.7	30.0				
Green Ext Time (p_c), s	0.3	0.2		0.7	0.6	2.5	0.1	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				41.0								
HCM 2010 LOS				D								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
47: Michigan St & Broadway St

2038 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	22	8	0	24	22	28	7	690	16	25	737	11
Future Volume (vph)	22	8	0	24	22	28	7	690	16	25	737	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		451			562			775			898	
Travel Time (s)		12.3			15.3			17.6			20.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
48: Michigan St & Indiana Ave

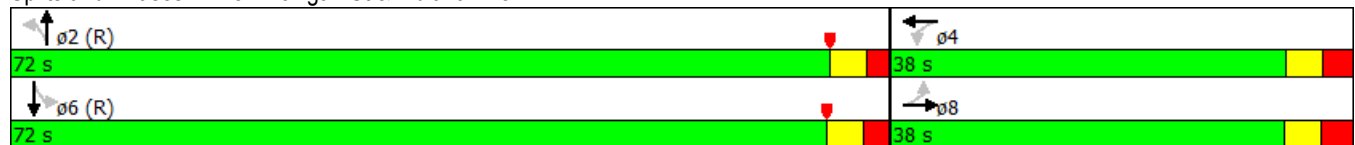
2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	30	254	26	36	12	107	651	20	49	665	48
Future Volume (vph)	51	30	254	26	36	12	107	651	20	49	665	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		0	250		0	250		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	200			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		445			540			1320			775	
Travel Time (s)		12.1			14.7			30.0			17.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	29.7	29.7		38.0	38.0		32.0	32.0		35.0	35.0	
Total Split (s)	38.0	38.0		38.0	38.0		72.0	72.0		72.0	72.0	
Total Split (%)	34.5%	34.5%		34.5%	34.5%		65.5%	65.5%		65.5%	65.5%	
Maximum Green (s)	32.3	32.3		32.4	32.4		67.0	67.0		66.8	66.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.7	2.7		2.6	2.6		2.0	2.0		2.2	2.2	
Lost Time Adjust (s)	0.0	0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	5.7			5.6		5.0	5.0		5.2	5.2	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	17.0	17.0		16.0	16.0		10.0	10.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		17	17		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 54 (49%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Pretimed

Splits and Phases: 48: Michigan St & Indiana Ave





















HCM 2010 Signalized Intersection Summary
48: Michigan St & Indiana Ave

2038 2-way
Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	30	254	26	36	12	107	651	20	49	665	48
Future Volume (veh/h)	51	30	254	26	36	12	107	651	20	49	665	48
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1900	1827	1900	1792	1792	1900	1792	1792	1900
Adj Flow Rate, veh/h	55	33	276	28	39	13	116	708	22	53	723	52
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	6	6	6	6	6	6
Cap, veh/h	342	50	414	104	134	38	470	1050	33	488	1004	72
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1321	169	1410	205	457	128	667	1729	54	695	1653	119
Grp Volume(v), veh/h	55	0	309	80	0	0	116	0	730	53	0	775
Grp Sat Flow(s),veh/h/ln	1321	0	1578	791	0	0	667	0	1783	695	0	1771
Q Serve(g_s), s	0.0	0.0	19.0	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.6	0.0	19.0	19.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.89	0.35		0.16	1.00		0.03	1.00		0.07
Lane Grp Cap(c), veh/h	342	0	464	276	0	0	470	0	1083	488	0	1076
V/C Ratio(X)	0.16	0.00	0.67	0.29	0.00	0.00	0.25	0.00	0.67	0.11	0.00	0.72
Avail Cap(c_a), veh/h	342	0	464	276	0	0	470	0	1083	488	0	1076
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.8	0.0	34.2	29.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	7.4	2.6	0.0	0.0	1.2	0.0	3.4	0.4	0.0	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.5	0.0	14.2	3.6	0.0	0.0	0.3	0.0	1.8	0.1	0.0	2.2
LnGrp Delay(d),s/veh	30.8	0.0	41.6	32.6	0.0	0.0	1.2	0.0	3.4	0.4	0.0	4.2
LnGrp LOS	C		D	C			A		A	A		A
Approach Vol, veh/h		364			80			846			828	
Approach Delay, s/veh		40.0			32.6			3.1			3.9	
Approach LOS		D			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		72.2		38.1		72.2		38.1				
Change Period (Y+Rc), s		* 5.2		* 5.7		* 5.2		* 5.7				
Max Green Setting (Gmax), s		* 67		* 32		* 67		* 32				
Max Q Clear Time (g_c+I1), s		2.0		21.9		2.0		21.0				
Green Ext Time (p_c), s		8.9		0.5		8.9		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay			10.9									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
49: Michigan St & Calvert St

2038 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	42	2	6	12	11	13	32	658	13	33	810	37
Future Volume (vph)	42	2	6	12	11	13	32	658	13	33	810	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		445			510			1320			1320	
Travel Time (s)		12.1			13.9			30.0			30.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
50: Michigan St & Ewing Ave

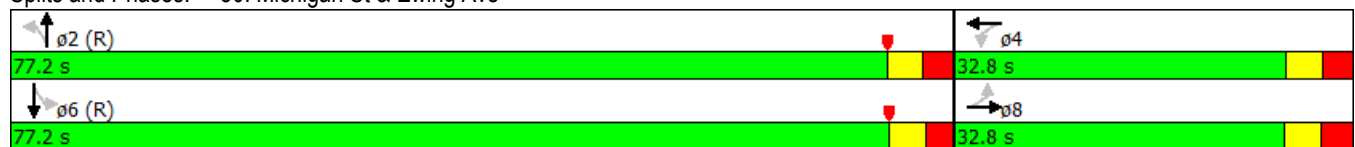
2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	163	25	83	153	82	29	584	65	180	626	7
Future Volume (vph)	46	163	25	83	153	82	29	584	65	180	626	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	150		150	250		0	250		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		440			540			2640			1320	
Travel Time (s)		10.0			12.3			60.0			30.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	10%	10%	10%	10%	10%	10%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	29.7	29.7		28.6	28.6		25.5	25.5		25.3	25.3	
Total Split (s)	32.8	32.8		32.8	32.8		77.2	77.2		77.2	77.2	
Total Split (%)	29.8%	29.8%		29.8%	29.8%		70.2%	70.2%		70.2%	70.2%	
Maximum Green (s)	27.1	27.1		27.2	27.2		71.7	71.7		71.9	71.9	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.7	2.7		2.6	2.6		2.5	2.5		2.3	2.3	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.7	5.7		5.6	5.6		5.5	5.5		5.3	5.3	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	16.0	16.0		16.0	16.0		13.0	13.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary






















Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 105 (95%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Pretimed

Splits and Phases: 50: Michigan St & Ewing Ave





















HCM 2010 Signalized Intersection Summary
50: Michigan St & Ewing Ave

2038 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	163	25	83	153	82	29	584	65	180	626	7
Future Volume (veh/h)	46	163	25	83	153	82	29	584	65	180	626	7
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1727	1900	1727	1727	1900	1792	1792	1900	1792	1792	1900
Adj Flow Rate, veh/h	50	177	27	90	166	89	32	635	71	196	680	8
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	10	10	10	10	10	6	6	6	6	6	6
Cap, veh/h	176	361	55	246	261	140	537	1033	115	363	1152	14
Arrive On Green	0.49	0.49	0.49	0.25	0.25	0.25	0.65	0.65	0.65	1.00	1.00	1.00
Sat Flow, veh/h	1039	1464	223	1088	1059	568	723	1584	177	711	1768	21
Grp Volume(v), veh/h	50	0	204	90	0	255	32	0	706	196	0	688
Grp Sat Flow(s),veh/h/ln	1039	0	1688	1088	0	1627	723	0	1761	711	0	1789
Q Serve(g_s), s	4.6	0.0	8.9	8.3	0.0	15.4	1.8	0.0	25.7	18.8	0.0	0.0
Cycle Q Clear(g_c), s	20.1	0.0	8.9	17.2	0.0	15.4	1.8	0.0	25.7	44.5	0.0	0.0
Prop In Lane	1.00		0.13	1.00		0.35	1.00		0.10	1.00		0.01
Lane Grp Cap(c), veh/h	176	0	416	246	0	401	537	0	1148	363	0	1166
V/C Ratio(X)	0.28	0.00	0.49	0.37	0.00	0.64	0.06	0.00	0.61	0.54	0.00	0.59
Avail Cap(c_a), veh/h	176	0	416	246	0	401	537	0	1148	363	0	1166
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.9	0.0	23.3	41.8	0.0	37.1	7.0	0.0	11.2	8.0	0.0	0.0
Incr Delay (d2), s/veh	4.0	0.0	4.1	4.2	0.0	7.5	0.2	0.0	2.5	5.7	0.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.7	0.0	8.0	5.0	0.0	12.3	0.7	0.0	19.1	7.6	0.0	1.3
LnGrp Delay(d),s/veh	36.9	0.0	27.4	46.0	0.0	44.6	7.2	0.0	13.6	13.6	0.0	2.2
LnGrp LOS	D		C	D		D	A		B	B		A
Approach Vol, veh/h		254			345			738			884	
Approach Delay, s/veh		29.3			45.0			13.3			4.7	
Approach LOS		C			D			B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		77.4		32.9		77.4		32.9				
Change Period (Y+Rc), s		5.5		* 5.7		* 5.5		* 5.7				
Max Green Setting (Gmax), s		71.7		* 27		* 72		* 27				
Max Q Clear Time (g_c+I1), s		27.7		19.2		46.5		22.1				
Green Ext Time (p_c), s		8.8		0.5		7.9		0.4				
Intersection Summary												
HCM 2010 Ctrl Delay			16.6									
HCM 2010 LOS			B									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
 51: Michigan St & Donmoyer Ave

2038 2-way
 Timing Plan: PM



















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	24	3	25	18	48	0	601	41	55	655	2
Future Volume (vph)	0	24	3	25	18	48	0	601	41	55	655	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Link Speed (mph)		25			25			30				30
Link Distance (ft)		316			461			2619				2640
Travel Time (s)		8.6			12.6			59.5				60.0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free				Free

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Lanes, Volumes, Timings
52: Michigan St & Chippewa Ave

2038 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	28	391	21	16	16	365	556	38	39	549	51
Future Volume (vph)	55	28	391	21	16	16	365	556	38	39	549	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	100		0	200		0
Storage Lanes	0		1	0		0	0		0	0		0
Taper Length (ft)	25			75			150			100		
Link Speed (mph)		30			30			35			30	
Link Distance (ft)		416			504			2638			2619	
Travel Time (s)		9.5			11.5			51.4			59.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	7%	7%	7%	7%	7%	7%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Sign Control		Yield			Yield			Yield			Yield	

Intersection Summary

Area Type: Other

Control Type: Roundabout

Lanes, Volumes, Timings
53: Michigan St & Ireland Rd

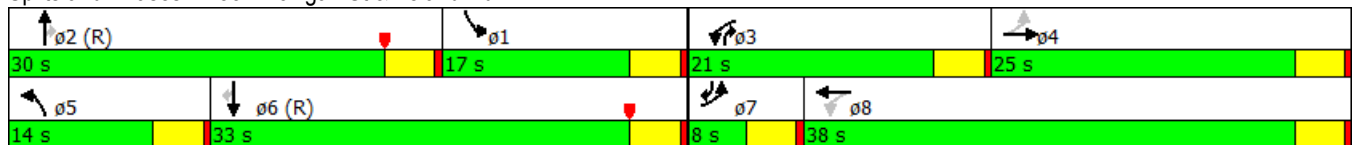
2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	470	125	272	449	307	254	612	228	325	641	4
Future Volume (vph)	8	470	125	272	449	307	254	612	228	325	641	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		0	200		0	225		0	275		275
Storage Lanes	1		0	1		0	2		1	2		1
Taper Length (ft)	100			100			150			150		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			30			35			35	
Link Distance (ft)		711			741			651			2638	
Travel Time (s)		13.9			16.8			12.7			51.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4		3	8		5	2	3	1	6	7
Permitted Phases	4			8					2			6
Minimum Split (s)	8.0	23.0		8.0	23.0		8.0	23.0	8.0	8.0	23.0	8.0
Total Split (s)	8.0	25.0		21.0	38.0		14.0	30.0	21.0	17.0	33.0	8.0
Total Split (%)	8.6%	26.9%		22.6%	40.9%		15.1%	32.3%	22.6%	18.3%	35.5%	8.6%
Maximum Green (s)	4.0	21.0		17.0	34.0		10.0	26.0	17.0	13.0	29.0	4.0
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5		0.5	0.5		0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0		4.0	4.0		4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lead	Lead	Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		12.0			12.0			12.0			12.0	
Pedestrian Calls (#/hr)		0			0			0			0	

Intersection Summary























Area Type: Other
 Cycle Length: 93
 Actuated Cycle Length: 93
 Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 53: Michigan St & Ireland Rd



HCM 2010 Signalized Intersection Summary
53: Michigan St & Ireland Rd

2038 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	470	125	272	449	307	254	612	228	325	641	4
Future Volume (veh/h)	8	470	125	272	449	307	254	612	228	325	641	4
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1792	1792	1900	1792	1792	1900	1792	1792	1792	1792	1792	1792
Adj Flow Rate, veh/h	9	511	136	296	488	334	276	665	248	353	697	4
Adj No. of Lanes	1	2	0	1	2	0	2	2	1	2	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	6	6	6	6	6	6	6	6	6	6	6	6
Cap, veh/h	247	602	159	420	709	484	356	952	704	463	1062	541
Arrive On Green	0.04	0.23	0.23	0.18	0.37	0.37	0.11	0.28	0.28	0.14	0.31	0.31
Sat Flow, veh/h	1707	2665	706	1707	1939	1323	3312	3406	1524	3312	3406	1524
Grp Volume(v), veh/h	9	326	321	296	428	394	276	665	248	353	697	4
Grp Sat Flow(s),veh/h/ln	1707	1703	1668	1707	1703	1559	1656	1703	1524	1656	1703	1524
Q Serve(g_s), s	0.4	17.0	17.2	11.1	19.8	19.9	7.5	16.3	4.9	9.5	16.5	0.2
Cycle Q Clear(g_c), s	0.4	17.0	17.2	11.1	19.8	19.9	7.5	16.3	4.9	9.5	16.5	0.2
Prop In Lane	1.00		0.42	1.00		0.85	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	247	385	377	420	623	570	356	952	704	463	1062	541
V/C Ratio(X)	0.04	0.85	0.85	0.70	0.69	0.69	0.78	0.70	0.35	0.76	0.66	0.01
Avail Cap(c_a), veh/h	247	385	377	420	623	570	356	952	704	463	1062	541
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	34.5	34.5	20.9	25.0	25.0	40.4	30.0	5.9	38.5	27.7	19.4
Incr Delay (d2), s/veh	0.3	20.0	21.1	9.5	6.1	6.7	15.1	4.2	1.4	11.3	3.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	15.3	15.3	10.3	15.6	14.7	7.6	12.9	4.1	8.8	12.9	0.1
LnGrp Delay(d),s/veh	25.5	54.5	55.6	30.4	31.1	31.8	55.6	34.2	7.3	49.8	30.9	19.4
LnGrp LOS	C	D	E	C	C	C	E	C	A	D	C	B
Approach Vol, veh/h		656			1118			1189			1054	
Approach Delay, s/veh		54.6			31.2			33.6			37.2	
Approach LOS		D			C			C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	30.0	21.0	25.0	14.0	33.0	8.0	38.0				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	13.0	26.0	17.0	21.0	10.0	29.0	4.0	34.0				
Max Q Clear Time (g_c+I1), s	11.5	18.3	13.1	19.2	9.5	18.5	2.4	21.9				
Green Ext Time (p_c), s	0.9	3.2	0.3	1.4	0.0	4.4	0.0	7.1				
Intersection Summary												
HCM 2010 Ctrl Delay				37.3								
HCM 2010 LOS				D								

Lanes, Volumes, Timings
54: St. Joseph St & Colfax Ave

2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	257	4	0	311	160	6	556	168	111	543	1
Future Volume (vph)	39	257	4	0	311	160	6	556	168	111	543	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	75		0	0		200	250		80	250		0
Storage Lanes	1		0	0		1	1		1	1		0
Taper Length (ft)	50			25			25			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		340			552			503			614	
Travel Time (s)		9.3			15.1			13.7			16.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Shared Lane Traffic (%)												
Turn Type	Perm	NA			NA	Perm	Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2				6
Permitted Phases	8			4		4	2			2	6	
Minimum Split (s)	25.7	25.7		25.7	25.7	25.7	49.0	49.0	49.0	34.0	34.0	
Total Split (s)	43.0	43.0		43.0	43.0	43.0	67.0	67.0	67.0	67.0	67.0	
Total Split (%)	39.1%	39.1%		39.1%	39.1%	39.1%	60.9%	60.9%	60.9%	60.9%	60.9%	
Maximum Green (s)	37.3	37.3		37.3	37.3	37.3	60.0	60.0	60.0	61.0	61.0	
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.7	2.7		2.7	2.7	2.7	4.0	4.0	4.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0			0.0	0.0	-1.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.7	5.7			5.7	5.7	6.0	7.0	7.0	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	9.0	9.0	9.0	7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		13.0	13.0	13.0	33.0	33.0	33.0	21.0	21.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0	0	0	0	

Intersection Summary























Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 77 (70%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 54: St. Joseph St & Colfax Ave



HCM 2010 Signalized Intersection Summary
54: St. Joseph St & Colfax Ave

2038 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	257	4	0	311	160	6	556	168	111	543	1
Future Volume (veh/h)	39	257	4	0	311	160	6	556	168	111	543	1
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1644	1644	1710	1710	1644	1644	1583	1583	1583	1583	1583	1710
Adj Flow Rate, veh/h	42	279	4	0	338	174	7	604	183	121	590	1
Adj No. of Lanes	1	1	0	0	1	1	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	193	543	8	0	553	470	268	870	740	385	868	1
Arrive On Green	0.67	0.67	0.67	0.00	0.34	0.34	1.00	1.00	1.00	0.55	0.55	0.55
Sat Flow, veh/h	781	1617	23	0	1644	1398	699	1583	1346	582	1580	3
Grp Volume(v), veh/h	42	0	283	0	338	174	7	604	183	121	0	591
Grp Sat Flow(s),veh/h/ln	781	0	1640	0	1644	1398	699	1583	1346	582	0	1583
Q Serve(g_s), s	4.5	0.0	9.6	0.0	19.1	10.5	0.5	0.0	0.0	13.1	0.0	29.8
Cycle Q Clear(g_c), s	23.6	0.0	9.6	0.0	19.1	10.5	30.3	0.0	0.0	13.1	0.0	29.8
Prop In Lane	1.00		0.01	0.00		1.00	1.00		1.00	1.00		0.00
Lane Grp Cap(c), veh/h	193	0	551	0	553	470	268	870	740	385	0	870
V/C Ratio(X)	0.22	0.00	0.51	0.00	0.61	0.37	0.03	0.69	0.25	0.31	0.00	0.68
Avail Cap(c_a), veh/h	193	0	551	0	553	470	268	870	740	385	0	870
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.1	0.0	13.7	0.0	30.8	27.9	7.3	0.0	0.0	14.2	0.0	18.0
Incr Delay (d2), s/veh	2.6	0.0	3.4	0.0	5.0	2.2	0.2	4.5	0.8	2.1	0.0	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	0.0	8.2	0.0	14.4	7.8	0.2	2.0	0.3	4.2	0.0	20.1
LnGrp Delay(d),s/veh	25.7	0.0	17.1	0.0	35.8	30.2	7.5	4.5	0.8	16.3	0.0	22.2
LnGrp LOS	C		B		D	C	A	A	A	B		C
Approach Vol, veh/h		325			512			794			712	
Approach Delay, s/veh		18.2			33.9			3.7			21.2	
Approach LOS		B			C			A			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		68.0		43.0		68.0		43.0				
Change Period (Y+Rc), s		7.0		* 5.7		* 7		* 5.7				
Max Green Setting (Gmax), s		60.0		* 37		* 61		* 37				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				17.6								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
55: St. Joseph St & Washington St

2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	0	12	0	0	0	13	712	0	0	542	4
Future Volume (vph)	19	0	12	0	0	0	13	712	0	0	542	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	10	11	11	14	11	11	11	11	11	11	11
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	0		0
Taper Length (ft)	25			25			100			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		422			152			490			503	
Travel Time (s)		11.5			4.1			11.1			11.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)	3	3	3									
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1			1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50			50	
Trailing Detector (ft)	0	0		0	0		0	0			0	
Detector 1 Position(ft)	0	0		0	0		0	0			0	
Detector 1 Size(ft)	50	50		50	50		50	50			50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Turn Type	Perm	NA					Perm	NA			NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2					
Detector Phase	8	8		4	4		2	2			6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0			20.0	
Minimum Split (s)	24.2	24.2		25.9	25.9		26.9	26.9			25.3	
Total Split (s)	25.9	25.9		25.9	25.9		84.1	84.1			84.1	
Total Split (%)	23.5%	23.5%		23.5%	23.5%		76.5%	76.5%			76.5%	
Maximum Green (s)	20.7	20.7		20.4	20.4		78.8	78.8			79.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
All-Red Time (s)	2.2	2.2		2.5	2.5		2.3	2.3			1.6	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0			0.0	
Total Lost Time (s)		5.2			5.5		5.3	5.3			4.6	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	None	None		None	None		C-Max	C-Max			C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0			7.0	
Flash Dont Walk (s)	10.0	10.0		10.0	10.0		6.0	6.0			9.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0			0	

Intersection Summary

Lanes, Volumes, Timings
 55: St. Joseph St & Washington St

2038 2-way
 Timing Plan: PM













Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow, Master Intersection
 Natural Cycle: 75
 Control Type: Actuated-Coordinated

Splits and Phases: 55: St. Joseph St & Washington St



HCM 2010 Signalized Intersection Summary
55: St. Joseph St & Washington St

2038 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↗			↗	
Traffic Volume (veh/h)	19	0	12	0	0	0	13	712	0	0	542	4
Future Volume (veh/h)	19	0	12	0	0	0	13	712	0	0	542	4
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1710	1644	1710	1710	1710	1710	1583	1583	1710	0	1583	1710
Adj Flow Rate, veh/h	21	0	13	0	0	0	14	774	0	0	589	4
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	0	8	8
Cap, veh/h	87	9	27	0	100	0	654	1335	0	0	1324	9
Arrive On Green	0.06	0.00	0.06	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Sat Flow, veh/h	581	154	455	0	1710	0	698	1583	0	0	1571	11
Grp Volume(v), veh/h	34	0	0	0	0	0	14	774	0	0	0	593
Grp Sat Flow(s),veh/h/ln	1189	0	0	0	1710	0	698	1583	0	0	0	1581
Q Serve(g_s), s	1.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.62		0.38	0.00		0.00	1.00		0.00	0.00		0.01
Lane Grp Cap(c), veh/h	123	0	0	0	100	0	654	1335	0	0	0	1333
V/C Ratio(X)	0.28	0.00	0.00	0.00	0.00	0.00	0.02	0.58	0.00	0.00	0.00	0.44
Avail Cap(c_a), veh/h	272	0	0	0	317	0	654	1335	0	0	0	1333
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	0.00	0.00	0.00	0.77	0.77	0.00	0.00	0.00	0.66
Uniform Delay (d), s/veh	50.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	0.5
LnGrp Delay(d),s/veh	51.3	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.7
LnGrp LOS	D						A	A				A
Approach Vol, veh/h		34			0			788			593	
Approach Delay, s/veh		51.3			0.0			1.4			0.7	
Approach LOS		D						A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		98.0		12.0		98.0		12.0				
Change Period (Y+Rc), s		* 5.3		5.5		* 5.3		* 5.5				
Max Green Setting (Gmax), s		* 79		20.4		* 80		* 21				
Max Q Clear Time (g_c+I1), s		2.0		0.0		2.0		4.9				
Green Ext Time (p_c), s		8.6		0.0		8.6		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay			2.3									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
56: St. Joseph St & Jefferson Blvd

2038 2-way
Timing Plan: PM

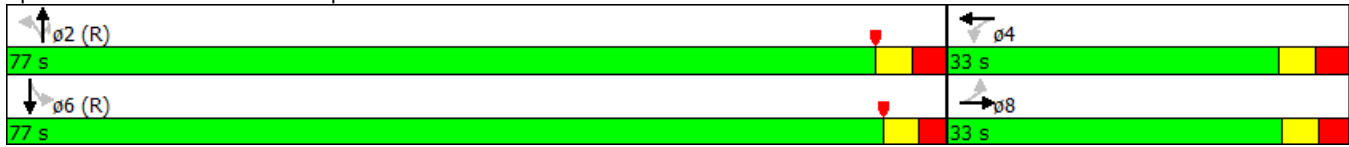
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	90	13	28	92	53	8	597	31	11	496	10
Future Volume (vph)	45	90	13	28	92	53	8	597	31	11	496	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	100		115	100		0
Storage Lanes	0		0	0		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		425			424			478			490	
Travel Time (s)		11.6			11.6			10.9			11.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Parking (#/hr)	5	5	5									
Shared Lane Traffic (%)												
Number of Detectors	1	1		1	1		1	1	1	1	1	
Detector Template												
Leading Detector (ft)	50	50		50	50		50	50	50	50	50	
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Position(ft)	0	0		0	0		0	0	0	0	0	
Detector 1 Size(ft)	50	50		50	50		50	50	50	50	50	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2		2	6		
Detector Phase	8	8		4	4		2	2	2	6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		20.0	20.0	20.0	20.0	20.0	
Minimum Split (s)	24.6	24.6		25.9	25.9		26.9	26.9	26.9	25.3	25.3	
Total Split (s)	33.0	33.0		33.0	33.0		77.0	77.0	77.0	77.0	77.0	
Total Split (%)	30.0%	30.0%		30.0%	30.0%		70.0%	70.0%	70.0%	70.0%	70.0%	
Maximum Green (s)	27.4	27.4		27.1	27.1		71.1	71.1	71.1	71.7	71.7	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.6	2.6		2.9	2.9		2.9	2.9	2.9	2.3	2.3	
Lost Time Adjust (s)		0.0			0.0		-0.8	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.6			5.9		5.1	5.9	5.9	5.3	5.3	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	None		None	None		C-Max	C-Max	C-Max	C-Max	C-Max	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		13.0	13.0		14.0	14.0	14.0	10.0	10.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	

Intersection Summary

Area Type: CBD













Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 6 (5%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 65
 Control Type: Actuated-Coordinated

Splits and Phases: 56: St. Joseph St & Jefferson Blvd



HCM 2010 Signalized Intersection Summary
56: St. Joseph St & Jefferson Blvd

2038 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↖	↗	↗	↖	↖
Traffic Volume (veh/h)	45	90	13	28	92	53	8	597	31	11	496	10
Future Volume (veh/h)	45	90	13	28	92	53	8	597	31	11	496	10
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1710	1644	1710	1710	1644	1710	1583	1583	1583	1583	1583	1710
Adj Flow Rate, veh/h	49	98	14	30	100	58	9	649	34	12	539	11
Adj No. of Lanes	0	1	0	0	1	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	86	130	17	63	141	74	601	1156	983	534	1129	23
Arrive On Green	0.17	0.16	0.16	0.16	0.16	0.16	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	268	800	102	153	868	456	726	1583	1346	642	1546	32
Grp Volume(v), veh/h	161	0	0	188	0	0	9	649	34	12	0	550
Grp Sat Flow(s),veh/h/ln	1169	0	0	1477	0	0	726	1583	1346	642	0	1578
Q Serve(g_s), s	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	14.8	0.0	0.0	13.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.30		0.09	0.16		0.31	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	245	0	0	278	0	0	601	1156	983	534	0	1152
V/C Ratio(X)	0.66	0.00	0.00	0.68	0.00	0.00	0.01	0.56	0.03	0.02	0.00	0.48
Avail Cap(c_a), veh/h	352	0	0	400	0	0	601	1156	983	534	0	1152
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	0.63	0.63	0.63	0.90	0.00	0.90
Uniform Delay (d), s/veh	44.2	0.0	0.0	44.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	3.0	0.0	0.0	2.9	0.0	0.0	0.0	1.2	0.0	0.1	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.5	0.0	0.0	9.6	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.7
LnGrp Delay(d),s/veh	47.2	0.0	0.0	46.9	0.0	0.0	0.0	1.2	0.0	0.1	0.0	1.3
LnGrp LOS	D			D			A	A	A	A		A
Approach Vol, veh/h		161			188			692				562
Approach Delay, s/veh		47.2			46.9			1.2				1.3
Approach LOS		D			D			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		86.2		23.8		86.2		23.8				
Change Period (Y+Rc), s		5.9		5.9		* 5.9		* 5.9				
Max Green Setting (Gmax), s		71.1		27.1		* 72		* 27				
Max Q Clear Time (g_c+I1), s		2.0		15.3		2.0		16.8				
Green Ext Time (p_c), s		7.2		1.1		7.2		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay				11.2								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
57: St. Joseph St & Wayne St

2038 2-way
Timing Plan: PM

	↖	→	↘	↙	←	↖	↘	↑	↖	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↘		↖	↘		↖	↑	↘	↖	↘	
Traffic Volume (vph)	14	64	8	200	138	0	0	609	252	0	543	5
Future Volume (vph)	14	64	8	200	138	0	0	609	252	0	543	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100		0	0		278	0		200	100		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	50			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		405			839			565			478	
Travel Time (s)		11.0			22.9			12.8			10.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA	Perm	Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2		2	6		
Minimum Split (s)	25.7	25.7		32.9	32.9		28.9	28.9	28.9	32.0	32.0	
Total Split (s)	39.0	39.0		39.0	39.0		71.0	71.0	71.0	71.0	71.0	
Total Split (%)	35.5%	35.5%		35.5%	35.5%		64.5%	64.5%	64.5%	64.5%	64.5%	
Maximum Green (s)	33.3	33.3		33.1	33.1		65.1	65.1	65.1	65.0	65.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
All-Red Time (s)	2.7	2.7		2.9	2.9		2.9	2.9	2.9	3.0	3.0	
Lost Time Adjust (s)	-1.0	0.0		0.0	0.0		-1.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	4.7	5.7		5.9	5.9		4.9	5.9	5.9	6.0	6.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0	7.0	7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		20.0	20.0		16.0	16.0	16.0	19.0	19.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0	0	0	0	

Intersection Summary

Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 96 (87%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Pretimed

Splits and Phases: 57: St. Joseph St & Wayne St



HCM 2010 Signalized Intersection Summary
 57: St. Joseph St & Wayne St

2038 2-way
 Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	64	8	200	138	0	0	609	252	0	543	5
Future Volume (veh/h)	14	64	8	200	138	0	0	609	252	0	543	5
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1644	1644	1710	1644	1644	1710	1583	1583	1583	1583	1583	1710
Adj Flow Rate, veh/h	15	70	9	217	150	0	0	662	274	0	590	5
Adj No. of Lanes	1	1	0	1	1	0	1	1	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	327	431	55	391	496	0	65	934	794	65	925	8
Arrive On Green	0.62	0.60	0.60	0.30	0.30	0.00	0.00	1.00	1.00	0.00	1.00	1.00
Sat Flow, veh/h	1088	1428	184	1160	1644	0	696	1583	1346	507	1568	13
Grp Volume(v), veh/h	15	0	79	217	150	0	0	662	274	0	0	595
Grp Sat Flow(s),veh/h/ln	1088	0	1612	1160	1644	0	696	1583	1346	507	0	1581
Q Serve(g_s), s	0.8	0.0	2.4	18.3	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	8.5	0.0	2.4	20.6	7.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.11	1.00		0.00	1.00		1.00	1.00		0.01
Lane Grp Cap(c), veh/h	327	0	487	391	496	0	65	934	794	65	0	933
V/C Ratio(X)	0.05	0.00	0.16	0.56	0.30	0.00	0.00	0.71	0.34	0.00	0.00	0.64
Avail Cap(c_a), veh/h	327	0	487	391	496	0	65	934	794	65	0	933
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	18.0	0.0	15.7	35.1	29.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.3	0.0	0.7	5.6	1.6	0.0	0.0	4.5	1.2	0.0	0.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	0.0	2.1	10.6	6.7	0.0	0.0	2.1	0.5	0.0	0.0	1.6
LnGrp Delay(d),s/veh	18.3	0.0	16.4	40.7	31.1	0.0	0.0	4.5	1.2	0.0	0.0	3.3
LnGrp LOS	B		B	D	C			A	A			A
Approach Vol, veh/h		94			367			936			595	
Approach Delay, s/veh		16.7			36.8			3.5			3.3	
Approach LOS		B			D			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		71.1		39.2		71.1		39.2				
Change Period (Y+Rc), s		* 6		5.9		6.0		* 5.9				
Max Green Setting (Gmax), s		* 65		33.1		65.0		* 33				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				10.2								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
58: Michigan St/St. Joseph St & Western Ave

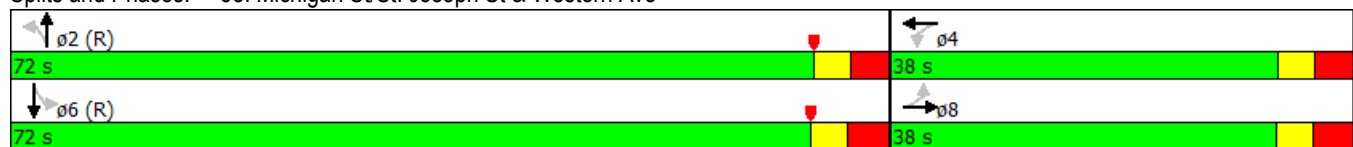
2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	281	12	100	7	14	17	97	563	3	5	710	37
Future Volume (vph)	281	12	100	7	14	17	97	563	3	5	710	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		75	150		0	200		0
Storage Lanes	1		0	0		0	1		0	1		0
Taper Length (ft)	25			25			50			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		145			566			536			565	
Travel Time (s)		4.0			15.4			12.2			12.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	8%	8%	8%	8%	8%	8%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	36.4	36.4		37.3	37.3		37.3	37.3		33.5	33.5	
Total Split (s)	38.0	38.0		38.0	38.0		72.0	72.0		72.0	72.0	
Total Split (%)	34.5%	34.5%		34.5%	34.5%		65.5%	65.5%		65.5%	65.5%	
Maximum Green (s)	31.6	31.6		31.7	31.7		65.7	65.7		65.5	65.5	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.4	3.4		3.3	3.3		3.3	3.3		3.5	3.5	
Lost Time Adjust (s)	0.0	0.0			0.0		-1.0	0.0		0.0	0.0	
Total Lost Time (s)	6.4	6.4			6.3		5.3	6.3		6.5	6.5	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	23.0	23.0		24.0	24.0		24.0	24.0		20.0	20.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary





















Area Type: CBD
 Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 85 (77%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Pretimed

Splits and Phases: 58: Michigan St/St. Joseph St & Western Ave



HCM 2010 Signalized Intersection Summary
58: Michigan St/St. Joseph St & Western Ave

2038 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	281	12	100	7	14	17	97	563	3	5	710	37
Future Volume (veh/h)	281	12	100	7	14	17	97	563	3	5	710	37
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1644	1644	1710	1710	1644	1710	1583	1583	1710	1583	1583	1710
Adj Flow Rate, veh/h	305	13	109	8	15	18	105	612	3	5	772	40
Adj No. of Lanes	1	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	8	8	8	8	8	8
Cap, veh/h	420	43	365	98	173	181	409	938	5	472	889	46
Arrive On Green	0.29	0.29	0.29	0.29	0.29	0.29	1.00	1.00	1.00	1.00	1.00	1.00
Sat Flow, veh/h	1210	151	1269	205	600	630	569	1574	8	684	1492	77
Grp Volume(v), veh/h	305	0	122	41	0	0	105	0	615	5	0	812
Grp Sat Flow(s),veh/h/ln	1210	0	1420	1436	0	0	569	0	1582	684	0	1570
Q Serve(g_s), s	23.5	0.0	7.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	25.6	0.0	7.4	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop In Lane	1.00		0.89	0.20		0.44	1.00		0.00	1.00		0.05
Lane Grp Cap(c), veh/h	420	0	408	452	0	0	409	0	942	472	0	935
V/C Ratio(X)	0.73	0.00	0.30	0.09	0.00	0.00	0.26	0.00	0.65	0.01	0.00	0.87
Avail Cap(c_a), veh/h	420	0	408	452	0	0	409	0	942	472	0	935
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.9	0.0	30.6	28.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	10.5	0.0	1.9	0.4	0.0	0.0	1.5	0.0	3.5	0.0	0.0	10.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.1	0.0	5.6	1.7	0.0	0.0	0.3	0.0	1.7	0.0	0.0	5.0
LnGrp Delay(d),s/veh	47.4	0.0	32.5	29.2	0.0	0.0	1.5	0.0	3.5	0.0	0.0	10.8
LnGrp LOS	D		C	C			A		A	A		B
Approach Vol, veh/h		427			41			720				817
Approach Delay, s/veh		43.1			29.2			3.2				10.7
Approach LOS		D			C			A				B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		72.2		38.1		72.2		38.1				
Change Period (Y+Rc), s		* 6.5		* 6.4		6.5		6.4				
Max Green Setting (Gmax), s		* 66		* 32		65.5		31.6				
Max Q Clear Time (g_c+I1), s		0.0		0.0		0.0		0.0				
Green Ext Time (p_c), s		0.0		0.0		0.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				15.3								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
59: Chapin St/Marion St & Lincoln Way

2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	658	27	15	944	0	19	72	30	0	70	101
Future Volume (vph)	49	658	27	15	944	0	19	72	30	0	70	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	75		0	100		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	50			50			100			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		650			972			577			308	
Travel Time (s)		14.8			22.1			13.1			7.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA			NA	
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Minimum Split (s)	35.5	35.5		35.5	35.5		24.0	24.0		24.0	24.0	
Total Split (s)	66.0	66.0		66.0	66.0		24.0	24.0		24.0	24.0	
Total Split (%)	73.3%	73.3%		73.3%	73.3%		26.7%	26.7%		26.7%	26.7%	
Maximum Green (s)	61.0	61.0		61.0	61.0		19.0	19.0		19.0	19.0	
Yellow Time (s)	3.5	3.5		3.5	3.5		3.5	3.5		3.5	3.5	
All-Red Time (s)	1.5	1.5		1.5	1.5		1.5	1.5		1.5	1.5	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary

Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 41 (46%), Referenced to phase 2:EBTL and 6:WBTL, Start of Yellow
 Natural Cycle: 80
 Control Type: Pretimed

Splits and Phases: 59: Chapin St/Marion St & Lincoln Way



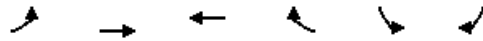
HCM 2010 Signalized Intersection Summary
59: Chapin St/Marion St & Lincoln Way

2038 2-way
Timing Plan: PM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	658	27	15	944	0	19	72	30	0	70	101
Future Volume (veh/h)	49	658	27	15	944	0	19	72	30	0	70	101
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1827	1900	1827	1827	1900	1900	1827	1900	1900	1827	1900
Adj Flow Rate, veh/h	53	715	29	16	1026	0	21	78	33	0	76	110
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	222	1182	48	397	1238	0	75	230	86	0	143	207
Arrive On Green	0.68	0.68	0.68	0.68	0.68	0.00	0.21	0.21	0.21	0.00	0.21	0.21
Sat Flow, veh/h	537	1744	71	700	1827	0	135	1091	409	0	676	978
Grp Volume(v), veh/h	53	0	744	16	1026	0	132	0	0	0	0	186
Grp Sat Flow(s),veh/h/ln	537	0	1814	700	1827	0	1635	0	0	0	0	1654
Q Serve(g_s), s	7.2	0.0	20.2	1.2	37.1	0.0	0.0	0.0	0.0	0.0	0.0	9.0
Cycle Q Clear(g_c), s	44.4	0.0	20.2	21.3	37.1	0.0	9.0	0.0	0.0	0.0	0.0	9.0
Prop In Lane	1.00		0.04	1.00		0.00	0.16		0.25	0.00		0.59
Lane Grp Cap(c), veh/h	222	0	1230	397	1238	0	391	0	0	0	0	349
V/C Ratio(X)	0.24	0.00	0.60	0.04	0.83	0.00	0.34	0.00	0.00	0.00	0.00	0.53
Avail Cap(c_a), veh/h	222	0	1230	397	1238	0	391	0	0	0	0	349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	27.0	0.0	7.9	13.7	10.7	0.0	30.3	0.0	0.0	0.0	0.0	31.6
Incr Delay (d2), s/veh	2.5	0.0	2.2	0.2	6.5	0.0	2.3	0.0	0.0	0.0	0.0	5.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.2	0.0	16.0	0.4	27.9	0.0	5.5	0.0	0.0	0.0	0.0	8.2
LnGrp Delay(d),s/veh	29.5	0.0	10.1	13.9	17.1	0.0	32.6	0.0	0.0	0.0	0.0	37.3
LnGrp LOS	C		B	B	B		C					D
Approach Vol, veh/h		797			1042			132				186
Approach Delay, s/veh		11.4			17.1			32.6				37.3
Approach LOS		B			B			C				D
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		66.0		24.0		66.0		24.0				
Change Period (Y+Rc), s		5.0		5.0		5.0		5.0				
Max Green Setting (Gmax), s		61.0		19.0		61.0		19.0				
Max Q Clear Time (g_c+I1), s		46.4		11.0		39.1		11.0				
Green Ext Time (p_c), s		11.1		1.1		15.2		1.1				
Intersection Summary												
HCM 2010 Ctrl Delay				17.7								
HCM 2010 LOS				B								

Lanes, Volumes, Timings
 60: Lafayette Blvd & Bartlett St

2038 2-way
 Timing Plan: PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	18	9	27
Future Volume (vph)	0	0	0	18	9	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	0
Taper Length (ft)	50				50	
Link Speed (mph)		30	30		30	
Link Distance (ft)		770	377		363	
Travel Time (s)		17.5	8.6		8.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%
Parking (#/hr)				16		
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
 Control Type: Unsignalized

Lanes, Volumes, Timings
61: William St & LaSalle Ave

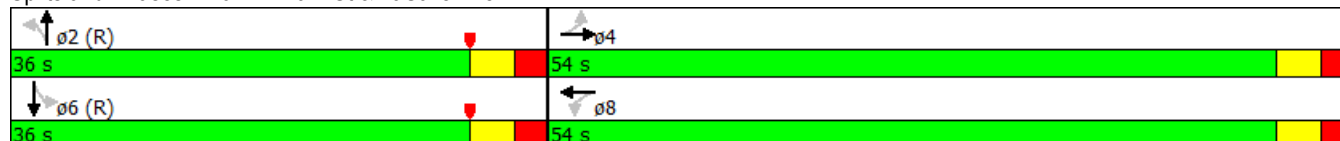
2038 2-way
Timing Plan: PM

	↖	→	↘	↙	←	↖	↙	↑	↘	↘	↓	↙
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (vph)	0	69	38	5	26	0	42	197	10	0	143	3
Future Volume (vph)	0	69	38	5	26	0	42	197	10	0	143	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		343			444			483			227	
Travel Time (s)		7.8			10.1			13.2			6.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Turn Type		NA		Perm	NA		Perm	NA			NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	25.3	25.3		24.0	24.0		25.3	25.3		24.0	24.0	
Total Split (s)	54.0	54.0		54.0	54.0		36.0	36.0		36.0	36.0	
Total Split (%)	60.0%	60.0%		60.0%	60.0%		40.0%	40.0%		40.0%	40.0%	
Maximum Green (s)	48.7	48.7		48.8	48.8		30.7	30.7		30.8	30.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.3	2.3		2.2	2.2		2.3	2.3		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.3			5.2			5.3			5.2	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		11.0	11.0		13.0	13.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary













Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 88 (98%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 61: William St & LaSalle Ave



HCM 2010 Signalized Intersection Summary
61: William St & LaSalle Ave

2038 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Volume (veh/h)	0	69	38	5	26	0	42	197	10	0	143	3
Future Volume (veh/h)	0	69	38	5	26	0	42	197	10	0	143	3
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1900	1900	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	0	75	41	5	28	0	46	214	11	0	155	3
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	0	613	335	156	846	0	116	503	24	0	622	12
Arrive On Green	0.00	0.54	0.54	0.54	0.54	0.00	0.68	0.68	0.68	0.00	0.11	0.11
Sat Flow, veh/h	0	1134	620	204	1563	0	202	1472	71	0	1821	35
Grp Volume(v), veh/h	0	0	116	33	0	0	271	0	0	0	0	158
Grp Sat Flow(s),veh/h/ln	0	0	1753	1768	0	0	1745	0	0	0	0	1857
Q Serve(g_s), s	0.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.0
Cycle Q Clear(g_c), s	0.0	0.0	2.9	0.7	0.0	0.0	5.9	0.0	0.0	0.0	0.0	7.0
Prop In Lane	0.00		0.35	0.15		0.00	0.17		0.04	0.00		0.02
Lane Grp Cap(c), veh/h	0	0	949	1002	0	0	642	0	0	0	0	634
V/C Ratio(X)	0.00	0.00	0.12	0.03	0.00	0.00	0.42	0.00	0.00	0.00	0.00	0.25
Avail Cap(c_a), veh/h	0	0	949	1002	0	0	642	0	0	0	0	634
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	10.2	9.7	0.0	0.0	10.4	0.0	0.0	0.0	0.0	29.5
Incr Delay (d2), s/veh	0.0	0.0	0.3	0.1	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.0	2.7	0.7	0.0	0.0	5.8	0.0	0.0	0.0	0.0	6.8
LnGrp Delay(d),s/veh	0.0	0.0	10.4	9.7	0.0	0.0	12.4	0.0	0.0	0.0	0.0	30.4
LnGrp LOS			B	A			B					C
Approach Vol, veh/h		116			33			271				158
Approach Delay, s/veh		10.4			9.7			12.4				30.4
Approach LOS		B			A			B				C
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		36.1		54.1		36.1		54.1				
Change Period (Y+Rc), s		* 5.3		* 5.3		* 5.3		* 5.3				
Max Green Setting (Gmax), s		* 31		* 49		* 31		* 49				
Max Q Clear Time (g_c+I1), s		7.9		4.9		0.0		2.7				
Green Ext Time (p_c), s		1.0		0.9		1.0		0.9				
Intersection Summary												
HCM 2010 Ctrl Delay				16.8								
HCM 2010 LOS				B								
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
62: William St & Colfax Ave

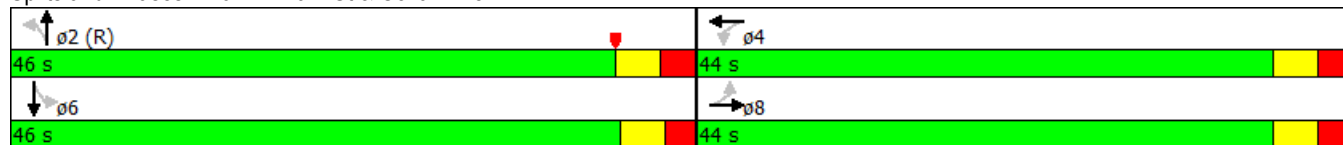
2038 2-way
Timing Plan: PM

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	57	18	17	122	27	1	99	93	9	152	67
Future Volume (vph)	76	57	18	17	122	27	1	99	93	9	152	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	75		0	75		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	50			50			50			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		387			682			495			483	
Travel Time (s)		8.8			15.5			13.5			13.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			2			6	
Permitted Phases	8			4			2			6		
Minimum Split (s)	25.5	25.5		25.5	25.5		25.5	25.5		25.2	25.2	
Total Split (s)	44.0	44.0		44.0	44.0		46.0	46.0		46.0	46.0	
Total Split (%)	48.9%	48.9%		48.9%	48.9%		51.1%	51.1%		51.1%	51.1%	
Maximum Green (s)	38.5	38.5		38.5	38.5		40.5	40.5		40.8	40.8	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.5	2.5		2.5	2.5		2.5	2.5		2.2	2.2	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		5.5			5.5		5.5	5.5		5.2	5.2	
Lead/Lag												
Lead-Lag Optimize?												
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		13.0	13.0		13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	

Intersection Summary













Area Type: Other
 Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 20 (22%), Referenced to phase 2:NBTL, Start of Yellow
 Natural Cycle: 55
 Control Type: Pretimed

Splits and Phases: 62: William St & Colfax Ave





















HCM 2010 Signalized Intersection Summary
62: William St & Colfax Ave

2038 2-way
Timing Plan: PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Volume (veh/h)	76	57	18	17	122	27	1	99	93	9	152	67
Future Volume (veh/h)	76	57	18	17	122	27	1	99	93	9	152	67
Number	3	8	18	7	4	14	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1827	1900	1827	1827	1900	1827	1827	1900
Adj Flow Rate, veh/h	83	62	20	18	133	29	1	108	101	10	165	73
Adj No. of Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	4	4	4	4	4	4	4	4	4
Cap, veh/h	356	256	76	87	577	119	563	393	368	579	543	240
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.90	0.90	0.90	0.90	0.90	0.90
Sat Flow, veh/h	695	600	179	101	1354	280	1116	870	813	1146	1202	532
Grp Volume(v), veh/h	165	0	0	180	0	0	1	0	209	10	0	238
Grp Sat Flow(s),veh/h/ln	1473	0	0	1735	0	0	1116	0	1683	1146	0	1733
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.1	0.0	1.6
Cycle Q Clear(g_c), s	5.3	0.0	0.0	5.8	0.0	0.0	1.7	0.0	1.4	1.5	0.0	1.6
Prop In Lane	0.50		0.12	0.10		0.16	1.00		0.48	1.00		0.31
Lane Grp Cap(c), veh/h	688	0	0	784	0	0	563	0	761	579	0	783
V/C Ratio(X)	0.24	0.00	0.00	0.23	0.00	0.00	0.00	0.00	0.27	0.02	0.00	0.30
Avail Cap(c_a), veh/h	688	0	0	784	0	0	563	0	761	579	0	783
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	16.4	0.0	0.0	16.5	0.0	0.0	2.6	0.0	2.5	2.6	0.0	2.5
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.9	0.1	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.0	0.0	0.0	5.4	0.0	0.0	0.0	0.0	1.4	0.1	0.0	1.5
LnGrp Delay(d),s/veh	17.2	0.0	0.0	17.2	0.0	0.0	2.6	0.0	3.3	2.6	0.0	3.5
LnGrp LOS	B			B			A		A	A		A
Approach Vol, veh/h		165			180			210			248	
Approach Delay, s/veh		17.2			17.2			3.3			3.4	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		46.3		44.0		46.3		44.0				
Change Period (Y+Rc), s		5.5		5.5		* 5.5		5.5				
Max Green Setting (Gmax), s		40.5		38.5		* 41		38.5				
Max Q Clear Time (g_c+I1), s		3.7		7.8		3.6		7.3				
Green Ext Time (p_c), s		3.3		2.2		3.3		2.2				
Intersection Summary												
HCM 2010 Ctrl Delay			9.3									
HCM 2010 LOS			A									
Notes												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings
63: William St & Jefferson Blvd

2038 2-way
Timing Plan: PM





















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	5	0	60	0	101	8	35	127	0
Future Volume (vph)	0	0	0	5	0	60	0	101	8	35	127	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		0	225		0	210		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		331			675			480			497	
Travel Time (s)		9.0			18.4			10.9			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)											5	5
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Lanes, Volumes, Timings
64: William St & Wayne St

2038 2-way
Timing Plan: PM










												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	100		0	150		0	150		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		318			680			490			480	
Travel Time (s)		8.7			18.5			11.1			10.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Lanes, Volumes, Timings
 65: Lafayette Blvd & Bronson St

2038 2-way
 Timing Plan: PM

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	16	297	6	0	387
Future Volume (vph)	0	16	297	6	0	387
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)	25		30			30
Link Distance (ft)	440		1160			480
Travel Time (s)	12.0		26.4			10.9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control	Stop		Free			Free

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Lanes, Volumes, Timings
66: William St & Lincoln Way

2038 2-way
Timing Plan: PM

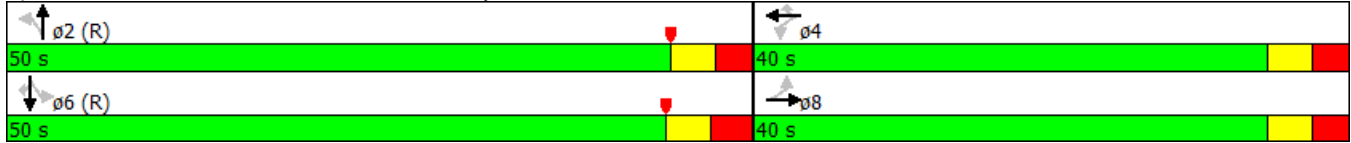
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	621	58	45	922	57	37	160	0	200	89	0
Future Volume (vph)	0	621	58	45	922	57	37	160	0	200	89	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	125		0	75		0	50		0	100		150
Storage Lanes	1		0	1		1	1		0	1		1
Taper Length (ft)	50			50			25			50		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		972			472			227			393	
Travel Time (s)		22.1			10.7			6.2			10.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
Shared Lane Traffic (%)												
Number of Detectors	1	0		1	0	1	1	1		1	1	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	0		20	0	20	50	50		50	50	50
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	50	50		50	50	50
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	Perm
Protected Phases		8			4			2			6	
Permitted Phases	8			4		4	2			6		6
Detector Phase	8	8		4	4	4	2	2		6	6	6
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Minimum Split (s)	26.6	26.6		25.6	25.6	25.6	29.5	29.5		29.9	29.9	29.9
Total Split (s)	40.0	40.0		40.0	40.0	40.0	50.0	50.0		50.0	50.0	50.0
Total Split (%)	44.4%	44.4%		44.4%	44.4%	44.4%	55.6%	55.6%		55.6%	55.6%	55.6%
Maximum Green (s)	34.4	34.4		34.4	34.4	34.4	44.5	44.5		44.1	44.1	44.1
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	2.6	2.6		2.6	2.6	2.6	2.5	2.5		2.9	2.9	2.9
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	5.6	5.6		5.6	5.6	5.6	5.5	5.5		5.9	5.9	5.9
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	None	None		None	None	None	C-Max	C-Max		C-Max	C-Max	C-Max
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	7.0
Flash Dont Walk (s)	14.0	14.0		13.0	13.0	13.0	17.0	17.0		17.0	17.0	17.0
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	0
Intersection Summary												
Area Type:	Other											
Cycle Length:	90											

Lanes, Volumes, Timings
66: William St & Lincoln Way

2038 2-way
Timing Plan: PM

Actuated Cycle Length: 90
Offset: 61 (68%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
Natural Cycle: 90
Control Type: Actuated-Coordinated






















Splits and Phases: 66: William St & Lincoln Way



HCM 2010 analysis cannot be performed without detectors for actuated controller type.

Lanes, Volumes, Timings
67: Michigan St N & Madison St

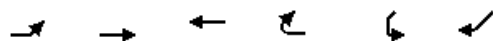
2038 2-way
Timing Plan: PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	0	20	0	0	0	21	577	0	0	491	8
Future Volume (vph)	44	0	20	0	0	0	21	577	0	0	491	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	50		0	50		0	200		0	200		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	50			50			50			50		
Link Speed (mph)		25			25			30			30	
Link Distance (ft)		433			199			492			528	
Travel Time (s)		11.8			5.4			11.2			12.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)		18										
Shared Lane Traffic (%)												
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: CBD

Control Type: Unsignalized



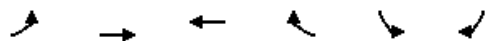
Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0			100	100	0
Storage Lanes	0			0	0	0
Taper Length (ft)	50				50	
Link Speed (mph)		25	30		30	
Link Distance (ft)		308	884		827	
Travel Time (s)		8.4	20.1		18.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Shared Lane Traffic (%)						
Sign Control		Free	Stop		Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized

Lanes, Volumes, Timings
85: Marion St & Main St

2038 2-way
Timing Plan: PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	11	15	8	8	4
Future Volume (vph)	0	11	15	8	8	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Link Speed (mph)		30	25		30	
Link Distance (ft)		425	192		491	
Travel Time (s)		9.7	5.2		11.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)		18				
Shared Lane Traffic (%)						
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized



Appendix I: Roundabout Capacity Analysis Memorandums



M E M O R A N D U M

DATE: November 16, 2015
TO: Project Design Team
FROM: Ryan Huebschman, PE
RE: Michigan Street and Bartlett Street Roundabout Capacity Analysis
CC: File

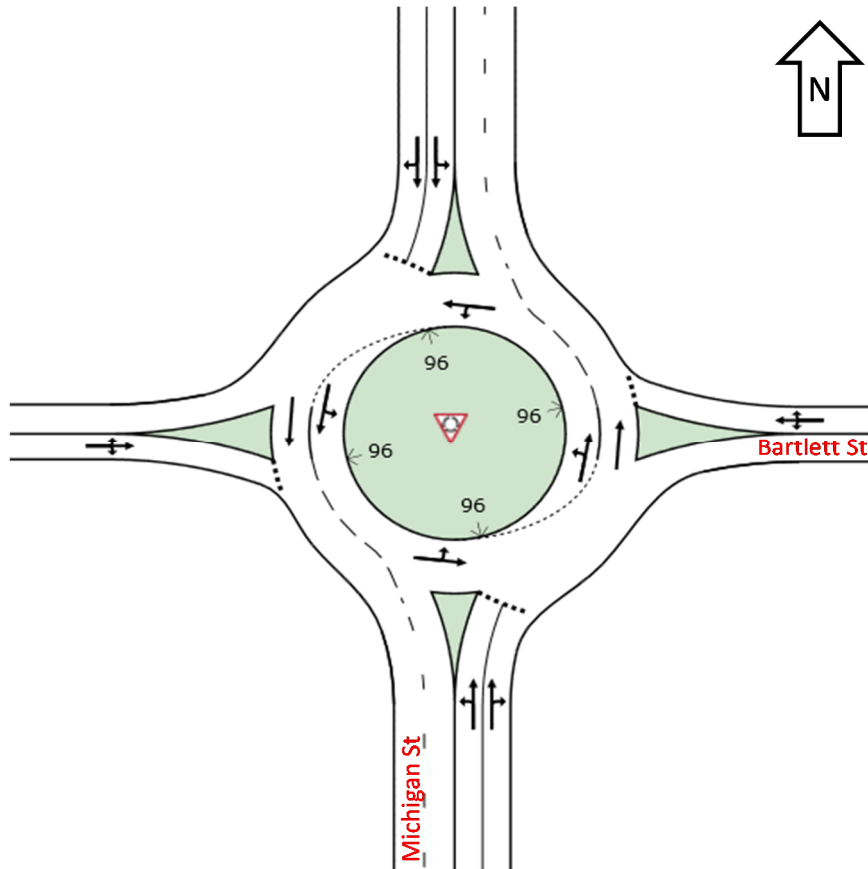
The intersection of Michigan Street and Bartlett Street has been analyzed to determine if the proposed roundabout lane configurations and geometry will be sufficient to handle the year 2038 projected traffic volumes. The traffic projections for the intersection have been developed by means of a travel demand model using year 2014 traffic counts as a base volume. This memo summarizes the capacity analysis results.

The following table summarizes the existing year 2014 and design year 2038 traffic volume estimates that were used for the capacity analysis.

Year	Hour	NB (Michigan St)			SB (Michigan St)			EB (Bartlett St)			WB (Bartlett St)		
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
2014	AM Peak	120	641	25	20	824	298	172	29	84	9	15	6
2014	PM Peak	93	892	9	3	683	181	291	7	51	24	11	18
2038	AM Peak	135	710	27	23	924	333	199	34	94	10	17	7
2038	PM Peak	100	995	9	4	799	281	369	9	54	27	13	21

SIDRA software was used to perform a capacity analysis for the study intersection. Per the Indiana Design Manual, the use of SIDRA as a capacity analysis tool is acceptable for LPA and INDOT projects. The following is a summary of the SIDRA analysis for the currently proposed roundabout configuration.

The figure below shows the lane configurations for the proposed roundabout.



The following table summarizes the results of the capacity analysis. Detailed capacity analysis results from SIDRA have been attached to this memorandum for additional information.

Analysis Year	Approach	AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
2014	NB	A	5.3	A	5.7
	SB	A	4.3	A	3.9
	EB	A	8.4	A	9.0
	WB	A	5.2	A	7.6
	Overall	A	5.2	A	5.5
2038	NB	A	5.6	A	7.2
	SB	A	4.6	A	4.1
	EB	B	10.3	B	12.0
	WB	A	5.5	A	8.7
	Overall	A	5.7	A	6.8

From this analysis, it can be concluded that the currently proposed lane configurations are capable of handling the projected traffic in the design year (2038) at an acceptable level of service in both the AM and PM peak hours.

MOVEMENT SUMMARY

 Site: Michigan St & Bartlett St - 2014 AM

2014 AM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Michigan St											
3	L2	130	11.0	0.354	10.3	LOS B	2.6	80.8	0.57	0.56	28.5
8	T1	697	11.0	0.354	4.4	LOS A	2.7	84.8	0.56	0.50	32.5
18	R2	27	11.0	0.354	4.6	LOS A	2.7	84.8	0.55	0.45	27.5
Approach		854	11.0	0.354	5.3	LOS A	2.7	84.8	0.56	0.50	31.6
East: Bartlett St											
1	L2	10	4.0	0.048	8.5	LOS A	0.2	5.7	0.65	0.62	27.9
6	T1	16	4.0	0.048	3.5	LOS A	0.2	5.7	0.65	0.62	24.5
16	R2	7	4.0	0.048	4.2	LOS A	0.2	5.7	0.65	0.62	27.1
Approach		33	4.0	0.048	5.2	LOS A	0.2	5.7	0.65	0.62	25.9
North: Michigan St											
7	L2	22	11.0	0.473	9.9	LOS A	3.9	121.7	0.52	0.46	29.0
4	T1	896	11.0	0.473	4.2	LOS A	4.0	125.4	0.51	0.46	32.8
14	R2	324	11.0	0.473	4.3	LOS A	4.0	125.4	0.49	0.46	27.6
Approach		1241	11.0	0.473	4.3	LOS A	4.0	125.4	0.51	0.46	31.2
West: Bartlett St											
5	L2	187	4.0	0.443	10.2	LOS B	2.6	69.8	0.76	0.91	27.0
2	T1	32	4.0	0.443	5.1	LOS A	2.6	69.8	0.76	0.91	23.8
12	R2	91	4.0	0.443	5.8	LOS A	2.6	69.8	0.76	0.91	26.2
Approach		310	4.0	0.443	8.4	LOS A	2.6	69.8	0.76	0.91	26.4
All Vehicles		2438	10.0	0.473	5.2	LOS A	4.0	125.4	0.56	0.54	30.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

SIDRA INTERSECTION 6.1 | Copyright © 2000-2015 Akcelik and Associates Pty Ltd | sidrasolutions.com

Organisation: AMERICAN STRUCTUREPOINT, INC | Processed: Monday, November 16, 2015 11:21:26 AM

Project: P:\2014\01351\C. Calcs_Data\Traffic Study\Roundabout Analysis\Michigan-Bartlett\INDOT Revised Volumes\SIDRA\Michigan & Bartlett - 2014 AM Peak Hour.sip6

MOVEMENT SUMMARY

 Site: Michigan St & Bartlett St - 2014 PM

2014 PM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Michigan St											
3	L2	101	7.0	0.475	11.1	LOS B	3.8	110.2	0.71	0.62	28.4
8	T1	970	7.0	0.475	5.1	LOS A	4.1	117.3	0.70	0.56	32.2
18	R2	10	7.0	0.475	5.2	LOS A	4.1	117.3	0.69	0.52	27.2
Approach		1080	7.0	0.475	5.7	LOS A	4.1	117.3	0.70	0.56	31.7
East: Bartlett St											
1	L2	26	5.0	0.108	10.1	LOS B	0.5	14.2	0.76	0.83	27.2
6	T1	12	5.0	0.108	5.0	LOS A	0.5	14.2	0.76	0.83	24.0
16	R2	20	5.0	0.108	5.8	LOS A	0.5	14.2	0.76	0.83	26.4
Approach		58	5.0	0.108	7.6	LOS A	0.5	14.2	0.76	0.83	26.2
North: Michigan St											
7	L2	3	7.0	0.346	9.5	LOS A	2.5	73.3	0.43	0.42	29.2
4	T1	742	7.0	0.346	3.8	LOS A	2.6	75.5	0.42	0.42	33.2
14	R2	197	7.0	0.346	4.0	LOS A	2.6	75.5	0.41	0.42	27.8
Approach		942	7.0	0.346	3.9	LOS A	2.6	75.5	0.42	0.42	31.9
West: Bartlett St											
5	L2	316	5.0	0.483	9.7	LOS A	2.9	80.2	0.72	0.92	26.7
2	T1	8	5.0	0.483	4.7	LOS A	2.9	80.2	0.72	0.92	23.7
12	R2	55	5.0	0.483	5.4	LOS A	2.9	80.2	0.72	0.92	26.0
Approach		379	5.0	0.483	9.0	LOS A	2.9	80.2	0.72	0.92	26.6
All Vehicles		2460	6.6	0.483	5.5	LOS A	4.1	117.3	0.60	0.57	30.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 **Site: Michigan St & Bartlett St - 2038 AM**

2038 AM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Michigan St											
3	L2	147	11.0	0.409	10.6	LOS B	3.1	97.9	0.64	0.60	28.4
8	T1	772	11.0	0.409	4.7	LOS A	3.3	103.5	0.62	0.53	32.3
18	R2	29	11.0	0.409	4.9	LOS A	3.3	103.5	0.62	0.49	27.3
Approach		948	11.0	0.409	5.6	LOS A	3.3	103.5	0.63	0.54	31.5
East: Bartlett St											
1	L2	11	4.0	0.059	9.0	LOS A	0.3	7.2	0.69	0.68	27.8
6	T1	18	4.0	0.059	3.9	LOS A	0.3	7.2	0.69	0.68	24.4
16	R2	8	4.0	0.059	4.6	LOS A	0.3	7.2	0.69	0.68	27.0
Approach		37	4.0	0.059	5.5	LOS A	0.3	7.2	0.69	0.68	25.8
North: Michigan St											
7	L2	25	11.0	0.542	10.2	LOS B	4.8	150.9	0.60	0.50	28.8
4	T1	1004	11.0	0.542	4.5	LOS A	5.0	156.0	0.59	0.49	32.6
14	R2	362	11.0	0.542	4.6	LOS A	5.0	156.0	0.57	0.49	27.5
Approach		1391	11.0	0.542	4.6	LOS A	5.0	156.0	0.58	0.49	31.1
West: Bartlett St											
5	L2	216	4.0	0.557	12.0	LOS B	3.7	100.8	0.83	1.02	26.4
2	T1	37	4.0	0.557	7.0	LOS A	3.7	100.8	0.83	1.02	23.3
12	R2	102	4.0	0.557	7.7	LOS A	3.7	100.8	0.83	1.02	25.7
Approach		355	4.0	0.557	10.3	LOS B	3.7	100.8	0.83	1.02	25.8
All Vehicles		2732	10.0	0.557	5.7	LOS A	5.0	156.0	0.63	0.58	30.3

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 Site: Michigan St & Bartlett St - 2038 PM

2038 PM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Michigan St											
3	L2	109	7.0	0.580	13.1	LOS B	5.7	164.9	0.85	0.83	28.0
8	T1	1082	7.0	0.580	6.6	LOS A	5.9	170.4	0.84	0.74	31.7
18	R2	10	7.0	0.580	6.4	LOS A	5.9	170.4	0.83	0.68	26.9
Approach		1200	7.0	0.580	7.2	LOS A	5.9	170.4	0.84	0.75	31.3
East: Bartlett St											
1	L2	29	5.0	0.149	11.3	LOS B	0.7	20.8	0.82	0.88	26.8
6	T1	14	5.0	0.149	6.2	LOS A	0.7	20.8	0.82	0.88	23.7
16	R2	23	5.0	0.149	7.0	LOS A	0.7	20.8	0.82	0.88	26.1
Approach		66	5.0	0.149	8.7	LOS A	0.7	20.8	0.82	0.88	25.9
North: Michigan St											
7	L2	4	7.0	0.439	9.7	LOS A	3.6	104.2	0.50	0.44	29.1
4	T1	868	7.0	0.439	4.0	LOS A	3.7	107.6	0.49	0.44	33.0
14	R2	305	7.0	0.439	4.2	LOS A	3.7	107.6	0.48	0.45	27.7
Approach		1178	7.0	0.439	4.1	LOS A	3.7	107.6	0.49	0.45	31.4
West: Bartlett St											
5	L2	401	5.0	0.656	12.7	LOS B	5.0	140.4	0.84	1.09	25.8
2	T1	10	5.0	0.656	7.6	LOS A	5.0	140.4	0.84	1.09	23.0
12	R2	59	5.0	0.656	8.4	LOS A	5.0	140.4	0.84	1.09	25.1
Approach		470	5.0	0.656	12.0	LOS B	5.0	140.4	0.84	1.09	25.7
All Vehicles		2914	6.6	0.656	6.8	LOS A	5.9	170.4	0.70	0.68	30.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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M E M O R A N D U M

DATE: November 16, 2015
TO: Project Design Team
FROM: Ryan Huebschman, PE
RE: Michigan Street and Marion Street Roundabout Capacity Analysis
CC: File

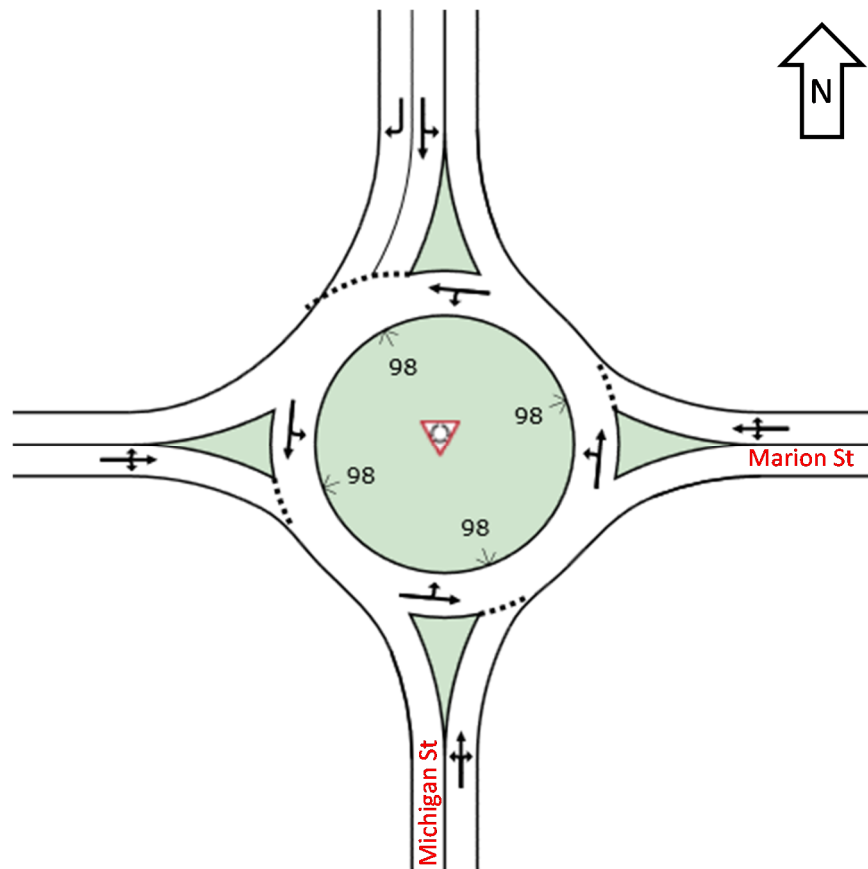
The intersection of Michigan Street and Marion Street has been analyzed to determine if the proposed roundabout lane configurations and geometry will be sufficient to handle the year 2038 projected traffic volumes. The traffic projections for the intersection have been developed by means of a travel demand model using year 2014 traffic counts as a base volume. This memo summarizes the capacity analysis results.

The following table summarizes the existing year 2014 and design year 2038 traffic volume estimates that were used for the capacity analysis.

Year	Hour	NB (Michigan St)			SB (Michigan St)			EB (Marion St)			WB (Marion St)		
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
2014	AM Peak	18	462	19	6	461	388	379	30	2	6	9	0
2014	PM Peak	13	489	19	3	436	364	466	11	4	4	5	0
2038	AM Peak	20	509	21	6	511	441	425	34	4	7	11	0
2038	PM Peak	9	566	20	4	492	431	493	13	4	4	6	0

SIDRA software was used to perform a capacity analysis for the study intersection. Per the Indiana Design Manual, the use of SIDRA as a capacity analysis tool is acceptable for LPA and INDOT projects. The following is a summary of the SIDRA analysis for the currently proposed roundabout configuration.

The figure below shows the lane configurations for the proposed roundabout.



The following table summarizes the results of the capacity analysis. Detailed capacity analysis results from SIDRA have been attached to this memorandum for additional information.

Analysis Year	Approach	AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
2014	NB	A	8.6	B	10.7
	SB	A	3.2	A	3.1
	EB	A	9.4	B	10.1
	WB	A	9.0	B	11.1
	Overall	A	6.2	A	7.2
2038	NB	B	12.1	C	16.3
	SB	A	3.3	A	3.1
	EB	B	11.5	B	12.0
	WB	B	10.9	B	13.7
	Overall	A	7.7	A	9.2

From this analysis, it can be concluded that the currently proposed lane configurations are capable of handling the projected traffic in the design year (2038) at an acceptable level of service in both the AM and PM peak hours.

MOVEMENT SUMMARY

Site: Michigan St & Marion St - 2014 AM

2014 AM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		Total	HV %	v/c	sec		Vehicles	Distance		per veh	mph
		veh/h	%				veh	ft			
South: Michigan St											
3	L2	20	11.0	0.615	14.2	LOS B	6.4	201.0	0.88	0.89	28.1
8	T1	502	11.0	0.615	8.3	LOS A	6.4	201.0	0.88	0.89	31.7
18	R2	21	11.0	0.615	8.7	LOS A	6.4	201.0	0.88	0.89	26.8
Approach		542	11.0	0.615	8.6	LOS A	6.4	201.0	0.88	0.89	31.3
East: Marion St											
1	L2	7	4.0	0.031	12.3	LOS B	0.2	5.8	0.86	0.68	26.7
6	T1	10	4.0	0.031	7.0	LOS A	0.2	5.8	0.86	0.68	23.6
16	R2	1	4.0	0.031	8.0	LOS A	0.2	5.8	0.86	0.68	25.9
Approach		17	4.0	0.031	9.0	LOS A	0.2	5.8	0.86	0.68	24.8
North: Michigan St											
7	L2	7	11.0	0.320	8.8	LOS A	2.4	76.0	0.20	0.31	29.9
4	T1	501	11.0	0.320	2.9	LOS A	2.4	76.0	0.20	0.31	33.9
14	R2	422	11.0	0.308	3.5	LOS A	2.3	70.7	0.21	0.41	28.1
Approach		929	11.0	0.320	3.2	LOS A	2.4	76.0	0.20	0.36	31.0
West: Marion St											
5	L2	412	4.0	0.480	9.8	LOS A	3.7	100.8	0.77	0.82	26.5
2	T1	33	4.0	0.480	4.5	LOS A	3.7	100.8	0.77	0.82	23.5
12	R2	2	4.0	0.480	5.5	LOS A	3.7	100.8	0.77	0.82	25.8
Approach		447	4.0	0.480	9.4	LOS A	3.7	100.8	0.77	0.82	26.3
All Vehicles		1936	9.3	0.615	6.2	LOS A	6.4	201.0	0.53	0.62	29.8

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 **Site: Michigan St & Marion St - 2014 PM**

2014 PM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Michigan St											
3	L2	14	7.0	0.677	16.4	LOS C	8.1	233.8	0.95	1.02	27.4
8	T1	532	7.0	0.677	10.5	LOS B	8.1	233.8	0.95	1.02	30.8
18	R2	21	7.0	0.677	10.9	LOS B	8.1	233.8	0.95	1.02	26.1
Approach		566	7.0	0.677	10.7	LOS B	8.1	233.8	0.95	1.02	30.5
East: Marion St											
1	L2	4	5.0	0.023	14.2	LOS B	0.2	4.5	0.91	0.69	26.0
6	T1	5	5.0	0.023	8.9	LOS A	0.2	4.5	0.91	0.69	23.1
16	R2	1	5.0	0.023	9.9	LOS A	0.2	4.5	0.91	0.69	25.3
Approach		11	5.0	0.023	11.1	LOS B	0.2	4.5	0.91	0.69	24.4
North: Michigan St											
7	L2	3	7.0	0.292	8.7	LOS A	2.2	64.4	0.15	0.30	30.0
4	T1	474	7.0	0.292	2.8	LOS A	2.2	64.4	0.15	0.30	34.1
14	R2	396	7.0	0.279	3.4	LOS A	2.1	59.5	0.16	0.40	28.2
Approach		873	7.0	0.292	3.1	LOS A	2.2	64.4	0.16	0.35	31.2
West: Marion St											
5	L2	507	5.0	0.543	10.2	LOS B	4.7	130.6	0.78	0.86	26.3
2	T1	12	5.0	0.543	4.9	LOS A	4.7	130.6	0.78	0.86	23.3
12	R2	4	5.0	0.543	5.9	LOS A	4.7	130.6	0.78	0.86	25.6
Approach		523	5.0	0.543	10.1	LOS B	4.7	130.6	0.78	0.86	26.2
All Vehicles		1973	6.5	0.677	7.2	LOS A	8.1	233.8	0.55	0.68	29.4

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 **Site: Michigan St & Marion St - 2038 AM**

2038 AM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		Total	HV	v/c	sec		Vehicles	Distance		per veh	mph
		veh/h	%				veh	ft			
South: Michigan St											
3	L2	22	11.0	0.726	17.7	LOS C	9.6	298.1	0.99	1.08	27.0
8	T1	553	11.0	0.726	11.8	LOS B	9.6	298.1	0.99	1.08	30.2
18	R2	23	11.0	0.726	12.2	LOS B	9.6	298.1	0.99	1.08	25.7
Approach		598	11.0	0.726	12.1	LOS B	9.6	298.1	0.99	1.08	29.9
East: Marion St											
1	L2	8	4.0	0.044	14.2	LOS B	0.3	8.6	0.92	0.74	26.1
6	T1	12	4.0	0.044	8.9	LOS A	0.3	8.6	0.92	0.74	23.1
16	R2	1	4.0	0.044	9.9	LOS A	0.3	8.6	0.92	0.74	25.4
Approach		21	4.0	0.044	10.9	LOS B	0.3	8.6	0.92	0.74	24.2
North: Michigan St											
7	L2	7	11.0	0.357	8.8	LOS A	2.9	89.1	0.23	0.32	29.8
4	T1	555	11.0	0.357	2.9	LOS A	2.9	89.1	0.23	0.32	33.8
14	R2	479	11.0	0.351	3.6	LOS A	2.7	85.6	0.24	0.41	28.1
Approach		1041	11.0	0.357	3.3	LOS A	2.9	89.1	0.23	0.36	30.9
West: Marion St											
5	L2	462	4.0	0.569	12.0	LOS B	5.4	146.3	0.85	0.96	25.9
2	T1	37	4.0	0.569	6.7	LOS A	5.4	146.3	0.85	0.96	23.0
12	R2	4	4.0	0.569	7.7	LOS A	5.4	146.3	0.85	0.96	25.2
Approach		503	4.0	0.569	11.5	LOS B	5.4	146.3	0.85	0.96	25.6
All Vehicles		2163	9.3	0.726	7.7	LOS A	9.6	298.1	0.59	0.70	29.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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MOVEMENT SUMMARY

 Site: Michigan St & Marion St - 2038 PM

2038 PM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Michigan St											
3	L2	10	7.0	0.811	22.1	LOS C	13.1	378.7	1.00	1.23	25.7
8	T1	615	7.0	0.811	16.2	LOS C	13.1	378.7	1.00	1.23	28.6
18	R2	22	7.0	0.811	16.6	LOS C	13.1	378.7	1.00	1.23	24.6
Approach		647	7.0	0.811	16.3	LOS C	13.1	378.7	1.00	1.23	28.4
East: Marion St											
1	L2	4	5.0	0.030	17.0	LOS C	0.2	6.2	0.96	0.75	25.3
6	T1	7	5.0	0.030	11.7	LOS B	0.2	6.2	0.96	0.75	22.5
16	R2	1	5.0	0.030	12.7	LOS B	0.2	6.2	0.96	0.75	24.6
Approach		12	5.0	0.030	13.7	LOS B	0.2	6.2	0.96	0.75	23.6
North: Michigan St											
7	L2	4	7.0	0.329	8.7	LOS A	2.6	74.5	0.15	0.30	30.0
4	T1	535	7.0	0.329	2.8	LOS A	2.6	74.5	0.15	0.30	34.1
14	R2	468	7.0	0.328	3.4	LOS A	2.5	73.0	0.15	0.40	28.2
Approach		1008	7.0	0.329	3.1	LOS A	2.6	74.5	0.15	0.35	31.1
West: Marion St											
5	L2	536	5.0	0.605	12.2	LOS B	6.1	168.4	0.84	0.98	25.7
2	T1	14	5.0	0.605	6.9	LOS A	6.1	168.4	0.84	0.98	22.9
12	R2	5	5.0	0.605	7.9	LOS A	6.1	168.4	0.84	0.98	25.1
Approach		555	5.0	0.605	12.0	LOS B	6.1	168.4	0.84	0.98	25.7
All Vehicles		2222	6.5	0.811	9.2	LOS A	13.1	378.7	0.57	0.76	28.7

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: P:\2014\01351\C. Calcs_Data\Traffic Study\Roundabout Analysis\Michigan-Marion\INDOT Revised Volumes\SIDRA\Michigan & Marion - 2038 PM Peak Hour.sip6



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M E M O R A N D U M

DATE: November 16, 2015
TO: Project Design Team
FROM: Ryan Huebschman, PE
RE: St. Joseph Street and Western Avenue Roundabout Capacity Analysis
CC: File

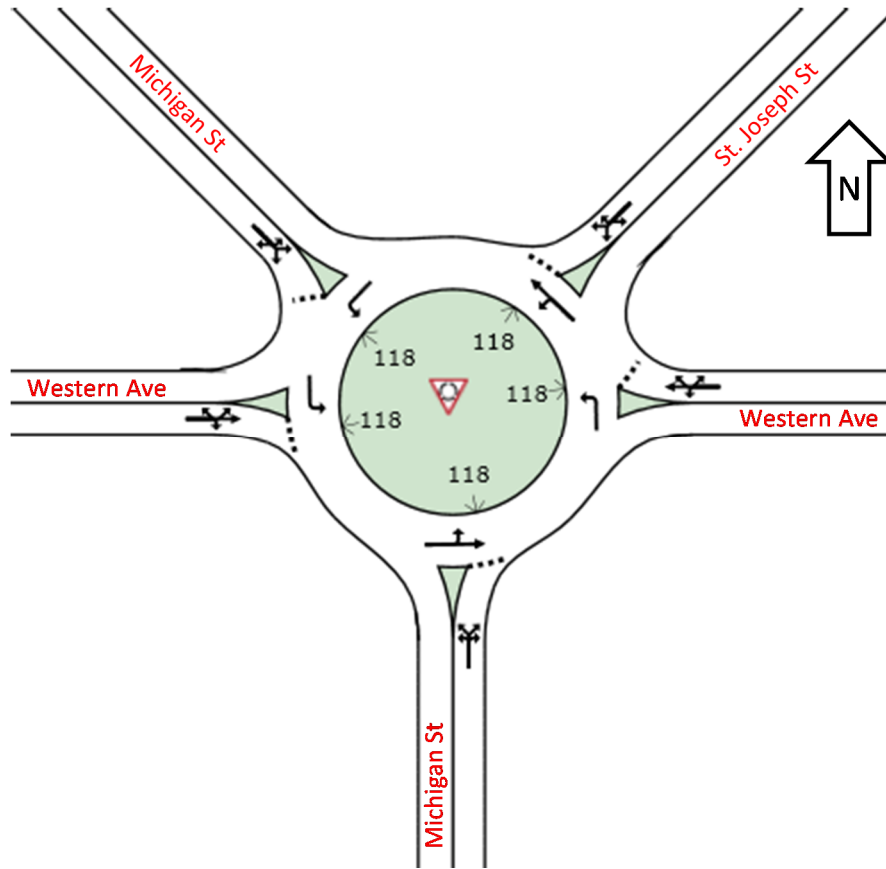
The intersection of St. Joseph Street / Michigan Street and Western Avenue has been analyzed to determine if the proposed roundabout lane configurations and geometry will be sufficient to handle the year 2038 projected traffic volumes. The traffic projections for the intersection have been developed by means of a travel demand model using year 2014 traffic counts as a base volume. This memo summarizes the capacity analysis results.

The table on the following page summarizes the design year 2038 traffic volume estimates that were used for the capacity analysis.

		Year (Peak Hour)	2038 (AM)	2038 (PM)
NEB (Michigan St)	To Western Ave (WB)		55	74
	To Michigan St (NB)		49	23
	To St. Joseph St (NB)		554	563
	To Western Ave (EB)		20	3
SWB (St. Joseph St)	To Western Ave (EB)		15	5
	To Michigan St (SB)		441	710
	To Western Ave (WB)		60	37
	To Michigan St (NB)		0	0
SEB (Michigan St)	To St. Joseph St (NB)		0	0
	To Western Ave (EB)		0	0
	To Michigan St (SB)		29	54
	To Western Ave (WB)		6	252
EB (Western Ave)	To Michigan St (NB)		2	0
	To St. Joseph St (NB)		234	281
	To Western Ave (EB)		13	12
	To Michigan St (SB)		14	46
WB (Western Ave)	To Michigan St (SB)		2	7
	To Western Ave (WB)		13	14
	To Michigan St (NB)		0	0
	To St. Joseph St (NB)		9	17

SIDRA software was used to perform a capacity analysis for the study intersection. Per the Indiana Design Manual, the use of SIDRA as a capacity analysis tool is acceptable for LPA and INDOT projects. The following is a summary of the SIDRA analysis for the currently proposed roundabout configuration.

The figure below shows the lane configurations for the proposed roundabout.



The table on the following page summarizes the results of the capacity analysis. Detailed capacity analysis results from SIDRA have been attached to this memorandum for additional information.

Analysis Year	Approach	AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
2038	Michigan St (NB)	A	6.2	A	7.3
	St. Joseph St (SB)	A	6.8	A	7.5
	Michigan St (SB)	A	4.9	C	19.7
	Western Ave (EB)	A	7.6	C	17.4
	Western Ave (WB)	A	8.6	B	10.5
	Overall	A	6.6	B	10.9

From this analysis, it can be concluded that the currently proposed lane configurations are capable of handling the projected traffic in the design year (2038) at an acceptable level of service in both the AM and PM peak hours.

MOVEMENT SUMMARY

 Site: St. Joseph St & Western Ave - 2038 AM

2038 AM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Michigan St											
3	L2	60	7.0	0.696	11.6	LOS B	8.6	227.7	0.85	0.77	27.4
3a	L1	53	7.0	0.696	10.6	LOS B	8.6	227.7	0.85	0.77	28.9
18a	R1	602	7.0	0.696	5.3	LOS A	8.6	227.7	0.85	0.77	28.5
18	R2	22	7.0	0.696	6.3	LOS A	8.6	227.7	0.85	0.77	25.8
Approach		737	7.0	0.696	6.2	LOS A	8.6	227.7	0.85	0.77	28.3
East: Western Ave											
1	L2	2	4.0	0.052	13.0	LOS B	0.4	10.1	0.92	0.73	26.0
6	T1	14	4.0	0.052	7.7	LOS A	0.4	10.1	0.92	0.73	22.8
16b	R3	10	4.0	0.052	9.1	LOS A	0.4	10.1	0.92	0.73	24.6
Approach		26	4.0	0.052	8.6	LOS A	0.4	10.1	0.92	0.73	23.7
NorthEast: St. Joseph St											
1bx	L3	16	7.0	0.458	9.2	LOS A	4.0	104.9	0.51	0.55	27.4
1ax	L1	479	7.0	0.458	7.3	LOS A	4.0	104.9	0.51	0.55	28.3
16ax	R1	65	7.0	0.458	2.4	LOS A	4.0	104.9	0.51	0.55	25.0
Approach		561	7.0	0.458	6.8	LOS A	4.0	104.9	0.51	0.55	27.9
NorthWest: Michigan St											
14ax	R1	32	7.0	0.049	4.6	LOS A	0.3	8.0	0.71	0.57	29.0
14bx	R3	7	7.0	0.049	6.1	LOS A	0.3	8.0	0.71	0.57	26.0
Approach		38	7.0	0.049	4.9	LOS A	0.3	8.0	0.71	0.57	28.4
West: Western Ave											
5b	L3	2	4.0	0.321	9.5	LOS A	2.2	58.0	0.74	0.74	26.6
5a	L1	254	4.0	0.321	8.0	LOS A	2.2	58.0	0.74	0.74	25.9
2	T1	14	4.0	0.321	3.5	LOS A	2.2	58.0	0.74	0.74	23.1
12	R2	15	4.0	0.321	4.3	LOS A	2.2	58.0	0.74	0.74	25.1
Approach		286	4.0	0.321	7.6	LOS A	2.2	58.0	0.74	0.74	25.7
All Vehicles		1648	6.4	0.696	6.6	LOS A	8.6	227.7	0.71	0.68	27.6

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 Site: St. Joseph St & Western Ave - 2038 PM

2038 PM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Michigan St											
3	L2	80	7.0	0.723	12.8	LOS B	9.8	258.6	0.93	0.88	27.1
3a	L1	25	7.0	0.723	11.8	LOS B	9.8	258.6	0.93	0.88	28.6
18a	R1	612	7.0	0.723	6.4	LOS A	9.8	258.6	0.93	0.88	28.2
18	R2	3	7.0	0.723	7.5	LOS A	9.8	258.6	0.93	0.88	25.6
Approach		721	7.0	0.723	7.3	LOS A	9.8	258.6	0.93	0.88	28.1
East: Western Ave											
1	L2	8	4.0	0.090	14.2	LOS B	0.7	17.9	0.96	0.81	25.4
6	T1	15	4.0	0.090	8.9	LOS A	0.7	17.9	0.96	0.81	22.4
16b	R3	18	4.0	0.090	10.3	LOS B	0.7	17.9	0.96	0.81	24.1
Approach		41	4.0	0.090	10.5	LOS B	0.7	17.9	0.96	0.81	23.7
NorthEast: St. Joseph St											
1bx	L3	5	7.0	0.667	9.7	LOS A	7.8	206.4	0.67	0.58	27.0
1ax	L1	772	7.0	0.667	7.7	LOS A	7.8	206.4	0.67	0.58	27.9
16ax	R1	40	7.0	0.667	2.8	LOS A	7.8	206.4	0.67	0.58	24.7
Approach		817	7.0	0.667	7.5	LOS A	7.8	206.4	0.67	0.58	27.8
NorthWest: Michigan St											
14ax	R1	59	7.0	0.643	18.5	LOS C	7.2	189.7	1.00	1.23	24.3
14bx	R3	274	7.0	0.643	20.0	LOS C	7.2	189.7	1.00	1.23	22.1
Approach		333	7.0	0.643	19.7	LOS C	7.2	189.7	1.00	1.23	22.5
West: Western Ave											
5a	L1	305	4.0	0.619	18.0	LOS C	6.8	175.6	1.00	1.21	23.3
2	T1	13	4.0	0.619	13.4	LOS B	6.8	175.6	1.00	1.21	21.0
12	R2	50	4.0	0.619	14.3	LOS B	6.8	175.6	1.00	1.21	22.7
Approach		368	4.0	0.619	17.4	LOS C	6.8	175.6	1.00	1.21	23.2
All Vehicles		2280	6.5	0.723	10.9	LOS B	9.8	258.6	0.86	0.87	26.1

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



M E M O R A N D U M

DATE: November 16, 2015
TO: Project Design Team
FROM: Ryan Huebschman, PE
RE: Michigan Street and Chippewa Avenue Roundabout Capacity Analysis
CC: File

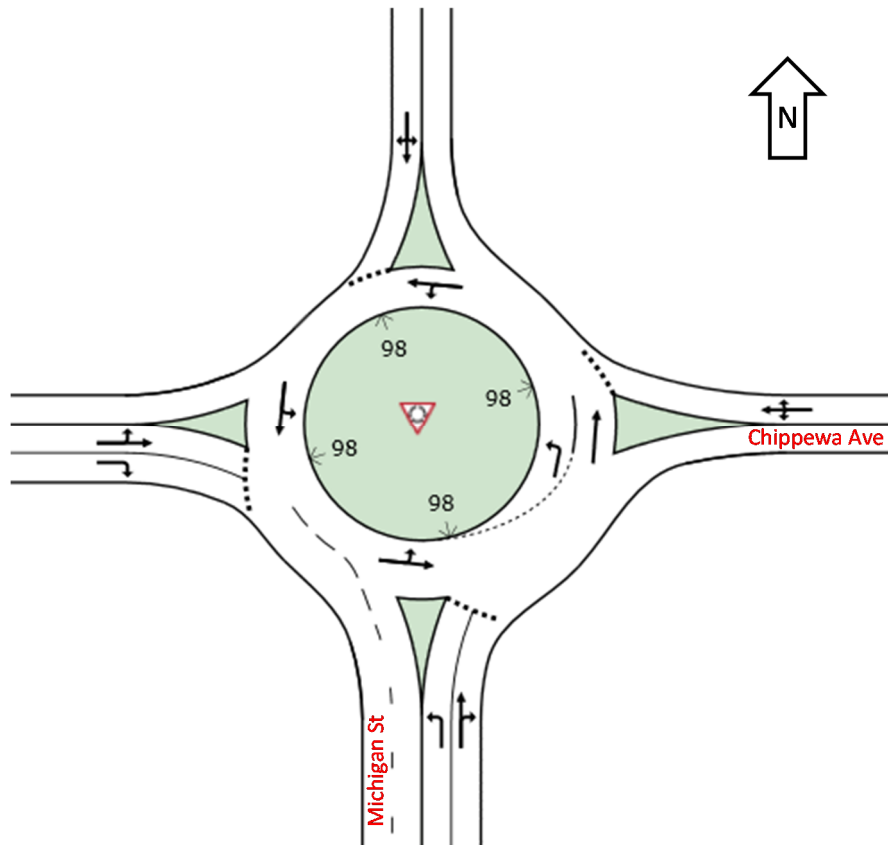
The intersection of Michigan Street and Chippewa Avenue has been analyzed to determine if a roundabout will be sufficient to handle the year 2038 projected traffic volumes and what lane configurations this roundabout should utilize. The traffic projections for the intersection have been developed by means of a travel demand model using year 2014 traffic counts as a base volume. This memo summarizes the capacity analysis results.

The following table summarizes the existing year 2014 and design year 2038 traffic volume estimates that were used for the capacity analysis.

Year	Hour	NB (Michigan St)			SB (Michigan St)			EB (Chippewa Ave)			WB (Chippewa Ave)		
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
2014	AM Peak	378	495	10	11	303	22	66	3	182	10	17	22
2014	PM Peak	326	493	34	38	482	51	57	22	361	19	14	14
2038	AM Peak	415	562	12	12	336	23	61	3	204	11	19	24
2038	PM Peak	365	556	38	39	549	51	55	28	391	21	16	16

SIDRA software was used to perform a capacity analysis for the study intersection. Per the Indiana Design Manual, the use of SIDRA as a capacity analysis tool is acceptable for LPA and INDOT projects. The following is a summary of the SIDRA analysis for the currently proposed roundabout configuration.

The figure below shows the minimum lane configurations for the proposed roundabout.



The following table summarizes the results of the capacity analysis. Detailed capacity analysis results from SIDRA have been attached to this memorandum for additional information.

Analysis Year	Approach	AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
2014	NB	A	5.9	A	5.8
	SB	A	6.2	A	8.0
	EB	A	4.1	A	5.2
	WB	A	5.0	A	5.7
	Overall	A	5.6	A	6.3
2038	NB	A	5.9	A	5.9
	SB	A	6.8	B	10.9
	EB	A	4.2	A	6.3
	WB	A	5.4	A	6.1
	Overall	A	5.8	A	7.5

From this analysis, it can be concluded that a roundabout with the lane configuration depicted in this memo is capable of handling the projected traffic in the design year (2038) at an acceptable level of service in both the AM and PM peak hours. Although the capacity analysis results indicate a single eastbound approach lane will provide acceptable operations, an eastbound right turn bypass lane should be considered in addition to the minimum lane configuration depicted in this memorandum.

The eastbound right turn bypass lane is suggested as Michigan Street south of Chippewa Avenue is currently a 5-lane facility. The two southbound lanes of this facility would be better utilized if an eastbound right turn bypass lane were provided, as southbound thru and eastbound right turn volumes would be distributed over two lanes instead of concentrated in one lane if no bypass lane was provided.

A signal controlled intersection was also evaluated for this intersection.

MOVEMENT SUMMARY

 **Site: Michigan St & Chippewa Ave - 2014 AM**

2014 AM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Michigan St											
3	L2	411	11.0	0.320	9.2	LOS A	2.3	72.2	0.34	0.58	27.8
8	T1	538	11.0	0.362	3.4	LOS A	2.8	87.7	0.33	0.36	33.4
18	R2	11	11.0	0.362	3.8	LOS A	2.8	87.7	0.33	0.36	28.0
Approach		960	11.0	0.362	5.9	LOS A	2.8	87.7	0.33	0.46	30.7
East: Chippewa Ave											
1	L2	11	4.0	0.075	8.8	LOS A	0.3	8.7	0.64	0.64	28.0
6	T1	18	4.0	0.075	3.6	LOS A	0.3	8.7	0.64	0.64	24.6
16	R2	24	4.0	0.075	4.4	LOS A	0.3	8.7	0.64	0.64	27.2
Approach		53	4.0	0.075	5.0	LOS A	0.3	8.7	0.64	0.64	26.4
North: Michigan St											
7	L2	12	11.0	0.392	11.9	LOS B	2.7	84.4	0.70	0.69	28.7
4	T1	329	11.0	0.392	6.0	LOS A	2.7	84.4	0.70	0.69	32.4
14	R2	24	11.0	0.392	6.4	LOS A	2.7	84.4	0.70	0.69	27.3
Approach		365	11.0	0.392	6.2	LOS A	2.7	84.4	0.70	0.69	31.8
West: Chippewa Ave											
5	L2	72	4.0	0.082	7.4	LOS A	0.5	13.1	0.57	0.61	27.1
2	T1	3	4.0	0.082	2.2	LOS A	0.5	13.1	0.57	0.61	23.9
12	R2	198	11.0	0.165	2.9	LOS A	1.1	34.4	0.57	0.49	27.6
Approach		273	9.1	0.165	4.1	LOS A	1.1	34.4	0.57	0.52	27.4
All Vehicles		1651	10.5	0.392	5.6	LOS A	2.8	87.7	0.46	0.52	30.2

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: P:\2014\01351\C. Calcs_Data\Traffic Study\Roundabout Analysis\Chippewa-Michigan\INDOT Revised Volumes\SIDRA\Michigan & Chippewa - 2014 AM Peak Hour.sip6

MOVEMENT SUMMARY

 Site: Michigan St & Chippewa Ave - 2014 PM

2014 PM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Michigan St											
3	L2	354	7.0	0.289	9.4	LOS A	2.0	57.6	0.40	0.60	27.8
8	T1	536	7.0	0.383	3.6	LOS A	3.0	87.1	0.40	0.39	33.2
18	R2	37	7.0	0.383	3.9	LOS A	3.0	87.1	0.40	0.39	27.8
Approach		927	7.0	0.383	5.8	LOS A	3.0	87.1	0.40	0.47	30.7
East: Chippewa Ave											
1	L2	21	4.0	0.071	8.6	LOS A	0.3	8.4	0.63	0.66	27.7
6	T1	15	4.0	0.071	3.4	LOS A	0.3	8.4	0.63	0.66	24.4
16	R2	15	4.0	0.071	4.2	LOS A	0.3	8.4	0.63	0.66	27.0
Approach		51	4.0	0.071	5.7	LOS A	0.3	8.4	0.63	0.66	26.4
North: Michigan St											
7	L2	41	7.0	0.622	13.4	LOS B	6.4	184.2	0.81	0.81	28.3
4	T1	524	7.0	0.622	7.5	LOS A	6.4	184.2	0.81	0.81	32.0
14	R2	55	7.0	0.622	7.9	LOS A	6.4	184.2	0.81	0.81	27.0
Approach		621	7.0	0.622	8.0	LOS A	6.4	184.2	0.81	0.81	31.2
West: Chippewa Ave											
5	L2	62	7.0	0.129	9.5	LOS A	0.8	23.6	0.74	0.72	27.0
2	T1	24	7.0	0.129	4.2	LOS A	0.8	23.6	0.74	0.72	23.8
12	R2	392	7.0	0.399	4.6	LOS A	3.3	96.8	0.84	0.74	27.2
Approach		478	7.0	0.399	5.2	LOS A	3.3	96.8	0.82	0.74	27.0
All Vehicles		2077	6.9	0.622	6.3	LOS A	6.4	184.2	0.63	0.64	29.8

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: P:\2014\01351\C. Calcs_Data\Traffic Study\Roundabout Analysis\Chippewa-Michigan\INDOT Revised Volumes\SIDRAMichigan & Chippewa - 2014 PM Peak Hour.sip6

MOVEMENT SUMMARY

 **Site: Michigan St & Chippewa Ave - 2038 AM**

2038 AM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Michigan St											
3	L2	451	11.0	0.352	9.2	LOS A	2.7	82.6	0.34	0.58	27.8
8	T1	611	11.0	0.411	3.4	LOS A	3.4	105.9	0.34	0.36	33.4
18	R2	13	11.0	0.411	3.8	LOS A	3.4	105.9	0.34	0.36	27.9
Approach		1075	11.0	0.411	5.9	LOS A	3.4	105.9	0.34	0.45	30.7
East: Chippewa Ave											
1	L2	12	4.0	0.087	9.2	LOS A	0.4	10.4	0.67	0.69	27.9
6	T1	21	4.0	0.087	4.1	LOS A	0.4	10.4	0.67	0.69	24.5
16	R2	26	4.0	0.087	4.8	LOS A	0.4	10.4	0.67	0.69	27.1
Approach		59	4.0	0.087	5.4	LOS A	0.4	10.4	0.67	0.69	26.3
North: Michigan St											
7	L2	13	11.0	0.450	12.5	LOS B	3.3	101.7	0.76	0.74	28.5
4	T1	365	11.0	0.450	6.6	LOS A	3.3	101.7	0.76	0.74	32.2
14	R2	25	11.0	0.450	7.0	LOS A	3.3	101.7	0.76	0.74	27.2
Approach		403	11.0	0.450	6.8	LOS A	3.3	101.7	0.76	0.74	31.7
West: Chippewa Ave											
5	L2	66	4.0	0.082	7.8	LOS A	0.5	13.2	0.60	0.63	27.0
2	T1	3	4.0	0.082	2.5	LOS A	0.5	13.2	0.60	0.63	23.9
12	R2	222	11.0	0.192	3.1	LOS A	1.3	41.5	0.62	0.53	27.5
Approach		291	9.3	0.192	4.2	LOS A	1.3	41.5	0.61	0.55	27.3
All Vehicles		1828	10.5	0.450	5.8	LOS A	3.4	105.9	0.49	0.54	30.2

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: P:\2014\01351\C. Calcs_Data\Traffic Study\Roundabout Analysis\Chippewa-Michigan\INDOT Revised Volumes\SIDRA\Michigan & Chippewa - 2038 AM Peak Hour.sip6

MOVEMENT SUMMARY

 Site: Michigan St & Chippewa Ave - 2038 PM

2038 PM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Michigan St											
3	L2	397	7.0	0.326	9.5	LOS A	2.4	68.0	0.42	0.61	27.7
8	T1	604	7.0	0.435	3.7	LOS A	3.7	105.7	0.44	0.40	33.1
18	R2	41	7.0	0.435	4.0	LOS A	3.7	105.7	0.44	0.40	27.7
Approach		1042	7.0	0.435	5.9	LOS A	3.7	105.7	0.43	0.48	30.6
East: Chippewa Ave											
1	L2	23	4.0	0.085	9.0	LOS A	0.4	10.4	0.67	0.70	27.6
6	T1	17	4.0	0.085	3.9	LOS A	0.4	10.4	0.67	0.70	24.3
16	R2	17	4.0	0.085	4.6	LOS A	0.4	10.4	0.67	0.70	26.9
Approach		58	4.0	0.085	6.1	LOS A	0.4	10.4	0.67	0.70	26.3
North: Michigan St											
7	L2	42	7.0	0.726	16.4	LOS C	9.6	276.7	0.92	0.99	27.4
4	T1	597	7.0	0.726	10.5	LOS B	9.6	276.7	0.92	0.99	30.7
14	R2	55	7.0	0.726	10.9	LOS B	9.6	276.7	0.92	0.99	26.1
Approach		695	7.0	0.726	10.9	LOS B	9.6	276.7	0.92	0.99	30.1
West: Chippewa Ave											
5	L2	60	7.0	0.151	10.2	LOS B	1.0	29.1	0.81	0.77	26.9
2	T1	30	7.0	0.151	4.9	LOS A	1.0	29.1	0.81	0.77	23.7
12	R2	425	7.0	0.484	5.8	LOS A	4.6	132.2	0.94	0.86	26.9
Approach		515	7.0	0.484	6.3	LOS A	4.6	132.2	0.92	0.85	26.7
All Vehicles		2310	6.9	0.726	7.5	LOS A	9.6	276.7	0.69	0.72	29.4

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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M E M O R A N D U M

DATE: October 17, 2014
TO: Project Design Team
FROM: Ryan Huebschman, PE
RE: Main Street and Chippewa Avenue Roundabout Capacity Analysis
CC: File

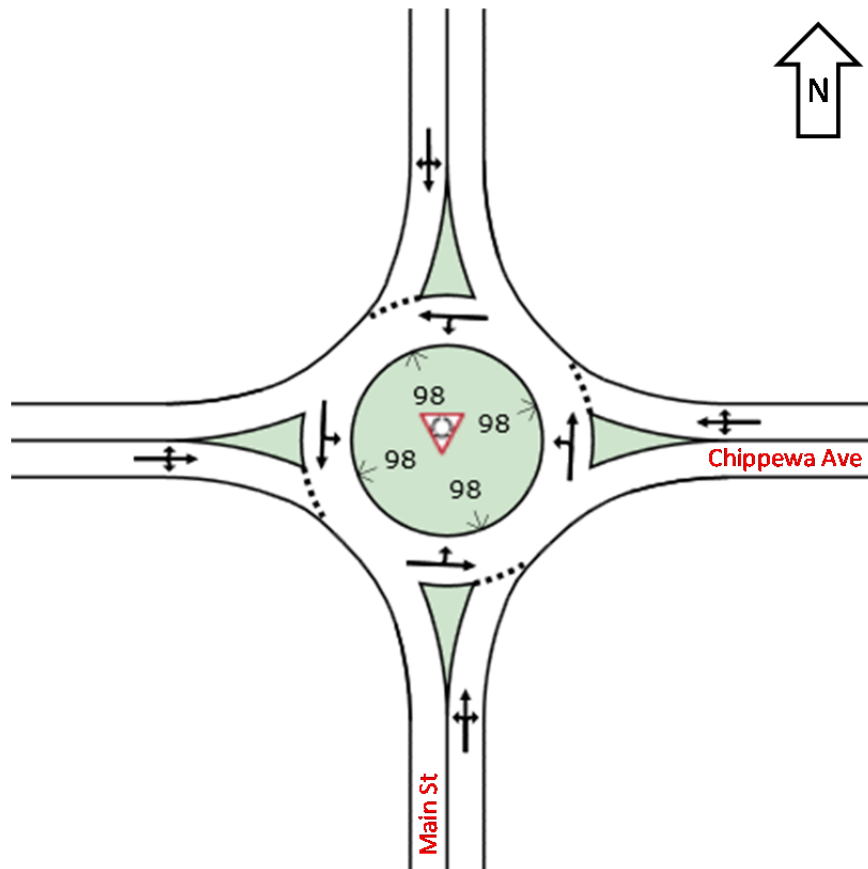
The intersection of Main Street and Chippewa Avenue has been analyzed to determine if a single lane roundabout will be sufficient to handle the year 2038 projected traffic volumes. The traffic projections for the intersection have been developed by means of a travel demand model using year 2014 traffic counts as a base volume. This memo summarizes the capacity analysis results.

The following table summarizes the opening year 2018 and design year 2038 traffic volume estimates that were used for the capacity analysis.

Year	Hour	NB (Main St)			SB (Main St)			EB (Chippewa Ave)			WB (Chippewa Ave)		
		NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
2018	AM Peak	1	8	1	186	73	41	15	18	9	6	28	431
2018	PM Peak	1	24	9	354	133	46	23	45	14	10	38	381
2038	AM Peak	3	157	4	203	80	46	16	21	10	7	26	393
2038	PM Peak	1	27	10	386	146	51	26	49	16	12	41	425

SIDRA software was used to perform a capacity analysis for the study intersection. Per the Indiana Design Manual, the use of SIDRA as a capacity analysis tool is acceptable for LPA and INDOT projects. The following is a summary of the SIDRA analysis for the currently proposed roundabout configuration.

The figure below shows the lane configurations for the proposed roundabout.



The following table summarizes the results of the capacity analysis. Detailed capacity analysis results from SIDRA have been attached to this memorandum for additional information.

Analysis Year	Approach	AM Peak		PM Peak	
		LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
2018	NB	A	4.5	A	5.3
	SB	A	6.6	A	7.0
	EB	A	3.6	A	4.8
	WB	A	1.3	A	1.5
	Overall	A	3.4	A	4.6
2038	NB	A	4.3	A	5.6
	SB	A	6.6	A	7.1
	EB	A	3.7	A	5.3
	WB	A	2.5	A	1.5
	Overall	A	4.3	A	4.7

From this analysis, it can be concluded that a single lane roundabout is capable of handling the projected traffic in the design year (2038) at an acceptable level of service in both the AM and PM peak hours.

MOVEMENT SUMMARY

 Site: Main-Chippewa

2018 AM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed
		Total	HV %	v/c	sec		Vehicles	Distance		per veh	mph
		veh/h	%				veh	ft			
South: Main St											
3	L2	1	11.0	0.010	9.7	LOS A	0.0	1.5	0.40	0.41	29.2
8	T1	9	11.0	0.010	3.8	LOS A	0.0	1.5	0.40	0.41	33.1
18	R2	1	11.0	0.010	4.2	LOS A	0.0	1.5	0.40	0.41	27.8
Approach		11	11.0	0.010	4.5	LOS A	0.0	1.5	0.40	0.41	32.1
East: Chippewa Ave											
1	L2	7	4.0	0.359	5.6	LOS A	2.7	73.0	0.17	0.21	29.2
6	T1	30	4.0	0.359	0.3	LOS A	2.7	73.0	0.17	0.21	25.5
16	R2	468	4.0	0.359	1.3	LOS A	2.7	73.0	0.17	0.21	28.3
Approach		505	4.0	0.359	1.3	LOS A	2.7	73.0	0.17	0.21	28.2
North: Main St											
7	L2	202	11.0	0.242	8.8	LOS A	1.5	47.3	0.18	0.52	28.7
4	T1	79	11.0	0.242	2.9	LOS A	1.5	47.3	0.18	0.52	32.4
14	R2	45	11.0	0.242	3.3	LOS A	1.5	47.3	0.18	0.52	27.3
Approach		326	11.0	0.242	6.6	LOS A	1.5	47.3	0.18	0.52	29.3
West: Chippewa Ave											
5	L2	16	4.0	0.041	6.8	LOS A	0.2	5.9	0.45	0.40	28.2
2	T1	20	4.0	0.041	1.5	LOS A	0.2	5.9	0.45	0.40	24.8
12	R2	10	4.0	0.041	2.5	LOS A	0.2	5.9	0.45	0.40	27.4
Approach		46	4.0	0.041	3.6	LOS A	0.2	5.9	0.45	0.40	26.5
All Vehicles		888	6.7	0.359	3.4	LOS A	2.7	73.0	0.19	0.34	28.5

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 Site: Main-Chippewa

2018 PM Peak Hour
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed	
		Total	HV %	v/c	sec		Vehicles	Distance		per veh	mph	
		veh/h	%				veh	ft				
South: Main St												
3	L2	1	7.0	0.039	10.9	LOS B	0.2	6.1	0.56	0.52	29.0	
8	T1	26	7.0	0.039	5.0	LOS A	0.2	6.1	0.56	0.52	32.9	
18	R2	10	7.0	0.039	5.4	LOS A	0.2	6.1	0.56	0.52	27.6	
Approach		37	7.0	0.039	5.3	LOS A	0.2	6.1	0.56	0.52	31.2	
East: Chippewa Ave												
1	L2	11	4.0	0.340	5.7	LOS A	2.5	67.1	0.25	0.24	29.1	
6	T1	41	4.0	0.340	0.4	LOS A	2.5	67.1	0.25	0.24	25.4	
16	R2	414	4.0	0.340	1.4	LOS A	2.5	67.1	0.25	0.24	28.2	
Approach		466	4.0	0.340	1.5	LOS A	2.5	67.1	0.25	0.24	27.9	
North: Main St												
7	L2	385	7.0	0.429	9.0	LOS A	3.4	98.9	0.28	0.53	28.5	
4	T1	145	7.0	0.429	3.1	LOS A	3.4	98.9	0.28	0.53	32.1	
14	R2	50	7.0	0.429	3.5	LOS A	3.4	98.9	0.28	0.53	27.2	
Approach		579	7.0	0.429	7.0	LOS A	3.4	98.9	0.28	0.53	29.2	
West: Chippewa Ave												
5	L2	25	7.0	0.100	8.5	LOS A	0.6	17.0	0.63	0.56	27.9	
2	T1	49	7.0	0.100	3.2	LOS A	0.6	17.0	0.63	0.56	24.5	
12	R2	15	7.0	0.100	4.2	LOS A	0.6	17.0	0.63	0.56	27.1	
Approach		89	7.0	0.100	4.8	LOS A	0.6	17.0	0.63	0.56	25.8	
All Vehicles		1172	5.8	0.429	4.6	LOS A	3.4	98.9	0.30	0.42	28.5	

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 Site: Main-Chippewa

2038 AM Peak Hour
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Main St											
3	L2	3	11.0	0.162	10.1	LOS B	0.9	28.7	0.47	0.48	29.2
8	T1	171	11.0	0.162	4.2	LOS A	0.9	28.7	0.47	0.48	33.1
18	R2	4	11.0	0.162	4.6	LOS A	0.9	28.7	0.47	0.48	27.8
Approach		178	11.0	0.162	4.3	LOS A	0.9	28.7	0.47	0.48	32.8
East: Chippewa Ave											
1	L2	8	4.0	0.387	6.7	LOS A	2.8	77.6	0.51	0.42	28.7
6	T1	28	4.0	0.387	1.5	LOS A	2.8	77.6	0.51	0.42	25.0
16	R2	427	4.0	0.387	2.4	LOS A	2.8	77.6	0.51	0.42	27.8
Approach		463	4.0	0.387	2.5	LOS A	2.8	77.6	0.51	0.42	27.6
North: Main St											
7	L2	221	11.0	0.267	8.9	LOS A	1.9	58.1	0.21	0.51	28.7
4	T1	87	11.0	0.267	2.9	LOS A	1.9	58.1	0.21	0.51	32.3
14	R2	50	11.0	0.267	3.3	LOS A	1.9	58.1	0.21	0.51	27.3
Approach		358	11.0	0.267	6.6	LOS A	1.9	58.1	0.21	0.51	29.3
West: Chippewa Ave											
5	L2	17	4.0	0.047	6.9	LOS A	0.2	6.8	0.47	0.42	28.2
2	T1	23	4.0	0.047	1.6	LOS A	0.2	6.8	0.47	0.42	24.8
12	R2	11	4.0	0.047	2.6	LOS A	0.2	6.8	0.47	0.42	27.4
Approach		51	4.0	0.047	3.7	LOS A	0.2	6.8	0.47	0.42	26.4
All Vehicles		1050	7.6	0.387	4.3	LOS A	2.8	77.6	0.40	0.46	28.9

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

MOVEMENT SUMMARY

 Site: Main-Chippewa

2038 PM Peak Hour
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows		Deg. Satn	Average Delay	Level of Service	95% Back of Queue		Prop. Queued	Effective Stop Rate	Average Speed	
		Total	HV %	v/c	sec		Vehicles	Distance		per veh	mph	
		veh/h	%				veh	ft				
South: Main St												
3	L2	1	7.0	0.045	11.2	LOS B	0.3	7.3	0.59	0.55	29.0	
8	T1	29	7.0	0.045	5.3	LOS A	0.3	7.3	0.59	0.55	32.8	
18	R2	11	7.0	0.045	5.7	LOS A	0.3	7.3	0.59	0.55	27.5	
Approach		41	7.0	0.045	5.6	LOS A	0.3	7.3	0.59	0.55	31.1	
East: Chippewa Ave												
1	L2	13	4.0	0.382	5.8	LOS A	2.9	79.3	0.28	0.26	29.0	
6	T1	45	4.0	0.382	0.5	LOS A	2.9	79.3	0.28	0.26	25.3	
16	R2	462	4.0	0.382	1.5	LOS A	2.9	79.3	0.28	0.26	28.1	
Approach		520	4.0	0.382	1.5	LOS A	2.9	79.3	0.28	0.26	27.9	
North: Main St												
7	L2	420	7.0	0.472	9.1	LOS A	4.0	116.1	0.31	0.53	28.5	
4	T1	159	7.0	0.472	3.2	LOS A	4.0	116.1	0.31	0.53	32.0	
14	R2	55	7.0	0.472	3.6	LOS A	4.0	116.1	0.31	0.53	27.1	
Approach		634	7.0	0.472	7.1	LOS A	4.0	116.1	0.31	0.53	29.1	
West: Chippewa Ave												
5	L2	28	7.0	0.117	8.9	LOS A	0.7	20.4	0.67	0.60	27.7	
2	T1	53	7.0	0.117	3.6	LOS A	0.7	20.4	0.67	0.60	24.4	
12	R2	17	7.0	0.117	4.6	LOS A	0.7	20.4	0.67	0.60	27.0	
Approach		99	7.0	0.117	5.3	LOS A	0.7	20.4	0.67	0.60	25.7	
All Vehicles		1293	5.8	0.472	4.7	LOS A	4.0	116.1	0.34	0.42	28.4	

Level of Service (LOS) Method: Delay & v/c (HCM 2010).

Roundabout LOS Method: Same as Sign Control.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 2010).

Roundabout Capacity Model: SIDRA Standard.

SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.



Appendix J: Traffic Operations Analysis

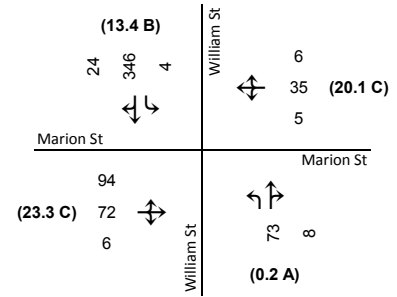
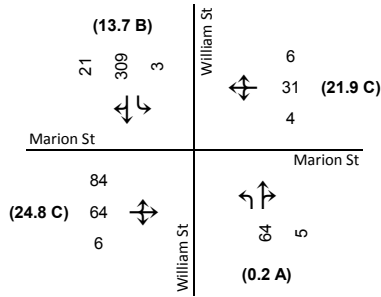
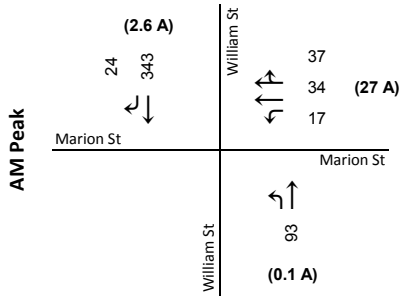
1: William St & Marion St



2014 One-Way Operations

2014 Two-Way Operations

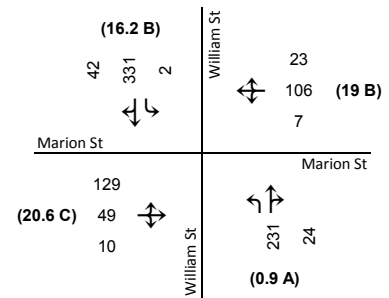
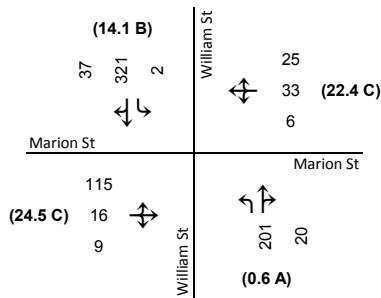
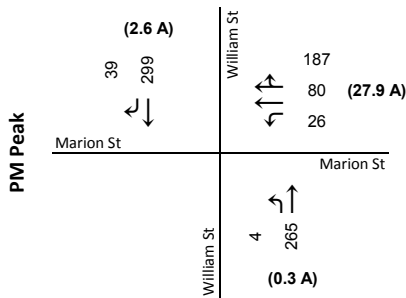
2038 Two-Way Operations



2010 HCM Delay (s/veh) 5.2 A

2010 HCM Delay (s/veh) 15.6 B

2010 HCM Delay (s/veh) 14.8 B



2010 HCM Delay (s/veh) 7.3 A

2010 HCM Delay (s/veh) 12.8 B

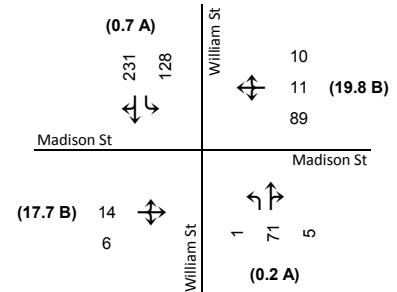
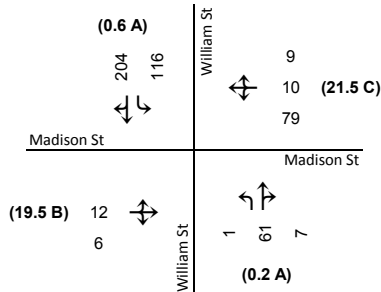
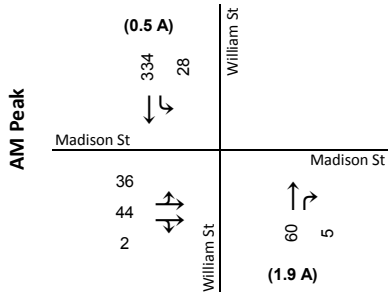
2010 HCM Delay (s/veh) 13.4 B

2: William St & Madison St

2014 One-Way Operations

2014 Two-Way Operations

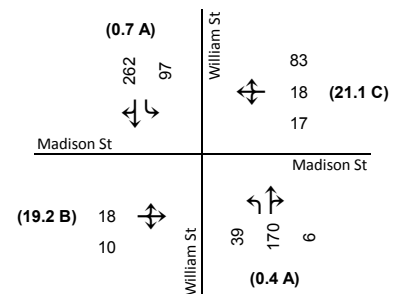
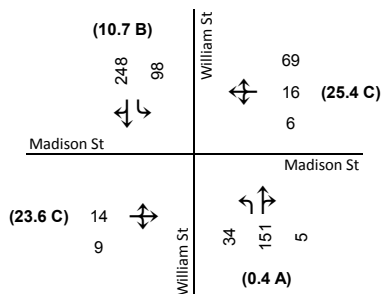
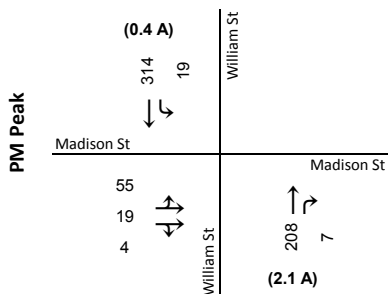
2038 Two-Way Operations



2010 HCM Delay (s/veh) 5.0 A

2010 HCM Delay (s/veh) 5.3 A

2010 HCM Delay (s/veh) 5.0 A



2010 HCM Delay (s/veh) 4.3 A

2010 HCM Delay (s/veh) 10.2 B

2010 HCM Delay (s/veh) 4.7 A



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 1 & 2

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

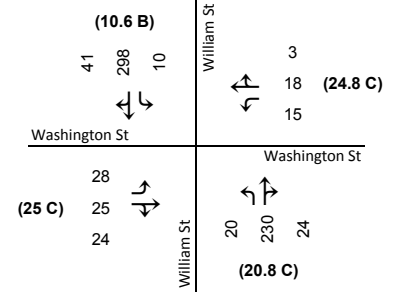
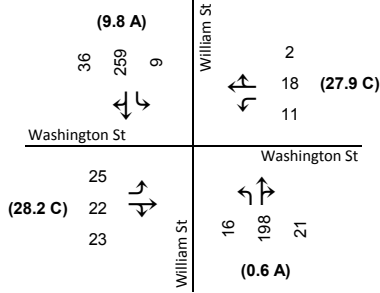
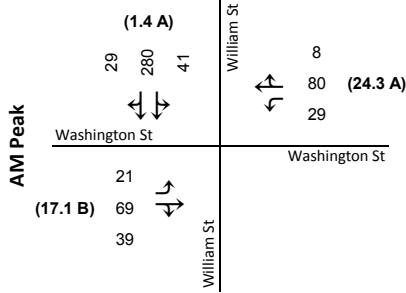
3: William St & Washington St



2014 One-Way Operations

2014 Two-Way Operations

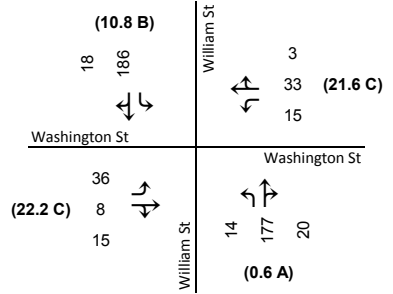
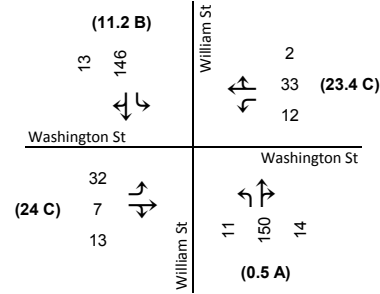
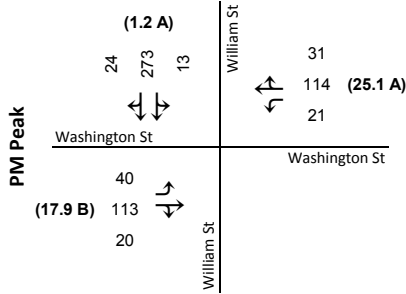
2038 Two-Way Operations



2010 HCM Delay (s/veh) 9.0 A

2010 HCM Delay (s/veh) 9.3 A

2010 HCM Delay (s/veh) 16.6 B



2010 HCM Delay (s/veh) 11.6 B

2010 HCM Delay (s/veh) 9.7 A

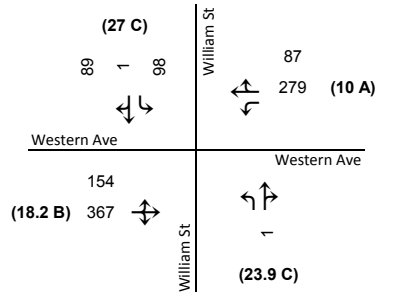
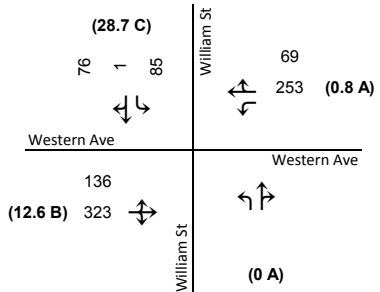
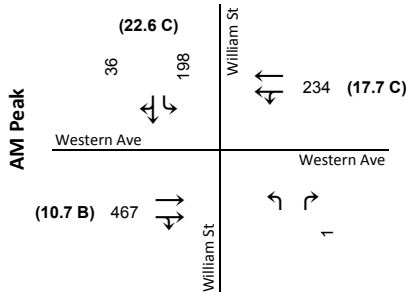
2010 HCM Delay (s/veh) 9.1 A

4: William St & Western Ave

2014 One-Way Operations

2014 Two-Way Operations

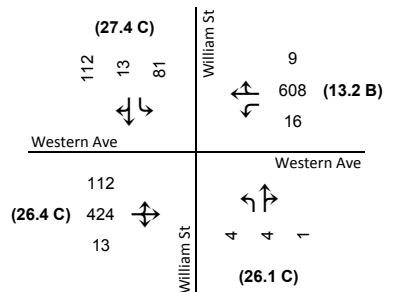
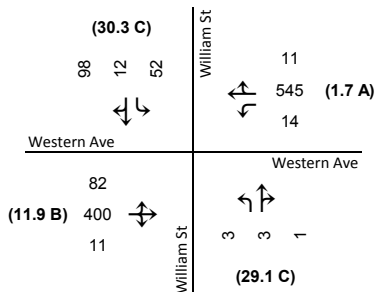
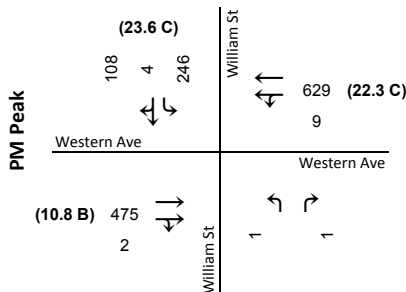
2038 Two-Way Operations



2010 HCM Delay (s/veh) 15.4 B

2010 HCM Delay (s/veh) 11.3 B

2010 HCM Delay (s/veh) 16.9 B



2010 HCM Delay (s/veh) 18.6 B

2010 HCM Delay (s/veh) 9.7 A

2010 HCM Delay (s/veh) 20.6 C



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 3 & 4

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

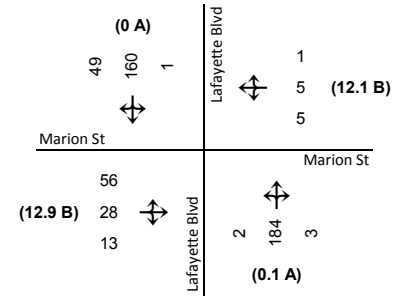
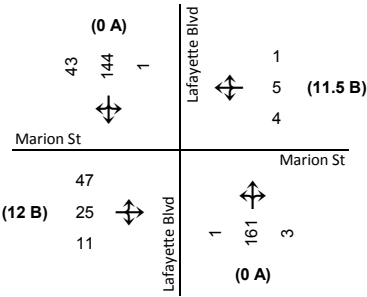
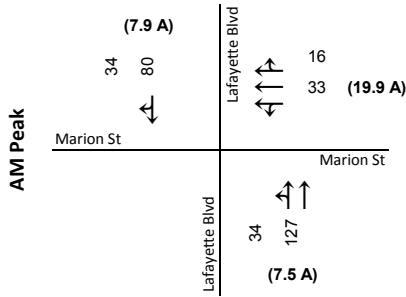
5: Lafayette Blvd & Marion St



2014 One-Way Operations

2014 Two-Way Operations

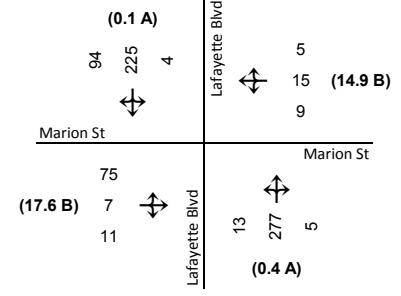
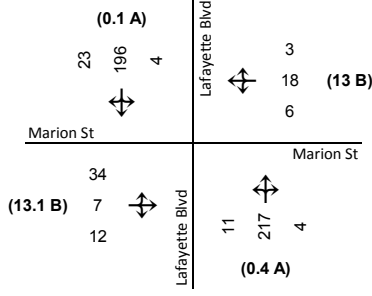
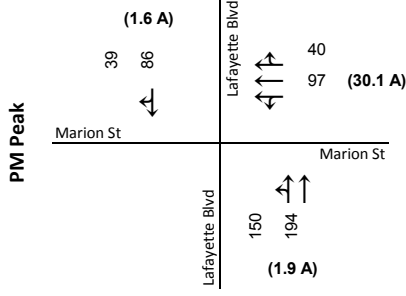
2038 Two-Way Operations



2010 HCM Delay (s/veh) 9.2 A

2010 HCM Delay (s/veh) 2.5 A

2010 HCM Delay (s/veh) 2.8 A



2010 HCM Delay (s/veh) 7.4 A

2010 HCM Delay (s/veh) 2.2 A

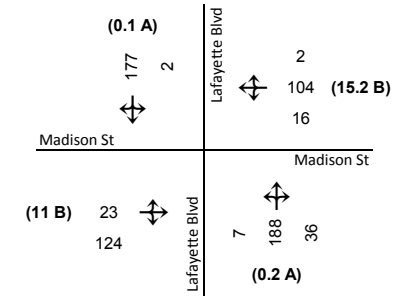
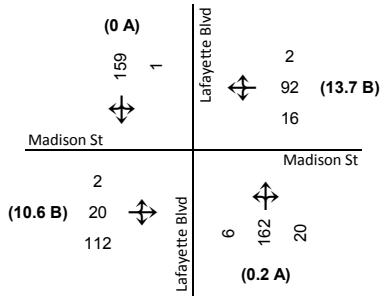
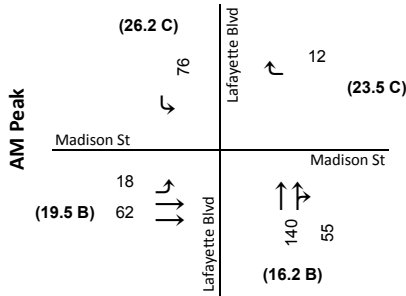
2010 HCM Delay (s/veh) 3.0 A

6: Lafayette Blvd & Madison St

2014 One-Way Operations

2014 Two-Way Operations

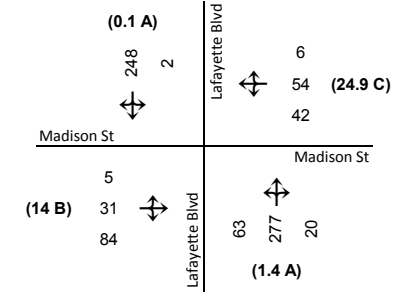
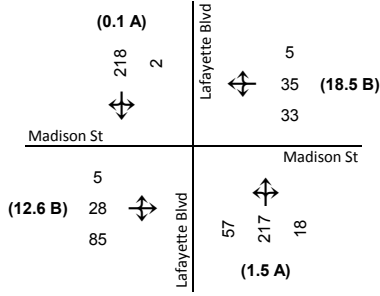
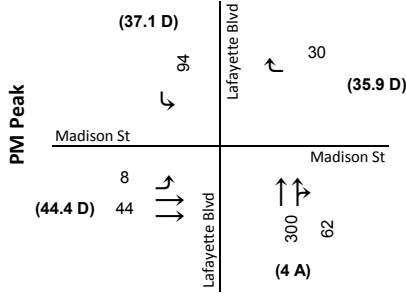
2038 Two-Way Operations



2010 HCM Delay (s/veh) 19.3 B

2010 HCM Delay (s/veh) 5.0 A

2010 HCM Delay (s/veh) 5.2 A



2010 HCM Delay (s/veh) 15.5 B

2010 HCM Delay (s/veh) 4.7 A

2010 HCM Delay (s/veh) 5.7 A



- Legend**
- stop bar geometry
 - volumes (veh)
 - [left, through, right]
 - approach delay (s / veh)

Intersection 5 & 6

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

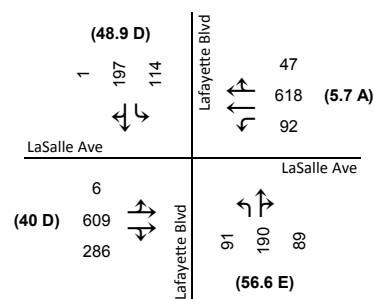
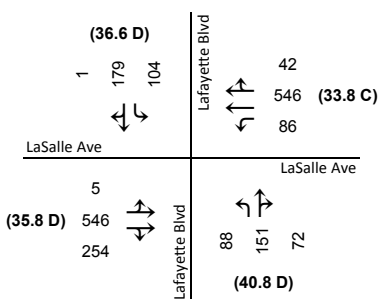
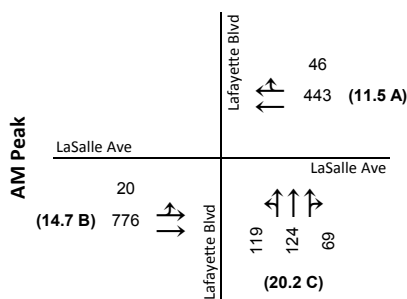
7: Lafayette Blvd & LaSalle Ave



2014 One-Way Operations

2014 Two-Way Operations

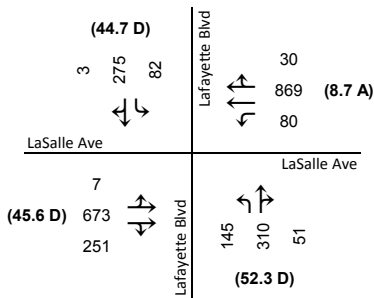
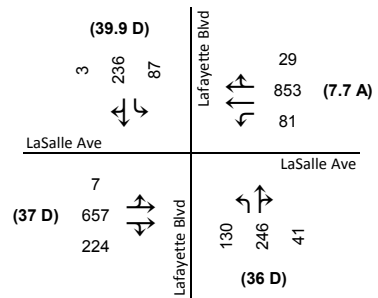
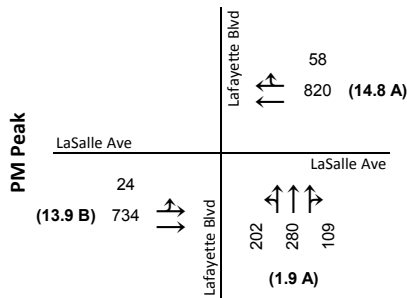
2038 Two-Way Operations



2010 HCM Delay (s/veh) 14.7 B

2010 HCM Delay (s/veh) 36.0 D

2010 HCM Delay (s/veh) 32.7 C



2010 HCM Delay (s/veh) 18.7 B

2010 HCM Delay (s/veh) 26.3 C

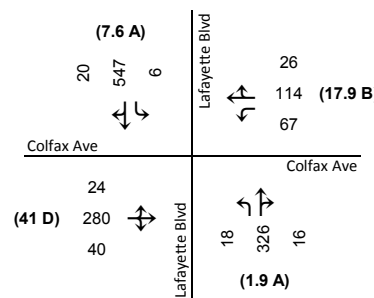
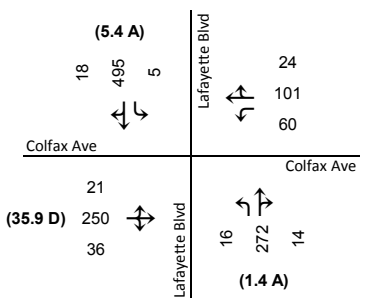
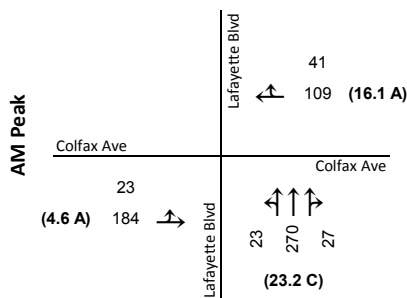
2010 HCM Delay (s/veh) 33.7 C

8: Lafayette Blvd & Colfax Ave

2014 One-Way Operations

2014 Two-Way Operations

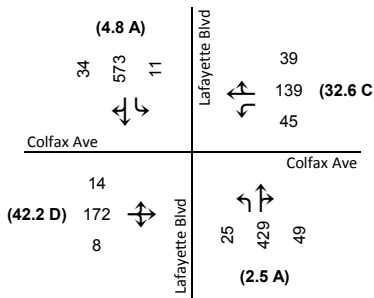
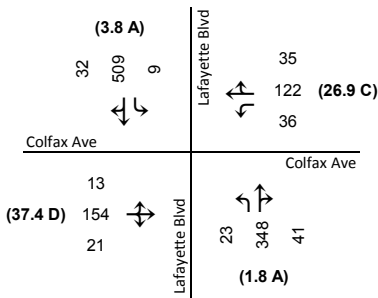
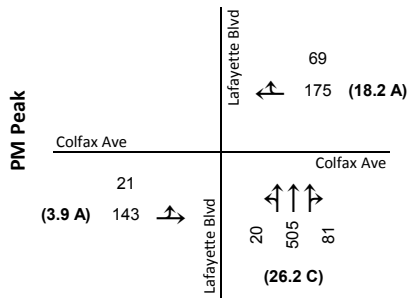
2038 Two-Way Operations



2010 HCM Delay (s/veh) 15.9 B

2010 HCM Delay (s/veh) 13.2 B

2010 HCM Delay (s/veh) 15.4 B



2010 HCM Delay (s/veh) 20.6 C

2010 HCM Delay (s/veh) 11.2 B

2010 HCM Delay (s/veh) 12.8 B



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 7 & 8

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

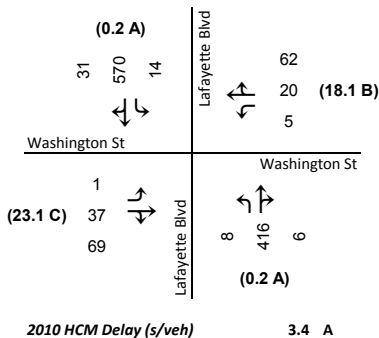
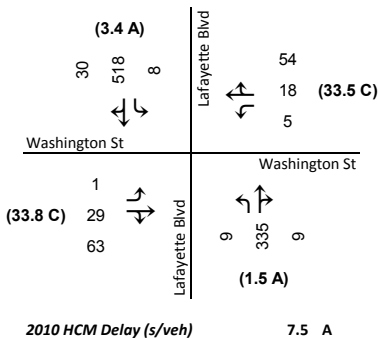
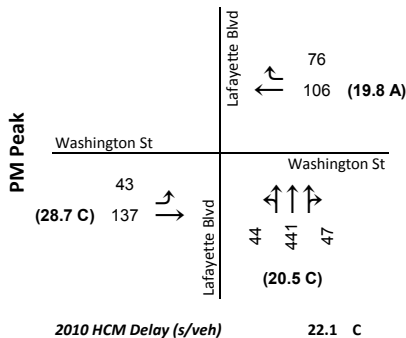
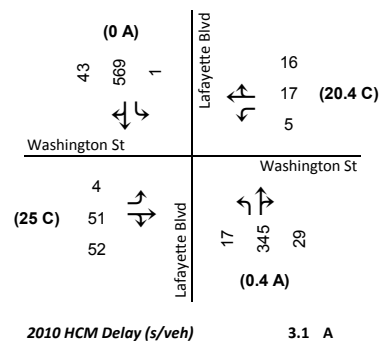
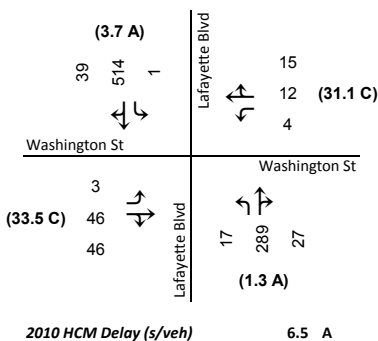
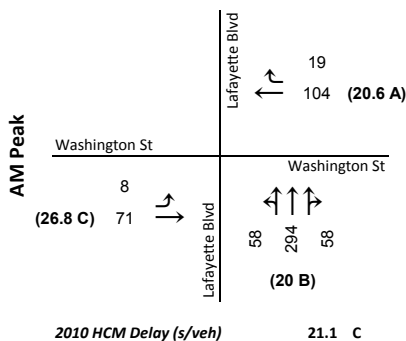
9: Lafayette Blvd & Washington St



2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations

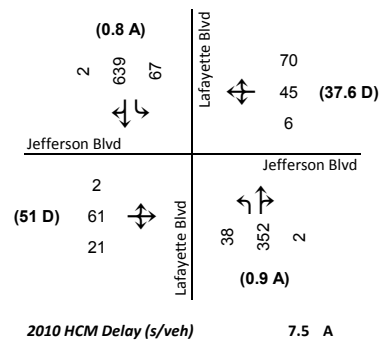
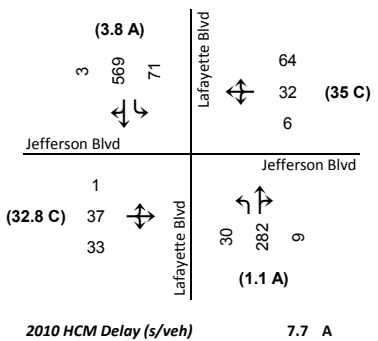
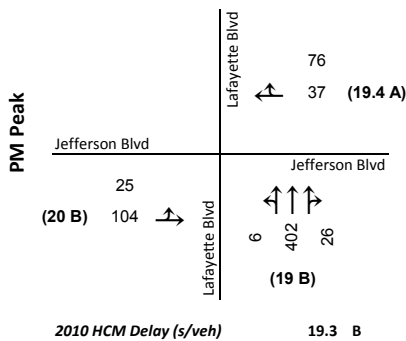
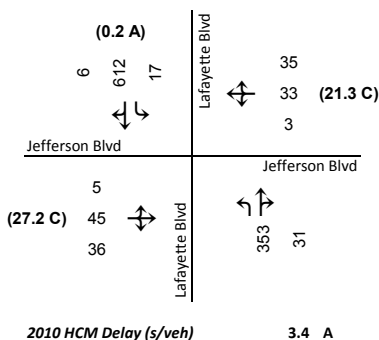
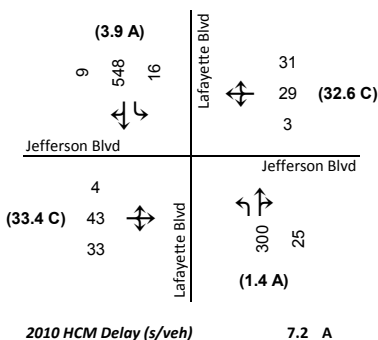
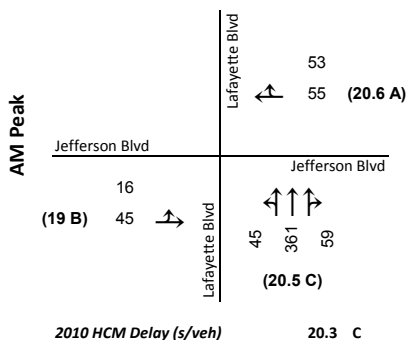


10: Lafayette Blvd & Jefferson Blvd

2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 9 & 10
Traffic Operations Summary
South Bend Downtown Two-Way Conversion

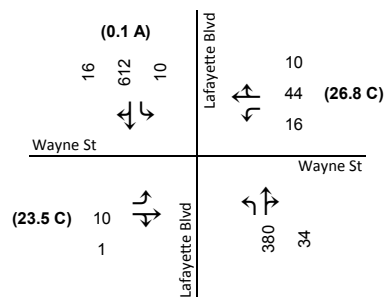
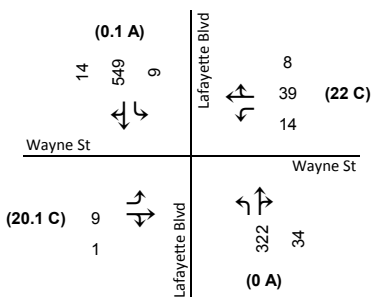
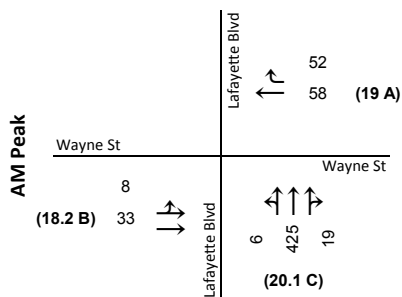
11: Lafayette Blvd & Wayne St



2014 One-Way Operations

2014 Two-Way Operations

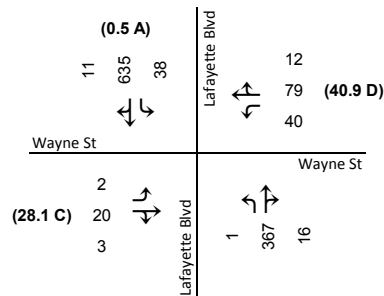
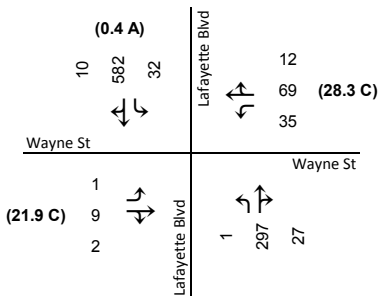
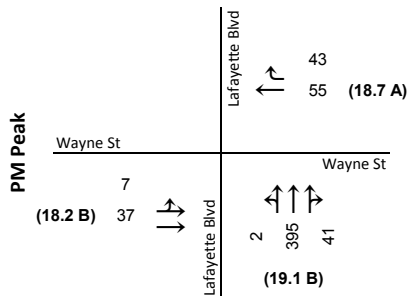
2038 Two-Way Operations



2010 HCM Delay (s/veh) 19.8 B

2010 HCM Delay (s/veh) 1.6 A

2010 HCM Delay (s/veh) 1.9 A



2010 HCM Delay (s/veh) 19.0 B

2010 HCM Delay (s/veh) 3.5 A

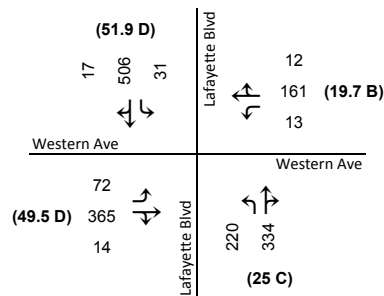
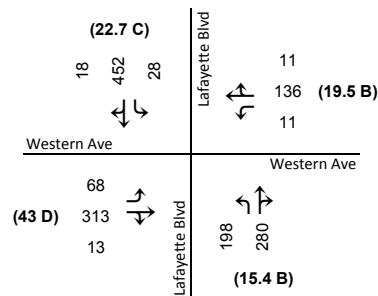
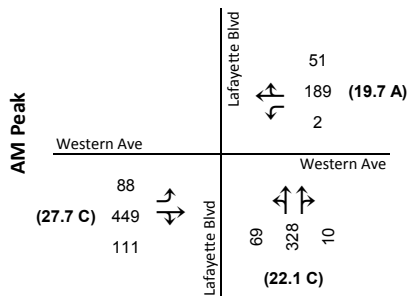
2010 HCM Delay (s/veh) 5.2 A

12: Lafayette Blvd & Western Ave

2014 One-Way Operations

2014 Two-Way Operations

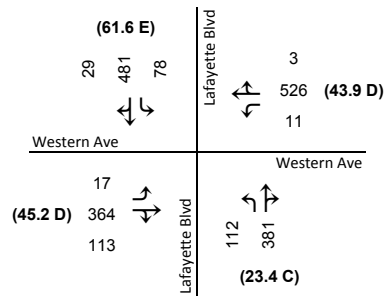
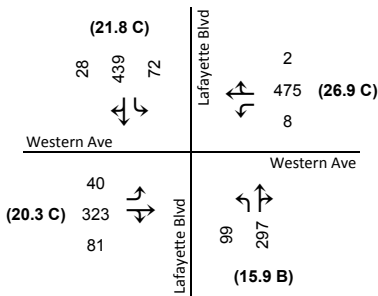
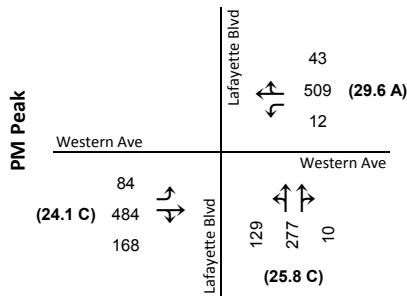
2038 Two-Way Operations



2010 HCM Delay (s/veh) 24.5 C

2010 HCM Delay (s/veh) 25.3 C

2010 HCM Delay (s/veh) 39.3 D



2010 HCM Delay (s/veh) 26.3 C

2010 HCM Delay (s/veh) 21.5 C

2010 HCM Delay (s/veh) 44.4 D



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 11 & 12

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

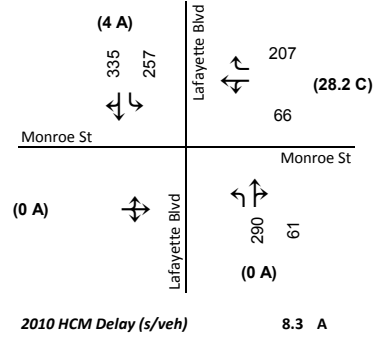
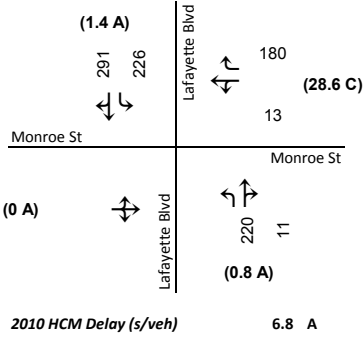
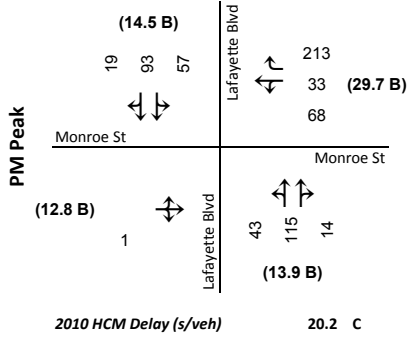
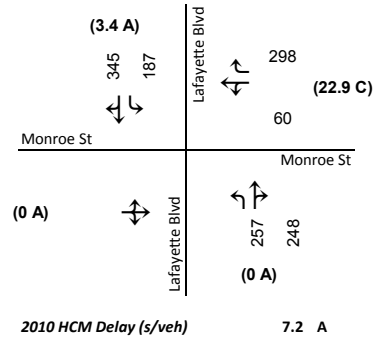
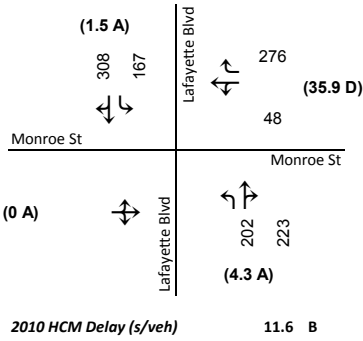
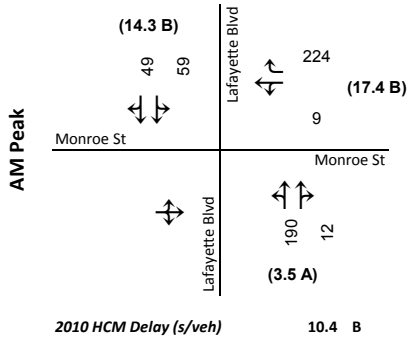
13: Lafayette Blvd & Monroe St



2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations

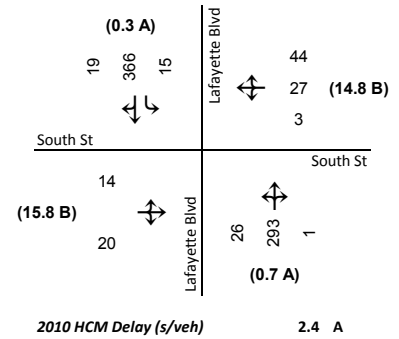
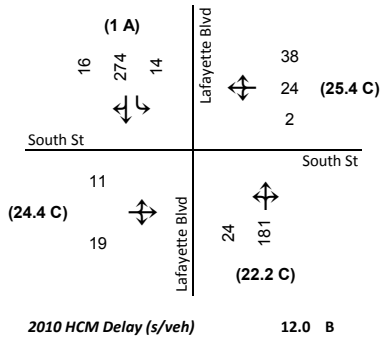
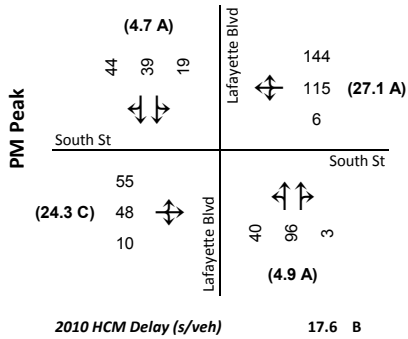
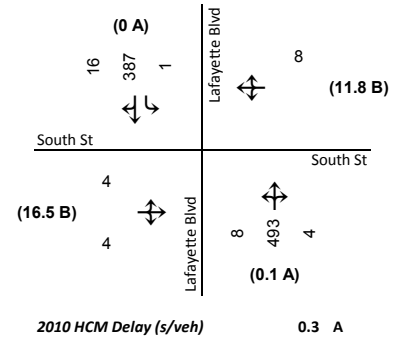
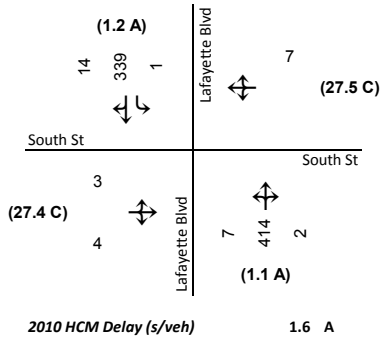
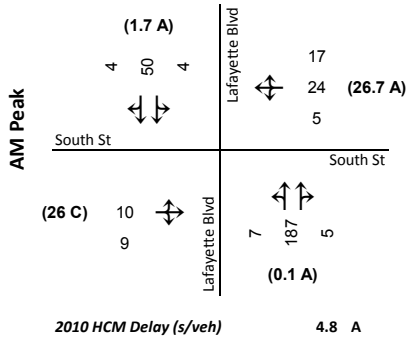


14: Lafayette Blvd & South St

2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 13 & 14

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

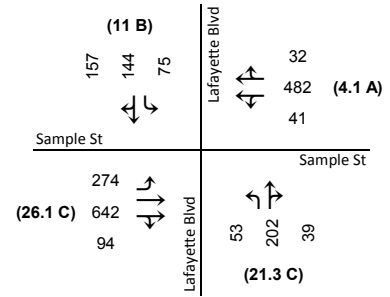
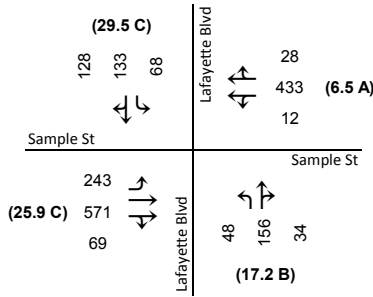
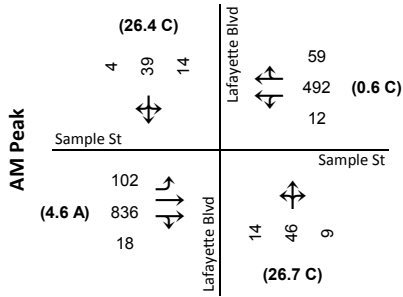
15: Lafayette Blvd & Sample St



2014 One-Way Operations

2014 Two-Way Operations

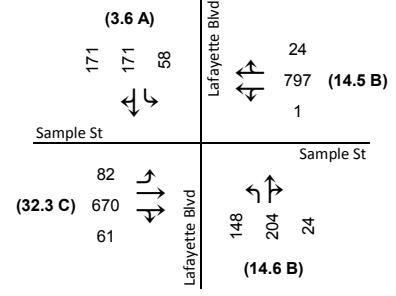
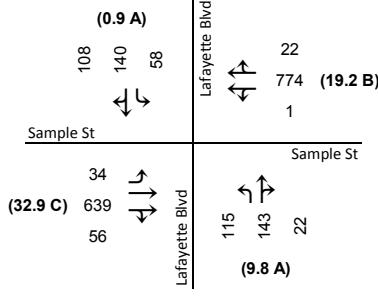
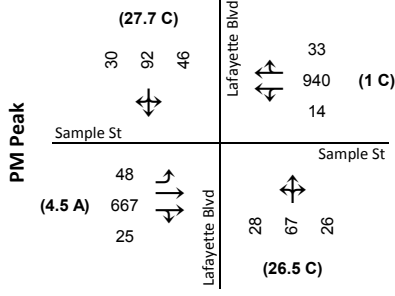
2038 Two-Way Operations



2010 HCM Delay (s/veh) 4.8 A

2010 HCM Delay (s/veh) 20.7 C

2010 HCM Delay (s/veh) 17.5 B



2010 HCM Delay (s/veh) 5.8 A

2010 HCM Delay (s/veh) 20.0 B

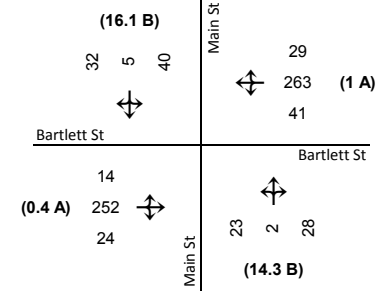
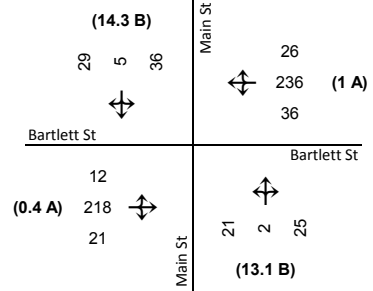
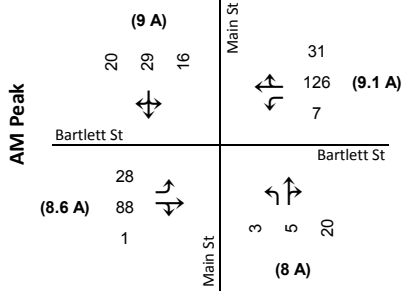
2010 HCM Delay (s/veh) 18.7 B

16: Main St & Bartlett St

2014 One-Way Operations

2014 Two-Way Operations

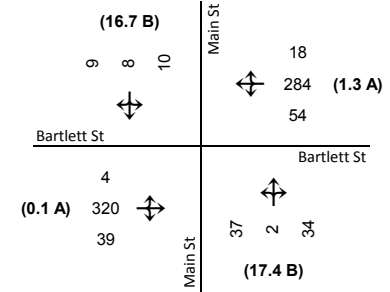
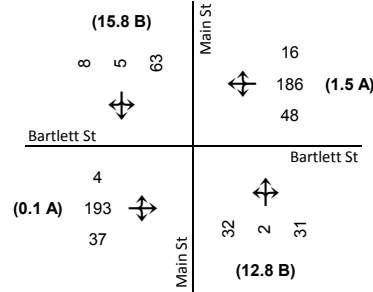
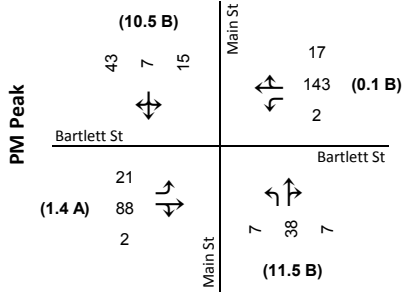
2038 Two-Way Operations



2010 HCM Delay (s/veh) 8.8 A

2010 HCM Delay (s/veh) 3.0 A

2010 HCM Delay (s/veh) 3.2 A



2010 HCM Delay (s/veh) 3.7 A

2010 HCM Delay (s/veh) 3.9 A

2010 HCM Delay (s/veh) 2.7 A



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 15 & 16

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

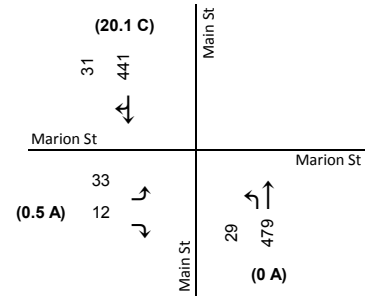
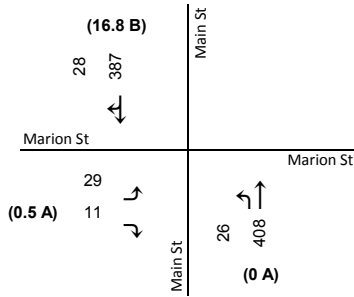
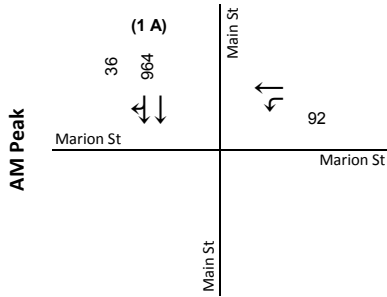
17: Main St & Marion St



2014 One-Way Operations

2014 Two-Way Operations

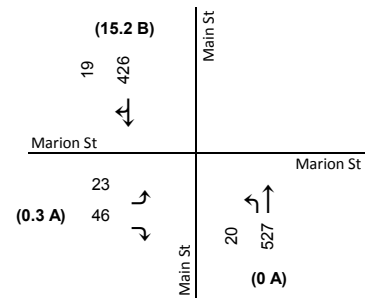
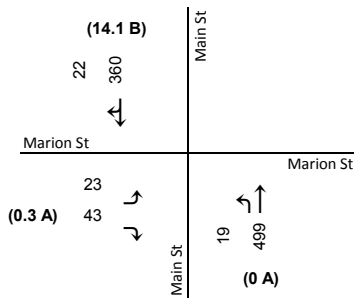
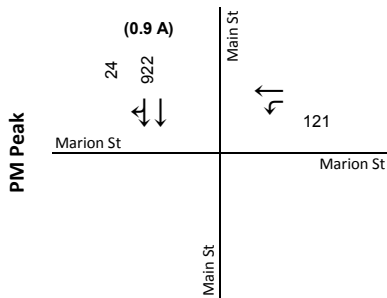
2038 Two-Way Operations



2010 HCM Delay (s/veh) 1.1 A

2010 HCM Delay (s/veh) 1.0 A

2010 HCM Delay (s/veh) 1.1 A



2010 HCM Delay (s/veh) 0.9 A

2010 HCM Delay (s/veh) 1.1 A

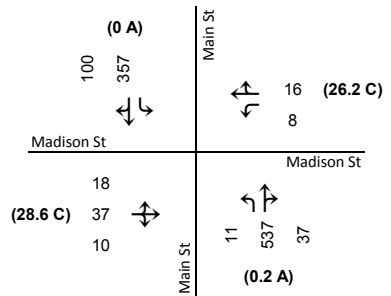
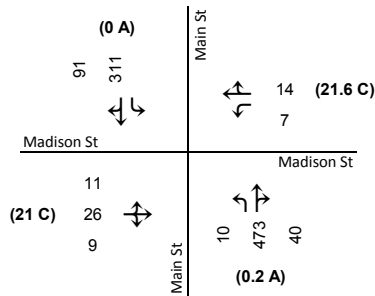
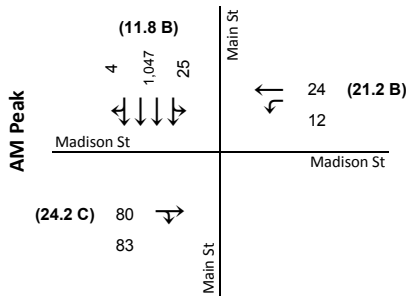
2010 HCM Delay (s/veh) 1.1 A

18: Main St & Madison St

2014 One-Way Operations

2014 Two-Way Operations

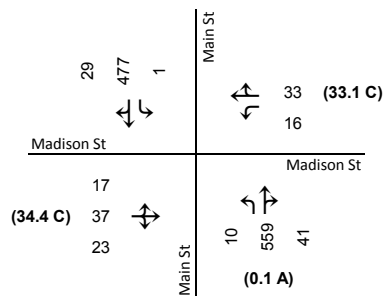
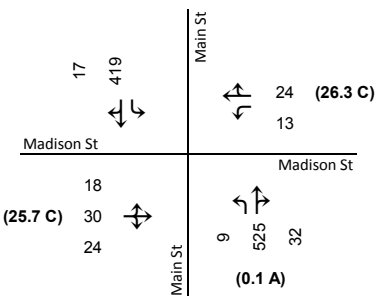
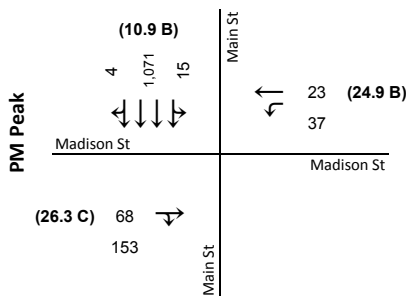
2038 Two-Way Operations



2010 HCM Delay (s/veh) 13.3 B

2010 HCM Delay (s/veh) 1.5 A

2010 HCM Delay (s/veh) 2.3 A



2010 HCM Delay (s/veh) 13.6 B

2010 HCM Delay (s/veh) 2.6 A

2010 HCM Delay (s/veh) 3.5 A



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 17 & 18

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

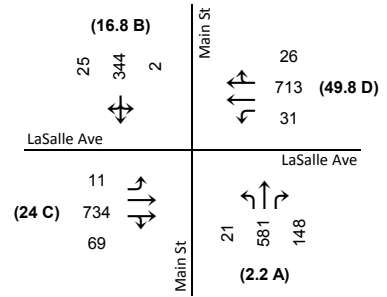
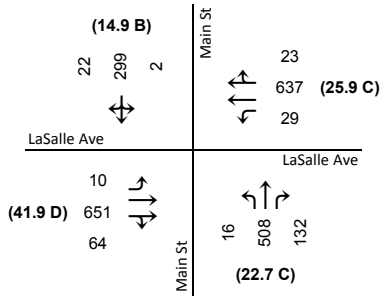
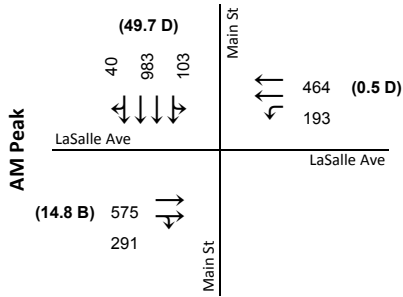
19: Main St & LaSalle Ave



2014 One-Way Operations

2014 Two-Way Operations

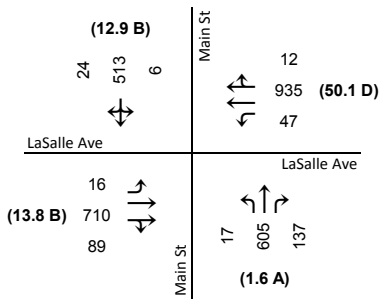
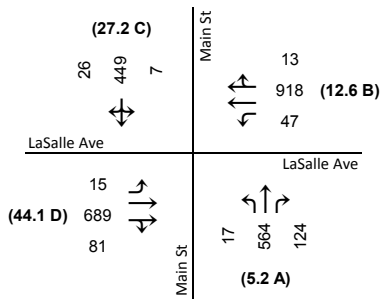
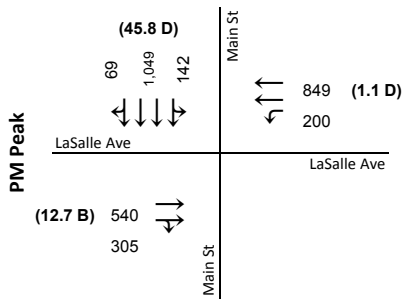
2038 Two-Way Operations



2010 HCM Delay (s/veh) 28.2 C

2010 HCM Delay (s/veh) 22.7 C

2010 HCM Delay (s/veh) 24.3 C



2010 HCM Delay (s/veh) 23.6 C

2010 HCM Delay (s/veh) 21.6 C

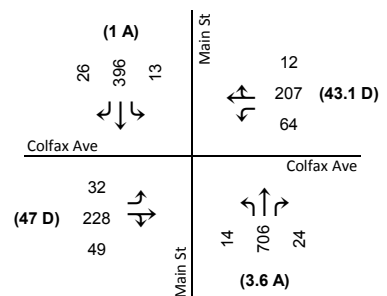
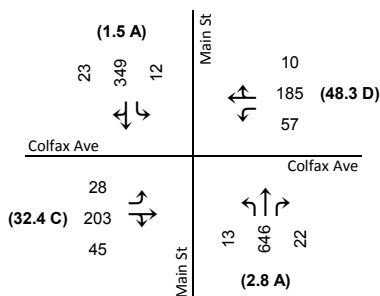
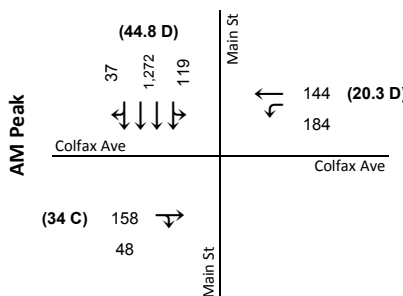
2010 HCM Delay (s/veh) 22.3 C

20: Main St & Colfax Ave

2014 One-Way Operations

2014 Two-Way Operations

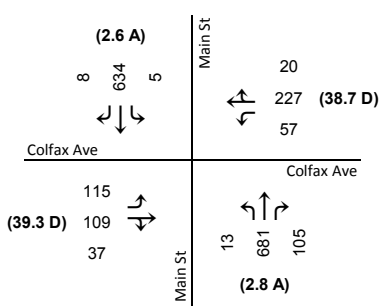
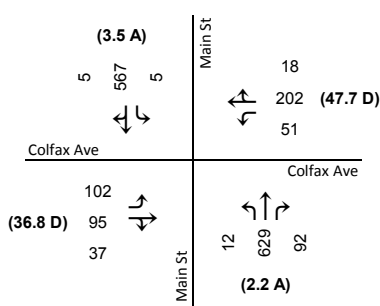
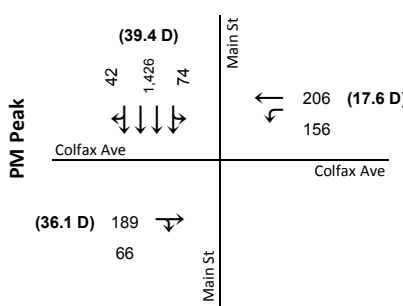
2038 Two-Way Operations



2010 HCM Delay (s/veh) 39.6 D

2010 HCM Delay (s/veh) 14.8 B

2010 HCM Delay (s/veh) 16.8 B



2010 HCM Delay (s/veh) 35.3 D

2010 HCM Delay (s/veh) 13.9 B

2010 HCM Delay (s/veh) 12.9 B



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 19 & 20

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

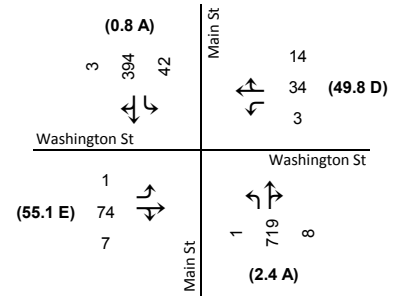
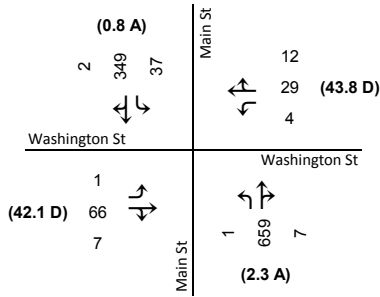
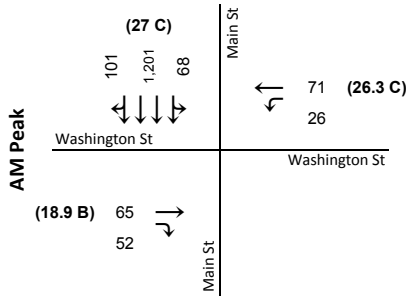
21: Main St & Washington St



2014 One-Way Operations

2014 Two-Way Operations

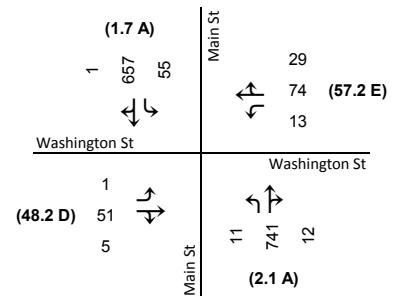
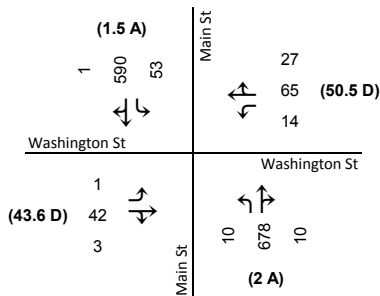
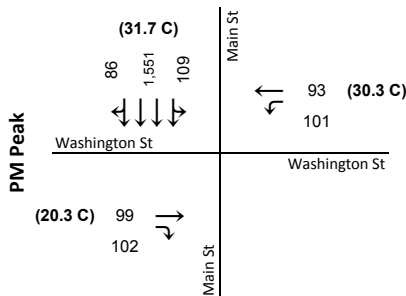
2038 Two-Way Operations



2010 HCM Delay (s/veh) 26.5 C

2010 HCM Delay (s/veh) 5.9 A

2010 HCM Delay (s/veh) 7.1 A



2010 HCM Delay (s/veh) 30.5 C

2010 HCM Delay (s/veh) 6.5 A

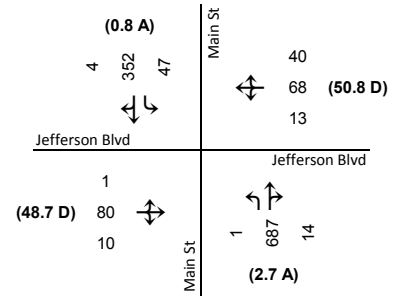
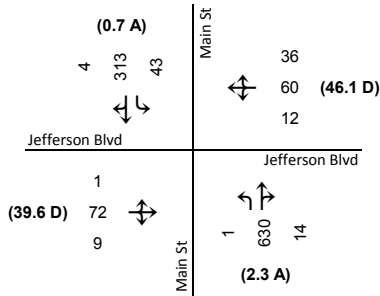
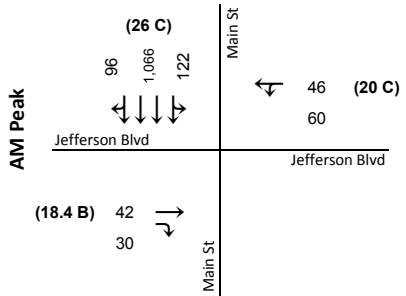
2010 HCM Delay (s/veh) 7.4 A

22: Main St & Jefferson Blvd

2014 One-Way Operations

2014 Two-Way Operations

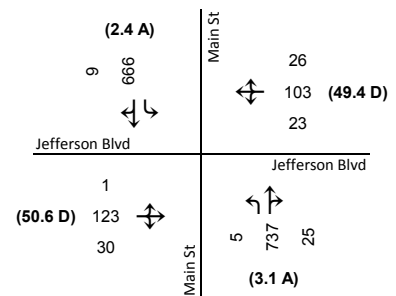
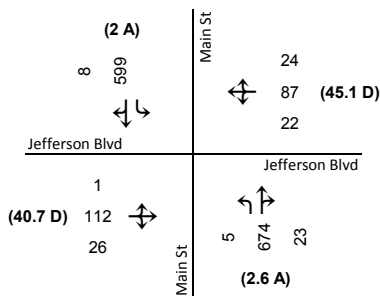
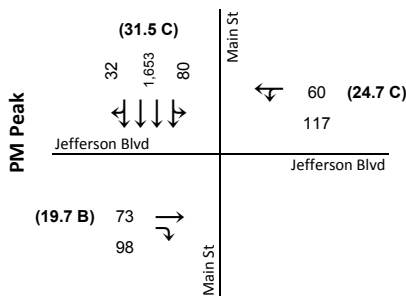
2038 Two-Way Operations



2010 HCM Delay (s/veh) 25.3 C

2010 HCM Delay (s/veh) 8.3 A

2010 HCM Delay (s/veh) 9.7 A



2010 HCM Delay (s/veh) 30.1 C

2010 HCM Delay (s/veh) 9.3 A

2010 HCM Delay (s/veh) 11.1 B



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 21 & 22

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

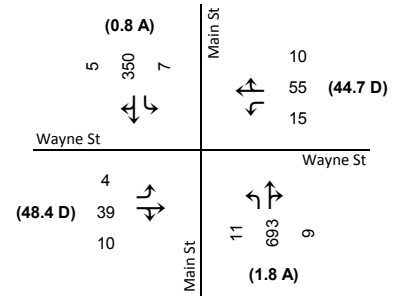
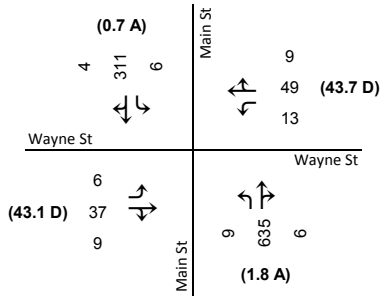
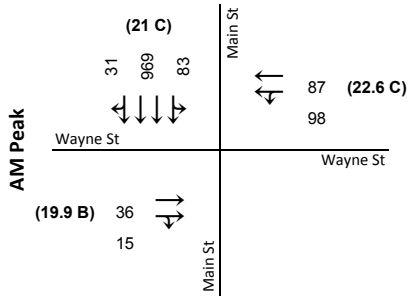
23: Main St & Wayne St



2014 One-Way Operations

2014 Two-Way Operations

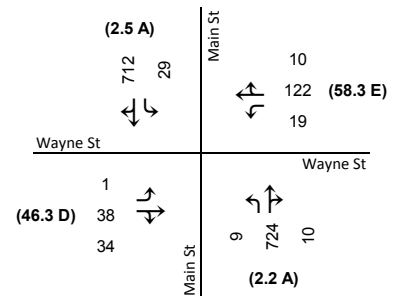
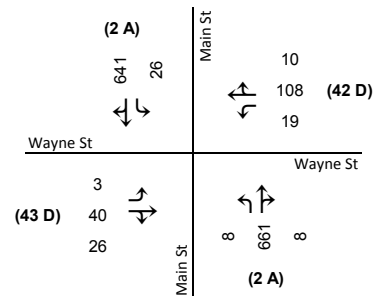
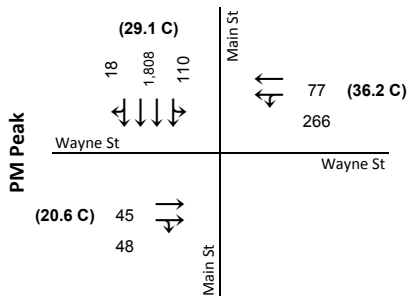
2038 Two-Way Operations



2010 HCM Delay (s/veh) 21.2 C

2010 HCM Delay (s/veh) 6.2 A

2010 HCM Delay (s/veh) 6.4 A



2010 HCM Delay (s/veh) 29.8 C

2010 HCM Delay (s/veh) 7.3 A

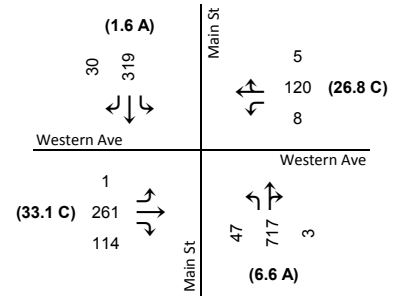
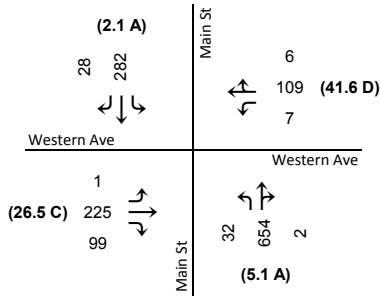
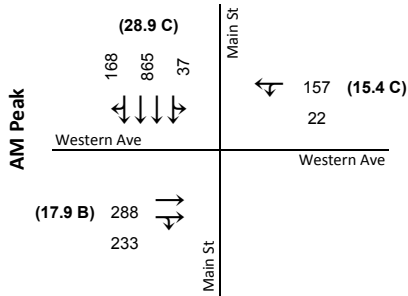
2010 HCM Delay (s/veh) 9.2 A

24: Main St & Western Ave

2014 One-Way Operations

2014 Two-Way Operations

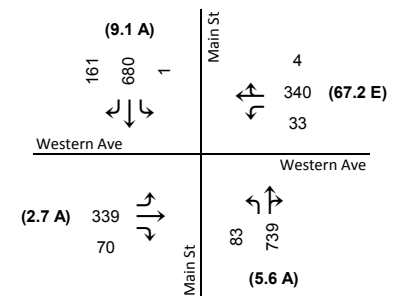
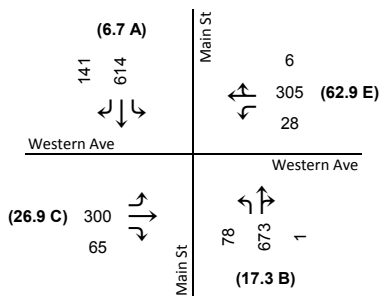
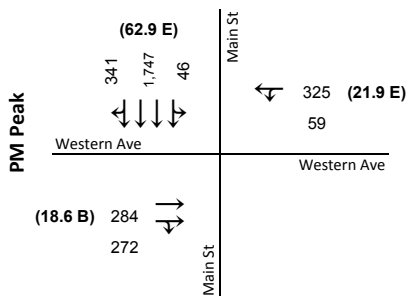
2038 Two-Way Operations



2010 HCM Delay (s/veh) 24.3 C

2010 HCM Delay (s/veh) 12.3 B

2010 HCM Delay (s/veh) 13.3 B



2010 HCM Delay (s/veh) 49.7 D

2010 HCM Delay (s/veh) 22.3 C

2010 HCM Delay (s/veh) 19.8 B



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 23 & 24

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

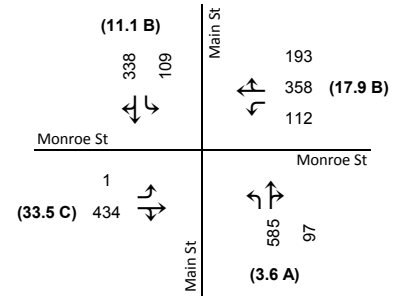
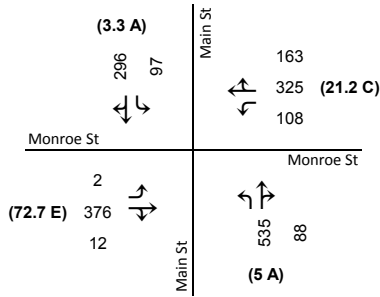
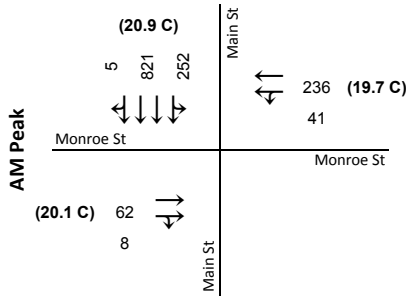
25: Main St & Monroe St



2014 One-Way Operations

2014 Two-Way Operations

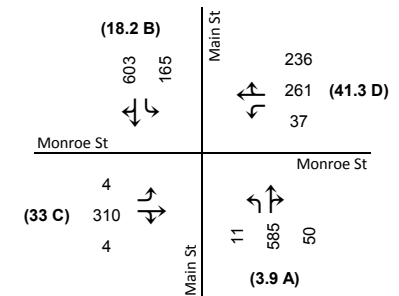
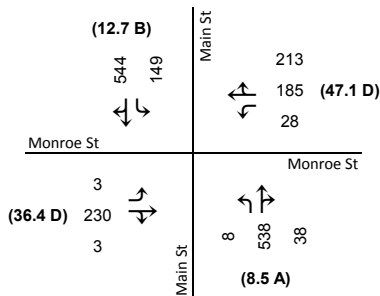
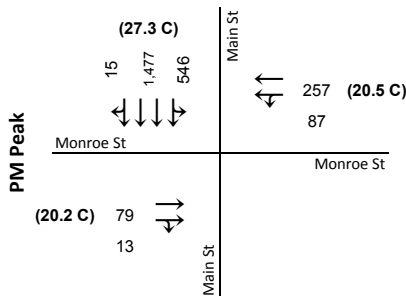
2038 Two-Way Operations



2010 HCM Delay (s/veh) 20.7 C

2010 HCM Delay (s/veh) 22.7 C

2010 HCM Delay (s/veh) 15.2 B



2010 HCM Delay (s/veh) 26.1 C

2010 HCM Delay (s/veh) 21.9 C

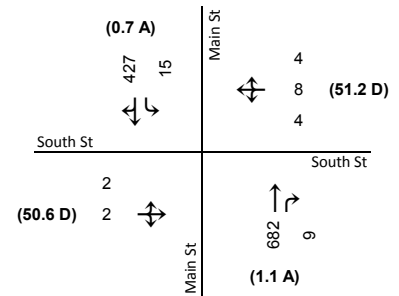
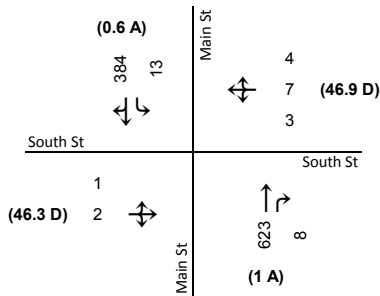
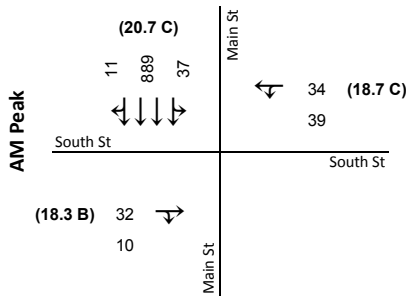
2010 HCM Delay (s/veh) 21.7 C

26: Main St & South St

2014 One-Way Operations

2014 Two-Way Operations

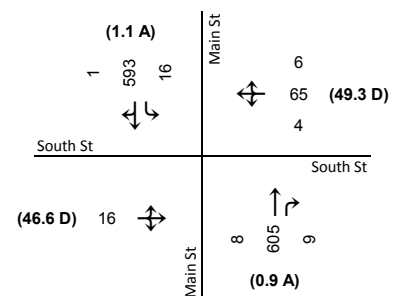
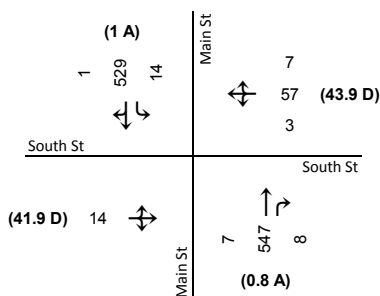
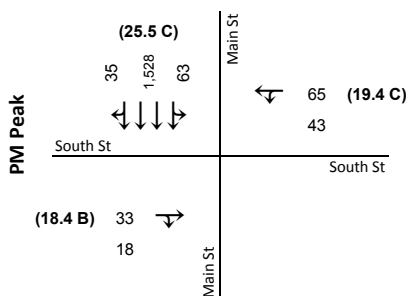
2038 Two-Way Operations



2010 HCM Delay (s/veh) 20.4 C

2010 HCM Delay (s/veh) 1.6 A

2010 HCM Delay (s/veh) 1.7 A



2010 HCM Delay (s/veh) 25.0 C

2010 HCM Delay (s/veh) 3.8 A

2010 HCM Delay (s/veh) 4.3 A



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 25 & 26

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

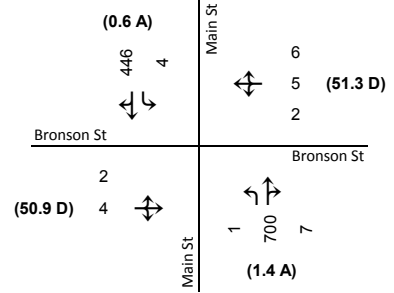
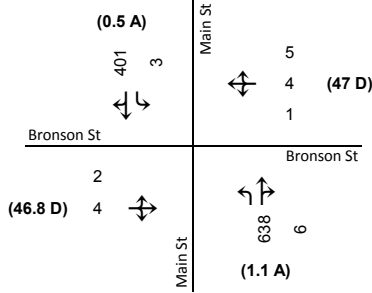
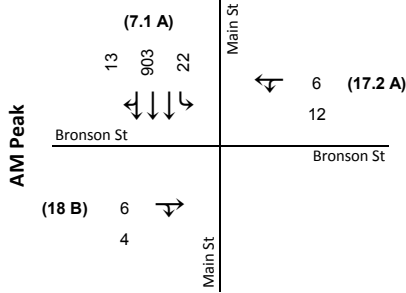
27: Main St & Bronson St



2014 One-Way Operations

2014 Two-Way Operations

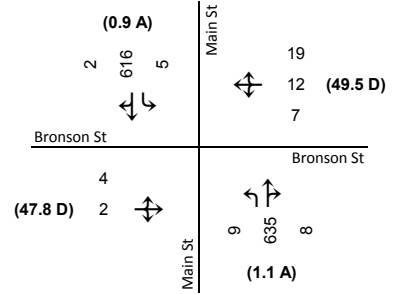
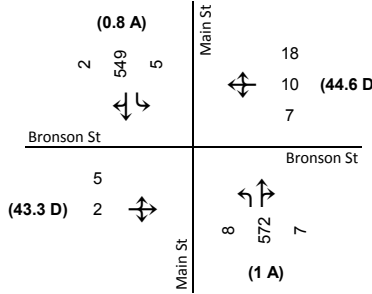
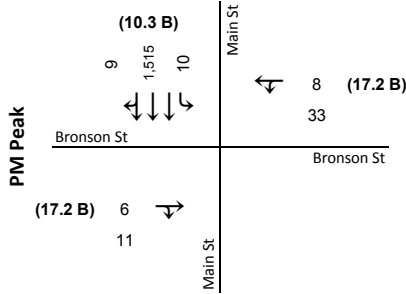
2038 Two-Way Operations



2010 HCM Delay (s/veh) 7.3 A

2010 HCM Delay (s/veh) 1.5 A

2010 HCM Delay (s/veh) 1.8 A



2010 HCM Delay (s/veh) 10.5 B

2010 HCM Delay (s/veh) 2.4 A

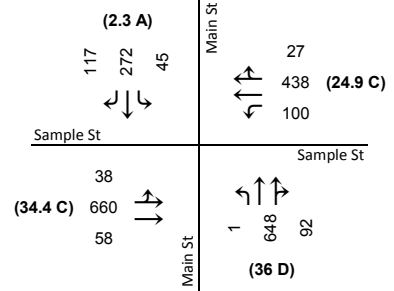
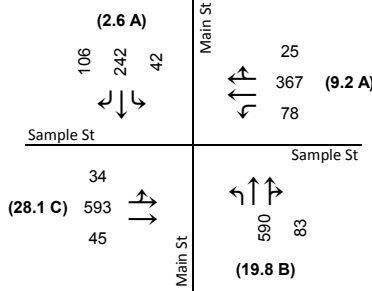
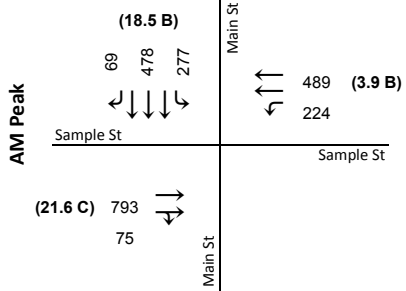
2010 HCM Delay (s/veh) 2.6 A

28: Main St & Sample St

2014 One-Way Operations

2014 Two-Way Operations

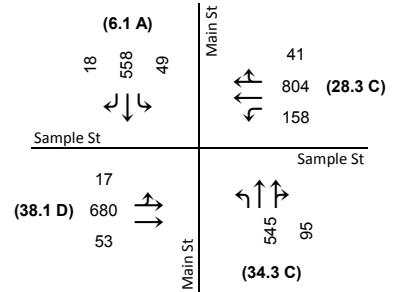
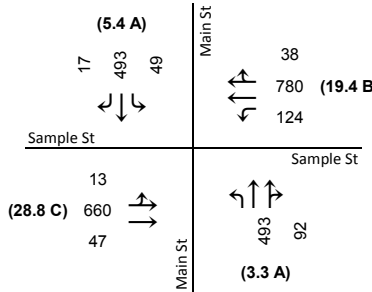
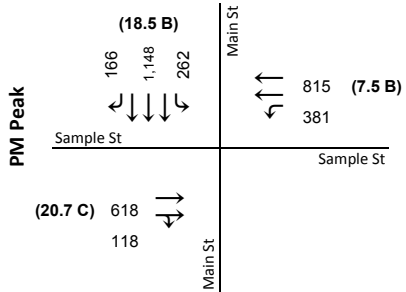
2038 Two-Way Operations



2010 HCM Delay (s/veh) 16.4 B

2010 HCM Delay (s/veh) 17.0 B

2010 HCM Delay (s/veh) 27.2 C



2010 HCM Delay (s/veh) 16.1 B

2010 HCM Delay (s/veh) 15.7 B

2010 HCM Delay (s/veh) 27.4 C



Legend

- stop bar geometry
- volumes (veh)
- approach delay (s / veh)

Intersection 27 & 28

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

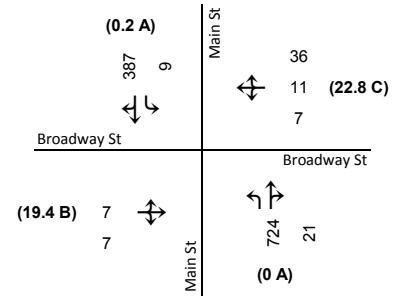
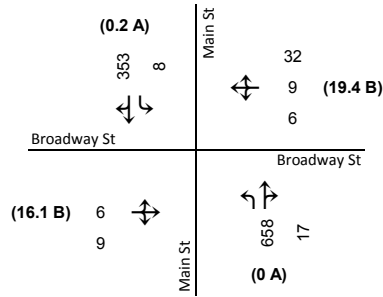
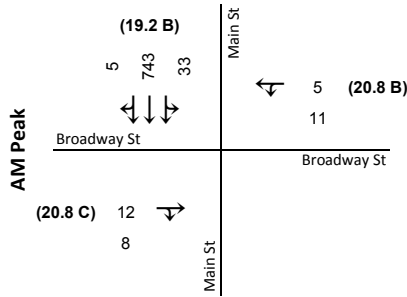
29: Main St & Broadway St



2014 One-Way Operations

2014 Two-Way Operations

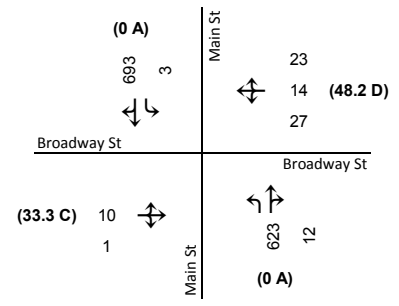
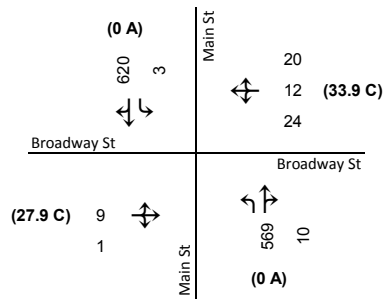
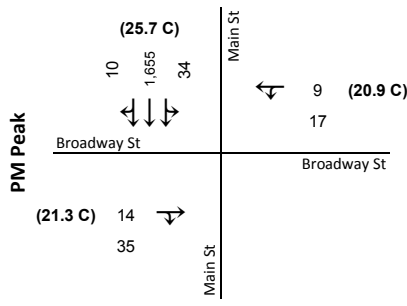
2038 Two-Way Operations



2010 HCM Delay (s/veh) 19.3 B

2010 HCM Delay (s/veh) 1.1 A

2010 HCM Delay (s/veh) 1.3 A



2010 HCM Delay (s/veh) 25.5 C

2010 HCM Delay (s/veh) 1.7 A

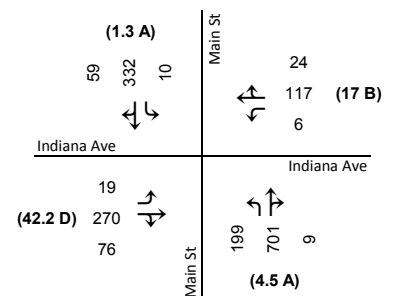
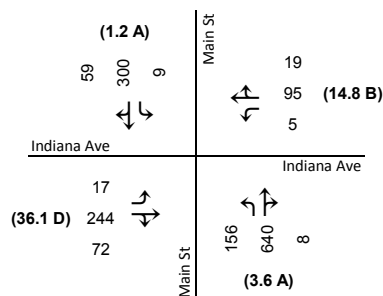
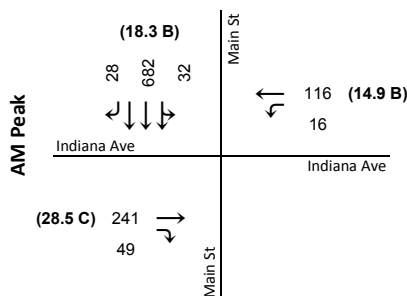
2010 HCM Delay (s/veh) 2.5 A

30: Main St & Indiana Ave

2014 One-Way Operations

2014 Two-Way Operations

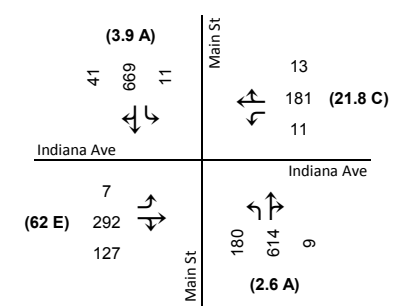
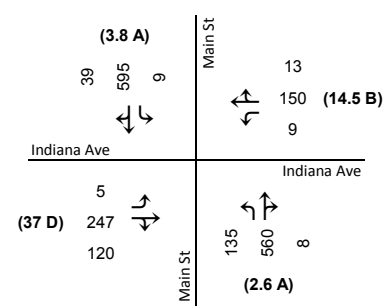
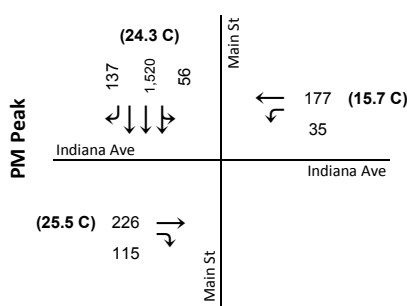
2038 Two-Way Operations



2010 HCM Delay (s/veh) 20.2 C

2010 HCM Delay (s/veh) 10.5 B

2010 HCM Delay (s/veh) 12.4 B



2010 HCM Delay (s/veh) 23.6 C

2010 HCM Delay (s/veh) 10.9 B

2010 HCM Delay (s/veh) 16.6 B



- Legend**
- stop bar geometry
 - volumes (veh)
 - [left, through, right]
 - approach delay (s / veh)

Intersection 29 & 30

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

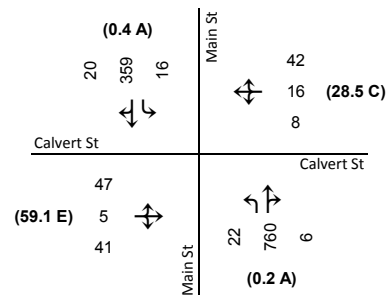
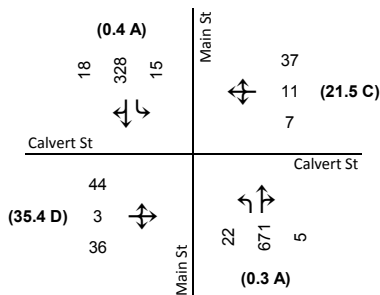
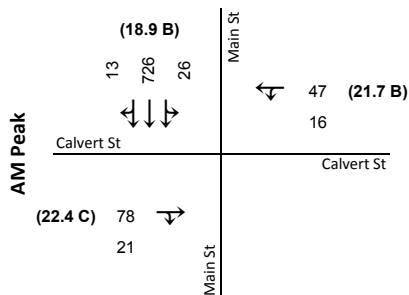
31: Main St & Calvert St



2014 One-Way Operations

2014 Two-Way Operations

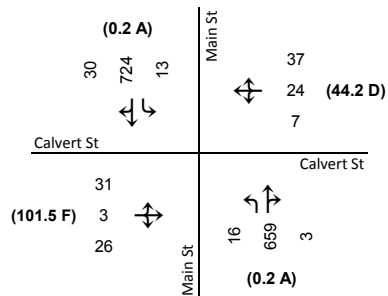
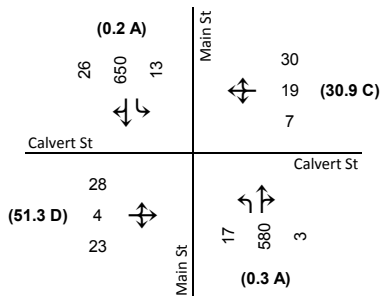
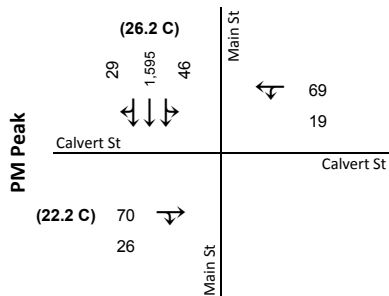
2038 Two-Way Operations



2010 HCM Delay (s/veh) 19.4 B

2010 HCM Delay (s/veh) 3.7 A

2010 HCM Delay (s/veh) 5.7 A



2010 HCM Delay (s/veh) 25.1 C

2010 HCM Delay (s/veh) 3.5 A

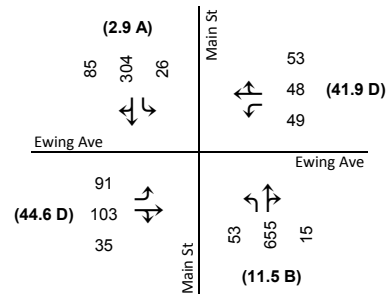
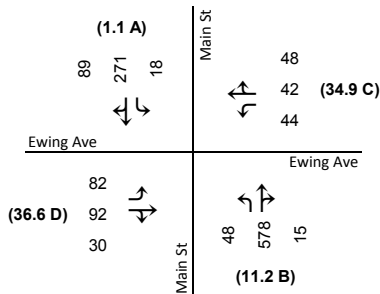
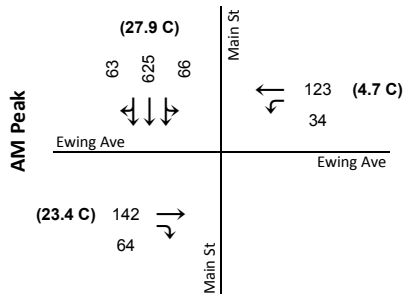
2010 HCM Delay (s/veh) 6.0 A

32: Main St & Ewing Ave

2014 One-Way Operations

2014 Two-Way Operations

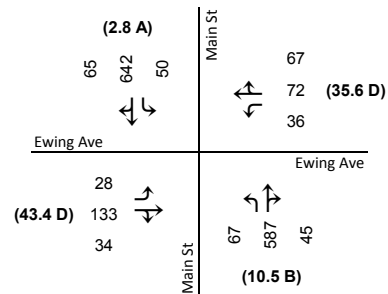
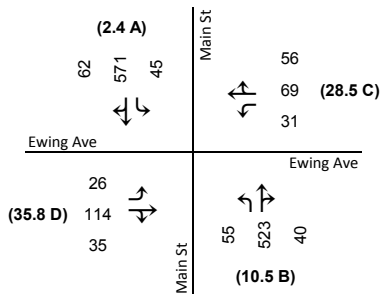
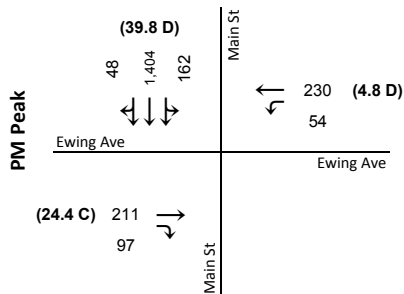
2038 Two-Way Operations



2010 HCM Delay (s/veh) 23.8 C

2010 HCM Delay (s/veh) 14.6 B

2010 HCM Delay (s/veh) 17.2 B



2010 HCM Delay (s/veh) 33.4 C

2010 HCM Delay (s/veh) 11.6 B

2010 HCM Delay (s/veh) 13.2 B



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 31 & 32

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

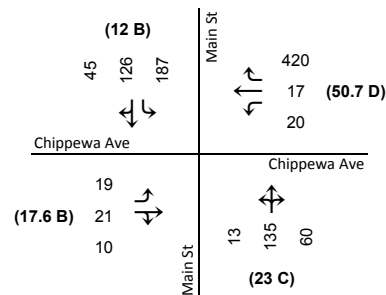
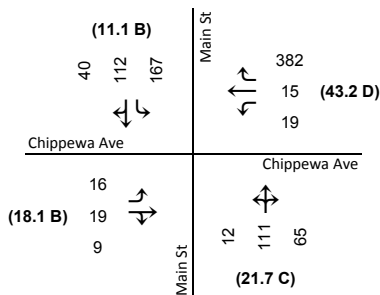
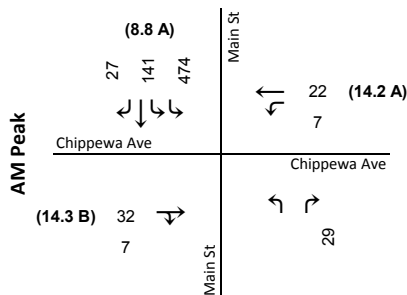
33: Main St & Chippewa Ave



2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations



2010 HCM Delay (s/veh)

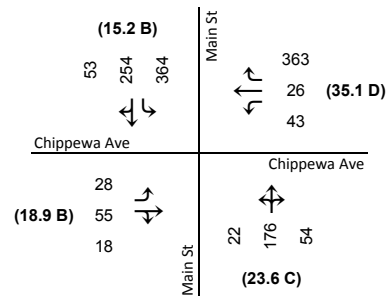
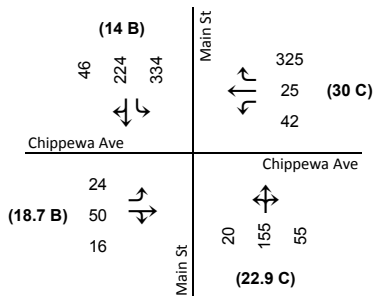
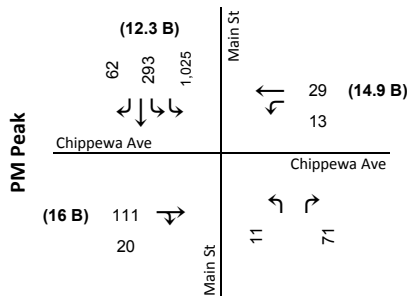
9.3 A

2010 HCM Delay (s/veh)

27.3 C

2010 HCM Delay (s/veh)

30.9 C



2010 HCM Delay (s/veh)

12.7 B

2010 HCM Delay (s/veh)

20.7 C

2010 HCM Delay (s/veh)

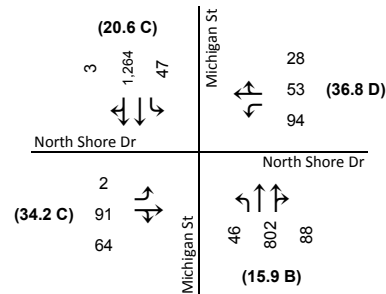
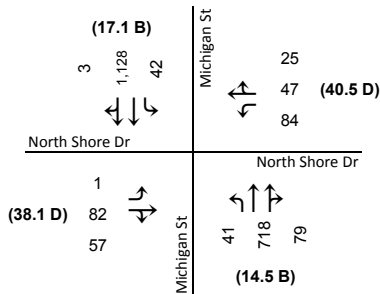
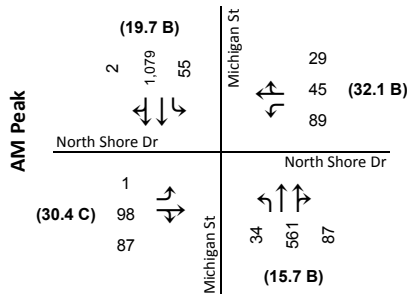
22.8 C

34: Michigan St & North Shore Dr

2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations



2010 HCM Delay (s/veh)

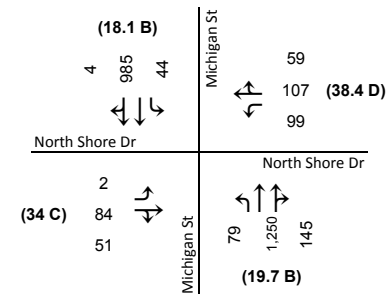
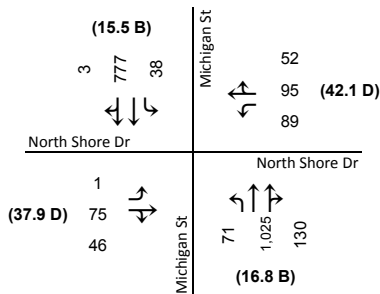
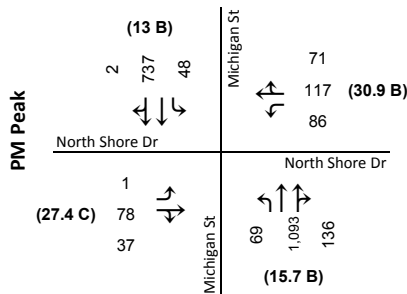
20.3 C

2010 HCM Delay (s/veh)

19.0 B

2010 HCM Delay (s/veh)

20.8 C



2010 HCM Delay (s/veh)

17.1 B

2010 HCM Delay (s/veh)

19.9 B

2010 HCM Delay (s/veh)

21.5 C



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 33 & 34

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

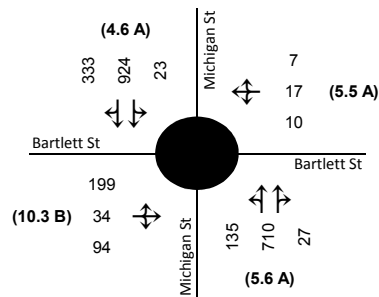
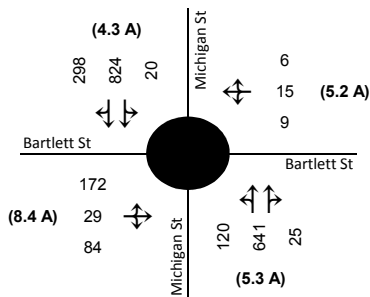
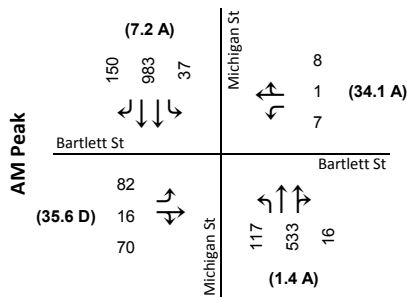
35: Michigan St & Bartlett St



2014 One-Way Operations

2014 Two-Way Operations

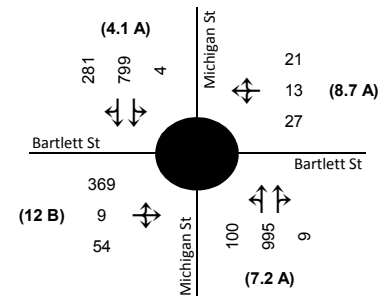
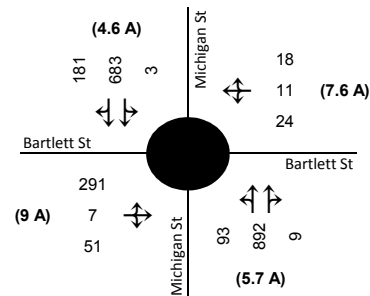
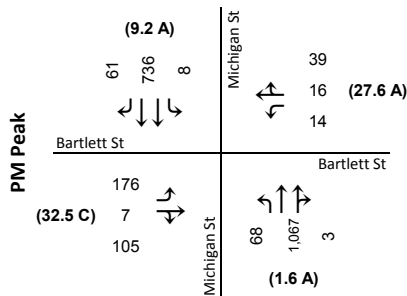
2038 Two-Way Operations



2010 HCM Delay (s/veh) 7.1 A

Sidra Delay (s/veh) 5.2 A

Sidra Delay (s/veh) 5.5 A



2010 HCM Delay (s/veh) 7.6 A

Sidra Delay (s/veh) 5.7 A

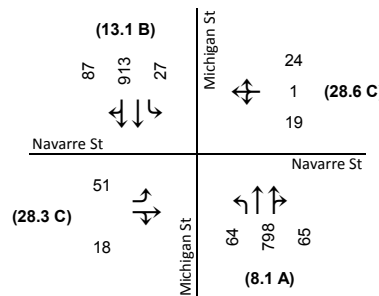
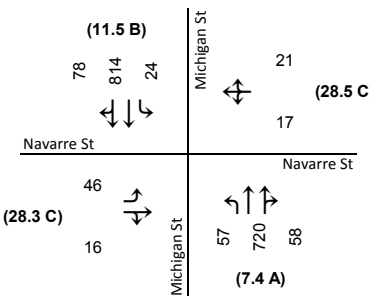
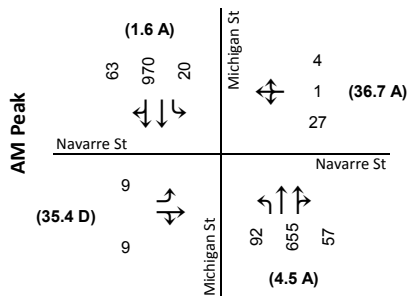
Sidra Delay (s/veh) 6.8 A

36: Michigan St & Navarre St

2014 One-Way Operations

2014 Two-Way Operations

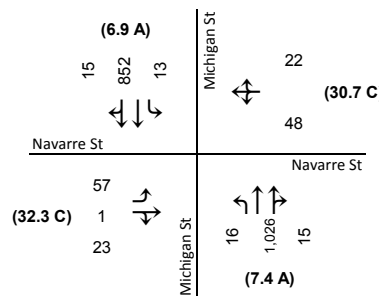
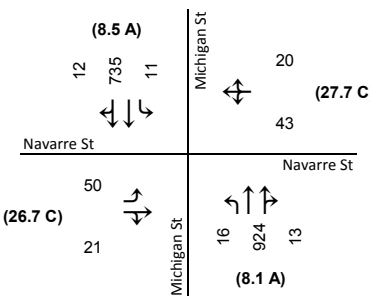
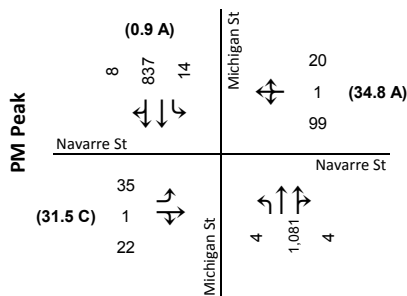
2038 Two-Way Operations



2010 HCM Delay (s/veh) 4.4 A

2010 HCM Delay (s/veh) 10.6 B

2010 HCM Delay (s/veh) 11.7 B



2010 HCM Delay (s/veh) 7.4 A

2010 HCM Delay (s/veh) 9.7 A

2010 HCM Delay (s/veh) 8.9 A



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 35 & 36

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

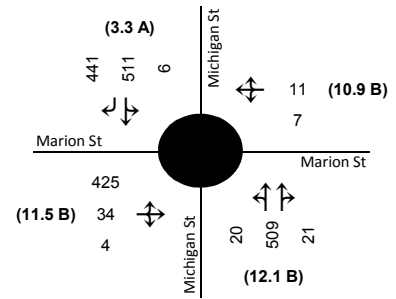
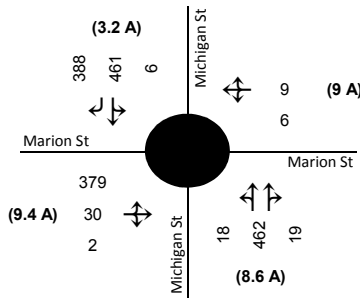
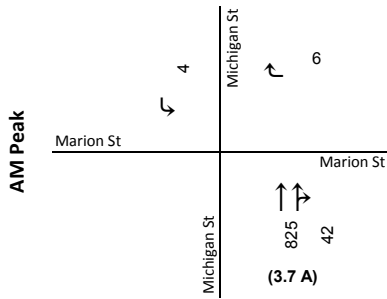
37: Michigan St & Marion St



2014 One-Way Operations

2014 Two-Way Operations

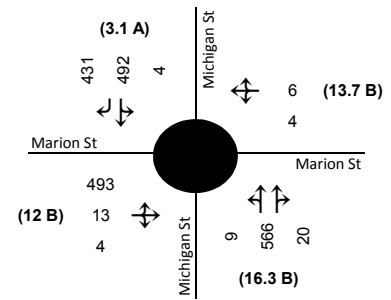
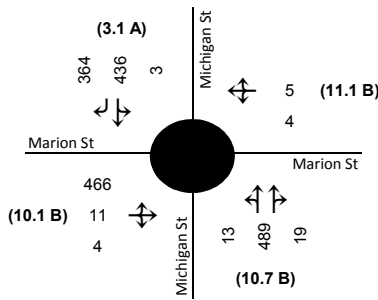
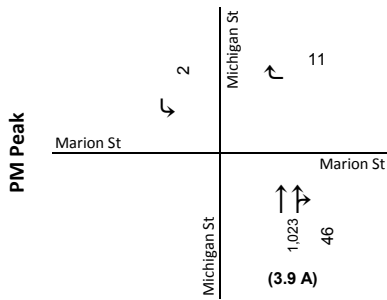
2038 Two-Way Operations



2010 HCM Delay (s/veh) 3.9 A

Sidra Delay (s/veh) 6.2 A

Sidra Delay (s/veh) 7.7 A



2010 HCM Delay (s/veh) 4.0 A

Sidra Delay (s/veh) 7.2 A

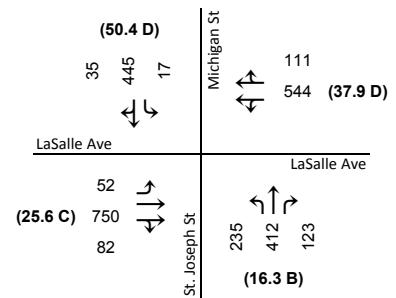
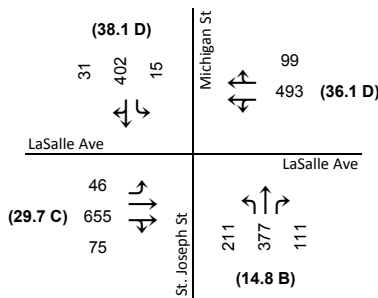
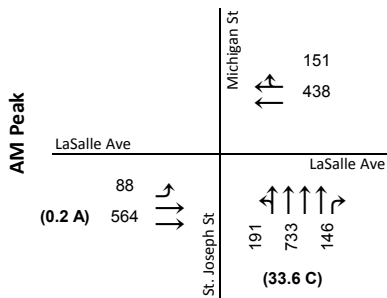
Sidra Delay (s/veh) 9.2 A

38: St. Joseph St/Michigan St & LaSalle Ave

2014 One-Way Operations

2014 Two-Way Operations

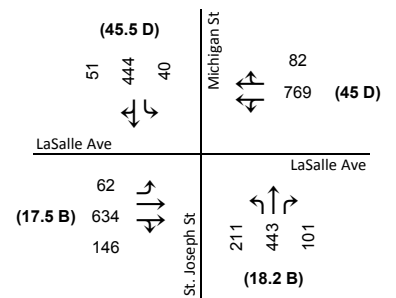
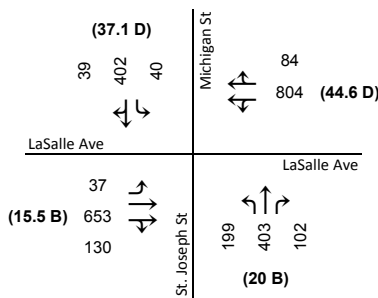
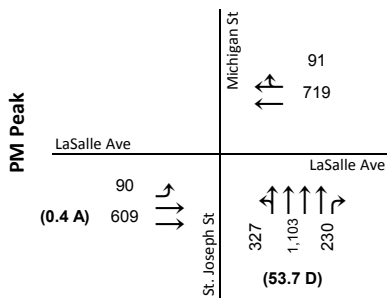
2038 Two-Way Operations



2010 HCM Delay (s/veh) 19.8 B

2010 HCM Delay (s/veh) 28.6 C

2010 HCM Delay (s/veh) 30.3 C



2010 HCM Delay (s/veh) 36.2 D

2010 HCM Delay (s/veh) 29.1 C

2010 HCM Delay (s/veh) 30.5 C



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 37 & 38

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

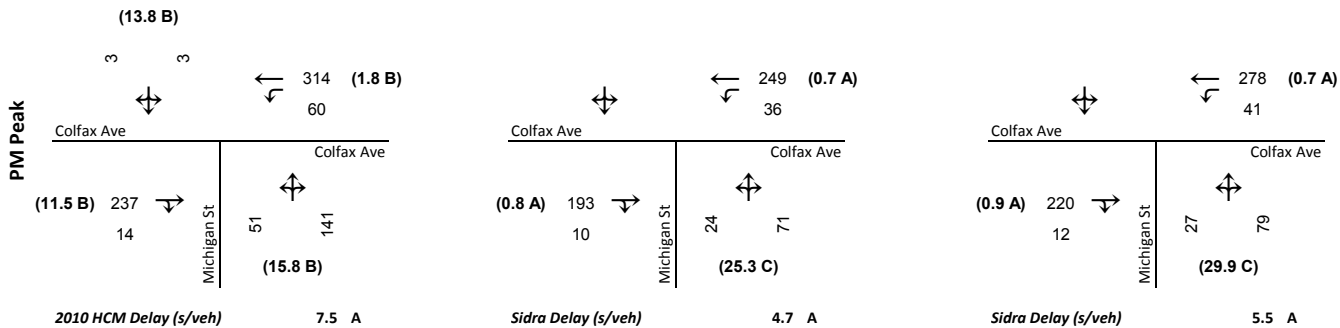
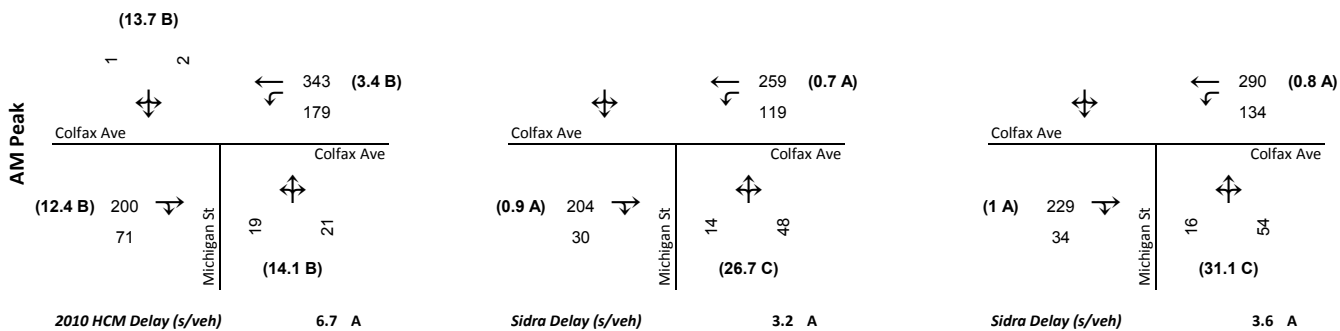
39: Michigan St & Colfax Ave



2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations

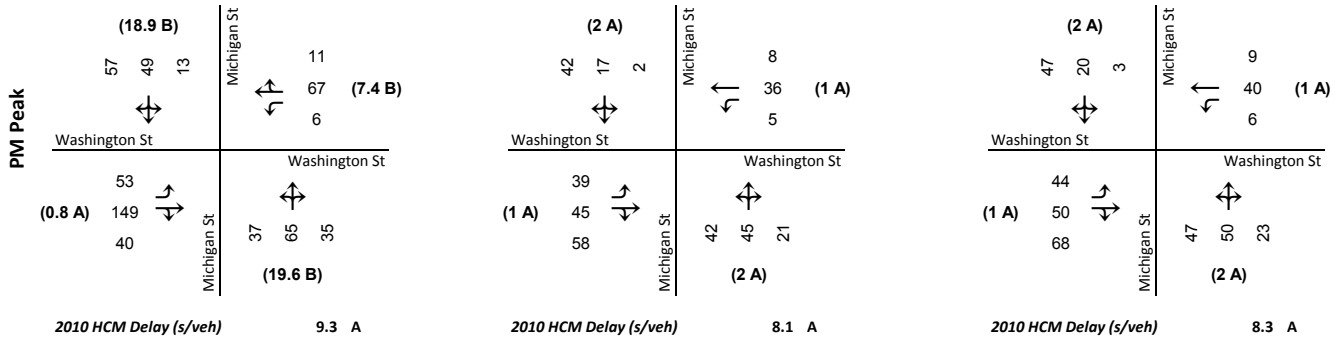
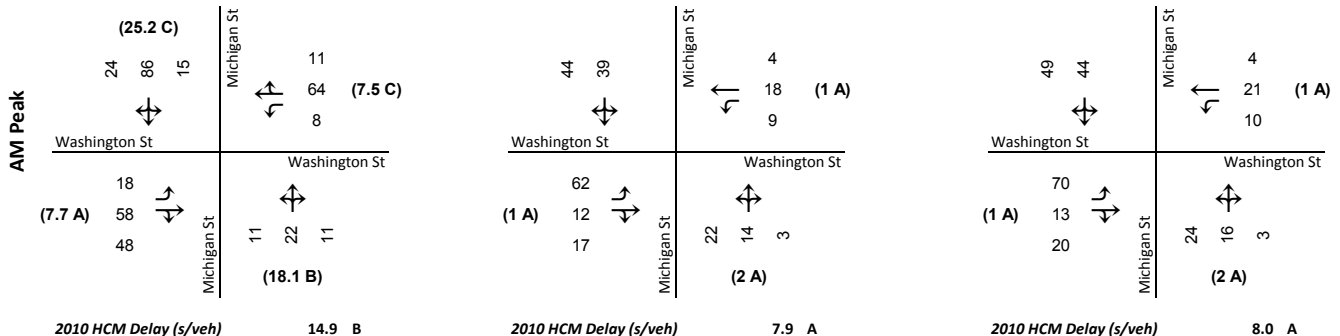


40: Michigan St & Washington St

2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 39 & 40

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

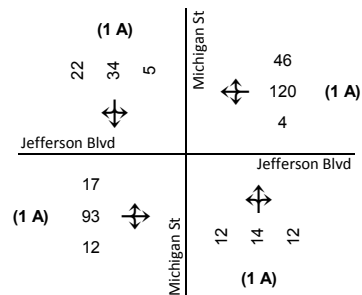
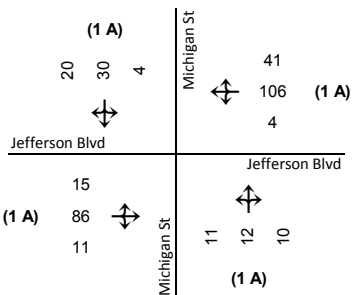
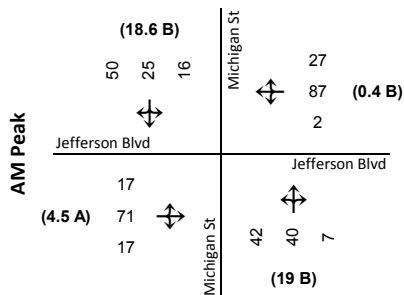
41: Michigan St & Jefferson Blvd



2014 One-Way Operations

2014 Two-Way Operations

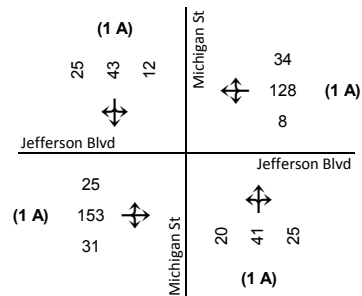
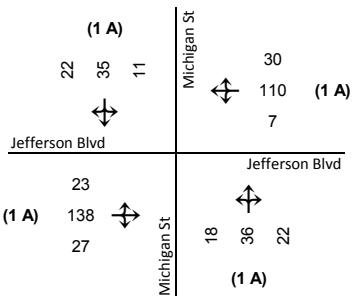
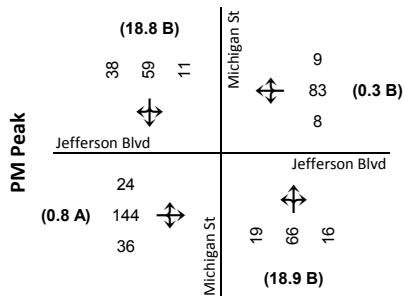
2038 Two-Way Operations



2010 HCM Delay (s/veh) 9.4 A

2010 HCM Delay (s/veh) 8.0 A

2010 HCM Delay (s/veh) 8.2 A



2010 HCM Delay (s/veh) 7.6 A

2010 HCM Delay (s/veh) 8.7 A

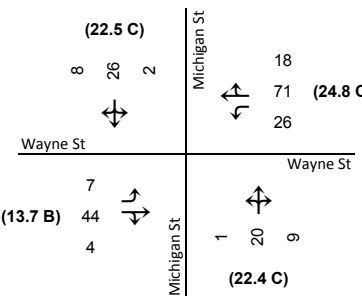
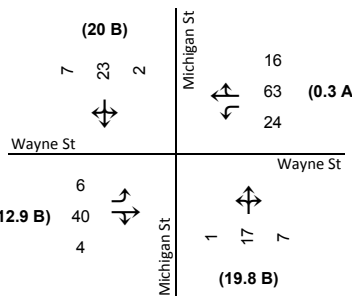
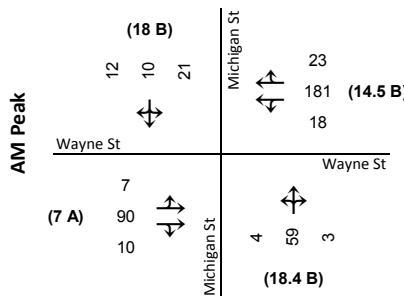
2010 HCM Delay (s/veh) 9.0 A

42: Michigan St & Wayne St

2014 One-Way Operations

2014 Two-Way Operations

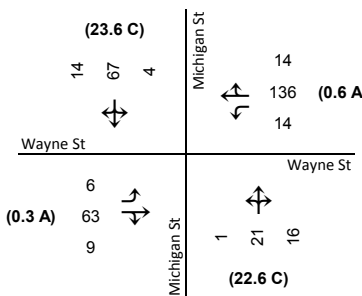
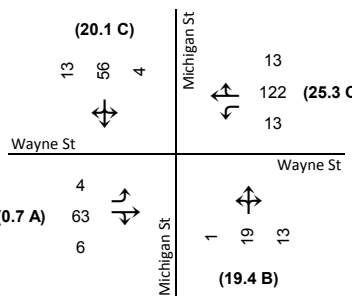
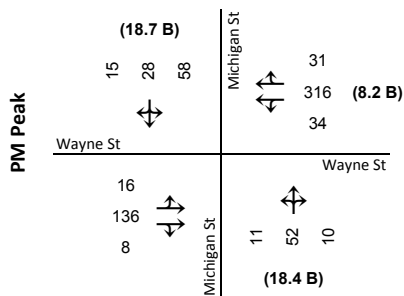
2038 Two-Way Operations



2010 HCM Delay (s/veh) 13.6 B

2010 HCM Delay (s/veh) 8.7 A

2010 HCM Delay (s/veh) 21.6 C



2010 HCM Delay (s/veh) 8.8 A

2010 HCM Delay (s/veh) 18.1 B

2010 HCM Delay (s/veh) 8.2 A



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 41 & 42

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

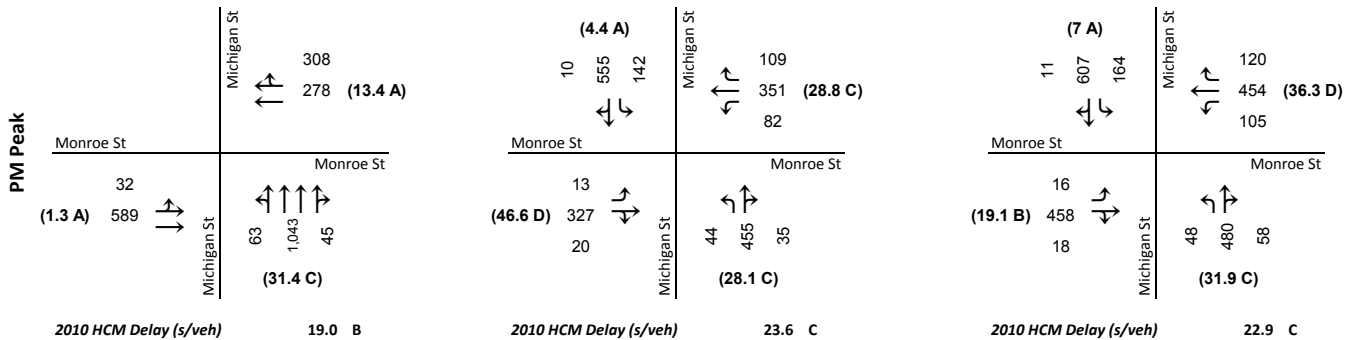
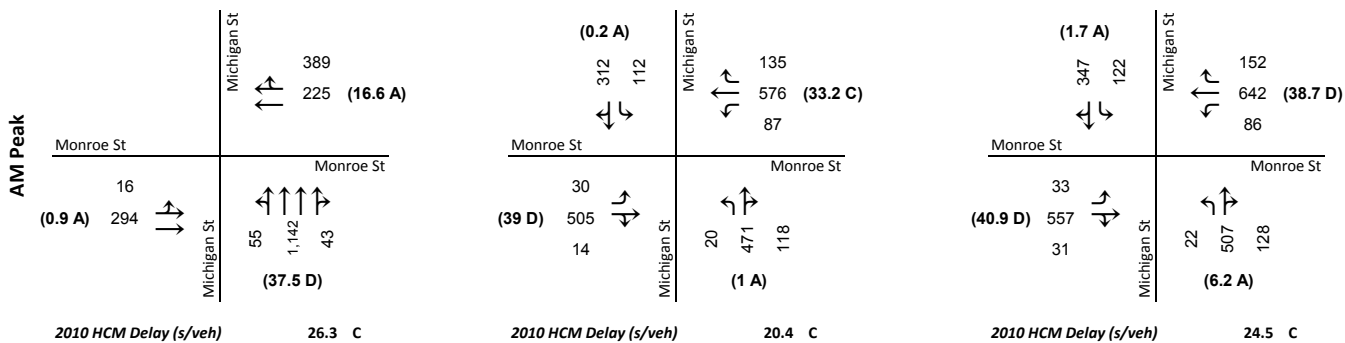
43: Michigan St & Monroe St



2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations

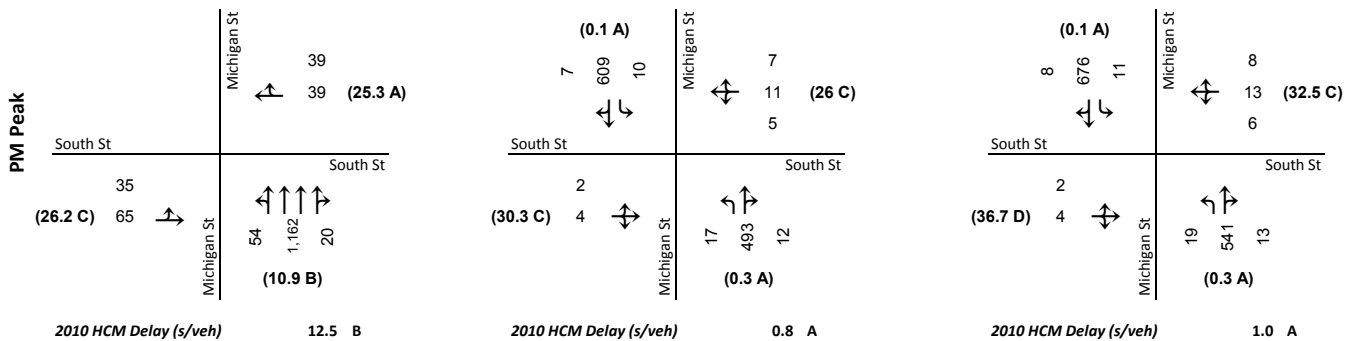
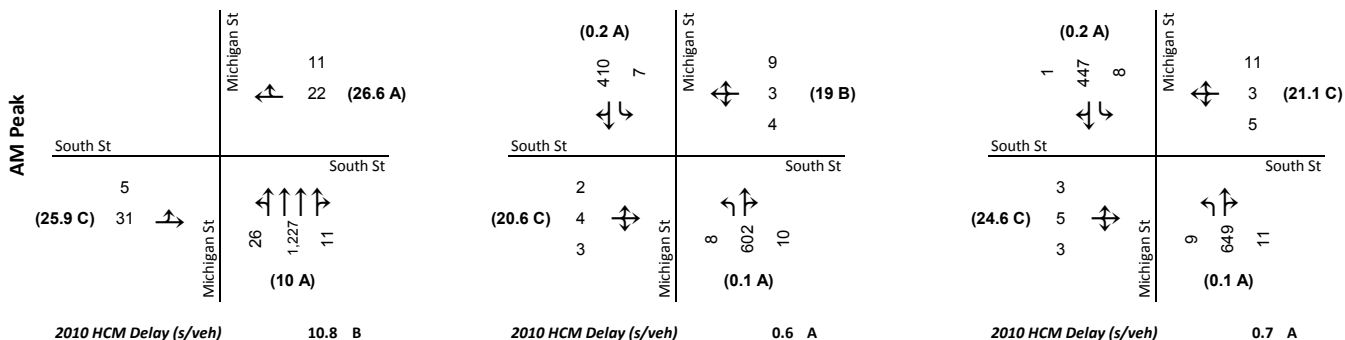


44: Michigan St & South St

2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations



Legend

- ↑↑ stop bar geometry
- ↑↑↑↑ volumes (veh)
- ↑↑↑↑ (left, through, right)
- (55) approach delay (s / veh)

Intersection 43 & 44

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

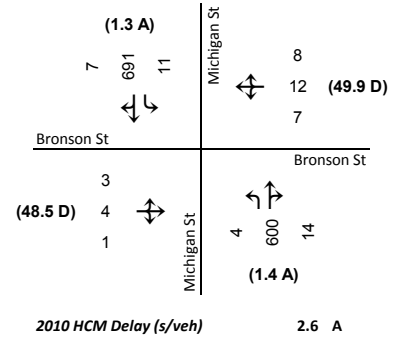
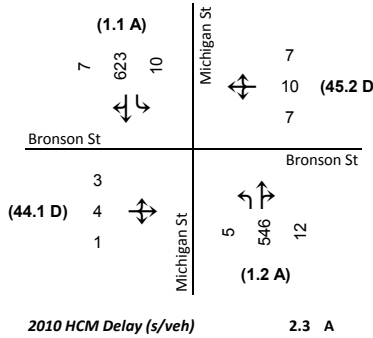
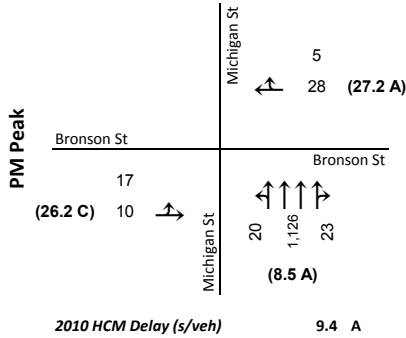
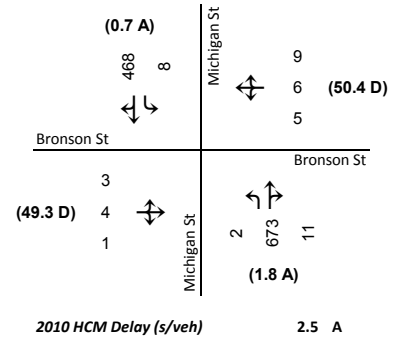
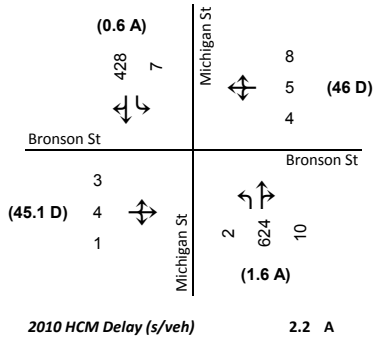
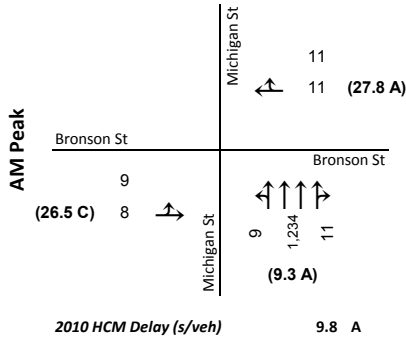
45: Michigan St & Bronson St



2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations

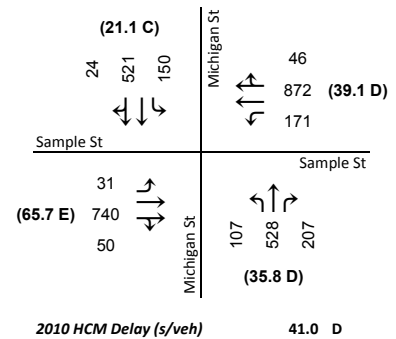
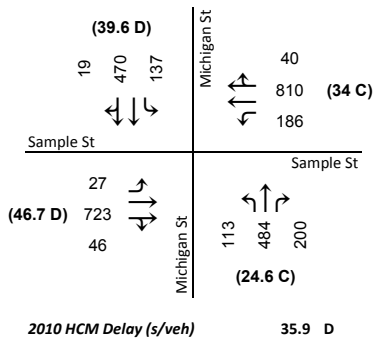
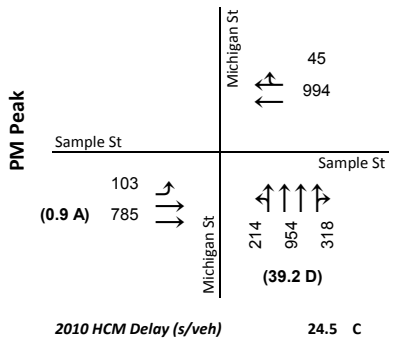
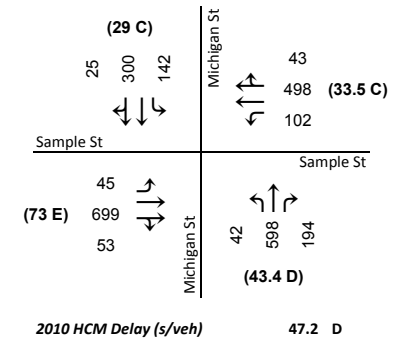
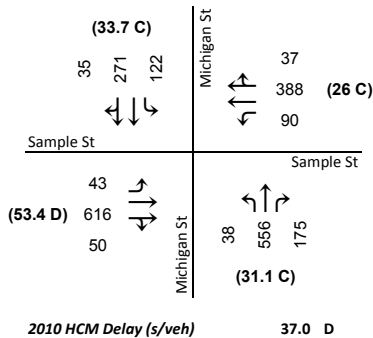
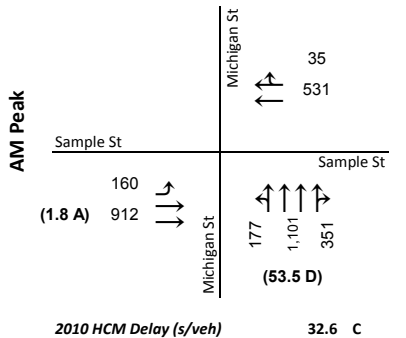


46: Michigan St & Sample St

2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 45 & 46

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

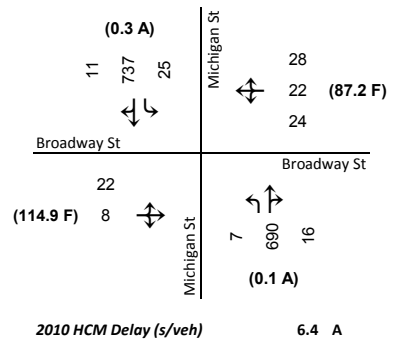
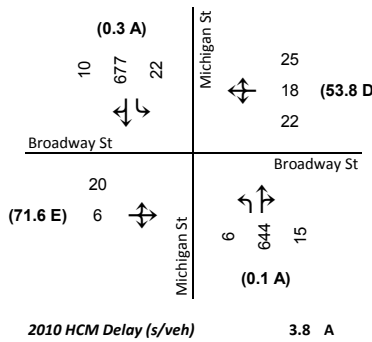
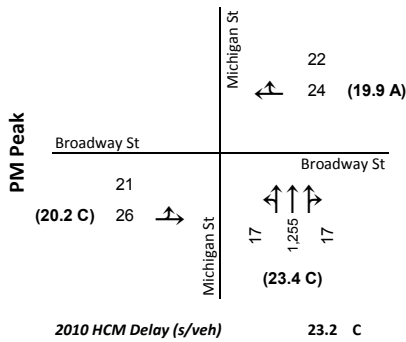
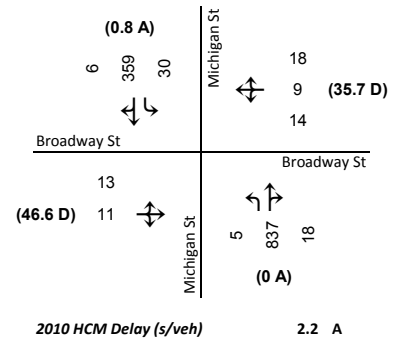
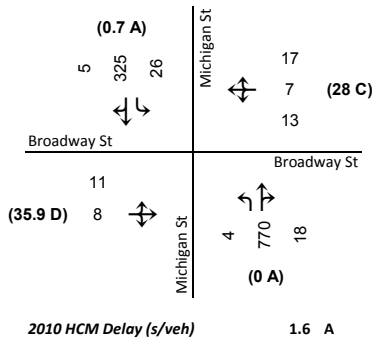
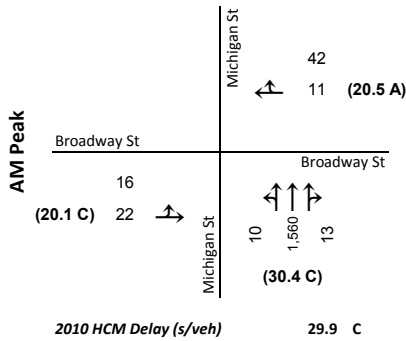
47: Michigan St & Broadway St



2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations

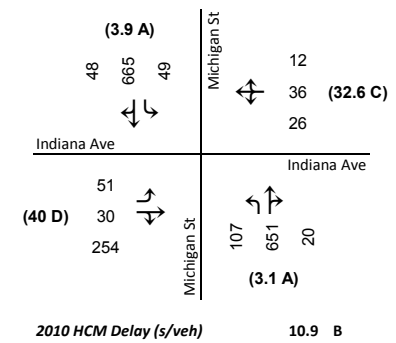
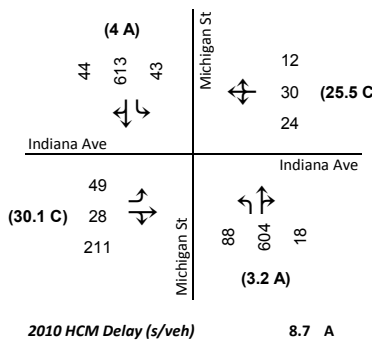
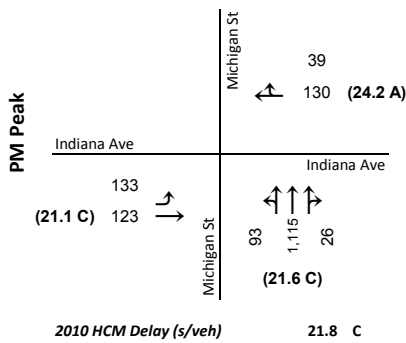
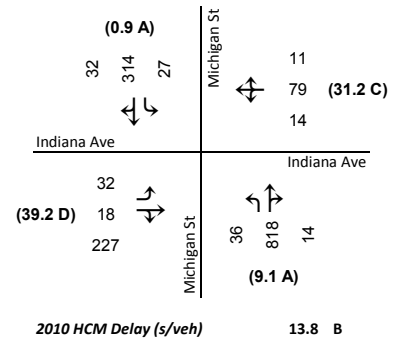
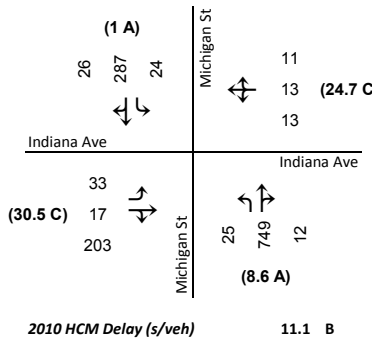
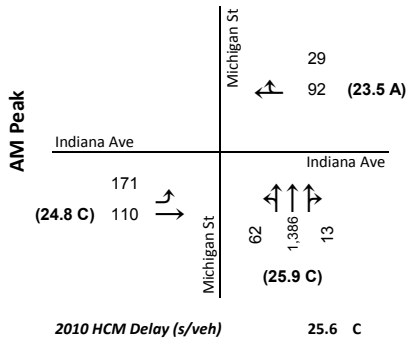


48: Michigan St & Indiana Ave

2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations



Legend

- stop bar geometry
- volumes (veh)
- approach delay (s / veh)

Intersection 47 & 48

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

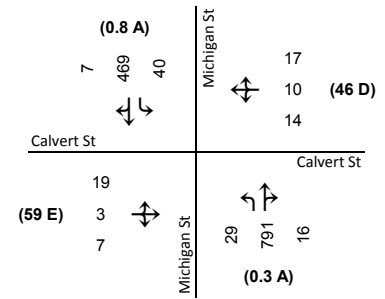
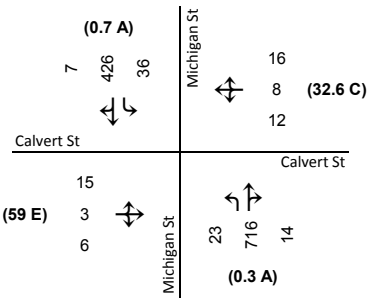
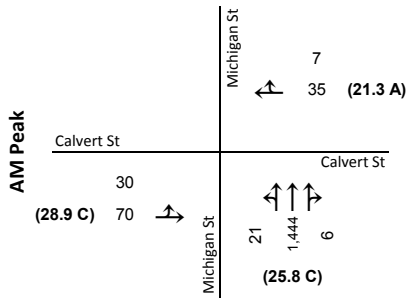
49: Michigan St & Calvert St



2014 One-Way Operations

2014 Two-Way Operations

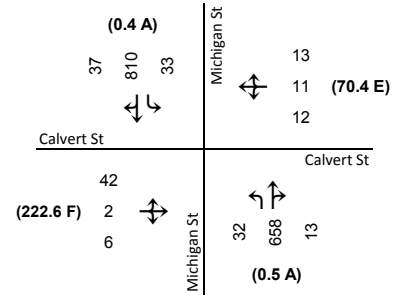
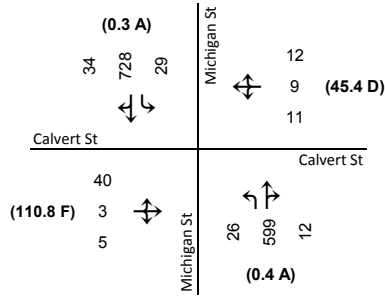
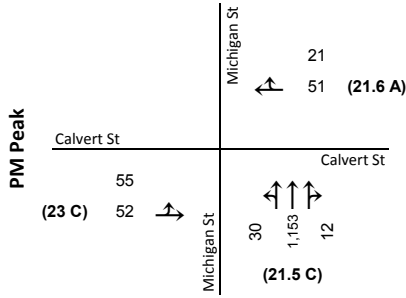
2038 Two-Way Operations



2010 HCM Delay (s/veh) 25.9 C

2010 HCM Delay (s/veh) 2.1 A

2010 HCM Delay (s/veh) 3.0 A



2010 HCM Delay (s/veh) 21.6 C

2010 HCM Delay (s/veh) 4.8 A

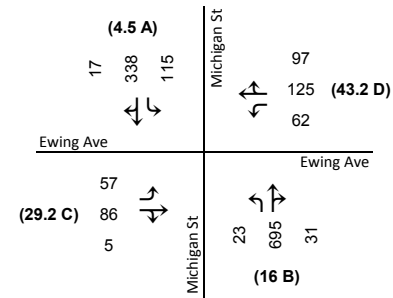
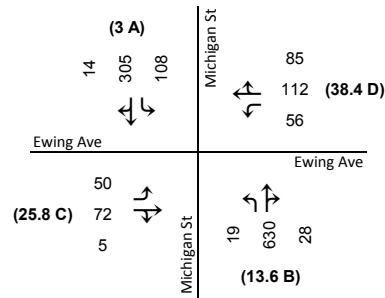
2010 HCM Delay (s/veh) 8.6 A

50: Michigan St & Ewing Ave

2014 One-Way Operations

2014 Two-Way Operations

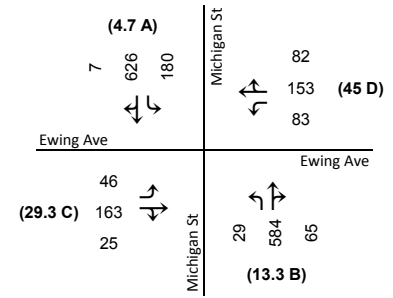
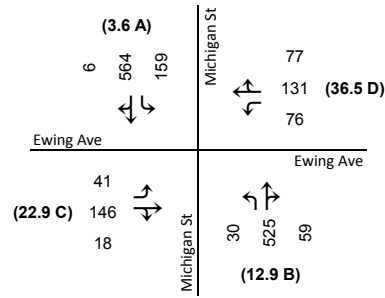
2038 Two-Way Operations



2010 HCM Delay (s/veh) 35.6 D

2010 HCM Delay (s/veh) 15.8 B

2010 HCM Delay (s/veh) 18.6 B



2010 HCM Delay (s/veh) 26.0 C

2010 HCM Delay (s/veh) 14.0 B

2010 HCM Delay (s/veh) 16.6 B



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 49 & 50

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

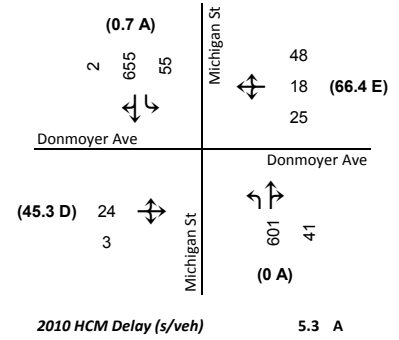
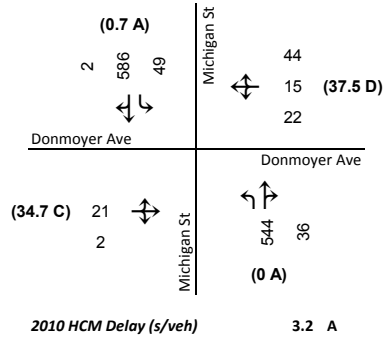
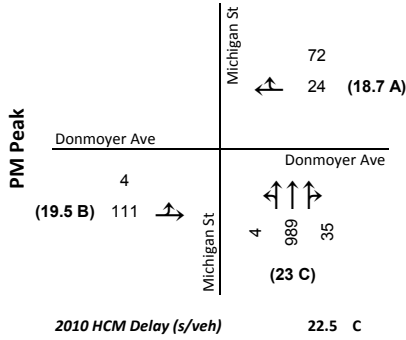
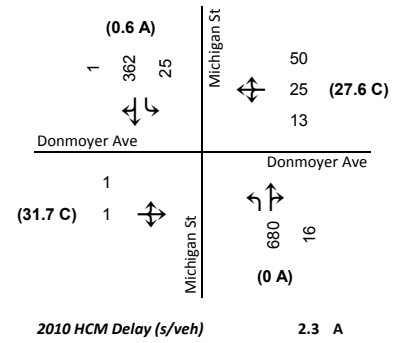
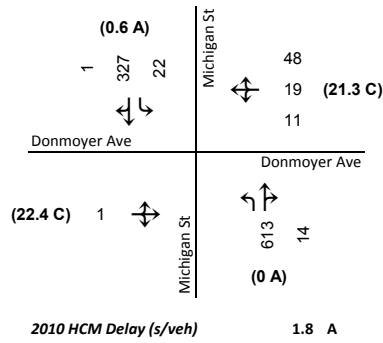
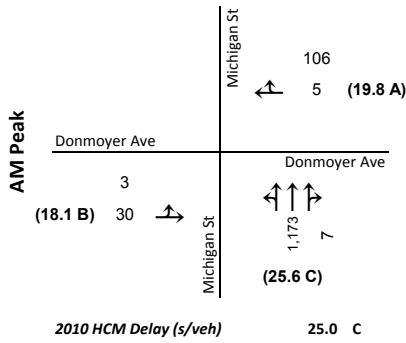
51: Michigan St & Donmoyer Ave



2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations

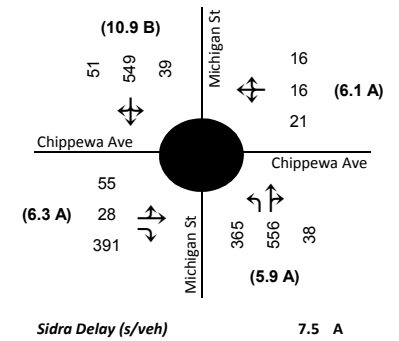
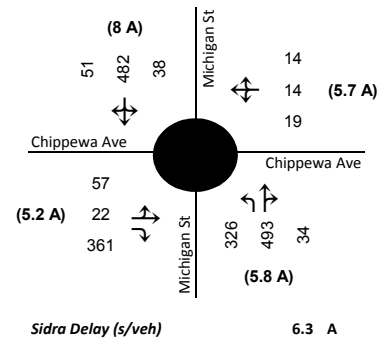
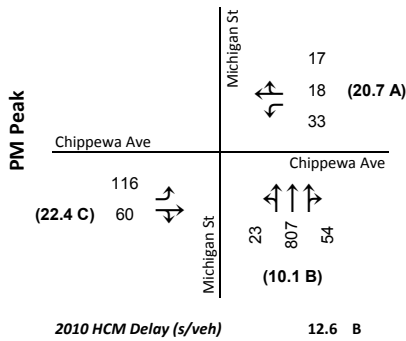
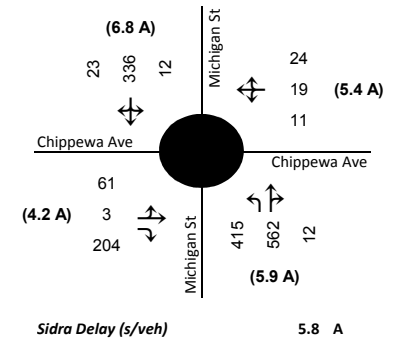
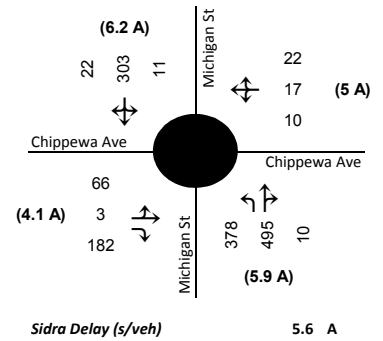
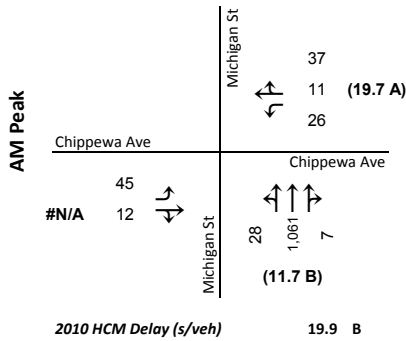


52: Michigan St & Chippewa Ave

2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 51 & 52

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

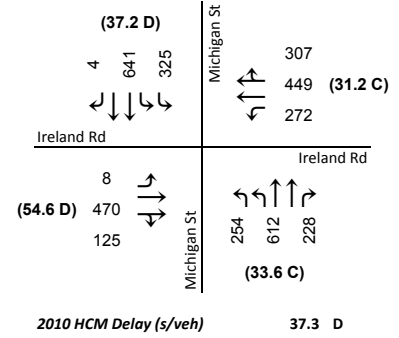
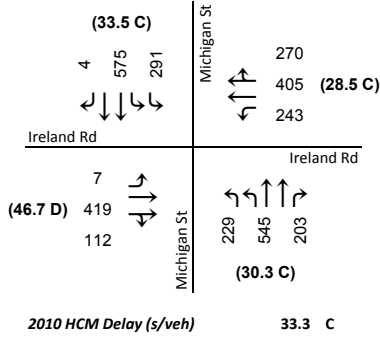
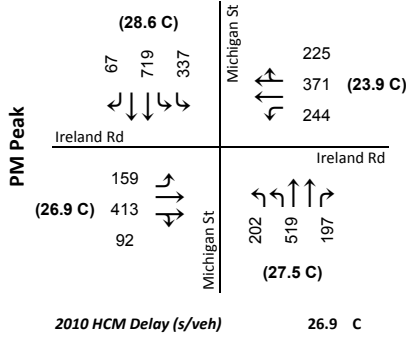
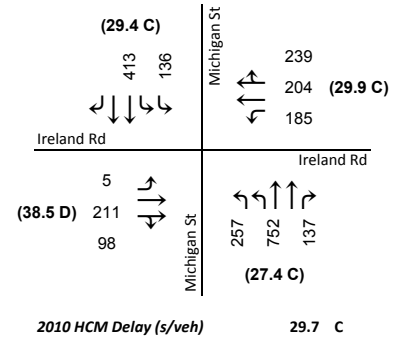
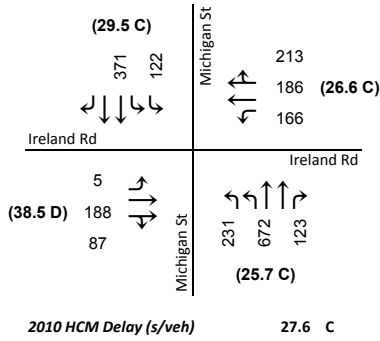
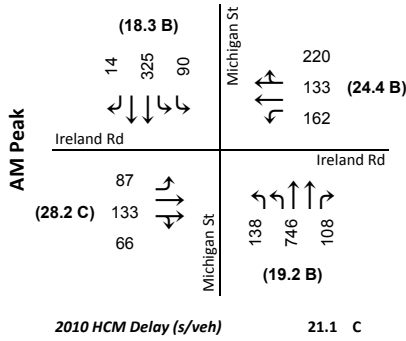
53: Michigan St & Ireland Rd



2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations

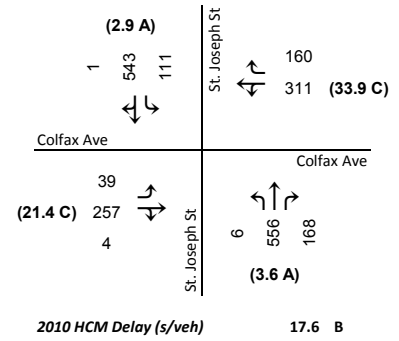
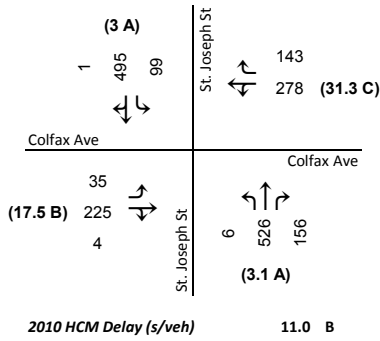
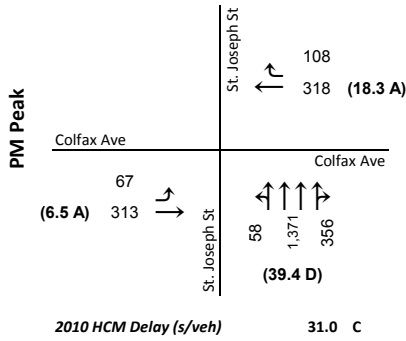
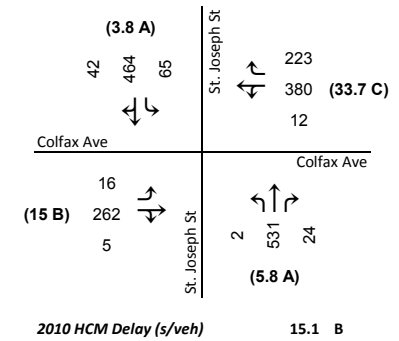
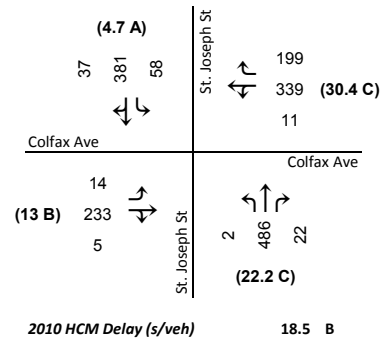
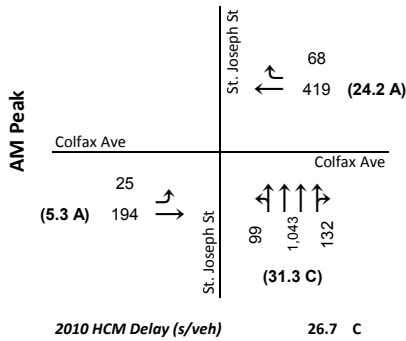


54: St. Joseph St & Colfax Ave

2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations



Legend

↑ ↓ stop bar geometry

63 75 21 volumes (veh)

(55) [left, through, right]

↑ ↓ approach delay (s / veh)

Intersection 53 & 54

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

55: St. Joseph St & Washington St

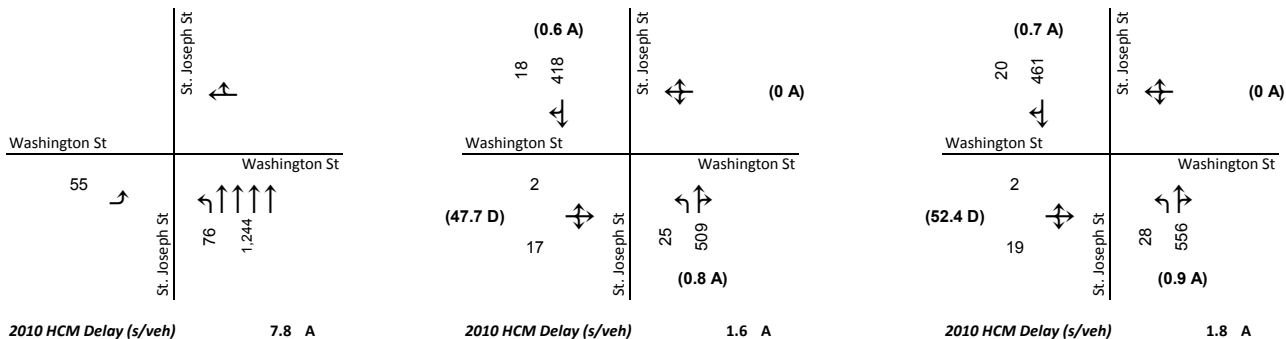


2014 One-Way Operations

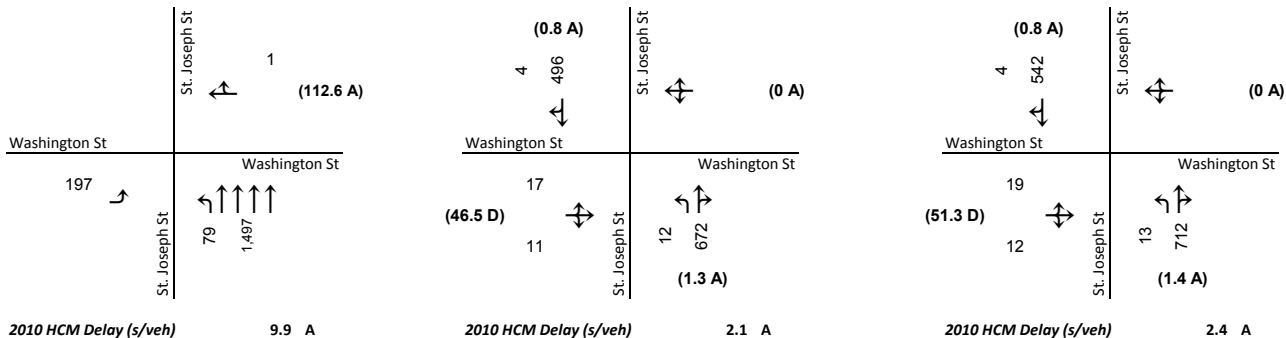
2014 Two-Way Operations

2038 Two-Way Operations

AM Peak



PM Peak



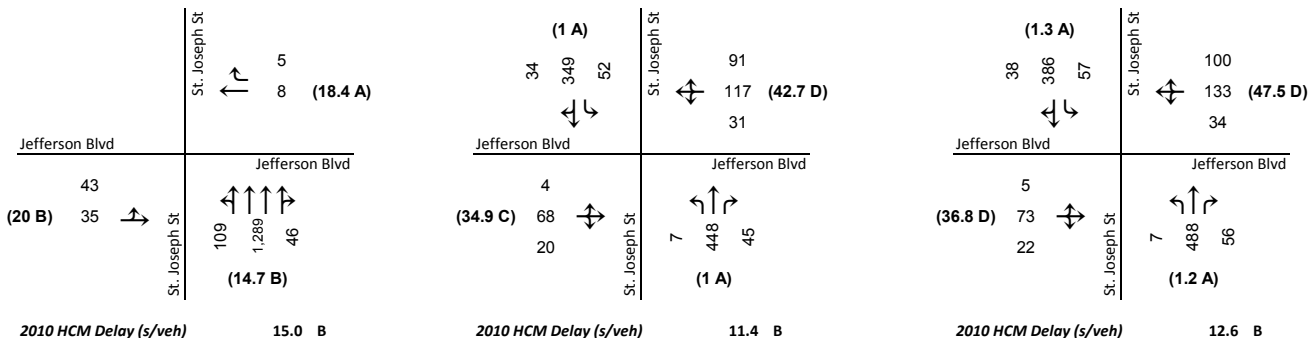
56: St. Joseph St & Jefferson Blvd

2014 One-Way Operations

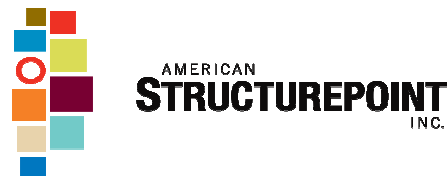
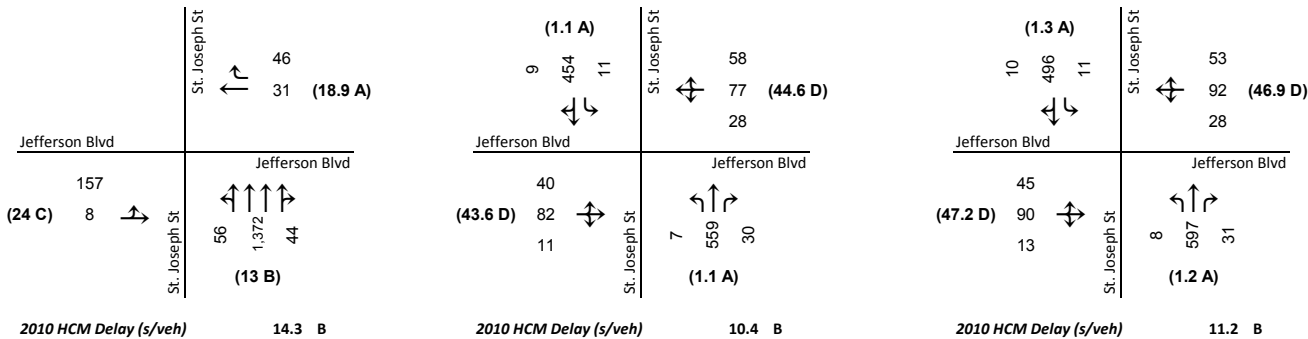
2014 Two-Way Operations

2038 Two-Way Operations

AM Peak



PM Peak



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 55 & 56

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

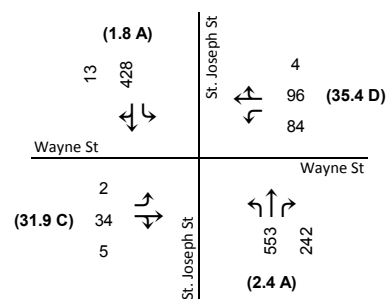
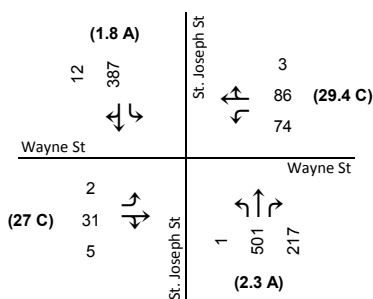
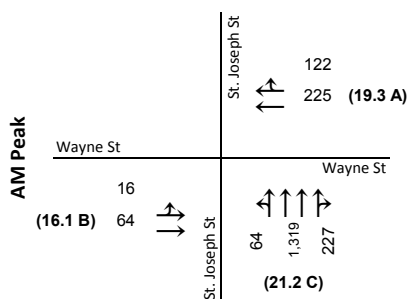
57: St. Joseph St & Wayne St



2014 One-Way Operations

2014 Two-Way Operations

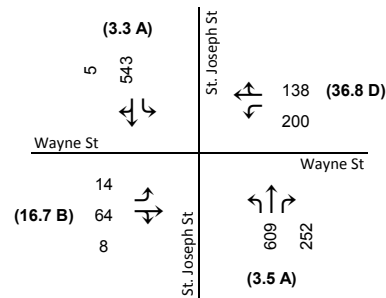
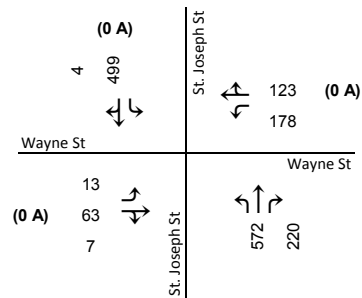
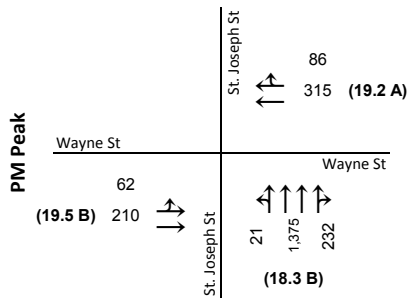
2038 Two-Way Operations



2010 HCM Delay (s/veh) 20.6 C

2010 HCM Delay (s/veh) 6.2 A

2010 HCM Delay (s/veh) 7.2 A



2010 HCM Delay (s/veh) 18.6 B

2010 HCM Delay (s/veh) 0.0 A

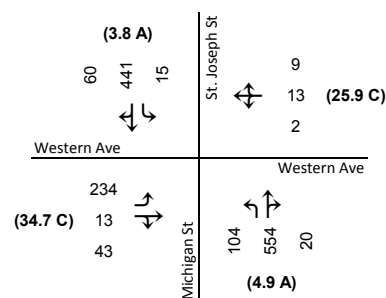
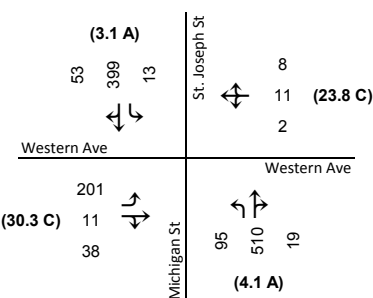
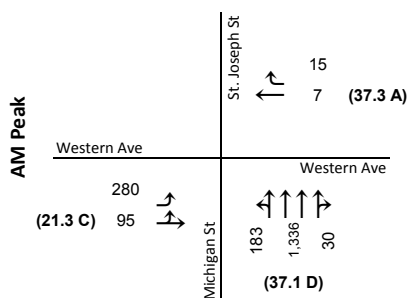
2010 HCM Delay (s/veh) 10.2 B

58: Michigan St/St. Joseph St & Western Ave

2014 One-Way Operations

2014 Two-Way Operations

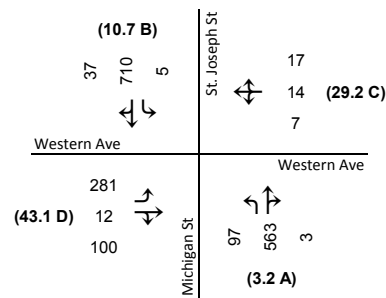
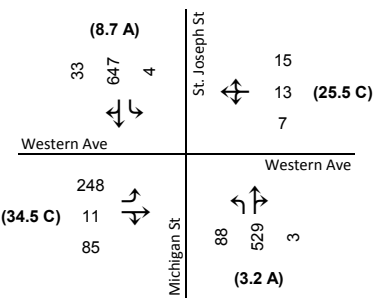
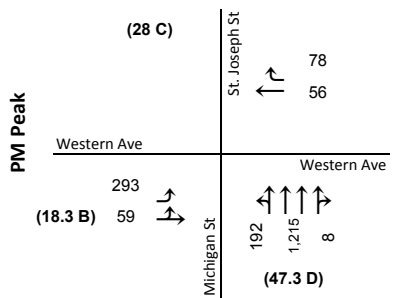
2038 Two-Way Operations



2010 HCM Delay (s/veh) 33.8 C

2010 HCM Delay (s/veh) 8.9 A

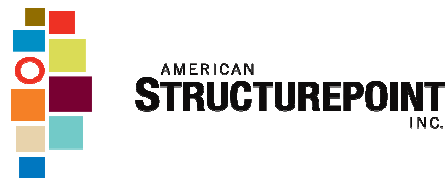
2010 HCM Delay (s/veh) 10.6 B



2010 HCM Delay (s/veh) 26.8 C

2010 HCM Delay (s/veh) 12.3 B

2010 HCM Delay (s/veh) 15.3 B



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 57 & 58

Traffic Operations Summary

South Bend Downtown Two-Way Conversion

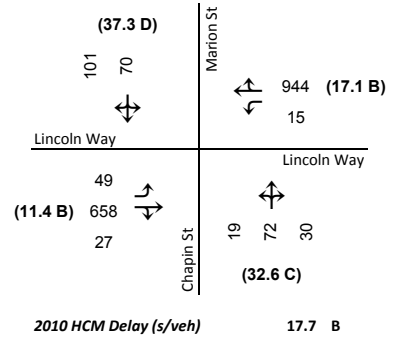
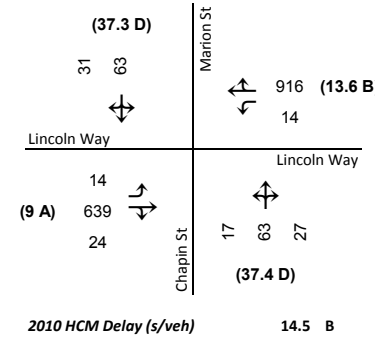
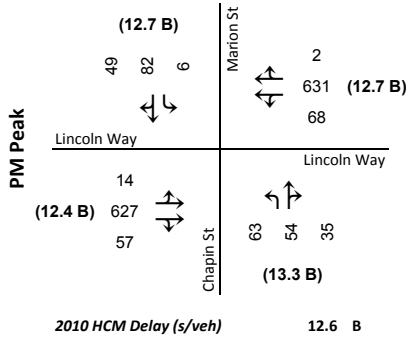
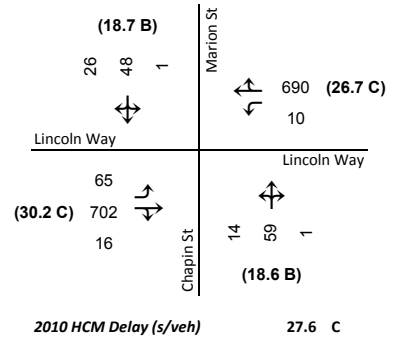
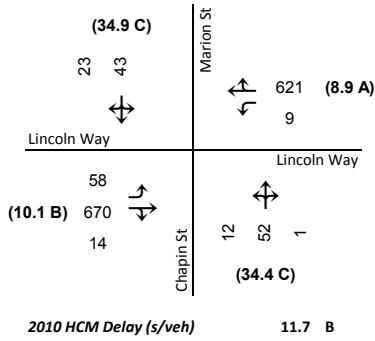
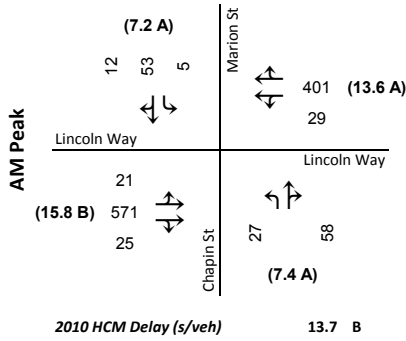
59: Chapin St & Lincoln Way & Marion St



2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations

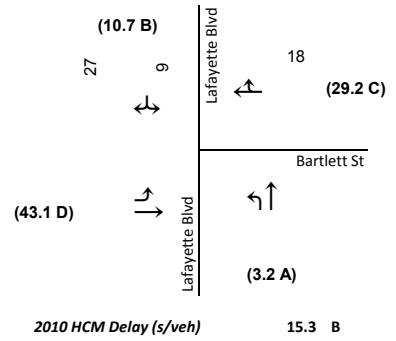
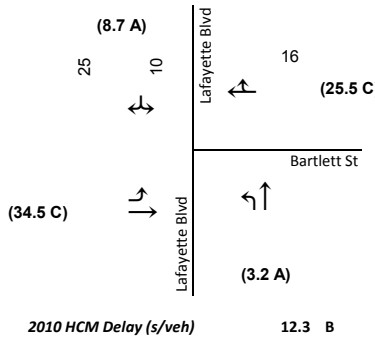
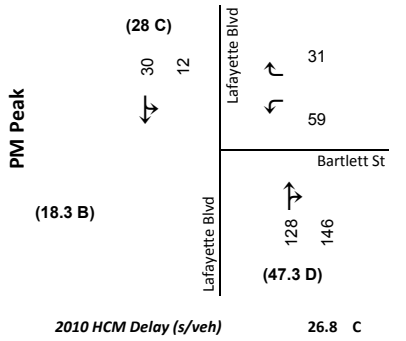
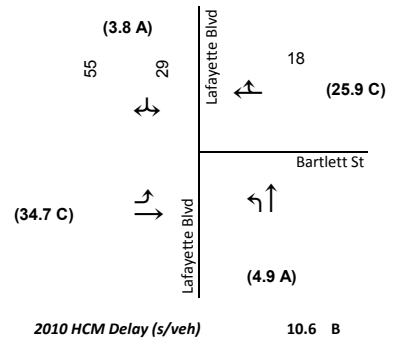
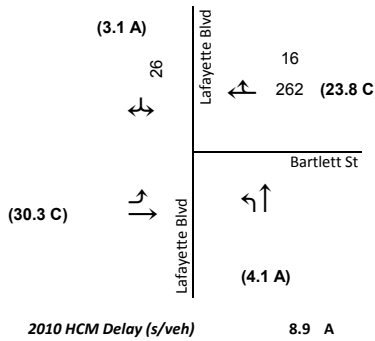
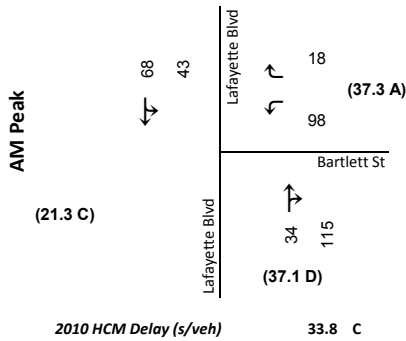


60: Lafayette Blvd & Bartlett St

2014 One-Way Operations

2014 Two-Way Operations

2038 Two-Way Operations



Legend

- stop bar geometry
- volumes (veh)
- [left, through, right]
- approach delay (s / veh)

Intersection 59

Traffic Operations Summary

South Bend Downtown Two-Way Conversion