

Riversbend Development TIA ***Suffolk, Virginia***

Technical Appendix

Prepared for
LPS, Inc.

June 2025

Prepared by



Project #: 35331.01

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A Site Plan

Riversbend

Conceptual Master Plan

Suffolk, Virginia
 March 31, 2025 - REV 6.10.25

SITE DATA:

Tax Map #s: 25-45A, 26E*F*G*PT*J, 25*45E

Current Zoning: B-2
Proposed Zoning: B-2 and RU-18
 Total Site Area: +/-88.8 ac.
 Area to Remain B-2: +/- 15.3 ac.

Proposed RU-18 Area: +/- 73.5 ac.
 Critical Area: +/-35.9 ac.
 Net Site Area: +/-37.6 ac.

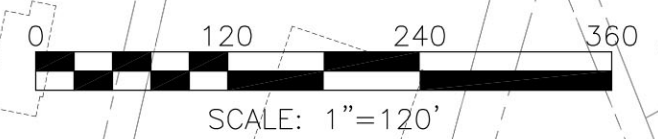
TABULATION:

RU-18 Development:

4 Story Condo Active Adult (Mosaic):	168 units
Parking Provided:	296 space or 1.7 per unit
4 Story Back to back Towns (Romeo & Juliet):	200 units
3 Story Townhomes Front Load (20x42'):	75 units
3 Story Townhomes Rear Load(20x42'):	54 units
Total Units Provided:	497 units
Net Density:	12.8 units/acre

Notes:

1. No 1 bedroom units are proposed.
2. Permits shall be pulled to remove any AST/UST that may be on-site through the Fire Marshal's Office.



LPS LAND PLANNING SOLUTIONS
 5857 HARBOUR VIEW BLVD. STE. 202
 SUFFOLK VA. 23435-2657
 O 757.935.9014 F 757.935.9015
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O:\Projects\NVA\RYH031 - Prelim\Code\Preim\RYH031 - Rezoning Master3 - 5JUNE25.dwg, Plotted By: Eric-PC, Plotted: Jun 12, 2025 - 9:20am

B Turning Movement Counts

Data Collection Group

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File Name : Godwin and 58 EB Ramp

Site Code :

Start Date : 3/29/2022

Page No : 1

Groups Printed- Passenger Veh - Trucks

Start Time	Godwin Blvd From North				Godwin Blvd From South				Rte 58 EB Off / On Ramp From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
07:00 AM	198	75	0	273	38	64	0	102	6	0	76	82	457
07:15 AM	208	111	0	319	34	79	0	113	10	0	75	85	517
07:30 AM	206	142	0	348	50	79	0	129	8	0	79	87	564
07:45 AM	172	156	0	328	43	122	0	165	13	0	113	126	619
Total	784	484	0	1268	165	344	0	509	37	0	343	380	2157
08:00 AM	193	168	0	361	48	123	0	171	14	0	93	107	639
08:15 AM	180	174	0	354	49	120	0	169	8	0	72	80	603
08:30 AM	131	146	0	277	38	94	0	132	10	0	77	87	496
08:45 AM	100	200	0	300	37	119	0	156	18	0	78	96	552
Total	604	688	0	1292	172	456	0	628	50	0	320	370	2290
04:00 PM	180	248	0	428	46	177	0	223	9	0	51	60	711
04:15 PM	153	264	0	417	55	145	0	200	7	0	51	58	675
04:30 PM	181	238	0	419	52	149	0	201	9	0	85	94	714
04:45 PM	155	229	0	384	56	199	0	255	5	0	76	81	720
Total	669	979	0	1648	209	670	0	879	30	0	263	293	2820
05:00 PM	192	208	0	400	59	183	0	242	9	0	79	88	730
05:15 PM	147	195	0	342	54	178	0	232	6	0	74	80	654
05:30 PM	149	240	0	389	65	181	0	246	4	0	57	61	696
05:45 PM	160	186	0	346	56	180	0	236	3	0	72	75	657
Total	648	829	0	1477	234	722	0	956	22	0	282	304	2737
Grand Total	2705	2980	0	5685	780	2192	0	2972	139	0	1208	1347	10004
Apprch %	47.6	52.4	0		26.2	73.8	0		10.3	0	89.7		
Total %	27	29.8	0	56.8	7.8	21.9	0	29.7	1.4	0	12.1	13.5	
Passenger Veh	2621	2921	0	5542	765	2134	0	2899	136	0	1165	1301	9742
% Passenger Veh	96.9	98	0	97.5	98.1	97.4	0	97.5	97.8	0	96.4	96.6	97.4
Trucks	84	59	0	143	15	58	0	73	3	0	43	46	262
% Trucks	3.1	2	0	2.5	1.9	2.6	0	2.5	2.2	0	3.6	3.4	2.6

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Start Time	Godwin Blvd From North				Godwin Blvd From South				Rte 58 EB Off / On Ramp From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	206	142	0	348	50	79	0	129	8	0	79	87	564
07:45 AM	172	156	0	328	43	122	0	165	13	0	113	126	619
08:00 AM	193	168	0	361	48	123	0	171	14	0	93	107	639
08:15 AM	180	174	0	354	49	120	0	169	8	0	72	80	603
Total Volume	751	640	0	1391	190	444	0	634	43	0	357	400	2425
% App. Total	54	46	0		30	70	0		10.8	0	89.2		
PHF	.911	.920	.000	.963	.950	.902	.000	.927	.768	.000	.790	.794	.949
Passenger Veh	730	621	0	1351	186	429	0	615	43	0	341	384	2350
% Passenger Veh	97.2	97.0	0	97.1	97.9	96.6	0	97.0	100	0	95.5	96.0	96.9
Trucks	21	19	0	40	4	15	0	19	0	0	16	16	75
% Trucks	2.8	3.0	0	2.9	2.1	3.4	0	3.0	0	0	4.5	4.0	3.1

Data Collection Group

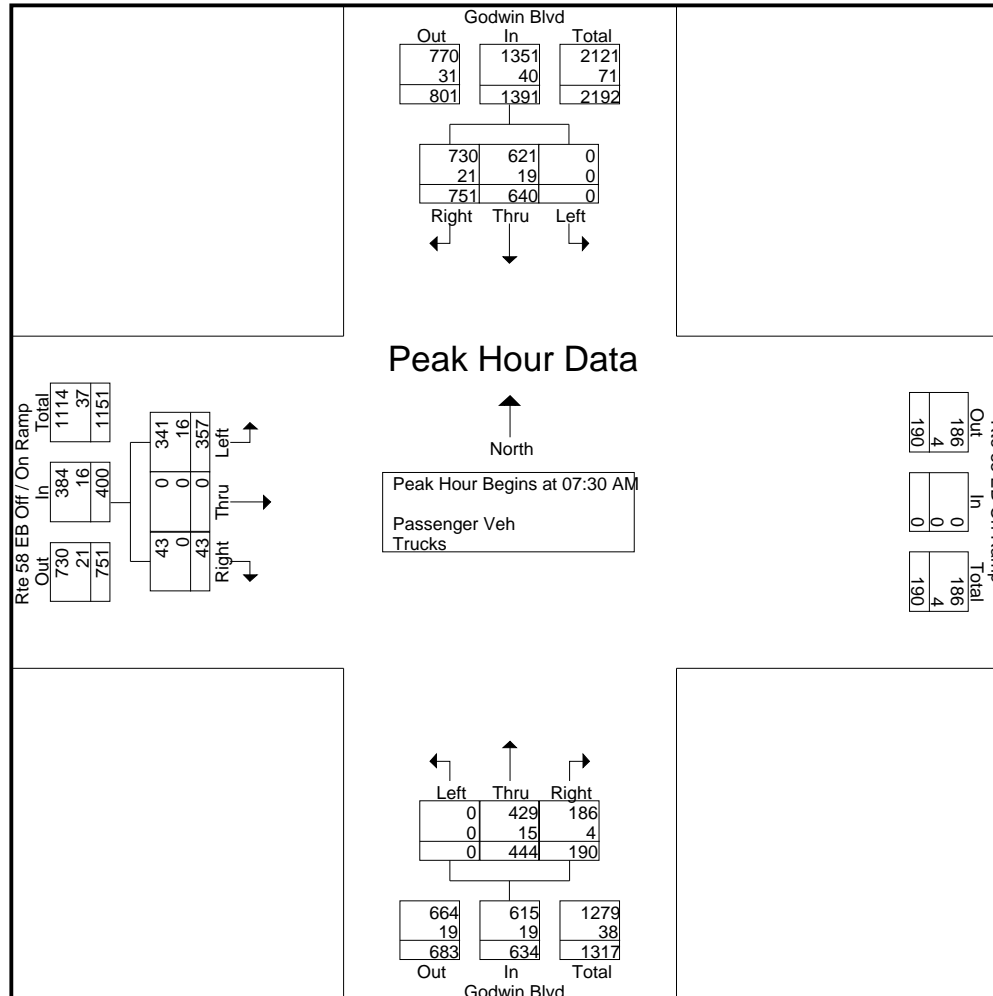
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Start Time	Godwin Blvd From North				Godwin Blvd From South				Rte 58 EB Off / On Ramp From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	153	264	0	417	55	145	0	200	7	0	51	58	675
04:30 PM	181	238	0	419	52	149	0	201	9	0	85	94	714
04:45 PM	155	229	0	384	56	199	0	255	5	0	76	81	720
05:00 PM	192	208	0	400	59	183	0	242	9	0	79	88	730
Total Volume	681	939	0	1620	222	676	0	898	30	0	291	321	2839
% App. Total	42	58	0		24.7	75.3	0		9.3	0	90.7		
PHF	.887	.889	.000	.967	.941	.849	.000	.880	.833	.000	.856	.854	.972
Passenger Veh	669	924	0	1593	217	660	0	877	29	0	284	313	2783
% Passenger Veh	98.2	98.4	0	98.3	97.7	97.6	0	97.7	96.7	0	97.6	97.5	98.0
Trucks	12	15	0	27	5	16	0	21	1	0	7	8	56
% Trucks	1.8	1.6	0	1.7	2.3	2.4	0	2.3	3.3	0	2.4	2.5	2.0

Data Collection Group

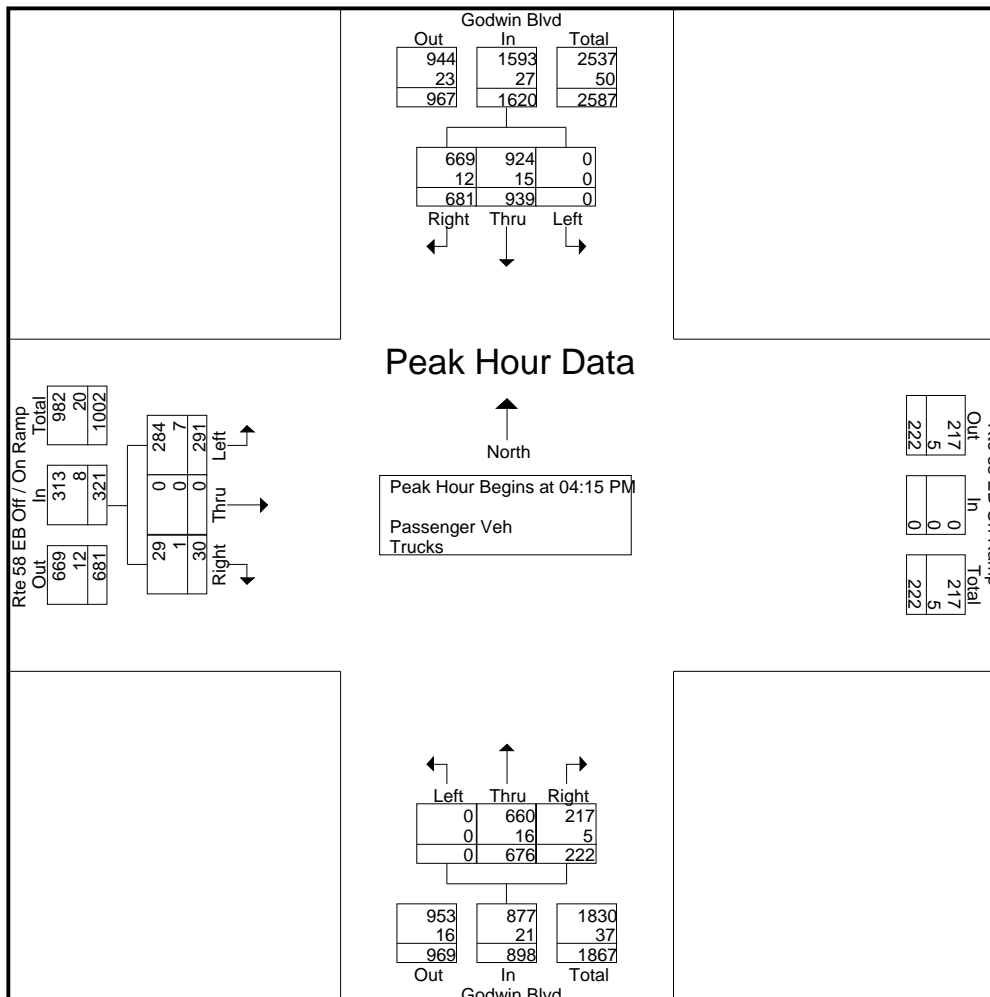
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Data Collection Group

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File Name : Godwin and 58 WB Ramp

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Page No : 1

Groups Printed- Passenger Veh - Trucks

Start Time	Godwin Blvd From North			Rte 58 WB Off Ramp From East				Godwin Blvd From South			Int. Total
	Right	Thru	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	
07:00 AM	69	253	322	124	0	23	147	125	2	127	596
07:15 AM	74	290	364	153	0	26	179	156	0	156	699
07:30 AM	57	309	366	171	0	31	202	157	4	161	729
07:45 AM	52	282	334	237	0	49	286	228	3	231	851
Total	252	1134	1386	685	0	129	814	666	9	675	2875
08:00 AM	62	309	371	186	0	52	238	204	11	215	824
08:15 AM	54	299	353	155	0	42	197	186	2	188	738
08:30 AM	59	247	306	135	0	43	178	172	1	173	657
08:45 AM	56	221	277	128	0	65	193	212	6	218	688
Total	231	1076	1307	604	0	202	806	774	20	794	2907
04:00 PM	102	365	467	217	1	88	306	200	10	210	983
04:15 PM	128	325	453	155	0	74	229	205	8	213	895
04:30 PM	129	356	485	223	0	64	287	227	10	237	1009
04:45 PM	97	320	417	219	0	68	287	257	8	265	969
Total	456	1366	1822	814	1	294	1109	889	36	925	3856
05:00 PM	116	344	460	176	1	54	231	254	9	263	954
05:15 PM	124	285	409	224	0	65	289	236	10	246	944
05:30 PM	126	292	418	184	2	74	260	230	5	235	913
05:45 PM	96	287	383	184	0	54	238	242	7	249	870
Total	462	1208	1670	768	3	247	1018	962	31	993	3681
Grand Total	1401	4784	6185	2871	4	872	3747	3291	96	3387	13319
Apprch %	22.7	77.3		76.6	0.1	23.3		97.2	2.8		
Total %	10.5	35.9	46.4	21.6	0	6.5	28.1	24.7	0.7	25.4	
Passenger Veh	1339	4650	5989	2812	4	856	3672	3182	91	3273	12934
% Passenger Veh	95.6	97.2	96.8	97.9	100	98.2	98	96.7	94.8	96.6	97.1
Trucks	62	134	196	59	0	16	75	109	5	114	385
% Trucks	4.4	2.8	3.2	2.1	0	1.8	2	3.3	5.2	3.4	2.9

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	Right	Thru	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 07:30 AM											
07:30 AM	57	309	366	171	0	31	202	157	4	161	729
07:45 AM	52	282	334	237	0	49	286	228	3	231	851
08:00 AM	62	309	371	186	0	52	238	204	11	215	824
08:15 AM	54	299	353	155	0	42	197	186	2	188	738
Total Volume	225	1199	1424	749	0	174	923	775	20	795	3142
% App. Total	15.8	84.2		81.1	0	18.9		97.5	2.5		
PHF	.907	.970	.960	.790	.000	.837	.807	.850	.455	.860	.923
Passenger Veh	203	1164	1367	723	0	168	891	739	19	758	3016
% Passenger Veh	90.2	97.1	96.0	96.5	0	96.6	96.5	95.4	95.0	95.3	96.0
Trucks	22	35	57	26	0	6	32	36	1	37	126
% Trucks	9.8	2.9	4.0	3.5	0	3.4	3.5	4.6	5.0	4.7	4.0

Data Collection Group

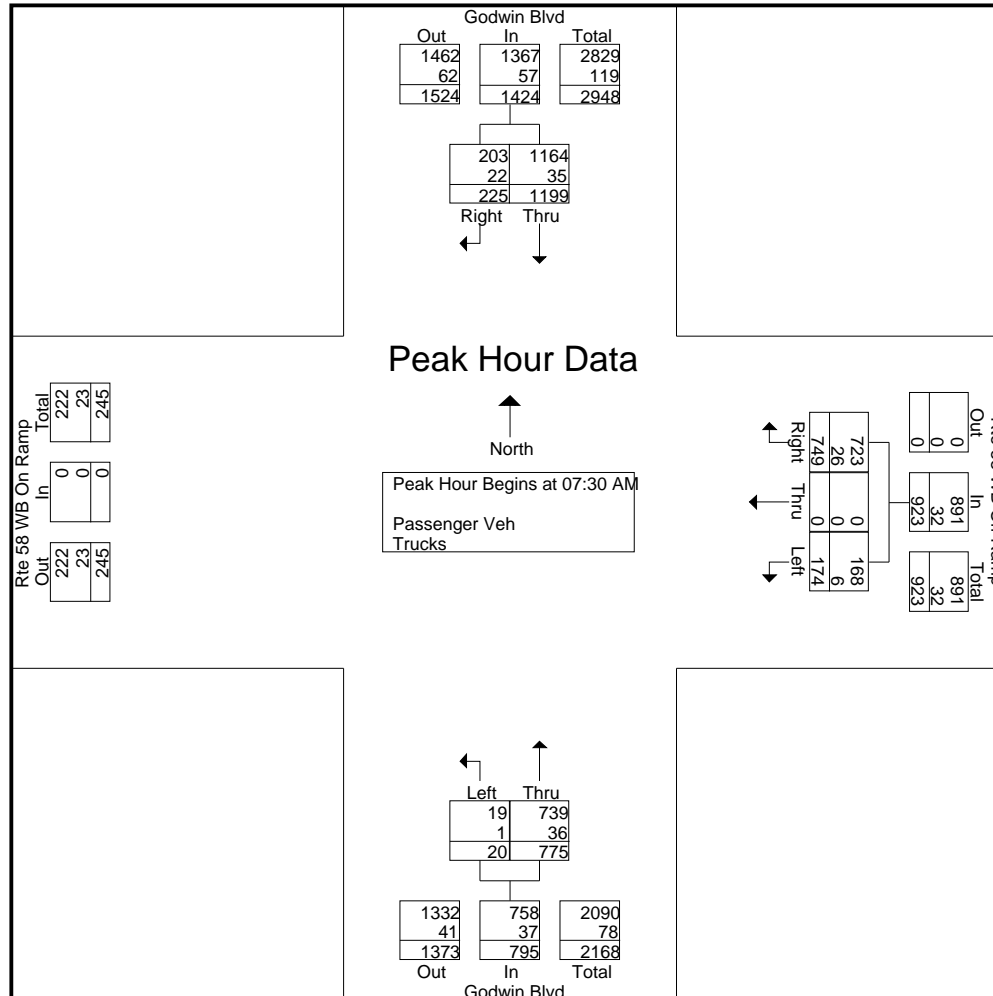
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Start Time	Godwin Blvd From North			Rte 58 WB Off Ramp From East				Godwin Blvd From South			Int. Total
	Right	Thru	App. Total	Right	Thru	Left	App. Total	Thru	Left	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1											
Peak Hour for Entire Intersection Begins at 04:30 PM											
04:30 PM	129	356	485	223	0	64	287	227	10	237	1009
04:45 PM	97	320	417	219	0	68	287	257	8	265	969
05:00 PM	116	344	460	176	1	54	231	254	9	263	954
05:15 PM	124	285	409	224	0	65	289	236	10	246	944
Total Volume	466	1305	1771	842	1	251	1094	974	37	1011	3876
% App. Total	26.3	73.7		77	0.1	22.9		96.3	3.7		
PHF	.903	.916	.913	.940	.250	.923	.946	.947	.925	.954	.960
Passenger Veh	456	1284	1740	829	1	249	1079	953	36	989	3808
% Passenger Veh	97.9	98.4	98.2	98.5	100	99.2	98.6	97.8	97.3	97.8	98.2
Trucks	10	21	31	13	0	2	15	21	1	22	68
% Trucks	2.1	1.6	1.8	1.5	0	0.8	1.4	2.2	2.7	2.2	1.8

Data Collection Group

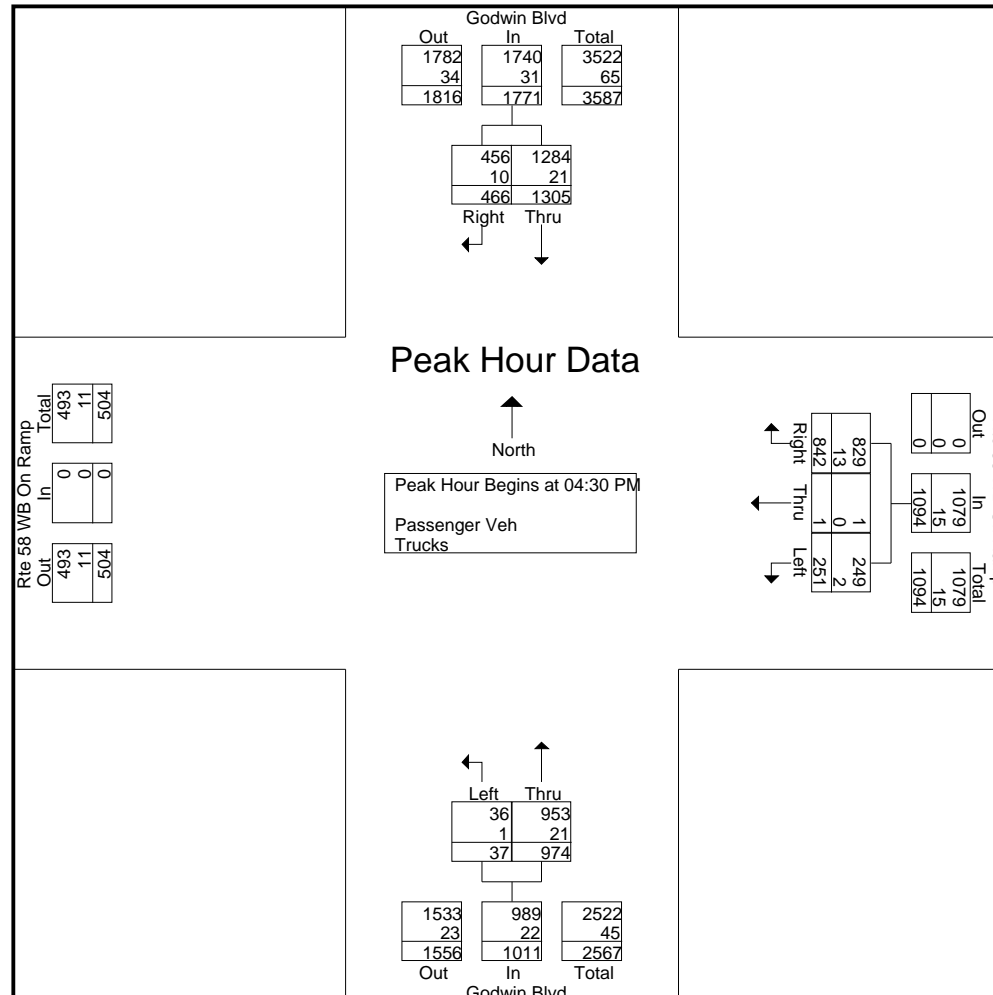
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File Name : Godwin and 58 WB Ramp

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Start Date : 3/29/2022

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Data Collection Group

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File Name : Pruden and Rte 58 WB Ramp Junction

Site Code : 00008005

Start Date : 5/3/2022

Page No : 1

Groups Printed- Passenger Veh - Trucks

Start Time	Rte 58 WB Off Ramp From North				Pruden Blvd From East				Rte 58 WB On Ramp From South				Pruden Blvd From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
07:00 AM	77	0	22	99	0	42	12	54	0	0	0	0	17	196	0	213	366
07:15 AM	90	0	22	112	0	48	7	55	0	0	0	0	13	206	0	219	386
07:30 AM	114	0	13	127	0	67	17	84	0	0	0	0	16	217	0	233	444
07:45 AM	188	2	20	210	0	90	11	101	0	0	0	0	24	214	0	238	549
Total	469	2	77	548	0	247	47	294	0	0	0	0	70	833	0	903	1745
08:00 AM	175	0	11	186	0	86	16	102	0	0	0	0	35	263	0	298	586
08:15 AM	113	0	8	121	0	68	15	83	0	0	0	0	13	197	0	210	414
08:30 AM	107	1	16	124	0	48	12	60	0	0	0	0	16	160	0	176	360
08:45 AM	91	0	14	105	0	41	15	56	0	0	0	0	18	168	0	186	347
Total	486	1	49	536	0	243	58	301	0	0	0	0	82	788	0	870	1707
*** BREAK ***																	
04:00 PM	189	0	11	200	0	110	34	144	0	0	0	0	34	201	0	235	579
04:15 PM	170	1	12	183	0	107	42	149	0	0	0	0	23	153	0	176	508
04:30 PM	174	0	11	185	0	113	47	160	0	0	0	0	30	180	0	210	555
04:45 PM	164	0	5	169	0	97	46	143	0	0	0	0	27	138	0	165	477
Total	697	1	39	737	0	427	169	596	0	0	0	0	114	672	0	786	2119
05:00 PM	187	0	8	195	0	109	64	173	0	0	0	0	36	180	0	216	584
05:15 PM	156	0	13	169	0	112	37	149	0	0	0	0	32	187	0	219	537
05:30 PM	151	0	6	157	0	129	59	188	0	0	0	0	33	186	0	219	564
05:45 PM	141	0	10	151	0	112	32	144	0	0	0	0	22	157	0	179	474
Total	635	0	37	672	0	462	192	654	0	0	0	0	123	710	0	833	2159
Grand Total	2287	4	202	2493	0	1379	466	1845	0	0	0	0	389	3003	0	3392	7730
Apprch %	91.7	0.2	8.1		0	74.7	25.3		0	0	0	0	11.5	88.5	0		
Total %	29.6	0.1	2.6	32.3	0	17.8	6	23.9	0	0	0	0	5	38.8	0	43.9	
Passenger Veh	2025	3	196	2224	0	1291	458	1749	0	0	0	0	326	2733	0	3059	7032
% Passenger Veh	88.5	75	97	89.2	0	93.6	98.3	94.8	0	0	0	0	83.8	91	0	90.2	91
Trucks	262	1	6	269	0	88	8	96	0	0	0	0	63	270	0	333	698
% Trucks	11.5	25	3	10.8	0	6.4	1.7	5.2	0	0	0	0	16.2	9	0	9.8	9

Data Collection Group

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File Name : Pruden and Rte 58 WB Ramp Junction

Site Code : 00008005

Start Date : 5/3/2022

Page No : 2

Start Time	Rte 58 WB Off Ramp From North				Pruden Blvd From East				Rte 58 WB On Ramp From South				Pruden Blvd From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	114	0	13	127	0	67	17	84	0	0	0	0	16	217	0	233	444
07:45 AM	188	2	20	210	0	90	11	101	0	0	0	0	24	214	0	238	549
08:00 AM	175	0	11	186	0	86	16	102	0	0	0	0	35	263	0	298	586
08:15 AM	113	0	8	121	0	68	15	83	0	0	0	0	13	197	0	210	414
Total Volume	590	2	52	644	0	311	59	370	0	0	0	0	88	891	0	979	1993
% App. Total	91.6	0.3	8.1		0	84.1	15.9		0	0	0		9	91	0		
PHF	.785	.250	.650	.767	.000	.864	.868	.907	.000	.000	.000	.000	.629	.847	.000	.821	.850
Passenger Veh	508	2	51	561	0	287	55	342	0	0	0	0	72	801	0	873	1776
% Passenger Veh	86.1	100	98.1	87.1	0	92.3	93.2	92.4	0	0	0	0	81.8	89.9	0	89.2	89.1
Trucks	82	0	1	83	0	24	4	28	0	0	0	0	16	90	0	106	217
% Trucks	13.9	0	1.9	12.9	0	7.7	6.8	7.6	0	0	0	0	18.2	10.1	0	10.8	10.9

Data Collection Group

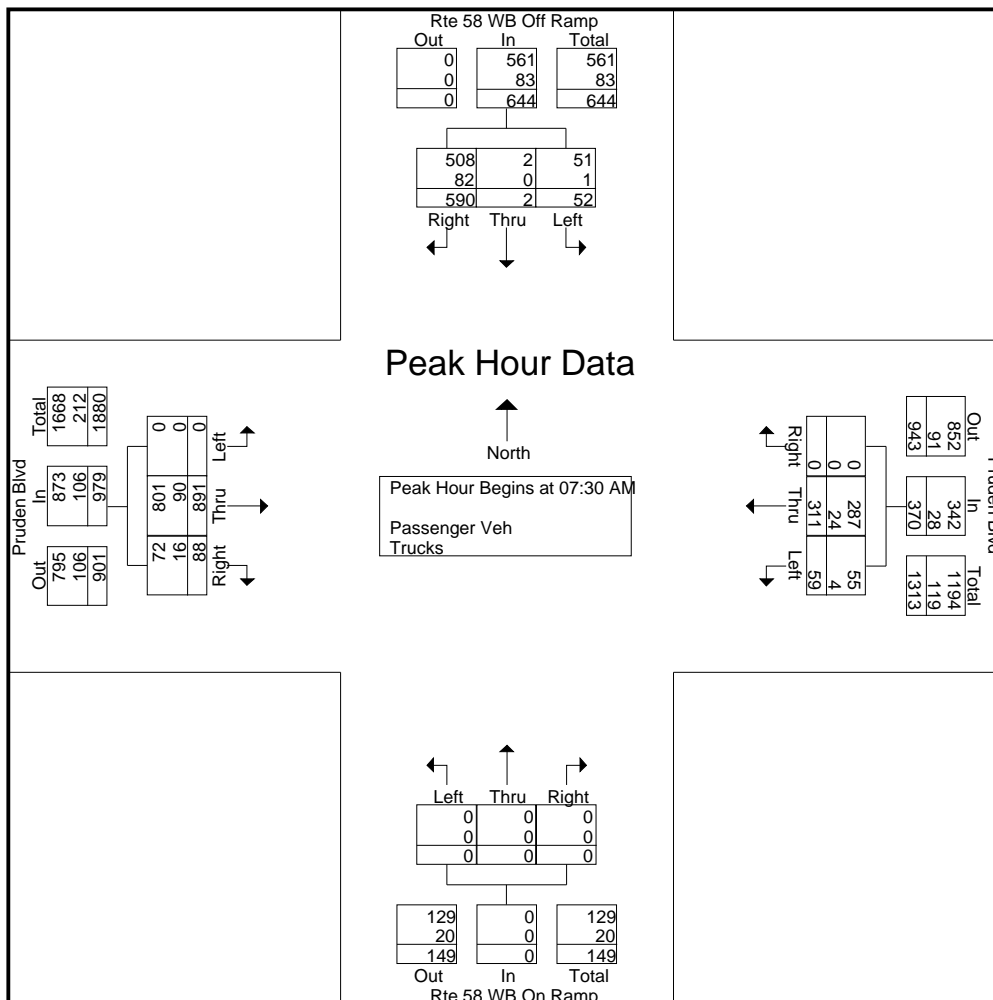
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Start Time	Rte 58 WB Off Ramp From North				Pruden Blvd From East				Rte 58 WB On Ramp From South				Pruden Blvd From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	164	0	5	169	0	97	46	143	0	0	0	0	27	138	0	165	477
05:00 PM	187	0	8	195	0	109	64	173	0	0	0	0	36	180	0	216	584
05:15 PM	156	0	13	169	0	112	37	149	0	0	0	0	32	187	0	219	537
05:30 PM	151	0	6	157	0	129	59	188	0	0	0	0	33	186	0	219	564
Total Volume	658	0	32	690	0	447	206	653	0	0	0	0	128	691	0	819	2162
% App. Total	95.4	0	4.6		0	68.5	31.5		0	0	0		15.6	84.4	0		
PHF	.880	.000	.615	.885	.000	.866	.805	.868	.000	.000	.000	.000	.889	.924	.000	.935	.926
Passenger Veh	615	0	30	645	0	433	205	638	0	0	0	0	119	641	0	760	2043
% Passenger Veh	93.5	0	93.8	93.5	0	96.9	99.5	97.7	0	0	0	0	93.0	92.8	0	92.8	94.5
Trucks	43	0	2	45	0	14	1	15	0	0	0	0	9	50	0	59	119
% Trucks	6.5	0	6.3	6.5	0	3.1	0.5	2.3	0	0	0	0	7.0	7.2	0	7.2	5.5

Data Collection Group

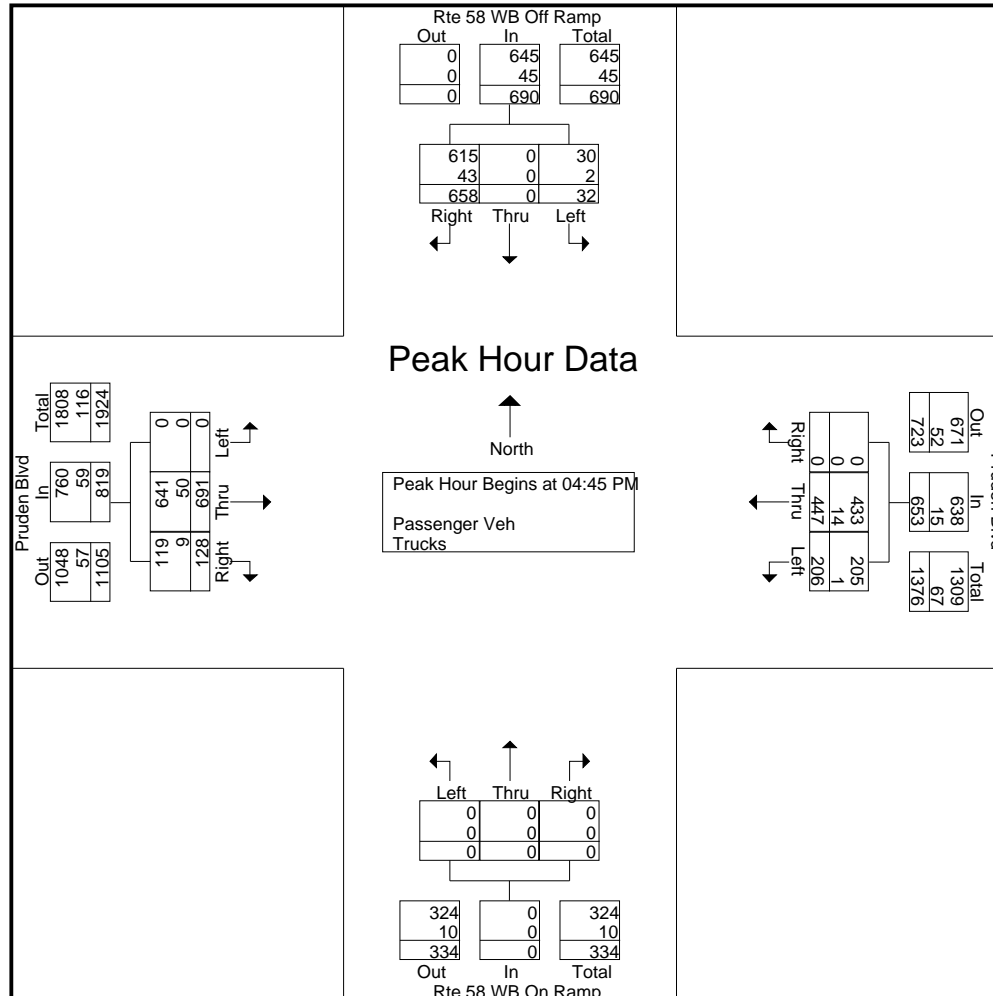
LSmith@DataCollectionGroup.net

File Name : Pruden and Rte 58 WB Ramp Junction

Site Code : 00008005

Start Date : 5/3/2022

Page No : 5



Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Pruden and Rte 58 EB Ramps

Site Code :

Start Date : 3/29/2022

Page No : 1

Groups Printed- Passenger Veh - Trucks

Start Time	From North				Pruden Blvd From East				Rte 58 EB Ramps From South				Pruden Blvd From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
07:00 AM	0	0	0	0	9	64	0	73	35	0	48	83	169	82	0	251	407
07:15 AM	0	0	0	0	11	41	0	52	48	0	21	69	113	64	0	177	298
07:30 AM	0	0	0	0	8	41	0	49	32	0	15	47	109	51	0	160	256
07:45 AM	0	0	0	0	8	42	0	50	25	0	13	38	90	57	0	147	235
Total	0	0	0	0	36	188	0	224	140	0	97	237	481	254	0	735	1196
08:00 AM	0	0	0	0	12	53	0	65	37	0	16	53	101	54	0	155	273
08:15 AM	0	0	0	0	11	50	0	61	31	0	20	51	100	69	0	169	281
08:30 AM	0	0	0	0	8	54	0	62	23	0	24	47	88	58	0	146	255
08:45 AM	0	0	0	0	7	61	0	68	28	0	16	44	106	68	0	174	286
Total	0	0	0	0	38	218	0	256	119	0	76	195	395	249	0	644	1095
04:00 PM	0	0	0	0	29	131	0	160	30	0	25	55	123	66	0	189	404
04:15 PM	0	0	0	0	25	121	0	146	22	0	41	63	102	59	1	162	371
04:30 PM	0	0	0	0	22	129	0	151	26	0	35	61	100	54	0	154	366
04:45 PM	0	0	0	0	25	92	0	117	22	0	34	56	87	61	1	149	322
Total	0	0	0	0	101	473	0	574	100	0	135	235	412	240	2	654	1463
05:00 PM	0	0	0	0	19	135	0	154	15	0	22	37	100	69	1	170	361
05:15 PM	0	0	0	0	17	124	0	141	20	0	18	38	90	53	0	143	322
05:30 PM	0	0	0	0	12	127	0	139	20	0	14	34	76	34	0	110	283
05:45 PM	0	0	0	0	14	85	0	99	14	0	16	30	77	52	0	129	258
Total	0	0	0	0	62	471	0	533	69	0	70	139	343	208	1	552	1224
Grand Total	0	0	0	0	237	1350	0	1587	428	0	378	806	1631	951	3	2585	4978
Aprch %	0	0	0	0	14.9	85.1	0	98.4	53.1	0	46.9	92.1	63.1	36.8	0.1	90.6	93.3
Total %	0	0	0	0	4.8	27.1	0	31.9	8.6	0	7.6	16.2	32.8	19.1	0.1	51.9	6.7
Passenger Veh	0	0	0	0	232	1330	0	1562	425	0	317	742	1416	923	3	2342	4646
% Passenger Veh	0	0	0	0	97.9	98.5	0	98.4	99.3	0	83.9	92.1	86.8	97.1	100	90.6	93.3
Trucks	0	0	0	0	5	20	0	25	3	0	61	64	215	28	0	243	332
% Trucks	0	0	0	0	2.1	1.5	0	1.6	0.7	0	16.1	7.9	13.2	2.9	0	9.4	6.7

Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Pruden and Rte 58 EB Ramps

Site Code :

Start Date : 3/29/2022

Page No : 2

Start Time	From North				Pruden Blvd From East				Rte 58 EB Ramps From South				Pruden Blvd From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:00 AM																	
07:00 AM	0	0	0	0	9	64	0	73	35	0	48	83	169	82	0	251	407
07:15 AM	0	0	0	0	11	41	0	52	48	0	21	69	113	64	0	177	298
07:30 AM	0	0	0	0	8	41	0	49	32	0	15	47	109	51	0	160	256
07:45 AM	0	0	0	0	8	42	0	50	25	0	13	38	90	57	0	147	235
Total Volume	0	0	0	0	36	188	0	224	140	0	97	237	481	254	0	735	1196
% App. Total	0	0	0	0	16.1	83.9	0		59.1	0	40.9		65.4	34.6	0		
PHF	.000	.000	.000	.000	.818	.734	.000	.767	.729	.000	.505	.714	.712	.774	.000	.732	.735
Passenger Veh	0	0	0	0	32	182	0	214	140	0	87	227	420	243	0	663	1104
% Passenger Veh	0	0	0	0	88.9	96.8	0	95.5	100	0	89.7	95.8	87.3	95.7	0	90.2	92.3
Trucks	0	0	0	0	4	6	0	10	0	0	10	10	61	11	0	72	92
% Trucks	0	0	0	0	11.1	3.2	0	4.5	0	0	10.3	4.2	12.7	4.3	0	9.8	7.7

Data Collection Group

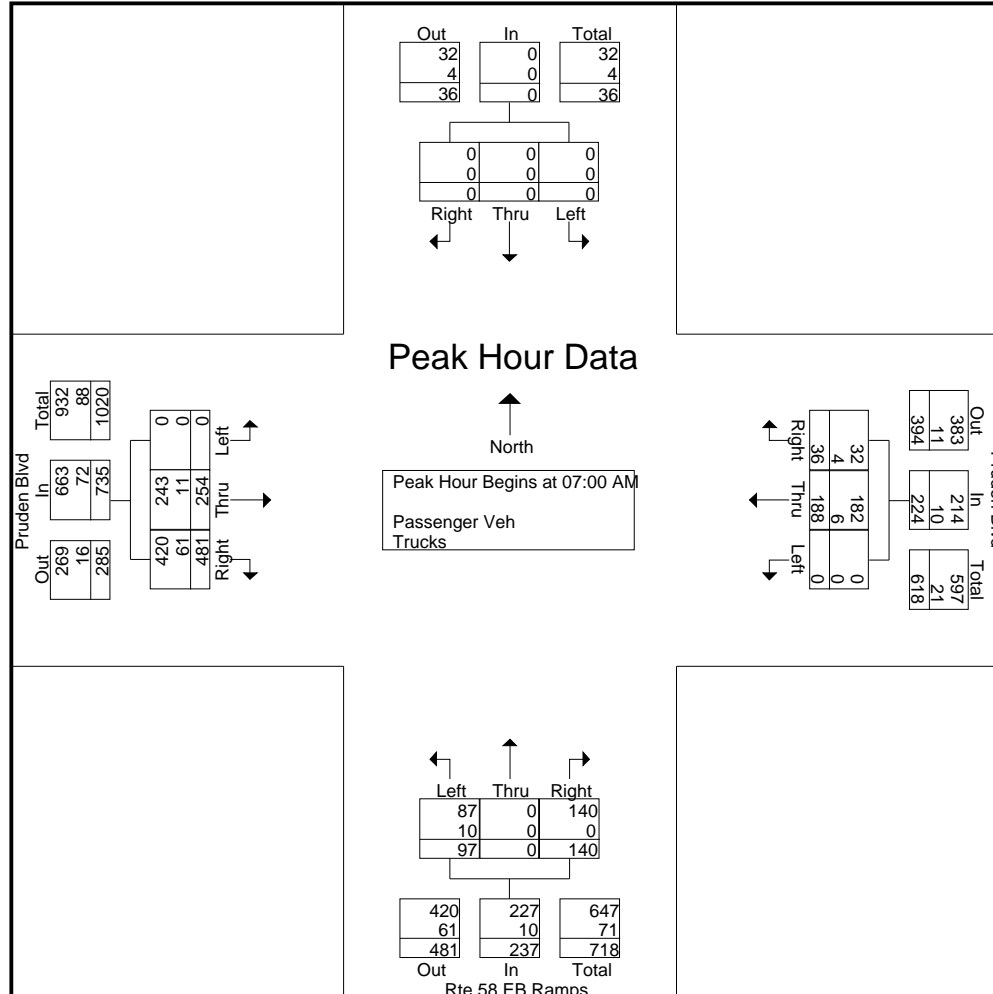
LSmith@DataCollectionGroup.net

File Name : Pruden and Rte 58 EB Ramps

Site Code :

Start Date : 3/29/2022

Page No : 3



Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Pruden and Rte 58 EB Ramps

Site Code :

Start Date : 3/29/2022

Page No : 4

Start Time	From North				Pruden Blvd From East				Rte 58 EB Ramps From South				Pruden Blvd From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	0	0	0	29	131	0	160	30	0	25	55	123	66	0	189	404
04:15 PM	0	0	0	0	25	121	0	146	22	0	41	63	102	59	1	162	371
04:30 PM	0	0	0	0	22	129	0	151	26	0	35	61	100	54	0	154	366
04:45 PM	0	0	0	0	25	92	0	117	22	0	34	56	87	61	1	149	322
Total Volume	0	0	0	0	101	473	0	574	100	0	135	235	412	240	2	654	1463
% App. Total	0	0	0	0	17.6	82.4	0		42.6	0	57.4		63	36.7	0.3		
PHF	.000	.000	.000	.000	.871	.903	.000	.897	.833	.000	.823	.933	.837	.909	.500	.865	.905
Passenger Veh	0	0	0	0	101	471	0	572	99	0	117	216	378	239	2	619	1407
% Passenger Veh	0	0	0	0	100	99.6	0	99.7	99.0	0	86.7	91.9	91.7	99.6	100	94.6	96.2
Trucks	0	0	0	0	0	2	0	2	1	0	18	19	34	1	0	35	56
% Trucks	0	0	0	0	0	0.4	0	0.3	1.0	0	13.3	8.1	8.3	0.4	0	5.4	3.8

Data Collection Group

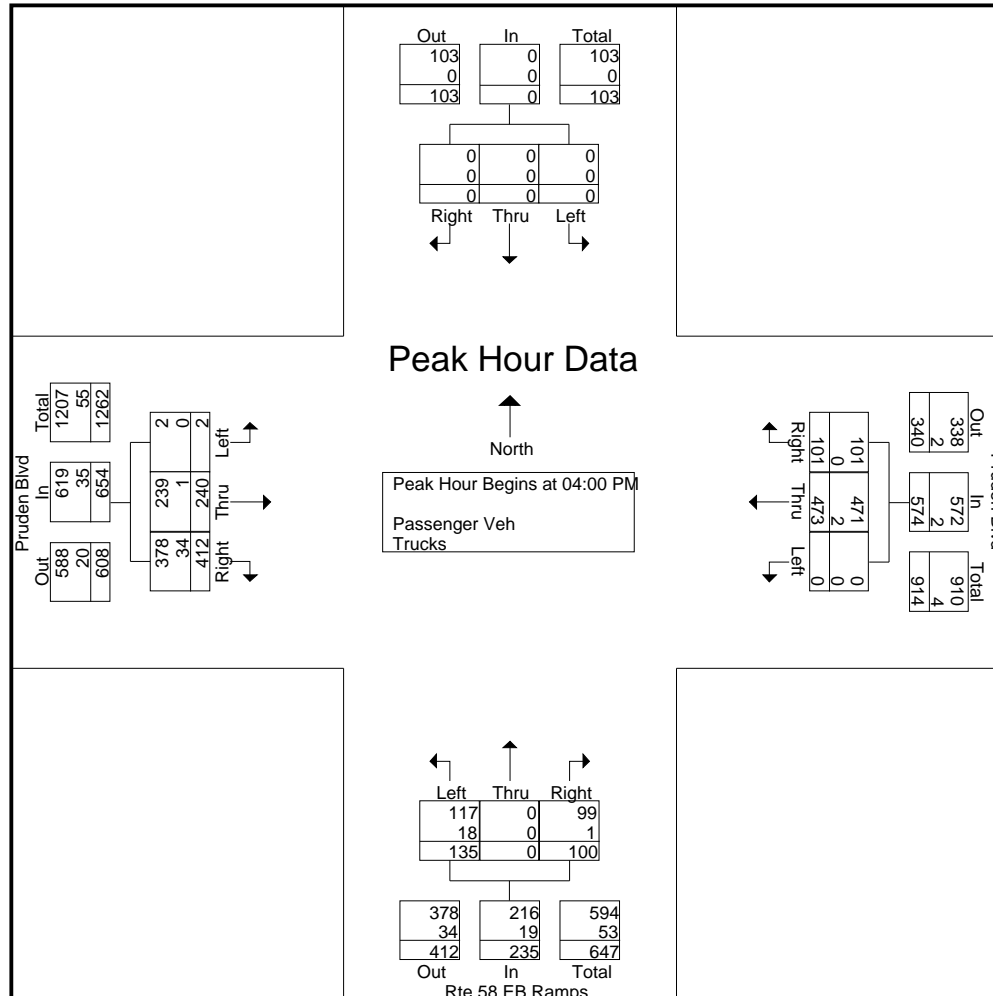
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File Name : Pruden and Rte 58 EB Ramps

Site Code :

Start Date : 3/29/2022

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Data Collection Group

757.478.6761

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File Name : Pruden and Meade

Site Code :

Start Date : 3/29/2022

Page No : 1

Groups Printed- Passenger Veh - Trucks

Start Time	Driveway From North				Pruden Blvd From East				Meade Pkwy From South				Pruden Blvd From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
07:00 AM	0	0	0	0	0	41	9	50	3	0	0	3	7	53	0	60	113
07:15 AM	0	0	0	0	0	31	16	47	3	0	1	4	18	66	0	84	135
07:30 AM	0	0	0	0	0	44	14	58	5	0	6	11	33	80	0	113	182
07:45 AM	0	0	0	0	0	43	22	65	13	0	5	18	46	90	0	136	219
Total	0	0	0	0	0	159	61	220	24	0	12	36	104	289	0	393	649
08:00 AM	0	0	0	0	0	62	18	80	11	0	10	21	38	92	0	130	231
08:15 AM	0	0	0	0	0	49	13	62	12	0	5	17	28	82	0	110	189
08:30 AM	0	0	0	0	0	37	17	54	10	0	8	18	12	71	0	83	155
08:45 AM	0	0	0	0	0	45	15	60	8	0	9	17	21	64	0	85	162
Total	0	0	0	0	0	193	63	256	41	0	32	73	99	309	0	408	737
04:00 PM	0	0	0	0	0	85	13	98	24	0	16	40	8	92	0	100	238
04:15 PM	0	0	0	0	0	97	8	105	19	0	21	40	7	82	0	89	234
04:30 PM	0	0	0	0	0	102	8	110	21	0	36	57	6	102	0	108	275
04:45 PM	0	0	0	0	0	119	9	128	17	0	22	39	5	79	0	84	251
Total	0	0	0	0	0	403	38	441	81	0	95	176	26	355	0	381	998
05:00 PM	0	0	0	0	0	104	7	111	25	0	47	72	7	84	0	91	274
05:15 PM	0	0	0	0	0	119	6	125	11	0	24	35	3	83	0	86	246
05:30 PM	0	0	0	0	0	136	3	139	10	0	7	17	3	72	0	75	231
05:45 PM	0	0	0	0	0	96	1	97	2	0	5	7	3	77	0	80	184
Total	0	0	0	0	0	455	17	472	48	0	83	131	16	316	0	332	935
Grand Total	0	0	0	0	0	1210	179	1389	194	0	222	416	245	1269	0	1514	3319
Apprch %	0	0	0	0	0	87.1	12.9		46.6	0	53.4		16.2	83.8	0		
Total %	0	0	0	0	0	36.5	5.4	41.8	5.8	0	6.7	12.5	7.4	38.2	0	45.6	
Passenger Veh	0	0	0	0	0	1189	173	1362	189	0	215	404	239	1243	0	1482	3248
% Passenger Veh	0	0	0	0	0	98.3	96.6	98.1	97.4	0	96.8	97.1	97.6	98	0	97.9	97.9
Trucks	0	0	0	0	0	21	6	27	5	0	7	12	6	26	0	32	71
% Trucks	0	0	0	0	0	1.7	3.4	1.9	2.6	0	3.2	2.9	2.4	2	0	2.1	2.1

Data Collection Group

757.478.6761

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File Name : Pruden and Meade

Site Code :

Start Date : 3/29/2022

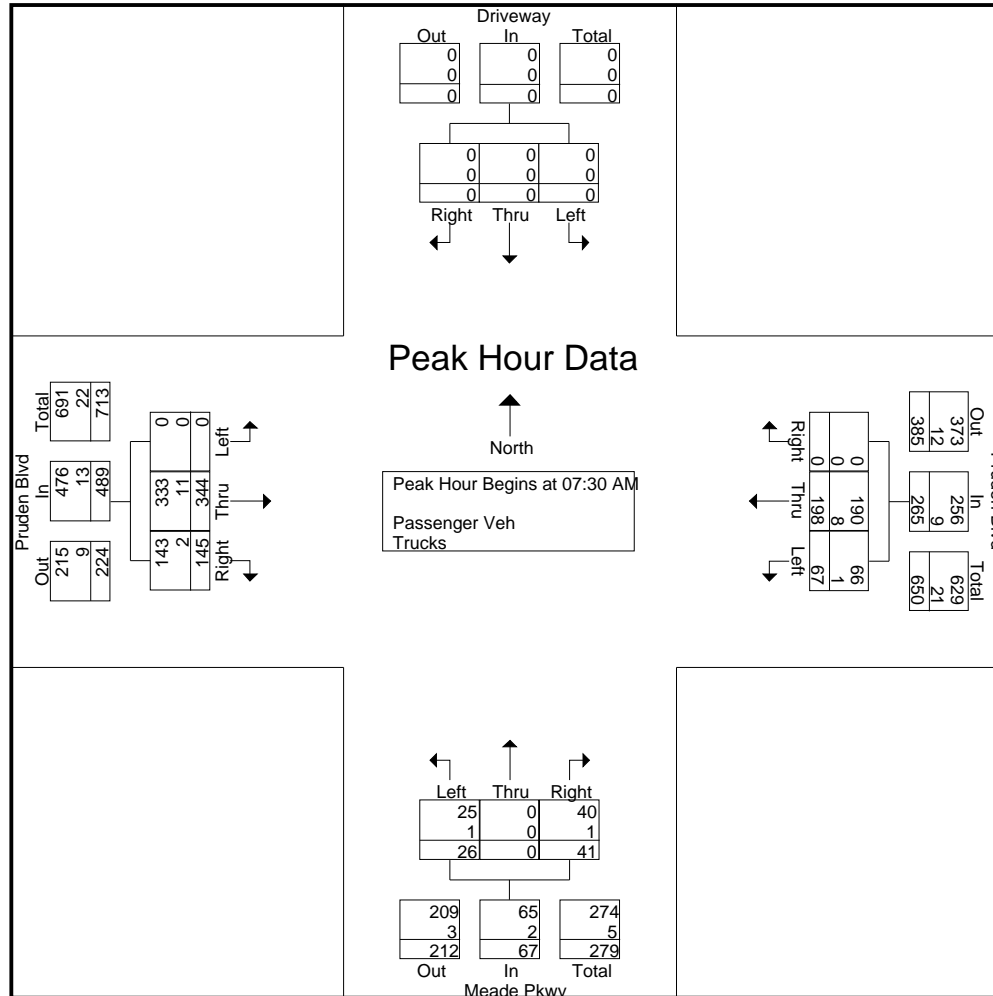
Page No : 2

Start Time	Driveway From North				Pruden Blvd From East				Meade Pkwy From South				Pruden Blvd From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	0	0	0	0	0	44	14	58	5	0	6	11	33	80	0	113	182
07:45 AM	0	0	0	0	0	43	22	65	13	0	5	18	46	90	0	136	219
08:00 AM	0	0	0	0	0	62	18	80	11	0	10	21	38	92	0	130	231
08:15 AM	0	0	0	0	0	49	13	62	12	0	5	17	28	82	0	110	189
Total Volume	0	0	0	0	0	198	67	265	41	0	26	67	145	344	0	489	821
% App. Total	0	0	0	0	0	74.7	25.3		61.2	0	38.8		29.7	70.3	0		
PHF	.000	.000	.000	.000	.000	.798	.761	.828	.788	.000	.650	.798	.788	.935	.000	.899	.889
Passenger Veh	0	0	0	0	0	190	66	256	40	0	25	65	143	333	0	476	797
% Passenger Veh	0	0	0	0	0	96.0	98.5	96.6	97.6	0	96.2	97.0	98.6	96.8	0	97.3	97.1
Trucks	0	0	0	0	0	8	1	9	1	0	1	2	2	11	0	13	24
% Trucks	0	0	0	0	0	4.0	1.5	3.4	2.4	0	3.8	3.0	1.4	3.2	0	2.7	2.9

Data Collection Group

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File Name : Pruden and Meade
 Site Code :
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File Name : Pruden and Meade

Site Code :

Start Date : 3/29/2022

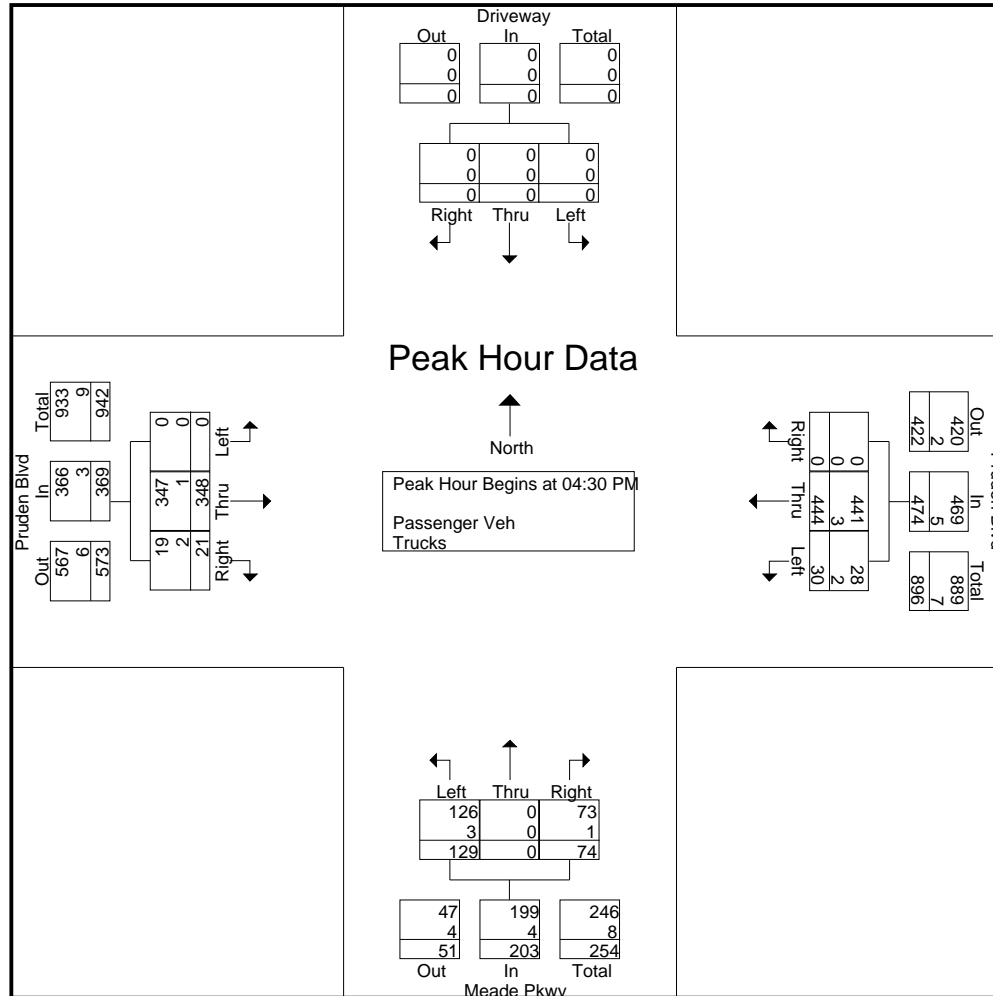
Page No : 4

Start Time	Driveway From North				Pruden Blvd From East				Meade Pkwy From South				Pruden Blvd From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	102	8	110	21	0	36	57	6	102	0	108	275
04:45 PM	0	0	0	0	0	119	9	128	17	0	22	39	5	79	0	84	251
05:00 PM	0	0	0	0	0	104	7	111	25	0	47	72	7	84	0	91	274
05:15 PM	0	0	0	0	0	119	6	125	11	0	24	35	3	83	0	86	246
Total Volume	0	0	0	0	0	444	30	474	74	0	129	203	21	348	0	369	1046
% App. Total	0	0	0	0	0	93.7	6.3		36.5	0	63.5		5.7	94.3	0		
PHF	.000	.000	.000	.000	.000	.933	.833	.926	.740	.000	.686	.705	.750	.853	.000	.854	.951
Passenger Veh	0	0	0	0	0	441	28	469	73	0	126	199	19	347	0	366	1034
% Passenger Veh	0	0	0	0	0	99.3	93.3	98.9	98.6	0	97.7	98.0	90.5	99.7	0	99.2	98.9
Trucks	0	0	0	0	0	3	2	5	1	0	3	4	2	1	0	3	12
% Trucks	0	0	0	0	0	0.7	6.7	1.1	1.4	0	2.3	2.0	9.5	0.3	0	0.8	1.1

Data Collection Group

757.478.6761
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File Name : Pruden and Meade
 Site Code :
 Start Date : 3/29/2022
 Page No : 5



Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Pruden and Godwin

Site Code :

Start Date : 3/29/2022

Page No : 1

Groups Printed- Passenger Veh - Trucks

Start Time	Pruden Blvd From North				Godwin Blvd From East				Pruden Blvd From South				Driveway From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
07:00 AM	6	41	6	53	16	2	58	76	76	26	6	108	5	6	2	13	250
07:15 AM	6	56	9	71	21	8	76	105	105	31	0	136	2	6	3	11	323
07:30 AM	10	53	13	76	18	13	106	137	91	42	5	138	4	9	5	18	369
07:45 AM	6	78	14	98	39	6	111	156	146	37	3	186	11	7	3	21	461
Total	28	228	42	298	94	29	351	474	418	136	14	568	22	28	13	63	1403
08:00 AM	7	77	21	105	36	10	109	155	130	48	3	181	7	6	5	18	459
08:15 AM	12	63	22	97	22	6	127	155	127	38	7	172	7	10	4	21	445
08:30 AM	7	63	20	90	18	5	118	141	124	43	7	174	3	10	2	15	420
08:45 AM	3	58	16	77	30	12	139	181	134	47	5	186	10	8	5	23	467
Total	29	261	79	369	106	33	493	632	515	176	22	713	27	34	16	77	1791
04:00 PM	2	110	22	134	32	1	227	260	191	78	1	270	5	3	0	8	672
04:15 PM	1	84	29	114	25	1	221	247	153	90	1	244	4	0	2	6	611
04:30 PM	2	103	21	126	12	3	198	213	176	88	4	268	4	4	1	9	616
04:45 PM	1	86	16	103	22	2	190	214	205	96	4	305	2	2	3	7	629
Total	6	383	88	477	91	7	836	934	725	352	10	1087	15	9	6	30	2528
05:00 PM	0	110	32	142	20	4	199	223	184	98	3	285	8	3	2	13	663
05:15 PM	3	74	16	93	21	3	189	213	193	104	3	300	4	5	0	9	615
05:30 PM	3	78	15	96	19	4	198	221	206	117	1	324	4	4	3	11	652
05:45 PM	1	62	22	85	9	2	163	174	199	92	2	293	3	0	4	7	559
Total	7	324	85	416	69	13	749	831	782	411	9	1202	19	12	9	40	2489
Grand Total	70	1196	294	1560	360	82	2429	2871	2440	1075	55	3570	83	83	44	210	8211
Apprch %	4.5	76.7	18.8		12.5	2.9	84.6		68.3	30.1	1.5		39.5	39.5	21		
Total %	0.9	14.6	3.6	19	4.4	1	29.6	35	29.7	13.1	0.7	43.5	1	1	0.5	2.6	
Passenger Veh	68	1171	285	1524	351	80	2385	2816	2386	1053	52	3491	80	81	41	202	8033
% Passenger Veh	97.1	97.9	96.9	97.7	97.5	97.6	98.2	98.1	97.8	98	94.5	97.8	96.4	97.6	93.2	96.2	97.8
Trucks	2	25	9	36	9	2	44	55	54	22	3	79	3	2	3	8	178
% Trucks	2.9	2.1	3.1	2.3	2.5	2.4	1.8	1.9	2.2	2	5.5	2.2	3.6	2.4	6.8	3.8	2.2

Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Pruden and Godwin

Site Code :

Start Date : 3/29/2022

Page No : 2

Start Time	Pruden Blvd From North				Godwin Blvd From East				Pruden Blvd From South				Driveway From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	7	77	21	105	36	10	109	155	130	48	3	181	7	6	5	18	459
08:15 AM	12	63	22	97	22	6	127	155	127	38	7	172	7	10	4	21	445
08:30 AM	7	63	20	90	18	5	118	141	124	43	7	174	3	10	2	15	420
08:45 AM	3	58	16	77	30	12	139	181	134	47	5	186	10	8	5	23	467
Total Volume	29	261	79	369	106	33	493	632	515	176	22	713	27	34	16	77	1791
% App. Total	7.9	70.7	21.4		16.8	5.2	78		72.2	24.7	3.1		35.1	44.2	20.8		
PHF	.604	.847	.898	.879	.736	.688	.887	.873	.961	.917	.786	.958	.675	.850	.800	.837	.959
Passenger Veh	29	256	74	359	105	32	479	616	498	171	20	689	26	34	14	74	1738
% Passenger Veh	100	98.1	93.7	97.3	99.1	97.0	97.2	97.5	96.7	97.2	90.9	96.6	96.3	100	87.5	96.1	97.0
Trucks	0	5	5	10	1	1	14	16	17	5	2	24	1	0	2	3	53
% Trucks	0	1.9	6.3	2.7	0.9	3.0	2.8	2.5	3.3	2.8	9.1	3.4	3.7	0	12.5	3.9	3.0

Data Collection Group

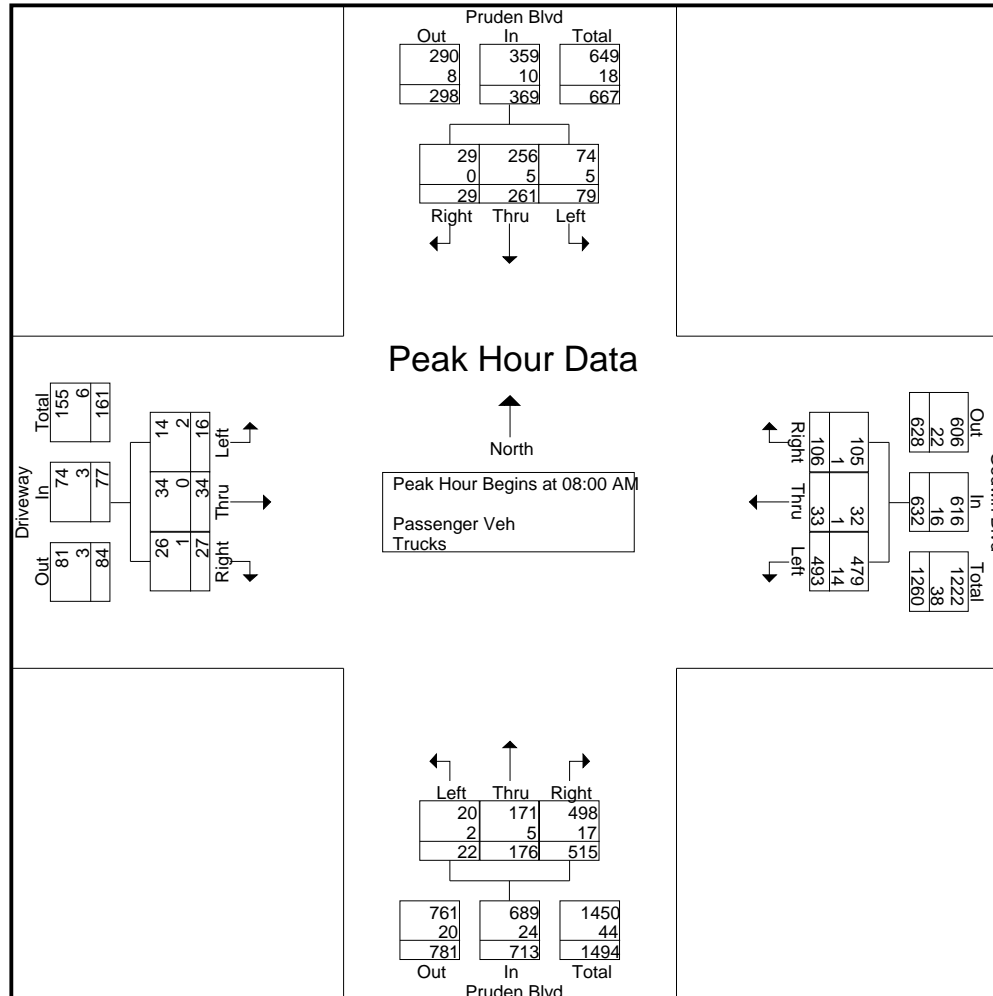
LSmith@DataCollectionGroup.net

File Name : Pruden and Godwin

Site Code :

Start Date : 3/29/2022

Page No : 3



Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Pruden and Godwin

Site Code :

Start Date : 3/29/2022

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Start Time	Pruden Blvd From North				Godwin Blvd From East				Pruden Blvd From South				Driveway From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	1	86	16	103	22	2	190	214	205	96	4	305	2	2	3	7	629
05:00 PM	0	110	32	142	20	4	199	223	184	98	3	285	8	3	2	13	663
05:15 PM	3	74	16	93	21	3	189	213	193	104	3	300	4	5	0	9	615
05:30 PM	3	78	15	96	19	4	198	221	206	117	1	324	4	4	3	11	652
Total Volume	7	348	79	434	82	13	776	871	788	415	11	1214	18	14	8	40	2559
% App. Total	1.6	80.2	18.2		9.4	1.5	89.1		64.9	34.2	0.9		45	35	20		
PHF	.583	.791	.617	.764	.932	.813	.975	.976	.956	.887	.688	.937	.563	.700	.667	.769	.965
Passenger Veh	7	346	77	430	80	12	771	863	782	413	11	1206	17	14	8	39	2538
% Passenger Veh	100	99.4	97.5	99.1	97.6	92.3	99.4	99.1	99.2	99.5	100	99.3	94.4	100	100	97.5	99.2
Trucks	0	2	2	4	2	1	5	8	6	2	0	8	1	0	0	1	21
% Trucks	0	0.6	2.5	0.9	2.4	7.7	0.6	0.9	0.8	0.5	0	0.7	5.6	0	0	2.5	0.8

Data Collection Group

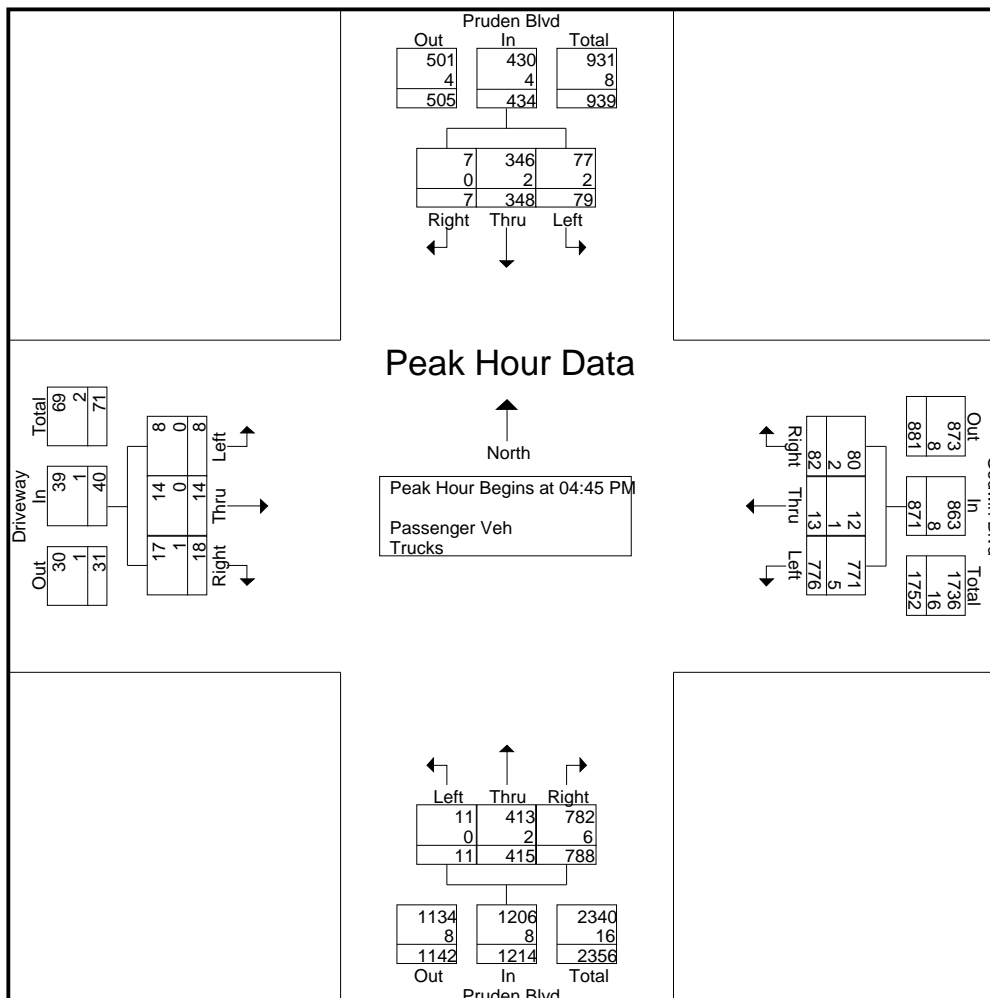
LSmith@DataCollectionGroup.net

File Name : Pruden and Godwin

Site Code :

Start Date : 3/29/2022

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Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Main and Murphys Mill

Site Code :

Start Date : 3/29/2022

Page No : 1

Groups Printed- Passenger Veh - Trucks

Start Time	Main St From North				Westbound Approach From East				Main St From South				Murphys Mill Rd From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
07:00 AM	2	97	1	100	0	0	0	0	1	104	1	106	2	1	5	8	214
07:15 AM	2	122	4	128	0	0	1	1	3	115	3	121	4	0	6	10	260
07:30 AM	4	155	3	162	1	0	3	4	4	141	5	150	4	0	10	14	330
07:45 AM	3	169	4	176	1	0	0	1	1	171	3	175	6	0	8	14	366
Total	11	543	12	566	2	0	4	6	9	531	12	552	16	1	29	46	1170
08:00 AM	3	198	3	204	3	0	0	3	1	172	0	173	0	0	7	7	387
08:15 AM	1	184	5	190	0	0	2	2	0	168	8	176	4	1	3	8	376
08:30 AM	3	163	5	171	1	1	2	4	1	164	3	168	3	0	9	12	355
08:45 AM	0	204	3	207	0	0	0	0	0	177	4	181	3	0	10	13	401
Total	7	749	16	772	4	1	4	9	2	681	15	698	10	1	29	40	1519
04:00 PM	14	332	2	348	1	0	1	2	0	260	11	271	8	0	2	10	631
04:15 PM	5	296	2	303	3	0	0	3	2	233	14	249	6	0	5	11	566
04:30 PM	11	299	3	313	8	1	2	11	2	269	13	284	8	0	3	11	619
04:45 PM	6	262	6	274	3	0	3	6	2	274	9	285	4	1	3	8	573
Total	36	1189	13	1238	15	1	6	22	6	1036	47	1089	26	1	13	40	2389
05:00 PM	5	312	2	319	8	1	4	13	2	266	15	283	4	0	8	12	627
05:15 PM	6	247	1	254	4	1	3	8	2	285	9	296	4	0	5	9	567
05:30 PM	6	281	0	287	3	1	0	4	0	310	5	315	4	0	5	9	615
05:45 PM	8	202	1	211	1	0	0	1	0	271	7	278	7	0	6	13	503
Total	25	1042	4	1071	16	3	7	26	4	1132	36	1172	19	0	24	43	2312
Grand Total	79	3523	45	3647	37	5	21	63	21	3380	110	3511	71	3	95	169	7390
Apprch %	2.2	96.6	1.2		58.7	7.9	33.3		0.6	96.3	3.1		42	1.8	56.2		
Total %	1.1	47.7	0.6	49.4	0.5	0.1	0.3	0.9	0.3	45.7	1.5	47.5	1	0	1.3	2.3	
Passenger Veh	75	3454	45	3574	37	5	20	62	20	3303	109	3432	70	3	90	163	7231
% Passenger Veh	94.9	98	100	98	100	100	95.2	98.4	95.2	97.7	99.1	97.7	98.6	100	94.7	96.4	97.8
Trucks	4	69	0	73	0	0	1	1	1	77	1	79	1	0	5	6	159
% Trucks	5.1	2	0	2	0	0	4.8	1.6	4.8	2.3	0.9	2.3	1.4	0	5.3	3.6	2.2

Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Main and Murphys Mill

Site Code :

Start Date : 3/29/2022

Page No : 2

Start Time	Main St From North				Westbound Approach From East				Main St From South				Murphys Mill Rd From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	3	198	3	204	3	0	0	3	1	172	0	173	0	0	7	7	387
08:15 AM	1	184	5	190	0	0	2	2	0	168	8	176	4	1	3	8	376
08:30 AM	3	163	5	171	1	1	2	4	1	164	3	168	3	0	9	12	355
08:45 AM	0	204	3	207	0	0	0	0	0	177	4	181	3	0	10	13	401
Total Volume	7	749	16	772	4	1	4	9	2	681	15	698	10	1	29	40	1519
% App. Total	0.9	97	2.1		44.4	11.1	44.4		0.3	97.6	2.1		25	2.5	72.5		
PHF	.583	.918	.800	.932	.333	.250	.500	.563	.500	.962	.469	.964	.625	.250	.725	.769	.947
Passenger Veh	6	729	16	751	4	1	3	8	2	658	15	675	10	1	27	38	1472
% Passenger Veh	85.7	97.3	100	97.3	100	100	75.0	88.9	100	96.6	100	96.7	100	100	93.1	95.0	96.9
Trucks	1	20	0	21	0	0	1	1	0	23	0	23	0	0	2	2	47
% Trucks	14.3	2.7	0	2.7	0	0	25.0	11.1	0	3.4	0	3.3	0	0	6.9	5.0	3.1

Data Collection Group

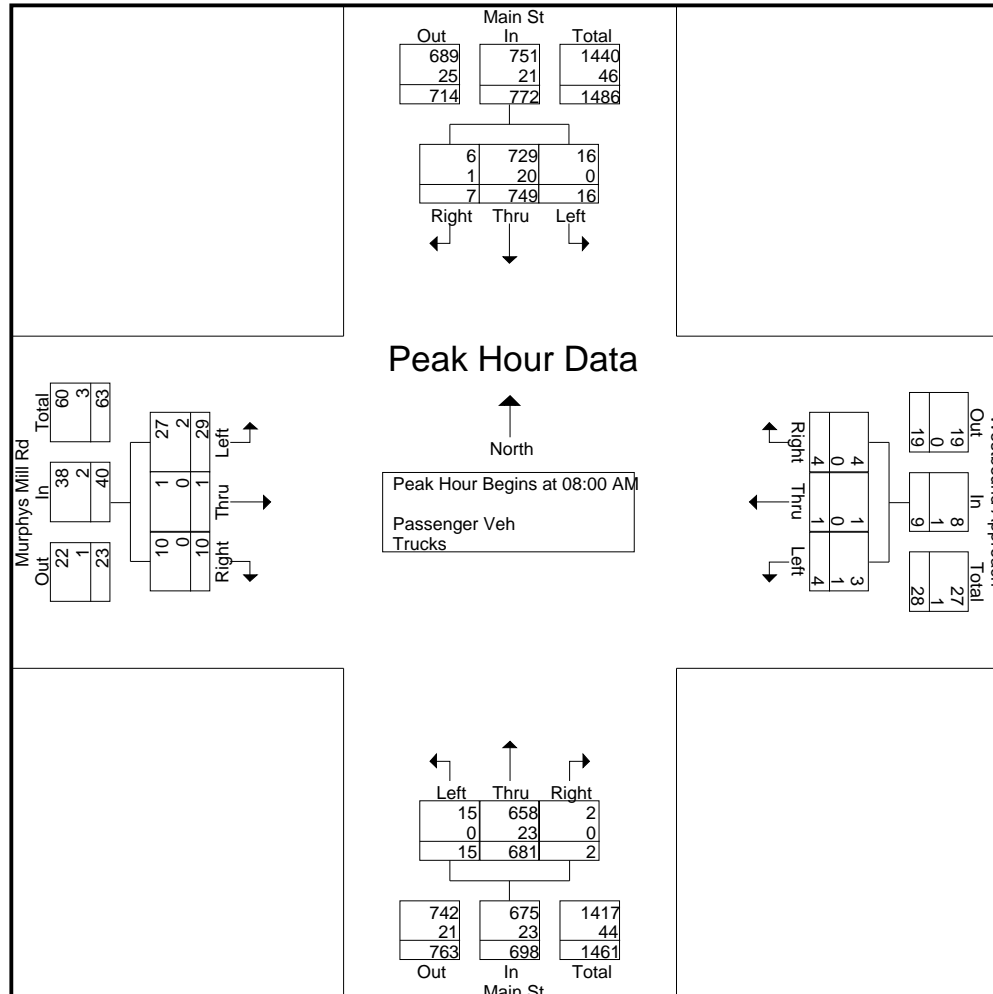
LSmith@DataCollectionGroup.net

File Name : Main and Murphys Mill

Site Code :

Start Date : 3/29/2022

Page No : 3



Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Main and Murphys Mill

Site Code :

Start Date : 3/29/2022

Page No : 4

Start Time	Main St From North				Westbound Approach From East				Main St From South				Murphys Mill Rd From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	14	332	2	348	1	0	1	2	0	260	11	271	8	0	2	10	631
04:15 PM	5	296	2	303	3	0	0	3	2	233	14	249	6	0	5	11	566
04:30 PM	11	299	3	313	8	1	2	11	2	269	13	284	8	0	3	11	619
04:45 PM	6	262	6	274	3	0	3	6	2	274	9	285	4	1	3	8	573
Total Volume	36	1189	13	1238	15	1	6	22	6	1036	47	1089	26	1	13	40	2389
% App. Total	2.9	96	1.1		68.2	4.5	27.3		0.6	95.1	4.3		65	2.5	32.5		
PHF	.643	.895	.542	.889	.469	.250	.500	.500	.750	.945	.839	.955	.813	.250	.650	.909	.947
Passenger Veh	35	1173	13	1221	15	1	6	22	6	1018	47	1071	26	1	12	39	2353
% Passenger Veh	97.2	98.7	100	98.6	100	100	100	100	100	98.3	100	98.3	100	100	92.3	97.5	98.5
Trucks	1	16	0	17	0	0	0	0	0	18	0	18	0	0	1	1	36
% Trucks	2.8	1.3	0	1.4	0	0	0	0	0	1.7	0	1.7	0	0	7.7	2.5	1.5

Data Collection Group

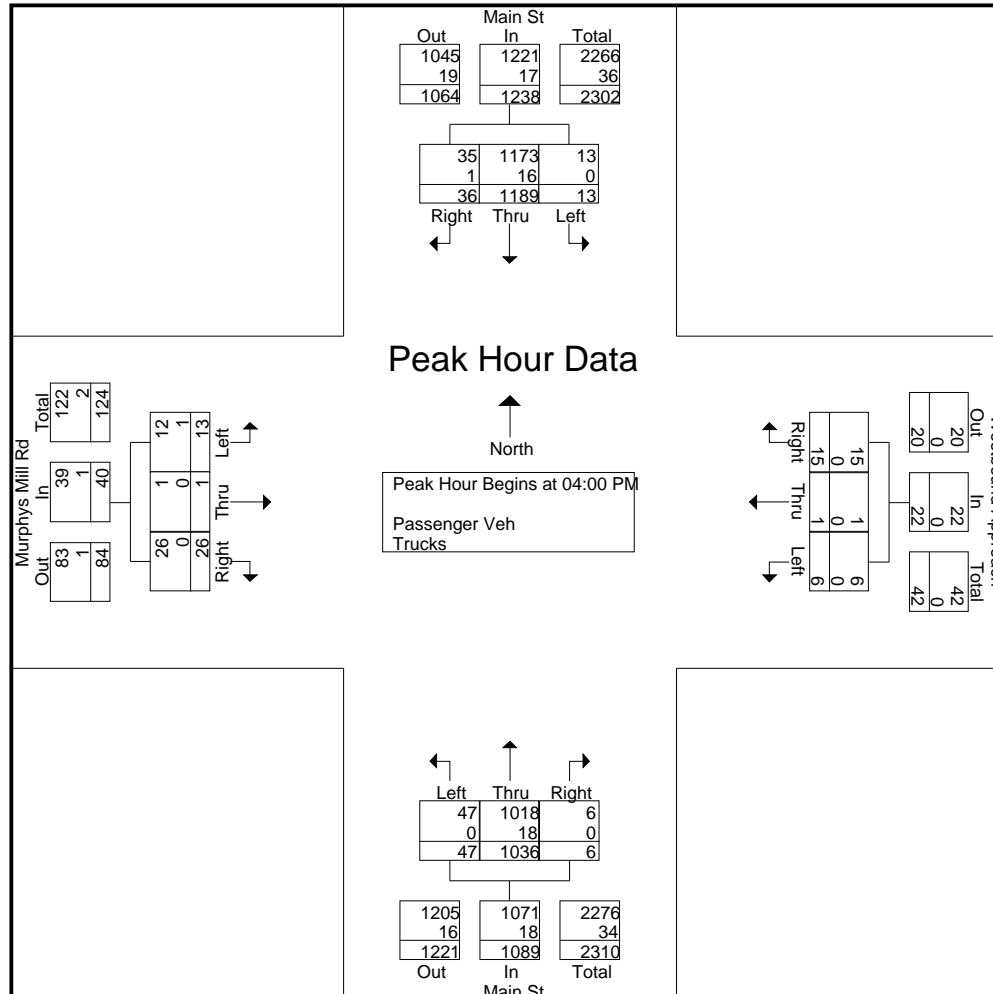
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File Name : Main and Murphys Mill

Site Code :

Start Date : 3/29/2022

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Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Main and Louise Obici

Site Code :

Start Date : 3/29/2022

Page No : 1

Groups Printed- Passenger Veh - Trucks

Start Time	Main St From North				Louise Obici Ln From East				Main St From South				Northgate Ln From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
07:00 AM	0	90	11	101	13	0	0	13	5	100	0	105	0	0	0	0	219
07:15 AM	0	110	16	126	22	1	7	30	4	99	0	103	1	0	3	4	263
07:30 AM	1	126	22	149	23	0	2	25	13	126	1	140	0	0	1	1	315
07:45 AM	0	142	20	162	33	0	6	39	7	146	0	153	1	0	1	2	356
Total	1	468	69	538	91	1	15	107	29	471	1	501	2	0	5	7	1153
08:00 AM	0	177	20	197	21	0	7	28	9	153	1	163	1	0	0	1	389
08:15 AM	0	178	19	197	22	0	8	30	6	150	0	156	0	0	1	1	384
08:30 AM	0	157	14	171	15	0	9	24	10	152	1	163	0	0	1	1	359
08:45 AM	0	183	22	205	16	0	15	31	11	161	1	173	0	0	0	0	409
Total	0	695	75	770	74	0	39	113	36	616	3	655	1	0	2	3	1541
04:00 PM	0	301	22	323	20	0	13	33	15	254	2	271	0	0	0	0	627
04:15 PM	0	283	29	312	24	0	11	35	17	226	0	243	0	0	0	0	590
04:30 PM	0	261	26	287	30	0	19	49	20	262	0	282	0	0	1	1	619
04:45 PM	0	260	26	286	30	0	19	49	16	257	2	275	0	0	1	1	611
Total	0	1105	103	1208	104	0	62	166	68	999	4	1071	0	0	2	2	2447
05:00 PM	1	285	33	319	24	0	18	42	15	259	3	277	0	0	0	0	638
05:15 PM	0	244	21	265	37	0	15	52	30	267	2	299	2	0	0	2	618
05:30 PM	1	258	20	279	31	0	16	47	15	285	1	301	0	0	0	0	627
05:45 PM	0	193	18	211	20	0	16	36	19	264	1	284	0	0	0	0	531
Total	2	980	92	1074	112	0	65	177	79	1075	7	1161	2	0	0	2	2414
Grand Total	3	3248	339	3590	381	1	181	563	212	3161	15	3388	5	0	9	14	7555
Apprch %	0.1	90.5	9.4		67.7	0.2	32.1		6.3	93.3	0.4		35.7	0	64.3		
Total %	0	43	4.5	47.5	5	0	2.4	7.5	2.8	41.8	0.2	44.8	0.1	0	0.1	0.2	
Passenger Veh	2	3181	333	3516	370	1	180	551	209	3090	15	3314	4	0	9	13	7394
% Passenger Veh	66.7	97.9	98.2	97.9	97.1	100	99.4	97.9	98.6	97.8	100	97.8	80	0	100	92.9	97.9
Trucks	1	67	6	74	11	0	1	12	3	71	0	74	1	0	0	1	161
% Trucks	33.3	2.1	1.8	2.1	2.9	0	0.6	2.1	1.4	2.2	0	2.2	20	0	0	7.1	2.1

Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Main and Louise Obici

Site Code :

Start Date : 3/29/2022

Page No : 2

Start Time	Main St From North				Louise Obici Ln From East				Main St From South				Northgate Ln From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	177	20	197	21	0	7	28	9	153	1	163	1	0	0	1	389
08:15 AM	0	178	19	197	22	0	8	30	6	150	0	156	0	0	1	1	384
08:30 AM	0	157	14	171	15	0	9	24	10	152	1	163	0	0	1	1	359
08:45 AM	0	183	22	205	16	0	15	31	11	161	1	173	0	0	0	0	409
Total Volume	0	695	75	770	74	0	39	113	36	616	3	655	1	0	2	3	1541
% App. Total	0	90.3	9.7		65.5	0	34.5		5.5	94	0.5		33.3	0	66.7		
PHF	.000	.949	.852	.939	.841	.000	.650	.911	.818	.957	.750	.947	.250	.000	.500	.750	.942
Passenger Veh	0	678	71	749	70	0	39	109	36	596	3	635	1	0	2	3	1496
% Passenger Veh	0	97.6	94.7	97.3	94.6	0	100	96.5	100	96.8	100	96.9	100	0	100	100	97.1
Trucks	0	17	4	21	4	0	0	4	0	20	0	20	0	0	0	0	45
% Trucks	0	2.4	5.3	2.7	5.4	0	0	3.5	0	3.2	0	3.1	0	0	0	0	2.9

Data Collection Group

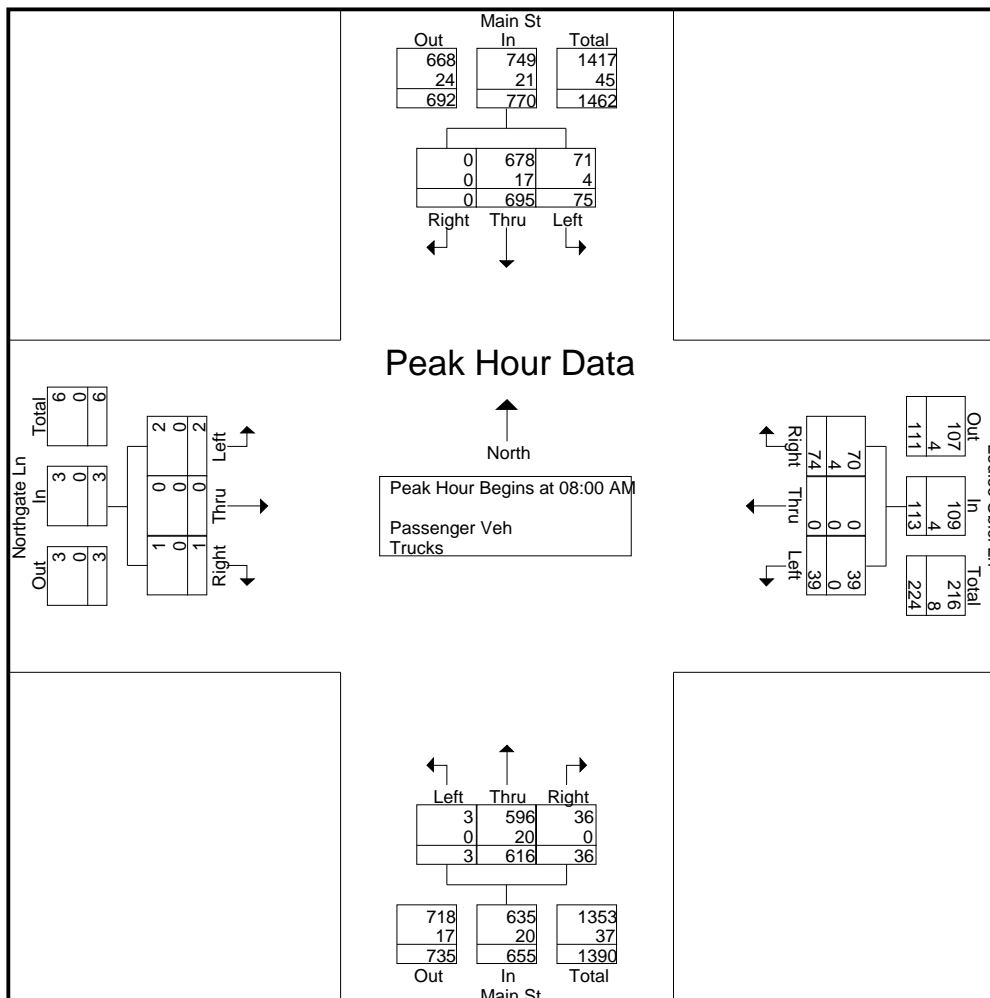
LSmith@DataCollectionGroup.net

File Name : Main and Louise Obici

Site Code :

Start Date : 3/29/2022

Page No : 3



Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Main and Louise Obici

Site Code :

Start Date : 3/29/2022

Page No : 4

Start Time	Main St From North				Louise Obici Ln From East				Main St From South				Northgate Ln From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	260	26	286	30	0	19	49	16	257	2	275	0	0	1	1	611
05:00 PM	1	285	33	319	24	0	18	42	15	259	3	277	0	0	0	0	638
05:15 PM	0	244	21	265	37	0	15	52	30	267	2	299	2	0	0	2	618
05:30 PM	1	258	20	279	31	0	16	47	15	285	1	301	0	0	0	0	627
Total Volume	2	1047	100	1149	122	0	68	190	76	1068	8	1152	2	0	1	3	2494
% App. Total	0.2	91.1	8.7		64.2	0	35.8		6.6	92.7	0.7		66.7	0	33.3		
PHF	.500	.918	.758	.900	.824	.000	.895	.913	.633	.937	.667	.957	.250	.000	.250	.375	.977
Passenger Veh	2	1037	100	1139	120	0	68	188	76	1059	8	1143	2	0	1	3	2473
% Passenger Veh	100	99.0	100	99.1	98.4	0	100	98.9	100	99.2	100	99.2	100	0	100	100	99.2
Trucks	0	10	0	10	2	0	0	2	0	9	0	9	0	0	0	0	21
% Trucks	0	1.0	0	0.9	1.6	0	0	1.1	0	0.8	0	0.8	0	0	0	0	0.8

Data Collection Group

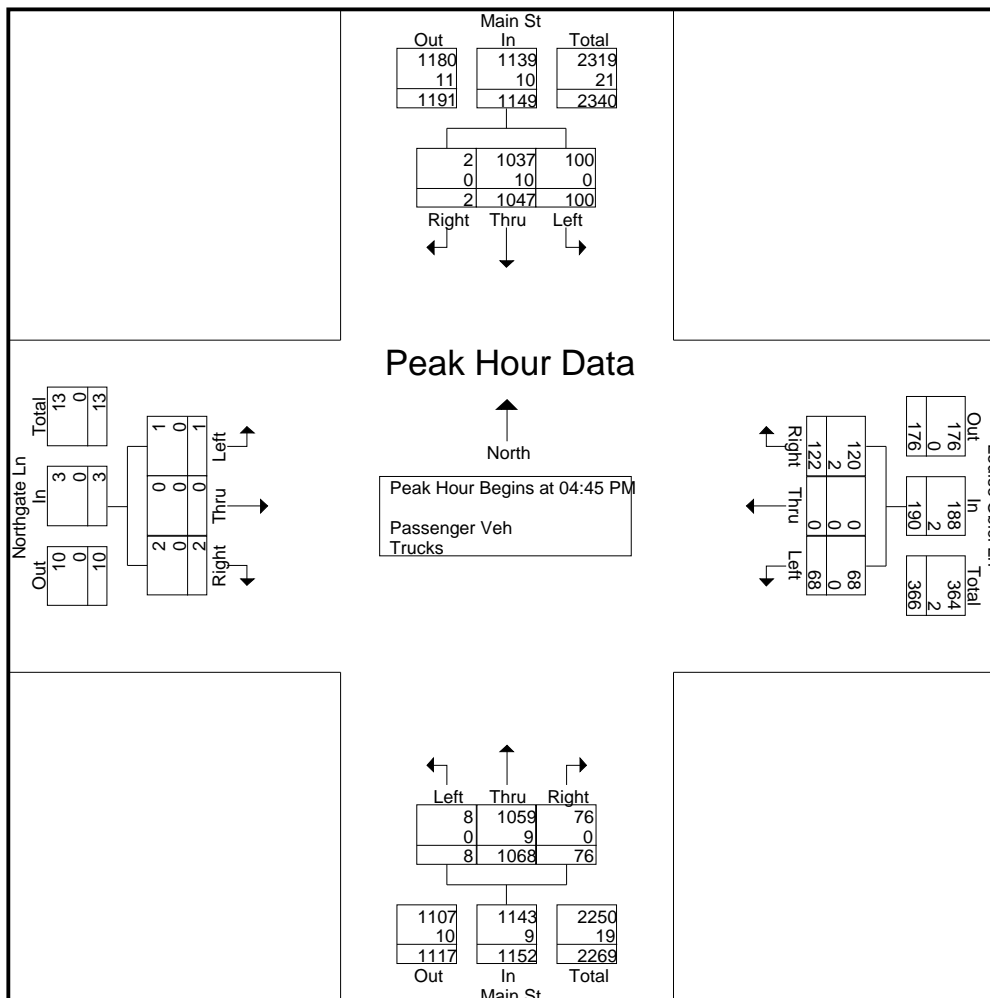
LSmith@DataCollectionGroup.net

File Name : Main and Louise Obici

Site Code :

Start Date : 3/29/2022

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Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Main and Lowes

Site Code :

Start Date : 3/31/2022

Page No : 1

Groups Printed- Passenger Veh - Trucks

Start Time	Main St From North				Lowes From East				Main St From South				Kroger From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
07:00 AM	7	65	18	90	14	0	6	20	12	91	7	110	0	0	5	5	225
07:15 AM	6	69	13	88	26	3	6	35	11	111	12	134	2	0	8	10	267
07:30 AM	5	100	23	128	23	1	12	36	10	105	9	124	7	0	9	16	304
07:45 AM	10	121	24	155	32	1	23	56	20	154	11	185	6	3	7	16	412
Total	28	355	78	461	95	5	47	147	53	461	39	553	15	3	29	47	1208
08:00 AM	11	119	31	161	23	3	9	35	19	121	11	151	6	4	4	14	361
08:15 AM	6	119	31	156	22	4	22	48	8	118	27	153	10	0	14	24	381
08:30 AM	13	132	45	190	36	0	11	47	7	135	10	152	9	3	10	22	411
08:45 AM	9	132	50	191	30	2	17	49	20	176	16	212	9	3	6	18	470
Total	39	502	157	698	111	9	59	179	54	550	64	668	34	10	34	78	1623
04:00 PM	24	170	34	228	36	6	32	74	14	167	55	236	39	4	40	83	621
04:15 PM	22	208	43	273	37	8	34	79	24	168	36	228	33	4	22	59	639
04:30 PM	16	173	47	236	53	7	22	82	14	173	47	234	27	7	28	62	614
04:45 PM	27	212	51	290	40	12	17	69	15	190	41	246	32	6	24	62	667
Total	89	763	175	1027	166	33	105	304	67	698	179	944	131	21	114	266	2541
05:00 PM	16	176	38	230	39	0	14	53	11	154	50	215	26	11	23	60	558
05:15 PM	21	173	44	238	48	3	18	69	26	181	37	244	28	9	26	63	614
05:30 PM	19	149	27	195	37	1	24	62	17	134	35	186	34	2	24	60	503
05:45 PM	21	136	45	202	51	0	11	62	20	158	37	215	37	3	31	71	550
Total	77	634	154	865	175	4	67	246	74	627	159	860	125	25	104	254	2225
Grand Total	233	2254	564	3051	547	51	278	876	248	2336	441	3025	305	59	281	645	7597
Apprch %	7.6	73.9	18.5		62.4	5.8	31.7		8.2	77.2	14.6		47.3	9.1	43.6		
Total %	3.1	29.7	7.4	40.2	7.2	0.7	3.7	11.5	3.3	30.7	5.8	39.8	4	0.8	3.7	8.5	
Passenger Veh	229	2204	550	2983	540	51	271	862	240	2284	438	2962	304	58	279	641	7448
% Passenger Veh	98.3	97.8	97.5	97.8	98.7	100	97.5	98.4	96.8	97.8	99.3	97.9	99.7	98.3	99.3	99.4	98
Trucks	4	50	14	68	7	0	7	14	8	52	3	63	1	1	2	4	149
% Trucks	1.7	2.2	2.5	2.2	1.3	0	2.5	1.6	3.2	2.2	0.7	2.1	0.3	1.7	0.7	0.6	2

Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Main and Lowes

Site Code :

Start Date : 3/31/2022

Page No : 2

Start Time	Main St From North				Lowes From East				Main St From South				Kroger From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	11	119	31	161	23	3	9	35	19	121	11	151	6	4	4	14	361
08:15 AM	6	119	31	156	22	4	22	48	8	118	27	153	10	0	14	24	381
08:30 AM	13	132	45	190	36	0	11	47	7	135	10	152	9	3	10	22	411
08:45 AM	9	132	50	191	30	2	17	49	20	176	16	212	9	3	6	18	470
Total Volume	39	502	157	698	111	9	59	179	54	550	64	668	34	10	34	78	1623
% App. Total	5.6	71.9	22.5		62	5	33		8.1	82.3	9.6		43.6	12.8	43.6		
PHF	.750	.951	.785	.914	.771	.563	.670	.913	.675	.781	.593	.788	.850	.625	.607	.813	.863
Passenger Veh	38	485	151	674	106	9	58	173	51	530	62	643	34	10	32	76	1566
% Passenger Veh	97.4	96.6	96.2	96.6	95.5	100	98.3	96.6	94.4	96.4	96.9	96.3	100	100	94.1	97.4	96.5
Trucks	1	17	6	24	5	0	1	6	3	20	2	25	0	0	2	2	57
% Trucks	2.6	3.4	3.8	3.4	4.5	0	1.7	3.4	5.6	3.6	3.1	3.7	0	0	5.9	2.6	3.5

Data Collection Group

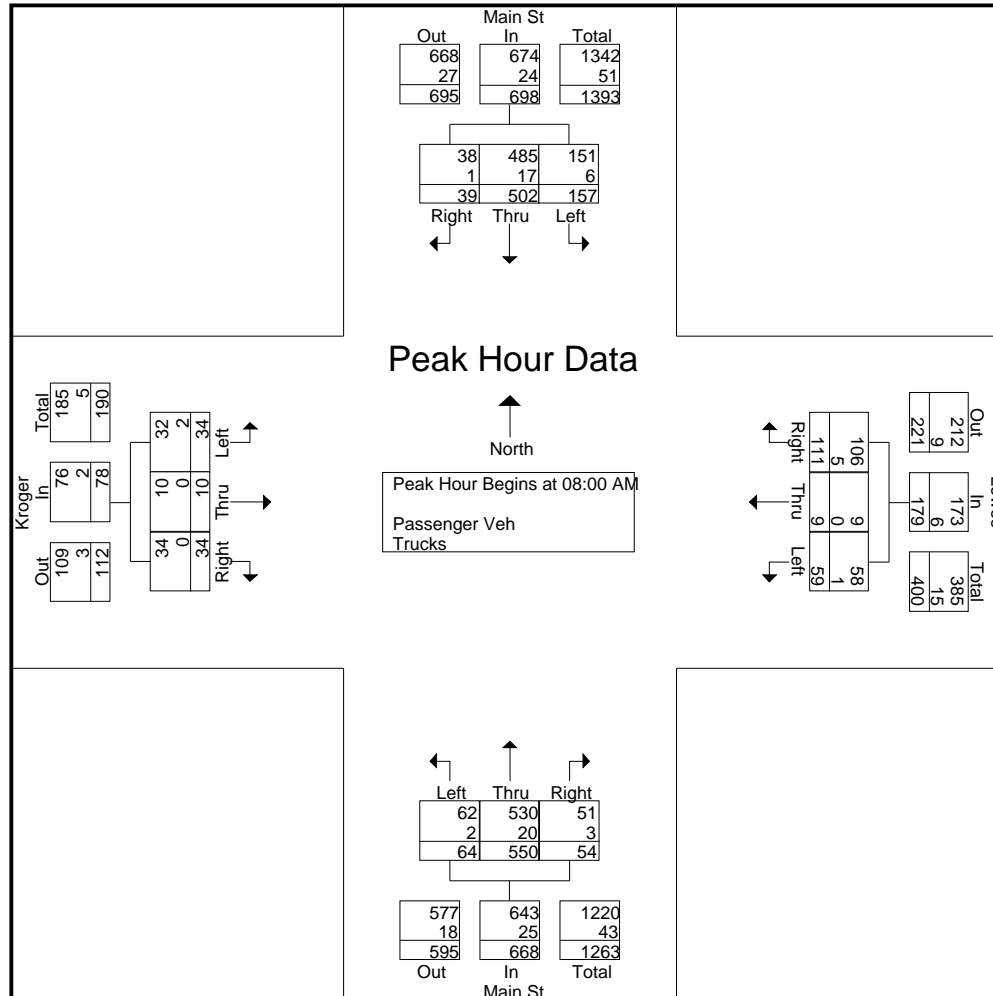
LSmith@DataCollectionGroup.net

File Name : Main and Lowes

Site Code :

Start Date : 3/31/2022

Page No : 3



Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Main and Lowes

Site Code :

Start Date : 3/31/2022

Page No : 4

Start Time	Main St From North				Lowes From East				Main St From South				Kroger From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	24	170	34	228	36	6	32	74	14	167	55	236	39	4	40	83	621
04:15 PM	22	208	43	273	37	8	34	79	24	168	36	228	33	4	22	59	639
04:30 PM	16	173	47	236	53	7	22	82	14	173	47	234	27	7	28	62	614
04:45 PM	27	212	51	290	40	12	17	69	15	190	41	246	32	6	24	62	667
Total Volume	89	763	175	1027	166	33	105	304	67	698	179	944	131	21	114	266	2541
% App. Total	8.7	74.3	17		54.6	10.9	34.5		7.1	73.9	19		49.2	7.9	42.9		
PHF	.824	.900	.858	.885	.783	.688	.772	.927	.698	.918	.814	.959	.840	.750	.713	.801	.952
Passenger Veh	88	746	174	1008	166	33	105	304	67	686	179	932	131	21	114	266	2510
% Passenger Veh	98.9	97.8	99.4	98.1	100	100	100	100	100	98.3	100	98.7	100	100	100	100	98.8
Trucks	1	17	1	19	0	0	0	0	0	12	0	12	0	0	0	0	31
% Trucks	1.1	2.2	0.6	1.9	0	0	0	0	0	1.7	0	1.3	0	0	0	0	1.2

Data Collection Group

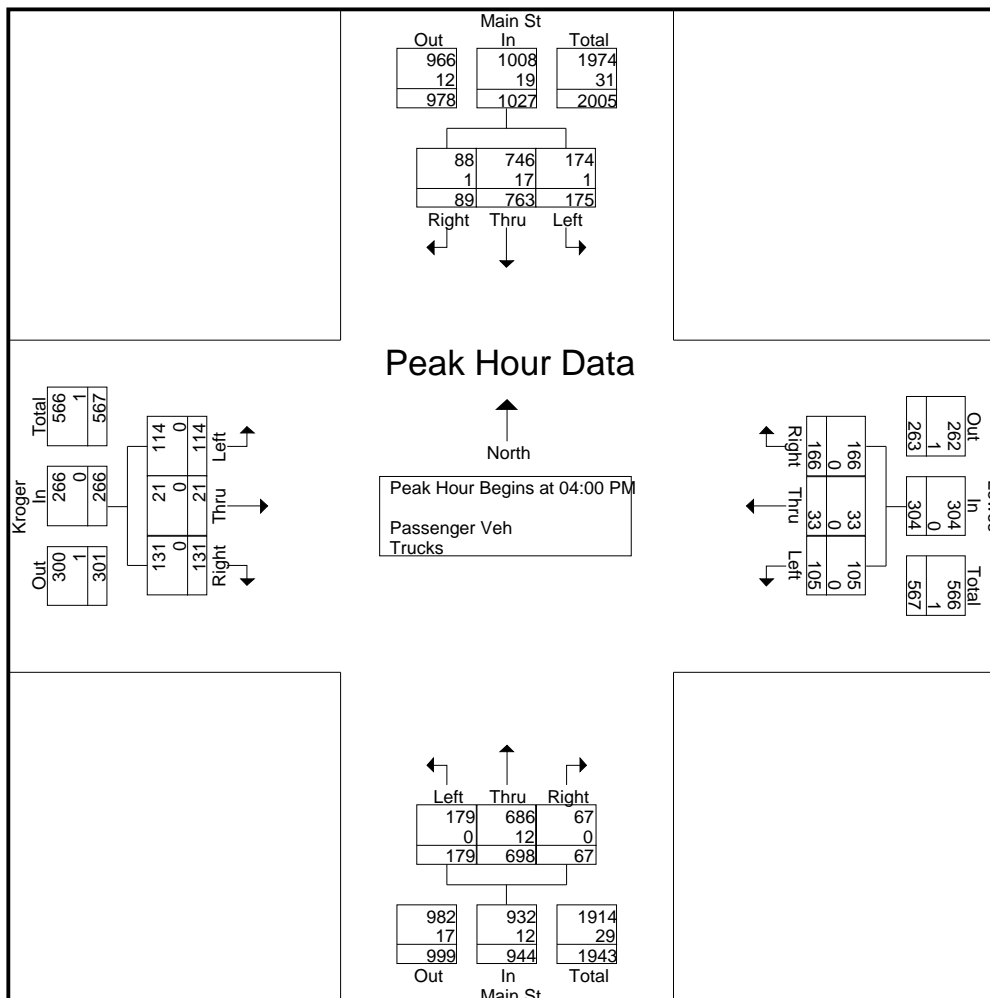
LSmith@DataCollectionGroup.net

File Name : Main and Lowes

Site Code :

Start Date : 3/31/2022

Page No : 5



Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Main and Big Lots

Site Code :

Start Date : 3/31/2022

Page No : 1

Groups Printed- Passenger Veh - Trucks

Start Time	Main St From North				Big Lots From East				Main St From South				KFC From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
07:00 AM	0	74	10	84	3	0	13	16	23	125	0	148	0	0	0	0	248
07:15 AM	0	87	12	99	2	0	7	9	21	144	0	165	0	0	0	0	273
07:30 AM	0	97	17	114	6	0	15	21	13	141	1	155	0	0	0	0	290
07:45 AM	0	130	26	156	7	0	10	17	22	191	0	213	0	0	1	1	387
Total	0	388	65	453	18	0	45	63	79	601	1	681	0	0	1	1	1198
08:00 AM	0	133	12	145	6	1	22	29	28	160	0	188	0	0	0	0	362
08:15 AM	0	130	19	149	7	0	21	28	30	154	0	184	0	0	0	0	361
08:30 AM	0	149	22	171	9	0	18	27	22	171	0	193	0	0	0	0	391
08:45 AM	0	147	27	174	6	0	17	23	33	196	1	230	0	0	0	0	427
Total	0	559	80	639	28	1	78	107	113	681	1	795	0	0	0	0	1541
04:00 PM	2	290	34	326	9	0	50	59	27	246	8	281	1	1	1	3	669
04:15 PM	4	279	38	321	18	1	45	64	36	207	3	246	2	0	4	6	637
04:30 PM	7	267	30	304	15	0	47	62	33	259	3	295	2	1	0	3	664
04:45 PM	9	255	31	295	21	1	46	68	34	257	4	295	0	0	0	0	658
Total	22	1091	133	1246	63	2	188	253	130	969	18	1117	5	2	5	12	2628
05:00 PM	7	248	35	290	23	0	42	65	32	224	5	261	0	1	5	6	622
05:15 PM	4	227	39	270	22	0	44	66	43	213	2	258	0	0	2	2	596
05:30 PM	6	225	53	284	17	0	33	50	37	197	5	239	0	0	1	1	574
05:45 PM	6	182	42	230	16	0	55	71	43	200	3	246	2	1	2	5	552
Total	23	882	169	1074	78	0	174	252	155	834	15	1004	2	2	10	14	2344
Grand Total	45	2920	447	3412	187	3	485	675	477	3085	35	3597	7	4	16	27	7711
Apprch %	1.3	85.6	13.1		27.7	0.4	71.9		13.3	85.8	1		25.9	14.8	59.3		
Total %	0.6	37.9	5.8	44.2	2.4	0	6.3	8.8	6.2	40	0.5	46.6	0.1	0.1	0.2	0.4	
Passenger Veh	45	2866	445	3356	185	3	484	672	476	3029	34	3539	7	4	15	26	7593
% Passenger Veh	100	98.2	99.6	98.4	98.9	100	99.8	99.6	99.8	98.2	97.1	98.4	100	100	93.8	96.3	98.5
Trucks	0	54	2	56	2	0	1	3	1	56	1	58	0	0	1	1	118
% Trucks	0	1.8	0.4	1.6	1.1	0	0.2	0.4	0.2	1.8	2.9	1.6	0	0	6.2	3.7	1.5

Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Main and Big Lots

Site Code :

Start Date : 3/31/2022

Page No : 2

Start Time	Main St From North				Big Lots From East				Main St From South				KFC From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	0	133	12	145	6	1	22	29	28	160	0	188	0	0	0	0	362
08:15 AM	0	130	19	149	7	0	21	28	30	154	0	184	0	0	0	0	361
08:30 AM	0	149	22	171	9	0	18	27	22	171	0	193	0	0	0	0	391
08:45 AM	0	147	27	174	6	0	17	23	33	196	1	230	0	0	0	0	427
Total Volume	0	559	80	639	28	1	78	107	113	681	1	795	0	0	0	0	1541
% App. Total	0	87.5	12.5		26.2	0.9	72.9		14.2	85.7	0.1		0	0	0		
PHF	.000	.938	.741	.918	.778	.250	.886	.922	.856	.869	.250	.864	.000	.000	.000	.000	.902
Passenger Veh	0	540	80	620	27	1	78	106	113	659	1	773	0	0	0	0	1499
% Passenger Veh	0	96.6	100	97.0	96.4	100	100	99.1	100	96.8	100	97.2	0	0	0	0	97.3
Trucks	0	19	0	19	1	0	0	1	0	22	0	22	0	0	0	0	42
% Trucks	0	3.4	0	3.0	3.6	0	0	0.9	0	3.2	0	2.8	0	0	0	0	2.7

Data Collection Group

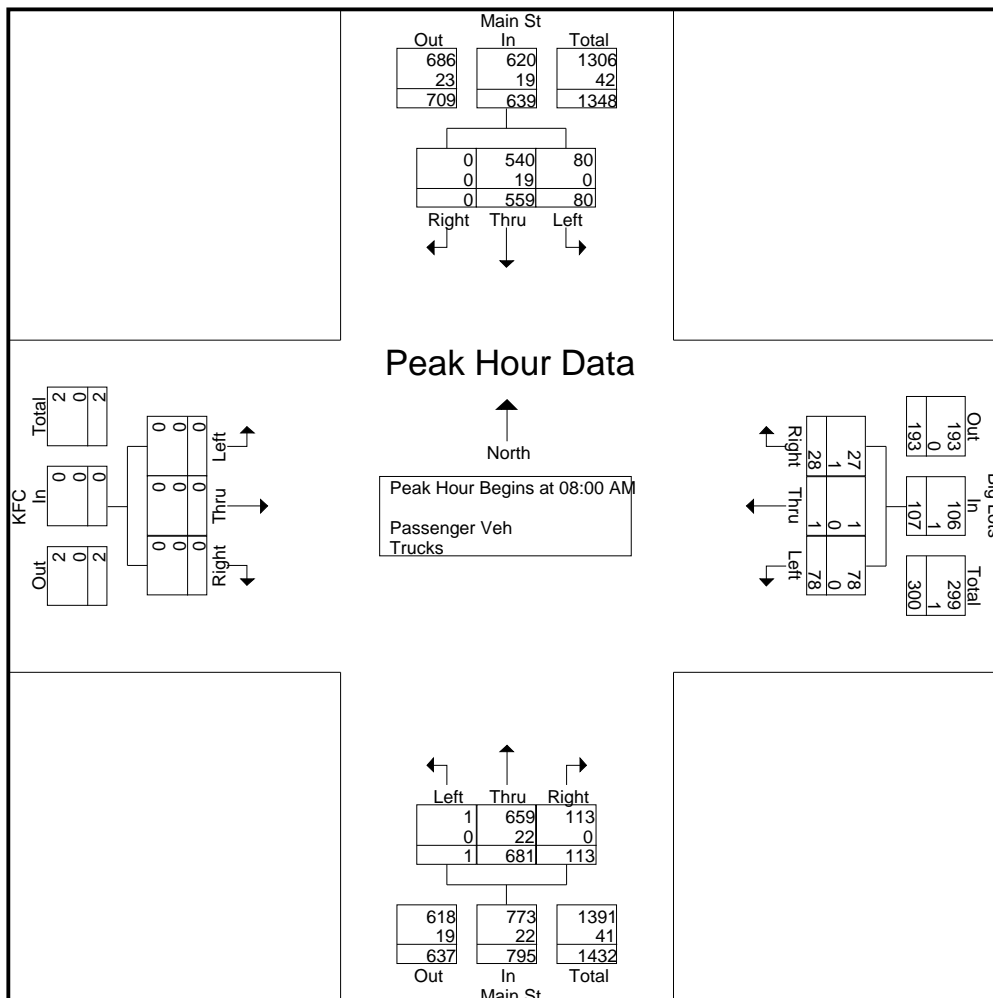
LSmith@DataCollectionGroup.net

File Name : Main and Big Lots

Site Code :

Start Date : 3/31/2022

Page No : 3



Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Main and Big Lots

Site Code :

Start Date : 3/31/2022

Page No : 4

Start Time	Main St From North				Big Lots From East				Main St From South				KFC From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	2	290	34	326	9	0	50	59	27	246	8	281	1	1	1	3	669
04:15 PM	4	279	38	321	18	1	45	64	36	207	3	246	2	0	4	6	637
04:30 PM	7	267	30	304	15	0	47	62	33	259	3	295	2	1	0	3	664
04:45 PM	9	255	31	295	21	1	46	68	34	257	4	295	0	0	0	0	658
Total Volume	22	1091	133	1246	63	2	188	253	130	969	18	1117	5	2	5	12	2628
% App. Total	1.8	87.6	10.7		24.9	0.8	74.3		11.6	86.8	1.6		41.7	16.7	41.7		
PHF	.611	.941	.875	.956	.750	.500	.940	.930	.903	.935	.563	.947	.625	.500	.313	.500	.982
Passenger Veh	22	1077	132	1231	63	2	188	253	130	956	18	1104	5	2	5	12	2600
% Passenger Veh	100	98.7	99.2	98.8	100	100	100	100	100	98.7	100	98.8	100	100	100	100	98.9
Trucks	0	14	1	15	0	0	0	0	0	13	0	13	0	0	0	0	28
% Trucks	0	1.3	0.8	1.2	0	0	0	0	0	1.3	0	1.2	0	0	0	0	1.1

Data Collection Group

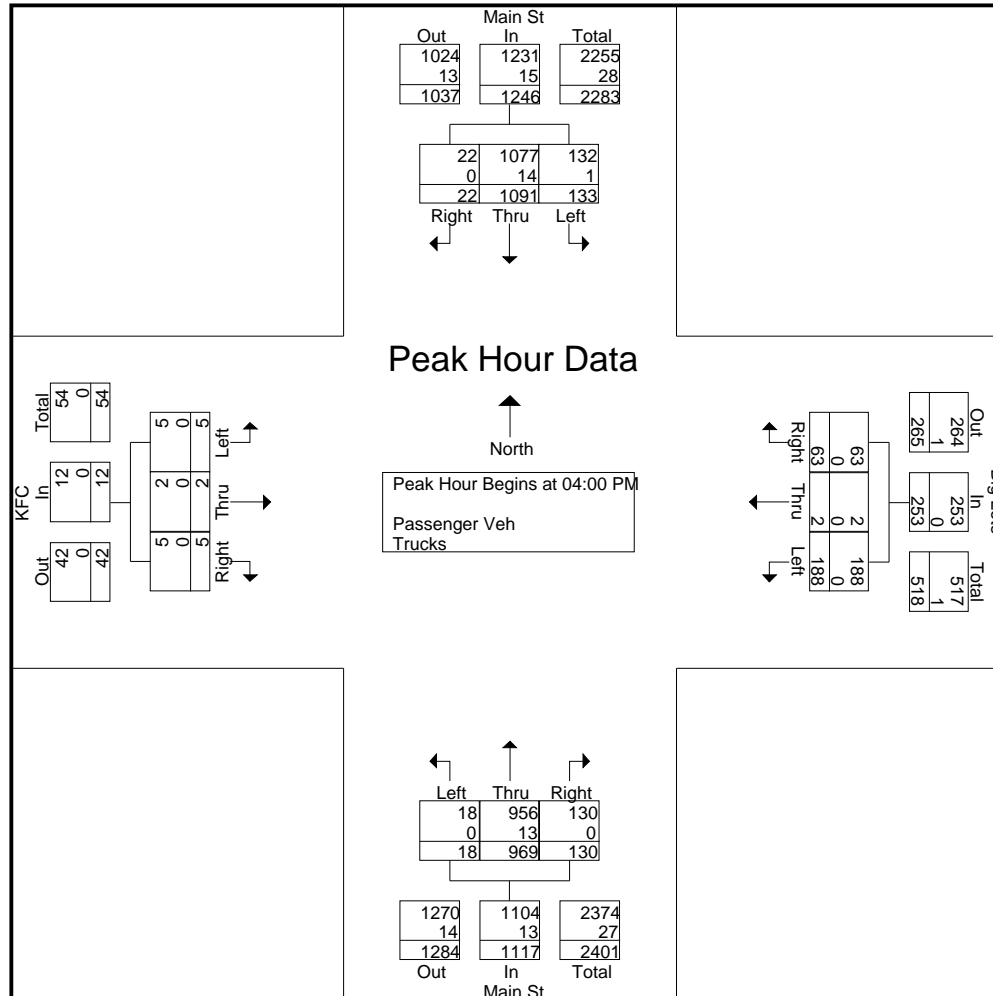
LSmith@DataCollectionGroup.net

File Name : Main and Big Lots

Site Code :

Start Date : 3/31/2022

Page No : 5



Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Main and Constance

Site Code :

Start Date : 3/31/2022

Page No : 1

Groups Printed- Passengrer Veh - Trucks

Start Time	Main St From North				Constance Rd From East				Main St From South				Constance Rd From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
07:00 AM	12	47	31	90	48	36	17	101	9	73	5	87	2	51	32	85	363
07:15 AM	8	53	26	87	41	34	16	91	10	81	1	92	0	48	37	85	355
07:30 AM	23	61	30	114	44	32	22	98	7	78	2	87	2	43	38	83	382
07:45 AM	17	81	30	128	50	43	34	127	11	100	6	117	0	44	55	99	471
Total	60	242	117	419	183	145	89	417	37	332	14	383	4	186	162	352	1571
08:00 AM	29	94	27	150	55	38	21	114	9	106	1	116	2	41	40	83	463
08:15 AM	33	96	38	167	67	35	36	138	14	74	0	88	0	43	48	91	484
08:30 AM	41	71	50	162	66	48	25	139	16	83	4	103	6	55	41	102	506
08:45 AM	29	89	31	149	72	48	31	151	7	113	11	131	0	38	60	98	529
Total	132	350	146	628	260	169	113	542	46	376	16	438	8	177	189	374	1982
04:00 PM	64	156	74	294	96	64	31	191	11	118	2	131	3	53	96	152	768
04:15 PM	78	152	100	330	67	52	19	138	22	116	7	145	10	53	70	133	746
04:30 PM	73	174	86	333	97	53	31	181	14	143	7	164	8	52	78	138	816
04:45 PM	72	142	81	295	98	55	15	168	17	141	4	162	4	46	85	135	760
Total	287	624	341	1252	358	224	96	678	64	518	20	602	25	204	329	558	3090
05:00 PM	72	142	69	283	80	50	20	150	17	126	7	150	5	57	60	122	705
05:15 PM	54	134	76	264	90	70	18	178	13	98	3	114	5	41	66	112	668
05:30 PM	60	128	70	258	92	46	21	159	18	125	1	144	4	39	51	94	655
05:45 PM	62	123	67	252	101	53	23	177	16	81	3	100	4	34	70	108	637
Total	248	527	282	1057	363	219	82	664	64	430	14	508	18	171	247	436	2665
Grand Total	727	1743	886	3356	1164	757	380	2301	211	1656	64	1931	55	738	927	1720	9308
Apprch %	21.7	51.9	26.4		50.6	32.9	16.5		10.9	85.8	3.3		3.2	42.9	53.9		
Total %	7.8	18.7	9.5	36.1	12.5	8.1	4.1	24.7	2.3	17.8	0.7	20.7	0.6	7.9	10	18.5	
Passengrer Veh	717	1709	875	3301	1152	722	360	2234	197	1622	61	1880	48	711	917	1676	9091
% Passengrer Veh	98.6	98	98.8	98.4	99	95.4	94.7	97.1	93.4	97.9	95.3	97.4	87.3	96.3	98.9	97.4	97.7
Trucks	10	34	11	55	12	35	20	67	14	34	3	51	7	27	10	44	217
% Trucks	1.4	2	1.2	1.6	1	4.6	5.3	2.9	6.6	2.1	4.7	2.6	12.7	3.7	1.1	2.6	2.3

Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Main and Constance

Site Code :

Start Date : 3/31/2022

Page No : 2

Start Time	Main St From North				Constance Rd From East				Main St From South				Constance Rd From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	29	94	27	150	55	38	21	114	9	106	1	116	2	41	40	83	463
08:15 AM	33	96	38	167	67	35	36	138	14	74	0	88	0	43	48	91	484
08:30 AM	41	71	50	162	66	48	25	139	16	83	4	103	6	55	41	102	506
08:45 AM	29	89	31	149	72	48	31	151	7	113	11	131	0	38	60	98	529
Total Volume	132	350	146	628	260	169	113	542	46	376	16	438	8	177	189	374	1982
% App. Total	21	55.7	23.2		48	31.2	20.8		10.5	85.8	3.7		2.1	47.3	50.5		
PHF	.805	.911	.730	.940	.903	.880	.785	.897	.719	.832	.364	.836	.333	.805	.788	.917	.937
Passenger Veh	129	337	139	605	251	152	106	509	39	363	15	417	6	166	186	358	1889
% Passenger Veh	97.7	96.3	95.2	96.3	96.5	89.9	93.8	93.9	84.8	96.5	93.8	95.2	75.0	93.8	98.4	95.7	95.3
Trucks	3	13	7	23	9	17	7	33	7	13	1	21	2	11	3	16	93
% Trucks	2.3	3.7	4.8	3.7	3.5	10.1	6.2	6.1	15.2	3.5	6.3	4.8	25.0	6.2	1.6	4.3	4.7

Data Collection Group

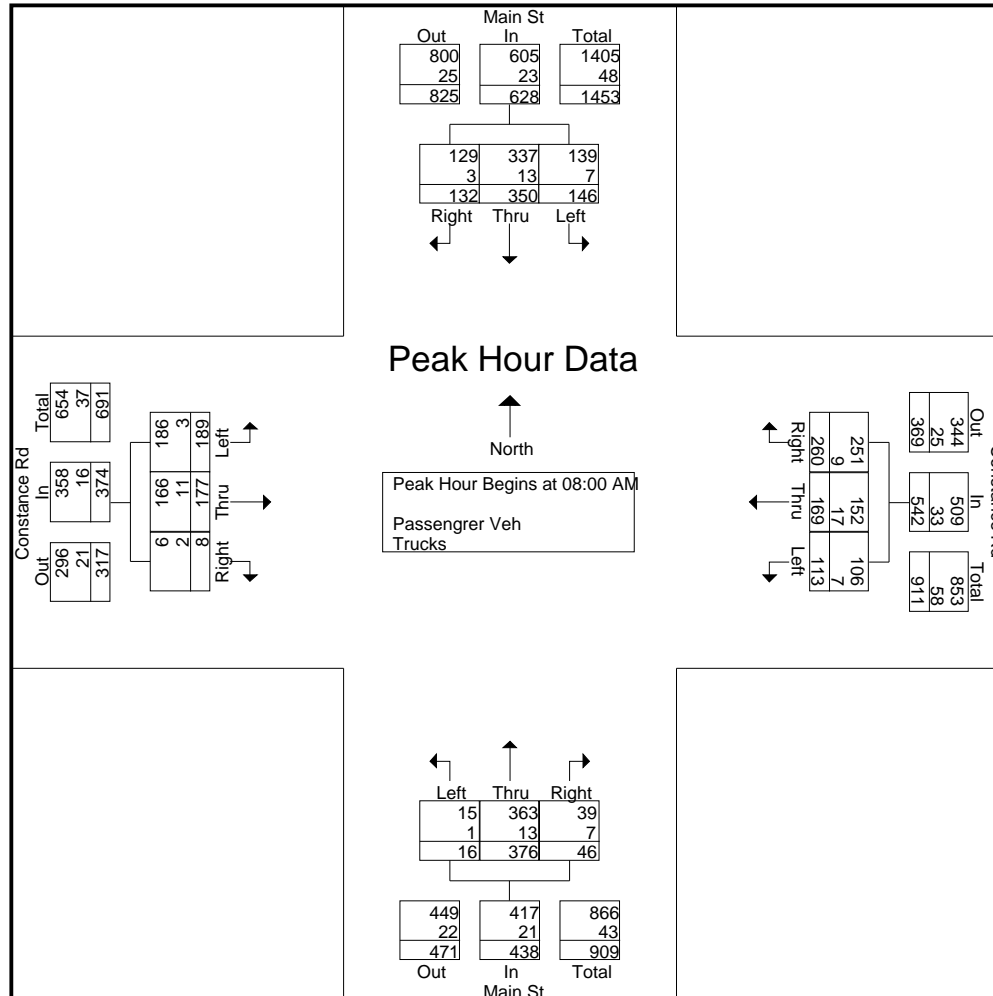
LSmith@DataCollectionGroup.net

File Name : Main and Constance

Site Code :

Start Date : 3/31/2022

Page No : 3



Data Collection Group

LSmith@DataCollectionGroup.net

File Name : Main and Constance

Site Code :

Start Date : 3/31/2022

Page No : 4

Start Time	Main St From North				Constance Rd From East				Main St From South				Constance Rd From West				Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	64	156	74	294	96	64	31	191	11	118	2	131	3	53	96	152	768
04:15 PM	78	152	100	330	67	52	19	138	22	116	7	145	10	53	70	133	746
04:30 PM	73	174	86	333	97	53	31	181	14	143	7	164	8	52	78	138	816
04:45 PM	72	142	81	295	98	55	15	168	17	141	4	162	4	46	85	135	760
Total Volume	287	624	341	1252	358	224	96	678	64	518	20	602	25	204	329	558	3090
% App. Total	22.9	49.8	27.2		52.8	33	14.2		10.6	86	3.3		4.5	36.6	59		
PHF	.920	.897	.853	.940	.913	.875	.774	.887	.727	.906	.714	.918	.625	.962	.857	.918	.947
Passenger Veh	285	616	339	1240	356	223	90	669	62	510	20	592	23	197	327	547	3048
% Passenger Veh	99.3	98.7	99.4	99.0	99.4	99.6	93.8	98.7	96.9	98.5	100	98.3	92.0	96.6	99.4	98.0	98.6
Trucks	2	8	2	12	2	1	6	9	2	8	0	10	2	7	2	11	42
% Trucks	0.7	1.3	0.6	1.0	0.6	0.4	6.3	1.3	3.1	1.5	0	1.7	8.0	3.4	0.6	2.0	1.4

Data Collection Group

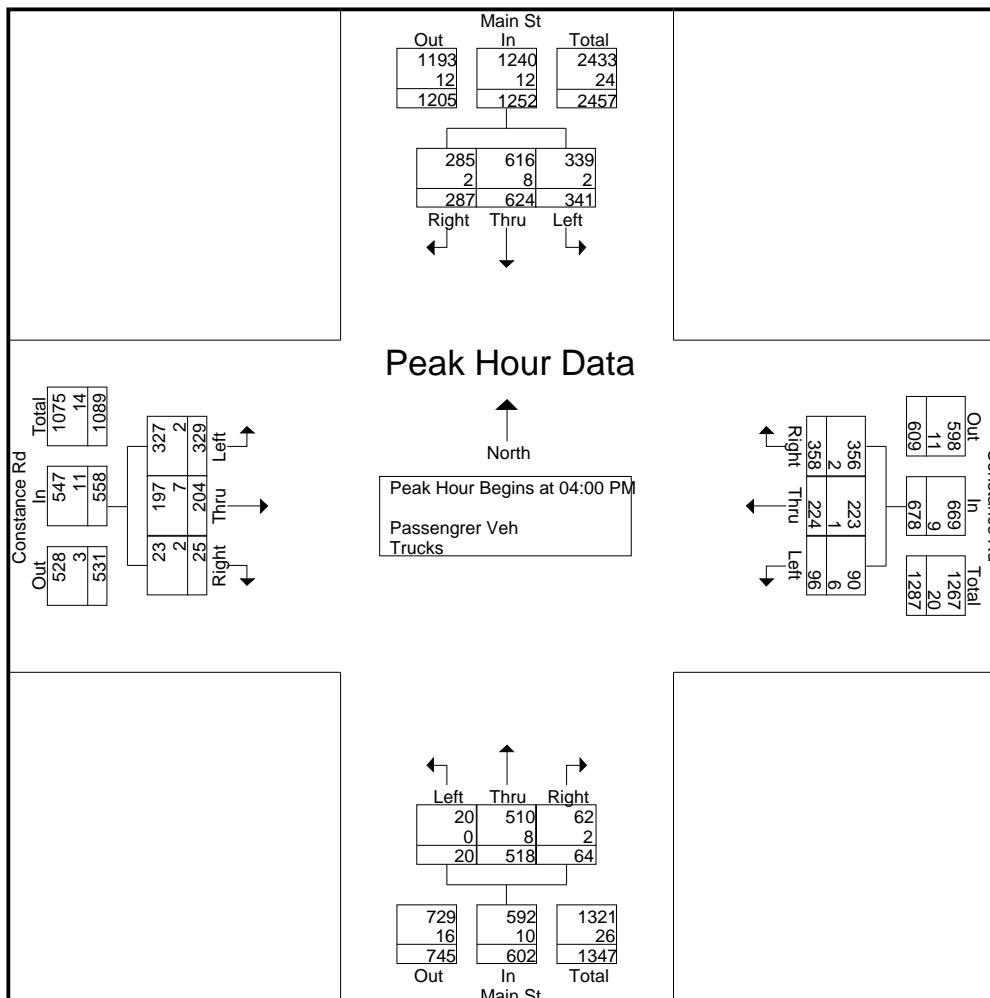
LSmith@DataCollectionGroup.net

File Name : Main and Constance

Site Code :

Start Date : 3/31/2022

Page No : 5



Data Collection Group

LSmith@DataCollectionGroup.net
757.478.6761

Site Code: 4
Station ID:
Edgewood
just east of Main St
Latitude: 36' 45.3028 North

Start Time	28-Mar-22		Tue		Wed		Thu		Fri		Sat		Sun		Week Average	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
12:00 AM	*	*	0	0	1	0	0	0	*	*	*	*	*	*	0	0
01:00	*	*	0	0	0	0	1	1	*	*	*	*	*	*	0	0
02:00	*	*	0	0	0	0	0	0	*	*	*	*	*	*	0	0
03:00	*	*	1	0	0	0	2	0	*	*	*	*	*	*	1	0
04:00	*	*	2	1	0	0	1	0	*	*	*	*	*	*	1	0
05:00	*	*	0	0	0	0	1	0	*	*	*	*	*	*	0	0
06:00	*	*	2	3	2	2	5	0	*	*	*	*	*	*	3	2
07:00	*	*	4	0	1	0	1	0	*	*	*	*	*	*	2	0
08:00	*	*	3	3	4	3	4	2	*	*	*	*	*	*	4	3
09:00	*	*	14	3	1	0	3	1	*	*	*	*	*	*	6	1
10:00	*	*	15	6	7	6	6	1	*	*	*	*	*	*	9	4
11:00	*	*	8	1	12	2	7	2	*	*	*	*	*	*	9	2
12:00 PM	*	*	10	4	12	5	13	3	*	*	*	*	*	*	12	4
01:00	*	*	10	3	13	3	17	6	*	*	*	*	*	*	13	4
02:00	*	*	15	8	6	2	9	4	*	*	*	*	*	*	10	5
03:00	*	*	10	2	9	3	11	2	*	*	*	*	*	*	10	2
04:00	*	*	9	4	8	6	14	5	*	*	*	*	*	*	10	5
05:00	*	*	9	4	12	6	9	2	*	*	*	*	*	*	10	4
06:00	*	*	11	4	10	2	8	3	*	*	*	*	*	*	10	3
07:00	*	*	9	4	9	2	4	0	*	*	*	*	*	*	7	2
08:00	*	*	10	0	8	6	11	1	*	*	*	*	*	*	10	2
09:00	*	*	12	1	4	1	7	0	*	*	*	*	*	*	8	1
10:00	*	*	5	2	2	0	3	0	*	*	*	*	*	*	3	1
11:00	*	*	2	1	1	1	1	0	*	*	*	*	*	*	1	1
Lane Day	0	0	161	54	122	50	138	33	0	0	0	0	0	0	139	46
AM Peak	-	-	10:00	10:00	11:00	10:00	11:00	08:00	-	-	-	-	-	-	10:00	10:00
Vol.	-	-	15	6	12	6	7	2	-	-	-	-	-	-	9	4
PM Peak	-	-	14:00	14:00	13:00	16:00	13:00	13:00	-	-	-	-	-	-	13:00	14:00
Vol.	-	-	15	8	13	6	17	6	-	-	-	-	-	-	13	5

Comb. Total 0 215 172 171 0 0 0 185

Data Collection Group

LSmith@DataCollectionGroup.net
757.478.6761

Site Code: 1
Station ID:
Main St NB
bw Edgewood and Barton Ford
Latitude: 0' 0.0000 Undefined

Start Time	Mon 18-Apr-22	Tue	Wed	Thu	Fri	Average Day	Sat	Sun	Week Average
12:00 AM	*	*	58	62	*	60	*	*	60
01:00	*	*	34	41	*	38	*	*	38
02:00	*	*	31	27	*	29	*	*	29
03:00	*	*	30	22	*	26	*	*	26
04:00	*	*	66	82	*	74	*	*	74
05:00	*	*	194	186	*	190	*	*	190
06:00	*	*	320	339	*	330	*	*	330
07:00	*	*	580	548	*	564	*	*	564
08:00	*	*	698	654	*	676	*	*	676
09:00	*	*	768	828	*	798	*	*	798
10:00	*	*	828	847	*	838	*	*	838
11:00	*	*	958	928	*	943	*	*	943
12:00 PM	*	944	1076	1098	*	1039	*	*	1039
01:00	*	1114	1066	1074	*	1085	*	*	1085
02:00	*	1078	1046	1090	*	1071	*	*	1071
03:00	*	1064	1058	1188	*	1103	*	*	1103
04:00	*	1110	1102	1216	*	1143	*	*	1143
05:00	*	1136	1236	1228	*	1200	*	*	1200
06:00	*	884	924	988	*	932	*	*	932
07:00	*	762	798	853	*	804	*	*	804
08:00	*	528	586	618	*	577	*	*	577
09:00	*	364	382	425	*	390	*	*	390
10:00	*	203	208	216	*	209	*	*	209
11:00	*	95	113	128	*	112	*	*	112
Total	0	9282	14160	14686	0	14231	0	0	14231
% Avg. WkDay	0.0%	65.2%	99.5%	103.2%	0.0%	100.0%			
% Avg. Week	0.0%	65.2%	99.5%	103.2%	0.0%	100.0%	0.0%	0.0%	
AM Peak	-	-	11:00	11:00	-	11:00	-	-	11:00
Vol.	-	-	958	928	-	943	-	-	943
PM Peak	-	17:00	17:00	17:00	-	17:00	-	-	17:00
Vol.	-	1136	1236	1228	-	1200	-	-	1200
Total	0	9282	14160	14686	0	14231	0	0	14231

Data Collection Group

LSmith@DataCollectionGroup.net
757.478.6761

Site Code: 8
Station ID:
Main St
just south of Edgewood Ave
Latitude: 0' 0.0000 Undefined

Start Time	Mon 28-Mar-22	Tue	Wed	Thu	Fri	Average Day	Sat	Sun	Week Average
12:00 AM	*	62	52	62	*	59	*	*	59
01:00	*	23	26	33	*	27	*	*	27
02:00	*	24	26	30	*	27	*	*	27
03:00	*	20	26	47	*	31	*	*	31
04:00	*	54	65	64	*	61	*	*	61
05:00	*	133	132	128	*	131	*	*	131
06:00	*	255	255	269	*	260	*	*	260
07:00	*	479	492	503	*	491	*	*	491
08:00	*	714	664	737	*	705	*	*	705
09:00	*	830	825	968	*	874	*	*	874
10:00	*	898	813	940	*	884	*	*	884
11:00	*	968	946	1142	*	1019	*	*	1019
12:00 PM	*	1084	1072	1070	*	1075	*	*	1075
01:00	*	954	932	1034	*	973	*	*	973
02:00	*	922	936	1012	*	957	*	*	957
03:00	*	1092	1088	1168	*	1116	*	*	1116
04:00	*	1148	1124	1071	*	1114	*	*	1114
05:00	*	1034	1024	905	*	988	*	*	988
06:00	*	842	849	714	*	802	*	*	802
07:00	*	636	669	542	*	616	*	*	616
08:00	*	435	431	386	*	417	*	*	417
09:00	*	226	269	272	*	256	*	*	256
10:00	*	133	130	146	*	136	*	*	136
11:00	*	70	101	100	*	90	*	*	90
Total	0	13036	12947	13343	0	13109	0	0	13109
<hr/>									
% Avg. WkDay	0.0%	99.4%	98.8%	101.8%	0.0%	100.0%			
% Avg. Week	0.0%	99.4%	98.8%	101.8%	0.0%	100.0%	0.0%	0.0%	
<hr/>									
AM Peak	-	11:00	11:00	11:00	-	11:00	-	-	11:00
Vol.	-	968	946	1142	-	1019	-	-	1019
<hr/>									
PM Peak	-	16:00	16:00	15:00	-	15:00	-	-	15:00
Vol.	-	1148	1124	1168	-	1116	-	-	1116
Total	0	13036	12947	13343	0	13109	0	0	13109

Data Collection Group

LSmith@DataCollectionGroup.net
757.478.6761

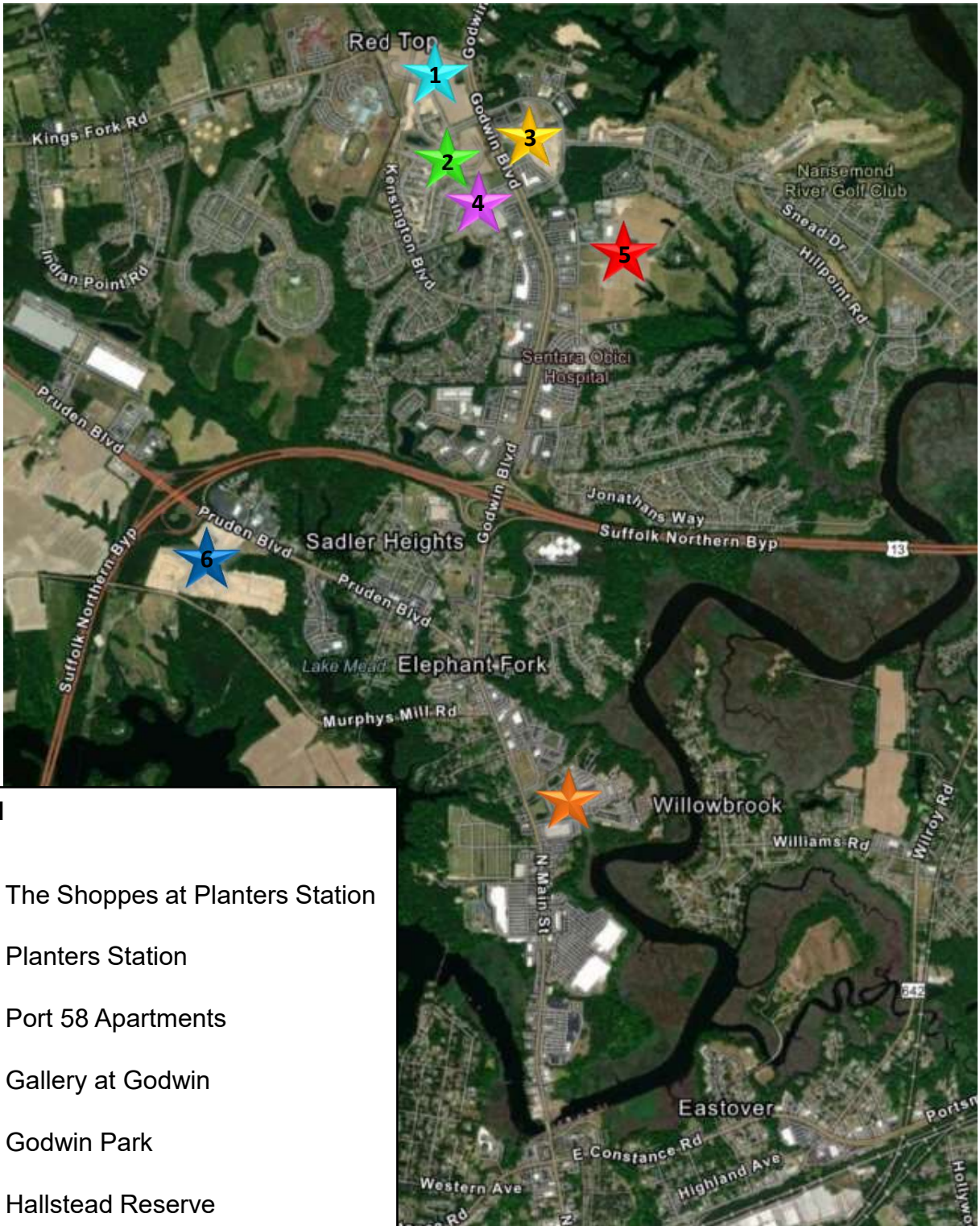
Site Code:
Station ID:
Main St SB
bw Edgewood and Barton Ford
Latitude: 0' 0.0000 Undefined

Start Time	Mon 18-Apr-22	Tue	Wed	Thu	Fri	Average Day	Sat	Sun	Week Average
12:00 AM	*	*	50	54	*	52	*	*	52
01:00	*	*	36	35	*	36	*	*	36
02:00	*	*	34	23	*	28	*	*	28
03:00	*	*	32	26	*	29	*	*	29
04:00	*	*	48	71	*	60	*	*	60
05:00	*	*	108	110	*	109	*	*	109
06:00	*	*	284	259	*	272	*	*	272
07:00	*	*	544	540	*	542	*	*	542
08:00	*	*	788	784	*	786	*	*	786
09:00	*	*	926	929	*	928	*	*	928
10:00	*	*	944	923	*	934	*	*	934
11:00	*	*	1078	975	*	1026	*	*	1026
12:00 PM	*	*	1057	1140	*	1098	*	*	1098
01:00	*	960	990	1058	*	1003	*	*	1003
02:00	*	988	1006	1087	*	1027	*	*	1027
03:00	*	1132	1174	1259	*	1188	*	*	1188
04:00	*	1144	1163	1232	*	1180	*	*	1180
05:00	*	1070	1116	1136	*	1107	*	*	1107
06:00	*	845	876	954	*	892	*	*	892
07:00	*	676	692	770	*	713	*	*	713
08:00	*	420	507	499	*	475	*	*	475
09:00	*	274	317	286	*	292	*	*	292
10:00	*	145	146	158	*	150	*	*	150
11:00	*	76	78	123	*	92	*	*	92
Total	0	7730	13994	14431	0	14019	0	0	14019
% Avg. WkDay	0.0%	55.1%	99.8%	102.9%	0.0%	100.0%			
% Avg. Week	0.0%	55.1%	99.8%	102.9%	0.0%	100.0%	0.0%	0.0%	
AM Peak	-	-	11:00	11:00	-	11:00	-	-	11:00
Vol.	-	-	1078	975	-	1026	-	-	1026
PM Peak	-	16:00	15:00	15:00	-	15:00	-	-	15:00
Vol.	-	1144	1174	1259	-	1188	-	-	1188
Total	0	7730	13994	14431	0	14019	0	0	14019








C Approved Developments

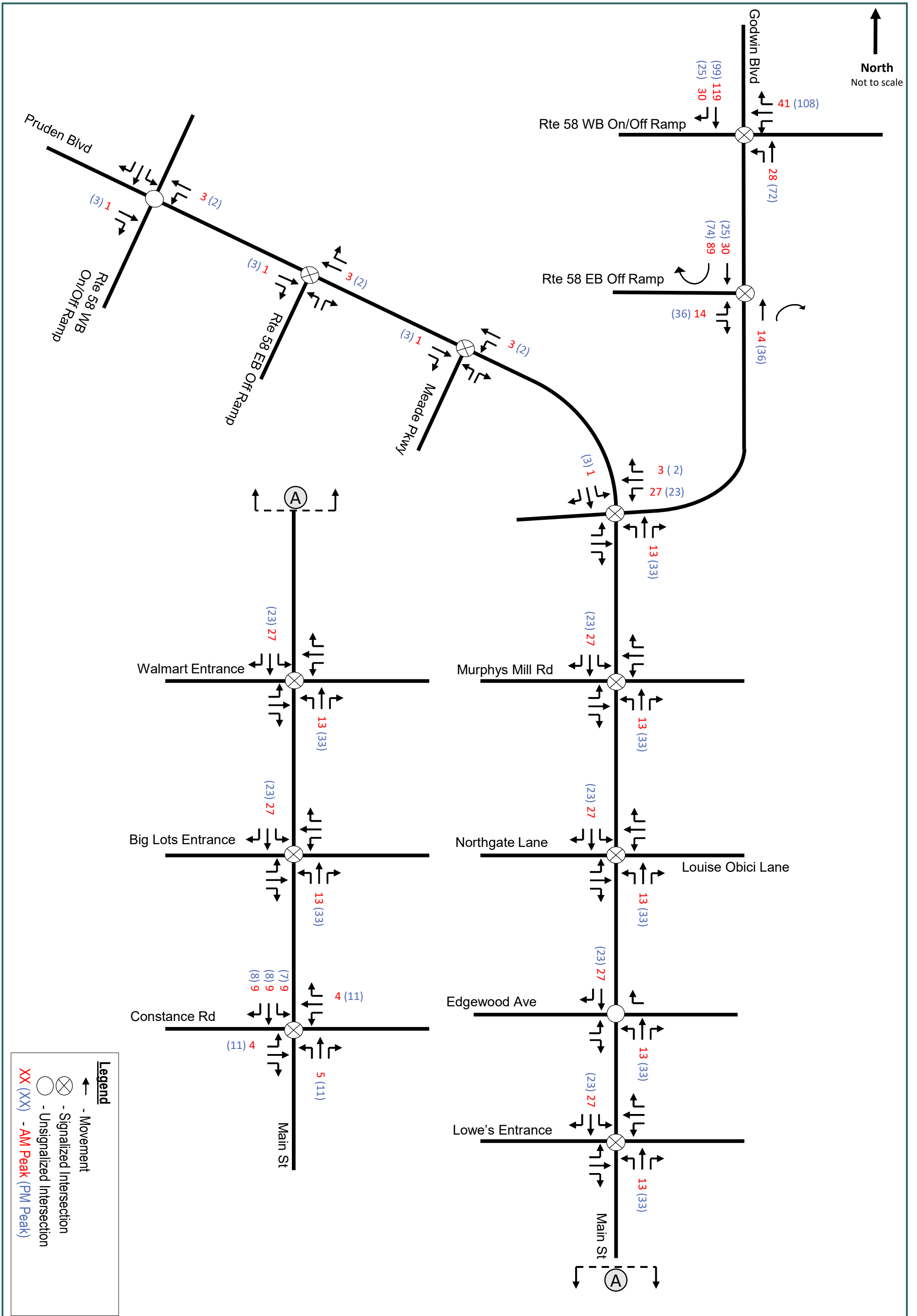
Approved Development Locations

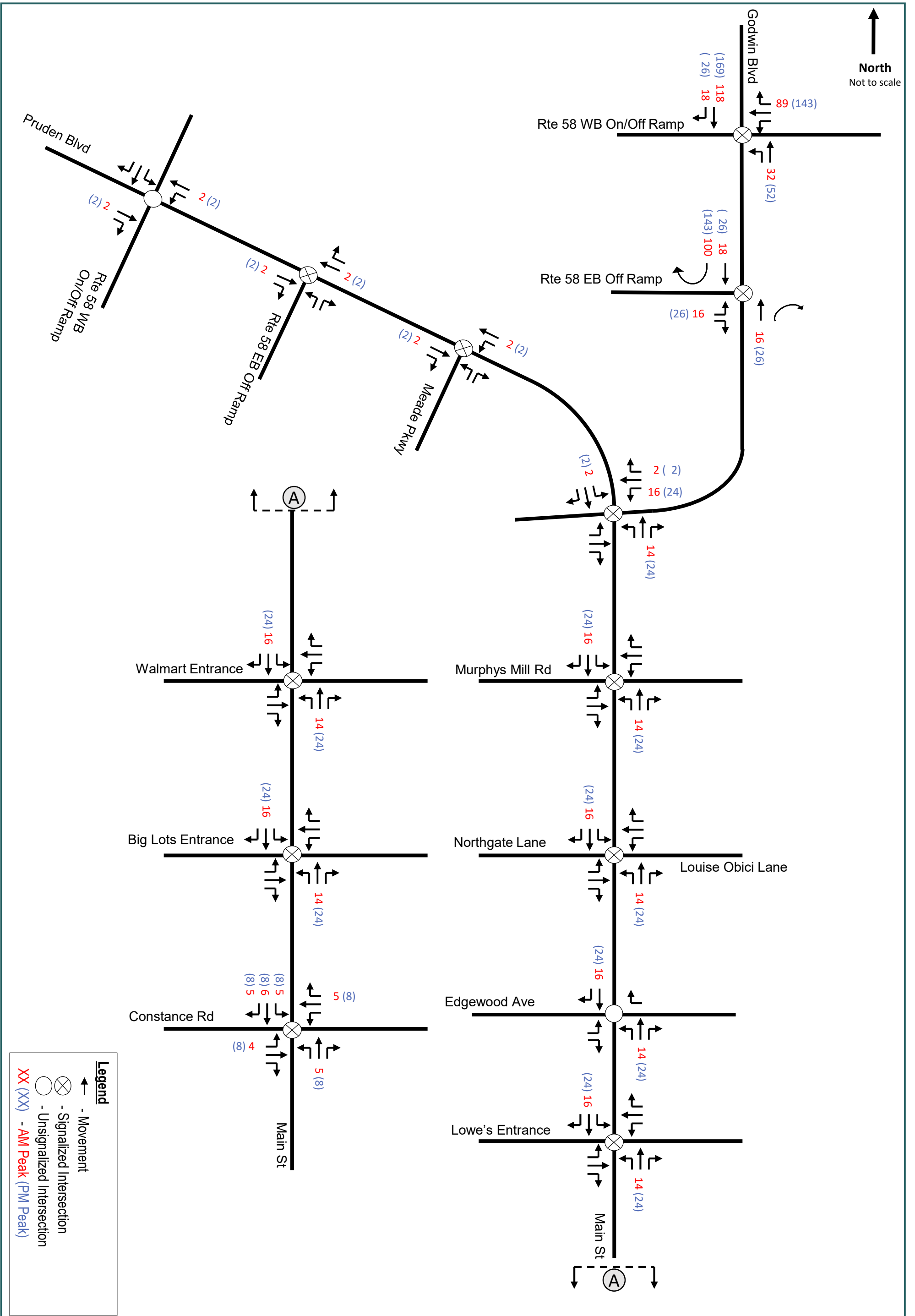
North
Not to Scale

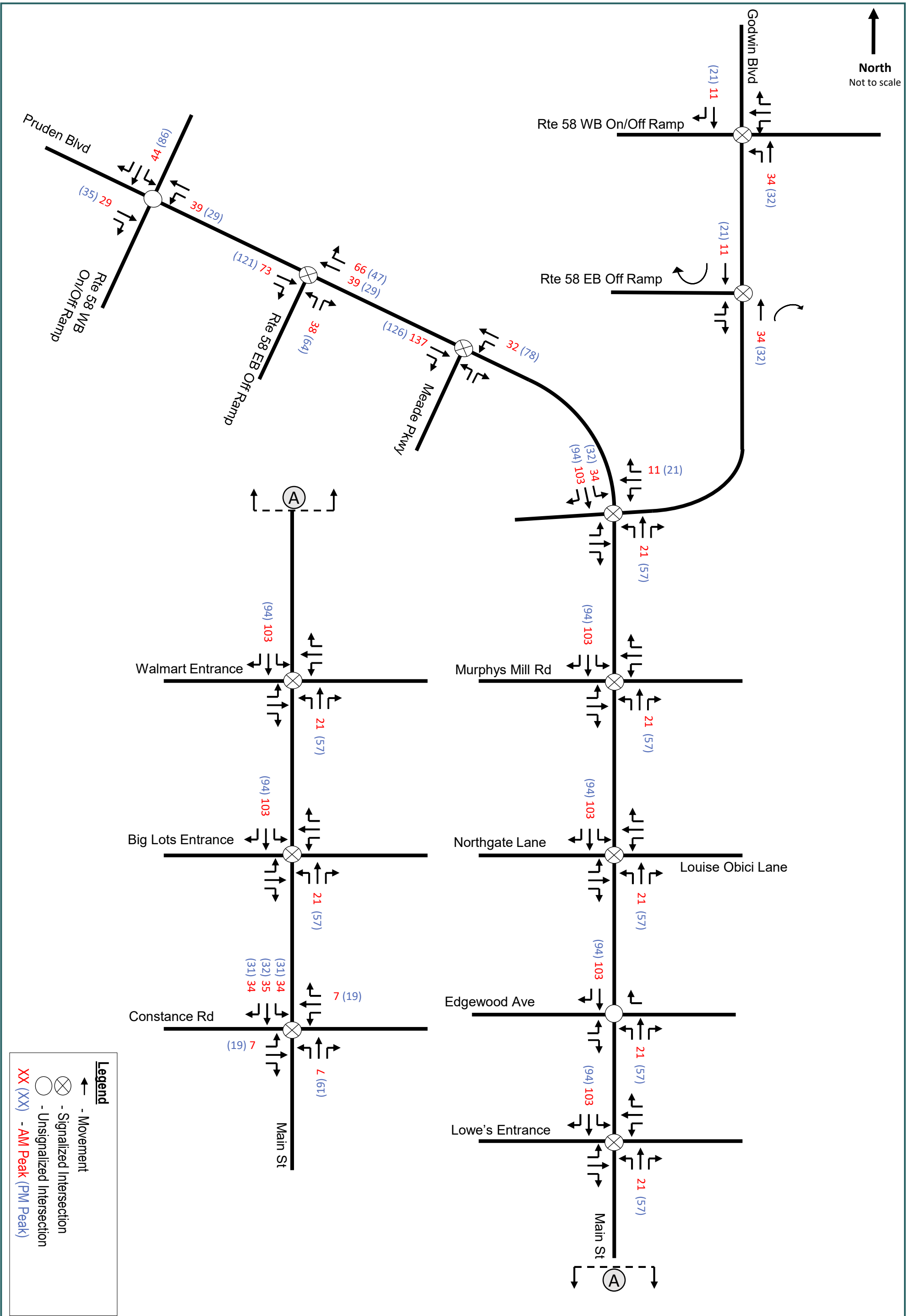


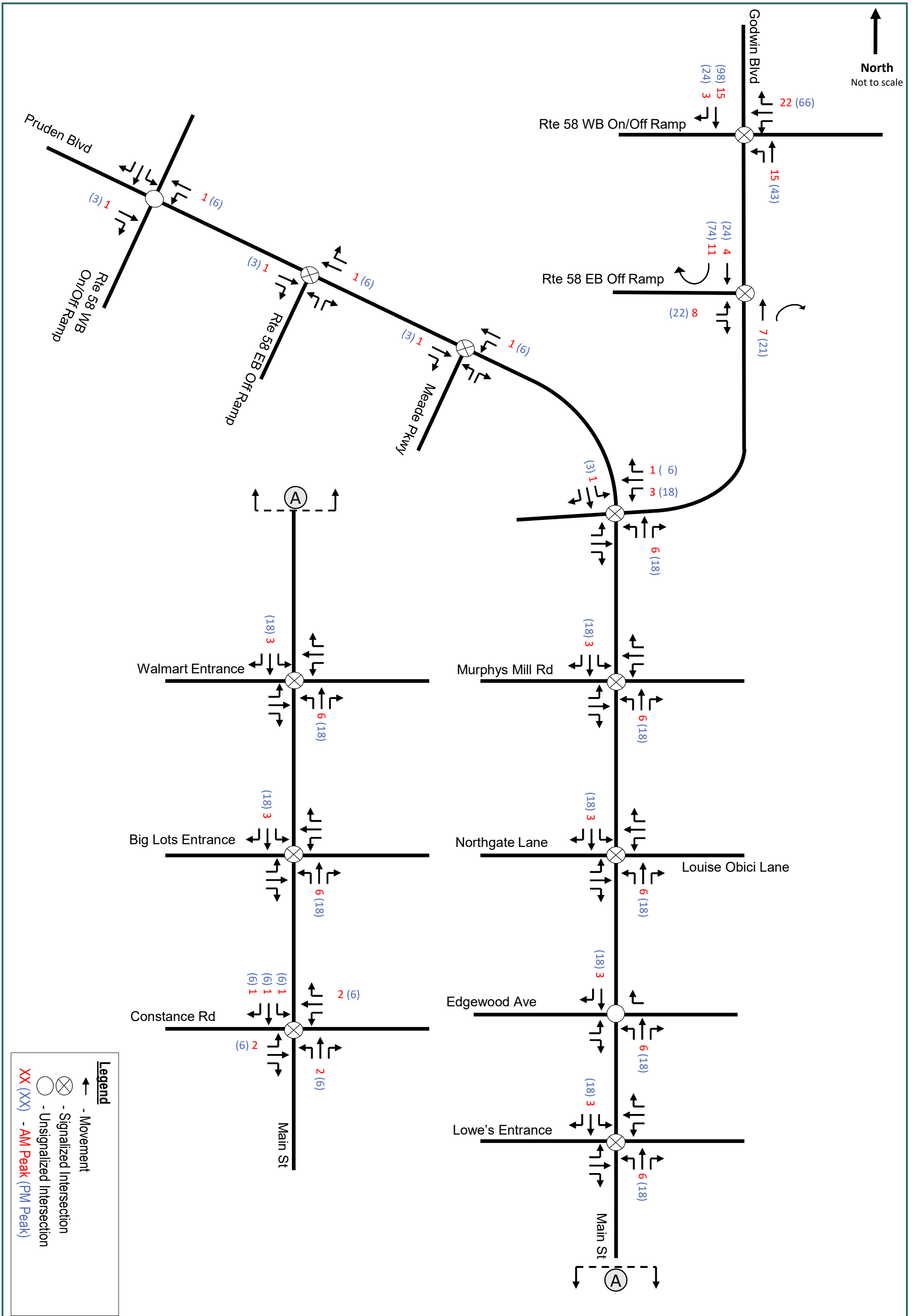
Legend

-  - The Shoppes at Planters Station
-  - Planters Station
-  - Port 58 Apartments
-  - Gallery at Godwin
-  - Godwin Park
-  - Hallstead Reserve
-  - Site Location



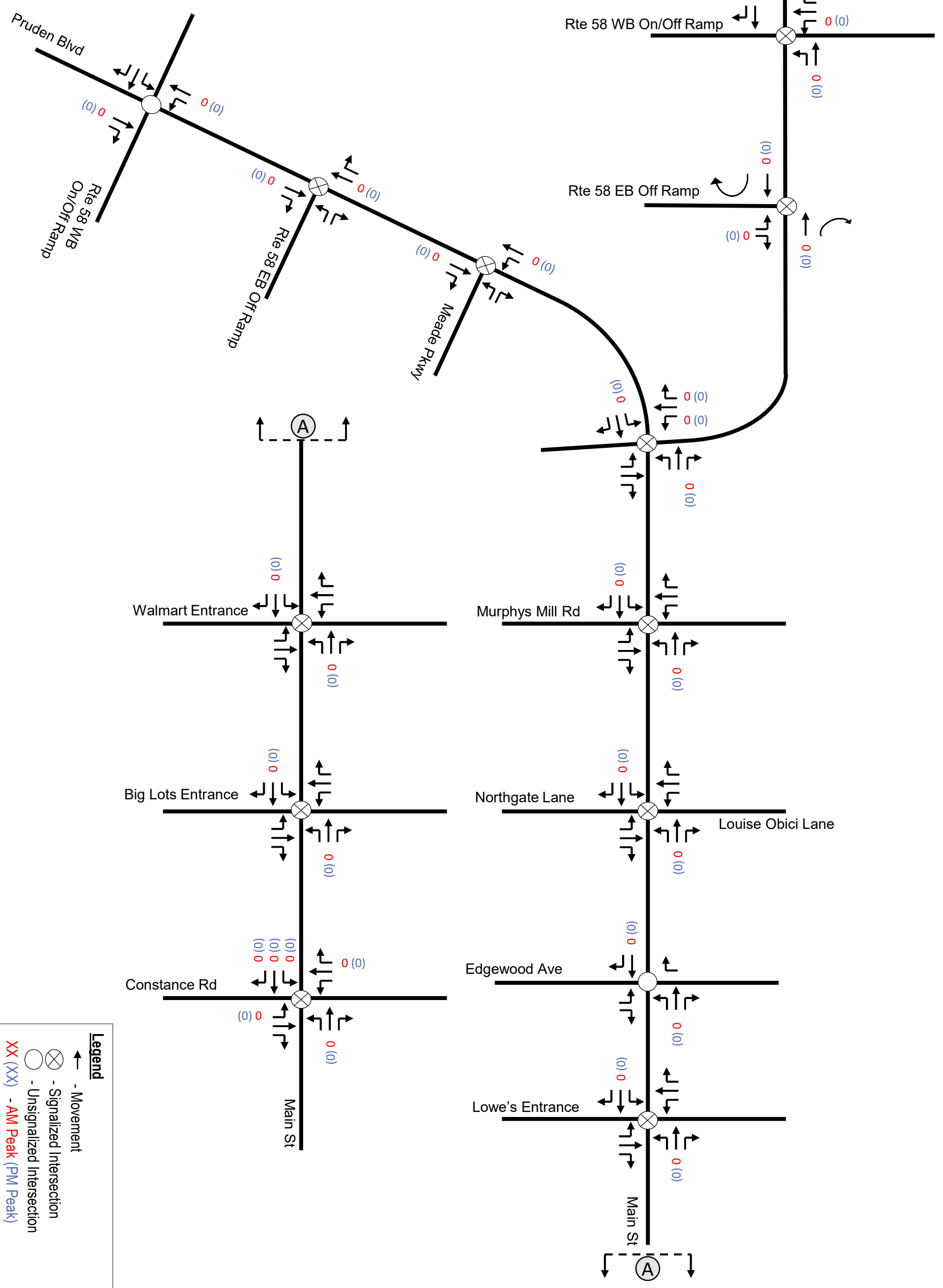






Note: Net traffic volumes for all intersections are zero because of pass by trip reduction methodology used in Planters Station TIA 2021.

North
Not to scale



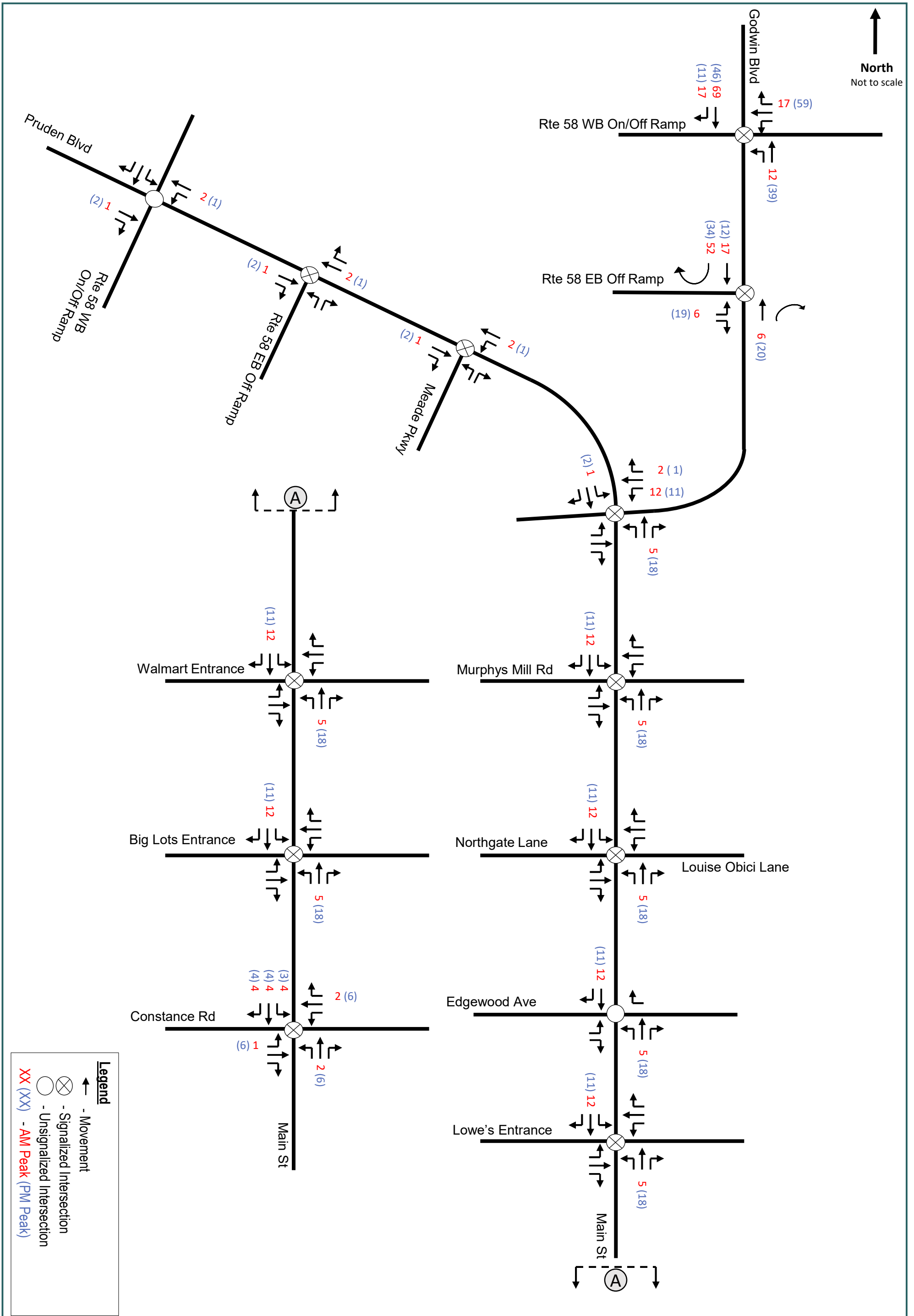
Legend

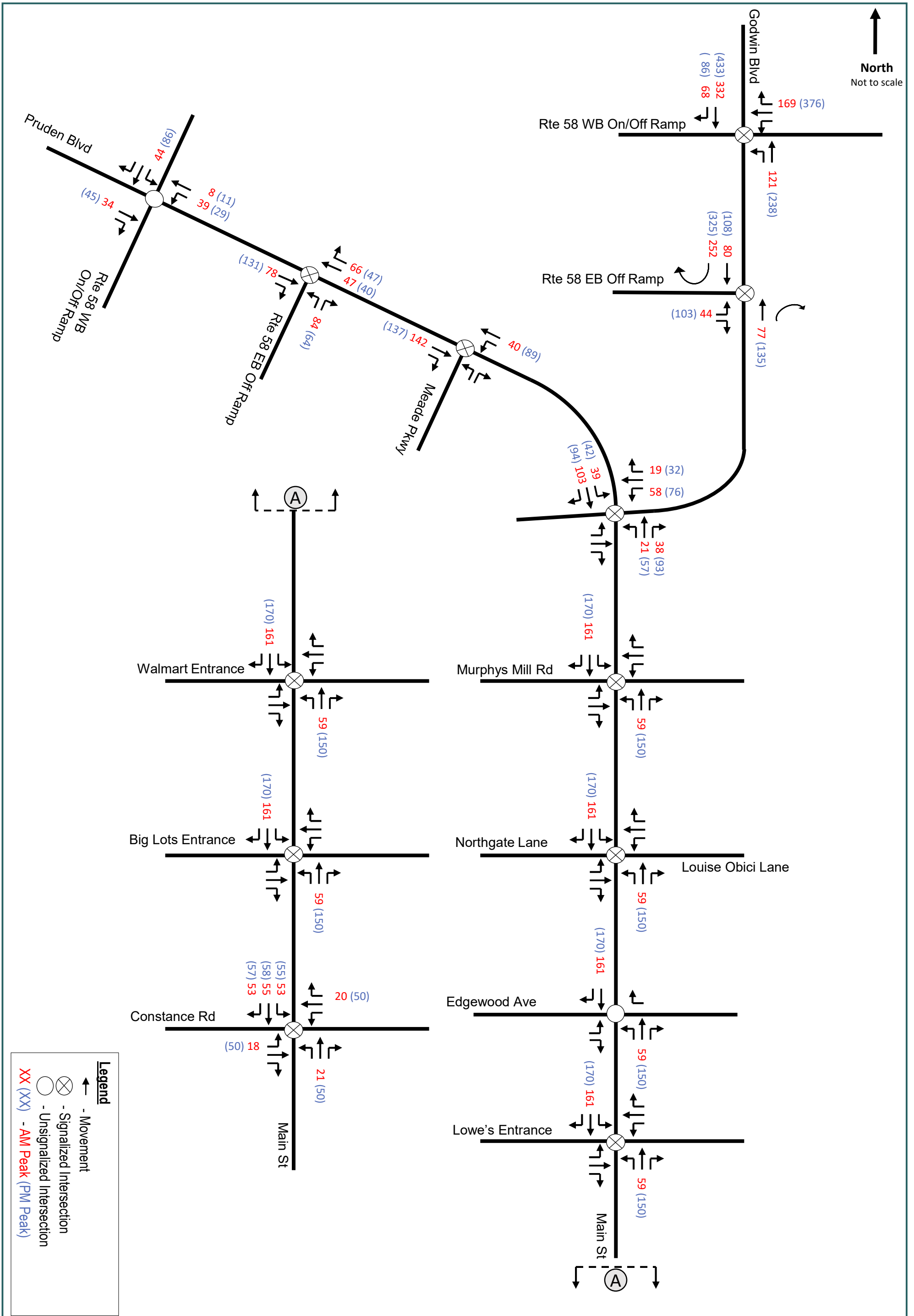
- - Movement
- ⊗ - Signalized Intersection
- - Unsignalized Intersection
- XX (XX) - AM Peak (PM Peak)



VDOT Site Development – Suffolk, VA
The Shoppes at Planters Station Site Trips

Figure
C6

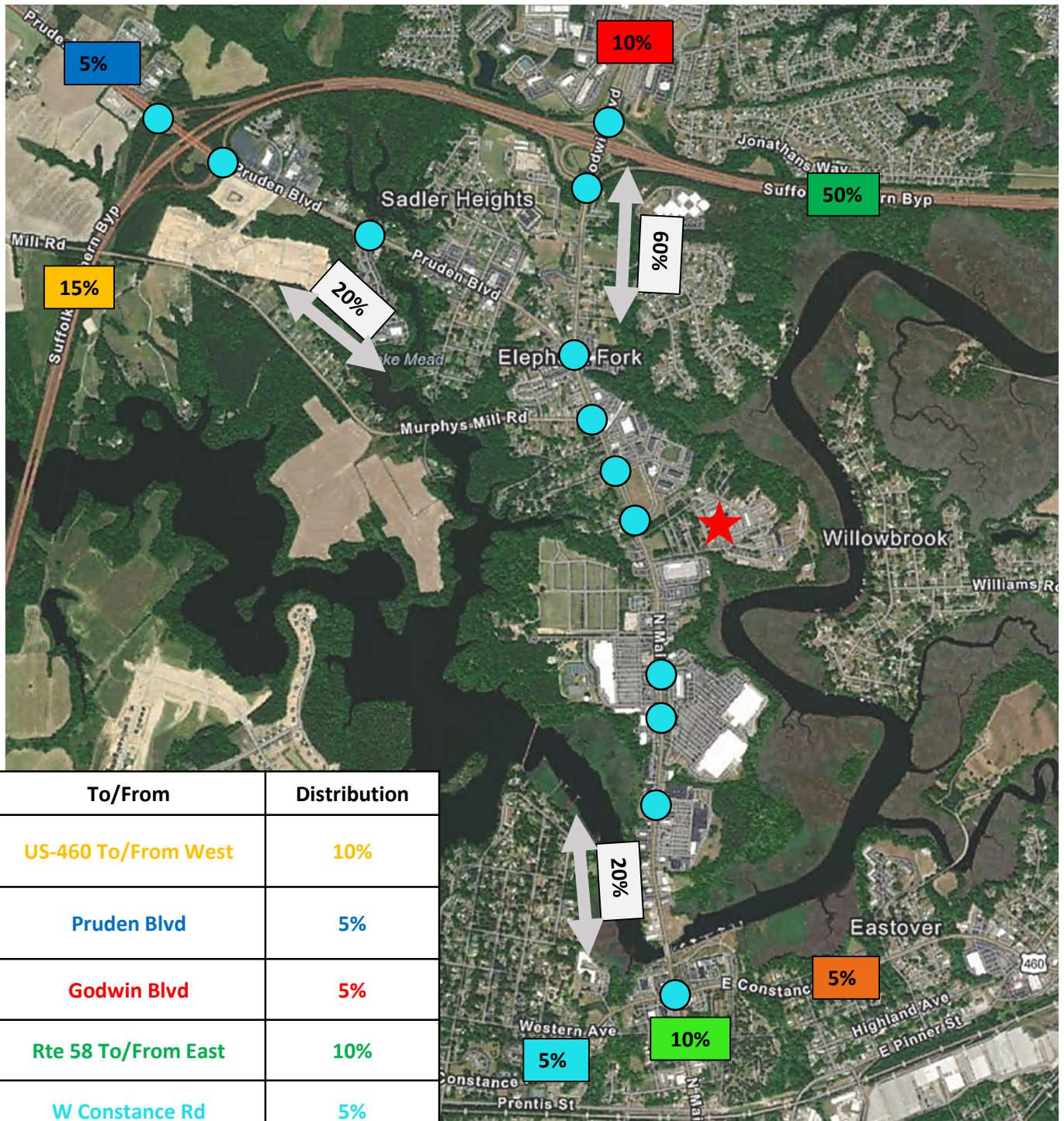




D External Distribution

Residential / General Office External Distribution

North
Not to Scale



To/From	Distribution
US-460 To/From West	10%
Pruden Blvd	5%
Godwin Blvd	5%
Rte 58 To/From East	10%
W Constance Rd	5%
N Main St	5%
E Constance Rd	5%

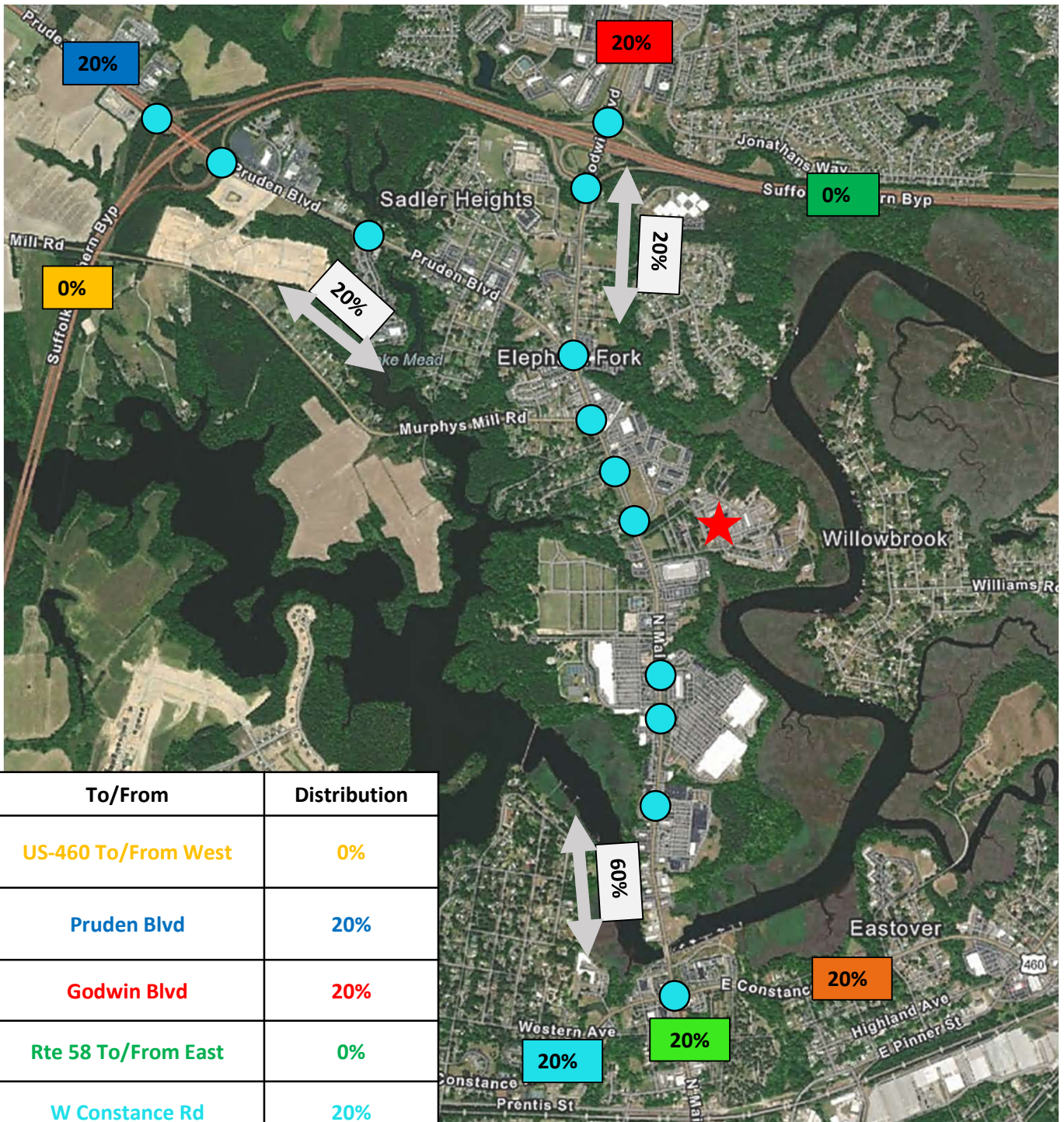
Legend

- ★ - Proposed Site
- - Study Intersection



Commercial External Distribution

North
Not to Scale



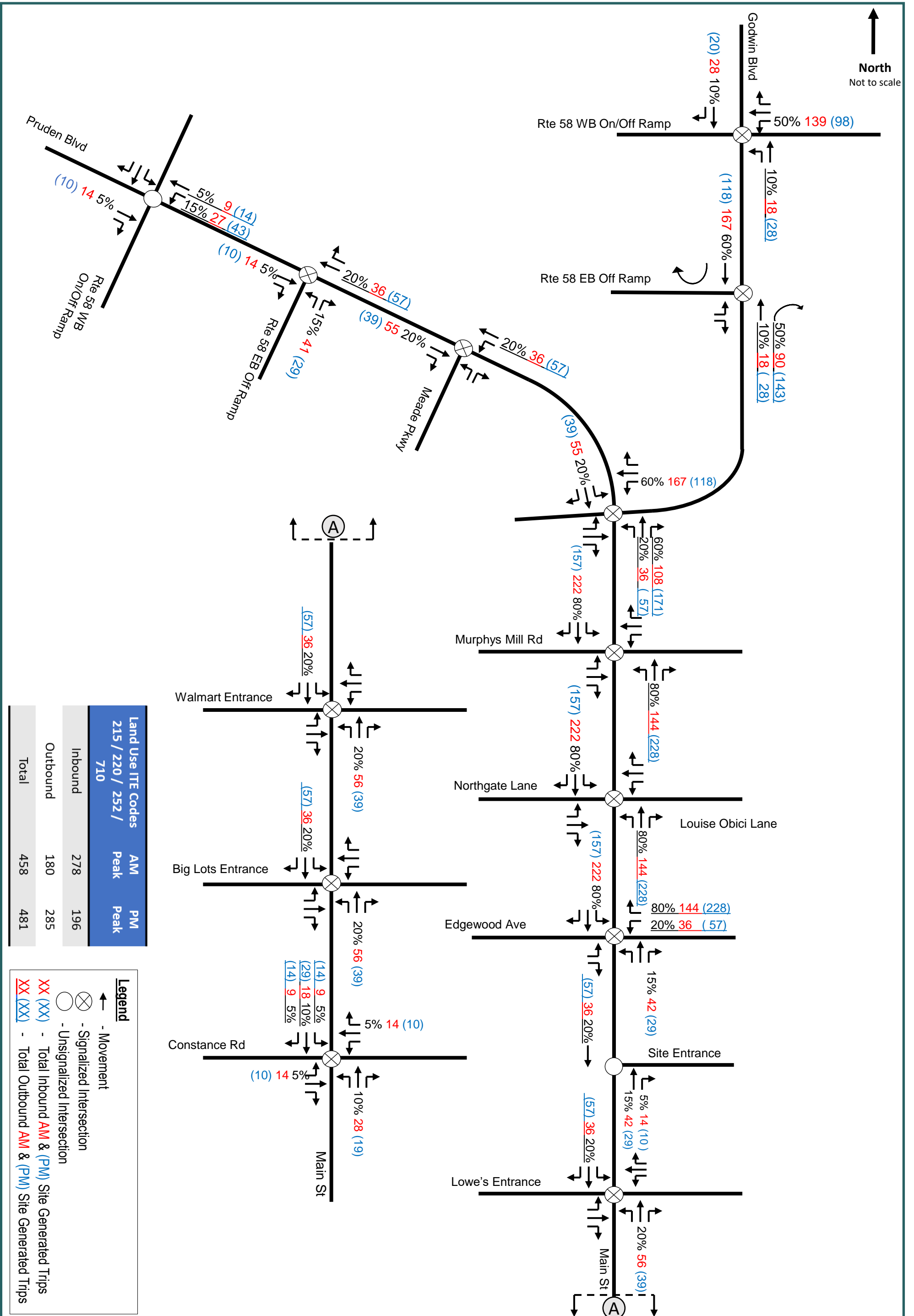
To/From	Distribution
US-460 To/From West	0%
Pruden Blvd	20%
Godwin Blvd	20%
Rte 58 To/From East	0%
W Constance Rd	20%
N Main St	20%
E Constance Rd	20%

Legend

- ★ - Proposed Site
- - Study Intersection

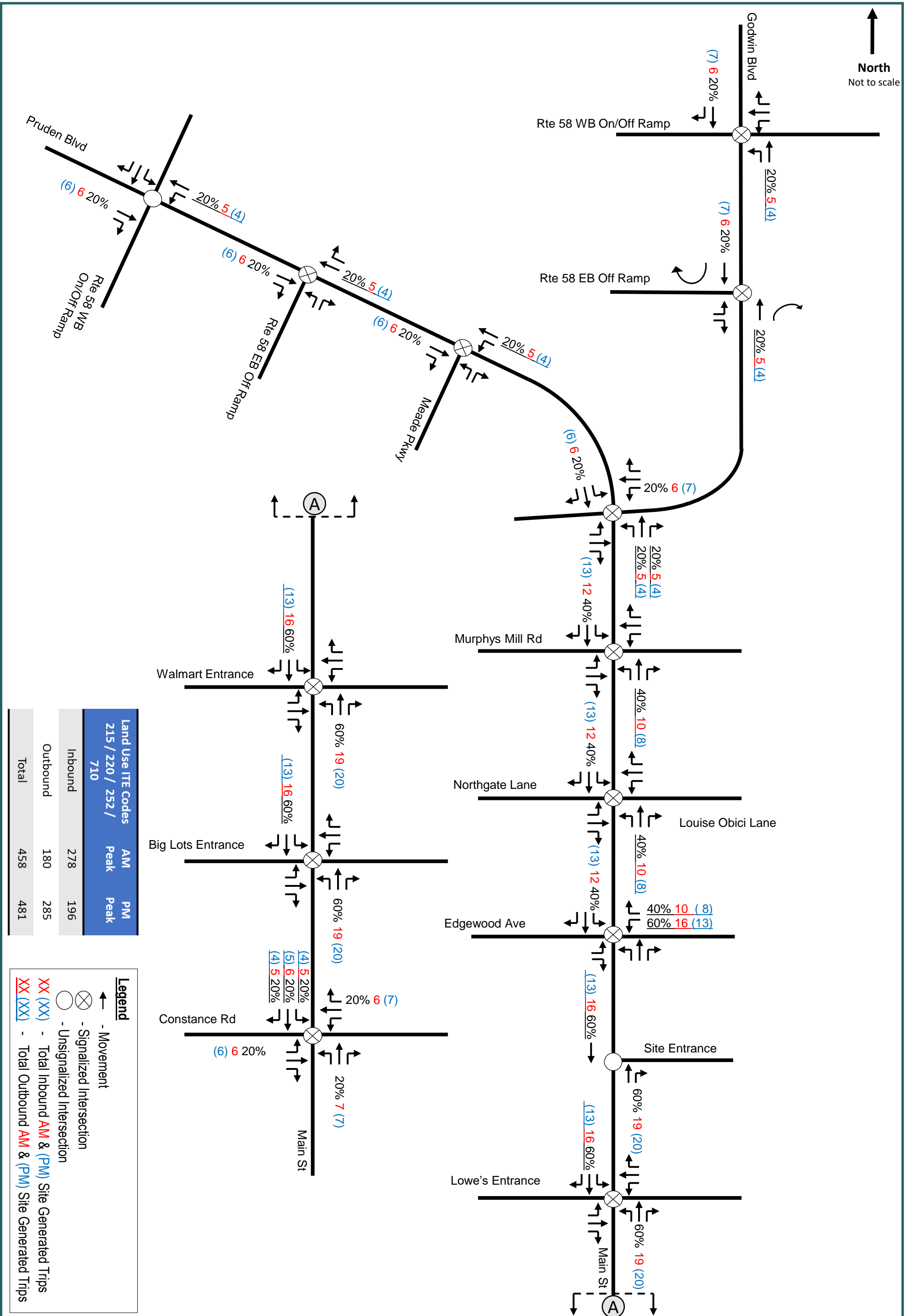


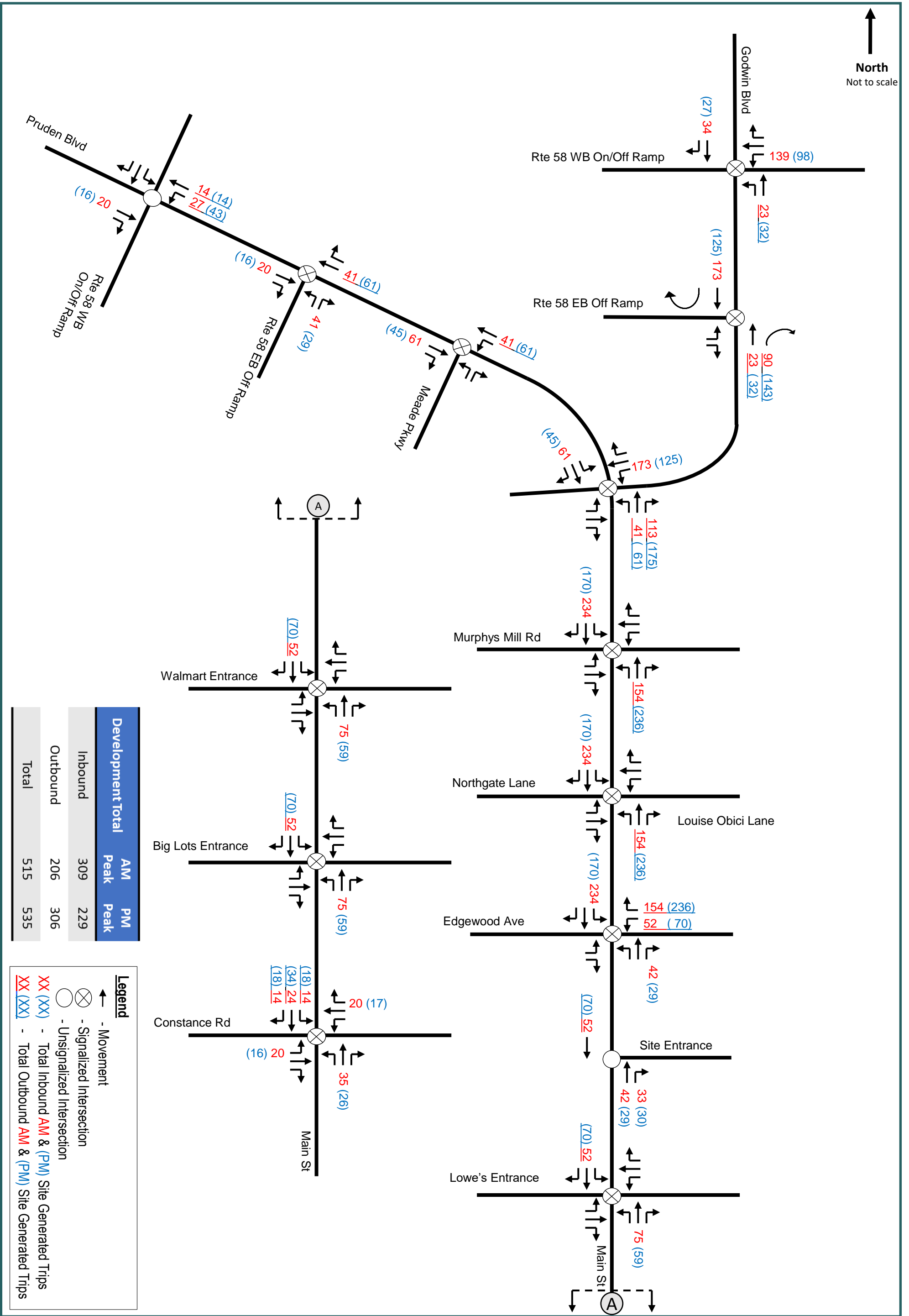
E Detailed Site Traffic Assignments



Riversbend Development – Suffolk, VA
Trip Distribution and Assignment
Residential and General Office

Figure E1





F Level of Service (LOS) Reports

Timings
1: Godwin Blvd & 58 WB Off Ramp

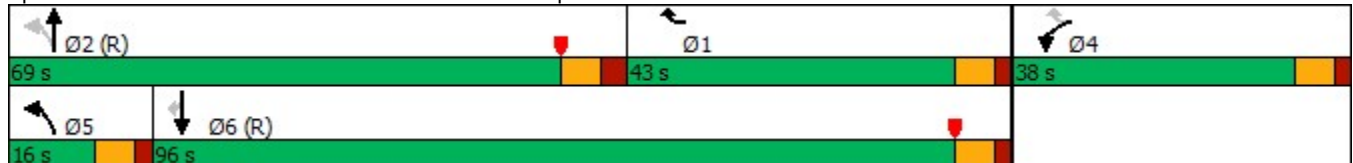
Existing
AM Peak

	↙	↖	↗	↑	↓	↘
Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↖	↖↖	↖	↑↑	↑↑	↖
Traffic Volume (vph)	179	771	21	798	1235	232
Future Volume (vph)	179	771	21	798	1235	232
Turn Type	Prot	custom	pm+pt	NA	NA	Perm
Protected Phases	4	1	5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	1	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	25.5	24.5	24.5
Total Split (s)	38.0	43.0	16.0	69.0	96.0	96.0
Total Split (%)	25.3%	28.7%	10.7%	46.0%	64.0%	64.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	3.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	7.5	6.5	6.5
Lead/Lag		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effect Green (s)	13.2	56.2	80.8	79.8	115.8	115.8
Actuated g/C Ratio	0.09	0.37	0.54	0.53	0.77	0.77
v/c Ratio	0.59	0.68	0.09	0.42	0.45	0.18
Control Delay	73.8	34.7	23.7	32.6	7.5	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.8	34.7	23.7	32.6	7.5	1.1
LOS	E	C	C	C	A	A
Approach Delay				32.3	6.5	
Approach LOS				C	A	

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 44 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 23.5
 Intersection Capacity Utilization 60.7%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service B























Splits and Phases: 1: Godwin Blvd & 58 WB Off Ramp



HCM Signalized Intersection Capacity Analysis

1: Godwin Blvd & 58 WB Off Ramp

Existing
AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 		 		 			 	
Traffic Volume (vph)	0	0	0	179	0	771	21	798	0	0	1235	232
Future Volume (vph)	0	0	0	179	0	771	21	798	0	0	1235	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Lane Util. Factor				0.97		0.88	1.00	0.95			0.95	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433		2787	1770	3539			3539	1583
Flt Permitted				0.95		1.00	0.16	1.00			1.00	1.00
Satd. Flow (perm)				3433		2787	302	3539			3539	1583
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	179	0	771	21	798	0	0	1235	232
RTOR Reduction (vph)	0	0	0	0	0	94	0	0	0	0	0	57
Lane Group Flow (vph)	0	0	0	179	0	677	21	798	0	0	1235	175
Turn Type				Prot		custom	pm+pt	NA			NA	Perm
Protected Phases				4		1	5	2			6	
Permitted Phases						4	2					6
Actuated Green, G (s)				13.2		52.3	77.2	77.2			113.2	113.2
Effective Green, g (s)				13.2		52.3	77.2	77.2			113.2	113.2
Actuated g/C Ratio				0.09		0.35	0.51	0.51			0.75	0.75
Clearance Time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Vehicle Extension (s)				3.0		3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				302		1092	195	1821			2670	1194
v/s Ratio Prot				0.05		c0.16	0.00	c0.23			c0.35	
v/s Ratio Perm						0.08	0.05					0.11
v/c Ratio				0.59		0.62	0.11	0.44			0.46	0.15
Uniform Delay, d1				65.8		40.6	19.4	22.8			6.9	5.1
Progression Factor				1.00		1.00	1.33	1.47			1.00	1.00
Incremental Delay, d2				3.1		1.1	0.2	0.7			0.6	0.3
Delay (s)				68.9		41.7	26.1	34.3			7.5	5.3
Level of Service				E		D	C	C			A	A
Approach Delay (s)		0.0			46.8			34.1			7.2	
Approach LOS		A			D			C			A	
Intersection Summary												
HCM 2000 Control Delay			25.6			HCM 2000 Level of Service					C	
HCM 2000 Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)					20.5	
Intersection Capacity Utilization			60.7%			ICU Level of Service					B	
Analysis Period (min)			15									
c Critical Lane Group												

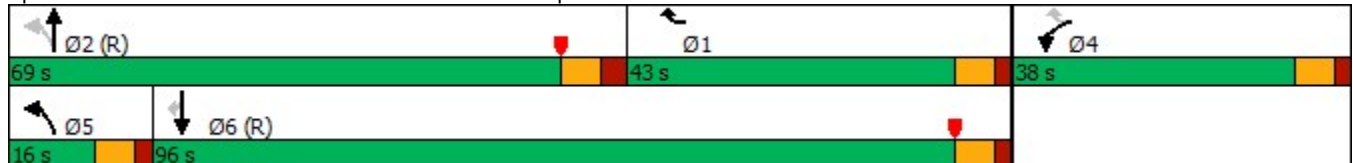
Timings
1: Godwin Blvd & 58 WB Off Ramp

	↙	↖	↗	↑	↓	↘
Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↖	↖↖	↖	↑↑	↑↑	↖
Traffic Volume (vph)	188	979	22	959	1629	312
Future Volume (vph)	188	979	22	959	1629	312
Turn Type	Prot	custom	pm+pt	NA	NA	Perm
Protected Phases	4	1	5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	1	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	25.5	24.5	24.5
Total Split (s)	38.0	43.0	16.0	69.0	96.0	96.0
Total Split (%)	25.3%	28.7%	10.7%	46.0%	64.0%	64.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	3.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	7.5	6.5	6.5
Lead/Lag		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	13.6	56.6	80.4	79.4	115.4	115.4
Actuated g/C Ratio	0.09	0.38	0.54	0.53	0.77	0.77
v/c Ratio	0.61	0.89	0.15	0.51	0.60	0.24
Control Delay	73.8	50.7	24.5	34.1	9.7	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.8	50.7	24.5	34.1	9.7	1.1
LOS	E	D	C	C	A	A
Approach Delay				33.9	8.3	
Approach LOS				C	A	

Intersection Summary



















Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 44 (29%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.89
 Intersection Signal Delay: 27.6
 Intersection Capacity Utilization 72.4%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 1: Godwin Blvd & 58 WB Off Ramp



HCM Signalized Intersection Capacity Analysis
 1: Godwin Blvd & 58 WB Off Ramp

Background 2030
 AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	188	0	979	22	959	0	0	1629	312
Future Volume (vph)	0	0	0	188	0	979	22	959	0	0	1629	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Lane Util. Factor				0.97		0.88	1.00	0.95			0.95	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433		2787	1770	3539			3539	1583
Flt Permitted				0.95		1.00	0.08	1.00			1.00	1.00
Satd. Flow (perm)				3433		2787	151	3539			3539	1583
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	188	0	979	22	959	0	0	1629	312
RTOR Reduction (vph)	0	0	0	0	0	54	0	0	0	0	0	77
Lane Group Flow (vph)	0	0	0	188	0	925	22	959	0	0	1629	235
Turn Type				Prot		custom	pm+pt	NA			NA	Perm
Protected Phases				4		1	5	2			6	
Permitted Phases						4	2					6
Actuated Green, G (s)				13.6		52.7	76.8	76.8			112.8	112.8
Effective Green, g (s)				13.6		52.7	76.8	76.8			112.8	112.8
Actuated g/C Ratio				0.09		0.35	0.51	0.51			0.75	0.75
Clearance Time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Vehicle Extension (s)				3.0		3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				311		1099	121	1811			2661	1190
v/s Ratio Prot				0.05		c0.22	0.00	c0.27			c0.46	
v/s Ratio Perm						0.11	0.09					0.15
v/c Ratio				0.60		0.84	0.18	0.53			0.61	0.20
Uniform Delay, d1				65.6		44.8	22.2	24.5			8.5	5.4
Progression Factor				1.00		1.00	1.31	1.43			1.00	1.00
Incremental Delay, d2				3.3		6.0	0.6	0.9			1.1	0.4
Delay (s)				68.9		50.8	29.7	35.9			9.6	5.8
Level of Service				E		D	C	D			A	A
Approach Delay (s)		0.0			53.7			35.8			9.0	
Approach LOS		A			D			D			A	
Intersection Summary												
HCM 2000 Control Delay			28.2			HCM 2000 Level of Service					C	
HCM 2000 Volume to Capacity ratio			0.75									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)				20.5		
Intersection Capacity Utilization			72.4%			ICU Level of Service				C		
Analysis Period (min)			15									

c Critical Lane Group

Timings
1: Godwin Blvd & 58 WB Off Ramp

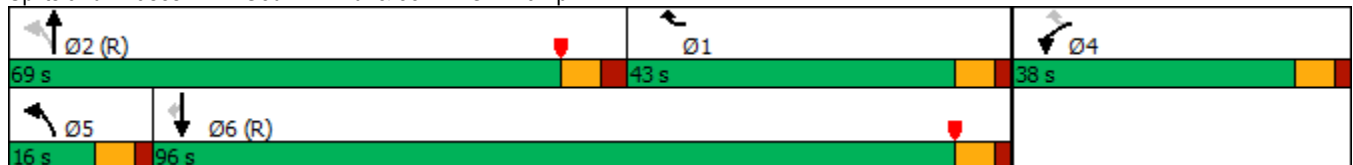
2030 Build
Timing Plan: AM Peak

Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	327	979	22	982	1663	312
Future Volume (vph)	327	979	22	982	1663	312
Turn Type	Prot	custom	pm+pt	NA	NA	Perm
Protected Phases	4	1	5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	1	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	25.5	24.5	24.5
Total Split (s)	38.0	43.0	16.0	69.0	96.0	96.0
Total Split (%)	25.3%	28.7%	10.7%	46.0%	64.0%	64.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	3.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	7.5	6.5	6.5
Lead/Lag		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	19.6	62.6	74.4	73.4	109.3	109.3
Actuated g/C Ratio	0.13	0.42	0.50	0.49	0.73	0.73
v/c Ratio	0.73	0.81	0.17	0.57	0.65	0.25
Control Delay	72.3	41.0	24.8	36.4	13.4	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.3	41.0	24.8	36.4	13.4	1.4
LOS	E	D	C	D	B	A
Approach Delay				36.1	11.5	
Approach LOS				D	B	

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 44 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.81
 Intersection Signal Delay: 28.7
 Intersection Capacity Utilization 73.1%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 1: Godwin Blvd & 58 WB Off Ramp



HCM Signalized Intersection Capacity Analysis

1: Godwin Blvd & 58 WB Off Ramp

2030 Build
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖↗		↖↗	↖	↗↗			↗↗	↖
Traffic Volume (vph)	0	0	0	327	0	979	22	982	0	0	1663	312
Future Volume (vph)	0	0	0	327	0	979	22	982	0	0	1663	312
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Lane Util. Factor				0.97		0.88	1.00	0.95			0.95	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433		2787	1770	3539			3539	1583
Flt Permitted				0.95		1.00	0.06	1.00			1.00	1.00
Satd. Flow (perm)				3433		2787	112	3539			3539	1583
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	327	0	979	22	982	0	0	1663	312
RTOR Reduction (vph)	0	0	0	0	0	49	0	0	0	0	0	90
Lane Group Flow (vph)	0	0	0	327	0	930	22	982	0	0	1663	222
Turn Type				Prot		custom	pm+pt	NA			NA	Perm
Protected Phases				4		1	5	2			6	
Permitted Phases						4	2					6
Actuated Green, G (s)				19.6		58.7	70.8	70.8			106.7	106.7
Effective Green, g (s)				19.6		58.7	70.8	70.8			106.7	106.7
Actuated g/C Ratio				0.13		0.39	0.47	0.47			0.71	0.71
Clearance Time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Vehicle Extension (s)				3.0		3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				448		1211	99	1670			2517	1126
v/s Ratio Prot				0.10		c0.20	0.01	c0.28			c0.47	
v/s Ratio Perm						0.13	0.10					0.14
v/c Ratio				0.73		0.77	0.22	0.59			0.66	0.20
Uniform Delay, d1				62.7		39.7	27.2	28.9			11.8	7.3
Progression Factor				1.00		1.00	1.06	1.26			1.00	1.00
Incremental Delay, d2				5.9		3.0	1.0	1.4			1.4	0.4
Delay (s)				68.5		42.7	30.0	37.9			13.2	7.7
Level of Service				E		D	C	D			B	A
Approach Delay (s)		0.0			49.2			37.7			12.3	
Approach LOS		A			D			D			B	

Intersection Summary

HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.5
Intersection Capacity Utilization	73.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

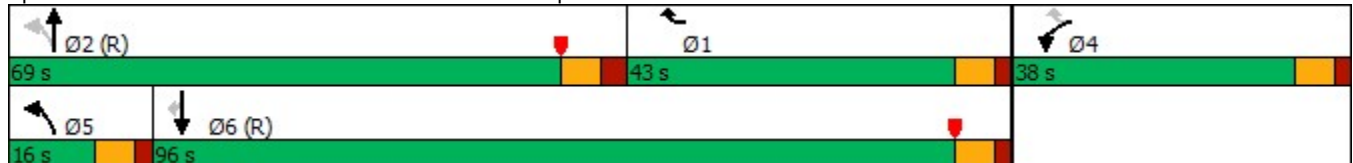
Timings
1: Godwin Blvd & 58 WB Off Ramp

	↙	↖	↗	↑	↓	↘
Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↖	↖↖	↖	↑↑	↑↑	↖
Traffic Volume (vph)	197	1017	23	999	1691	323
Future Volume (vph)	197	1017	23	999	1691	323
Turn Type	Prot	custom	pm+pt	NA	NA	Perm
Protected Phases	4	1	5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	1	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	25.5	24.5	24.5
Total Split (s)	38.0	43.0	16.0	69.0	96.0	96.0
Total Split (%)	25.3%	28.7%	10.7%	46.0%	64.0%	64.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	3.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	7.5	6.5	6.5
Lead/Lag		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	14.0	57.0	80.0	79.0	114.9	114.9
Actuated g/C Ratio	0.09	0.38	0.53	0.53	0.77	0.77
v/c Ratio	0.62	0.92	0.16	0.54	0.62	0.25
Control Delay	73.7	54.1	24.9	35.0	10.3	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.7	54.1	24.9	35.0	10.3	1.2
LOS	E	D	C	C	B	A
Approach Delay				34.8	8.9	
Approach LOS				C	A	

Intersection Summary

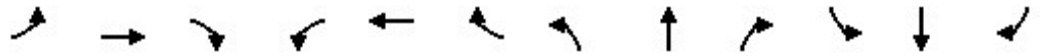
Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 44 (29%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 28.9
 Intersection Capacity Utilization 74.9%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 1: Godwin Blvd & 58 WB Off Ramp



HCM Signalized Intersection Capacity Analysis
 1: Godwin Blvd & 58 WB Off Ramp

Background 2035
 AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖↗		↖↗	↖	↕↕			↕↕	↖
Traffic Volume (vph)	0	0	0	197	0	1017	23	999	0	0	1691	323
Future Volume (vph)	0	0	0	197	0	1017	23	999	0	0	1691	323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Lane Util. Factor				0.97		0.88	1.00	0.95			0.95	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433		2787	1770	3539			3539	1583
Flt Permitted				0.95		1.00	0.07	1.00			1.00	1.00
Satd. Flow (perm)				3433		2787	130	3539			3539	1583
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	197	0	1017	23	999	0	0	1691	323
RTOR Reduction (vph)	0	0	0	0	0	52	0	0	0	0	0	81
Lane Group Flow (vph)	0	0	0	197	0	965	23	999	0	0	1691	242
Turn Type				Prot		custom	pm+pt	NA			NA	Perm
Protected Phases				4		1	5	2			6	
Permitted Phases						4	2					6
Actuated Green, G (s)				14.0		53.1	76.4	76.4			112.3	112.3
Effective Green, g (s)				14.0		53.1	76.4	76.4			112.3	112.3
Actuated g/C Ratio				0.09		0.35	0.51	0.51			0.75	0.75
Clearance Time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Vehicle Extension (s)				3.0		3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				320		1107	112	1802			2649	1185
v/s Ratio Prot				0.06		c0.23	0.01	c0.28			c0.48	
v/s Ratio Perm						0.12	0.10					0.15
v/c Ratio				0.62		0.87	0.21	0.55			0.64	0.20
Uniform Delay, d1				65.4		45.3	23.3	25.2			9.1	5.6
Progression Factor				1.00		1.00	1.30	1.42			1.00	1.00
Incremental Delay, d2				3.5		7.7	0.7	1.0			1.2	0.4
Delay (s)				68.9		53.0	30.9	36.8			10.3	6.0
Level of Service				E		D	C	D			B	A
Approach Delay (s)		0.0			55.6			36.7			9.6	
Approach LOS		A			E			D			A	

Intersection Summary			
HCM 2000 Control Delay	29.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.5
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Timings
1: Godwin Blvd & 58 WB Off Ramp

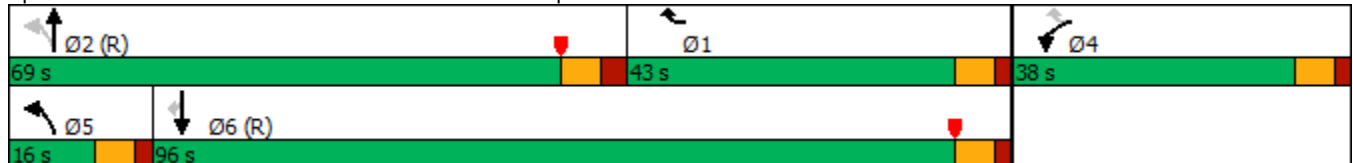
2035 Build
Timing Plan: AM Peak

Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	336	1017	23	1022	1725	323
Future Volume (vph)	336	1017	23	1022	1725	323
Turn Type	Prot	custom	pm+pt	NA	NA	Perm
Protected Phases	4	1	5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	1	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	25.5	24.5	24.5
Total Split (s)	38.0	43.0	16.0	69.0	96.0	96.0
Total Split (%)	25.3%	28.7%	10.7%	46.0%	64.0%	64.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	3.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	7.5	6.5	6.5
Lead/Lag		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	20.0	63.0	74.0	73.0	108.9	108.9
Actuated g/C Ratio	0.13	0.42	0.49	0.49	0.73	0.73
v/c Ratio	0.74	0.84	0.18	0.59	0.67	0.26
Control Delay	72.2	42.5	24.9	36.8	14.3	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.2	42.5	24.9	36.8	14.3	1.4
LOS	E	D	C	D	B	A
Approach Delay				36.5	12.2	
Approach LOS				D	B	

Intersection Summary

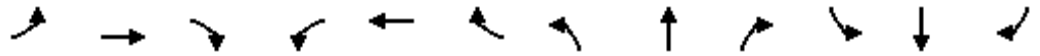
Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 44 (29%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 29.4
 Intersection Capacity Utilization 77.7%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 1: Godwin Blvd & 58 WB Off Ramp



HCM Signalized Intersection Capacity Analysis
 1: Godwin Blvd & 58 WB Off Ramp

2035 Build
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖↗		↖↗	↖	↕			↕	↖
Traffic Volume (vph)	0	0	0	336	0	1017	23	1022	0	0	1725	323
Future Volume (vph)	0	0	0	336	0	1017	23	1022	0	0	1725	323
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Lane Util. Factor				0.97		0.88	1.00	0.95			0.95	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433		2787	1770	3539			3539	1583
Flt Permitted				0.95		1.00	0.06	1.00			1.00	1.00
Satd. Flow (perm)				3433		2787	113	3539			3539	1583
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	336	0	1017	23	1022	0	0	1725	323
RTOR Reduction (vph)	0	0	0	0	0	48	0	0	0	0	0	94
Lane Group Flow (vph)	0	0	0	336	0	969	23	1022	0	0	1725	229
Turn Type				Prot		custom	pm+pt	NA			NA	Perm
Protected Phases				4		1	5	2			6	
Permitted Phases						4	2					6
Actuated Green, G (s)				20.0		59.2	70.3	70.3			106.2	106.2
Effective Green, g (s)				20.0		59.2	70.3	70.3			106.2	106.2
Actuated g/C Ratio				0.13		0.39	0.47	0.47			0.71	0.71
Clearance Time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Vehicle Extension (s)				3.0		3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				457		1220	100	1658			2505	1120
v/s Ratio Prot				0.10		c0.21	0.01	c0.29			c0.49	
v/s Ratio Perm						0.14	0.10					0.14
v/c Ratio				0.74		0.79	0.23	0.62			0.69	0.20
Uniform Delay, d1				62.5		40.0	28.5	29.8			12.5	7.5
Progression Factor				1.00		1.00	1.06	1.24			1.00	1.00
Incremental Delay, d2				6.1		3.6	1.0	1.5			1.6	0.4
Delay (s)				68.5		43.7	31.3	38.5			14.1	7.9
Level of Service				E		D	C	D			B	A
Approach Delay (s)		0.0			49.8			38.3			13.1	
Approach LOS		A			D			D			B	

Intersection Summary

HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.5
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Timings
1: Godwin Blvd & 58 WB Off Ramp

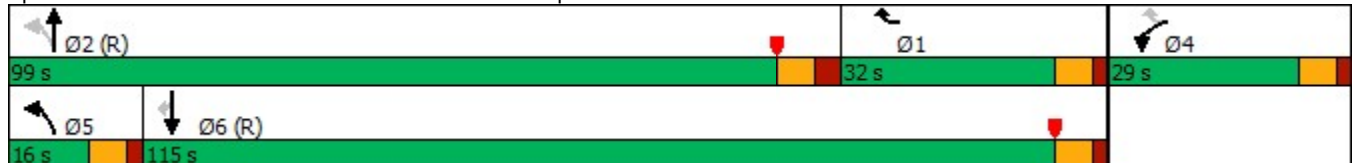
Existing
PM Peak

Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	259	867	38	1003	1344	480
Future Volume (vph)	259	867	38	1003	1344	480
Turn Type	Prot	custom	pm+pt	NA	NA	Perm
Protected Phases	4	1	5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	1	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	25.5	24.5	24.5
Total Split (s)	29.0	32.0	16.0	99.0	115.0	115.0
Total Split (%)	18.1%	20.0%	10.0%	61.9%	71.9%	71.9%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	3.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	7.5	6.5	6.5
Lead/Lag		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	17.3	49.3	97.7	96.7	118.7	118.7
Actuated g/C Ratio	0.11	0.31	0.61	0.60	0.74	0.74
v/c Ratio	0.70	0.88	0.17	0.47	0.51	0.37
Control Delay	78.8	51.6	13.7	20.8	10.3	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	78.8	51.6	13.7	20.8	10.3	1.5
LOS	E	D	B	C	B	A
Approach Delay				20.5	8.0	
Approach LOS				C	A	

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 129 (81%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 25.3
 Intersection Capacity Utilization 69.7%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C























Splits and Phases: 1: Godwin Blvd & 58 WB Off Ramp



HCM Signalized Intersection Capacity Analysis

1: Godwin Blvd & 58 WB Off Ramp

Existing
PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				 		 		 			 	
Traffic Volume (vph)	0	0	0	259	0	867	38	1003	0	0	1344	480
Future Volume (vph)	0	0	0	259	0	867	38	1003	0	0	1344	480
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Lane Util. Factor				0.97		0.88	1.00	0.95			0.95	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433		2787	1770	3539			3539	1583
Flt Permitted				0.95		1.00	0.14	1.00			1.00	1.00
Satd. Flow (perm)				3433		2787	262	3539			3539	1583
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	259	0	867	38	1003	0	0	1344	480
RTOR Reduction (vph)	0	0	0	0	0	136	0	0	0	0	0	128
Lane Group Flow (vph)	0	0	0	259	0	731	38	1003	0	0	1344	352
Turn Type				Prot		custom	pm+pt	NA			NA	Perm
Protected Phases				4		1	5	2			6	
Permitted Phases						4	2					6
Actuated Green, G (s)				17.3		44.1	95.4	95.4			117.4	117.4
Effective Green, g (s)				17.3		44.1	95.4	95.4			117.4	117.4
Actuated g/C Ratio				0.11		0.28	0.60	0.60			0.73	0.73
Clearance Time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Vehicle Extension (s)				3.0		3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				371		881	210	2110			2596	1161
v/s Ratio Prot				0.08		c0.14	0.01	c0.28			c0.38	
v/s Ratio Perm						0.12	0.10					0.22
v/c Ratio				0.70		0.83	0.18	0.48			0.52	0.30
Uniform Delay, d1				68.8		54.4	16.0	18.2			9.1	7.3
Progression Factor				1.00		1.00	0.91	1.12			1.00	1.00
Incremental Delay, d2				5.6		6.5	0.4	0.7			0.7	0.7
Delay (s)				74.5		60.9	14.9	21.0			9.9	8.0
Level of Service				E		E	B	C			A	A
Approach Delay (s)		0.0			64.1			20.8			9.4	
Approach LOS		A			E			C			A	
Intersection Summary												
HCM 2000 Control Delay			27.8		HCM 2000 Level of Service						C	
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			160.0		Sum of lost time (s)						20.5	
Intersection Capacity Utilization			69.7%		ICU Level of Service						C	
Analysis Period (min)			15									

c Critical Lane Group

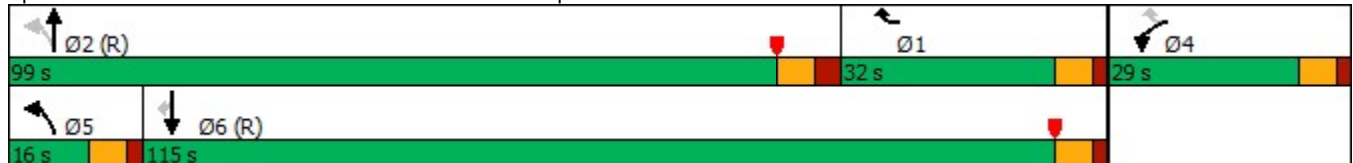
Timings
1: Godwin Blvd & 58 WB Off Ramp

Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	272	1286	40	1291	1844	590
Future Volume (vph)	272	1286	40	1291	1844	590
Turn Type	Prot	custom	pm+pt	NA	NA	Perm
Protected Phases	4	1	5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	1	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	25.5	24.5	24.5
Total Split (s)	29.0	32.0	16.0	99.0	115.0	115.0
Total Split (%)	18.1%	20.0%	10.0%	61.9%	71.9%	71.9%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	3.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	7.5	6.5	6.5
Lead/Lag		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effect Green (s)	17.9	49.9	97.1	96.1	118.0	118.0
Actuated g/C Ratio	0.11	0.31	0.61	0.60	0.74	0.74
v/c Ratio	0.71	1.38	0.30	0.61	0.71	0.45
Control Delay	78.6	215.0	17.7	24.4	14.6	1.7
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay	78.6	215.0	17.7	24.7	14.6	1.7
LOS	E	F	B	C	B	A
Approach Delay				24.5	11.5	
Approach LOS				C	B	

Intersection Summary

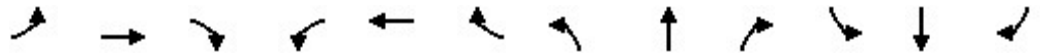
Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 129 (81%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.38
 Intersection Signal Delay: 67.3
 Intersection Capacity Utilization 92.3%
 Analysis Period (min) 15
 Intersection LOS: E
 ICU Level of Service F

Splits and Phases: 1: Godwin Blvd & 58 WB Off Ramp



HCM Signalized Intersection Capacity Analysis
 1: Godwin Blvd & 58 WB Off Ramp

Background 2030
 PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖↗		↖↗	↖	↕			↕	↗
Traffic Volume (vph)	0	0	0	272	0	1286	40	1291	0	0	1844	590
Future Volume (vph)	0	0	0	272	0	1286	40	1291	0	0	1844	590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Lane Util. Factor				0.97		0.88	1.00	0.95			0.95	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433		2787	1770	3539			3539	1583
Flt Permitted				0.95		1.00	0.05	1.00			1.00	1.00
Satd. Flow (perm)				3433		2787	98	3539			3539	1583
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	272	0	1286	40	1291	0	0	1844	590
RTOR Reduction (vph)	0	0	0	0	0	67	0	0	0	0	0	160
Lane Group Flow (vph)	0	0	0	272	0	1219	40	1291	0	0	1844	430
Turn Type				Prot		custom	pm+pt	NA			NA	Perm
Protected Phases				4		1	5	2			6	
Permitted Phases						4	2					6
Actuated Green, G (s)				17.9		44.7	94.8	94.8			116.7	116.7
Effective Green, g (s)				17.9		44.7	94.8	94.8			116.7	116.7
Actuated g/C Ratio				0.11		0.28	0.59	0.59			0.73	0.73
Clearance Time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Vehicle Extension (s)				3.0		3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				384		891	119	2096			2581	1154
v/s Ratio Prot				0.08		c0.23	0.01	c0.36			c0.52	
v/s Ratio Perm						0.21	0.19					0.27
v/c Ratio				0.71		1.37	0.34	0.62			0.71	0.37
Uniform Delay, d1				68.5		57.6	23.3	20.9			12.2	8.0
Progression Factor				1.00		1.00	0.94	1.13			1.00	1.00
Incremental Delay, d2				5.9		172.8	1.4	1.1			1.7	0.9
Delay (s)				74.4		230.5	23.4	24.7			14.0	9.0
Level of Service				E		F	C	C			B	A
Approach Delay (s)		0.0			203.2			24.6			12.7	
Approach LOS		A			F			C			B	

Intersection Summary			
HCM 2000 Control Delay	71.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	20.5
Intersection Capacity Utilization	92.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Timings
1: Godwin Blvd & 58 WB Off Ramp

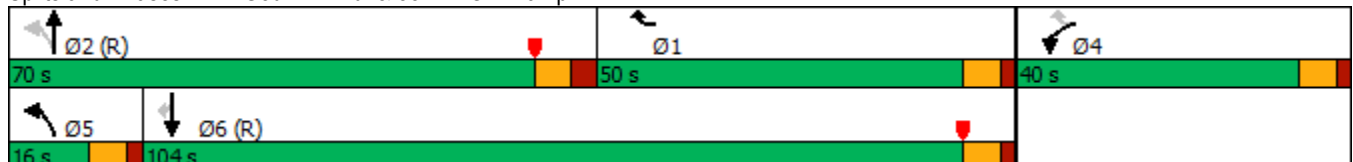
2030 Build
Timing Plan: PM Peak

	↙	↖	↗	↑	↓	↘
Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↖	↖↖	↖	↑↑	↑↑	↖
Traffic Volume (vph)	370	1286	40	1323	1871	590
Future Volume (vph)	370	1286	40	1323	1871	590
Turn Type	Prot	custom	pm+pt	NA	NA	Perm
Protected Phases	4	1	5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	1	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	25.5	24.5	24.5
Total Split (s)	40.0	50.0	16.0	70.0	104.0	104.0
Total Split (%)	25.0%	31.3%	10.0%	43.8%	65.0%	65.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	3.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	7.5	6.5	6.5
Lead/Lag		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	22.5	72.5	74.5	73.5	112.9	112.9
Actuated g/C Ratio	0.14	0.45	0.47	0.46	0.71	0.71
v/c Ratio	0.77	0.99	0.31	0.81	0.75	0.46
Control Delay	77.0	62.3	25.7	32.7	18.7	2.4
Queue Delay	0.0	0.0	0.0	0.5	0.0	0.0
Total Delay	77.0	62.3	25.7	33.2	18.7	2.4
LOS	E	E	C	C	B	A
Approach Delay				32.9	14.8	
Approach LOS				C	B	

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 129 (81%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 34.7
 Intersection Capacity Utilization 93.2%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service F

Splits and Phases: 1: Godwin Blvd & 58 WB Off Ramp



HCM Signalized Intersection Capacity Analysis

1: Godwin Blvd & 58 WB Off Ramp

2030 Build
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖↗		↖↗	↖	↕			↕	↗
Traffic Volume (vph)	0	0	0	370	0	1286	40	1323	0	0	1871	590
Future Volume (vph)	0	0	0	370	0	1286	40	1323	0	0	1871	590
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Lane Util. Factor				0.97		0.88	1.00	0.95			0.95	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433		2787	1770	3539			3539	1583
Flt Permitted				0.95		1.00	0.06	1.00			1.00	1.00
Satd. Flow (perm)				3433		2787	113	3539			3539	1583
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	370	0	1286	40	1323	0	0	1871	590
RTOR Reduction (vph)	0	0	0	0	0	43	0	0	0	0	0	167
Lane Group Flow (vph)	0	0	0	370	0	1243	40	1323	0	0	1871	423
Turn Type				Prot		custom	pm+pt	NA			NA	Perm
Protected Phases				4		1	5	2			6	
Permitted Phases						4	2					6
Actuated Green, G (s)				22.5		67.3	72.2	72.2			111.6	111.6
Effective Green, g (s)				22.5		67.3	72.2	72.2			111.6	111.6
Actuated g/C Ratio				0.14		0.42	0.45	0.45			0.70	0.70
Clearance Time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Vehicle Extension (s)				3.0		3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				482		1285	117	1596			2468	1104
v/s Ratio Prot				0.11		c0.27	0.01	c0.37			0.53	
v/s Ratio Perm						0.18	0.14					0.27
v/c Ratio				0.77		0.97	0.34	0.83			0.76	0.38
Uniform Delay, d1				66.2		45.3	35.8	38.5			15.5	10.0
Progression Factor				1.00		1.00	0.82	0.75			1.00	1.00
Incremental Delay, d2				7.2		17.6	1.5	4.5			2.2	1.0
Delay (s)				73.4		62.8	30.8	33.2			17.8	11.0
Level of Service				E		E	C	C			B	B
Approach Delay (s)		0.0			65.2			33.1			16.2	
Approach LOS		A			E			C			B	

Intersection Summary

HCM 2000 Control Delay	35.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	20.5
Intersection Capacity Utilization	93.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Timings
1: Godwin Blvd & 58 WB Off Ramp

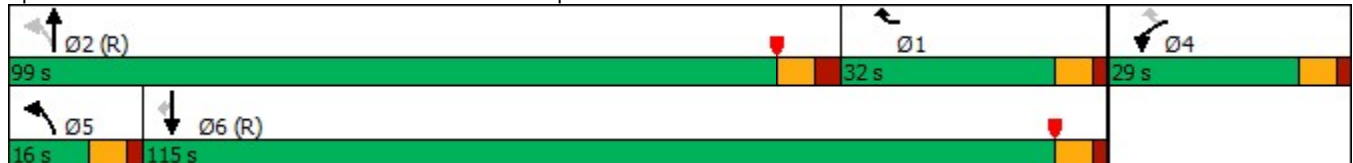
	↙	↖	↗	↑	↓	↘
Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↖↖	↖↖	↖	↑↑	↑↑	↖
Traffic Volume (vph)	285	1330	42	1341	1911	614
Future Volume (vph)	285	1330	42	1341	1911	614
Turn Type	Prot	custom	pm+pt	NA	NA	Perm
Protected Phases	4	1	5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	1	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	25.5	24.5	24.5
Total Split (s)	29.0	32.0	16.0	99.0	115.0	115.0
Total Split (%)	18.1%	20.0%	10.0%	61.9%	71.9%	71.9%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	3.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	7.5	6.5	6.5
Lead/Lag		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effect Green (s)	18.4	50.4	96.6	95.6	117.5	117.5
Actuated g/C Ratio	0.12	0.32	0.60	0.60	0.73	0.73
v/c Ratio	0.73	1.43	0.34	0.63	0.74	0.46
Control Delay	79.1	235.0	19.4	25.4	15.8	1.8
Queue Delay	0.0	0.0	0.0	0.3	0.0	0.0
Total Delay	79.1	235.0	19.4	25.7	15.8	1.8
LOS	E	F	B	C	B	A
Approach Delay				25.5	12.4	
Approach LOS				C	B	

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 129 (81%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.43
 Intersection Signal Delay: 72.7
 Intersection Capacity Utilization 95.3%
 Analysis Period (min) 15

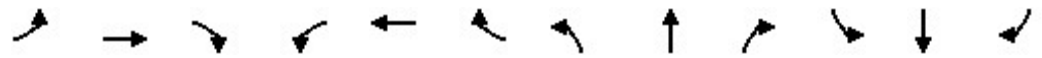
Intersection LOS: E
 ICU Level of Service F

Splits and Phases: 1: Godwin Blvd & 58 WB Off Ramp



HCM Signalized Intersection Capacity Analysis
 1: Godwin Blvd & 58 WB Off Ramp

Background 2035
 PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖↗		↖↗	↖	↕			↕	↗
Traffic Volume (vph)	0	0	0	285	0	1330	42	1341	0	0	1911	614
Future Volume (vph)	0	0	0	285	0	1330	42	1341	0	0	1911	614
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Lane Util. Factor				0.97		0.88	1.00	0.95			0.95	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433		2787	1770	3539			3539	1583
Flt Permitted				0.95		1.00	0.05	1.00			1.00	1.00
Satd. Flow (perm)				3433		2787	84	3539			3539	1583
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	285	0	1330	42	1341	0	0	1911	614
RTOR Reduction (vph)	0	0	0	0	0	59	0	0	0	0	0	168
Lane Group Flow (vph)	0	0	0	285	0	1271	42	1341	0	0	1911	446
Turn Type				Prot		custom	pm+pt	NA			NA	Perm
Protected Phases				4		1	5	2			6	
Permitted Phases						4	2					6
Actuated Green, G (s)				18.4		45.3	94.2	94.2			116.1	116.1
Effective Green, g (s)				18.4		45.3	94.2	94.2			116.1	116.1
Actuated g/C Ratio				0.11		0.28	0.59	0.59			0.73	0.73
Clearance Time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Vehicle Extension (s)				3.0		3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				394		902	112	2083			2567	1148
v/s Ratio Prot				0.08		c0.24	0.01	c0.38			c0.54	
v/s Ratio Perm						0.22	0.20					0.28
v/c Ratio				0.72		1.41	0.38	0.64			0.74	0.39
Uniform Delay, d1				68.3		57.4	25.7	21.8			13.1	8.4
Progression Factor				1.00		1.00	0.98	1.13			1.00	1.00
Incremental Delay, d2				6.5		190.8	1.7	1.2			2.0	1.0
Delay (s)				74.8		248.2	27.0	25.8			15.1	9.4
Level of Service				E		F	C	C			B	A
Approach Delay (s)		0.0			217.6			25.8			13.7	
Approach LOS		A			F			C			B	

Intersection Summary			
HCM 2000 Control Delay	76.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	20.5
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Timings
1: Godwin Blvd & 58 WB Off Ramp

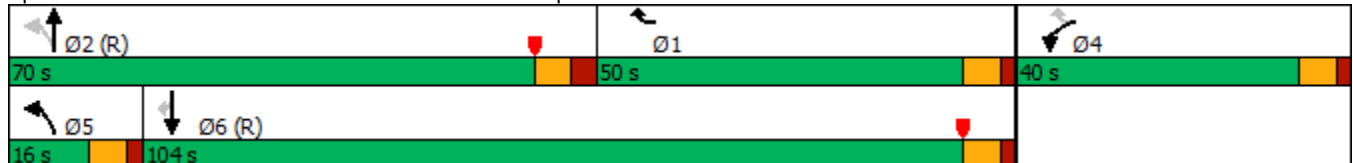
2035 Build
Timing Plan: PM Peak

	↙ ↘		↑ ↓		↙	
Lane Group	WBL	WBR	NBL	NBT	SBT	SBR
Lane Configurations	↙↘	↙↘	↙	↑↑	↑↑	↙
Traffic Volume (vph)	383	1330	42	1373	1938	614
Future Volume (vph)	383	1330	42	1373	1938	614
Turn Type	Prot	custom	pm+pt	NA	NA	Perm
Protected Phases	4	1	5	2	6	
Permitted Phases		4	2			6
Detector Phase	4	1	5	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	25.5	24.5	24.5
Total Split (s)	40.0	50.0	16.0	70.0	104.0	104.0
Total Split (%)	25.0%	31.3%	10.0%	43.8%	65.0%	65.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	3.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	7.5	6.5	6.5
Lead/Lag		Lag	Lead	Lead	Lag	Lag
Lead-Lag Optimize?		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effct Green (s)	23.1	73.1	73.9	72.9	112.2	112.2
Actuated g/C Ratio	0.14	0.46	0.46	0.46	0.70	0.70
v/c Ratio	0.77	1.01	0.32	0.85	0.78	0.48
Control Delay	76.6	68.1	26.9	34.7	20.4	2.8
Queue Delay	0.0	0.0	0.0	0.6	0.0	0.0
Total Delay	76.6	68.1	26.9	35.2	20.4	2.8
LOS	E	E	C	D	C	A
Approach Delay				35.0	16.2	
Approach LOS				C	B	

Intersection Summary

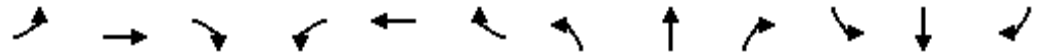
Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 129 (81%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.01
 Intersection Signal Delay: 37.1
 Intersection Capacity Utilization 96.1%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service F

Splits and Phases: 1: Godwin Blvd & 58 WB Off Ramp



HCM Signalized Intersection Capacity Analysis
 1: Godwin Blvd & 58 WB Off Ramp

2035 Build
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations				↖↗		↖↗	↖	↕			↕	↗
Traffic Volume (vph)	0	0	0	383	0	1330	42	1373	0	0	1938	614
Future Volume (vph)	0	0	0	383	0	1330	42	1373	0	0	1938	614
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Lane Util. Factor				0.97		0.88	1.00	0.95			0.95	1.00
Frt				1.00		0.85	1.00	1.00			1.00	0.85
Flt Protected				0.95		1.00	0.95	1.00			1.00	1.00
Satd. Flow (prot)				3433		2787	1770	3539			3539	1583
Flt Permitted				0.95		1.00	0.06	1.00			1.00	1.00
Satd. Flow (perm)				3433		2787	114	3539			3539	1583
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	383	0	1330	42	1373	0	0	1938	614
RTOR Reduction (vph)	0	0	0	0	0	43	0	0	0	0	0	170
Lane Group Flow (vph)	0	0	0	383	0	1287	42	1373	0	0	1938	444
Turn Type				Prot		custom	pm+pt	NA			NA	Perm
Protected Phases				4		1	5	2			6	
Permitted Phases						4	2					6
Actuated Green, G (s)				23.1		67.9	71.6	71.6			110.9	110.9
Effective Green, g (s)				23.1		67.9	71.6	71.6			110.9	110.9
Actuated g/C Ratio				0.14		0.42	0.45	0.45			0.69	0.69
Clearance Time (s)				6.5		6.5	6.5	7.5			6.5	6.5
Vehicle Extension (s)				3.0		3.0	3.0	3.0			3.0	3.0
Lane Grp Cap (vph)				495		1295	118	1583			2452	1097
v/s Ratio Prot				0.11		c0.28	0.01	c0.39			0.55	
v/s Ratio Perm						0.18	0.14					0.28
v/c Ratio				0.77		0.99	0.36	0.87			0.79	0.40
Uniform Delay, d1				65.9		45.8	36.9	39.9			16.7	10.5
Progression Factor				1.00		1.00	0.84	0.74			1.00	1.00
Incremental Delay, d2				7.4		23.4	1.6	5.8			2.7	1.1
Delay (s)				73.3		69.2	32.8	35.4			19.4	11.6
Level of Service				E		E	C	D			B	B
Approach Delay (s)		0.0			70.1			35.3			17.5	
Approach LOS		A			E			D			B	

Intersection Summary

HCM 2000 Control Delay	37.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	20.5
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Timings
2: Godwin Blvd & 58 EB off ramp

Existing
AM Peak

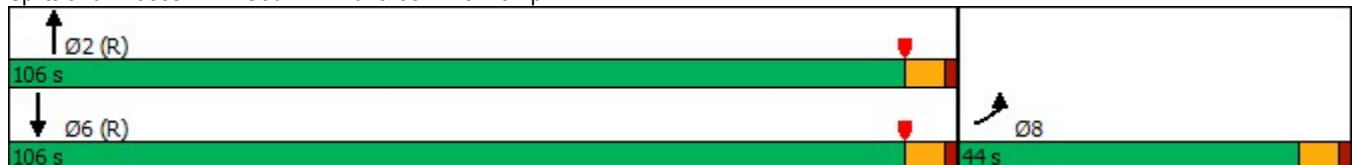


Lane Group	EBL	NBT	SBT
Lane Configurations	↘	↑↑	↑↑
Traffic Volume (vph)	368	457	659
Future Volume (vph)	368	457	659
Turn Type	Prot	NA	NA
Protected Phases	8	2	6
Permitted Phases			
Detector Phase	8	2	6
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	24.5	24.0	24.5
Total Split (s)	44.0	106.0	106.0
Total Split (%)	29.3%	70.7%	70.7%
Yellow Time (s)	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	C-Max	C-Max
Act Effct Green (s)	36.9	101.1	101.1
Actuated g/C Ratio	0.25	0.67	0.67
v/c Ratio	0.95	0.19	0.28
Control Delay	86.5	9.5	8.7
Queue Delay	0.0	0.0	0.0
Total Delay	86.5	9.5	8.7
LOS	F	A	A
Approach Delay	86.5	9.5	8.7
Approach LOS	F	A	A

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 39 (26%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 30.0
 Intersection Capacity Utilization 60.7%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 2: Godwin Blvd & 58 EB off ramp



HCM Signalized Intersection Capacity Analysis

2: Godwin Blvd & 58 EB off ramp

Existing
AM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (vph)	368	44	0	457	659	0
Future Volume (vph)	368	44	0	457	659	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.99			1.00	1.00	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1757			3539	3539	
Flt Permitted	0.96			1.00	1.00	
Satd. Flow (perm)	1757			3539	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	368	44	0	457	659	0
RTOR Reduction (vph)	3	0	0	0	0	0
Lane Group Flow (vph)	409	0	0	457	659	0
Turn Type	Prot			NA	NA	
Protected Phases	8			2	6	
Permitted Phases						
Actuated Green, G (s)	36.9			101.1	101.1	
Effective Green, g (s)	36.9			101.1	101.1	
Actuated g/C Ratio	0.25			0.67	0.67	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	432			2385	2385	
v/s Ratio Prot	c0.23			0.13	c0.19	
v/s Ratio Perm						
v/c Ratio	0.95			0.19	0.28	
Uniform Delay, d1	55.6			9.2	9.8	
Progression Factor	1.00			1.00	0.85	
Incremental Delay, d2	29.8			0.2	0.3	
Delay (s)	85.4			9.3	8.6	
Level of Service	F			A	A	
Approach Delay (s)	85.4			9.3	8.6	
Approach LOS	F			A	A	

Intersection Summary

HCM 2000 Control Delay	29.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Timings
2: Godwin Blvd & 58 EB off ramp

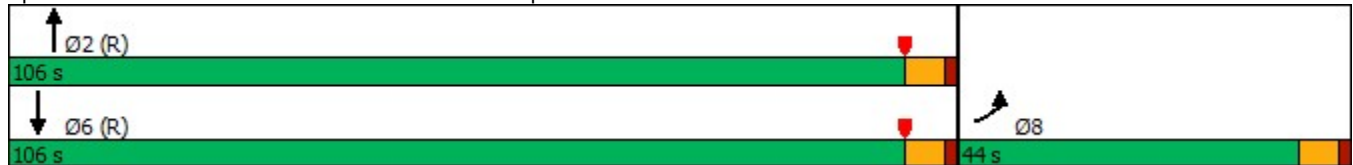


Lane Group	EBL	NBT	SBT
Lane Configurations	↘	↑↑	↑↑
Traffic Volume (vph)	430	557	772
Future Volume (vph)	430	557	772
Turn Type	Prot	NA	NA
Protected Phases	8	2	6
Permitted Phases			
Detector Phase	8	2	6
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	24.5	24.0	24.5
Total Split (s)	44.0	106.0	106.0
Total Split (%)	29.3%	70.7%	70.7%
Yellow Time (s)	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	C-Max	C-Max
Act Effct Green (s)	38.0	100.0	100.0
Actuated g/C Ratio	0.25	0.67	0.67
v/c Ratio	1.06	0.24	0.33
Control Delay	112.8	10.2	10.1
Queue Delay	0.0	0.0	0.0
Total Delay	112.8	10.2	10.1
LOS	F	B	B
Approach Delay	112.8	10.2	10.1
Approach LOS	F	B	B

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 39 (26%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 37.2
 Intersection Capacity Utilization 72.4%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service C

Splits and Phases: 2: Godwin Blvd & 58 EB off ramp



HCM Signalized Intersection Capacity Analysis
 2: Godwin Blvd & 58 EB off ramp

Background 2030
 AM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↑↑	↑↑	
Traffic Volume (vph)	430	46	0	557	772	0
Future Volume (vph)	430	46	0	557	772	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.99			1.00	1.00	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1759			3539	3539	
Flt Permitted	0.96			1.00	1.00	
Satd. Flow (perm)	1759			3539	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	430	46	0	557	772	0
RTOR Reduction (vph)	2	0	0	0	0	0
Lane Group Flow (vph)	474	0	0	557	772	0
Turn Type	Prot			NA	NA	
Protected Phases	8			2	6	
Permitted Phases						
Actuated Green, G (s)	38.0			100.0	100.0	
Effective Green, g (s)	38.0			100.0	100.0	
Actuated g/C Ratio	0.25			0.67	0.67	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	445			2359	2359	
v/s Ratio Prot	c0.27			0.16	c0.22	
v/s Ratio Perm						
v/c Ratio	1.06			0.24	0.33	
Uniform Delay, d1	56.0			9.9	10.7	
Progression Factor	1.00			1.00	0.91	
Incremental Delay, d2	60.9			0.2	0.3	
Delay (s)	116.9			10.1	10.0	
Level of Service	F			B	B	
Approach Delay (s)	116.9			10.1	10.0	
Approach LOS	F			B	B	

Intersection Summary

HCM 2000 Control Delay	38.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Timings
2: Godwin Blvd & 58 EB off ramp

2030 Build
Timing Plan: AM Peak



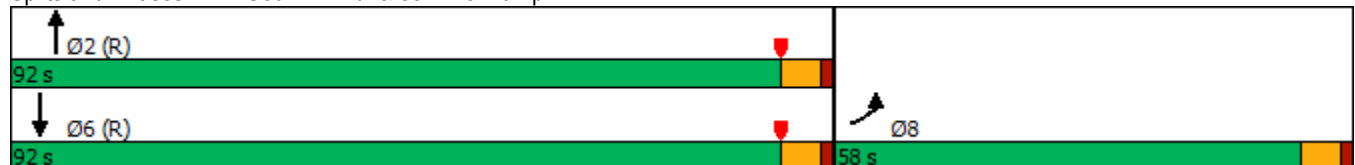
Lane Group	EBL	NBT	SBT
Lane Configurations	↔	↑↑	↑↑
Traffic Volume (vph)	430	580	945
Future Volume (vph)	430	580	945
Turn Type	Prot	NA	NA
Protected Phases	8	2	6
Permitted Phases			
Detector Phase	8	2	6
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	24.5	24.0	24.5
Total Split (s)	58.0	92.0	92.0
Total Split (%)	38.7%	61.3%	61.3%
Yellow Time (s)	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	C-Max	C-Max
Act Effct Green (s)	44.8	93.2	93.2
Actuated g/C Ratio	0.30	0.62	0.62
v/c Ratio	0.90	0.26	0.94
Control Delay	70.7	14.0	27.1
Queue Delay	0.0	0.0	0.0
Total Delay	70.7	14.0	27.1
LOS	E	B	C
Approach Delay	70.7	14.0	27.1
Approach LOS	E	B	C

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 39 (26%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.94
 Intersection Signal Delay: 31.4
 Intersection Capacity Utilization 97.0%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service F

Splits and Phases: 2: Godwin Blvd & 58 EB off ramp



HCM Signalized Intersection Capacity Analysis
 2: Godwin Blvd & 58 EB off ramp

2030 Build
 Timing Plan: AM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	430	46	0	580	945	1065
Future Volume (vph)	430	46	0	580	945	1065
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.99			1.00	0.92	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1759			3539	3258	
Flt Permitted	0.96			1.00	1.00	
Satd. Flow (perm)	1759			3539	3258	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	430	46	0	580	945	1065
RTOR Reduction (vph)	3	0	0	0	120	0
Lane Group Flow (vph)	473	0	0	580	1890	0
Turn Type	Prot			NA	NA	
Protected Phases	8			2	6	
Permitted Phases						
Actuated Green, G (s)	44.8			93.2	93.2	
Effective Green, g (s)	44.8			93.2	93.2	
Actuated g/C Ratio	0.30			0.62	0.62	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	525			2198	2024	
v/s Ratio Prot	c0.27			0.16	c0.58	
v/s Ratio Perm						
v/c Ratio	0.90			0.26	0.93	
Uniform Delay, d1	50.5			12.9	25.6	
Progression Factor	1.00			1.00	0.84	
Incremental Delay, d2	18.6			0.3	7.9	
Delay (s)	69.0			13.2	29.4	
Level of Service	E			B	C	
Approach Delay (s)	69.0			13.2	29.4	
Approach LOS	E			B	C	

Intersection Summary			
HCM 2000 Control Delay	32.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	97.0%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Timings
2: Godwin Blvd & 58 EB off ramp

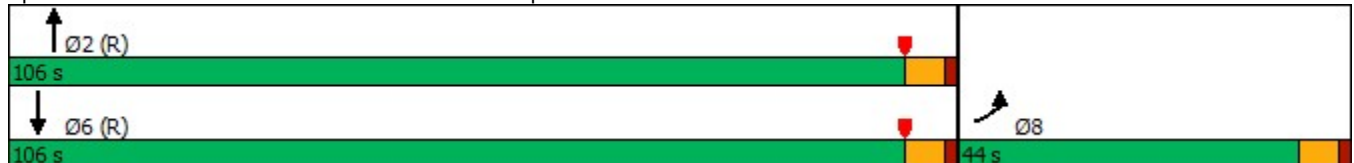


Lane Group	EBL	NBT	SBT
Lane Configurations	↘	↑↑	↑↑
Traffic Volume (vph)	449	580	805
Future Volume (vph)	449	580	805
Turn Type	Prot	NA	NA
Protected Phases	8	2	6
Permitted Phases			
Detector Phase	8	2	6
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	24.5	24.0	24.5
Total Split (s)	44.0	106.0	106.0
Total Split (%)	29.3%	70.7%	70.7%
Yellow Time (s)	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	C-Max	C-Max
Act Effct Green (s)	38.0	100.0	100.0
Actuated g/C Ratio	0.25	0.67	0.67
v/c Ratio	1.11	0.25	0.34
Control Delay	126.7	10.3	10.5
Queue Delay	0.0	0.0	0.0
Total Delay	126.7	10.3	10.5
LOS	F	B	B
Approach Delay	126.7	10.3	10.5
Approach LOS	F	B	B

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 39 (26%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.11
 Intersection Signal Delay: 41.1
 Intersection Capacity Utilization 74.9%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service D

Splits and Phases: 2: Godwin Blvd & 58 EB off ramp



HCM Signalized Intersection Capacity Analysis
 2: Godwin Blvd & 58 EB off ramp

Background 2035
 AM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔			↑↑	↑↑	
Traffic Volume (vph)	449	48	0	580	805	0
Future Volume (vph)	449	48	0	580	805	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.99			1.00	1.00	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1759			3539	3539	
Flt Permitted	0.96			1.00	1.00	
Satd. Flow (perm)	1759			3539	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	449	48	0	580	805	0
RTOR Reduction (vph)	2	0	0	0	0	0
Lane Group Flow (vph)	495	0	0	580	805	0
Turn Type	Prot			NA	NA	
Protected Phases	8			2	6	
Permitted Phases						
Actuated Green, G (s)	38.0			100.0	100.0	
Effective Green, g (s)	38.0			100.0	100.0	
Actuated g/C Ratio	0.25			0.67	0.67	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	445			2359	2359	
v/s Ratio Prot	c0.28			0.16	c0.23	
v/s Ratio Perm						
v/c Ratio	1.11			0.25	0.34	
Uniform Delay, d1	56.0			10.0	10.8	
Progression Factor	1.00			1.00	0.94	
Incremental Delay, d2	76.7			0.2	0.3	
Delay (s)	132.7			10.2	10.5	
Level of Service	F			B	B	
Approach Delay (s)	132.7			10.2	10.5	
Approach LOS	F			B	B	

Intersection Summary

HCM 2000 Control Delay	42.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	74.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Timings
2: Godwin Blvd & 58 EB off ramp

2035 Build
Timing Plan: AM Peak

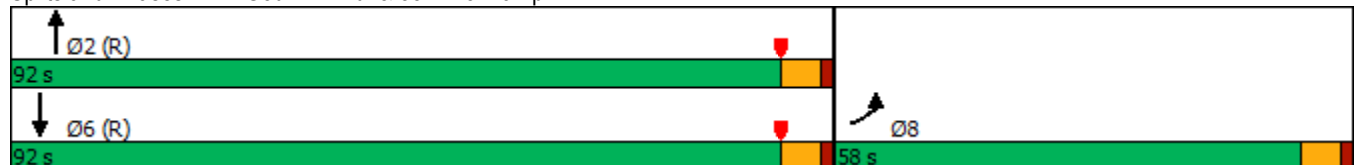


Lane Group	EBL	NBT	SBT
Lane Configurations	↘	↑↑	↑↑
Traffic Volume (vph)	449	603	978
Future Volume (vph)	449	603	978
Turn Type	Prot	NA	NA
Protected Phases	8	2	6
Permitted Phases			
Detector Phase	8	2	6
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	24.5	24.0	24.5
Total Split (s)	58.0	92.0	92.0
Total Split (%)	38.7%	61.3%	61.3%
Yellow Time (s)	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	C-Max	C-Max
Act Effct Green (s)	46.4	91.6	91.6
Actuated g/C Ratio	0.31	0.61	0.61
v/c Ratio	0.91	0.28	0.45
Control Delay	70.5	14.8	16.9
Queue Delay	0.0	0.0	0.0
Total Delay	70.5	14.8	16.9
LOS	E	B	B
Approach Delay	70.5	14.8	16.9
Approach LOS	E	B	B

Intersection Summary

Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 39 (26%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 29.1
 Intersection Capacity Utilization 77.7%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 2: Godwin Blvd & 58 EB off ramp



HCM Signalized Intersection Capacity Analysis
 2: Godwin Blvd & 58 EB off ramp

2035 Build
 Timing Plan: AM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (vph)	449	48	0	603	978	0
Future Volume (vph)	449	48	0	603	978	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Fr _t	0.99			1.00	1.00	
Fl _t Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1759			3539	3539	
Fl _t Permitted	0.96			1.00	1.00	
Satd. Flow (perm)	1759			3539	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	449	48	0	603	978	0
RTOR Reduction (vph)	3	0	0	0	0	0
Lane Group Flow (vph)	494	0	0	603	978	0
Turn Type	Prot			NA	NA	
Protected Phases	8			2	6	
Permitted Phases						
Actuated Green, G (s)	46.4			91.6	91.6	
Effective Green, g (s)	46.4			91.6	91.6	
Actuated g/C Ratio	0.31			0.61	0.61	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	544			2161	2161	
v/s Ratio Prot	c0.28			0.17	c0.28	
v/s Ratio Perm						
v/c Ratio	0.91			0.28	0.45	
Uniform Delay, d ₁	49.8			13.7	15.7	
Progression Factor	1.00			1.00	0.99	
Incremental Delay, d ₂	18.9			0.3	0.5	
Delay (s)	68.7			14.0	16.1	
Level of Service	E			B	B	
Approach Delay (s)	68.7			14.0	16.1	
Approach LOS	E			B	B	

Intersection Summary			
HCM 2000 Control Delay	28.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Timings
2: Godwin Blvd & 58 EB off ramp

Existing
PM Peak



Lane Group	EBL	NBT	SBT
Lane Configurations	↘	↑↑	↑↑
Traffic Volume (vph)	300	696	967
Future Volume (vph)	300	696	967
Turn Type	Prot	NA	NA
Protected Phases	8	2	6
Permitted Phases			
Detector Phase	8	2	6
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	24.5	24.0	24.5
Total Split (s)	43.0	117.0	117.0
Total Split (%)	26.9%	73.1%	73.1%
Yellow Time (s)	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	C-Max	C-Max
Act Effct Green (s)	33.4	114.6	114.6
Actuated g/C Ratio	0.21	0.72	0.72
v/c Ratio	0.90	0.27	0.38
Control Delay	87.2	8.7	7.9
Queue Delay	0.0	0.0	0.0
Total Delay	87.2	8.7	7.9
LOS	F	A	A
Approach Delay	87.2	8.7	7.9
Approach LOS	F	A	A

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 135 (84%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 21.3
 Intersection Capacity Utilization 69.7%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 2: Godwin Blvd & 58 EB off ramp



HCM Signalized Intersection Capacity Analysis

2: Godwin Blvd & 58 EB off ramp

Existing
PM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (vph)	300	31	0	696	967	0
Future Volume (vph)	300	31	0	696	967	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.99			1.00	1.00	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1759			3539	3539	
Flt Permitted	0.96			1.00	1.00	
Satd. Flow (perm)	1759			3539	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	300	31	0	696	967	0
RTOR Reduction (vph)	2	0	0	0	0	0
Lane Group Flow (vph)	329	0	0	696	967	0
Turn Type	Prot			NA	NA	
Protected Phases	8			2	6	
Permitted Phases						
Actuated Green, G (s)	33.4			114.6	114.6	
Effective Green, g (s)	33.4			114.6	114.6	
Actuated g/C Ratio	0.21			0.72	0.72	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	367			2534	2534	
v/s Ratio Prot	c0.19			0.20	c0.27	
v/s Ratio Perm						
v/c Ratio	0.90			0.27	0.38	
Uniform Delay, d1	61.6			8.0	8.9	
Progression Factor	1.00			1.00	0.81	
Incremental Delay, d2	23.2			0.3	0.4	
Delay (s)	84.8			8.3	7.5	
Level of Service	F			A	A	
Approach Delay (s)	84.8			8.3	7.5	
Approach LOS	F			A	A	

Intersection Summary

HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	69.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Timings
2: Godwin Blvd & 58 EB off ramp



Lane Group	EBL	NBT	SBT
Lane Configurations	↔	↑↑	↑↑
Traffic Volume (vph)	418	866	1123
Future Volume (vph)	418	866	1123
Turn Type	Prot	NA	NA
Protected Phases	8	2	6
Permitted Phases			
Detector Phase	8	2	6
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	24.5	24.0	24.5
Total Split (s)	43.0	117.0	117.0
Total Split (%)	26.9%	73.1%	73.1%
Yellow Time (s)	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	C-Max	C-Max
Act Effct Green (s)	37.0	111.0	111.0
Actuated g/C Ratio	0.23	0.69	0.69
v/c Ratio	1.10	0.35	0.46
Control Delay	130.0	10.4	9.5
Queue Delay	0.0	0.0	0.2
Total Delay	130.0	10.4	9.8
LOS	F	B	A
Approach Delay	130.0	10.4	9.8
Approach LOS	F	B	A

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 135 (84%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.10
 Intersection Signal Delay: 32.2
 Intersection Capacity Utilization 92.3%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service F

Splits and Phases: 2: Godwin Blvd & 58 EB off ramp



HCM Signalized Intersection Capacity Analysis
2: Godwin Blvd & 58 EB off ramp

Background 2030
PM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (vph)	418	33	0	866	1123	0
Future Volume (vph)	418	33	0	866	1123	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.99			1.00	1.00	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1763			3539	3539	
Flt Permitted	0.96			1.00	1.00	
Satd. Flow (perm)	1763			3539	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	418	33	0	866	1123	0
RTOR Reduction (vph)	2	0	0	0	0	0
Lane Group Flow (vph)	449	0	0	866	1123	0
Turn Type	Prot			NA	NA	
Protected Phases	8			2	6	
Permitted Phases						
Actuated Green, G (s)	37.0			111.0	111.0	
Effective Green, g (s)	37.0			111.0	111.0	
Actuated g/C Ratio	0.23			0.69	0.69	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	407			2455	2455	
v/s Ratio Prot	c0.25			0.24	c0.32	
v/s Ratio Perm						
v/c Ratio	1.10			0.35	0.46	
Uniform Delay, d1	61.5			9.9	11.0	
Progression Factor	1.00			1.00	0.82	
Incremental Delay, d2	75.9			0.4	0.4	
Delay (s)	137.4			10.3	9.5	
Level of Service	F			B	A	
Approach Delay (s)	137.4			10.3	9.5	
Approach LOS	F			B	A	

Intersection Summary

HCM 2000 Control Delay	33.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Timings
2: Godwin Blvd & 58 EB off ramp

2030 Build
Timing Plan: PM Peak

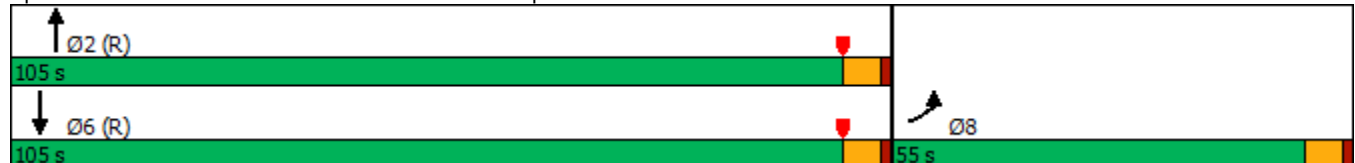


Lane Group	EBL	NBT	SBT
Lane Configurations	↔	↑↑	↑↑
Traffic Volume (vph)	418	898	1248
Future Volume (vph)	418	898	1248
Turn Type	Prot	NA	NA
Protected Phases	8	2	6
Permitted Phases			
Detector Phase	8	2	6
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	24.5	24.0	24.5
Total Split (s)	55.0	105.0	105.0
Total Split (%)	34.4%	65.6%	65.6%
Yellow Time (s)	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	C-Max	C-Max
Act Effct Green (s)	44.5	103.5	103.5
Actuated g/C Ratio	0.28	0.65	0.65
v/c Ratio	0.92	0.39	0.54
Control Delay	79.5	14.5	11.9
Queue Delay	0.0	0.0	0.3
Total Delay	79.5	14.5	12.2
LOS	E	B	B
Approach Delay	79.5	14.5	12.2
Approach LOS	E	B	B

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 11 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 24.7
 Intersection Capacity Utilization 93.2%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service F

Splits and Phases: 2: Godwin Blvd & 58 EB off ramp



HCM Signalized Intersection Capacity Analysis
 2: Godwin Blvd & 58 EB off ramp

2030 Build
 Timing Plan: PM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (vph)	418	33	0	898	1248	0
Future Volume (vph)	418	33	0	898	1248	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.99			1.00	1.00	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1763			3539	3539	
Flt Permitted	0.96			1.00	1.00	
Satd. Flow (perm)	1763			3539	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	418	33	0	898	1248	0
RTOR Reduction (vph)	2	0	0	0	0	0
Lane Group Flow (vph)	449	0	0	898	1248	0
Turn Type	Prot			NA	NA	
Protected Phases	8			2	6	
Permitted Phases						
Actuated Green, G (s)	44.5			103.5	103.5	
Effective Green, g (s)	44.5			103.5	103.5	
Actuated g/C Ratio	0.28			0.65	0.65	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	490			2289	2289	
v/s Ratio Prot	c0.25			0.25	c0.35	
v/s Ratio Perm						
v/c Ratio	0.92			0.39	0.55	
Uniform Delay, d1	55.9			13.4	15.4	
Progression Factor	1.00			1.00	0.69	
Incremental Delay, d2	21.8			0.5	0.6	
Delay (s)	77.7			13.9	11.4	
Level of Service	E			B	B	
Approach Delay (s)	77.7			13.9	11.4	
Approach LOS	E			B	B	

Intersection Summary			
HCM 2000 Control Delay	23.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	93.2%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Timings
2: Godwin Blvd & 58 EB off ramp



Lane Group	EBL	NBT	SBT
Lane Configurations	↔	↑↑	↑↑
Traffic Volume (vph)	433	901	1172
Future Volume (vph)	433	901	1172
Turn Type	Prot	NA	NA
Protected Phases	8	2	6
Permitted Phases			
Detector Phase	8	2	6
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	24.5	24.0	24.5
Total Split (s)	43.0	117.0	117.0
Total Split (%)	26.9%	73.1%	73.1%
Yellow Time (s)	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	C-Max	C-Max
Act Effct Green (s)	37.0	111.0	111.0
Actuated g/C Ratio	0.23	0.69	0.69
v/c Ratio	1.14	0.37	0.48
Control Delay	142.2	10.6	10.0
Queue Delay	0.0	0.0	0.3
Total Delay	142.2	10.6	10.2
LOS	F	B	B
Approach Delay	142.2	10.6	10.2
Approach LOS	F	B	B

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 135 (84%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.14
 Intersection Signal Delay: 34.6
 Intersection Capacity Utilization 95.3%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service F

Splits and Phases: 2: Godwin Blvd & 58 EB off ramp



HCM Signalized Intersection Capacity Analysis
 2: Godwin Blvd & 58 EB off ramp

Background 2035
 PM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (vph)	433	34	0	901	1172	0
Future Volume (vph)	433	34	0	901	1172	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.99			1.00	1.00	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1763			3539	3539	
Flt Permitted	0.96			1.00	1.00	
Satd. Flow (perm)	1763			3539	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	433	34	0	901	1172	0
RTOR Reduction (vph)	2	0	0	0	0	0
Lane Group Flow (vph)	465	0	0	901	1172	0
Turn Type	Prot			NA	NA	
Protected Phases	8			2	6	
Permitted Phases						
Actuated Green, G (s)	37.0			111.0	111.0	
Effective Green, g (s)	37.0			111.0	111.0	
Actuated g/C Ratio	0.23			0.69	0.69	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	407			2455	2455	
v/s Ratio Prot	c0.26			0.25	c0.33	
v/s Ratio Perm						
v/c Ratio	1.14			0.37	0.48	
Uniform Delay, d1	61.5			10.1	11.2	
Progression Factor	1.00			1.00	0.84	
Incremental Delay, d2	89.9			0.4	0.5	
Delay (s)	151.4			10.5	9.9	
Level of Service	F			B	A	
Approach Delay (s)	151.4			10.5	9.9	
Approach LOS	F			B	A	

Intersection Summary			
HCM 2000 Control Delay	36.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	95.3%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Timings
2: Godwin Blvd & 58 EB off ramp

2035 Build
Timing Plan: PM Peak

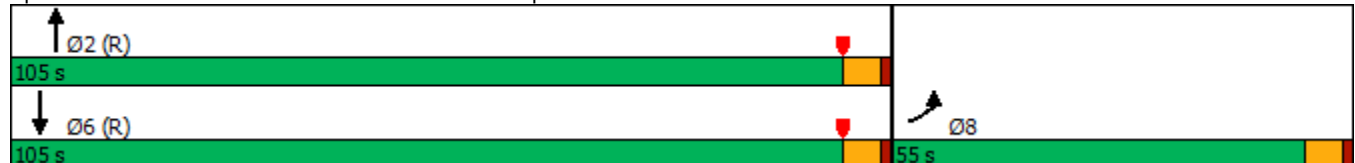


Lane Group	EBL	NBT	SBT
Lane Configurations	↔	↑↑	↑↑
Traffic Volume (vph)	433	933	1297
Future Volume (vph)	433	933	1297
Turn Type	Prot	NA	NA
Protected Phases	8	2	6
Permitted Phases			
Detector Phase	8	2	6
Switch Phase			
Minimum Initial (s)	5.0	5.0	5.0
Minimum Split (s)	24.5	24.0	24.5
Total Split (s)	55.0	105.0	105.0
Total Split (%)	34.4%	65.6%	65.6%
Yellow Time (s)	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5
Lost Time Adjust (s)	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0
Lead/Lag			
Lead-Lag Optimize?			
Recall Mode	None	C-Max	C-Max
Act Effct Green (s)	45.4	102.6	102.6
Actuated g/C Ratio	0.28	0.64	0.64
v/c Ratio	0.93	0.41	0.57
Control Delay	80.8	15.1	12.8
Queue Delay	0.0	0.0	0.3
Total Delay	80.8	15.1	13.2
LOS	F	B	B
Approach Delay	80.8	15.1	13.2
Approach LOS	F	B	B

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 11 (7%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.93
 Intersection Signal Delay: 25.6
 Intersection Capacity Utilization 96.1%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service F

Splits and Phases: 2: Godwin Blvd & 58 EB off ramp



HCM Signalized Intersection Capacity Analysis
 2: Godwin Blvd & 58 EB off ramp

2035 Build
 Timing Plan: PM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			↑↑	↑↑	
Traffic Volume (vph)	433	34	0	933	1297	0
Future Volume (vph)	433	34	0	933	1297	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0			6.0	6.0	
Lane Util. Factor	1.00			0.95	0.95	
Frt	0.99			1.00	1.00	
Flt Protected	0.96			1.00	1.00	
Satd. Flow (prot)	1763			3539	3539	
Flt Permitted	0.96			1.00	1.00	
Satd. Flow (perm)	1763			3539	3539	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	433	34	0	933	1297	0
RTOR Reduction (vph)	2	0	0	0	0	0
Lane Group Flow (vph)	465	0	0	933	1297	0
Turn Type	Prot			NA	NA	
Protected Phases	8			2	6	
Permitted Phases						
Actuated Green, G (s)	45.4			102.6	102.6	
Effective Green, g (s)	45.4			102.6	102.6	
Actuated g/C Ratio	0.28			0.64	0.64	
Clearance Time (s)	6.0			6.0	6.0	
Vehicle Extension (s)	3.0			3.0	3.0	
Lane Grp Cap (vph)	500			2269	2269	
v/s Ratio Prot	c0.26			0.26	c0.37	
v/s Ratio Perm						
v/c Ratio	0.93			0.41	0.57	
Uniform Delay, d1	55.7			14.0	16.3	
Progression Factor	1.00			1.00	0.71	
Incremental Delay, d2	23.7			0.6	0.7	
Delay (s)	79.5			14.5	12.3	
Level of Service	E			B	B	
Approach Delay (s)	79.5			14.5	12.3	
Approach LOS	E			B	B	

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Vol, veh/h	0	918	91	61	320	0	0	0	0	54	2	608
Future Vol, veh/h	0	918	91	61	320	0	0	0	0	54	2	608
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	225	150	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	918	91	61	320	0	0	0	0	54	2	608

Major/Minor	Major1			Major2			Minor2			
Conflicting Flow All	-	0	0	918	0	0		901	1360	-
Stage 1	-	-	-	-	-	-		442	442	-
Stage 2	-	-	-	-	-	-		459	918	-
Critical Hdwy	-	-	-	4.14	-	-		6.84	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-		5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.84	5.54	-
Follow-up Hdwy	-	-	-	2.22	-	-		3.52	4.02	-
Pot Cap-1 Maneuver	0	-	-	739	-	0		278	147	0
Stage 1	0	-	-	-	-	0		615	575	0
Stage 2	0	-	-	-	-	0		603	349	0
Platoon blocked, %	-	-	-	-	-	-		-	-	-
Mov Cap-1 Maneuver	-	-	-	739	-	-		255	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-		255	0	-
Stage 1	-	-	-	-	-	-		615	0	-
Stage 2	-	-	-	-	-	-		553	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	1.7	23
HCM LOS			C

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	739	-	255	-
HCM Lane V/C Ratio	-	-	0.083	-	0.22	-
HCM Control Delay (s)	-	-	10.3	-	23	0
HCM Lane LOS	-	-	B	-	C	A
HCM 95th %tile Q(veh)	-	-	0.3	-	0.8	-

Intersection												
Int Delay, s/veh	3.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Vol, veh/h	0	998	96	103	344	0	0	0	0	101	2	638
Future Vol, veh/h	0	998	96	103	344	0	0	0	0	101	2	638
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	225	150	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	998	96	103	344	0	0	0	0	101	2	638

Major/Minor	Major1			Major2			Minor2				
Conflicting Flow All	-	0	0	998	0	0			1049	1548	-
Stage 1	-	-	-	-	-	-			550	550	-
Stage 2	-	-	-	-	-	-			499	998	-
Critical Hdwy	-	-	-	4.14	-	-			6.84	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-			5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-			5.84	5.54	-
Follow-up Hdwy	-	-	-	2.22	-	-			3.52	4.02	-
Pot Cap-1 Maneuver	0	-	-	689	-	0			223	113	0
Stage 1	0	-	-	-	-	0			542	514	0
Stage 2	0	-	-	-	-	0			575	320	0
Platoon blocked, %	-	-	-	-	-	-			-	-	-
Mov Cap-1 Maneuver	-	-	-	689	-	-			190	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-			190	0	-
Stage 1	-	-	-	-	-	-			542	0	-
Stage 2	-	-	-	-	-	-			489	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	2.6	44.4
HCM LOS			E

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	689	-	190	-
HCM Lane V/C Ratio	-	-	0.149	-	0.542	-
HCM Control Delay (s)	-	-	11.1	-	44.4	0
HCM Lane LOS	-	-	B	-	E	A
HCM 95th %tile Q(veh)	-	-	0.5	-	2.8	-

Intersection												
Int Delay, s/veh	4.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Vol, veh/h	0	1018	96	130	358	0	0	0	0	101	2	638
Future Vol, veh/h	0	1018	96	130	358	0	0	0	0	101	2	638
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	225	150	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1018	96	130	358	0	0	0	0	101	2	638

Major/Minor	Major1			Major2			Minor2			
Conflicting Flow All	-	0	0	1018	0	0		1127	1636	-
Stage 1	-	-	-	-	-	-		618	618	-
Stage 2	-	-	-	-	-	-		509	1018	-
Critical Hdwy	-	-	-	4.14	-	-		6.84	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-		5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.84	5.54	-
Follow-up Hdwy	-	-	-	2.22	-	-		3.52	4.02	-
Pot Cap-1 Maneuver	0	-	-	677	-	0		198	100	0
Stage 1	0	-	-	-	-	0		500	479	0
Stage 2	0	-	-	-	-	0		569	313	0
Platoon blocked, %	-	-	-	-	-	-		-	-	-
Mov Cap-1 Maneuver	-	-	-	677	-	-		160	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-		160	0	-
Stage 1	-	-	-	-	-	-		500	0	-
Stage 2	-	-	-	-	-	-		460	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	3.1	61.1
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	677	-	160	-
HCM Lane V/C Ratio	-	-	0.192	-	0.644	-
HCM Control Delay (s)	-	-	11.6	-	61.1	0
HCM Lane LOS	-	-	B	-	F	A
HCM 95th %tile Q(veh)	-	-	0.7	-	3.6	-

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Vol, veh/h	0	1044	100	106	360	0	0	0	0	103	2	669
Future Vol, veh/h	0	1044	100	106	360	0	0	0	0	103	2	669
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	225	150	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1044	100	106	360	0	0	0	0	103	2	669

Major/Minor	Major1			Major2			Minor2			
Conflicting Flow All	-	0	0	1044	0	0		1094	1616	-
Stage 1	-	-	-	-	-	-		572	572	-
Stage 2	-	-	-	-	-	-		522	1044	-
Critical Hdwy	-	-	-	4.14	-	-		6.84	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-		5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.84	5.54	-
Follow-up Hdwy	-	-	-	2.22	-	-		3.52	4.02	-
Pot Cap-1 Maneuver	0	-	-	662	-	0		208	103	0
Stage 1	0	-	-	-	-	0		528	502	0
Stage 2	0	-	-	-	-	0		560	304	0
Platoon blocked, %	-	-	-	-	-	-		-	-	-
Mov Cap-1 Maneuver	-	-	-	662	-	-		175	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-		175	0	-
Stage 1	-	-	-	-	-	-		528	0	-
Stage 2	-	-	-	-	-	-		470	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	2.6	52.4
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	662	-	175	-
HCM Lane V/C Ratio	-	-	0.16	-	0.6	-
HCM Control Delay (s)	-	-	11.5	-	52.4	0
HCM Lane LOS	-	-	B	-	F	A
HCM 95th %tile Q(veh)	-	-	0.6	-	3.3	-

Intersection												
Int Delay, s/veh	5.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Vol, veh/h	0	1064	100	133	374	0	0	0	0	103	2	669
Future Vol, veh/h	0	1064	100	133	374	0	0	0	0	103	2	669
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	225	150	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1064	100	133	374	0	0	0	0	103	2	669

Major/Minor	Major1			Major2			Minor2			
Conflicting Flow All	-	0	0	1064	0	0		1172	1704	-
Stage 1	-	-	-	-	-	-		640	640	-
Stage 2	-	-	-	-	-	-		532	1064	-
Critical Hdwy	-	-	-	4.14	-	-		6.84	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-		5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.84	5.54	-
Follow-up Hdwy	-	-	-	2.22	-	-		3.52	4.02	-
Pot Cap-1 Maneuver	0	-	-	651	-	0		185	91	0
Stage 1	0	-	-	-	-	0		487	468	0
Stage 2	0	-	-	-	-	0		553	298	0
Platoon blocked, %	-	-	-	-	-	-		-	-	-
Mov Cap-1 Maneuver	-	-	-	651	-	-		147	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-		147	0	-
Stage 1	-	-	-	-	-	-		487	0	-
Stage 2	-	-	-	-	-	-		440	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	3.1	74.8
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	651	-	147	-
HCM Lane V/C Ratio	-	-	0.204	-	0.714	-
HCM Control Delay (s)	-	-	11.9	-	74.8	0
HCM Lane LOS	-	-	B	-	F	A
HCM 95th %tile Q(veh)	-	-	0.8	-	4.2	-

HCM 6th TWSC
3: Pruden Blvd & Rte 58 WB

Existing
PM Peak

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Vol, veh/h	0	712	132	212	460	0	0	0	0	33	0	678
Future Vol, veh/h	0	712	132	212	460	0	0	0	0	33	0	678
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	225	150	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	712	132	212	460	0	0	0	0	33	0	678

Major/Minor	Major1			Major2			Minor2			
Conflicting Flow All	-	0	0	712	0	0		1240	1596	-
Stage 1	-	-	-	-	-	-		884	884	-
Stage 2	-	-	-	-	-	-		356	712	-
Critical Hdwy	-	-	-	4.14	-	-		6.84	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-		5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.84	5.54	-
Follow-up Hdwy	-	-	-	2.22	-	-		3.52	4.02	-
Pot Cap-1 Maneuver	0	-	-	884	-	0		167	106	0
Stage 1	0	-	-	-	-	0		364	362	0
Stage 2	0	-	-	-	-	0		680	434	0
Platoon blocked, %	-	-	-	-	-	-		-	-	-
Mov Cap-1 Maneuver	-	-	-	884	-	-		127	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-		127	0	-
Stage 1	-	-	-	-	-	-		364	0	-
Stage 2	-	-	-	-	-	-		517	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	3.3	43
HCM LOS			E

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	884	-	127	-
HCM Lane V/C Ratio	-	-	0.24	-	0.26	-
HCM Control Delay (s)	-	-	10.4	-	43	0
HCM Lane LOS	-	-	B	-	E	A
HCM 95th %tile Q(veh)	-	-	0.9	-	1	-

Intersection												
Int Delay, s/veh	20.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Vol, veh/h	0	793	139	252	494	0	0	0	0	121	0	712
Future Vol, veh/h	0	793	139	252	494	0	0	0	0	121	0	712
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	225	150	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	793	139	252	494	0	0	0	0	121	0	712

Major/Minor	Major1			Major2			Minor2			
Conflicting Flow All	-	0	0	793	0	0		1395	1791	-
Stage 1	-	-	-	-	-	-		998	998	-
Stage 2	-	-	-	-	-	-		397	793	-
Critical Hdwy	-	-	-	4.14	-	-		6.84	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-		5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.84	5.54	-
Follow-up Hdwy	-	-	-	2.22	-	-		3.52	4.02	-
Pot Cap-1 Maneuver	0	-	-	824	-	0		132	80	0
Stage 1	0	-	-	-	-	0		317	320	0
Stage 2	0	-	-	-	-	0		648	398	0
Platoon blocked, %	-	-	-	-	-	-		-	-	-
Mov Cap-1 Maneuver	-	-	-	824	-	-		~ 92	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-		~ 92	0	-
Stage 1	-	-	-	-	-	-		317	0	-
Stage 2	-	-	-	-	-	-		450	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	3.8	283
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	824	-	92	-
HCM Lane V/C Ratio	-	-	0.306	-	1.315	-
HCM Control Delay (s)	-	-	11.3	-	283	0
HCM Lane LOS	-	-	B	-	F	A
HCM 95th %tile Q(veh)	-	-	1.3	-	8.8	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	32.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Vol, veh/h	0	809	139	295	508	0	0	0	0	121	0	712
Future Vol, veh/h	0	809	139	295	508	0	0	0	0	121	0	712
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	225	150	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	809	139	295	508	0	0	0	0	121	0	712

Major/Minor	Major1			Major2			Minor2			
Conflicting Flow All	-	0	0	809	0	0		1503	1907	-
Stage 1	-	-	-	-	-	-		1098	1098	-
Stage 2	-	-	-	-	-	-		405	809	-
Critical Hdwy	-	-	-	4.14	-	-		6.84	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-		5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.84	5.54	-
Follow-up Hdwy	-	-	-	2.22	-	-		3.52	4.02	-
Pot Cap-1 Maneuver	0	-	-	812	-	0		~ 112	68	0
Stage 1	0	-	-	-	-	0		281	287	0
Stage 2	0	-	-	-	-	0		642	392	0
Platoon blocked, %		-	-		-					
Mov Cap-1 Maneuver	-	-	-	812	-	-		~ 71	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-		~ 71	0	-
Stage 1	-	-	-	-	-	-		281	0	-
Stage 2	-	-	-	-	-	-		409	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	4.4	\$ 467.1
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	812	-	71	-
HCM Lane V/C Ratio	-	-	0.363	-	1.704	-
HCM Control Delay (s)	-	-	11.9	-	\$ 467.1	0
HCM Lane LOS	-	-	B	-	F	A
HCM 95th %tile Q(veh)	-	-	1.7	-	10.6	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	25.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Vol, veh/h	0	828	145	262	517	0	0	0	0	122	0	746
Future Vol, veh/h	0	828	145	262	517	0	0	0	0	122	0	746
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	225	150	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	828	145	262	517	0	0	0	0	122	0	746

Major/Minor	Major1			Major2			Minor2			
Conflicting Flow All	-	0	0	828	0	0		1455	1869	-
Stage 1	-	-	-	-	-	-		1041	1041	-
Stage 2	-	-	-	-	-	-		414	828	-
Critical Hdwy	-	-	-	4.14	-	-		6.84	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-		5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.84	5.54	-
Follow-up Hdwy	-	-	-	2.22	-	-		3.52	4.02	-
Pot Cap-1 Maneuver	0	-	-	799	-	0		~ 121	72	0
Stage 1	0	-	-	-	-	0		301	305	0
Stage 2	0	-	-	-	-	0		635	384	0
Platoon blocked, %	-	-	-	-	-	-		-	-	-
Mov Cap-1 Maneuver	-	-	-	799	-	-		~ 81	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-		~ 81	0	-
Stage 1	-	-	-	-	-	-		301	0	-
Stage 2	-	-	-	-	-	-		427	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	3.9	\$ 370.9
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	799	-	81	-
HCM Lane V/C Ratio	-	-	0.328	-	1.506	-
HCM Control Delay (s)	-	-	11.7	-	\$ 370.9	0
HCM Lane LOS	-	-	B	-	F	A
HCM 95th %tile Q(veh)	-	-	1.4	-	9.8	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	38.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑	↑	↑↑						↑	↑
Traffic Vol, veh/h	0	844	145	305	531	0	0	0	0	122	0	746
Future Vol, veh/h	0	844	145	305	531	0	0	0	0	122	0	746
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	None	-	-	Free
Storage Length	-	-	225	150	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	844	145	305	531	0	0	0	0	122	0	746

Major/Minor	Major1			Major2			Minor2			
Conflicting Flow All	-	0	0	844	0	0		1563	1985	-
Stage 1	-	-	-	-	-	-		1141	1141	-
Stage 2	-	-	-	-	-	-		422	844	-
Critical Hdwy	-	-	-	4.14	-	-		6.84	6.54	-
Critical Hdwy Stg 1	-	-	-	-	-	-		5.84	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-		5.84	5.54	-
Follow-up Hdwy	-	-	-	2.22	-	-		3.52	4.02	-
Pot Cap-1 Maneuver	0	-	-	788	-	0		~ 102	61	0
Stage 1	0	-	-	-	-	0		267	274	0
Stage 2	0	-	-	-	-	0		629	377	0
Platoon blocked, %	-	-	-	-	-	-		-	-	-
Mov Cap-1 Maneuver	-	-	-	788	-	-		~ 63	0	-
Mov Cap-2 Maneuver	-	-	-	-	-	-		~ 63	0	-
Stage 1	-	-	-	-	-	-		267	0	-
Stage 2	-	-	-	-	-	-		386	0	-

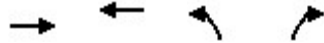
Approach	EB	WB	SB
HCM Control Delay, s	0	4.5	\$ 579.8
HCM LOS			F

Minor Lane/Major Mvmt	EBT	EBR	WBL	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	788	-	63	-
HCM Lane V/C Ratio	-	-	0.387	-	1.937	-
HCM Control Delay (s)	-	-	12.4	-	\$ 579.8	0
HCM Lane LOS	-	-	B	-	F	A
HCM 95th %tile Q(veh)	-	-	1.8	-	11.4	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Timings
4: Rte 58 EB & Pruden Blvd

Existing
AM Peak

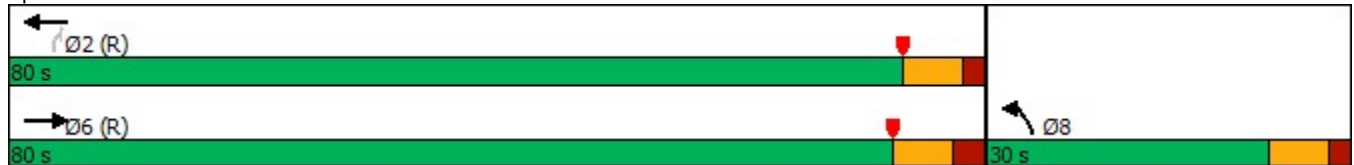


Lane Group	EBT	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↵	↶
Traffic Volume (vph)	262	194	100	144
Future Volume (vph)	262	194	100	144
Turn Type	NA	NA	Prot	Perm
Protected Phases	6	2	8	
Permitted Phases				2
Detector Phase	6	2	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	25.6	24.8	24.8	24.8
Total Split (s)	80.0	80.0	30.0	80.0
Total Split (%)	72.7%	72.7%	27.3%	72.7%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.8	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.6	6.8	6.8	6.8
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	84.1	84.9	11.5	84.9
Actuated g/C Ratio	0.76	0.77	0.10	0.77
v/c Ratio	0.10	0.07	0.54	0.11
Control Delay	3.7	3.4	56.7	0.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.7	3.4	56.7	0.9
LOS	A	A	E	A
Approach Delay	3.7	3.4	23.8	
Approach LOS	A	A	C	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 18.2 (17%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.54
 Intersection Signal Delay: 10.6
 Intersection Capacity Utilization 53.2%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

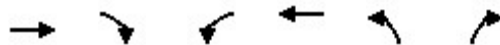
Splits and Phases: 4: Rte 58 EB & Pruden Blvd



HCM Signalized Intersection Capacity Analysis

4: Rte 58 EB & Pruden Blvd

Existing
AM Peak



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (vph)	262	0	0	194	100	144
Future Volume (vph)	262	0	0	194	100	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.6			6.8	6.8	6.8
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3539			3539	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3539			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	262	0	0	194	100	144
RTOR Reduction (vph)	0	0	0	0	0	33
Lane Group Flow (vph)	262	0	0	194	100	111
Turn Type	NA			NA	Prot	Perm
Protected Phases	6			2	8	
Permitted Phases						2
Actuated Green, G (s)	84.1			84.9	11.5	84.9
Effective Green, g (s)	84.1			84.9	11.5	84.9
Actuated g/C Ratio	0.76			0.77	0.10	0.77
Clearance Time (s)	7.6			6.8	6.8	6.8
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2705			2731	185	1221
v/s Ratio Prot	c0.07			0.05	c0.06	
v/s Ratio Perm						0.07
v/c Ratio	0.10			0.07	0.54	0.09
Uniform Delay, d1	3.3			3.0	46.7	3.1
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.1			0.1	3.2	0.1
Delay (s)	3.4			3.1	49.9	3.2
Level of Service	A			A	D	A
Approach Delay (s)	3.4			3.1	22.4	
Approach LOS	A			A	C	

Intersection Summary

HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.15		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.4
Intersection Capacity Utilization	53.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
4: Rte 58 EB & Pruden Blvd



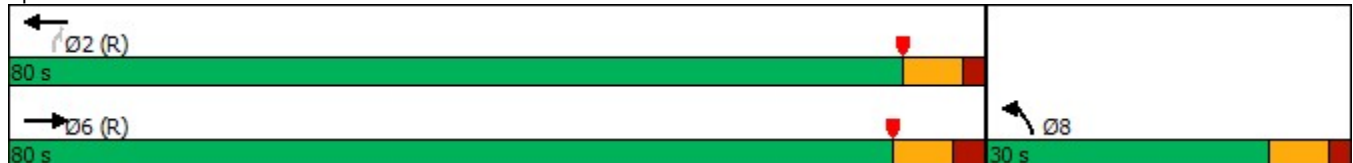
Lane Group	EBT	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↵	↷
Traffic Volume (vph)	353	251	105	235
Future Volume (vph)	353	251	105	235
Turn Type	NA	NA	Prot	Perm
Protected Phases	6	2	8	
Permitted Phases				2
Detector Phase	6	2	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	25.6	24.8	24.8	24.8
Total Split (s)	80.0	80.0	30.0	80.0
Total Split (%)	72.7%	72.7%	27.3%	72.7%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.8	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.6	6.8	6.8	6.8
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	83.8	84.6	11.8	84.6
Actuated g/C Ratio	0.76	0.77	0.11	0.77
v/c Ratio	0.13	0.09	0.55	0.18
Control Delay	3.9	3.6	56.9	0.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	3.9	3.6	56.9	0.9
LOS	A	A	E	A
Approach Delay	3.9	3.6	18.2	
Approach LOS	A	A	B	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 18.2 (17%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.55
 Intersection Signal Delay: 9.0
 Intersection Capacity Utilization 55.7%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 4: Rte 58 EB & Pruden Blvd



HCM Signalized Intersection Capacity Analysis
4: Rte 58 EB & Pruden Blvd

Background 2030
AM Peak



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (vph)	353	0	0	251	105	235
Future Volume (vph)	353	0	0	251	105	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.6			6.8	6.8	6.8
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3539			3539	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3539			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	353	0	0	251	105	235
RTOR Reduction (vph)	0	0	0	0	0	54
Lane Group Flow (vph)	353	0	0	251	105	181
Turn Type	NA			NA	Prot	Perm
Protected Phases	6			2	8	
Permitted Phases						2
Actuated Green, G (s)	83.8			84.6	11.8	84.6
Effective Green, g (s)	83.8			84.6	11.8	84.6
Actuated g/C Ratio	0.76			0.77	0.11	0.77
Clearance Time (s)	7.6			6.8	6.8	6.8
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2696			2721	189	1217
v/s Ratio Prot	0.10			0.07	c0.06	
v/s Ratio Perm						c0.11
v/c Ratio	0.13			0.09	0.56	0.15
Uniform Delay, d1	3.5			3.2	46.6	3.3
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.1			0.1	3.5	0.3
Delay (s)	3.6			3.2	50.1	3.6
Level of Service	A			A	D	A
Approach Delay (s)	3.6			3.2	17.9	
Approach LOS	A			A	B	

Intersection Summary

HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.4
Intersection Capacity Utilization	55.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Timings
4: Rte 58 EB & Pruden Blvd

2030 Build
Timing Plan: AM Peak

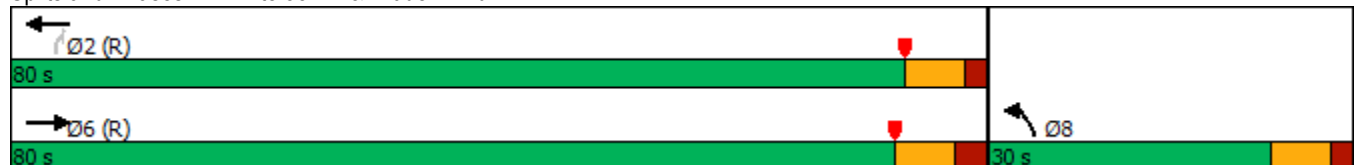


Lane Group	EBT	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↵	↶
Traffic Volume (vph)	373	292	105	276
Future Volume (vph)	373	292	105	276
Turn Type	NA	NA	Prot	Perm
Protected Phases	6	2	8	
Permitted Phases				2
Detector Phase	6	2	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	25.6	24.8	24.8	24.8
Total Split (s)	80.0	80.0	30.0	80.0
Total Split (%)	72.7%	72.7%	27.3%	72.7%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.8	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.6	6.8	6.8	6.8
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	83.8	84.6	11.8	84.6
Actuated g/C Ratio	0.76	0.77	0.11	0.77
v/c Ratio	0.35	0.11	0.55	0.22
Control Delay	2.1	3.6	56.9	0.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	2.1	3.6	56.9	0.9
LOS	A	A	E	A
Approach Delay	2.1	3.6	16.3	
Approach LOS	A	A	B	

Intersection Summary

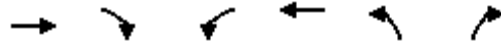
Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 18.2 (17%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.55
 Intersection Signal Delay: 5.9
 Intersection Capacity Utilization 56.1%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 4: Rte 58 EB & Pruden Blvd



HCM Signalized Intersection Capacity Analysis
4: Rte 58 EB & Pruden Blvd

2030 Build
Timing Plan: AM Peak



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (vph)	373	520	0	292	105	276
Future Volume (vph)	373	520	0	292	105	276
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.6			6.8	6.8	6.8
Lane Util. Factor	0.95			0.95	1.00	1.00
Fr _t	0.91			1.00	1.00	0.85
Fl _t Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3230			3539	1770	1583
Fl _t Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3230			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	373	520	0	292	105	276
RTOR Reduction (vph)	124	0	0	0	0	64
Lane Group Flow (vph)	769	0	0	292	105	212
Turn Type	NA			NA	Prot	Perm
Protected Phases	6			2	8	
Permitted Phases						2
Actuated Green, G (s)	83.8			84.6	11.8	84.6
Effective Green, g (s)	83.8			84.6	11.8	84.6
Actuated g/C Ratio	0.76			0.77	0.11	0.77
Clearance Time (s)	7.6			6.8	6.8	6.8
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2460			2721	189	1217
v/s Ratio Prot	c0.24			0.08	c0.06	
v/s Ratio Perm						0.13
v/c Ratio	0.31			0.11	0.56	0.17
Uniform Delay, d ₁	4.1			3.2	46.6	3.4
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d ₂	0.3			0.1	3.5	0.3
Delay (s)	4.4			3.3	50.1	3.7
Level of Service	A			A	D	A
Approach Delay (s)	4.4			3.3	16.5	
Approach LOS	A			A	B	

Intersection Summary

HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.4
Intersection Capacity Utilization	56.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Timings
4: Rte 58 EB & Pruden Blvd



Lane Group	EBT	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↶	↷
Traffic Volume (vph)	366	260	110	242
Future Volume (vph)	366	260	110	242
Turn Type	NA	NA	Prot	Perm
Protected Phases	6	2	8	
Permitted Phases				2
Detector Phase	6	2	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	25.6	24.8	24.8	24.8
Total Split (s)	80.0	80.0	30.0	80.0
Total Split (%)	72.7%	72.7%	27.3%	72.7%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.8	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.6	6.8	6.8	6.8
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	83.5	84.3	12.1	84.3
Actuated g/C Ratio	0.76	0.77	0.11	0.77
v/c Ratio	0.14	0.10	0.56	0.19
Control Delay	4.0	3.7	57.0	0.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.0	3.7	57.0	0.9
LOS	A	A	E	A
Approach Delay	4.0	3.7	18.4	
Approach LOS	A	A	B	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 18.2 (17%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.56
 Intersection Signal Delay: 9.1
 Intersection Capacity Utilization 58.0%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 4: Rte 58 EB & Pruden Blvd



HCM Signalized Intersection Capacity Analysis
4: Rte 58 EB & Pruden Blvd

Background 2035
AM Peak



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (vph)	366	0	0	260	110	242
Future Volume (vph)	366	0	0	260	110	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.6			6.8	6.8	6.8
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3539			3539	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3539			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	366	0	0	260	110	242
RTOR Reduction (vph)	0	0	0	0	0	57
Lane Group Flow (vph)	366	0	0	260	110	185
Turn Type	NA			NA	Prot	Perm
Protected Phases	6			2	8	
Permitted Phases						2
Actuated Green, G (s)	83.5			84.3	12.1	84.3
Effective Green, g (s)	83.5			84.3	12.1	84.3
Actuated g/C Ratio	0.76			0.77	0.11	0.77
Clearance Time (s)	7.6			6.8	6.8	6.8
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2686			2712	194	1213
v/s Ratio Prot	0.10			0.07	c0.06	
v/s Ratio Perm						c0.12
v/c Ratio	0.14			0.10	0.57	0.15
Uniform Delay, d1	3.6			3.2	46.5	3.4
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.1			0.1	3.8	0.3
Delay (s)	3.7			3.3	50.2	3.7
Level of Service	A			A	D	A
Approach Delay (s)	3.7			3.3	18.2	
Approach LOS	A			A	B	

Intersection Summary

HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.4
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Timings
4: Rte 58 EB & Pruden Blvd

2035 Build
Timing Plan: AM Peak



Lane Group	EBT	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↶	↷
Traffic Volume (vph)	386	301	110	283
Future Volume (vph)	386	301	110	283
Turn Type	NA	NA	Prot	Perm
Protected Phases	6	2	8	
Permitted Phases				2
Detector Phase	6	2	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	25.6	24.8	24.8	24.8
Total Split (s)	80.0	80.0	30.0	80.0
Total Split (%)	72.7%	72.7%	27.3%	72.7%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.8	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.6	6.8	6.8	6.8
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	None	C-Max
Act Effct Green (s)	83.5	84.3	12.1	84.3
Actuated g/C Ratio	0.76	0.77	0.11	0.77
v/c Ratio	0.14	0.11	0.56	0.22
Control Delay	4.0	3.7	57.0	0.9
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.0	3.7	57.0	0.9
LOS	A	A	E	A
Approach Delay	4.0	3.7	16.6	
Approach LOS	A	A	B	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 18.2 (17%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.56
 Intersection Signal Delay: 8.5
 Intersection Capacity Utilization 58.4%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B

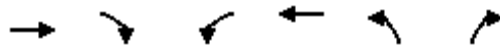
Splits and Phases: 4: Rte 58 EB & Pruden Blvd



HCM Signalized Intersection Capacity Analysis

4: Rte 58 EB & Pruden Blvd

2035 Build
Timing Plan: AM Peak



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (vph)	386	0	0	301	110	283
Future Volume (vph)	386	0	0	301	110	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.6			6.8	6.8	6.8
Lane Util. Factor	0.95			0.95	1.00	1.00
Fr _t	1.00			1.00	1.00	0.85
Fl _t Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3539			3539	1770	1583
Fl _t Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3539			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	386	0	0	301	110	283
RTOR Reduction (vph)	0	0	0	0	0	66
Lane Group Flow (vph)	386	0	0	301	110	217
Turn Type	NA			NA	Prot	Perm
Protected Phases	6			2	8	
Permitted Phases						2
Actuated Green, G (s)	83.5			84.3	12.1	84.3
Effective Green, g (s)	83.5			84.3	12.1	84.3
Actuated g/C Ratio	0.76			0.77	0.11	0.77
Clearance Time (s)	7.6			6.8	6.8	6.8
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2686			2712	194	1213
v/s Ratio Prot	0.11			0.09	c0.06	
v/s Ratio Perm						c0.14
v/c Ratio	0.14			0.11	0.57	0.18
Uniform Delay, d ₁	3.6			3.3	46.5	3.5
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d ₂	0.1			0.1	3.8	0.3
Delay (s)	3.7			3.4	50.2	3.8
Level of Service	A			A	D	A
Approach Delay (s)	3.7			3.4	16.8	
Approach LOS	A			A	B	

Intersection Summary

HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.23		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.4
Intersection Capacity Utilization	58.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Timings
4: Rte 58 EB & Pruden Blvd

Existing
PM Peak



Lane Group	EBT	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↵	↶
Traffic Volume (vph)	247	487	139	103
Future Volume (vph)	247	487	139	103
Turn Type	NA	NA	Prot	Perm
Protected Phases	6	2	8	
Permitted Phases				2
Detector Phase	6	2	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	25.6	24.8	24.8	24.8
Total Split (s)	85.0	85.0	25.0	85.0
Total Split (%)	77.3%	77.3%	22.7%	77.3%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.8	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.6	6.8	6.8	6.8
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Max	None	C-Max
Act Effct Green (s)	81.9	82.7	13.7	82.7
Actuated g/C Ratio	0.74	0.75	0.12	0.75
v/c Ratio	0.09	0.18	0.63	0.08
Control Delay	4.3	4.4	58.1	1.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.3	4.4	58.1	1.1
LOS	A	A	E	A
Approach Delay	4.3	4.4	33.8	
Approach LOS	A	A	C	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:WBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 11.7
 Intersection Capacity Utilization 61.4%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service B

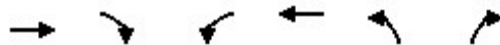
Splits and Phases: 4: Rte 58 EB & Pruden Blvd



HCM Signalized Intersection Capacity Analysis

4: Rte 58 EB & Pruden Blvd

Existing
PM Peak



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (vph)	247	0	0	487	139	103
Future Volume (vph)	247	0	0	487	139	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.6			6.8	6.8	6.8
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3539			3539	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3539			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	247	0	0	487	139	103
RTOR Reduction (vph)	0	0	0	0	0	26
Lane Group Flow (vph)	247	0	0	487	139	77
Turn Type	NA			NA	Prot	Perm
Protected Phases	6			2	8	
Permitted Phases						2
Actuated Green, G (s)	81.9			82.7	13.7	82.7
Effective Green, g (s)	81.9			82.7	13.7	82.7
Actuated g/C Ratio	0.74			0.75	0.12	0.75
Clearance Time (s)	7.6			6.8	6.8	6.8
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2634			2660	220	1190
v/s Ratio Prot	0.07			c0.14	c0.08	
v/s Ratio Perm						0.05
v/c Ratio	0.09			0.18	0.63	0.07
Uniform Delay, d1	3.9			3.9	45.8	3.6
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.0			0.2	5.8	0.1
Delay (s)	3.9			4.1	51.6	3.7
Level of Service	A			A	D	A
Approach Delay (s)	3.9			4.1	31.2	
Approach LOS	A			A	C	

Intersection Summary

HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.4
Intersection Capacity Utilization	61.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Timings
4: Rte 58 EB & Pruden Blvd

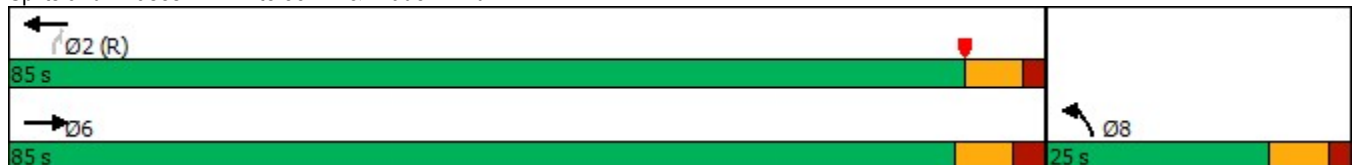


Lane Group	EBT	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↶	↷
Traffic Volume (vph)	390	551	146	172
Future Volume (vph)	390	551	146	172
Turn Type	NA	NA	Prot	Perm
Protected Phases	6	2	8	
Permitted Phases				2
Detector Phase	6	2	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	25.6	24.8	24.8	24.8
Total Split (s)	85.0	85.0	25.0	85.0
Total Split (%)	77.3%	77.3%	22.7%	77.3%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.8	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.6	6.8	6.8	6.8
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Max	None	C-Max
Act Effct Green (s)	81.6	82.4	14.0	82.4
Actuated g/C Ratio	0.74	0.75	0.13	0.75
v/c Ratio	0.15	0.21	0.65	0.14
Control Delay	4.6	4.6	58.7	1.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.6	4.6	58.7	1.0
LOS	A	A	E	A
Approach Delay	4.6	4.6	27.5	
Approach LOS	A	A	C	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:WBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 10.4
 Intersection Capacity Utilization 64.4%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 4: Rte 58 EB & Pruden Blvd



HCM Signalized Intersection Capacity Analysis
4: Rte 58 EB & Pruden Blvd

Background 2030
PM Peak



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (vph)	390	0	0	551	146	172
Future Volume (vph)	390	0	0	551	146	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.6			6.8	6.8	6.8
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3539			3539	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3539			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	390	0	0	551	146	172
RTOR Reduction (vph)	0	0	0	0	0	43
Lane Group Flow (vph)	390	0	0	551	146	129
Turn Type	NA			NA	Prot	Perm
Protected Phases	6			2	8	
Permitted Phases						2
Actuated Green, G (s)	81.6			82.4	14.0	82.4
Effective Green, g (s)	81.6			82.4	14.0	82.4
Actuated g/C Ratio	0.74			0.75	0.13	0.75
Clearance Time (s)	7.6			6.8	6.8	6.8
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2625			2651	225	1185
v/s Ratio Prot	0.11			c0.16	c0.08	
v/s Ratio Perm						0.08
v/c Ratio	0.15			0.21	0.65	0.11
Uniform Delay, d1	4.1			4.1	45.7	3.8
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.0			0.2	6.3	0.2
Delay (s)	4.1			4.3	52.0	4.0
Level of Service	A			A	D	A
Approach Delay (s)	4.1			4.3	26.0	
Approach LOS	A			A	C	

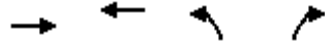
Intersection Summary

HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.4
Intersection Capacity Utilization	64.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Timings
4: Rte 58 EB & Pruden Blvd

2030 Build
Timing Plan: PM Peak

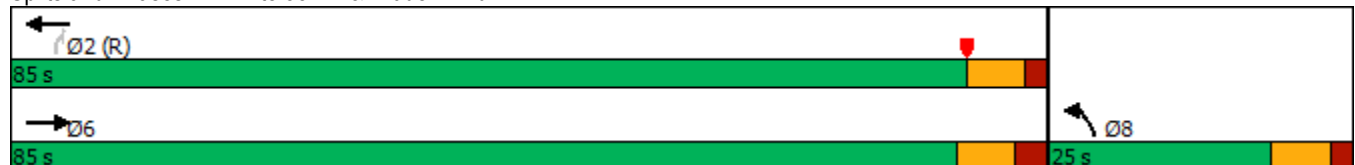


Lane Group	EBT	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↶	↷
Traffic Volume (vph)	406	612	146	201
Future Volume (vph)	406	612	146	201
Turn Type	NA	NA	Prot	Perm
Protected Phases	6	2	8	
Permitted Phases				2
Detector Phase	6	2	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	25.6	24.8	24.8	24.8
Total Split (s)	85.0	85.0	25.0	85.0
Total Split (%)	77.3%	77.3%	22.7%	77.3%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.8	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.6	6.8	6.8	6.8
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Max	None	C-Max
Act Effct Green (s)	81.6	82.4	14.0	82.4
Actuated g/C Ratio	0.74	0.75	0.13	0.75
v/c Ratio	0.34	0.23	0.65	0.16
Control Delay	2.7	4.7	58.7	1.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	2.7	4.7	58.7	1.0
LOS	A	A	E	A
Approach Delay	2.7	4.7	25.3	
Approach LOS	A	A	C	

Intersection Summary

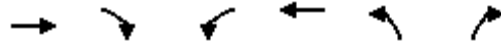
Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:WBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 7.7
 Intersection Capacity Utilization 50.0%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 4: Rte 58 EB & Pruden Blvd



HCM Signalized Intersection Capacity Analysis
4: Rte 58 EB & Pruden Blvd

2030 Build
Timing Plan: PM Peak



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (vph)	406	445	0	612	146	201
Future Volume (vph)	406	445	0	612	146	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.6			6.8	6.8	6.8
Lane Util. Factor	0.95			0.95	1.00	1.00
Fr _t	0.92			1.00	1.00	0.85
Fl _t Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3262			3539	1770	1583
Fl _t Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3262			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	406	445	0	612	146	201
RTOR Reduction (vph)	115	0	0	0	0	50
Lane Group Flow (vph)	736	0	0	612	146	151
Turn Type	NA			NA	Prot	Perm
Protected Phases	6			2	8	
Permitted Phases						2
Actuated Green, G (s)	81.6			82.4	14.0	82.4
Effective Green, g (s)	81.6			82.4	14.0	82.4
Actuated g/C Ratio	0.74			0.75	0.13	0.75
Clearance Time (s)	7.6			6.8	6.8	6.8
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2419			2651	225	1185
v/s Ratio Prot	c0.23			0.17	c0.08	
v/s Ratio Perm						0.10
v/c Ratio	0.30			0.23	0.65	0.13
Uniform Delay, d ₁	4.7			4.2	45.7	3.8
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d ₂	0.1			0.2	6.3	0.2
Delay (s)	4.8			4.4	52.0	4.0
Level of Service	A			A	D	A
Approach Delay (s)	4.8			4.4	24.2	
Approach LOS	A			A	C	

Intersection Summary

HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.4
Intersection Capacity Utilization	50.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
4: Rte 58 EB & Pruden Blvd

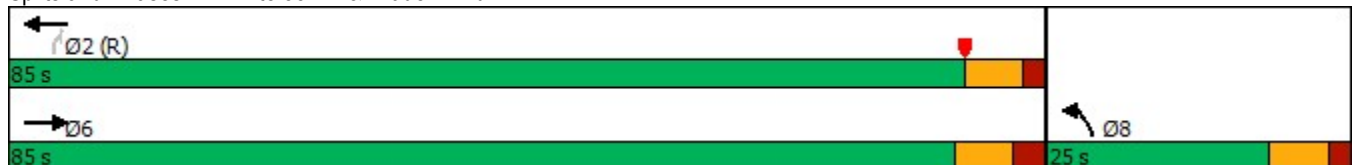


Lane Group	EBT	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↵	↶
Traffic Volume (vph)	403	576	153	177
Future Volume (vph)	403	576	153	177
Turn Type	NA	NA	Prot	Perm
Protected Phases	6	2	8	
Permitted Phases				2
Detector Phase	6	2	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	25.6	24.8	24.8	24.8
Total Split (s)	85.0	85.0	25.0	85.0
Total Split (%)	77.3%	77.3%	22.7%	77.3%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.8	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.6	6.8	6.8	6.8
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Max	None	C-Max
Act Effct Green (s)	81.3	82.1	14.3	82.1
Actuated g/C Ratio	0.74	0.75	0.13	0.75
v/c Ratio	0.15	0.22	0.67	0.14
Control Delay	4.7	4.8	59.2	1.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.7	4.8	59.2	1.0
LOS	A	A	E	A
Approach Delay	4.7	4.8	28.0	
Approach LOS	A	A	C	

Intersection Summary

Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:WBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 10.6
 Intersection Capacity Utilization 67.1%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 4: Rte 58 EB & Pruden Blvd



HCM Signalized Intersection Capacity Analysis
4: Rte 58 EB & Pruden Blvd

Background 2035
PM Peak



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (vph)	403	0	0	576	153	177
Future Volume (vph)	403	0	0	576	153	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.6			6.8	6.8	6.8
Lane Util. Factor	0.95			0.95	1.00	1.00
Frt	1.00			1.00	1.00	0.85
Flt Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3539			3539	1770	1583
Flt Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3539			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	403	0	0	576	153	177
RTOR Reduction (vph)	0	0	0	0	0	45
Lane Group Flow (vph)	403	0	0	576	153	132
Turn Type	NA			NA	Prot	Perm
Protected Phases	6			2	8	
Permitted Phases						2
Actuated Green, G (s)	81.3			82.1	14.3	82.1
Effective Green, g (s)	81.3			82.1	14.3	82.1
Actuated g/C Ratio	0.74			0.75	0.13	0.75
Clearance Time (s)	7.6			6.8	6.8	6.8
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2615			2641	230	1181
v/s Ratio Prot	0.11			c0.16	c0.09	
v/s Ratio Perm						0.08
v/c Ratio	0.15			0.22	0.67	0.11
Uniform Delay, d1	4.2			4.2	45.6	3.9
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d2	0.0			0.2	7.1	0.2
Delay (s)	4.3			4.4	52.6	4.1
Level of Service	A			A	D	A
Approach Delay (s)	4.3			4.4	26.6	
Approach LOS	A			A	C	

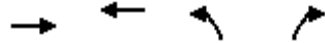
Intersection Summary

HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.4
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Timings
4: Rte 58 EB & Pruden Blvd

2035 Build
Timing Plan: PM Peak

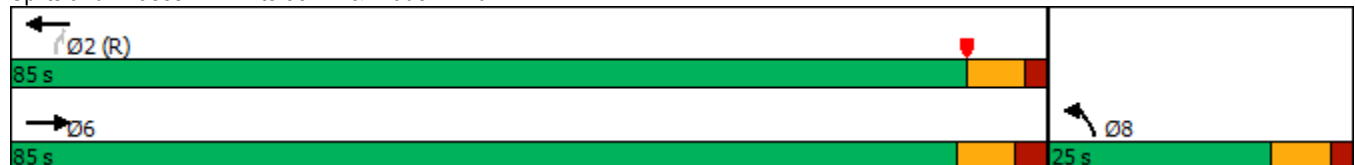


Lane Group	EBT	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↵	↶
Traffic Volume (vph)	419	637	153	206
Future Volume (vph)	419	637	153	206
Turn Type	NA	NA	Prot	Perm
Protected Phases	6	2	8	
Permitted Phases				2
Detector Phase	6	2	8	2
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	25.6	24.8	24.8	24.8
Total Split (s)	85.0	85.0	25.0	85.0
Total Split (%)	77.3%	77.3%	22.7%	77.3%
Yellow Time (s)	4.8	4.8	4.8	4.8
All-Red Time (s)	2.8	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.6	6.8	6.8	6.8
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Max	None	C-Max
Act Effct Green (s)	81.3	82.1	14.3	82.1
Actuated g/C Ratio	0.74	0.75	0.13	0.75
v/c Ratio	0.16	0.24	0.67	0.17
Control Delay	4.7	4.9	59.2	1.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	4.7	4.9	59.2	1.0
LOS	A	A	E	A
Approach Delay	4.7	4.9	25.8	
Approach LOS	A	A	C	

Intersection Summary

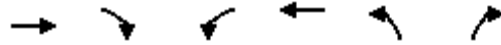
Cycle Length: 110
 Actuated Cycle Length: 110
 Offset: 0 (0%), Referenced to phase 2:WBT, Start of Yellow
 Natural Cycle: 55
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 10.1
 Intersection Capacity Utilization 67.5%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 4: Rte 58 EB & Pruden Blvd



HCM Signalized Intersection Capacity Analysis
4: Rte 58 EB & Pruden Blvd

2035 Build
Timing Plan: PM Peak



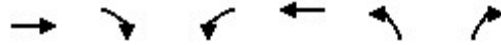
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑	↘	↗
Traffic Volume (vph)	419	0	0	637	153	206
Future Volume (vph)	419	0	0	637	153	206
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.6			6.8	6.8	6.8
Lane Util. Factor	0.95			0.95	1.00	1.00
Fr _t	1.00			1.00	1.00	0.85
Fl _t Protected	1.00			1.00	0.95	1.00
Satd. Flow (prot)	3539			3539	1770	1583
Fl _t Permitted	1.00			1.00	0.95	1.00
Satd. Flow (perm)	3539			3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	419	0	0	637	153	206
RTOR Reduction (vph)	0	0	0	0	0	52
Lane Group Flow (vph)	419	0	0	637	153	154
Turn Type	NA			NA	Prot	Perm
Protected Phases	6			2	8	
Permitted Phases						2
Actuated Green, G (s)	81.3			82.1	14.3	82.1
Effective Green, g (s)	81.3			82.1	14.3	82.1
Actuated g/C Ratio	0.74			0.75	0.13	0.75
Clearance Time (s)	7.6			6.8	6.8	6.8
Vehicle Extension (s)	3.0			3.0	3.0	3.0
Lane Grp Cap (vph)	2615			2641	230	1181
v/s Ratio Prot	0.12			c0.18	c0.09	
v/s Ratio Perm						0.10
v/c Ratio	0.16			0.24	0.67	0.13
Uniform Delay, d ₁	4.2			4.3	45.6	3.9
Progression Factor	1.00			1.00	1.00	1.00
Incremental Delay, d ₂	0.0			0.2	7.1	0.2
Delay (s)	4.3			4.5	52.6	4.1
Level of Service	A			A	D	A
Approach Delay (s)	4.3			4.5	24.8	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	9.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	110.0	Sum of lost time (s)	14.4
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Timings
5: Meade Parkway & Pruden Blvd

Existing
AM Peak

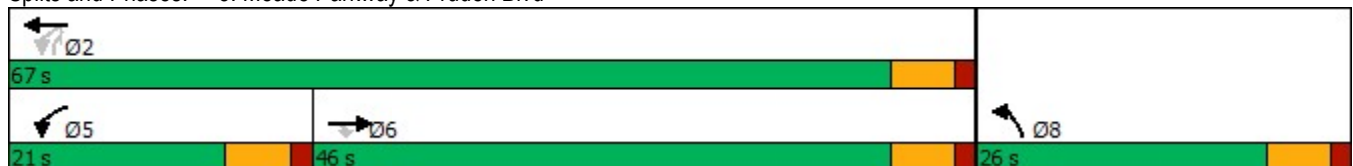


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Volume (vph)	354	145	67	204	26	41
Future Volume (vph)	354	145	67	204	26	41
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Detector Phase	6	6	5	2	8	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	24.5	24.5	24.5
Total Split (s)	46.0	46.0	21.0	67.0	26.0	67.0
Total Split (%)	49.5%	49.5%	22.6%	72.0%	28.0%	72.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	None	Max	None	Max
Act Effct Green (s)	60.7	60.7	69.5	73.1	6.7	73.1
Actuated g/C Ratio	0.75	0.75	0.86	0.90	0.08	0.90
v/c Ratio	0.13	0.12	0.08	0.06	0.18	0.03
Control Delay	4.9	1.6	2.1	1.5	36.7	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.9	1.6	2.1	1.5	36.7	0.9
LOS	A	A	A	A	D	A
Approach Delay	4.0			1.7	14.8	
Approach LOS	A			A	B	

Intersection Summary

Cycle Length: 93
 Actuated Cycle Length: 81
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.18
 Intersection Signal Delay: 4.1
 Intersection LOS: A
 Intersection Capacity Utilization 33.1%
 ICU Level of Service A
 Analysis Period (min) 15

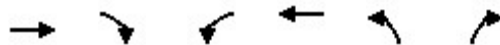
Splits and Phases: 5: Meade Parkway & Pruden Blvd



HCM Signalized Intersection Capacity Analysis

5: Meade Parkway & Pruden Blvd

Existing
AM Peak



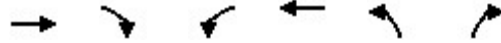
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Volume (vph)	354	145	67	204	26	41
Future Volume (vph)	354	145	67	204	26	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.49	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	914	3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	354	145	67	204	26	41
RTOR Reduction (vph)	0	44	0	0	0	7
Lane Group Flow (vph)	354	101	67	204	26	34
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Actuated Green, G (s)	59.5	59.5	70.7	70.7	3.1	70.7
Effective Green, g (s)	59.5	59.5	70.7	70.7	3.1	70.7
Actuated g/C Ratio	0.69	0.69	0.82	0.82	0.04	0.82
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2454	1097	805	2916	63	1304
v/s Ratio Prot	c0.10		0.01	c0.06	c0.01	
v/s Ratio Perm		0.06	0.06			0.02
v/c Ratio	0.14	0.09	0.08	0.07	0.41	0.03
Uniform Delay, d1	4.5	4.3	1.6	1.4	40.5	1.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.2	0.0	0.0	4.3	0.0
Delay (s)	4.6	4.5	1.7	1.5	44.8	1.4
Level of Service	A	A	A	A	D	A
Approach Delay (s)	4.6			1.5	18.2	
Approach LOS	A			A	B	

Intersection Summary

HCM 2000 Control Delay	4.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.15		
Actuated Cycle Length (s)	85.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	33.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
5: Meade Parkway & Pruden Blvd

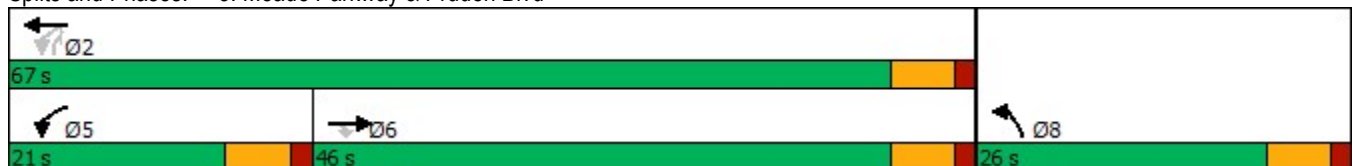


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↵	↑↑	↵	↵
Traffic Volume (vph)	514	145	67	254	26	41
Future Volume (vph)	514	145	67	254	26	41
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Detector Phase	6	6	5	2	8	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	24.5	24.5	24.5
Total Split (s)	46.0	46.0	21.0	67.0	26.0	67.0
Total Split (%)	49.5%	49.5%	22.6%	72.0%	28.0%	72.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	None	Max	None	Max
Act Effct Green (s)	60.7	60.7	69.5	73.1	6.7	73.1
Actuated g/C Ratio	0.75	0.75	0.86	0.90	0.08	0.90
v/c Ratio	0.19	0.12	0.09	0.08	0.18	0.03
Control Delay	5.1	1.6	2.1	1.5	36.7	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.1	1.6	2.1	1.5	36.7	0.9
LOS	A	A	A	A	D	A
Approach Delay	4.4			1.7	14.8	
Approach LOS	A			A	B	

Intersection Summary

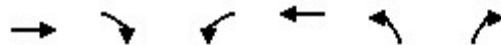
Cycle Length: 93	
Actuated Cycle Length: 81	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.19	
Intersection Signal Delay: 4.2	Intersection LOS: A
Intersection Capacity Utilization 37.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Meade Parkway & Pruden Blvd



HCM Signalized Intersection Capacity Analysis
5: Meade Parkway & Pruden Blvd

Background 2030
AM Peak



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Volume (vph)	514	145	67	254	26	41
Future Volume (vph)	514	145	67	254	26	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.42	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	782	3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	514	145	67	254	26	41
RTOR Reduction (vph)	0	44	0	0	0	7
Lane Group Flow (vph)	514	101	67	254	26	34
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Actuated Green, G (s)	59.5	59.5	70.7	70.7	3.1	70.7
Effective Green, g (s)	59.5	59.5	70.7	70.7	3.1	70.7
Actuated g/C Ratio	0.69	0.69	0.82	0.82	0.04	0.82
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2454	1097	704	2916	63	1304
v/s Ratio Prot	c0.15		0.01	c0.07	c0.01	
v/s Ratio Perm		0.06	0.07			0.02
v/c Ratio	0.21	0.09	0.10	0.09	0.41	0.03
Uniform Delay, d1	4.7	4.3	1.6	1.4	40.5	1.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.1	0.1	4.3	0.0
Delay (s)	4.9	4.5	1.7	1.5	44.8	1.4
Level of Service	A	A	A	A	D	A
Approach Delay (s)	4.8			1.5	18.2	
Approach LOS	A			A	B	

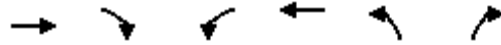
Intersection Summary

HCM 2000 Control Delay	4.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.21		
Actuated Cycle Length (s)	85.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	37.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
5: Meade Parkway & Pruden Blvd

2030 Build
Timing Plan: AM Peak



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↓
Traffic Volume (vph)	575	145	67	295	26	41
Future Volume (vph)	575	145	67	295	26	41
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Detector Phase	6	6	5	2	8	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	24.5	24.5	24.5
Total Split (s)	46.0	46.0	21.0	67.0	26.0	67.0
Total Split (%)	49.5%	49.5%	22.6%	72.0%	28.0%	72.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	None	Max	None	Max
Act Effct Green (s)	60.7	60.7	69.5	73.1	6.7	73.1
Actuated g/C Ratio	0.75	0.75	0.86	0.90	0.08	0.90
v/c Ratio	0.22	0.12	0.09	0.09	0.18	0.03
Control Delay	5.2	1.6	2.1	1.5	36.7	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.2	1.6	2.1	1.5	36.7	0.9
LOS	A	A	A	A	D	A
Approach Delay	4.5			1.7	14.8	
Approach LOS	A			A	B	

Intersection Summary

Cycle Length: 93
 Actuated Cycle Length: 81
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.22
 Intersection Signal Delay: 4.2
 Intersection LOS: A
 Intersection Capacity Utilization 39.2%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 5: Meade Parkway & Pruden Blvd



HCM Signalized Intersection Capacity Analysis
5: Meade Parkway & Pruden Blvd

2030 Build
Timing Plan: AM Peak



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↵	↑↑	↵	↵
Traffic Volume (vph)	575	145	67	295	26	41
Future Volume (vph)	575	145	67	295	26	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.40	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	737	3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	575	145	67	295	26	41
RTOR Reduction (vph)	0	44	0	0	0	7
Lane Group Flow (vph)	575	101	67	295	26	34
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Actuated Green, G (s)	59.5	59.5	70.7	70.7	3.1	70.7
Effective Green, g (s)	59.5	59.5	70.7	70.7	3.1	70.7
Actuated g/C Ratio	0.69	0.69	0.82	0.82	0.04	0.82
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2454	1097	669	2916	63	1304
v/s Ratio Prot	c0.16		0.01	c0.08	c0.01	
v/s Ratio Perm		0.06	0.08			0.02
v/c Ratio	0.23	0.09	0.10	0.10	0.41	0.03
Uniform Delay, d1	4.8	4.3	1.6	1.4	40.5	1.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.1	0.1	4.3	0.0
Delay (s)	5.0	4.5	1.7	1.5	44.8	1.4
Level of Service	A	A	A	A	D	A
Approach Delay (s)	4.9			1.5	18.2	
Approach LOS	A			A	B	

Intersection Summary

HCM 2000 Control Delay	4.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	85.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
5: Meade Parkway & Pruden Blvd

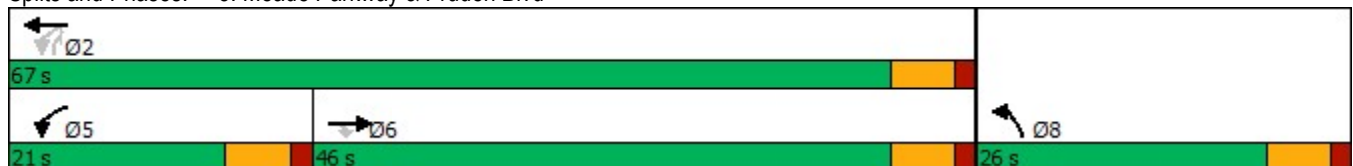


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↵	↑↑	↵	↵
Traffic Volume (vph)	531	145	67	264	26	41
Future Volume (vph)	531	145	67	264	26	41
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Detector Phase	6	6	5	2	8	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	24.5	24.5	24.5
Total Split (s)	46.0	46.0	21.0	67.0	26.0	67.0
Total Split (%)	49.5%	49.5%	22.6%	72.0%	28.0%	72.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	None	Max	None	Max
Act Effct Green (s)	60.7	60.7	69.5	73.1	6.7	73.1
Actuated g/C Ratio	0.75	0.75	0.86	0.90	0.08	0.90
v/c Ratio	0.20	0.12	0.09	0.08	0.18	0.03
Control Delay	5.2	1.6	2.1	1.5	36.7	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.2	1.6	2.1	1.5	36.7	0.9
LOS	A	A	A	A	D	A
Approach Delay	4.4			1.7	14.8	
Approach LOS	A			A	B	

Intersection Summary

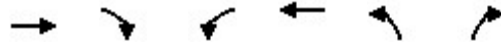
Cycle Length: 93
 Actuated Cycle Length: 81
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.20
 Intersection Signal Delay: 4.2
 Intersection LOS: A
 Intersection Capacity Utilization 38.0%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 5: Meade Parkway & Pruden Blvd



HCM Signalized Intersection Capacity Analysis
5: Meade Parkway & Pruden Blvd

Background 2035
AM Peak



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Volume (vph)	531	145	67	264	26	41
Future Volume (vph)	531	145	67	264	26	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.41	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	769	3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	531	145	67	264	26	41
RTOR Reduction (vph)	0	44	0	0	0	7
Lane Group Flow (vph)	531	101	67	264	26	34
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Actuated Green, G (s)	59.5	59.5	70.7	70.7	3.1	70.7
Effective Green, g (s)	59.5	59.5	70.7	70.7	3.1	70.7
Actuated g/C Ratio	0.69	0.69	0.82	0.82	0.04	0.82
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2454	1097	694	2916	63	1304
v/s Ratio Prot	c0.15		0.01	c0.07	c0.01	
v/s Ratio Perm		0.06	0.07			0.02
v/c Ratio	0.22	0.09	0.10	0.09	0.41	0.03
Uniform Delay, d1	4.7	4.3	1.6	1.4	40.5	1.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.1	0.1	4.3	0.0
Delay (s)	4.9	4.5	1.7	1.5	44.8	1.4
Level of Service	A	A	A	A	D	A
Approach Delay (s)	4.8			1.5	18.2	
Approach LOS	A			A	B	

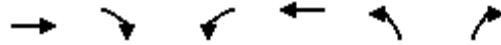
Intersection Summary

HCM 2000 Control Delay	4.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.22		
Actuated Cycle Length (s)	85.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	38.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
5: Meade Parkway & Pruden Blvd

2035 Build
Timing Plan: AM Peak



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↓
Traffic Volume (vph)	592	145	67	305	26	41
Future Volume (vph)	592	145	67	305	26	41
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Detector Phase	6	6	5	2	8	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	24.5	24.5	24.5
Total Split (s)	46.0	46.0	21.0	67.0	26.0	67.0
Total Split (%)	49.5%	49.5%	22.6%	72.0%	28.0%	72.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	None	Max	None	Max
Act Effct Green (s)	60.7	60.7	69.5	73.1	6.7	73.1
Actuated g/C Ratio	0.75	0.75	0.86	0.90	0.08	0.90
v/c Ratio	0.22	0.12	0.10	0.10	0.18	0.03
Control Delay	5.3	1.6	2.1	1.5	36.7	0.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.3	1.6	2.1	1.5	36.7	0.9
LOS	A	A	A	A	D	A
Approach Delay	4.5			1.7	14.8	
Approach LOS	A			A	B	

Intersection Summary

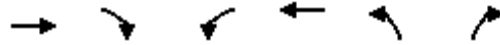
Cycle Length: 93
 Actuated Cycle Length: 81
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.22
 Intersection Signal Delay: 4.2
 Intersection LOS: A
 Intersection Capacity Utilization 39.7%
 ICU Level of Service A
 Analysis Period (min) 15

Splits and Phases: 5: Meade Parkway & Pruden Blvd



HCM Signalized Intersection Capacity Analysis
5: Meade Parkway & Pruden Blvd

2035 Build
Timing Plan: AM Peak



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Volume (vph)	592	145	67	305	26	41
Future Volume (vph)	592	145	67	305	26	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.39	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	725	3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	592	145	67	305	26	41
RTOR Reduction (vph)	0	44	0	0	0	7
Lane Group Flow (vph)	592	101	67	305	26	34
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Actuated Green, G (s)	59.5	59.5	70.7	70.7	3.1	70.7
Effective Green, g (s)	59.5	59.5	70.7	70.7	3.1	70.7
Actuated g/C Ratio	0.69	0.69	0.82	0.82	0.04	0.82
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2454	1097	660	2916	63	1304
v/s Ratio Prot	c0.17		0.01	c0.09	c0.01	
v/s Ratio Perm		0.06	0.08			0.02
v/c Ratio	0.24	0.09	0.10	0.10	0.41	0.03
Uniform Delay, d1	4.8	4.3	1.6	1.5	40.5	1.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.2	0.1	0.1	4.3	0.0
Delay (s)	5.1	4.5	1.7	1.5	44.8	1.4
Level of Service	A	A	A	A	D	A
Approach Delay (s)	5.0			1.6	18.2	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	4.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.24		
Actuated Cycle Length (s)	85.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	39.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
5: Meade Parkway & Pruden Blvd

Existing
PM Peak



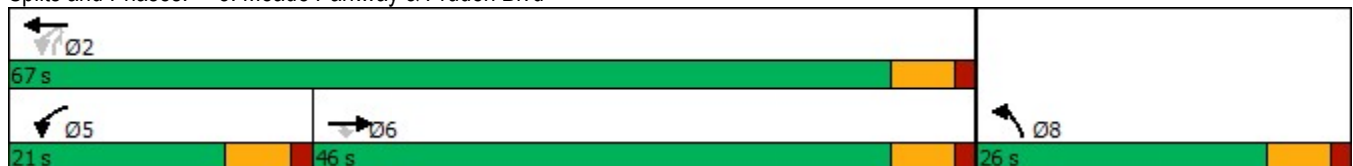
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↗
Traffic Volume (vph)	358	21	30	457	129	74
Future Volume (vph)	358	21	30	457	129	74
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Detector Phase	6	6	5	2	8	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	24.5	24.5	24.5
Total Split (s)	46.0	46.0	21.0	67.0	26.0	67.0
Total Split (%)	49.5%	49.5%	22.6%	72.0%	28.0%	72.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	None	Max	None	Max
Act Effct Green (s)	61.6	61.6	66.7	66.7	11.8	66.7
Actuated g/C Ratio	0.68	0.68	0.74	0.74	0.13	0.74
v/c Ratio	0.15	0.02	0.04	0.18	0.56	0.06
Control Delay	6.8	4.0	4.1	4.1	45.1	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.8	4.0	4.1	4.1	45.1	1.3
LOS	A	A	A	A	D	A
Approach Delay	6.7			4.1	29.1	
Approach LOS	A			A	C	

Intersection Summary

Cycle Length: 93
 Actuated Cycle Length: 90.6
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.56
 Intersection Signal Delay: 9.8
 Intersection Capacity Utilization 36.2%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service A

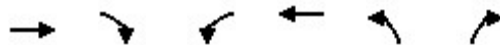
Splits and Phases: 5: Meade Parkway & Pruden Blvd



HCM Signalized Intersection Capacity Analysis

5: Meade Parkway & Pruden Blvd

Existing
PM Peak



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↵	↑↑	↵	↑
Traffic Volume (vph)	358	21	30	457	129	74
Future Volume (vph)	358	21	30	457	129	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.49	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	913	3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	358	21	30	457	129	74
RTOR Reduction (vph)	0	7	0	0	0	19
Lane Group Flow (vph)	358	14	30	457	129	55
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Actuated Green, G (s)	61.6	61.6	70.3	70.3	11.8	70.3
Effective Green, g (s)	61.6	61.6	70.3	70.3	11.8	70.3
Actuated g/C Ratio	0.65	0.65	0.75	0.75	0.13	0.75
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2316	1036	706	2643	221	1182
v/s Ratio Prot	0.10		0.00	c0.13	c0.07	
v/s Ratio Perm		0.01	0.03			0.03
v/c Ratio	0.15	0.01	0.04	0.17	0.58	0.05
Uniform Delay, d1	6.2	5.7	3.3	3.5	38.8	3.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	0.0	0.0	0.1	3.9	0.1
Delay (s)	6.4	5.7	3.3	3.6	42.7	3.2
Level of Service	A	A	A	A	D	A
Approach Delay (s)	6.3			3.6	28.3	
Approach LOS	A			A	C	

Intersection Summary

HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.25		
Actuated Cycle Length (s)	94.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	36.2%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
5: Meade Parkway & Pruden Blvd



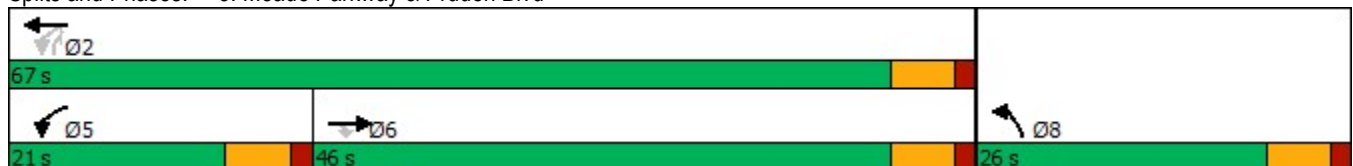
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↓
Traffic Volume (vph)	513	21	30	569	129	74
Future Volume (vph)	513	21	30	569	129	74
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Detector Phase	6	6	5	2	8	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	24.5	24.5	24.5
Total Split (s)	46.0	46.0	21.0	67.0	26.0	67.0
Total Split (%)	49.5%	49.5%	22.6%	72.0%	28.0%	72.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	None	Max	None	Max
Act Effct Green (s)	61.6	61.6	66.7	66.7	11.8	66.7
Actuated g/C Ratio	0.68	0.68	0.74	0.74	0.13	0.74
v/c Ratio	0.21	0.02	0.05	0.22	0.56	0.06
Control Delay	7.1	4.0	4.1	4.3	45.1	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.1	4.0	4.1	4.3	45.1	1.3
LOS	A	A	A	A	D	A
Approach Delay	7.0			4.3	29.1	
Approach LOS	A			A	C	

Intersection Summary

Cycle Length: 93
 Actuated Cycle Length: 90.6
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.56
 Intersection Signal Delay: 9.2
 Intersection Capacity Utilization 40.5%
 Analysis Period (min) 15

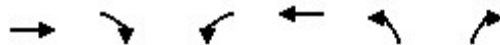
Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 5: Meade Parkway & Pruden Blvd



HCM Signalized Intersection Capacity Analysis
5: Meade Parkway & Pruden Blvd

Background 2030
PM Peak



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑	↑
Traffic Volume (vph)	513	21	30	569	129	74
Future Volume (vph)	513	21	30	569	129	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.42	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	785	3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	513	21	30	569	129	74
RTOR Reduction (vph)	0	7	0	0	0	19
Lane Group Flow (vph)	513	14	30	569	129	55
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Actuated Green, G (s)	61.6	61.6	70.3	70.3	11.8	70.3
Effective Green, g (s)	61.6	61.6	70.3	70.3	11.8	70.3
Actuated g/C Ratio	0.65	0.65	0.75	0.75	0.13	0.75
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2316	1036	614	2643	221	1182
v/s Ratio Prot	0.14		0.00	c0.16	c0.07	
v/s Ratio Perm		0.01	0.04			0.03
v/c Ratio	0.22	0.01	0.05	0.22	0.58	0.05
Uniform Delay, d1	6.6	5.7	3.3	3.6	38.8	3.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.0	0.0	0.2	3.9	0.1
Delay (s)	6.8	5.7	3.3	3.8	42.7	3.2
Level of Service	A	A	A	A	D	A
Approach Delay (s)	6.7			3.7	28.3	
Approach LOS	A			A	C	

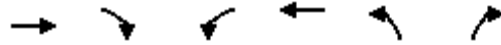
Intersection Summary

HCM 2000 Control Delay	8.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.29		
Actuated Cycle Length (s)	94.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	40.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
5: Meade Parkway & Pruden Blvd

2030 Build
Timing Plan: PM Peak



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	558	21	30	630	129	74
Future Volume (vph)	558	21	30	630	129	74
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Detector Phase	6	6	5	2	8	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	24.5	24.5	24.5
Total Split (s)	46.0	46.0	21.0	67.0	26.0	67.0
Total Split (%)	49.5%	49.5%	22.6%	72.0%	28.0%	72.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	None	Max	None	Max
Act Effct Green (s)	61.6	61.6	66.7	66.7	11.8	66.7
Actuated g/C Ratio	0.68	0.68	0.74	0.74	0.13	0.74
v/c Ratio	0.23	0.02	0.05	0.24	0.56	0.06
Control Delay	7.2	4.0	4.1	4.4	45.1	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.2	4.0	4.1	4.4	45.1	1.3
LOS	A	A	A	A	D	A
Approach Delay	7.1			4.4	29.1	
Approach LOS	A			A	C	

Intersection Summary

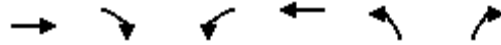
Cycle Length: 93
 Actuated Cycle Length: 90.6
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.56
 Intersection Signal Delay: 9.0
 Intersection Capacity Utilization 41.7%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 5: Meade Parkway & Pruden Blvd



HCM Signalized Intersection Capacity Analysis
5: Meade Parkway & Pruden Blvd

2030 Build
Timing Plan: PM Peak



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	558	21	30	630	129	74
Future Volume (vph)	558	21	30	630	129	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.40	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	748	3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	558	21	30	630	129	74
RTOR Reduction (vph)	0	7	0	0	0	19
Lane Group Flow (vph)	558	14	30	630	129	55
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Actuated Green, G (s)	61.6	61.6	70.3	70.3	11.8	70.3
Effective Green, g (s)	61.6	61.6	70.3	70.3	11.8	70.3
Actuated g/C Ratio	0.65	0.65	0.75	0.75	0.13	0.75
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2316	1036	588	2643	221	1182
v/s Ratio Prot	0.16		0.00	c0.18	c0.07	
v/s Ratio Perm		0.01	0.04			0.03
v/c Ratio	0.24	0.01	0.05	0.24	0.58	0.05
Uniform Delay, d1	6.7	5.7	3.3	3.7	38.8	3.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.0	0.0	0.2	3.9	0.1
Delay (s)	6.9	5.7	3.3	3.9	42.7	3.2
Level of Service	A	A	A	A	D	A
Approach Delay (s)	6.9			3.8	28.3	
Approach LOS	A			A	C	

Intersection Summary

HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	94.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
5: Meade Parkway & Pruden Blvd

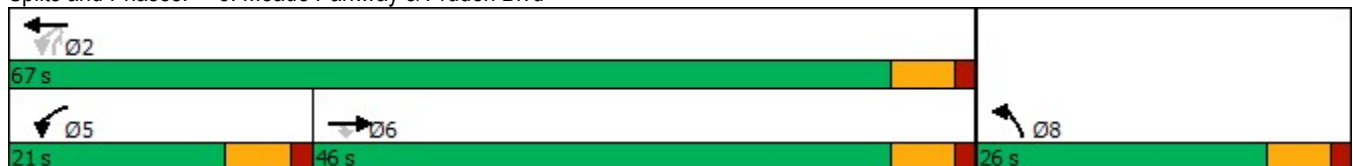


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↘	↑↑	↘	↘
Traffic Volume (vph)	531	21	30	592	129	74
Future Volume (vph)	531	21	30	592	129	74
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Detector Phase	6	6	5	2	8	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	24.5	24.5	24.5
Total Split (s)	46.0	46.0	21.0	67.0	26.0	67.0
Total Split (%)	49.5%	49.5%	22.6%	72.0%	28.0%	72.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	None	Max	None	Max
Act Effct Green (s)	61.6	61.6	66.7	66.7	11.8	66.7
Actuated g/C Ratio	0.68	0.68	0.74	0.74	0.13	0.74
v/c Ratio	0.22	0.02	0.05	0.23	0.56	0.06
Control Delay	7.2	4.0	4.1	4.4	45.1	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.2	4.0	4.1	4.4	45.1	1.3
LOS	A	A	A	A	D	A
Approach Delay	7.0			4.3	29.1	
Approach LOS	A			A	C	

Intersection Summary

Cycle Length: 93	
Actuated Cycle Length: 90.6	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 9.1	Intersection LOS: A
Intersection Capacity Utilization 41.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 5: Meade Parkway & Pruden Blvd



HCM Signalized Intersection Capacity Analysis
5: Meade Parkway & Pruden Blvd

Background 2035
PM Peak



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↵	↑↑	↵	↑
Traffic Volume (vph)	531	21	30	592	129	74
Future Volume (vph)	531	21	30	592	129	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.41	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	772	3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	531	21	30	592	129	74
RTOR Reduction (vph)	0	7	0	0	0	19
Lane Group Flow (vph)	531	14	30	592	129	55
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Actuated Green, G (s)	61.6	61.6	70.3	70.3	11.8	70.3
Effective Green, g (s)	61.6	61.6	70.3	70.3	11.8	70.3
Actuated g/C Ratio	0.65	0.65	0.75	0.75	0.13	0.75
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2316	1036	605	2643	221	1182
v/s Ratio Prot	0.15		0.00	c0.17	c0.07	
v/s Ratio Perm		0.01	0.04			0.03
v/c Ratio	0.23	0.01	0.05	0.22	0.58	0.05
Uniform Delay, d1	6.6	5.7	3.3	3.6	38.8	3.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.0	0.0	0.2	3.9	0.1
Delay (s)	6.8	5.7	3.3	3.8	42.7	3.2
Level of Service	A	A	A	A	D	A
Approach Delay (s)	6.8			3.8	28.3	
Approach LOS	A			A	C	

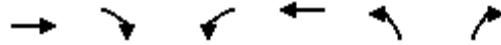
Intersection Summary

HCM 2000 Control Delay	8.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	94.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	41.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
5: Meade Parkway & Pruden Blvd

2035 Build
Timing Plan: PM Peak



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↓	↑↑	↓	↑
Traffic Volume (vph)	576	21	30	653	129	74
Future Volume (vph)	576	21	30	653	129	74
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Detector Phase	6	6	5	2	8	2
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	24.5	24.5	24.5
Total Split (s)	46.0	46.0	21.0	67.0	26.0	67.0
Total Split (%)	49.5%	49.5%	22.6%	72.0%	28.0%	72.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lead			
Lead-Lag Optimize?	Yes	Yes	Yes			
Recall Mode	Max	Max	None	Max	None	Max
Act Effct Green (s)	61.6	61.6	66.7	66.7	11.8	66.7
Actuated g/C Ratio	0.68	0.68	0.74	0.74	0.13	0.74
v/c Ratio	0.24	0.02	0.05	0.25	0.56	0.06
Control Delay	7.3	4.0	4.2	4.5	45.1	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.3	4.0	4.2	4.5	45.1	1.3
LOS	A	A	A	A	D	A
Approach Delay	7.2			4.4	29.1	
Approach LOS	A			A	C	

Intersection Summary

Cycle Length: 93
 Actuated Cycle Length: 90.6
 Natural Cycle: 65
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.56
 Intersection Signal Delay: 8.9
 Intersection Capacity Utilization 42.1%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

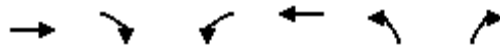
Splits and Phases: 5: Meade Parkway & Pruden Blvd



HCM Signalized Intersection Capacity Analysis

5: Meade Parkway & Pruden Blvd

2035 Build
Timing Plan: PM Peak



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↵	↑↑	↵	↑
Traffic Volume (vph)	576	21	30	653	129	74
Future Volume (vph)	576	21	30	653	129	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.95	1.00	1.00	0.95	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3539	1583	1770	3539	1770	1583
Flt Permitted	1.00	1.00	0.39	1.00	0.95	1.00
Satd. Flow (perm)	3539	1583	732	3539	1770	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	576	21	30	653	129	74
RTOR Reduction (vph)	0	7	0	0	0	19
Lane Group Flow (vph)	576	14	30	653	129	55
Turn Type	NA	Perm	pm+pt	NA	Prot	Perm
Protected Phases	6		5	2	8	
Permitted Phases		6	2			2
Actuated Green, G (s)	61.6	61.6	70.3	70.3	11.8	70.3
Effective Green, g (s)	61.6	61.6	70.3	70.3	11.8	70.3
Actuated g/C Ratio	0.65	0.65	0.75	0.75	0.13	0.75
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	2316	1036	576	2643	221	1182
v/s Ratio Prot	0.16		0.00	c0.18	c0.07	
v/s Ratio Perm		0.01	0.04			0.03
v/c Ratio	0.25	0.01	0.05	0.25	0.58	0.05
Uniform Delay, d1	6.7	5.7	3.3	3.7	38.8	3.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.3	0.0	0.0	0.2	3.9	0.1
Delay (s)	7.0	5.7	3.3	3.9	42.7	3.2
Level of Service	A	A	A	A	D	A
Approach Delay (s)	6.9			3.9	28.3	
Approach LOS	A			A	C	

Intersection Summary

HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.32		
Actuated Cycle Length (s)	94.1	Sum of lost time (s)	18.0
Intersection Capacity Utilization	42.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
6: Main St./Pruden Blvd & Godwin Blvd

Existing
AM Peak

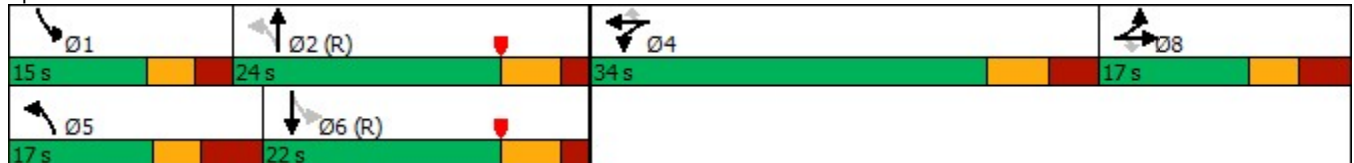
	→	↘	↙	←	↖	↗	↑	↘	↙	↓
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↘	↑↑	↗	↘	↖↗
Traffic Volume (vph)	35	28	508	34	109	23	181	530	81	269
Future Volume (vph)	35	28	508	34	109	23	181	530	81	269
Turn Type	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA
Protected Phases	8		4	4		5	2		1	6
Permitted Phases		8			4	2		Free	6	
Detector Phase	8	8	4	4	4	5	2		1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	25.0	25.0	25.5	25.5	25.5	12.3	24.1		11.0	24.1
Total Split (s)	17.0	17.0	34.0	34.0	34.0	17.0	24.0		15.0	22.0
Total Split (%)	18.9%	18.9%	37.8%	37.8%	37.8%	18.9%	26.7%		16.7%	24.4%
Yellow Time (s)	3.4	3.4	4.1	4.1	4.1	3.2	4.1		3.2	4.1
All-Red Time (s)	3.6	3.6	3.4	3.4	3.4	4.1	2.0		2.6	2.0
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)	7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1
Lead/Lag							Lead	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max
Act Effct Green (s)	7.8	7.8	20.1	20.1	20.1	36.7	32.7	90.0	42.1	38.2
Actuated g/C Ratio	0.09	0.09	0.22	0.22	0.22	0.41	0.36	1.00	0.47	0.42
v/c Ratio	0.32	0.09	0.72	0.72	0.22	0.05	0.14	0.33	0.14	0.20
Control Delay	43.4	0.5	42.6	42.7	1.0	5.4	8.8	3.4	17.0	21.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.4	0.5	42.6	42.7	1.0	5.4	8.8	3.4	17.0	21.2
LOS	D	A	D	D	A	A	A	A	B	C
Approach Delay	28.2			35.7			4.8			20.3
Approach LOS	C			D			A			C

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 16 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.72
 Intersection Signal Delay: 19.9
 Intersection Capacity Utilization 51.4%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 6: Main St./Pruden Blvd & Godwin Blvd



HCM Signalized Intersection Capacity Analysis

6: Main St./Pruden Blvd & Godwin Blvd

Existing
AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗	↖	↖	↗	↖	↑↑	↗	↖	↕	↗
Traffic Volume (vph)	16	35	28	508	34	109	23	181	530	81	269	30
Future Volume (vph)	16	35	28	508	34	109	23	181	530	81	269	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1	4.0	5.8	6.1	
Lane Util. Factor		1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected		0.98	1.00	0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1834	1583	1681	1695	1583	1770	3539	1583	1770	3486	
Flt Permitted		0.98	1.00	0.95	0.96	1.00	0.57	1.00	1.00	0.59	1.00	
Satd. Flow (perm)		1834	1583	1681	1695	1583	1060	3539	1583	1107	3486	
Peak-hour factor, PHF	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. Flow (vph)	16	35	28	508	34	109	23	181	530	81	269	30
RTOR Reduction (vph)	0	0	26	0	0	85	0	0	0	0	7	0
Lane Group Flow (vph)	0	51	2	269	273	24	23	181	530	81	292	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA	
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases			8			4	2		Free	6		
Actuated Green, G (s)		6.7	6.7	20.1	20.1	20.1	33.1	30.2	90.0	39.0	32.4	
Effective Green, g (s)		6.7	6.7	20.1	20.1	20.1	33.1	30.2	90.0	39.0	32.4	
Actuated g/C Ratio		0.07	0.07	0.22	0.22	0.22	0.37	0.34	1.00	0.43	0.36	
Clearance Time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		136	117	375	378	353	412	1187	1583	528	1254	
v/s Ratio Prot		0.03		0.16	c0.16		0.00	0.05		0.01	0.08	
v/s Ratio Perm			0.00			0.02	0.02		c0.33	0.06		
v/c Ratio		0.38	0.02	0.72	0.72	0.07	0.06	0.15	0.33	0.15	0.23	
Uniform Delay, d1		39.7	38.6	32.3	32.4	27.6	18.2	20.9	0.0	15.2	20.1	
Progression Factor		1.00	1.00	1.00	1.00	1.00	0.30	0.35	1.00	1.00	1.00	
Incremental Delay, d2		1.7	0.1	6.4	6.7	0.1	0.1	0.3	0.6	0.1	0.4	
Delay (s)		41.4	38.7	38.7	39.0	27.7	5.4	7.5	0.6	15.3	20.6	
Level of Service		D	D	D	D	C	A	A	A	B	C	
Approach Delay (s)		40.4			37.0			2.4			19.4	
Approach LOS		D			D			A			B	

Intersection Summary

HCM 2000 Control Delay	19.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	27.9
Intersection Capacity Utilization	51.4%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
6: Main St./Pruden Blvd & Godwin Blvd

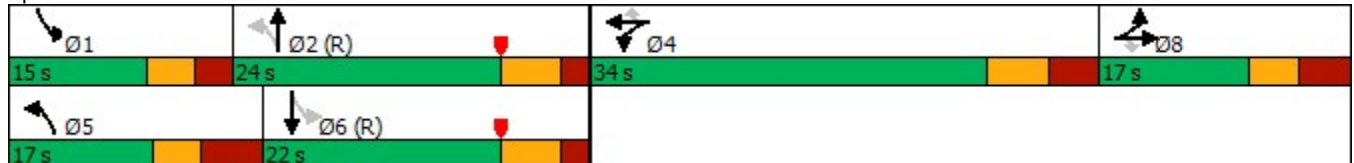
Background 2030
AM Peak

	→	↘	↙	←	↖	↗	↑	↘	↙	↓
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↙	↖	↗	↙	↑↑	↗	↙	↑↓
Traffic Volume (vph)	37	29	591	36	133	24	211	595	124	385
Future Volume (vph)	37	29	591	36	133	24	211	595	124	385
Turn Type	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA
Protected Phases	8		4	4		5	2		1	6
Permitted Phases		8			4	2		Free	6	
Detector Phase	8	8	4	4	4	5	2		1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	25.0	25.0	25.5	25.5	25.5	12.3	24.1		11.0	24.1
Total Split (s)	17.0	17.0	34.0	34.0	34.0	17.0	24.0		15.0	22.0
Total Split (%)	18.9%	18.9%	37.8%	37.8%	37.8%	18.9%	26.7%		16.7%	24.4%
Yellow Time (s)	3.4	3.4	4.1	4.1	4.1	3.2	4.1		3.2	4.1
All-Red Time (s)	3.6	3.6	3.4	3.4	3.4	4.1	2.0		2.6	2.0
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)	7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1
Lead/Lag							Lead	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max
Act Effct Green (s)	7.9	7.9	22.1	22.1	22.1	32.8	27.6	90.0	40.3	36.1
Actuated g/C Ratio	0.09	0.09	0.25	0.25	0.25	0.36	0.31	1.00	0.45	0.40
v/c Ratio	0.34	0.09	0.76	0.76	0.25	0.06	0.19	0.38	0.24	0.30
Control Delay	43.6	0.6	43.4	43.0	2.3	5.5	10.7	4.2	18.4	23.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.6	0.6	43.4	43.0	2.3	5.5	10.7	4.2	18.4	23.4
LOS	D	A	D	D	A	A	B	A	B	C
Approach Delay	28.6			36.1			5.9			22.3
Approach LOS	C			D			A			C

Intersection Summary
























Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 16 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.76
 Intersection Signal Delay: 21.1
 Intersection Capacity Utilization 57.2%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 6: Main St./Pruden Blvd & Godwin Blvd



HCM Signalized Intersection Capacity Analysis
6: Main St./Pruden Blvd & Godwin Blvd

Background 2030
AM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	17	37	29	591	36	133	24	211	595	124	385	32	
Future Volume (vph)	17	37	29	591	36	133	24	211	595	124	385	32	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1	4.0	5.8	6.1		
Lane Util. Factor		1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95		
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		
Flt Protected		0.98	1.00	0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)		1834	1583	1681	1695	1583	1770	3539	1583	1770	3498		
Flt Permitted		0.98	1.00	0.95	0.96	1.00	0.51	1.00	1.00	0.54	1.00		
Satd. Flow (perm)		1834	1583	1681	1695	1583	946	3539	1583	998	3498		
Peak-hour factor, PHF	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. Flow (vph)	17	37	29	591	36	133	24	211	595	124	385	32	
RTOR Reduction (vph)	0	0	27	0	0	100	0	0	0	0	5	0	
Lane Group Flow (vph)	0	54	2	313	314	33	24	211	595	124	412	0	
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA		
Protected Phases	8	8		4	4		5	2		1	6		
Permitted Phases			8			4	2		Free	6			
Actuated Green, G (s)		6.8	6.8	22.1	22.1	22.1	29.1	26.2	90.0	38.8	30.3		
Effective Green, g (s)		6.8	6.8	22.1	22.1	22.1	29.1	26.2	90.0	38.8	30.3		
Actuated g/C Ratio		0.08	0.08	0.25	0.25	0.25	0.32	0.29	1.00	0.43	0.34		
Clearance Time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1		
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)		138	119	412	416	388	332	1030	1583	503	1177		
v/s Ratio Prot		0.03		c0.19	0.19		0.00	0.06		0.02	0.12		
v/s Ratio Perm			0.00			0.02	0.02		c0.38	0.08			
v/c Ratio		0.39	0.02	0.76	0.75	0.08	0.07	0.20	0.38	0.25	0.35		
Uniform Delay, d1		39.6	38.5	31.5	31.4	26.2	20.9	24.0	0.0	15.8	22.4		
Progression Factor		1.00	1.00	1.00	1.00	1.00	0.28	0.38	1.00	1.00	1.00		
Incremental Delay, d2		1.8	0.1	7.9	7.6	0.1	0.1	0.4	0.7	0.3	0.8		
Delay (s)		41.5	38.6	39.3	39.0	26.2	5.9	9.6	0.7	16.0	23.3		
Level of Service		D	D	D	D	C	A	A	A	B	C		
Approach Delay (s)		40.5			36.9			3.1			21.6		
Approach LOS		D			D			A			C		
Intersection Summary													
HCM 2000 Control Delay			20.6		HCM 2000 Level of Service					C			
HCM 2000 Volume to Capacity ratio			0.64										
Actuated Cycle Length (s)			90.0		Sum of lost time (s)					27.9			
Intersection Capacity Utilization			57.2%		ICU Level of Service					B			
Analysis Period (min)			15										

c Critical Lane Group

Timings
6: Main St./Pruden Blvd & Godwin Blvd

2030 Build
Timing Plan: AM Peak

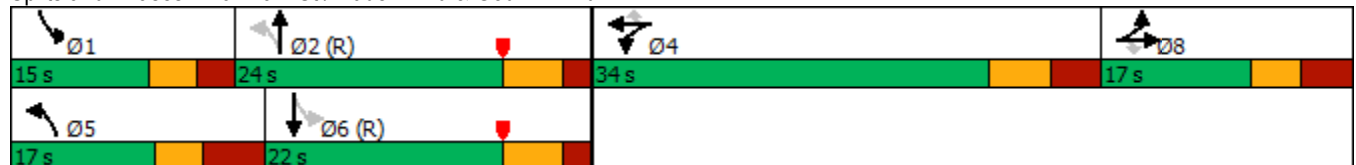
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Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖↗	↖↗	↖↗	↖↗	↖↗	↖↗	↖↗	↖↗	↖↗	↖↗
Traffic Volume (vph)	37	29	764	36	133	24	252	708	124	446
Future Volume (vph)	37	29	764	36	133	24	252	708	124	446
Turn Type	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA
Protected Phases	8		4	4		5	2		1	6
Permitted Phases		8			4	2		Free	6	
Detector Phase	8	8	4	4	4	5	2		1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	25.0	25.0	25.5	25.5	25.5	12.3	24.1		11.0	24.1
Total Split (s)	17.0	17.0	34.0	34.0	34.0	17.0	24.0		15.0	22.0
Total Split (%)	18.9%	18.9%	37.8%	37.8%	37.8%	18.9%	26.7%		16.7%	24.4%
Yellow Time (s)	3.4	3.4	4.1	4.1	4.1	3.2	4.1		3.2	4.1
All-Red Time (s)	3.6	3.6	3.4	3.4	3.4	4.1	2.0		2.6	2.0
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)	7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1
Lead/Lag						Lead	Lag		Lead	Lag
Lead-Lag Optimize?						Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max
Act Effct Green (s)	7.9	7.9	24.7	24.7	24.7	30.0	24.8	90.0	37.6	33.4
Actuated g/C Ratio	0.09	0.09	0.27	0.27	0.27	0.33	0.28	1.00	0.42	0.37
v/c Ratio	0.34	0.09	0.86	0.87	0.23	0.07	0.26	0.45	0.26	0.37
Control Delay	43.6	0.6	50.2	50.8	2.1	9.3	14.1	5.0	19.6	25.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.6	0.6	50.2	50.8	2.1	9.3	14.1	5.0	19.6	25.3
LOS	D	A	D	D	A	A	B	A	B	C
Approach Delay	28.6			43.6			7.4			24.1
Approach LOS	C			D			A			C

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 16 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.87
 Intersection Signal Delay: 24.9
 Intersection Capacity Utilization 63.7%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 6: Main St./Pruden Blvd & Godwin Blvd



HCM Signalized Intersection Capacity Analysis

6: Main St./Pruden Blvd & Godwin Blvd

2030 Build
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↕	↕	↕	↕	↕	↕↕	↕	↕	↕↕	
Traffic Volume (vph)	17	37	29	764	36	133	24	252	708	124	446	32
Future Volume (vph)	17	37	29	764	36	133	24	252	708	124	446	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1	4.0	5.8	6.1	
Lane Util. Factor		1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.98	1.00	0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1834	1583	1681	1693	1583	1770	3539	1583	1770	3504	
Flt Permitted		0.98	1.00	0.95	0.96	1.00	0.48	1.00	1.00	0.51	1.00	
Satd. Flow (perm)		1834	1583	1681	1693	1583	892	3539	1583	941	3504	
Peak-hour factor, PHF	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. Flow (vph)	17	37	29	764	36	133	24	252	708	124	446	32
RTOR Reduction (vph)	0	0	27	0	0	96	0	0	0	0	5	0
Lane Group Flow (vph)	0	54	2	397	403	37	24	252	708	124	473	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA	
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases			8			4	2		Free	6		
Actuated Green, G (s)		6.8	6.8	24.7	24.7	24.7	26.4	23.5	90.0	36.3	27.7	
Effective Green, g (s)		6.8	6.8	24.7	24.7	24.7	26.4	23.5	90.0	36.3	27.7	
Actuated g/C Ratio		0.08	0.08	0.27	0.27	0.27	0.29	0.26	1.00	0.40	0.31	
Clearance Time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		138	119	461	464	434	289	924	1583	458	1078	
v/s Ratio Prot		0.03		0.24	c0.24		0.00	0.07		0.03	0.14	
v/s Ratio Perm			0.00			0.02	0.02		c0.45	0.08		
v/c Ratio		0.39	0.02	0.86	0.87	0.08	0.08	0.27	0.45	0.27	0.44	
Uniform Delay, d1		39.6	38.5	31.0	31.1	24.2	22.8	26.5	0.0	17.3	24.9	
Progression Factor		1.00	1.00	1.00	1.00	1.00	0.46	0.47	1.00	1.00	1.00	
Incremental Delay, d2		1.8	0.1	15.1	15.7	0.1	0.1	0.7	0.9	0.3	1.3	
Delay (s)		41.5	38.6	46.2	46.8	24.3	10.7	13.1	0.9	17.7	26.2	
Level of Service		D	D	D	D	C	B	B	A	B	C	
Approach Delay (s)		40.5			43.3			4.3			24.5	
Approach LOS		D			D			A			C	

Intersection Summary

HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	27.9
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Timings
6: Main St./Pruden Blvd & Godwin Blvd

Background 2035
AM Peak

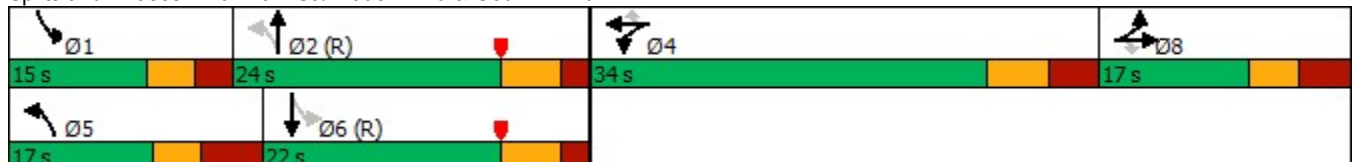
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Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↘	↑↑	↗	↘	↖↗
Traffic Volume (vph)	39	31	617	37	139	25	220	621	128	399
Future Volume (vph)	39	31	617	37	139	25	220	621	128	399
Turn Type	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA
Protected Phases	8		4	4		5	2		1	6
Permitted Phases		8			4	2		Free	6	
Detector Phase	8	8	4	4	4	5	2		1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	25.0	25.0	25.5	25.5	25.5	12.3	24.1		11.0	24.1
Total Split (s)	17.0	17.0	34.0	34.0	34.0	17.0	24.0		15.0	22.0
Total Split (%)	18.9%	18.9%	37.8%	37.8%	37.8%	18.9%	26.7%		16.7%	24.4%
Yellow Time (s)	3.4	3.4	4.1	4.1	4.1	3.2	4.1		3.2	4.1
All-Red Time (s)	3.6	3.6	3.4	3.4	3.4	4.1	2.0		2.6	2.0
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)	7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1
Lead/Lag						Lead	Lag		Lead	Lag
Lead-Lag Optimize?						Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max
Act Effct Green (s)	8.0	8.0	22.5	22.5	22.5	32.3	27.1	90.0	39.7	35.6
Actuated g/C Ratio	0.09	0.09	0.25	0.25	0.25	0.36	0.30	1.00	0.44	0.40
v/c Ratio	0.35	0.10	0.78	0.77	0.26	0.06	0.21	0.39	0.25	0.31
Control Delay	44.0	0.6	44.5	43.9	2.5	6.2	10.8	4.5	18.8	23.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.0	0.6	44.5	43.9	2.5	6.2	10.8	4.5	18.8	23.9
LOS	D	A	D	D	A	A	B	A	B	C
Approach Delay	28.7			36.9			6.1			22.7
Approach LOS	C			D			A			C

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 16 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 21.6
 Intersection Capacity Utilization 58.4%
 Analysis Period (min) 15
























Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 6: Main St./Pruden Blvd & Godwin Blvd



HCM Signalized Intersection Capacity Analysis
6: Main St./Pruden Blvd & Godwin Blvd

Background 2035
AM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	18	39	31	617	37	139	25	220	621	128	399	33	
Future Volume (vph)	18	39	31	617	37	139	25	220	621	128	399	33	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1	4.0	5.8	6.1		
Lane Util. Factor		1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95		
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		
Flt Protected		0.98	1.00	0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)		1834	1583	1681	1694	1583	1770	3539	1583	1770	3499		
Flt Permitted		0.98	1.00	0.95	0.96	1.00	0.50	1.00	1.00	0.53	1.00		
Satd. Flow (perm)		1834	1583	1681	1694	1583	933	3539	1583	987	3499		
Peak-hour factor, PHF	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. Flow (vph)	18	39	31	617	37	139	25	220	621	128	399	33	
RTOR Reduction (vph)	0	0	29	0	0	104	0	0	0	0	5	0	
Lane Group Flow (vph)	0	57	2	327	327	35	25	220	621	128	427	0	
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA		
Protected Phases	8	8		4	4		5	2		1	6		
Permitted Phases			8			4	2		Free	6			
Actuated Green, G (s)		6.9	6.9	22.5	22.5	22.5	28.6	25.7	90.0	38.3	29.8		
Effective Green, g (s)		6.9	6.9	22.5	22.5	22.5	28.6	25.7	90.0	38.3	29.8		
Actuated g/C Ratio		0.08	0.08	0.25	0.25	0.25	0.32	0.29	1.00	0.43	0.33		
Clearance Time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1		
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)		140	121	420	423	395	323	1010	1583	493	1158		
v/s Ratio Prot		0.03		c0.19	0.19		0.00	0.06		0.02	0.12		
v/s Ratio Perm			0.00			0.02	0.02		c0.39	0.09			
v/c Ratio		0.41	0.02	0.78	0.77	0.09	0.08	0.22	0.39	0.26	0.37		
Uniform Delay, d1		39.6	38.4	31.4	31.4	25.9	21.2	24.5	0.0	16.1	22.9		
Progression Factor		1.00	1.00	1.00	1.00	1.00	0.31	0.38	1.00	1.00	1.00		
Incremental Delay, d2		1.9	0.1	8.8	8.5	0.1	0.1	0.5	0.7	0.3	0.9		
Delay (s)		41.5	38.5	40.3	39.9	26.0	6.7	9.8	0.7	16.4	23.8		
Level of Service		D	D	D	D	C	A	A	A	B	C		
Approach Delay (s)		40.5			37.6			3.2			22.1		
Approach LOS		D			D			A			C		
Intersection Summary													
HCM 2000 Control Delay			21.0		HCM 2000 Level of Service					C			
HCM 2000 Volume to Capacity ratio			0.66										
Actuated Cycle Length (s)			90.0		Sum of lost time (s)					27.9			
Intersection Capacity Utilization			58.4%		ICU Level of Service					B			
Analysis Period (min)			15										

c Critical Lane Group

Timings
6: Main St./Pruden Blvd & Godwin Blvd

2035 Build
Timing Plan: AM Peak

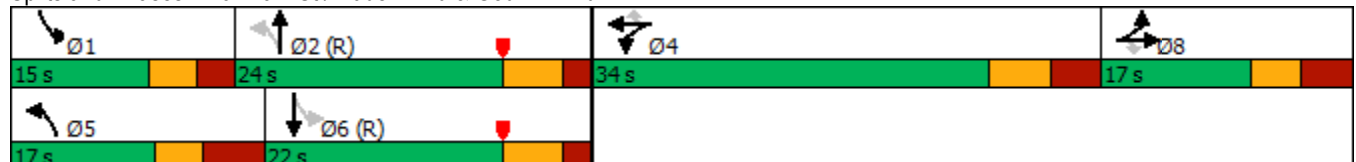
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Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↘	↑↑	↗	↘	↖↗
Traffic Volume (vph)	39	31	790	37	139	25	261	734	128	460
Future Volume (vph)	39	31	790	37	139	25	261	734	128	460
Turn Type	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA
Protected Phases	8		4	4		5	2		1	6
Permitted Phases		8			4	2		Free	6	
Detector Phase	8	8	4	4	4	5	2		1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	25.0	25.0	25.5	25.5	25.5	12.3	24.1		11.0	24.1
Total Split (s)	17.0	17.0	34.0	34.0	34.0	17.0	24.0		15.0	22.0
Total Split (%)	18.9%	18.9%	37.8%	37.8%	37.8%	18.9%	26.7%		16.7%	24.4%
Yellow Time (s)	3.4	3.4	4.1	4.1	4.1	3.2	4.1		3.2	4.1
All-Red Time (s)	3.6	3.6	3.4	3.4	3.4	4.1	2.0		2.6	2.0
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)	7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1
Lead/Lag						Lead	Lag		Lead	Lag
Lead-Lag Optimize?						Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max
Act Effct Green (s)	8.0	8.0	25.1	25.1	25.1	29.6	24.4	90.0	37.1	33.0
Actuated g/C Ratio	0.09	0.09	0.28	0.28	0.28	0.33	0.27	1.00	0.41	0.37
v/c Ratio	0.35	0.10	0.88	0.88	0.24	0.07	0.27	0.46	0.28	0.38
Control Delay	44.0	0.6	52.1	52.4	2.4	9.4	14.5	5.1	19.9	25.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.0	0.6	52.1	52.4	2.4	9.4	14.5	5.1	19.9	25.8
LOS	D	A	D	D	A	A	B	A	B	C
Approach Delay	28.7			45.1			7.6			24.6
Approach LOS	C			D			A			C

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 16 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 25.6
 Intersection Capacity Utilization 64.9%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 6: Main St./Pruden Blvd & Godwin Blvd



HCM Signalized Intersection Capacity Analysis
6: Main St./Pruden Blvd & Godwin Blvd

2035 Build
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗	↖	↖	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	18	39	31	790	37	139	25	261	734	128	460	33
Future Volume (vph)	18	39	31	790	37	139	25	261	734	128	460	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1	4.0	5.8	6.1	
Lane Util. Factor		1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.98	1.00	0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1834	1583	1681	1693	1583	1770	3539	1583	1770	3504	
Flt Permitted		0.98	1.00	0.95	0.96	1.00	0.47	1.00	1.00	0.50	1.00	
Satd. Flow (perm)		1834	1583	1681	1693	1583	868	3539	1583	930	3504	
Peak-hour factor, PHF	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. Flow (vph)	18	39	31	790	37	139	25	261	734	128	460	33
RTOR Reduction (vph)	0	0	29	0	0	100	0	0	0	0	5	0
Lane Group Flow (vph)	0	57	2	411	416	39	25	261	734	128	488	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA	
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases			8			4	2		Free	6		
Actuated Green, G (s)		6.9	6.9	25.1	25.1	25.1	25.9	23.0	90.0	35.8	27.2	
Effective Green, g (s)		6.9	6.9	25.1	25.1	25.1	25.9	23.0	90.0	35.8	27.2	
Actuated g/C Ratio		0.08	0.08	0.28	0.28	0.28	0.29	0.26	1.00	0.40	0.30	
Clearance Time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		140	121	468	472	441	278	904	1583	450	1058	
v/s Ratio Prot		0.03		0.24	c0.25		0.00	0.07		0.03	0.14	
v/s Ratio Perm			0.00			0.02	0.02		c0.46	0.09		
v/c Ratio		0.41	0.02	0.88	0.88	0.09	0.09	0.29	0.46	0.28	0.46	
Uniform Delay, d1		39.6	38.4	31.0	31.0	24.0	23.2	26.9	0.0	17.7	25.5	
Progression Factor		1.00	1.00	1.00	1.00	1.00	0.47	0.48	1.00	1.00	1.00	
Incremental Delay, d2		1.9	0.1	16.8	17.3	0.1	0.1	0.8	0.9	0.3	1.4	
Delay (s)		41.5	38.5	47.8	48.3	24.1	11.0	13.6	0.9	18.1	26.9	
Level of Service		D	D	D	D	C	B	B	A	B	C	
Approach Delay (s)		40.5			44.6			4.4			25.1	
Approach LOS		D			D			A			C	

Intersection Summary		
HCM 2000 Control Delay	24.8	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio	0.78	
Actuated Cycle Length (s)	90.0	Sum of lost time (s) 27.9
Intersection Capacity Utilization	64.9%	ICU Level of Service C
Analysis Period (min)	15	

c Critical Lane Group

Timings
6: Main St./Pruden Blvd & Godwin Blvd

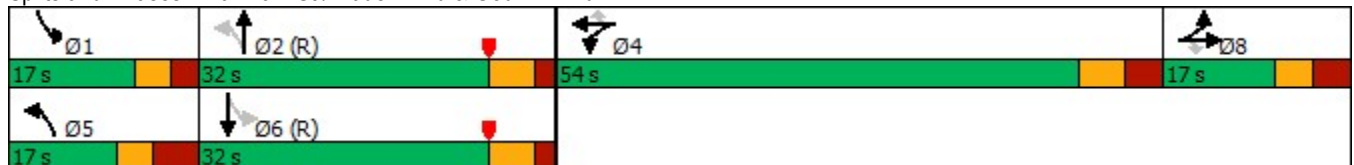
Existing
PM Peak

	→	↘	↙	←	↖	↗	↑	↘	↙	↓
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↘	↑↑	↗	↘	↖↗
Traffic Volume (vph)	14	19	799	13	84	11	427	812	81	358
Future Volume (vph)	14	19	799	13	84	11	427	812	81	358
Turn Type	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA
Protected Phases	8		4	4		5	2		1	6
Permitted Phases		8			4	2		Free	6	
Detector Phase	8	8	4	4	4	5	2		1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	25.0	25.0	25.5	25.5	25.5	12.3	24.1		11.0	24.1
Total Split (s)	17.0	17.0	54.0	54.0	54.0	17.0	32.0		17.0	32.0
Total Split (%)	14.2%	14.2%	45.0%	45.0%	45.0%	14.2%	26.7%		14.2%	26.7%
Yellow Time (s)	3.4	3.4	4.1	4.1	4.1	3.2	4.1		3.2	4.1
All-Red Time (s)	3.6	3.6	3.4	3.4	3.4	4.1	2.0		2.6	2.0
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)	7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1
Lead/Lag							Lead	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max
Act Effct Green (s)	7.0	7.0	36.2	36.2	36.2	52.9	49.1	120.0	61.1	58.4
Actuated g/C Ratio	0.06	0.06	0.30	0.30	0.30	0.44	0.41	1.00	0.51	0.49
v/c Ratio	0.21	0.08	0.80	0.80	0.14	0.02	0.29	0.51	0.18	0.21
Control Delay	57.7	0.6	50.3	49.7	0.5	13.1	23.9	4.3	20.7	22.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.7	0.6	50.3	49.7	0.5	13.1	23.9	4.3	20.7	22.6
LOS	E	A	D	D	A	B	C	A	C	C
Approach Delay	31.3			45.4			11.1			22.2
Approach LOS	C			D			B			C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 58.9 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 24.9
 Intersection Capacity Utilization 61.6%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 6: Main St./Pruden Blvd & Godwin Blvd



HCM Signalized Intersection Capacity Analysis

6: Main St./Pruden Blvd & Godwin Blvd

Existing
PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗	↖	↖	↗	↖	↑↑	↗	↖	↖↗	
Traffic Volume (vph)	8	14	19	799	13	84	11	427	812	81	358	7
Future Volume (vph)	8	14	19	799	13	84	11	427	812	81	358	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1	4.0	5.8	6.1	
Lane Util. Factor		1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1829	1583	1681	1688	1583	1770	3539	1583	1770	3529	
Flt Permitted		0.98	1.00	0.95	0.95	1.00	0.53	1.00	1.00	0.41	1.00	
Satd. Flow (perm)		1829	1583	1681	1688	1583	995	3539	1583	764	3529	
Peak-hour factor, PHF	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. Flow (vph)	8	14	19	799	13	84	11	427	812	81	358	7
RTOR Reduction (vph)	0	0	18	0	0	59	0	0	0	0	1	0
Lane Group Flow (vph)	0	22	1	407	405	25	11	427	812	81	364	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA	
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases			8			4	2		Free	6		
Actuated Green, G (s)		4.7	4.7	36.2	36.2	36.2	46.6	45.2	120.0	57.3	49.8	
Effective Green, g (s)		4.7	4.7	36.2	36.2	36.2	46.6	45.2	120.0	57.3	49.8	
Actuated g/C Ratio		0.04	0.04	0.30	0.30	0.30	0.39	0.38	1.00	0.48	0.41	
Clearance Time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		71	62	507	509	477	395	1333	1583	427	1464	
v/s Ratio Prot		0.01		c0.24	0.24		0.00	0.12		0.01	0.10	
v/s Ratio Perm			0.00			0.02	0.01		c0.51	0.08		
v/c Ratio		0.31	0.01	0.80	0.80	0.05	0.03	0.32	0.51	0.19	0.25	
Uniform Delay, d1		56.1	55.4	38.6	38.5	29.7	22.6	26.5	0.0	17.5	22.9	
Progression Factor		1.00	1.00	1.00	1.00	1.00	0.57	0.80	1.00	1.00	1.00	
Incremental Delay, d2		2.5	0.1	8.9	8.4	0.0	0.0	0.6	1.1	0.2	0.4	
Delay (s)		58.6	55.5	47.5	46.9	29.8	12.8	21.9	1.1	17.8	23.3	
Level of Service		E	E	D	D	C	B	C	A	B	C	
Approach Delay (s)		57.1			45.6			8.3			22.3	
Approach LOS		E			D			A			C	

Intersection Summary

HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	27.9
Intersection Capacity Utilization	61.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Timings
6: Main St./Pruden Blvd & Godwin Blvd

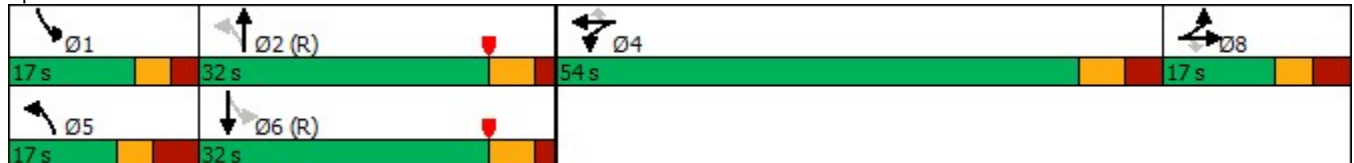
Background 2030
PM Peak

	→	↘	↙	←	↖	↗	↑	↘	↙	↓
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↘	↑↑	↗	↘	↖↗
Traffic Volume (vph)	15	20	915	14	120	12	505	946	127	470
Future Volume (vph)	15	20	915	14	120	12	505	946	127	470
Turn Type	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA
Protected Phases	8		4	4		5	2		1	6
Permitted Phases		8			4	2		Free	6	
Detector Phase	8	8	4	4	4	5	2		1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	25.0	25.0	25.5	25.5	25.5	12.3	24.1		11.0	24.1
Total Split (s)	17.0	17.0	54.0	54.0	54.0	17.0	32.0		17.0	32.0
Total Split (%)	14.2%	14.2%	45.0%	45.0%	45.0%	14.2%	26.7%		14.2%	26.7%
Yellow Time (s)	3.4	3.4	4.1	4.1	4.1	3.2	4.1		3.2	4.1
All-Red Time (s)	3.6	3.6	3.4	3.4	3.4	4.1	2.0		2.6	2.0
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)	7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1
Lead/Lag							Lead	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max
Act Effct Green (s)	7.1	7.1	39.8	39.8	39.8	46.6	41.7	120.0	57.3	52.0
Actuated g/C Ratio	0.06	0.06	0.33	0.33	0.33	0.39	0.35	1.00	0.48	0.43
v/c Ratio	0.21	0.08	0.84	0.83	0.19	0.03	0.41	0.60	0.33	0.31
Control Delay	57.9	0.7	50.6	49.4	2.2	13.5	28.7	6.7	23.8	27.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.9	0.7	50.6	49.4	2.2	13.5	28.7	6.7	23.8	27.8
LOS	E	A	D	D	A	B	C	A	C	C
Approach Delay	31.3			44.5			14.4			26.9
Approach LOS	C			D			B			C

Intersection Summary
























Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 58.9 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.84
 Intersection Signal Delay: 27.0
 Intersection Capacity Utilization 69.5%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 6: Main St./Pruden Blvd & Godwin Blvd



HCM Signalized Intersection Capacity Analysis
6: Main St./Pruden Blvd & Godwin Blvd

Background 2030
PM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	8	15	20	915	14	120	12	505	946	127	470	7	
Future Volume (vph)	8	15	20	915	14	120	12	505	946	127	470	7	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1	4.0	5.8	6.1		
Lane Util. Factor		1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95		
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00		
Flt Protected		0.98	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00		
Satd. Flow (prot)		1831	1583	1681	1688	1583	1770	3539	1583	1770	3531		
Flt Permitted		0.98	1.00	0.95	0.95	1.00	0.48	1.00	1.00	0.32	1.00		
Satd. Flow (perm)		1831	1583	1681	1688	1583	888	3539	1583	602	3531		
Peak-hour factor, PHF	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. Flow (vph)	8	15	20	915	14	120	12	505	946	127	470	7	
RTOR Reduction (vph)	0	0	19	0	0	80	0	0	0	0	1	0	
Lane Group Flow (vph)	0	23	1	467	462	40	12	505	946	127	476	0	
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA		
Protected Phases	8	8		4	4		5	2		1	6		
Permitted Phases			8			4	2		Free	6			
Actuated Green, G (s)		4.8	4.8	39.8	39.8	39.8	41.6	38.9	120.0	54.8	44.8		
Effective Green, g (s)		4.8	4.8	39.8	39.8	39.8	41.6	38.9	120.0	54.8	44.8		
Actuated g/C Ratio		0.04	0.04	0.33	0.33	0.33	0.35	0.32	1.00	0.46	0.37		
Clearance Time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1		
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)		73	63	557	559	525	327	1147	1583	373	1318		
v/s Ratio Prot		0.01		c0.28	0.27		0.00	0.14		0.03	0.13		
v/s Ratio Perm			0.00			0.03	0.01		c0.60	0.13			
v/c Ratio		0.32	0.01	0.84	0.83	0.08	0.04	0.44	0.60	0.34	0.36		
Uniform Delay, d1		56.0	55.3	37.1	36.9	27.5	25.8	32.0	0.0	20.0	27.2		
Progression Factor		1.00	1.00	1.00	1.00	1.00	0.55	0.82	1.00	1.00	1.00		
Incremental Delay, d2		2.5	0.1	10.6	9.7	0.1	0.0	1.2	1.6	0.5	0.8		
Delay (s)		58.5	55.4	47.8	46.6	27.6	14.2	27.3	1.6	20.6	28.0		
Level of Service		E	E	D	D	C	B	C	A	C	C		
Approach Delay (s)		57.0			45.0			10.5			26.4		
Approach LOS		E			D			B			C		
Intersection Summary													
HCM 2000 Control Delay			25.6		HCM 2000 Level of Service					C			
HCM 2000 Volume to Capacity ratio			0.83										
Actuated Cycle Length (s)			120.0		Sum of lost time (s)					27.9			
Intersection Capacity Utilization			69.5%		ICU Level of Service					C			
Analysis Period (min)			15										

c Critical Lane Group

Timings
6: Main St./Pruden Blvd & Godwin Blvd

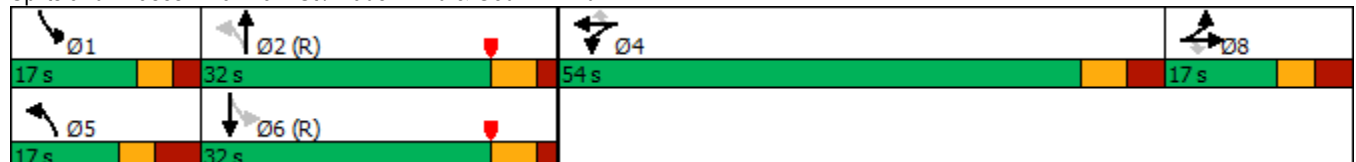
2030 Build
Timing Plan: PM Peak

	→	↘	↙	←	↖	↗	↑	↘	↙	↓
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↘	↑↑	↗	↘	↖↗
Traffic Volume (vph)	15	20	1040	14	120	12	566	1121	127	515
Future Volume (vph)	15	20	1040	14	120	12	566	1121	127	515
Turn Type	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA
Protected Phases	8		4	4		5	2		1	6
Permitted Phases		8			4	2		Free	6	
Detector Phase	8	8	4	4	4	5	2		1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	25.0	25.0	25.5	25.5	25.5	12.3	24.1		11.0	24.1
Total Split (s)	17.0	17.0	54.0	54.0	54.0	17.0	32.0		17.0	32.0
Total Split (%)	14.2%	14.2%	45.0%	45.0%	45.0%	14.2%	26.7%		14.2%	26.7%
Yellow Time (s)	3.4	3.4	4.1	4.1	4.1	3.2	4.1		3.2	4.1
All-Red Time (s)	3.6	3.6	3.4	3.4	3.4	4.1	2.0		2.6	2.0
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)	7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1
Lead/Lag							Lead	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max
Act Effct Green (s)	7.1	7.1	43.0	43.0	43.0	43.3	38.4	120.0	54.1	48.8
Actuated g/C Ratio	0.06	0.06	0.36	0.36	0.36	0.36	0.32	1.00	0.45	0.41
v/c Ratio	0.21	0.08	0.88	0.87	0.18	0.04	0.50	0.71	0.38	0.36
Control Delay	57.9	0.7	52.9	51.3	2.1	12.8	28.9	11.3	26.1	29.9
Queue Delay	0.0	0.1	0.8	0.7	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.9	0.7	53.7	51.9	2.1	12.8	28.9	11.3	26.1	29.9
LOS	E	A	D	D	A	B	C	B	C	C
Approach Delay	31.3			47.6			17.2			29.1
Approach LOS	C			D			B			C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 58.9 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.88
 Intersection Signal Delay: 29.5
 Intersection Capacity Utilization 74.7%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 6: Main St./Pruden Blvd & Godwin Blvd



HCM Signalized Intersection Capacity Analysis
6: Main St./Pruden Blvd & Godwin Blvd

2030 Build
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↕	↗	↖	↕↕	↗	↖	↕↕	
Traffic Volume (vph)	8	15	20	1040	14	120	12	566	1121	127	515	7
Future Volume (vph)	8	15	20	1040	14	120	12	566	1121	127	515	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1	4.0	5.8	6.1	
Lane Util. Factor		1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1831	1583	1681	1687	1583	1770	3539	1583	1770	3532	
Flt Permitted		0.98	1.00	0.95	0.95	1.00	0.43	1.00	1.00	0.26	1.00	
Satd. Flow (perm)		1831	1583	1681	1687	1583	808	3539	1583	492	3532	
Peak-hour factor, PHF	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. Flow (vph)	8	15	20	1040	14	120	12	566	1121	127	515	7
RTOR Reduction (vph)	0	0	19	0	0	77	0	0	0	0	1	0
Lane Group Flow (vph)	0	23	1	530	524	43	12	566	1121	127	521	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA	
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases			8			4	2		Free	6		
Actuated Green, G (s)		4.8	4.8	43.0	43.0	43.0	38.2	35.5	120.0	51.6	41.6	
Effective Green, g (s)		4.8	4.8	43.0	43.0	43.0	38.2	35.5	120.0	51.6	41.6	
Actuated g/C Ratio		0.04	0.04	0.36	0.36	0.36	0.32	0.30	1.00	0.43	0.35	
Clearance Time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		73	63	602	604	567	278	1046	1583	321	1224	
v/s Ratio Prot		0.01		c0.32	0.31		0.00	0.16		0.03	0.15	
v/s Ratio Perm			0.00			0.03	0.01		c0.71	0.14		
v/c Ratio		0.32	0.01	0.88	0.87	0.08	0.04	0.54	0.71	0.40	0.43	
Uniform Delay, d1		56.0	55.3	36.1	35.8	25.4	28.1	35.4	0.0	22.3	30.0	
Progression Factor		1.00	1.00	1.00	1.00	1.00	0.50	0.75	1.00	1.00	1.00	
Incremental Delay, d2		2.5	0.1	14.1	12.5	0.1	0.1	1.8	2.4	0.8	1.1	
Delay (s)		58.5	55.4	50.2	48.4	25.5	14.1	28.4	2.4	23.1	31.1	
Level of Service		E	E	D	D	C	B	C	A	C	C	
Approach Delay (s)		57.0			46.8			11.1			29.6	
Approach LOS		E			D			B			C	

Intersection Summary

HCM 2000 Control Delay	26.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	27.9
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Timings
6: Main St./Pruden Blvd & Godwin Blvd

Background 2035
PM Peak

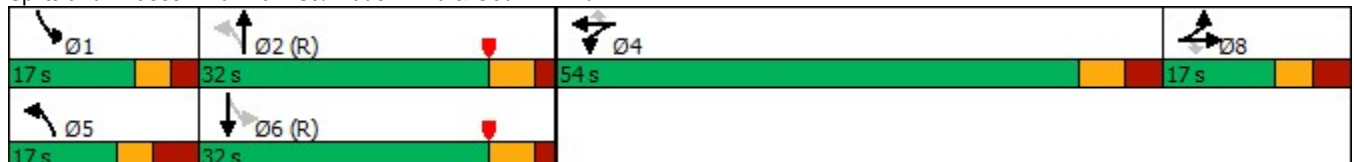
	→	↘	↙	←	↖	↗	↑	↘	↙	↓
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↘	↑↑	↗	↘	↖↗
Traffic Volume (vph)	15	21	955	14	124	12	527	986	131	488
Future Volume (vph)	15	21	955	14	124	12	527	986	131	488
Turn Type	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA
Protected Phases	8		4	4		5	2		1	6
Permitted Phases		8			4	2		Free	6	
Detector Phase	8	8	4	4	4	5	2		1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	25.0	25.0	25.5	25.5	25.5	12.3	24.1		11.0	24.1
Total Split (s)	17.0	17.0	54.0	54.0	54.0	17.0	32.0		17.0	32.0
Total Split (%)	14.2%	14.2%	45.0%	45.0%	45.0%	14.2%	26.7%		14.2%	26.7%
Yellow Time (s)	3.4	3.4	4.1	4.1	4.1	3.2	4.1		3.2	4.1
All-Red Time (s)	3.6	3.6	3.4	3.4	3.4	4.1	2.0		2.6	2.0
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)	7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1
Lead/Lag							Lead	Lag	Lead	Lag
Lead-Lag Optimize?							Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max
Act Effct Green (s)	7.1	7.1	40.9	40.9	40.9	45.3	40.4	120.0	56.2	50.8
Actuated g/C Ratio	0.06	0.06	0.34	0.34	0.34	0.38	0.34	1.00	0.47	0.42
v/c Ratio	0.22	0.09	0.85	0.84	0.19	0.03	0.44	0.62	0.36	0.33
Control Delay	58.0	0.7	51.0	49.7	2.3	13.8	29.6	7.4	24.8	28.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.0	0.7	51.0	49.7	2.3	13.8	29.6	7.4	24.8	28.6
LOS	E	A	D	D	A	B	C	A	C	C
Approach Delay	31.3			44.9			15.1			27.8
Approach LOS	C			D			B			C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 58.9 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.85
 Intersection Signal Delay: 27.7
 Intersection Capacity Utilization 71.5%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 6: Main St./Pruden Blvd & Godwin Blvd



HCM Signalized Intersection Capacity Analysis

6: Main St./Pruden Blvd & Godwin Blvd

Background 2035

PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗	↖	↖	↗	↖	↑↑	↗	↖	↖↗	
Traffic Volume (vph)	9	15	21	955	14	124	12	527	986	131	488	8
Future Volume (vph)	9	15	21	955	14	124	12	527	986	131	488	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1	4.0	5.8	6.1	
Lane Util. Factor		1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1828	1583	1681	1688	1583	1770	3539	1583	1770	3531	
Flt Permitted		0.98	1.00	0.95	0.95	1.00	0.46	1.00	1.00	0.30	1.00	
Satd. Flow (perm)		1828	1583	1681	1688	1583	859	3539	1583	562	3531	
Peak-hour factor, PHF	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. Flow (vph)	9	15	21	955	14	124	12	527	986	131	488	8
RTOR Reduction (vph)	0	0	20	0	0	82	0	0	0	0	1	0
Lane Group Flow (vph)	0	24	1	487	482	42	12	527	986	131	495	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA	
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases			8			4	2		Free	6		
Actuated Green, G (s)		4.8	4.8	40.9	40.9	40.9	40.3	37.6	120.0	53.7	43.7	
Effective Green, g (s)		4.8	4.8	40.9	40.9	40.9	40.3	37.6	120.0	53.7	43.7	
Actuated g/C Ratio		0.04	0.04	0.34	0.34	0.34	0.34	0.31	1.00	0.45	0.36	
Clearance Time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		73	63	572	575	539	308	1108	1583	355	1285	
v/s Ratio Prot		0.01		c0.29	0.29		0.00	0.15		0.03	0.14	
v/s Ratio Perm			0.00			0.03	0.01		c0.62	0.13		
v/c Ratio		0.33	0.01	0.85	0.84	0.08	0.04	0.48	0.62	0.37	0.39	
Uniform Delay, d1		56.0	55.3	36.7	36.5	26.8	26.7	33.2	0.0	20.8	28.2	
Progression Factor		1.00	1.00	1.00	1.00	1.00	0.55	0.81	1.00	1.00	1.00	
Incremental Delay, d2		2.6	0.1	11.7	10.3	0.1	0.0	1.4	1.7	0.7	0.9	
Delay (s)		58.7	55.4	48.4	46.8	26.8	14.8	28.4	1.7	21.5	29.1	
Level of Service		E	E	D	D	C	B	C	A	C	C	
Approach Delay (s)		57.1			45.3			11.0			27.5	
Approach LOS		E			D			B			C	

Intersection Summary

HCM 2000 Control Delay	26.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	27.9
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Timings
6: Main St./Pruden Blvd & Godwin Blvd

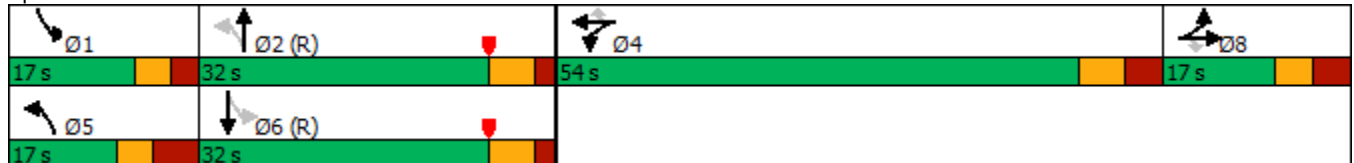
2035 Build
Timing Plan: PM Peak

	→	↘	↙	←	↖	↗	↑	↘	↙	↓
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↖	↗	↘	↖	↗	↘	↑↑	↗	↘	↖↗
Traffic Volume (vph)	15	21	1080	14	124	12	568	1161	131	533
Future Volume (vph)	15	21	1080	14	124	12	568	1161	131	533
Turn Type	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA
Protected Phases	8		4	4		5	2		1	6
Permitted Phases		8			4	2		Free	6	
Detector Phase	8	8	4	4	4	5	2		1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0		5.0	5.0
Minimum Split (s)	25.0	25.0	25.5	25.5	25.5	12.3	24.1		11.0	24.1
Total Split (s)	17.0	17.0	54.0	54.0	54.0	17.0	32.0		17.0	32.0
Total Split (%)	14.2%	14.2%	45.0%	45.0%	45.0%	14.2%	26.7%		14.2%	26.7%
Yellow Time (s)	3.4	3.4	4.1	4.1	4.1	3.2	4.1		3.2	4.1
All-Red Time (s)	3.6	3.6	3.4	3.4	3.4	4.1	2.0		2.6	2.0
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)	7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1
Lead/Lag						Lead	Lag		Lead	Lag
Lead-Lag Optimize?						Yes	Yes		Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Max		None	C-Max
Act Effct Green (s)	7.1	7.1	43.7	43.7	43.7	42.3	37.4	120.0	53.3	48.0
Actuated g/C Ratio	0.06	0.06	0.36	0.36	0.36	0.35	0.31	1.00	0.44	0.40
v/c Ratio	0.22	0.09	0.90	0.88	0.18	0.04	0.51	0.73	0.40	0.38
Control Delay	58.0	0.7	54.9	52.6	2.2	13.8	31.4	11.2	26.7	30.5
Queue Delay	0.0	0.0	1.9	1.5	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	58.0	0.7	56.8	54.1	2.2	13.8	31.4	11.2	26.7	30.5
LOS	E	A	E	D	A	B	C	B	C	C
Approach Delay	31.3			50.0			17.8			29.7
Approach LOS	C			D			B			C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 58.9 (49%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.90
 Intersection Signal Delay: 30.8
 Intersection Capacity Utilization 76.1%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service D

Splits and Phases: 6: Main St./Pruden Blvd & Godwin Blvd



HCM Signalized Intersection Capacity Analysis
6: Main St./Pruden Blvd & Godwin Blvd

2035 Build
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗	↖	↕	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	9	15	21	1080	14	124	12	568	1161	131	533	8
Future Volume (vph)	9	15	21	1080	14	124	12	568	1161	131	533	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1	4.0	5.8	6.1	
Lane Util. Factor		1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1828	1583	1681	1687	1583	1770	3539	1583	1770	3531	
Flt Permitted		0.98	1.00	0.95	0.95	1.00	0.42	1.00	1.00	0.26	1.00	
Satd. Flow (perm)		1828	1583	1681	1687	1583	777	3539	1583	480	3531	
Peak-hour factor, PHF	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. Flow (vph)	9	15	21	1080	14	124	12	568	1161	131	533	8
RTOR Reduction (vph)	0	0	20	0	0	79	0	0	0	0	1	0
Lane Group Flow (vph)	0	24	1	551	543	45	12	568	1161	131	540	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Free	pm+pt	NA	
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases			8			4	2		Free	6		
Actuated Green, G (s)		4.8	4.8	43.7	43.7	43.7	37.4	34.7	120.0	50.9	40.9	
Effective Green, g (s)		4.8	4.8	43.7	43.7	43.7	37.4	34.7	120.0	50.9	40.9	
Actuated g/C Ratio		0.04	0.04	0.36	0.36	0.36	0.31	0.29	1.00	0.42	0.34	
Clearance Time (s)		7.0	7.0	7.5	7.5	7.5	7.3	6.1		5.8	6.1	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		73	63	612	614	576	264	1023	1583	315	1203	
v/s Ratio Prot		0.01		c0.33	0.32		0.00	0.16		0.04	0.15	
v/s Ratio Perm			0.00			0.03	0.01		c0.73	0.14		
v/c Ratio		0.33	0.01	0.90	0.88	0.08	0.05	0.56	0.73	0.42	0.45	
Uniform Delay, d1		56.0	55.3	36.1	35.8	25.0	28.7	36.1	0.0	22.9	30.8	
Progression Factor		1.00	1.00	1.00	1.00	1.00	0.54	0.80	1.00	1.00	1.00	
Incremental Delay, d2		2.6	0.1	16.4	14.2	0.1	0.1	1.9	2.7	0.9	1.2	
Delay (s)		58.7	55.4	52.4	50.0	25.0	15.5	30.8	2.7	23.8	32.0	
Level of Service		E	E	D	D	C	B	C	A	C	C	
Approach Delay (s)		57.1			48.6			12.0			30.4	
Approach LOS		E			D			B			C	

Intersection Summary

HCM 2000 Control Delay	28.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	27.9
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Timings
7: Main St. & Murpheys Mill Road

Existing
AM Peak

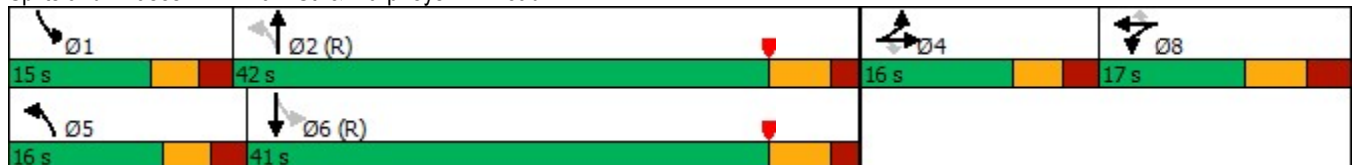


Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↕	↗	↕	↗	↖	↕	↖	↕
Traffic Volume (vph)	1	10	1	4	15	701	16	771
Future Volume (vph)	1	10	1	4	15	701	16	771
Turn Type	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	4		8		5	2	1	6
Permitted Phases		4		8	2		6	
Detector Phase	4	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	25.2	25.2	11.0	24.1	11.0	24.1
Total Split (s)	16.0	16.0	17.0	17.0	16.0	42.0	15.0	41.0
Total Split (%)	17.8%	17.8%	18.9%	18.9%	17.8%	46.7%	16.7%	45.6%
Yellow Time (s)	3.4	3.4	4.1	4.1	3.2	4.1	3.2	4.1
All-Red Time (s)	2.4	2.4	3.1	3.1	2.5	2.0	2.3	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)	5.8	5.8	7.2	7.2	5.7	6.1	5.5	6.1
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	7.1	7.1	5.9	5.9	72.2	73.0	72.4	72.9
Actuated g/C Ratio	0.08	0.08	0.07	0.07	0.80	0.81	0.80	0.81
v/c Ratio	0.22	0.03	0.04	0.02	0.03	0.25	0.03	0.27
Control Delay	41.9	0.2	40.0	0.0	1.3	1.2	4.4	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	0.2	40.0	0.0	1.3	1.2	4.4	7.1
LOS	D	A	D	A	A	A	A	A
Approach Delay	31.5		22.2			1.2		7.1
Approach LOS	C		C			A		A

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 3 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.27
 Intersection Signal Delay: 5.1
 Intersection Capacity Utilization 45.8%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 7: Main St. & Murpheys Mill Road



HCM Signalized Intersection Capacity Analysis

7: Main St. & Murpheys Mill Road

Existing
AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↗		↖	↗	
Traffic Volume (vph)	29	1	10	4	1	4	15	701	2	16	771	7
Future Volume (vph)	29	1	10	4	1	4	15	701	2	16	771	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1777	1583		1791	1583	1770	3538		1770	3534	
Flt Permitted		0.95	1.00		0.96	1.00	0.33	1.00		0.37	1.00	
Satd. Flow (perm)		1777	1583		1791	1583	624	3538		691	3534	
Peak-hour factor, PHF	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. Flow (vph)	29	1	10	4	1	4	15	701	2	16	771	7
RTOR Reduction (vph)	0	0	9	0	0	4	0	0	0	0	0	0
Lane Group Flow (vph)	0	30	1	0	5	0	15	703	0	16	778	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)		4.8	4.8		1.3	1.3	59.3	58.0		59.1	57.8	
Effective Green, g (s)		4.8	4.8		1.3	1.3	59.3	58.0		59.1	57.8	
Actuated g/C Ratio		0.05	0.05		0.01	0.01	0.66	0.64		0.66	0.64	
Clearance Time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		94	84		25	22	427	2280		469	2269	
v/s Ratio Prot		c0.02			c0.00		c0.00	0.20		0.00	c0.22	
v/s Ratio Perm			0.00			0.00	0.02			0.02		
v/c Ratio		0.32	0.01		0.20	0.00	0.04	0.31		0.03	0.34	
Uniform Delay, d1		41.0	40.3		43.8	43.7	5.4	7.1		5.4	7.4	
Progression Factor		1.00	1.00		1.00	1.00	0.26	0.18		0.99	1.25	
Incremental Delay, d2		2.0	0.0		3.9	0.0	0.0	0.3		0.0	0.4	
Delay (s)		43.0	40.4		47.8	43.8	1.4	1.6		5.4	9.6	
Level of Service		D	D		D	D	A	A		A	A	
Approach Delay (s)		42.3			46.0			1.6			9.5	
Approach LOS		D			D			A			A	

Intersection Summary

HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.8
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
7: Main St. & Murpheys Mill Road

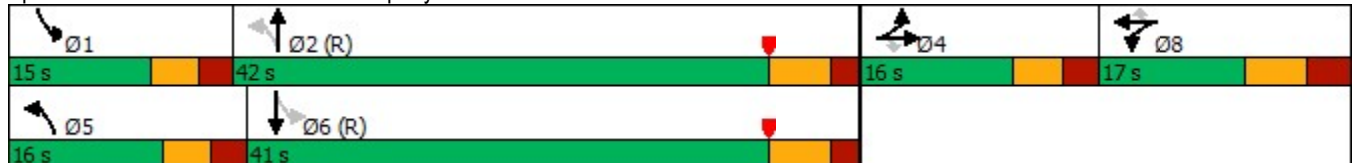


Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↕	↗	↕	↗	↖	↕↗	↖	↕↗
Traffic Volume (vph)	1	10	1	4	15	795	16	971
Future Volume (vph)	1	10	1	4	15	795	16	971
Turn Type	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	4		8		5	2	1	6
Permitted Phases		4		8	2		6	
Detector Phase	4	4	8	8	5	2	1	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)	24.0	24.0	25.2	25.2	11.0	24.1	11.0	24.1
Total Split (s)	16.0	16.0	17.0	17.0	16.0	42.0	15.0	41.0
Total Split (%)	17.8%	17.8%	18.9%	18.9%	17.8%	46.7%	16.7%	45.6%
Yellow Time (s)	3.4	3.4	4.1	4.1	3.2	4.1	3.2	4.1
All-Red Time (s)	2.4	2.4	3.1	3.1	2.5	2.0	2.3	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)	5.8	5.8	7.2	7.2	5.7	6.1	5.5	6.1
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	7.1	7.1	5.9	5.9	72.2	73.0	72.4	72.9
Actuated g/C Ratio	0.08	0.08	0.07	0.07	0.80	0.81	0.80	0.81
v/c Ratio	0.22	0.03	0.04	0.02	0.03	0.28	0.03	0.34
Control Delay	41.9	0.2	40.0	0.0	1.1	1.1	4.2	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	0.2	40.0	0.0	1.1	1.1	4.2	7.8
LOS	D	A	D	A	A	A	A	A
Approach Delay	31.5		22.2			1.1		7.7
Approach LOS	C		C			A		A

Intersection Summary























Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 3 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.34
 Intersection Signal Delay: 5.4
 Intersection Capacity Utilization 51.3%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 7: Main St. & Murpheys Mill Road



HCM Signalized Intersection Capacity Analysis
7: Main St. & Murpheys Mill Road

Background 2030
AM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	29	1	10	4	1	4	15	795	2	16	971	7	
Future Volume (vph)	29	1	10	4	1	4	15	795	2	16	971	7	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1		
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95		
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00		
Flt Protected		0.95	1.00		0.96	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)		1777	1583		1791	1583	1770	3538		1770	3535		
Flt Permitted		0.95	1.00		0.96	1.00	0.26	1.00		0.33	1.00		
Satd. Flow (perm)		1777	1583		1791	1583	480	3538		614	3535		
Peak-hour factor, PHF	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. Flow (vph)	29	1	10	4	1	4	15	795	2	16	971	7	
RTOR Reduction (vph)	0	0	9	0	0	4	0	0	0	0	0	0	
Lane Group Flow (vph)	0	30	1	0	5	0	15	797	0	16	978	0	
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA		
Protected Phases	4	4		8	8		5	2		1	6		
Permitted Phases			4			8	2			6			
Actuated Green, G (s)		4.8	4.8		1.3	1.3	59.3	58.0		59.1	57.8		
Effective Green, g (s)		4.8	4.8		1.3	1.3	59.3	58.0		59.1	57.8		
Actuated g/C Ratio		0.05	0.05		0.01	0.01	0.66	0.64		0.66	0.64		
Clearance Time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1		
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)		94	84		25	22	334	2280		419	2270		
v/s Ratio Prot		c0.02			c0.00		c0.00	0.23		0.00	c0.28		
v/s Ratio Perm			0.00			0.00	0.03			0.02			
v/c Ratio		0.32	0.01		0.20	0.00	0.04	0.35		0.04	0.43		
Uniform Delay, d1		41.0	40.3		43.8	43.7	5.6	7.3		5.4	8.0		
Progression Factor		1.00	1.00		1.00	1.00	0.23	0.16		0.94	1.27		
Incremental Delay, d2		2.0	0.0		3.9	0.0	0.1	0.4		0.0	0.5		
Delay (s)		43.0	40.4		47.8	43.8	1.3	1.6		5.1	10.6		
Level of Service		D	D		D	D	A	A		A	B		
Approach Delay (s)		42.3			46.0			1.6			10.5		
Approach LOS		D			D			A			B		
Intersection Summary													
HCM 2000 Control Delay			7.5									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.41										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	24.8
Intersection Capacity Utilization			51.3%									ICU Level of Service	A
Analysis Period (min)			15										

c Critical Lane Group

Timings
7: Main St. & Murpheys Mill Road

2030 Build
Timing Plan: AM Peak



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	1	10	1	4	15	949	16	1205
Future Volume (vph)	1	10	1	4	15	949	16	1205
Turn Type	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	4		8		5	2	1	6
Permitted Phases		4		8	2		6	
Detector Phase	4	4	8	8	5	2	1	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)	24.0	24.0	25.2	25.2	11.0	24.1	11.0	24.1
Total Split (s)	16.0	16.0	17.0	17.0	16.0	42.0	15.0	41.0
Total Split (%)	17.8%	17.8%	18.9%	18.9%	17.8%	46.7%	16.7%	45.6%
Yellow Time (s)	3.4	3.4	4.1	4.1	3.2	4.1	3.2	4.1
All-Red Time (s)	2.4	2.4	3.1	3.1	2.5	2.0	2.3	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)	5.8	5.8	7.2	7.2	5.7	6.1	5.5	6.1
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	7.1	7.1	5.9	5.9	72.2	73.0	72.4	72.9
Actuated g/C Ratio	0.08	0.08	0.07	0.07	0.80	0.81	0.80	0.81
v/c Ratio	0.22	0.03	0.04	0.02	0.04	0.33	0.03	0.42
Control Delay	41.9	0.2	40.0	0.0	1.2	1.2	4.0	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	0.2	40.0	0.0	1.2	1.2	4.0	8.5
LOS	D	A	D	A	A	A	A	A
Approach Delay	31.5		22.2			1.2		8.4
Approach LOS	C		C			A		A

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 3 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.42
 Intersection Signal Delay: 5.7
 Intersection Capacity Utilization 57.8%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 7: Main St. & Murpheys Mill Road



HCM Signalized Intersection Capacity Analysis
7: Main St. & Murpheys Mill Road

2030 Build
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↗	↕↗		↗	↕↗	
Traffic Volume (vph)	29	1	10	4	1	4	15	949	2	16	1205	7
Future Volume (vph)	29	1	10	4	1	4	15	949	2	16	1205	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1777	1583		1791	1583	1770	3538		1770	3536	
Flt Permitted		0.95	1.00		0.96	1.00	0.18	1.00		0.27	1.00	
Satd. Flow (perm)		1777	1583		1791	1583	344	3538		502	3536	
Peak-hour factor, PHF	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. Flow (vph)	29	1	10	4	1	4	15	949	2	16	1205	7
RTOR Reduction (vph)	0	0	9	0	0	4	0	0	0	0	0	0
Lane Group Flow (vph)	0	30	1	0	5	0	15	951	0	16	1212	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)		4.8	4.8		1.3	1.3	59.3	58.0		59.1	57.8	
Effective Green, g (s)		4.8	4.8		1.3	1.3	59.3	58.0		59.1	57.8	
Actuated g/C Ratio		0.05	0.05		0.01	0.01	0.66	0.64		0.66	0.64	
Clearance Time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		94	84		25	22	247	2280		347	2270	
v/s Ratio Prot		c0.02			c0.00		c0.00	0.27		0.00	c0.34	
v/s Ratio Perm			0.00			0.00	0.04			0.03		
v/c Ratio		0.32	0.01		0.20	0.00	0.06	0.42		0.05	0.53	
Uniform Delay, d1		41.0	40.3		43.8	43.7	6.1	7.8		5.6	8.8	
Progression Factor		1.00	1.00		1.00	1.00	0.23	0.15		0.89	1.24	
Incremental Delay, d2		2.0	0.0		3.9	0.0	0.1	0.5		0.0	0.7	
Delay (s)		43.0	40.4		47.8	43.8	1.5	1.7		5.0	11.5	
Level of Service		D	D		D	D	A	A		A	B	
Approach Delay (s)		42.3			46.0			1.7			11.4	
Approach LOS		D			D			A			B	

Intersection Summary

HCM 2000 Control Delay	7.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.8
Intersection Capacity Utilization	57.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Timings
7: Main St. & Murpheys Mill Road

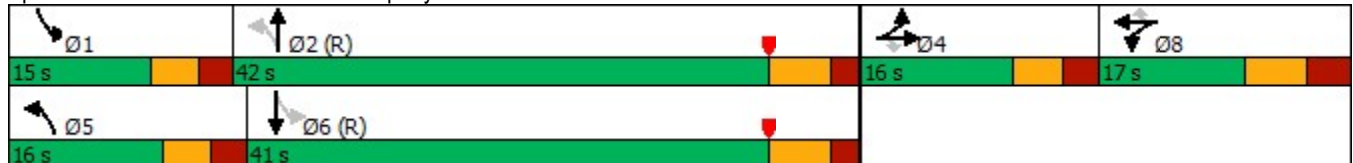


Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖	↗	↖	↗	↖	↕	↗	↕
Traffic Volume (vph)	1	10	1	4	15	830	16	1009
Future Volume (vph)	1	10	1	4	15	830	16	1009
Turn Type	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	4		8		5	2	1	6
Permitted Phases		4		8	2		6	
Detector Phase	4	4	8	8	5	2	1	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)	24.0	24.0	25.2	25.2	11.0	24.1	11.0	24.1
Total Split (s)	16.0	16.0	17.0	17.0	16.0	42.0	15.0	41.0
Total Split (%)	17.8%	17.8%	18.9%	18.9%	17.8%	46.7%	16.7%	45.6%
Yellow Time (s)	3.4	3.4	4.1	4.1	3.2	4.1	3.2	4.1
All-Red Time (s)	2.4	2.4	3.1	3.1	2.5	2.0	2.3	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)	5.8	5.8	7.2	7.2	5.7	6.1	5.5	6.1
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	7.1	7.1	5.9	5.9	72.2	73.0	72.4	72.9
Actuated g/C Ratio	0.08	0.08	0.07	0.07	0.80	0.81	0.80	0.81
v/c Ratio	0.22	0.03	0.04	0.02	0.03	0.29	0.03	0.35
Control Delay	41.9	0.2	40.0	0.0	1.1	1.1	4.1	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	0.2	40.0	0.0	1.1	1.1	4.1	7.8
LOS	D	A	D	A	A	A	A	A
Approach Delay	31.5		22.2			1.1		7.7
Approach LOS	C		C			A		A

Intersection Summary























Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 3 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.35
 Intersection Signal Delay: 5.4
 Intersection Capacity Utilization 52.4%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 7: Main St. & Murpheys Mill Road



HCM Signalized Intersection Capacity Analysis
7: Main St. & Murpheys Mill Road

Background 2035
AM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	29	1	10	4	1	4	15	830	2	16	1009	7	
Future Volume (vph)	29	1	10	4	1	4	15	830	2	16	1009	7	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1		
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95		
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00		
Flt Protected		0.95	1.00		0.96	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)		1777	1583		1791	1583	1770	3538		1770	3536		
Flt Permitted		0.95	1.00		0.96	1.00	0.24	1.00		0.32	1.00		
Satd. Flow (perm)		1777	1583		1791	1583	456	3538		587	3536		
Peak-hour factor, PHF	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. Flow (vph)	29	1	10	4	1	4	15	830	2	16	1009	7	
RTOR Reduction (vph)	0	0	9	0	0	4	0	0	0	0	0	0	
Lane Group Flow (vph)	0	30	1	0	5	0	15	832	0	16	1016	0	
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA		
Protected Phases	4	4		8	8		5	2		1	6		
Permitted Phases			4			8	2			6			
Actuated Green, G (s)		4.8	4.8		1.3	1.3	59.3	58.0		59.1	57.8		
Effective Green, g (s)		4.8	4.8		1.3	1.3	59.3	58.0		59.1	57.8		
Actuated g/C Ratio		0.05	0.05		0.01	0.01	0.66	0.64		0.66	0.64		
Clearance Time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1		
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)		94	84		25	22	319	2280		402	2270		
v/s Ratio Prot		c0.02			c0.00		c0.00	0.24		0.00	c0.29		
v/s Ratio Perm			0.00			0.00	0.03			0.03			
v/c Ratio		0.32	0.01		0.20	0.00	0.05	0.36		0.04	0.45		
Uniform Delay, d1		41.0	40.3		43.8	43.7	5.6	7.4		5.4	8.1		
Progression Factor		1.00	1.00		1.00	1.00	0.22	0.15		0.91	1.24		
Incremental Delay, d2		2.0	0.0		3.9	0.0	0.1	0.4		0.0	0.6		
Delay (s)		43.0	40.4		47.8	43.8	1.3	1.6		5.0	10.6		
Level of Service		D	D		D	D	A	A		A	B		
Approach Delay (s)		42.3			46.0			1.6			10.5		
Approach LOS		D			D			A			B		
Intersection Summary													
HCM 2000 Control Delay			7.4									HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.42										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	24.8
Intersection Capacity Utilization			52.4%									ICU Level of Service	A
Analysis Period (min)			15										

c Critical Lane Group

Timings
7: Main St. & Murpheys Mill Road

2035 Build
Timing Plan: AM Peak



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↕	↗	↕	↗	↖	↕↗	↖	↕↗
Traffic Volume (vph)	1	10	1	4	15	984	16	1243
Future Volume (vph)	1	10	1	4	15	984	16	1243
Turn Type	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	4		8		5	2	1	6
Permitted Phases		4		8	2		6	
Detector Phase	4	4	8	8	5	2	1	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)	24.0	24.0	25.2	25.2	11.0	24.1	11.0	24.1
Total Split (s)	16.0	16.0	17.0	17.0	16.0	42.0	15.0	41.0
Total Split (%)	17.8%	17.8%	18.9%	18.9%	17.8%	46.7%	16.7%	45.6%
Yellow Time (s)	3.4	3.4	4.1	4.1	3.2	4.1	3.2	4.1
All-Red Time (s)	2.4	2.4	3.1	3.1	2.5	2.0	2.3	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)	5.8	5.8	7.2	7.2	5.7	6.1	5.5	6.1
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	7.1	7.1	5.9	5.9	72.2	73.0	72.4	72.9
Actuated g/C Ratio	0.08	0.08	0.07	0.07	0.80	0.81	0.80	0.81
v/c Ratio	0.22	0.03	0.04	0.02	0.04	0.34	0.03	0.44
Control Delay	41.9	0.2	40.0	0.0	1.3	1.5	3.9	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.9	0.2	40.0	0.0	1.3	1.5	3.9	8.6
LOS	D	A	D	A	A	A	A	A
Approach Delay	31.5		22.2			1.5		8.5
Approach LOS	C		C			A		A

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 3 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.44
 Intersection Signal Delay: 5.9
 Intersection Capacity Utilization 58.8%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 7: Main St. & Murpheys Mill Road



HCM Signalized Intersection Capacity Analysis

7: Main St. & Murpheys Mill Road

2035 Build
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↗		↖	↗	
Traffic Volume (vph)	29	1	10	4	1	4	15	984	2	16	1243	7
Future Volume (vph)	29	1	10	4	1	4	15	984	2	16	1243	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.95	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1777	1583		1791	1583	1770	3538		1770	3536	
Flt Permitted		0.95	1.00		0.96	1.00	0.17	1.00		0.26	1.00	
Satd. Flow (perm)		1777	1583		1791	1583	325	3538		479	3536	
Peak-hour factor, PHF	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. Flow (vph)	29	1	10	4	1	4	15	984	2	16	1243	7
RTOR Reduction (vph)	0	0	9	0	0	4	0	0	0	0	0	0
Lane Group Flow (vph)	0	30	1	0	5	0	15	986	0	16	1250	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)		4.8	4.8		1.3	1.3	59.3	58.0		59.1	57.8	
Effective Green, g (s)		4.8	4.8		1.3	1.3	59.3	58.0		59.1	57.8	
Actuated g/C Ratio		0.05	0.05		0.01	0.01	0.66	0.64		0.66	0.64	
Clearance Time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		94	84		25	22	235	2280		333	2270	
v/s Ratio Prot		c0.02			c0.00		c0.00	0.28		0.00	c0.35	
v/s Ratio Perm			0.00			0.00	0.04			0.03		
v/c Ratio		0.32	0.01		0.20	0.00	0.06	0.43		0.05	0.55	
Uniform Delay, d1		41.0	40.3		43.8	43.7	6.2	7.9		5.6	8.9	
Progression Factor		1.00	1.00		1.00	1.00	0.23	0.20		0.87	1.23	
Incremental Delay, d2		2.0	0.0		3.9	0.0	0.1	0.6		0.0	0.7	
Delay (s)		43.0	40.4		47.8	43.8	1.5	2.1		4.9	11.7	
Level of Service		D	D		D	D	A	A		A	B	
Approach Delay (s)		42.3			46.0			2.1			11.6	
Approach LOS		D			D			A			B	

Intersection Summary

HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.8
Intersection Capacity Utilization	58.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Timings
7: Main St. & Murpheys Mill Road

Existing
PM Peak

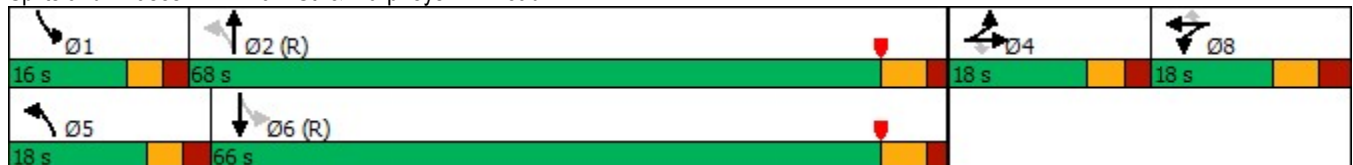


Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	1	26	1	15	47	1067	13	1225
Future Volume (vph)	1	26	1	15	47	1067	13	1225
Turn Type	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	4		8		5	2	1	6
Permitted Phases		4		8	2		6	
Detector Phase	4	4	8	8	5	2	1	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)	24.0	24.0	25.2	25.2	11.0	24.1	11.0	24.1
Total Split (s)	18.0	18.0	18.0	18.0	18.0	68.0	16.0	66.0
Total Split (%)	15.0%	15.0%	15.0%	15.0%	15.0%	56.7%	13.3%	55.0%
Yellow Time (s)	3.4	3.4	4.1	4.1	3.2	4.1	3.2	4.1
All-Red Time (s)	2.4	2.4	3.1	3.1	2.5	2.0	2.3	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)	5.8	5.8	7.2	7.2	5.7	6.1	5.5	6.1
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	6.5	6.5	6.1	6.1	96.5	95.7	93.4	89.4
Actuated g/C Ratio	0.05	0.05	0.05	0.05	0.80	0.80	0.78	0.74
v/c Ratio	0.14	0.12	0.08	0.07	0.14	0.38	0.03	0.48
Control Delay	56.9	1.1	55.7	0.7	2.0	1.7	3.1	7.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	1.1	55.7	0.7	2.0	1.7	3.1	7.3
LOS	E	A	E	A	A	A	A	A
Approach Delay	20.6		18.2			1.7		7.3
Approach LOS	C		B			A		A

Intersection Summary























Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 33 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.48
 Intersection Signal Delay: 5.0
 Intersection Capacity Utilization 59.3%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 7: Main St. & Murpheys Mill Road



HCM Signalized Intersection Capacity Analysis
 7: Main St. & Murpheys Mill Road

Existing
 PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	1	26	6	1	15	47	1067	6	13	1225	36
Future Volume (vph)	13	1	26	6	1	15	47	1067	6	13	1225	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1780	1583		1786	1583	1770	3536		1770	3524	
Flt Permitted		0.96	1.00		0.96	1.00	0.17	1.00		0.24	1.00	
Satd. Flow (perm)		1780	1583		1786	1583	318	3536		454	3524	
Peak-hour factor, PHF	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. Flow (vph)	13	1	26	6	1	15	47	1067	6	13	1225	36
RTOR Reduction (vph)	0	0	25	0	0	15	0	0	0	0	1	0
Lane Group Flow (vph)	0	14	1	0	7	0	47	1073	0	13	1260	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)		4.3	4.3		3.9	3.9	90.0	84.8		84.2	81.8	
Effective Green, g (s)		4.3	4.3		3.9	3.9	90.0	84.8		84.2	81.8	
Actuated g/C Ratio		0.04	0.04		0.03	0.03	0.75	0.71		0.70	0.68	
Clearance Time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		63	56		58	51	301	2498		344	2402	
v/s Ratio Prot		c0.01			c0.00		c0.01	c0.30		0.00	c0.36	
v/s Ratio Perm			0.00			0.00	0.11			0.03		
v/c Ratio		0.22	0.02		0.12	0.01	0.16	0.43		0.04	0.52	
Uniform Delay, d1		56.2	55.8		56.4	56.2	5.6	7.4		5.6	9.5	
Progression Factor		1.00	1.00		1.00	1.00	0.27	0.18		0.65	0.70	
Incremental Delay, d2		1.8	0.1		0.9	0.1	0.2	0.5		0.0	0.7	
Delay (s)		58.0	55.9		57.3	56.3	1.7	1.8		3.7	7.4	
Level of Service		E	E		E	E	A	A		A	A	
Approach Delay (s)		56.7			56.6			1.8			7.3	
Approach LOS		E			E			A			A	
Intersection Summary												
HCM 2000 Control Delay			6.1				HCM 2000 Level of Service				A	
HCM 2000 Volume to Capacity ratio			0.48									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)				24.8	
Intersection Capacity Utilization			59.3%				ICU Level of Service				B	
Analysis Period (min)			15									

c Critical Lane Group

Timings
7: Main St. & Murpheys Mill Road

Background 2030
PM Peak

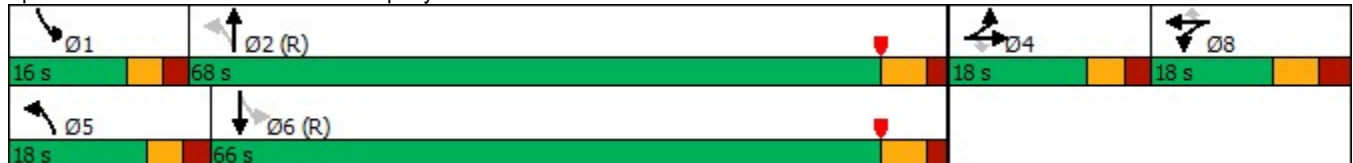


Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↕	↔	↕
Traffic Volume (vph)	1	26	1	15	47	1270	13	1456
Future Volume (vph)	1	26	1	15	47	1270	13	1456
Turn Type	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	4		8		5	2	1	6
Permitted Phases		4		8	2		6	
Detector Phase	4	4	8	8	5	2	1	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)	24.0	24.0	25.2	25.2	11.0	24.1	11.0	24.1
Total Split (s)	18.0	18.0	18.0	18.0	18.0	68.0	16.0	66.0
Total Split (%)	15.0%	15.0%	15.0%	15.0%	15.0%	56.7%	13.3%	55.0%
Yellow Time (s)	3.4	3.4	4.1	4.1	3.2	4.1	3.2	4.1
All-Red Time (s)	2.4	2.4	3.1	3.1	2.5	2.0	2.3	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)	5.8	5.8	7.2	7.2	5.7	6.1	5.5	6.1
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	6.5	6.5	6.1	6.1	96.5	95.7	93.4	89.4
Actuated g/C Ratio	0.05	0.05	0.05	0.05	0.80	0.80	0.78	0.74
v/c Ratio	0.14	0.12	0.08	0.07	0.18	0.45	0.04	0.57
Control Delay	56.9	1.1	55.7	0.7	2.4	1.6	3.8	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	56.9	1.1	55.7	0.7	2.4	1.6	3.8	12.2
LOS	E	A	E	A	A	A	A	B
Approach Delay	20.6		18.2			1.7		12.2
Approach LOS	C		B			A		B

Intersection Summary























Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 33 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 115
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.57
 Intersection Signal Delay: 7.5
 Intersection Capacity Utilization 65.6%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 7: Main St. & Murpheys Mill Road



HCM Signalized Intersection Capacity Analysis
7: Main St. & Murpheys Mill Road

Background 2030
PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	1	26	6	1	15	47	1270	6	13	1456	36
Future Volume (vph)	13	1	26	6	1	15	47	1270	6	13	1456	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1780	1583		1786	1583	1770	3537		1770	3526	
Flt Permitted		0.96	1.00		0.96	1.00	0.12	1.00		0.19	1.00	
Satd. Flow (perm)		1780	1583		1786	1583	224	3537		346	3526	
Peak-hour factor, PHF	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. Flow (vph)	13	1	26	6	1	15	47	1270	6	13	1456	36
RTOR Reduction (vph)	0	0	25	0	0	15	0	0	0	0	1	0
Lane Group Flow (vph)	0	14	1	0	7	0	47	1276	0	13	1491	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)		4.3	4.3		3.9	3.9	90.0	84.8		84.2	81.8	
Effective Green, g (s)		4.3	4.3		3.9	3.9	90.0	84.8		84.2	81.8	
Actuated g/C Ratio		0.04	0.04		0.03	0.03	0.75	0.71		0.70	0.68	
Clearance Time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		63	56		58	51	234	2499		271	2403	
v/s Ratio Prot		c0.01			c0.00		c0.01	c0.36		0.00	c0.42	
v/s Ratio Perm			0.00			0.00	0.14			0.03		
v/c Ratio		0.22	0.02		0.12	0.01	0.20	0.51		0.05	0.62	
Uniform Delay, d1		56.2	55.8		56.4	56.2	7.3	8.1		6.0	10.5	
Progression Factor		1.00	1.00		1.00	1.00	0.24	0.15		0.81	1.05	
Incremental Delay, d2		1.8	0.1		0.9	0.1	0.4	0.7		0.1	1.0	
Delay (s)		58.0	55.9		57.3	56.3	2.1	1.9		4.9	12.1	
Level of Service		E	E		E	E	A	A		A	B	
Approach Delay (s)		56.7			56.6			1.9			12.0	
Approach LOS		E			E			A			B	
Intersection Summary												
HCM 2000 Control Delay			8.3									A
HCM 2000 Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			120.0							24.8		
Intersection Capacity Utilization			65.6%									C
Analysis Period (min)			15									

c Critical Lane Group

Timings
7: Main St. & Murpheys Mill Road

2030 Build
Timing Plan: PM Peak



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	1	26	1	15	47	1506	13	1626
Future Volume (vph)	1	26	1	15	47	1506	13	1626
Turn Type	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	4		8		5	2	1	6
Permitted Phases		4		8	2		6	
Detector Phase	4	4	8	8	5	2	1	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)	24.0	24.0	25.2	25.2	11.0	24.1	11.0	24.1
Total Split (s)	18.0	18.0	18.0	18.0	18.0	68.0	16.0	66.0
Total Split (%)	15.0%	15.0%	15.0%	15.0%	15.0%	56.7%	13.3%	55.0%
Yellow Time (s)	3.4	3.4	4.1	4.1	3.2	4.1	3.2	4.1
All-Red Time (s)	2.4	2.4	3.1	3.1	2.5	2.0	2.3	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)	5.8	5.8	7.2	7.2	5.7	6.1	5.5	6.1
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	6.5	6.5	6.1	6.1	96.5	95.7	93.4	89.4
Actuated g/C Ratio	0.05	0.05	0.05	0.05	0.80	0.80	0.78	0.74
v/c Ratio	0.14	0.12	0.08	0.07	0.22	0.54	0.05	0.63
Control Delay	56.9	1.1	55.7	0.7	4.1	1.8	4.1	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Total Delay	56.9	1.1	55.7	0.7	4.1	1.8	4.1	14.8
LOS	E	A	E	A	A	A	A	B
Approach Delay	20.6		18.2			1.8		14.8
Approach LOS	C		B			A		B

Intersection Summary

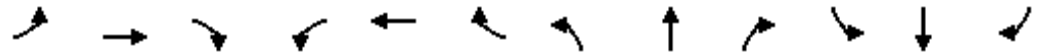
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 33 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 125
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 8.7
 Intersection Capacity Utilization 70.3%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 7: Main St. & Murpheys Mill Road



HCM Signalized Intersection Capacity Analysis
7: Main St. & Murpheys Mill Road

2030 Build
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↗	↕↗		↗	↕↗	
Traffic Volume (vph)	13	1	26	6	1	15	47	1506	6	13	1626	36
Future Volume (vph)	13	1	26	6	1	15	47	1506	6	13	1626	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1780	1583		1786	1583	1770	3537		1770	3528	
Flt Permitted		0.96	1.00		0.96	1.00	0.09	1.00		0.13	1.00	
Satd. Flow (perm)		1780	1583		1786	1583	167	3537		246	3528	
Peak-hour factor, PHF	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. Flow (vph)	13	1	26	6	1	15	47	1506	6	13	1626	36
RTOR Reduction (vph)	0	0	25	0	0	15	0	0	0	0	1	0
Lane Group Flow (vph)	0	14	1	0	7	0	47	1512	0	13	1661	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)		4.3	4.3		3.9	3.9	90.0	84.8		84.2	81.8	
Effective Green, g (s)		4.3	4.3		3.9	3.9	90.0	84.8		84.2	81.8	
Actuated g/C Ratio		0.04	0.04		0.03	0.03	0.75	0.71		0.70	0.68	
Clearance Time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		63	56		58	51	194	2499		203	2404	
v/s Ratio Prot		c0.01			c0.00		c0.01	c0.43		0.00	c0.47	
v/s Ratio Perm			0.00			0.00	0.17			0.04		
v/c Ratio		0.22	0.02		0.12	0.01	0.24	0.61		0.06	0.69	
Uniform Delay, d1		56.2	55.8		56.4	56.2	9.3	9.0		6.9	11.5	
Progression Factor		1.00	1.00		1.00	1.00	0.53	0.13		0.83	1.15	
Incremental Delay, d2		1.8	0.1		0.9	0.1	0.5	0.9		0.1	1.3	
Delay (s)		58.0	55.9		57.3	56.3	5.5	2.1		5.9	14.5	
Level of Service		E	E		E	E	A	A		A	B	
Approach Delay (s)		56.7			56.6			2.2			14.4	
Approach LOS		E			E			A			B	

Intersection Summary		
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.62	A
Actuated Cycle Length (s)	120.0	Sum of lost time (s)
Intersection Capacity Utilization	70.3%	24.8
Analysis Period (min)	15	ICU Level of Service
		C

c Critical Lane Group

Timings
7: Main St. & Murpheys Mill Road

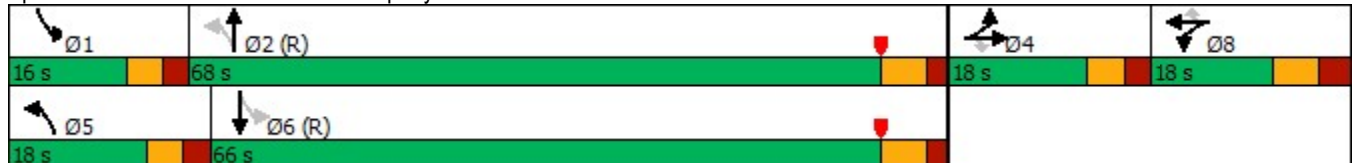


Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↕	↗	↕	↗	↖	↕↗	↖	↕↗
Traffic Volume (vph)	1	26	1	15	47	1324	13	1518
Future Volume (vph)	1	26	1	15	47	1324	13	1518
Turn Type	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	4		8		5	2	1	6
Permitted Phases		4		8	2		6	
Detector Phase	4	4	8	8	5	2	1	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)	24.0	24.0	25.2	25.2	11.0	24.1	11.0	24.1
Total Split (s)	18.0	18.0	18.0	18.0	18.0	68.0	16.0	66.0
Total Split (%)	15.0%	15.0%	15.0%	15.0%	15.0%	56.7%	13.3%	55.0%
Yellow Time (s)	3.4	3.4	4.1	4.1	3.2	4.1	3.2	4.1
All-Red Time (s)	2.4	2.4	3.1	3.1	2.5	2.0	2.3	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)	5.8	5.8	7.2	7.2	5.7	6.1	5.5	6.1
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	6.5	6.5	6.1	6.1	96.5	95.7	93.4	89.4
Actuated g/C Ratio	0.05	0.05	0.05	0.05	0.80	0.80	0.78	0.74
v/c Ratio	0.14	0.12	0.08	0.07	0.19	0.47	0.04	0.59
Control Delay	56.9	1.1	55.7	0.7	2.5	1.6	3.9	13.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	56.9	1.1	55.7	0.7	2.5	1.6	3.9	13.2
LOS	E	A	E	A	A	A	A	B
Approach Delay	20.6		18.2			1.7		13.1
Approach LOS	C		B			A		B

Intersection Summary

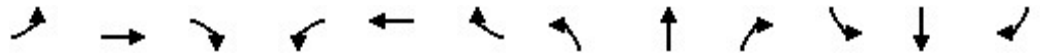
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 33 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 115
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.59
 Intersection Signal Delay: 8.0
 Intersection Capacity Utilization 67.4%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 7: Main St. & Murpheys Mill Road



HCM Signalized Intersection Capacity Analysis
 7: Main St. & Murpheys Mill Road

Background 2035
 PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↗		↖	↗	
Traffic Volume (vph)	13	1	26	6	1	15	47	1324	6	13	1518	36
Future Volume (vph)	13	1	26	6	1	15	47	1324	6	13	1518	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1780	1583		1786	1583	1770	3537		1770	3527	
Flt Permitted		0.96	1.00		0.96	1.00	0.11	1.00		0.17	1.00	
Satd. Flow (perm)		1780	1583		1786	1583	202	3537		321	3527	
Peak-hour factor, PHF	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. Flow (vph)	13	1	26	6	1	15	47	1324	6	13	1518	36
RTOR Reduction (vph)	0	0	25	0	0	15	0	0	0	0	1	0
Lane Group Flow (vph)	0	14	1	0	7	0	47	1330	0	13	1553	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)		4.3	4.3		3.9	3.9	90.0	84.8		84.2	81.8	
Effective Green, g (s)		4.3	4.3		3.9	3.9	90.0	84.8		84.2	81.8	
Actuated g/C Ratio		0.04	0.04		0.03	0.03	0.75	0.71		0.70	0.68	
Clearance Time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		63	56		58	51	219	2499		254	2404	
v/s Ratio Prot		c0.01			c0.00		c0.01	c0.38		0.00	c0.44	
v/s Ratio Perm			0.00			0.00	0.15			0.03		
v/c Ratio		0.22	0.02		0.12	0.01	0.21	0.53		0.05	0.65	
Uniform Delay, d1		56.2	55.8		56.4	56.2	7.9	8.3		6.1	10.9	
Progression Factor		1.00	1.00		1.00	1.00	0.24	0.14		0.81	1.09	
Incremental Delay, d2		1.8	0.1		0.9	0.1	0.4	0.7		0.1	1.1	
Delay (s)		58.0	55.9		57.3	56.3	2.3	1.9		5.1	13.0	
Level of Service		E	E		E	E	A	A		A	B	
Approach Delay (s)		56.7			56.6			1.9			12.9	
Approach LOS		E			E			A			B	

Intersection Summary		
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.58	A
Actuated Cycle Length (s)	120.0	Sum of lost time (s)
Intersection Capacity Utilization	67.4%	24.8
Analysis Period (min)	15	ICU Level of Service
		C

c Critical Lane Group

Timings
7: Main St. & Murpheys Mill Road

2035 Build
Timing Plan: PM Peak

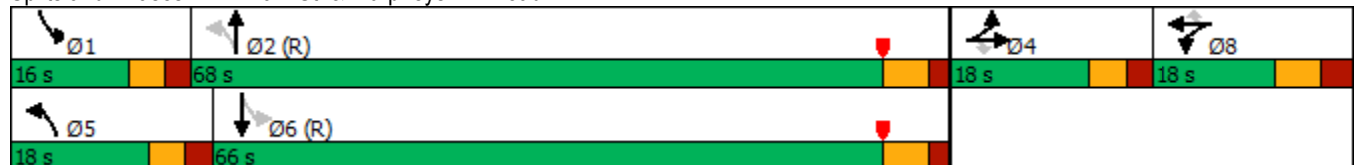


Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↕	↗	↕	↗	↖	↕↗	↖	↕↗
Traffic Volume (vph)	1	26	1	15	47	1560	13	1688
Future Volume (vph)	1	26	1	15	47	1560	13	1688
Turn Type	NA	Perm	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	4		8		5	2	1	6
Permitted Phases		4		8	2		6	
Detector Phase	4	4	8	8	5	2	1	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)	24.0	24.0	25.2	25.2	11.0	24.1	11.0	24.1
Total Split (s)	18.0	18.0	18.0	18.0	18.0	68.0	16.0	66.0
Total Split (%)	15.0%	15.0%	15.0%	15.0%	15.0%	56.7%	13.3%	55.0%
Yellow Time (s)	3.4	3.4	4.1	4.1	3.2	4.1	3.2	4.1
All-Red Time (s)	2.4	2.4	3.1	3.1	2.5	2.0	2.3	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)	5.8	5.8	7.2	7.2	5.7	6.1	5.5	6.1
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	6.5	6.5	6.1	6.1	96.5	95.7	93.4	89.4
Actuated g/C Ratio	0.05	0.05	0.05	0.05	0.80	0.80	0.78	0.74
v/c Ratio	0.14	0.12	0.08	0.07	0.23	0.56	0.05	0.66
Control Delay	56.9	1.1	55.7	0.7	6.6	2.2	4.0	15.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3
Total Delay	56.9	1.1	55.7	0.7	6.6	2.2	4.0	15.6
LOS	E	A	E	A	A	A	A	B
Approach Delay	20.6		18.2			2.3		15.5
Approach LOS	C		B			A		B

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 33 (28%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 125
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.66
 Intersection Signal Delay: 9.4
 Intersection Capacity Utilization 72.1%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 7: Main St. & Murpheys Mill Road



HCM Signalized Intersection Capacity Analysis

7: Main St. & Murpheys Mill Road

2035 Build
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↕		↖	↕	
Traffic Volume (vph)	13	1	26	6	1	15	47	1560	6	13	1688	36
Future Volume (vph)	13	1	26	6	1	15	47	1560	6	13	1688	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95		1.00	0.95	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1780	1583		1786	1583	1770	3537		1770	3528	
Flt Permitted		0.96	1.00		0.96	1.00	0.08	1.00		0.12	1.00	
Satd. Flow (perm)		1780	1583		1786	1583	149	3537		226	3528	
Peak-hour factor, PHF	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. Flow (vph)	13	1	26	6	1	15	47	1560	6	13	1688	36
RTOR Reduction (vph)	0	0	25	0	0	15	0	0	0	0	1	0
Lane Group Flow (vph)	0	14	1	0	7	0	47	1566	0	13	1723	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases			4			8	2			6		
Actuated Green, G (s)		4.3	4.3		3.9	3.9	90.0	84.8		84.2	81.8	
Effective Green, g (s)		4.3	4.3		3.9	3.9	90.0	84.8		84.2	81.8	
Actuated g/C Ratio		0.04	0.04		0.03	0.03	0.75	0.71		0.70	0.68	
Clearance Time (s)		5.8	5.8		7.2	7.2	5.7	6.1		5.5	6.1	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		63	56		58	51	181	2499		189	2404	
v/s Ratio Prot		c0.01			c0.00		c0.01	c0.44		0.00	c0.49	
v/s Ratio Perm			0.00			0.00	0.18			0.05		
v/c Ratio		0.22	0.02		0.12	0.01	0.26	0.63		0.07	0.72	
Uniform Delay, d1		56.2	55.8		56.4	56.2	10.4	9.3		7.2	11.9	
Progression Factor		1.00	1.00		1.00	1.00	1.07	0.17		0.81	1.16	
Incremental Delay, d2		1.8	0.1		0.9	0.1	0.6	0.9		0.1	1.4	
Delay (s)		58.0	55.9		57.3	56.3	11.7	2.5		6.0	15.2	
Level of Service		E	E		E	E	B	A		A	B	
Approach Delay (s)		56.7			56.6			2.8			15.1	
Approach LOS		E			E			A			B	

Intersection Summary

HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	24.8
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Timings
8: Main St. & Northgate Lane/Louise Obici Ln

Existing
AM Peak



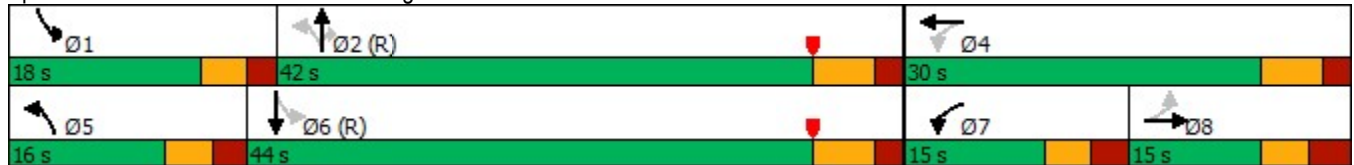
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕	↗	↘	↗	↕	↗	↗	↕
Traffic Volume (vph)	2	0	39	0	3	634	36	75	716
Future Volume (vph)	2	0	39	0	3	634	36	75	716
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		8	7	4	5	2		1	6
Permitted Phases	8		4		2		2	6	
Detector Phase	8	8	7	4	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.1	11.0	24.1	24.1	11.0	24.1
Total Split (s)	15.0	15.0	15.0	30.0	16.0	42.0	42.0	18.0	44.0
Total Split (%)	16.7%	16.7%	16.7%	33.3%	17.8%	46.7%	46.7%	20.0%	48.9%
Yellow Time (s)	3.2	3.2	3.0	4.1	3.2	4.1	4.1	3.2	4.1
All-Red Time (s)	3.0	3.0	2.6	2.0	2.3	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.2	5.6	6.1	5.5	6.1	6.1	5.2	6.1
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		5.5	9.7	9.3	66.3	62.5	62.5	71.1	69.8
Actuated g/C Ratio		0.06	0.11	0.10	0.74	0.69	0.69	0.79	0.78
v/c Ratio		0.01	0.22	0.15	0.01	0.26	0.03	0.12	0.26
Control Delay		0.0	36.7	0.7	1.7	3.5	0.1	0.8	0.9
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		0.0	36.7	0.7	1.7	3.5	0.1	0.8	0.9
LOS		A	D	A	A	A	A	A	A
Approach Delay				13.1		3.3			0.9
Approach LOS				B		A			A

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 8 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.26
 Intersection Signal Delay: 2.8
 Intersection Capacity Utilization 43.3%
 Analysis Period (min) 15

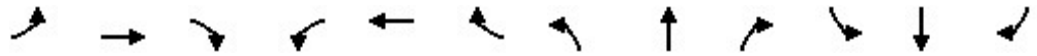
Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 8: Main St. & Northgate Lane/Louise Obici Ln



HCM Signalized Intersection Capacity Analysis
 8: Main St. & Northgate Lane/Louise Obici Ln

Existing
 AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗		↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	2	0	1	39	0	74	3	634	36	75	716	0
Future Volume (vph)	2	0	1	39	0	74	3	634	36	75	716	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2		5.6	6.1		5.5	6.1	6.1	5.2	6.1	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt		0.95		1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1722		1770	1583		1770	3539	1583	1770	3539	
Flt Permitted		1.00		0.72	1.00		0.38	1.00	1.00	0.37	1.00	
Satd. Flow (perm)		1779		1333	1583		707	3539	1583	688	3539	
Peak-hour factor, PHF	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. Flow (vph)	2	0	1	39	0	74	3	634	36	75	716	0
RTOR Reduction (vph)	0	3	0	0	63	0	0	0	14	0	0	0
Lane Group Flow (vph)	0	0	0	39	11	0	3	634	22	75	716	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8		7	4		5	2		1	6	
Permitted Phases	8			4			2		2	6		
Actuated Green, G (s)		2.2		12.9	12.9		55.5	54.3	54.3	63.6	58.2	
Effective Green, g (s)		2.2		12.9	12.9		55.5	54.3	54.3	63.6	58.2	
Actuated g/C Ratio		0.02		0.14	0.14		0.62	0.60	0.60	0.71	0.65	
Clearance Time (s)		6.2		5.6	6.1		5.5	6.1	6.1	5.2	6.1	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		43		215	226		450	2135	955	551	2288	
v/s Ratio Prot				c0.01	0.01		0.00	0.18		c0.01	c0.20	
v/s Ratio Perm		0.00		c0.02			0.00		0.01	0.09		
v/c Ratio		0.00		0.18	0.05		0.01	0.30	0.02	0.14	0.31	
Uniform Delay, d1		42.8		33.9	33.2		6.6	8.6	7.2	4.3	7.0	
Progression Factor		1.00		1.00	1.00		0.39	0.41	1.00	0.11	0.12	
Incremental Delay, d2		0.0		0.4	0.1		0.0	0.3	0.0	0.1	0.4	
Delay (s)		42.8		34.3	33.3		2.6	3.9	7.2	0.6	1.2	
Level of Service		D		C	C		A	A	A	A	A	
Approach Delay (s)		42.8			33.7			4.1			1.1	
Approach LOS		D			C			A			A	

Intersection Summary		
HCM 2000 Control Delay	4.8	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.31	A
Actuated Cycle Length (s)	90.0	Sum of lost time (s)
Intersection Capacity Utilization	43.3%	23.4
Analysis Period (min)	15	ICU Level of Service
		A

c Critical Lane Group

Timings
8: Main St. & Northgate Lane/Louise Obici Ln

Background 2030
AM Peak



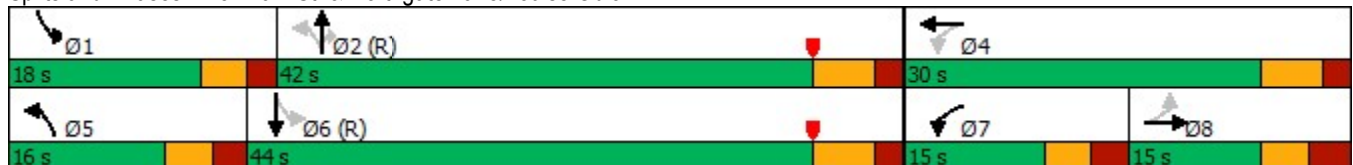
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕	↗	↘	↗	↕	↗	↗	↕
Traffic Volume (vph)	2	0	39	0	3	725	36	75	913
Future Volume (vph)	2	0	39	0	3	725	36	75	913
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		8	7	4	5	2		1	6
Permitted Phases	8		4		2		2	6	
Detector Phase	8	8	7	4	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.1	11.0	24.1	24.1	11.0	24.1
Total Split (s)	15.0	15.0	15.0	30.0	16.0	42.0	42.0	18.0	44.0
Total Split (%)	16.7%	16.7%	16.7%	33.3%	17.8%	46.7%	46.7%	20.0%	48.9%
Yellow Time (s)	3.2	3.2	3.0	4.1	3.2	4.1	4.1	3.2	4.1
All-Red Time (s)	3.0	3.0	2.6	2.0	2.3	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.2	5.6	6.1	5.5	6.1	6.1	5.2	6.1
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		5.5	9.7	9.3	66.3	62.5	62.5	71.1	69.8
Actuated g/C Ratio		0.06	0.11	0.10	0.74	0.69	0.69	0.79	0.78
v/c Ratio		0.01	0.22	0.16	0.01	0.30	0.03	0.13	0.33
Control Delay		0.0	36.7	0.8	1.7	3.3	0.1	1.3	1.6
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		0.0	36.7	0.8	1.7	3.3	0.1	1.3	1.6
LOS		A	D	A	A	A	A	A	A
Approach Delay				13.2		3.2			1.5
Approach LOS				B		A			A

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 8 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.33
 Intersection Signal Delay: 2.9
 Intersection Capacity Utilization 48.7%
 Analysis Period (min) 15

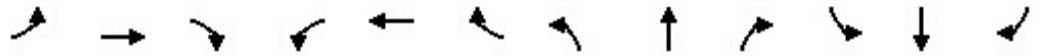
Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 8: Main St. & Northgate Lane/Louise Obici Ln



HCM Signalized Intersection Capacity Analysis
 8: Main St. & Northgate Lane/Louise Obici Ln

Background 2030
 AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗		↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	2	0	1	39	0	74	3	725	36	75	913	0
Future Volume (vph)	2	0	1	39	0	74	3	725	36	75	913	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2		5.6	6.1		5.5	6.1	6.1	5.2	6.1	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt		0.95		1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1722		1770	1583		1770	3539	1583	1770	3539	
Flt Permitted		1.00		0.72	1.00		0.30	1.00	1.00	0.33	1.00	
Satd. Flow (perm)		1779		1333	1583		565	3539	1583	611	3539	
Peak-hour factor, PHF	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. Flow (vph)	2	0	1	39	0	74	3	725	36	75	913	0
RTOR Reduction (vph)	0	3	0	0	63	0	0	0	14	0	0	0
Lane Group Flow (vph)	0	0	0	39	11	0	3	725	22	75	913	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8		7	4		5	2		1	6	
Permitted Phases	8			4			2		2	6		
Actuated Green, G (s)		2.2		12.9	12.9		55.5	54.3	54.3	63.6	58.2	
Effective Green, g (s)		2.2		12.9	12.9		55.5	54.3	54.3	63.6	58.2	
Actuated g/C Ratio		0.02		0.14	0.14		0.62	0.60	0.60	0.71	0.65	
Clearance Time (s)		6.2		5.6	6.1		5.5	6.1	6.1	5.2	6.1	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		43		215	226		364	2135	955	501	2288	
v/s Ratio Prot				c0.01	0.01		0.00	0.20		c0.01	c0.26	
v/s Ratio Perm		0.00		c0.02			0.00		0.01	0.10		
v/c Ratio		0.00		0.18	0.05		0.01	0.34	0.02	0.15	0.40	
Uniform Delay, d1		42.8		33.9	33.2		6.6	8.9	7.2	4.4	7.6	
Progression Factor		1.00		1.00	1.00		0.36	0.37	1.00	0.25	0.22	
Incremental Delay, d2		0.0		0.4	0.1		0.0	0.4	0.0	0.1	0.5	
Delay (s)		42.8		34.3	33.3		2.4	3.7	7.2	1.2	2.1	
Level of Service		D		C	C		A	A	A	A	A	
Approach Delay (s)		42.8			33.7			3.9			2.1	
Approach LOS		D			C			A			A	

Intersection Summary		
HCM 2000 Control Delay	4.8	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.39	A
Actuated Cycle Length (s)	90.0	Sum of lost time (s)
Intersection Capacity Utilization	48.7%	23.4
Analysis Period (min)	15	ICU Level of Service
		A

c Critical Lane Group

Timings
8: Main St. & Northgate Lane/Louise Obici Ln

2030 Build
Timing Plan: AM Peak



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕	↗	↘	↗	↕	↗	↗	↕
Traffic Volume (vph)	2	0	39	0	3	879	36	75	1147
Future Volume (vph)	2	0	39	0	3	879	36	75	1147
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		8	7	4	5	2		1	6
Permitted Phases	8		4		2		2	6	
Detector Phase	8	8	7	4	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.1	11.0	24.1	24.1	11.0	24.1
Total Split (s)	15.0	15.0	15.0	30.0	16.0	42.0	42.0	18.0	44.0
Total Split (%)	16.7%	16.7%	16.7%	33.3%	17.8%	46.7%	46.7%	20.0%	48.9%
Yellow Time (s)	3.2	3.2	3.0	4.1	3.2	4.1	4.1	3.2	4.1
All-Red Time (s)	3.0	3.0	2.6	2.0	2.3	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.2	5.6	6.1	5.5	6.1	6.1	5.2	6.1
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		5.5	9.7	9.3	66.3	62.5	62.5	71.1	69.8
Actuated g/C Ratio		0.06	0.11	0.10	0.74	0.69	0.69	0.79	0.78
v/c Ratio		0.01	0.22	0.17	0.01	0.36	0.03	0.15	0.42
Control Delay		0.0	36.7	0.9	1.3	3.9	0.1	2.4	2.8
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		0.0	36.7	0.9	1.3	3.9	0.1	2.4	2.8
LOS		A	D	A	A	A	A	A	A
Approach Delay				13.2		3.7			2.8
Approach LOS				B		A			A

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 8 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.42
 Intersection Signal Delay: 3.7
 Intersection Capacity Utilization 55.2%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 8: Main St. & Northgate Lane/Louise Obici Ln



HCM Signalized Intersection Capacity Analysis
 8: Main St. & Northgate Lane/Louise Obici Ln

2030 Build
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕↕	↕	↕	↕↕	
Traffic Volume (vph)	2	0	1	39	0	74	3	879	36	75	1147	0
Future Volume (vph)	2	0	1	39	0	74	3	879	36	75	1147	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2		5.6	6.1		5.5	6.1	6.1	5.2	6.1	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Fr _t		0.95		1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Fl _t Protected		0.97		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1722		1770	1583		1770	3539	1583	1770	3539	
Fl _t Permitted		1.00		0.72	1.00		0.22	1.00	1.00	0.27	1.00	
Satd. Flow (perm)		1779		1333	1583		410	3539	1583	497	3539	
Peak-hour factor, PHF	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. Flow (vph)	2	0	1	39	0	74	3	879	36	75	1147	0
RTOR Reduction (vph)	0	3	0	0	63	0	0	0	14	0	0	0
Lane Group Flow (vph)	0	0	0	39	11	0	3	879	22	75	1147	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8		7	4		5	2		1	6	
Permitted Phases	8			4			2		2	6		
Actuated Green, G (s)		2.2		12.9	12.9		55.5	54.3	54.3	63.6	58.2	
Effective Green, g (s)		2.2		12.9	12.9		55.5	54.3	54.3	63.6	58.2	
Actuated g/C Ratio		0.02		0.14	0.14		0.62	0.60	0.60	0.71	0.65	
Clearance Time (s)		6.2		5.6	6.1		5.5	6.1	6.1	5.2	6.1	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		43		215	226		270	2135	955	427	2288	
v/s Ratio Prot				c0.01	0.01		0.00	0.25		c0.01	c0.32	
v/s Ratio Perm		0.00		c0.02			0.01		0.01	0.11		
v/c Ratio		0.00		0.18	0.05		0.01	0.41	0.02	0.18	0.50	
Uniform Delay, d1		42.8		33.9	33.2		6.8	9.4	7.2	4.7	8.3	
Progression Factor		1.00		1.00	1.00		0.31	0.41	1.00	0.49	0.38	
Incremental Delay, d2		0.0		0.4	0.1		0.0	0.6	0.0	0.2	0.7	
Delay (s)		42.8		34.3	33.3		2.2	4.4	7.2	2.5	3.9	
Level of Service		D		C	C		A	A	A	A	A	
Approach Delay (s)		42.8			33.7			4.5			3.8	
Approach LOS		D			C			A			A	

Intersection Summary		
HCM 2000 Control Delay	5.6	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.48	A
Actuated Cycle Length (s)	90.0	Sum of lost time (s)
Intersection Capacity Utilization	55.2%	23.4
Analysis Period (min)	15	ICU Level of Service
		B

c Critical Lane Group

Timings
8: Main St. & Northgate Lane/Louise Obici Ln

Background 2035
AM Peak



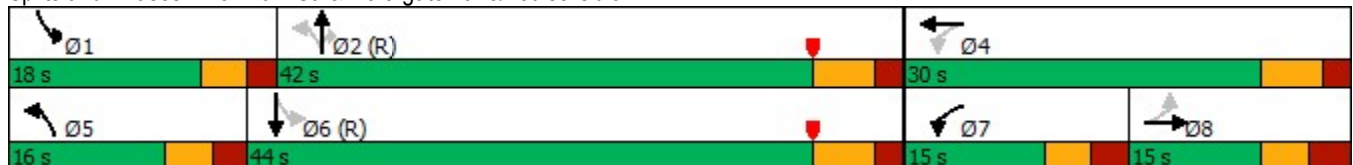
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕	↗	↘	↗	↕	↗	↗	↕
Traffic Volume (vph)	2	0	39	0	3	756	36	75	949
Future Volume (vph)	2	0	39	0	3	756	36	75	949
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		8	7	4	5	2		1	6
Permitted Phases	8		4		2		2	6	
Detector Phase	8	8	7	4	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.1	11.0	24.1	24.1	11.0	24.1
Total Split (s)	15.0	15.0	15.0	30.0	16.0	42.0	42.0	18.0	44.0
Total Split (%)	16.7%	16.7%	16.7%	33.3%	17.8%	46.7%	46.7%	20.0%	48.9%
Yellow Time (s)	3.2	3.2	3.0	4.1	3.2	4.1	4.1	3.2	4.1
All-Red Time (s)	3.0	3.0	2.6	2.0	2.3	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.2	5.6	6.1	5.5	6.1	6.1	5.2	6.1
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		5.5	9.7	9.3	66.3	62.5	62.5	71.1	69.8
Actuated g/C Ratio		0.06	0.11	0.10	0.74	0.69	0.69	0.79	0.78
v/c Ratio		0.01	0.22	0.17	0.01	0.31	0.03	0.14	0.35
Control Delay		0.0	36.7	0.8	1.7	3.3	0.1	1.5	1.6
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		0.0	36.7	0.8	1.7	3.3	0.1	1.5	1.6
LOS		A	D	A	A	A	A	A	A
Approach Delay				13.2		3.2			1.6
Approach LOS				B		A			A

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 8 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.35
 Intersection Signal Delay: 2.9
 Intersection Capacity Utilization 49.7%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 8: Main St. & Northgate Lane/Louise Obici Ln



HCM Signalized Intersection Capacity Analysis
8: Main St. & Northgate Lane/Louise Obici Ln

Background 2035
AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗		↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	2	0	1	39	0	74	3	756	36	75	949	0
Future Volume (vph)	2	0	1	39	0	74	3	756	36	75	949	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2		5.6	6.1		5.5	6.1	6.1	5.2	6.1	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt		0.95		1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1722		1770	1583		1770	3539	1583	1770	3539	
Flt Permitted		1.00		0.72	1.00		0.29	1.00	1.00	0.32	1.00	
Satd. Flow (perm)		1779		1333	1583		539	3539	1583	587	3539	
Peak-hour factor, PHF	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. Flow (vph)	2	0	1	39	0	74	3	756	36	75	949	0
RTOR Reduction (vph)	0	3	0	0	63	0	0	0	14	0	0	0
Lane Group Flow (vph)	0	0	0	39	11	0	3	756	22	75	949	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8		7	4		5	2		1	6	
Permitted Phases	8			4			2		2	6		
Actuated Green, G (s)		2.2		12.9	12.9		55.5	54.3	54.3	63.6	58.2	
Effective Green, g (s)		2.2		12.9	12.9		55.5	54.3	54.3	63.6	58.2	
Actuated g/C Ratio		0.02		0.14	0.14		0.62	0.60	0.60	0.71	0.65	
Clearance Time (s)		6.2		5.6	6.1		5.5	6.1	6.1	5.2	6.1	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		43		215	226		348	2135	955	485	2288	
v/s Ratio Prot				c0.01	0.01		0.00	0.21		c0.01	c0.27	
v/s Ratio Perm		0.00		c0.02			0.01		0.01	0.10		
v/c Ratio		0.00		0.18	0.05		0.01	0.35	0.02	0.15	0.41	
Uniform Delay, d1		42.8		33.9	33.2		6.7	9.0	7.2	4.4	7.7	
Progression Factor		1.00		1.00	1.00		0.35	0.36	1.00	0.27	0.23	
Incremental Delay, d2		0.0		0.4	0.1		0.0	0.4	0.0	0.1	0.5	
Delay (s)		42.8		34.3	33.3		2.4	3.7	7.2	1.3	2.3	
Level of Service		D		C	C		A	A	A	A	A	
Approach Delay (s)		42.8			33.7			3.9			2.2	
Approach LOS		D			C			A			A	

Intersection Summary

HCM 2000 Control Delay	4.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	23.4
Intersection Capacity Utilization	49.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
8: Main St. & Northgate Lane/Louise Obici Ln

2035 Build
Timing Plan: AM Peak



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕	↖	↗	↖	↗	↗	↖	↗
Traffic Volume (vph)	2	0	39	0	3	910	36	75	1183
Future Volume (vph)	2	0	39	0	3	910	36	75	1183
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		8	7	4	5	2		1	6
Permitted Phases	8		4		2		2	6	
Detector Phase	8	8	7	4	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.1	11.0	24.1	24.1	11.0	24.1
Total Split (s)	15.0	15.0	15.0	30.0	16.0	42.0	42.0	18.0	44.0
Total Split (%)	16.7%	16.7%	16.7%	33.3%	17.8%	46.7%	46.7%	20.0%	48.9%
Yellow Time (s)	3.2	3.2	3.0	4.1	3.2	4.1	4.1	3.2	4.1
All-Red Time (s)	3.0	3.0	2.6	2.0	2.3	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.2	5.6	6.1	5.5	6.1	6.1	5.2	6.1
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		5.5	9.7	9.3	66.3	62.5	62.5	71.1	69.8
Actuated g/C Ratio		0.06	0.11	0.10	0.74	0.69	0.69	0.79	0.78
v/c Ratio		0.01	0.22	0.18	0.01	0.37	0.03	0.16	0.43
Control Delay		0.0	36.7	0.9	1.0	3.4	0.1	2.7	3.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		0.0	36.7	0.9	1.0	3.4	0.1	2.7	3.0
LOS		A	D	A	A	A	A	A	A
Approach Delay				13.3		3.3			3.0
Approach LOS				B		A			A

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 8 (9%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.43
 Intersection Signal Delay: 3.6
 Intersection Capacity Utilization 56.2%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 8: Main St. & Northgate Lane/Louise Obici Ln



HCM Signalized Intersection Capacity Analysis
 8: Main St. & Northgate Lane/Louise Obici Ln

2035 Build
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕↕	↕	↕	↕↕	
Traffic Volume (vph)	2	0	1	39	0	74	3	910	36	75	1183	0
Future Volume (vph)	2	0	1	39	0	74	3	910	36	75	1183	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2		5.6	6.1		5.5	6.1	6.1	5.2	6.1	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt		0.95		1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1722		1770	1583		1770	3539	1583	1770	3539	
Flt Permitted		1.00		0.72	1.00		0.21	1.00	1.00	0.26	1.00	
Satd. Flow (perm)		1779		1333	1583		389	3539	1583	476	3539	
Peak-hour factor, PHF	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. Flow (vph)	2	0	1	39	0	74	3	910	36	75	1183	0
RTOR Reduction (vph)	0	3	0	0	63	0	0	0	14	0	0	0
Lane Group Flow (vph)	0	0	0	39	11	0	3	910	22	75	1183	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8		7	4		5	2		1	6	
Permitted Phases	8			4			2		2	6		
Actuated Green, G (s)		2.2		12.9	12.9		55.5	54.3	54.3	63.6	58.2	
Effective Green, g (s)		2.2		12.9	12.9		55.5	54.3	54.3	63.6	58.2	
Actuated g/C Ratio		0.02		0.14	0.14		0.62	0.60	0.60	0.71	0.65	
Clearance Time (s)		6.2		5.6	6.1		5.5	6.1	6.1	5.2	6.1	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		43		215	226		258	2135	955	414	2288	
v/s Ratio Prot				c0.01	0.01		0.00	0.26		c0.01	c0.33	
v/s Ratio Perm		0.00		c0.02			0.01		0.01	0.12		
v/c Ratio		0.00		0.18	0.05		0.01	0.43	0.02	0.18	0.52	
Uniform Delay, d1		42.8		33.9	33.2		6.9	9.5	7.2	4.8	8.4	
Progression Factor		1.00		1.00	1.00		0.24	0.35	1.00	0.55	0.41	
Incremental Delay, d2		0.0		0.4	0.1		0.0	0.6	0.0	0.2	0.8	
Delay (s)		42.8		34.3	33.3		1.7	3.9	7.2	2.8	4.2	
Level of Service		D		C	C		A	A	A	A	A	
Approach Delay (s)		42.8			33.7			4.0			4.1	
Approach LOS		D			C			A			A	

Intersection Summary		
HCM 2000 Control Delay	5.6	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.50	A
Actuated Cycle Length (s)	90.0	Sum of lost time (s)
Intersection Capacity Utilization	56.2%	23.4
Analysis Period (min)	15	ICU Level of Service
		B

c Critical Lane Group

Timings
8: Main St. & Northgate Lane/Louise Obici Ln

Existing
PM Peak

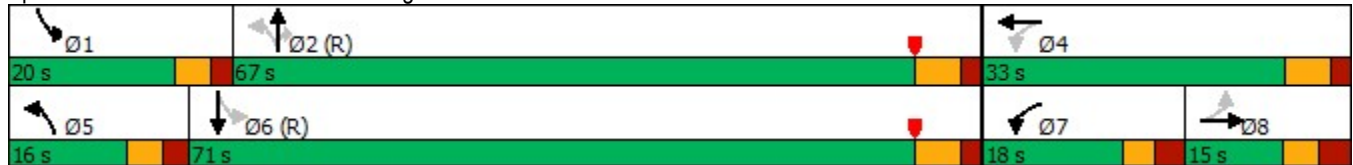


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕	↗	↘	↗	↕	↗	↗	↕
Traffic Volume (vph)	1	0	68	0	8	1100	76	100	1078
Future Volume (vph)	1	0	68	0	8	1100	76	100	1078
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		8	7	4	5	2		1	6
Permitted Phases	8		4		2		2	6	
Detector Phase	8	8	7	4	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.1	11.0	24.1	24.1	11.0	24.1
Total Split (s)	15.0	15.0	18.0	33.0	16.0	67.0	67.0	20.0	71.0
Total Split (%)	12.5%	12.5%	15.0%	27.5%	13.3%	55.8%	55.8%	16.7%	59.2%
Yellow Time (s)	3.2	3.2	3.0	4.1	3.2	4.1	4.1	3.2	4.1
All-Red Time (s)	3.0	3.0	2.6	2.0	2.3	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.2	5.6	6.1	5.5	6.1	6.1	5.2	6.1
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		5.5	12.0	11.5	90.3	84.0	84.0	96.7	94.0
Actuated g/C Ratio		0.05	0.10	0.10	0.75	0.70	0.70	0.81	0.78
v/c Ratio		0.01	0.42	0.36	0.02	0.44	0.07	0.26	0.39
Control Delay		0.0	55.9	2.9	2.5	5.2	0.1	3.1	2.0
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		0.0	55.9	2.9	2.5	5.2	0.1	3.1	2.0
LOS		A	E	A	A	A	A	A	A
Approach Delay				21.8		4.8			2.1
Approach LOS				C		A			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 30 (25%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.44
 Intersection Signal Delay: 4.8
 Intersection Capacity Utilization 59.9%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service B

Splits and Phases: 8: Main St. & Northgate Lane/Louise Obici Ln



Timings
8: Main St. & Northgate Lane/Louise Obici Ln

Background 2030
PM Peak

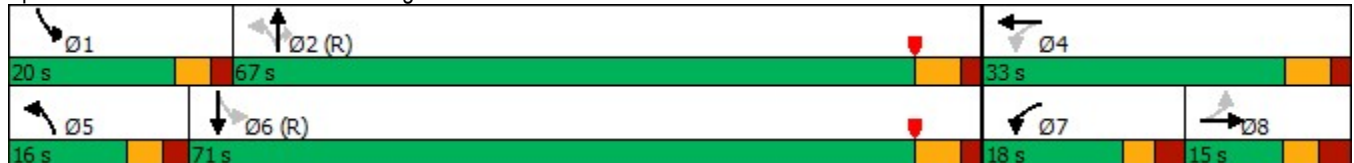


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕	↗	↘	↗	↕	↗	↗	↕
Traffic Volume (vph)	1	0	68	0	8	1305	76	100	1302
Future Volume (vph)	1	0	68	0	8	1305	76	100	1302
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		8	7	4	5	2		1	6
Permitted Phases	8		4		2		2	6	
Detector Phase	8	8	7	4	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.1	11.0	24.1	24.1	11.0	24.1
Total Split (s)	15.0	15.0	18.0	33.0	16.0	67.0	67.0	20.0	71.0
Total Split (%)	12.5%	12.5%	15.0%	27.5%	13.3%	55.8%	55.8%	16.7%	59.2%
Yellow Time (s)	3.2	3.2	3.0	4.1	3.2	4.1	4.1	3.2	4.1
All-Red Time (s)	3.0	3.0	2.6	2.0	2.3	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.2	5.6	6.1	5.5	6.1	6.1	5.2	6.1
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		5.5	12.0	11.5	90.1	83.9	83.9	96.8	94.0
Actuated g/C Ratio		0.05	0.10	0.10	0.75	0.70	0.70	0.81	0.78
v/c Ratio		0.01	0.42	0.38	0.02	0.53	0.07	0.32	0.47
Control Delay		0.0	55.9	4.1	2.2	5.0	0.1	7.0	2.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		0.0	55.9	4.1	2.2	5.0	0.1	7.0	2.1
LOS		A	E	A	A	A	A	A	A
Approach Delay				22.6		4.7			2.5
Approach LOS				C		A			A

Intersection Summary

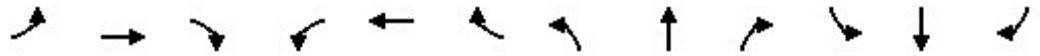
Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 30 (25%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.53
 Intersection Signal Delay: 4.8
 Intersection Capacity Utilization 65.5%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 8: Main St. & Northgate Lane/Louise Obici Ln



HCM Signalized Intersection Capacity Analysis
 8: Main St. & Northgate Lane/Louise Obici Ln

Background 2030
 PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗		↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	1	0	2	68	0	122	8	1305	76	100	1302	2
Future Volume (vph)	1	0	2	68	0	122	8	1305	76	100	1302	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2		5.6	6.1		5.5	6.1	6.1	5.2	6.1	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt		0.91		1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1667		1770	1583		1770	3539	1583	1770	3538	
Flt Permitted		1.00		0.57	1.00		0.18	1.00	1.00	0.15	1.00	
Satd. Flow (perm)		1695		1058	1583		344	3539	1583	279	3538	
Peak-hour factor, PHF	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. Flow (vph)	1	0	2	68	0	122	8	1305	76	100	1302	2
RTOR Reduction (vph)	0	3	0	0	105	0	0	0	26	0	0	0
Lane Group Flow (vph)	0	0	0	68	17	0	8	1305	50	100	1304	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8		7	4		5	2		1	6	
Permitted Phases	8			4			2		2	6		
Actuated Green, G (s)		2.2		16.4	16.4		80.2	79.0	79.0	91.4	84.7	
Effective Green, g (s)		2.2		16.4	16.4		80.2	79.0	79.0	91.4	84.7	
Actuated g/C Ratio		0.02		0.14	0.14		0.67	0.66	0.66	0.76	0.71	
Clearance Time (s)		6.2		5.6	6.1		5.5	6.1	6.1	5.2	6.1	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		31		195	216		244	2329	1042	301	2497	
v/s Ratio Prot				c0.02	0.01		0.00	c0.37		c0.02	c0.37	
v/s Ratio Perm		0.00		c0.02			0.02		0.03	0.23		
v/c Ratio		0.00		0.35	0.08		0.03	0.56	0.05	0.33	0.52	
Uniform Delay, d1		57.8		46.6	45.2		7.1	11.1	7.2	6.9	8.2	
Progression Factor		1.00		1.00	1.00		0.52	0.43	0.00	1.50	0.26	
Incremental Delay, d2		0.0		1.1	0.2		0.0	0.9	0.1	0.5	0.7	
Delay (s)		57.8		47.7	45.4		3.7	5.7	0.1	11.0	2.8	
Level of Service		E		D	D		A	A	A	B	A	
Approach Delay (s)		57.8			46.2			5.4			3.4	
Approach LOS		E			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	23.4
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Timings
8: Main St. & Northgate Lane/Louise Obici Ln

2030 Build
Timing Plan: PM Peak



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕	↙	↘	↙	↕	↘	↙	↕
Traffic Volume (vph)	1	0	68	0	8	1541	76	100	1472
Future Volume (vph)	1	0	68	0	8	1541	76	100	1472
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		8	7	4	5	2		1	6
Permitted Phases	8		4		2		2	6	
Detector Phase	8	8	7	4	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.1	11.0	24.1	24.1	11.0	24.1
Total Split (s)	15.0	15.0	18.0	33.0	16.0	67.0	67.0	20.0	71.0
Total Split (%)	12.5%	12.5%	15.0%	27.5%	13.3%	55.8%	55.8%	16.7%	59.2%
Yellow Time (s)	3.2	3.2	3.0	4.1	3.2	4.1	4.1	3.2	4.1
All-Red Time (s)	3.0	3.0	2.6	2.0	2.3	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.2	5.6	6.1	5.5	6.1	6.1	5.2	6.1
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		5.5	12.0	11.5	88.9	82.7	82.7	97.2	94.0
Actuated g/C Ratio		0.05	0.10	0.10	0.74	0.69	0.69	0.81	0.78
v/c Ratio		0.01	0.42	0.39	0.03	0.63	0.07	0.39	0.53
Control Delay		0.0	55.9	5.3	0.9	3.7	0.1	17.4	3.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		0.0	55.9	5.3	0.9	3.7	0.1	17.4	3.1
LOS		A	E	A	A	A	A	B	A
Approach Delay				23.4		3.5			4.0
Approach LOS				C		A			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 30 (25%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 115
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 4.9
 Intersection Capacity Utilization 72.1%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 8: Main St. & Northgate Lane/Louise Obici Ln



HCM Signalized Intersection Capacity Analysis
8: Main St. & Northgate Lane/Louise Obici Ln

2030 Build
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗		↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	1	0	2	68	0	122	8	1541	76	100	1472	2
Future Volume (vph)	1	0	2	68	0	122	8	1541	76	100	1472	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2		5.6	6.1		5.5	6.1	6.1	5.2	6.1	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt		0.91		1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1667		1770	1583		1770	3539	1583	1770	3538	
Flt Permitted		1.00		0.57	1.00		0.15	1.00	1.00	0.10	1.00	
Satd. Flow (perm)		1695		1058	1583		273	3539	1583	184	3538	
Peak-hour factor, PHF	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. Flow (vph)	1	0	2	68	0	122	8	1541	76	100	1472	2
RTOR Reduction (vph)	0	3	0	0	105	0	0	0	27	0	0	0
Lane Group Flow (vph)	0	0	0	68	17	0	8	1541	49	100	1474	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8		7	4		5	2		1	6	
Permitted Phases	8			4			2		2	6		
Actuated Green, G (s)		2.2		16.4	16.4		79.0	77.8	77.8	91.4	84.7	
Effective Green, g (s)		2.2		16.4	16.4		79.0	77.8	77.8	91.4	84.7	
Actuated g/C Ratio		0.02		0.14	0.14		0.66	0.65	0.65	0.76	0.71	
Clearance Time (s)		6.2		5.6	6.1		5.5	6.1	6.1	5.2	6.1	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		31		195	216		194	2294	1026	251	2497	
v/s Ratio Prot				c0.02	0.01		0.00	c0.44		c0.03	c0.42	
v/s Ratio Perm		0.00		c0.02			0.03		0.03	0.28		
v/c Ratio		0.00		0.35	0.08		0.04	0.67	0.05	0.40	0.59	
Uniform Delay, d1		57.8		46.6	45.2		7.8	13.1	7.7	10.6	8.9	
Progression Factor		1.00		1.00	1.00		0.17	0.22	0.00	4.44	0.37	
Incremental Delay, d2		0.0		1.1	0.2		0.1	1.3	0.1	0.8	0.8	
Delay (s)		57.8		47.7	45.4		1.4	4.1	0.1	47.9	4.1	
Level of Service		E		D	D		A	A	A	D	A	
Approach Delay (s)		57.8			46.2			3.9			6.9	
Approach LOS		E			D			A			A	

Intersection Summary

HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	23.4
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Timings
8: Main St. & Northgate Lane/Louise Obici Ln

Background 2035
PM Peak

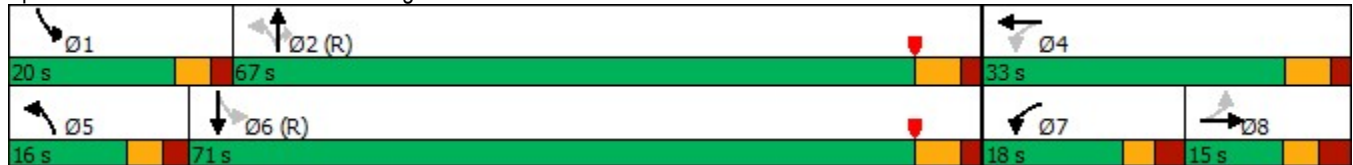


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕	↗	↘	↗	↕	↗	↗	↕
Traffic Volume (vph)	1	0	68	0	8	1360	76	100	1356
Future Volume (vph)	1	0	68	0	8	1360	76	100	1356
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		8	7	4	5	2		1	6
Permitted Phases	8		4		2		2	6	
Detector Phase	8	8	7	4	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.1	11.0	24.1	24.1	11.0	24.1
Total Split (s)	15.0	15.0	18.0	33.0	16.0	67.0	67.0	20.0	71.0
Total Split (%)	12.5%	12.5%	15.0%	27.5%	13.3%	55.8%	55.8%	16.7%	59.2%
Yellow Time (s)	3.2	3.2	3.0	4.1	3.2	4.1	4.1	3.2	4.1
All-Red Time (s)	3.0	3.0	2.6	2.0	2.3	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.2	5.6	6.1	5.5	6.1	6.1	5.2	6.1
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		5.5	12.0	11.5	89.8	83.5	83.5	97.0	94.0
Actuated g/C Ratio		0.05	0.10	0.10	0.75	0.70	0.70	0.81	0.78
v/c Ratio		0.01	0.42	0.38	0.03	0.55	0.07	0.33	0.49
Control Delay		0.0	55.9	4.4	2.2	5.4	0.1	8.7	2.3
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		0.0	55.9	4.4	2.2	5.4	0.1	8.7	2.4
LOS		A	E	A	A	A	A	A	A
Approach Delay				22.8		5.1			2.8
Approach LOS				C		A			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 30 (25%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 105
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.55
 Intersection Signal Delay: 5.1
 Intersection Capacity Utilization 67.1%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 8: Main St. & Northgate Lane/Louise Obici Ln



HCM Signalized Intersection Capacity Analysis

8: Main St. & Northgate Lane/Louise Obici Ln

Background 2035

PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗		↖	↗	↖	↖	↗	↖
Traffic Volume (vph)	1	0	2	68	0	122	8	1360	76	100	1356	2
Future Volume (vph)	1	0	2	68	0	122	8	1360	76	100	1356	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2		5.6	6.1		5.5	6.1	6.1	5.2	6.1	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Frt		0.91		1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1667		1770	1583		1770	3539	1583	1770	3538	
Flt Permitted		1.00		0.57	1.00		0.17	1.00	1.00	0.14	1.00	
Satd. Flow (perm)		1695		1058	1583		320	3539	1583	255	3538	
Peak-hour factor, PHF	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. Flow (vph)	1	0	2	68	0	122	8	1360	76	100	1356	2
RTOR Reduction (vph)	0	3	0	0	105	0	0	0	26	0	0	0
Lane Group Flow (vph)	0	0	0	68	17	0	8	1360	50	100	1358	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8		7	4		5	2		1	6	
Permitted Phases	8			4			2		2	6		
Actuated Green, G (s)		2.2		16.4	16.4		79.9	78.7	78.7	91.4	84.7	
Effective Green, g (s)		2.2		16.4	16.4		79.9	78.7	78.7	91.4	84.7	
Actuated g/C Ratio		0.02		0.14	0.14		0.67	0.66	0.66	0.76	0.71	
Clearance Time (s)		6.2		5.6	6.1		5.5	6.1	6.1	5.2	6.1	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		31		195	216		227	2320	1038	288	2497	
v/s Ratio Prot				c0.02	0.01		0.00	c0.38		c0.02	c0.38	
v/s Ratio Perm		0.00		c0.02			0.02		0.03	0.24		
v/c Ratio		0.00		0.35	0.08		0.04	0.59	0.05	0.35	0.54	
Uniform Delay, d1		57.8		46.6	45.2		7.3	11.5	7.3	7.6	8.4	
Progression Factor		1.00		1.00	1.00		0.51	0.44	0.00	1.96	0.28	
Incremental Delay, d2		0.0		1.1	0.2		0.1	1.0	0.1	0.6	0.7	
Delay (s)		57.8		47.7	45.4		3.7	6.1	0.1	15.5	3.1	
Level of Service		E		D	D		A	A	A	B	A	
Approach Delay (s)		57.8			46.2			5.8			4.0	
Approach LOS		E			D			A			A	

Intersection Summary

HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	23.4
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Timings
8: Main St. & Northgate Lane/Louise Obici Ln

2035 Build
Timing Plan: PM Peak



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕	↗	↘	↗	↕	↗	↗	↕
Traffic Volume (vph)	1	0	68	0	8	1596	76	100	1526
Future Volume (vph)	1	0	68	0	8	1596	76	100	1526
Turn Type	Perm	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		8	7	4	5	2		1	6
Permitted Phases	8		4		2		2	6	
Detector Phase	8	8	7	4	5	2	2	1	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.1	11.0	24.1	24.1	11.0	24.1
Total Split (s)	15.0	15.0	18.0	33.0	16.0	67.0	67.0	20.0	71.0
Total Split (%)	12.5%	12.5%	15.0%	27.5%	13.3%	55.8%	55.8%	16.7%	59.2%
Yellow Time (s)	3.2	3.2	3.0	4.1	3.2	4.1	4.1	3.2	4.1
All-Red Time (s)	3.0	3.0	2.6	2.0	2.3	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.2	5.6	6.1	5.5	6.1	6.1	5.2	6.1
Lead/Lag	Lag	Lag	Lead		Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)		5.5	12.0	11.5	88.9	82.7	82.7	97.2	94.0
Actuated g/C Ratio		0.05	0.10	0.10	0.74	0.69	0.69	0.81	0.78
v/c Ratio		0.01	0.42	0.40	0.03	0.65	0.07	0.41	0.55
Control Delay		0.0	55.9	5.5	2.6	7.6	0.1	20.2	3.7
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		0.0	55.9	5.5	2.6	7.6	0.1	20.2	3.7
LOS		A	E	A	A	A	A	C	A
Approach Delay				23.5		7.3			4.8
Approach LOS				C		A			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 30 (25%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 115
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 7.0
 Intersection Capacity Utilization 73.6%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service D

Splits and Phases: 8: Main St. & Northgate Lane/Louise Obici Ln



HCM Signalized Intersection Capacity Analysis
 8: Main St. & Northgate Lane/Louise Obici Ln

2035 Build
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗		↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	1	0	2	68	0	122	8	1596	76	100	1526	2
Future Volume (vph)	1	0	2	68	0	122	8	1596	76	100	1526	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2		5.6	6.1		5.5	6.1	6.1	5.2	6.1	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	
Fr _t		0.91		1.00	0.85		1.00	1.00	0.85	1.00	1.00	
Fl _t Protected		0.98		0.95	1.00		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1667		1770	1583		1770	3539	1583	1770	3539	
Fl _t Permitted		1.00		0.57	1.00		0.13	1.00	1.00	0.09	1.00	
Satd. Flow (perm)		1695		1058	1583		251	3539	1583	166	3539	
Peak-hour factor, PHF	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. Flow (vph)	1	0	2	68	0	122	8	1596	76	100	1526	2
RTOR Reduction (vph)	0	3	0	0	105	0	0	0	27	0	0	0
Lane Group Flow (vph)	0	0	0	68	17	0	8	1596	49	100	1528	0
Turn Type	Perm	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases		8		7	4		5	2		1	6	
Permitted Phases	8			4			2		2	6		
Actuated Green, G (s)		2.2		16.4	16.4		79.0	77.8	77.8	91.4	84.7	
Effective Green, g (s)		2.2		16.4	16.4		79.0	77.8	77.8	91.4	84.7	
Actuated g/C Ratio		0.02		0.14	0.14		0.66	0.65	0.65	0.76	0.71	
Clearance Time (s)		6.2		5.6	6.1		5.5	6.1	6.1	5.2	6.1	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		31		195	216		180	2294	1026	238	2497	
v/s Ratio Prot				c0.02	0.01		0.00	c0.45		c0.03	c0.43	
v/s Ratio Perm		0.00		c0.02			0.03		0.03	0.29		
v/c Ratio		0.00		0.35	0.08		0.04	0.70	0.05	0.42	0.61	
Uniform Delay, d1		57.8		46.6	45.2		8.1	13.5	7.7	11.8	9.1	
Progression Factor		1.00		1.00	1.00		0.56	0.51	0.00	4.64	0.45	
Incremental Delay, d2		0.0		1.1	0.2		0.1	1.6	0.1	0.9	0.9	
Delay (s)		57.8		47.7	45.4		4.6	8.5	0.1	55.8	4.9	
Level of Service		E		D	D		A	A	A	E	A	
Approach Delay (s)		57.8			46.2			8.1			8.1	
Approach LOS		E			D			A			A	

Intersection Summary

HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	23.4
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔				↗	↖	↗	↖		↗	↖
Traffic Vol, veh/h	3	0	2	0	0	0	1	672	1	0	754	3
Future Vol, veh/h	3	0	2	0	0	0	1	672	1	0	754	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	0	-	150	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	2	0	0	0	1	672	1	0	754	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1094	1431	379	-	-	336	757	0	0	-	-	0
Stage 1	756	756	-	-	-	-	-	-	-	-	-	-
Stage 2	338	675	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	-	-	6.94	4.14	-	-	-	-	-
Critical Hdwy Stg 1	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	-	-	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	168	133	619	0	0	660	850	-	-	0	-	-
Stage 1	366	414	-	0	0	-	-	-	-	0	-	-
Stage 2	650	451	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	168	133	619	-	-	660	850	-	-	-	-	-
Mov Cap-2 Maneuver	168	133	-	-	-	-	-	-	-	-	-	-
Stage 1	366	414	-	-	-	-	-	-	-	-	-	-
Stage 2	649	451	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	20.5		0		0		0			
HCM LOS	C		A							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	850	-	-	237	-	-	-
HCM Lane V/C Ratio	0.001	-	-	0.021	-	-	-
HCM Control Delay (s)	9.2	-	-	20.5	0	-	-
HCM Lane LOS	A	-	-	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	-	-

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔				↗	↖	↕	↗		↕	↖
Traffic Vol, veh/h	3	0	2	0	0	0	1	765	1	0	953	3
Future Vol, veh/h	3	0	2	0	0	0	1	765	1	0	953	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	0	-	150	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	2	0	0	0	1	765	1	0	953	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1340	1723	478	-	-	383	956	0	0	-	-	0
Stage 1	955	955	-	-	-	-	-	-	-	-	-	-
Stage 2	385	768	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	-	-	6.94	4.14	-	-	-	-	-
Critical Hdwy Stg 1	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	-	-	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	111	88	534	0	0	615	715	-	-	0	-	-
Stage 1	278	335	-	0	0	-	-	-	-	0	-	-
Stage 2	610	409	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	111	88	534	-	-	615	715	-	-	-	-	-
Mov Cap-2 Maneuver	111	88	-	-	-	-	-	-	-	-	-	-
Stage 1	278	335	-	-	-	-	-	-	-	-	-	-
Stage 2	609	409	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	27.9		0		0		0			
HCM LOS	D		A							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	715	-	-	162	-	-	-
HCM Lane V/C Ratio	0.001	-	-	0.031	-	-	-
HCM Control Delay (s)	10	-	-	27.9	0	-	-
HCM Lane LOS	B	-	-	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	-	-

Intersection												
Int Delay, s/veh	10											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕	↕	↕	↕	↕
Traffic Vol, veh/h	3	0	2	52	0	154	1	765	43	234	953	3
Future Vol, veh/h	3	0	2	52	0	154	1	765	43	234	953	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	0	-	0	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	2	52	0	154	1	765	43	234	953	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1808	2233	478	1712	2191	383	956	0	0	808	0	0
Stage 1	1423	1423	-	767	767	-	-	-	-	-	-	-
Stage 2	385	810	-	945	1424	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	49	42	534	58	45	615	715	-	-	813	-	-
Stage 1	143	200	-	361	410	-	-	-	-	-	-	-
Stage 2	610	391	-	282	200	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	29	30	534	~ 45	32	615	715	-	-	813	-	-
Mov Cap-2 Maneuver	29	30	-	~ 45	32	-	-	-	-	-	-	-
Stage 1	143	142	-	361	410	-	-	-	-	-	-	-
Stage 2	457	391	-	200	142	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	90.5	92.1	0	2.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	715	-	-	47	45	615	813	-	-
HCM Lane V/C Ratio	0.001	-	-	0.106	1.156	0.25	0.288	-	-
HCM Control Delay (s)	10	-	-	90.5	326.9	12.8	11.2	-	-
HCM Lane LOS	B	-	-	F	F	B	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	4.9	1	1.2	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	0.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔				↗	↖	↕	↗		↕	↖
Traffic Vol, veh/h	3	0	2	0	0	0	1	798	1	0	990	3
Future Vol, veh/h	3	0	2	0	0	0	1	798	1	0	990	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	0	-	150	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	2	0	0	0	1	798	1	0	990	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1393	1793	497	-	-	399	993	0	0	-	-	0
Stage 1	992	992	-	-	-	-	-	-	-	-	-	-
Stage 2	401	801	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	-	-	6.94	4.14	-	-	-	-	-
Critical Hdwy Stg 1	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	-	-	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	101	80	519	0	0	601	692	-	-	0	-	-
Stage 1	264	322	-	0	0	-	-	-	-	0	-	-
Stage 2	597	395	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	101	80	519	-	-	601	692	-	-	-	-	-
Mov Cap-2 Maneuver	101	80	-	-	-	-	-	-	-	-	-	-
Stage 1	264	322	-	-	-	-	-	-	-	-	-	-
Stage 2	596	395	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	30	0	0	0
HCM LOS	D	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBT	SBR
Capacity (veh/h)	692	-	-	149	-	-
HCM Lane V/C Ratio	0.001	-	-	0.034	-	-
HCM Control Delay (s)	10.2	-	-	30	0	-
HCM Lane LOS	B	-	-	D	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	-	-

Intersection												
Int Delay, s/veh	11.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕	↕	↕	↕	↕
Traffic Vol, veh/h	3	0	2	52	0	154	1	798	43	234	990	3
Future Vol, veh/h	3	0	2	52	0	154	1	798	43	234	990	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	0	-	0	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	0	2	52	0	154	1	798	43	234	990	3

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	1861	2303	497	1763	2261	399	993	0	0	841	0	0
Stage 1	1460	1460	-	800	800	-	-	-	-	-	-	-
Stage 2	401	843	-	963	1461	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	45	38	519	53	40	601	692	-	-	790	-	-
Stage 1	135	192	-	345	395	-	-	-	-	-	-	-
Stage 2	597	378	-	274	192	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	26	27	519	~ 41	28	601	692	-	-	790	-	-
Mov Cap-2 Maneuver	26	27	-	~ 41	28	-	-	-	-	-	-	-
Stage 1	135	135	-	345	395	-	-	-	-	-	-	-
Stage 2	443	378	-	192	135	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	102	106.9	0	2.2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	692	-	-	42	41	601	790	-	-
HCM Lane V/C Ratio	0.001	-	-	0.119	1.268	0.256	0.296	-	-
HCM Control Delay (s)	10.2	-	-	102	\$ 385	13	11.5	-	-
HCM Lane LOS	B	-	-	F	F	B	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	5.2	1	1.2	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔				↗		↑↑	↗		↑↑	
Traffic Vol, veh/h	4	0	3	0	0	4	2	1178	1	0	1147	3
Future Vol, veh/h	4	0	3	0	0	4	2	1178	1	0	1147	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	-	-	150	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	3	0	0	4	2	1178	1	0	1147	3

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	1742	2332	575	-	-	589	1150	0	0	-	-	0
Stage 1	1149	1149	-	-	-	-	-	-	-	-	-	-
Stage 2	593	1183	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	-	-	6.94	4.14	-	-	-	-	-
Critical Hdwy Stg 1	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	-	-	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	55	36	461	0	0	452	603	-	-	0	-	-
Stage 1	211	271	-	0	0	-	-	-	-	0	-	-
Stage 2	459	261	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	54	36	461	-	-	452	603	-	-	-	-	-
Mov Cap-2 Maneuver	54	36	-	-	-	-	-	-	-	-	-	-
Stage 1	209	271	-	-	-	-	-	-	-	-	-	-
Stage 2	450	258	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB			NB		SB			
HCM Control Delay, s	50		13			0		0			
HCM LOS	F		B								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	603	-	-	87	452	-	-
HCM Lane V/C Ratio	0.003	-	-	0.08	0.009	-	-
HCM Control Delay (s)	11	-	-	50	13	-	-
HCM Lane LOS	B	-	-	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0	-	-

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔				↗	↖	↕	↗		↕	↖
Traffic Vol, veh/h	4	0	3	0	0	4	2	1387	1	0	1374	3
Future Vol, veh/h	4	0	3	0	0	4	2	1387	1	0	1374	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	0	-	150	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	3	0	0	4	2	1387	1	0	1374	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2074	2768	689	-	-	694	1377	0	0	-	-	0
Stage 1	1376	1376	-	-	-	-	-	-	-	-	-	-
Stage 2	698	1392	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	-	-	6.94	4.14	-	-	-	-	-
Critical Hdwy Stg 1	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	-	-	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	31	19	388	0	0	385	494	-	-	0	-	-
Stage 1	153	211	-	0	0	-	-	-	-	0	-	-
Stage 2	397	207	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	31	19	388	-	-	385	494	-	-	-	-	-
Mov Cap-2 Maneuver	31	19	-	-	-	-	-	-	-	-	-	-
Stage 1	152	211	-	-	-	-	-	-	-	-	-	-
Stage 2	391	206	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB				
HCM Control Delay, s	86.5		14.4		0		0				
HCM LOS	F		B								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	494	-	-	51	385	-	-
HCM Lane V/C Ratio	0.004	-	-	0.137	0.01	-	-
HCM Control Delay (s)	12.3	-	-	86.5	14.4	-	-
HCM Lane LOS	B	-	-	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0	-	-

Intersection												
Int Delay, s/veh	64.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↗	↖	↗	↖	↗	↖	↗↖
Traffic Vol, veh/h	4	0	3	70	0	240	2	1387	30	170	1374	3
Future Vol, veh/h	4	0	3	70	0	240	2	1387	30	170	1374	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	0	-	0	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	3	70	0	240	2	1387	30	170	1374	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2414	3137	689	2418	3108	694	1377	0	0	1417	0	0
Stage 1	1716	1716	-	1391	1391	-	-	-	-	-	-	-
Stage 2	698	1421	-	1027	1717	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	17	11	388	~ 17	11	385	494	-	-	477	-	-
Stage 1	93	143	-	150	207	-	-	-	-	-	-	-
Stage 2	397	201	-	251	143	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	5	7	388	~ 12	7	385	494	-	-	477	-	-
Mov Cap-2 Maneuver	5	7	-	~ 12	7	-	-	-	-	-	-	-
Stage 1	93	92	-	149	206	-	-	-	-	-	-	-
Stage 2	149	200	-	160	92	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	\$ 732.5	\$ 653.5	0	1.8
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	494	-	-	9	12	385	477	-	-
HCM Lane V/C Ratio	0.004	-	-	0.778	5.833	0.623	0.356	-	-
HCM Control Delay (s)	12.3	-	-	\$ 732.5	\$ 2796.1	28.6	16.7	-	-
HCM Lane LOS	B	-	-	F	F	D	C	-	-
HCM 95th %tile Q(veh)	0	-	-	1.5	9.9	4.1	1.6	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection												
Int Delay, s/veh	0.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔				↗	↖	↗	↖		↗	↖
Traffic Vol, veh/h	4	0	3	0	0	4	2	1446	1	0	1432	3
Future Vol, veh/h	4	0	3	0	0	4	2	1446	1	0	1432	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	0	-	150	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	3	0	0	4	2	1446	1	0	1432	3

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2161	2885	718	-	-	723	1435	0	0	-	-	0
Stage 1	1434	1434	-	-	-	-	-	-	-	-	-	-
Stage 2	727	1451	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	-	-	6.94	4.14	-	-	-	-	-
Critical Hdwy Stg 1	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	-	-	3.32	2.22	-	-	-	-	-
Pot Cap-1 Maneuver	27	16	371	0	0	369	469	-	-	0	-	-
Stage 1	141	198	-	0	0	-	-	-	-	0	-	-
Stage 2	381	194	-	0	0	-	-	-	-	0	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	27	16	371	-	-	369	469	-	-	-	-	-
Mov Cap-2 Maneuver	27	16	-	-	-	-	-	-	-	-	-	-
Stage 1	140	198	-	-	-	-	-	-	-	-	-	-
Stage 2	375	193	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	99.2		14.9		0		0			
HCM LOS	F		B							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBT	SBR
Capacity (veh/h)	469	-	-	45	369	-	-
HCM Lane V/C Ratio	0.004	-	-	0.156	0.011	-	-
HCM Control Delay (s)	12.7	-	-	99.2	14.9	-	-
HCM Lane LOS	B	-	-	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0	-	-

Intersection												
Int Delay, s/veh	75.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↗	↖	↗	↖	↗	↖	↗↖
Traffic Vol, veh/h	4	0	3	70	0	240	2	1446	30	170	1432	3
Future Vol, veh/h	4	0	3	70	0	240	2	1446	30	170	1432	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	0	0	-	0	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	100	100	100	100	100	100	100	100	100	100	100	100
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	0	3	70	0	240	2	1446	30	170	1432	3

Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	2501	3254	718	2506	3225	723	1435	0	0	1476	0	0
Stage 1	1774	1774	-	1450	1450	-	-	-	-	-	-	-
Stage 2	727	1480	-	1056	1775	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	15	9	371	~ 14	9	369	469	-	-	452	-	-
Stage 1	86	134	-	137	194	-	-	-	-	-	-	-
Stage 2	381	188	-	241	134	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	4	6	371	~ 10	6	369	469	-	-	452	-	-
Mov Cap-2 Maneuver	4	6	-	~ 10	6	-	-	-	-	-	-	-
Stage 1	86	84	-	136	193	-	-	-	-	-	-	-
Stage 2	133	187	-	149	84	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, \$ 1000.4		\$ 799.7	0	1.9
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	469	-	-	7	10	369	452	-	-
HCM Lane V/C Ratio	0.004	-	-	1	7	0.65	0.376	-	-
HCM Control Delay (s)	12.7	-	-	\$ 1000	\$ 3434.4	31.2	17.7	-	-
HCM Lane LOS	B	-	-	F	F	D	C	-	-
HCM 95th %tile Q(veh)	0	-	-	1.6	10.1	4.4	1.7	-	-

Notes
 ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Timings
9: Main St. & Edgewood Ave

2030 Build
Timing Plan: AM Peak

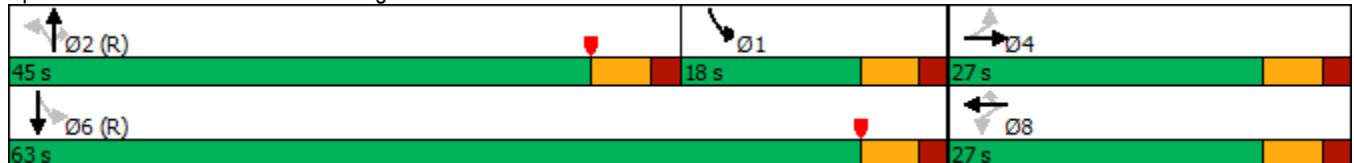
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	3	0	52	0	154	1	765	43	234	953
Future Volume (vph)	3	0	52	0	154	1	765	43	234	953
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA
Protected Phases		4		8			2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	4	4	8	8	8	2	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	11.0	24.0
Total Split (s)	27.0	27.0	27.0	27.0	27.0	45.0	45.0	45.0	18.0	63.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	50.0%	50.0%	50.0%	20.0%	70.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lead	Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max
Act Effct Green (s)		8.8		8.8	8.8	51.2	51.2	51.2	69.2	69.2
Actuated g/C Ratio		0.10		0.10	0.10	0.57	0.57	0.57	0.77	0.77
v/c Ratio		0.02		0.38	0.53	0.00	0.38	0.05	0.37	0.35
Control Delay		0.2		45.1	13.3	3.0	3.7	0.1	5.9	3.3
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		0.2		45.1	13.3	3.0	3.7	0.1	5.9	3.3
LOS		A		D	B	A	A	A	A	A
Approach Delay		0.2		21.3			3.5			3.8
Approach LOS		A		C			A			A

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 75 (83%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.53
 Intersection Signal Delay: 5.3
 Intersection Capacity Utilization 53.4%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 9: Main St. & Edgewood Ave



HCM Signalized Intersection Capacity Analysis
 9: Main St. & Edgewood Ave

2030 Build
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↖	↕	↗	↖	↕	↕
Traffic Volume (vph)	3	0	2	52	0	154	1	765	43	234	953	3
Future Volume (vph)	3	0	2	52	0	154	1	765	43	234	953	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.95			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1711			1770	1583	1770	3539	1583	1770	3538	
Flt Permitted		0.82			0.75	1.00	0.29	1.00	1.00	0.33	1.00	
Satd. Flow (perm)		1446			1405	1583	535	3539	1583	613	3538	
Peak-hour factor, PHF	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. Flow (vph)	3	0	2	52	0	154	1	765	43	234	953	3
RTOR Reduction (vph)	0	5	0	0	0	139	0	0	19	0	0	0
Lane Group Flow (vph)	0	0	0	0	52	15	1	765	24	234	956	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		8.8			8.8	8.8	51.2	51.2	51.2	69.2	69.2	
Effective Green, g (s)		8.8			8.8	8.8	51.2	51.2	51.2	69.2	69.2	
Actuated g/C Ratio		0.10			0.10	0.10	0.57	0.57	0.57	0.77	0.77	
Clearance Time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		141			137	154	304	2013	900	625	2720	
v/s Ratio Prot								0.22		0.05	c0.27	
v/s Ratio Perm		0.00			c0.04	0.01	0.00		0.02	c0.24		
v/c Ratio		0.00			0.38	0.10	0.00	0.38	0.03	0.37	0.35	
Uniform Delay, d1		36.6			38.0	37.0	8.4	10.7	8.5	5.7	3.3	
Progression Factor		1.00			1.00	1.00	0.26	0.29	1.00	0.86	0.83	
Incremental Delay, d2		0.0			1.8	0.3	0.0	0.5	0.1	0.4	0.3	
Delay (s)		36.7			39.8	37.3	2.2	3.6	8.5	5.3	3.1	
Level of Service		D			D	D	A	A	A	A	A	
Approach Delay (s)		36.7			37.9			3.8			3.5	
Approach LOS		D			D			A			A	

Intersection Summary		
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.40	A
Actuated Cycle Length (s)	90.0	Sum of lost time (s)
Intersection Capacity Utilization	53.4%	18.0
Analysis Period (min)	15	ICU Level of Service
		A

c Critical Lane Group

Timings
9: Main St. & Edgewood Ave

2035 Build
Timing Plan: AM Peak



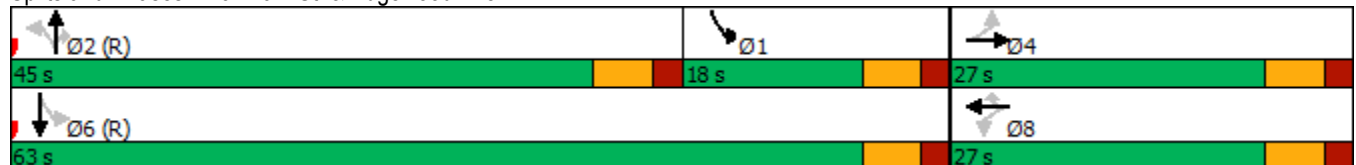
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕		↕	↕	↕	↕	↕	↕	↕
Traffic Volume (vph)	3	0	52	0	154	1	798	43	234	990
Future Volume (vph)	3	0	52	0	154	1	798	43	234	990
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA
Protected Phases		4		8			2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	4	4	8	8	8	2	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	11.0	24.0
Total Split (s)	27.0	27.0	27.0	27.0	27.0	45.0	45.0	45.0	18.0	63.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	50.0%	50.0%	50.0%	20.0%	70.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lead	Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max
Act Effct Green (s)		8.8		8.8	8.8	51.2	51.2	51.2	69.2	69.2
Actuated g/C Ratio		0.10		0.10	0.10	0.57	0.57	0.57	0.77	0.77
v/c Ratio		0.02		0.38	0.53	0.00	0.40	0.05	0.38	0.36
Control Delay		0.2		45.1	13.3	2.0	4.3	0.1	5.1	2.6
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		0.2		45.1	13.3	2.0	4.3	0.1	5.1	2.6
LOS		A		D	B	A	A	A	A	A
Approach Delay		0.2		21.3			4.1			3.0
Approach LOS		A		C			A			A

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 40 (44%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
 Natural Cycle: 60
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.53
 Intersection Signal Delay: 5.1
 Intersection Capacity Utilization 54.3%
 Analysis Period (min) 15

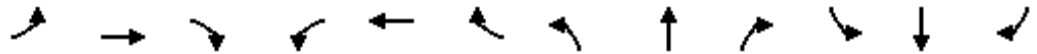
Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 9: Main St. & Edgewood Ave



HCM Signalized Intersection Capacity Analysis
 9: Main St. & Edgewood Ave

2035 Build
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↖	↕	↗	↖	↕	↕
Traffic Volume (vph)	3	0	2	52	0	154	1	798	43	234	990	3
Future Volume (vph)	3	0	2	52	0	154	1	798	43	234	990	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.95			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1711			1770	1583	1770	3539	1583	1770	3538	
Flt Permitted		0.82			0.75	1.00	0.27	1.00	1.00	0.31	1.00	
Satd. Flow (perm)		1446			1405	1583	511	3539	1583	586	3538	
Peak-hour factor, PHF	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. Flow (vph)	3	0	2	52	0	154	1	798	43	234	990	3
RTOR Reduction (vph)	0	5	0	0	0	139	0	0	19	0	0	0
Lane Group Flow (vph)	0	0	0	0	52	15	1	798	24	234	993	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		8.8			8.8	8.8	51.2	51.2	51.2	69.2	69.2	
Effective Green, g (s)		8.8			8.8	8.8	51.2	51.2	51.2	69.2	69.2	
Actuated g/C Ratio		0.10			0.10	0.10	0.57	0.57	0.57	0.77	0.77	
Clearance Time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		141			137	154	290	2013	900	608	2720	
v/s Ratio Prot								0.23		0.05	c0.28	
v/s Ratio Perm		0.00			c0.04	0.01	0.00		0.02	c0.24		
v/c Ratio		0.00			0.38	0.10	0.00	0.40	0.03	0.38	0.36	
Uniform Delay, d1		36.6			38.0	37.0	8.4	10.8	8.5	6.1	3.3	
Progression Factor		1.00			1.00	1.00	0.23	0.33	1.00	0.64	0.61	
Incremental Delay, d2		0.0			1.8	0.3	0.0	0.5	0.1	0.4	0.4	
Delay (s)		36.7			39.8	37.3	1.9	4.1	8.5	4.3	2.4	
Level of Service		D			D	D	A	A	A	A	A	
Approach Delay (s)		36.7			37.9			4.4			2.8	
Approach LOS		D			D			A			A	

Intersection Summary		
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.41	A
Actuated Cycle Length (s)	90.0	Sum of lost time (s)
Intersection Capacity Utilization	54.3%	18.0
Analysis Period (min)	15	ICU Level of Service
		A

c Critical Lane Group

Timings
9: Main St. & Edgewood Ave

2030 Build
Timing Plan: PM Peak



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕		↕	↕	↕	↕↕	↕	↕	↕↕
Traffic Volume (vph)	4	0	70	0	240	2	1387	30	170	1374
Future Volume (vph)	4	0	70	0	240	2	1387	30	170	1374
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA
Protected Phases		4		8			2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	4	4	8	8	8	2	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	11.0	24.0
Total Split (s)	25.0	25.0	25.0	25.0	25.0	76.0	76.0	76.0	19.0	95.0
Total Split (%)	20.8%	20.8%	20.8%	20.8%	20.8%	63.3%	63.3%	63.3%	15.8%	79.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lead	Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max
Act Effct Green (s)		11.7		11.7	11.7	77.3	77.3	77.3	96.3	96.3
Actuated g/C Ratio		0.10		0.10	0.10	0.64	0.64	0.64	0.80	0.80
v/c Ratio		0.03		0.51	0.70	0.01	0.61	0.03	0.46	0.49
Control Delay		0.3		63.3	21.4	5.5	7.5	0.0	9.5	1.8
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		0.3		63.3	21.4	5.5	7.6	0.0	9.5	1.8
LOS		A		E	C	A	A	A	A	A
Approach Delay		0.3		30.9			7.4			2.7
Approach LOS		A		C			A			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 22 (18%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.70
 Intersection Signal Delay: 7.4
 Intersection Capacity Utilization 72.4%
 Analysis Period (min) 15

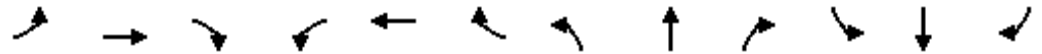
Intersection LOS: A
 ICU Level of Service C

Splits and Phases: 9: Main St. & Edgewood Ave



HCM Signalized Intersection Capacity Analysis
 9: Main St. & Edgewood Ave

2030 Build
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕	↕	↕↕	↕	↕	↕↕	
Traffic Volume (vph)	4	0	3	70	0	240	2	1387	30	170	1374	3
Future Volume (vph)	4	0	3	70	0	240	2	1387	30	170	1374	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.94			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1706			1770	1583	1770	3539	1583	1770	3538	
Flt Permitted		0.84			0.75	1.00	0.17	1.00	1.00	0.14	1.00	
Satd. Flow (perm)		1479			1403	1583	319	3539	1583	262	3538	
Peak-hour factor, PHF	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. Flow (vph)	4	0	3	70	0	240	2	1387	30	170	1374	3
RTOR Reduction (vph)	0	6	0	0	0	189	0	0	11	0	0	0
Lane Group Flow (vph)	0	1	0	0	70	51	2	1387	19	170	1377	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		11.7			11.7	11.7	77.3	77.3	77.3	96.3	96.3	
Effective Green, g (s)		11.7			11.7	11.7	77.3	77.3	77.3	96.3	96.3	
Actuated g/C Ratio		0.10			0.10	0.10	0.64	0.64	0.64	0.80	0.80	
Clearance Time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		144			136	154	205	2279	1019	373	2839	
v/s Ratio Prot								c0.39		0.05	c0.39	
v/s Ratio Perm		0.00			c0.05	0.03	0.01		0.01	0.32		
v/c Ratio		0.00			0.51	0.33	0.01	0.61	0.02	0.46	0.49	
Uniform Delay, d1		48.9			51.5	50.5	7.6	12.5	7.7	17.2	3.8	
Progression Factor		1.00			1.00	1.00	0.56	0.48	1.00	0.48	0.30	
Incremental Delay, d2		0.0			3.3	1.3	0.1	1.1	0.0	0.8	0.5	
Delay (s)		48.9			54.7	51.8	4.4	7.1	7.7	9.1	1.7	
Level of Service		D			D	D	A	A	A	A	A	
Approach Delay (s)		48.9			52.5			7.1			2.5	
Approach LOS		D			D			A			A	

Intersection Summary		
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.59	A
Actuated Cycle Length (s)	120.0	Sum of lost time (s)
Intersection Capacity Utilization	72.4%	18.0
Analysis Period (min)	15	ICU Level of Service
		C

c Critical Lane Group

Timings
9: Main St. & Edgewood Ave

2035 Build
Timing Plan: PM Peak



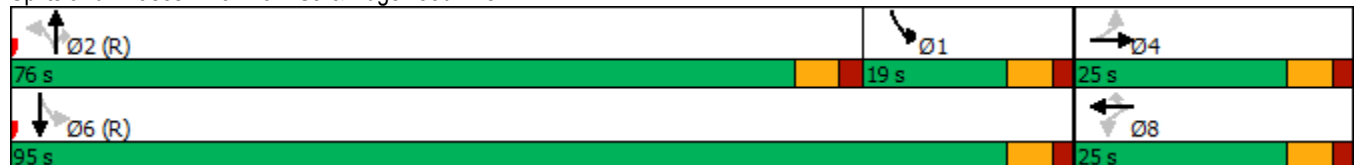
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations		↕		↕	↕	↕	↕↕	↕	↕	↕↕
Traffic Volume (vph)	4	0	70	0	240	2	1446	30	170	1432
Future Volume (vph)	4	0	70	0	240	2	1446	30	170	1432
Turn Type	Perm	NA	Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA
Protected Phases		4		8			2		1	6
Permitted Phases	4		8		8	2		2	6	
Detector Phase	4	4	8	8	8	2	2	2	1	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	11.0	24.0
Total Split (s)	25.0	25.0	25.0	25.0	25.0	76.0	76.0	76.0	19.0	95.0
Total Split (%)	20.8%	20.8%	20.8%	20.8%	20.8%	63.3%	63.3%	63.3%	15.8%	79.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag						Lead	Lead	Lead	Lag	
Lead-Lag Optimize?						Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	None	C-Max
Act Effct Green (s)		11.8		11.8	11.8	77.2	77.2	77.2	96.2	96.2
Actuated g/C Ratio		0.10		0.10	0.10	0.64	0.64	0.64	0.80	0.80
v/c Ratio		0.03		0.51	0.71	0.01	0.64	0.03	0.48	0.51
Control Delay		0.3		62.9	22.8	5.5	8.4	0.0	11.1	1.5
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		0.3		62.9	22.8	5.5	8.4	0.0	11.1	1.5
LOS		A		E	C	A	A	A	B	A
Approach Delay		0.3		31.8			8.2			2.6
Approach LOS		A		C			A			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 74 (62%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
 Natural Cycle: 70
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.71
 Intersection Signal Delay: 7.7
 Intersection Capacity Utilization 74.0%
 Analysis Period (min) 15

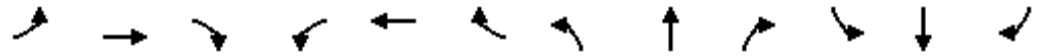
Intersection LOS: A
 ICU Level of Service D

Splits and Phases: 9: Main St. & Edgewood Ave



HCM Signalized Intersection Capacity Analysis
 9: Main St. & Edgewood Ave

2035 Build
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	4	0	3	70	0	240	2	1446	30	170	1432	3
Future Volume (vph)	4	0	3	70	0	240	2	1446	30	170	1432	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.94			1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.97			0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1706			1770	1583	1770	3539	1583	1770	3538	
Flt Permitted		0.84			0.75	1.00	0.16	1.00	1.00	0.13	1.00	
Satd. Flow (perm)		1481			1403	1583	295	3539	1583	237	3538	
Peak-hour factor, PHF	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. Flow (vph)	4	0	3	70	0	240	2	1446	30	170	1432	3
RTOR Reduction (vph)	0	6	0	0	0	183	0	0	11	0	0	0
Lane Group Flow (vph)	0	1	0	0	70	57	2	1446	19	170	1435	0
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA	Perm	pm+pt	NA	
Protected Phases		4			8			2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)		11.8			11.8	11.8	77.2	77.2	77.2	96.2	96.2	
Effective Green, g (s)		11.8			11.8	11.8	77.2	77.2	77.2	96.2	96.2	
Actuated g/C Ratio		0.10			0.10	0.10	0.64	0.64	0.64	0.80	0.80	
Clearance Time (s)		6.0			6.0	6.0	6.0	6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		145			137	155	189	2276	1018	356	2836	
v/s Ratio Prot								c0.41		0.05	c0.41	
v/s Ratio Perm		0.00			c0.05	0.04	0.01		0.01	0.33		
v/c Ratio		0.00			0.51	0.37	0.01	0.64	0.02	0.48	0.51	
Uniform Delay, d1		48.8			51.4	50.6	7.7	12.9	7.7	20.1	4.0	
Progression Factor		1.00			1.00	1.00	0.58	0.52	1.00	0.50	0.21	
Incremental Delay, d2		0.0			3.2	1.5	0.1	1.2	0.0	0.9	0.6	
Delay (s)		48.8			54.6	52.1	4.5	7.9	7.8	10.8	1.4	
Level of Service		D			D	D	A	A	A	B	A	
Approach Delay (s)		48.8			52.6			7.9			2.4	
Approach LOS		D			D			A			A	

Intersection Summary		
HCM 2000 Control Delay	9.5	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.62	A
Actuated Cycle Length (s)	120.0	Sum of lost time (s)
Intersection Capacity Utilization	74.0%	18.0
Analysis Period (min)	15	ICU Level of Service
		D

c Critical Lane Group

Timings
10: Main St. & Kroger/Lowes

Existing
AM Peak



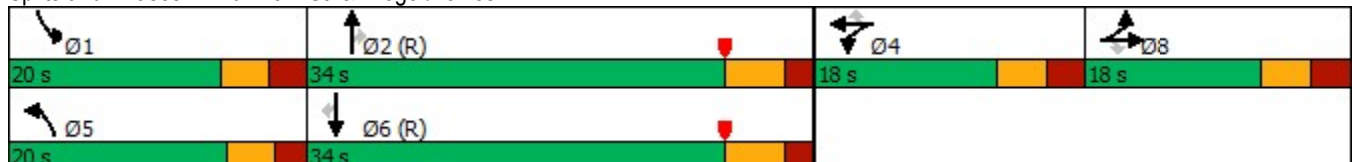
Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕	↕	↕	↕	↕	↕↕	↕	↕	↕↕	↕
Traffic Volume (vph)	10	34	9	111	64	567	54	157	517	39
Future Volume (vph)	10	34	9	111	64	567	54	157	517	39
Turn Type	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8		4		5	2		1	6	
Permitted Phases		8		4			2			6
Detector Phase	8	8	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.0	11.0	24.1	24.1	11.0	24.1	24.1
Total Split (s)	18.0	18.0	18.0	18.0	20.0	34.0	34.0	20.0	34.0	34.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	22.2%	37.8%	37.8%	22.2%	37.8%	37.8%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.8	2.8	2.5	2.5	2.2	2.0	2.0	2.6	2.0	2.0
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)	6.2	6.2	5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	7.7	7.7	8.8	8.8	8.6	41.4	41.4	12.7	49.3	49.3
Actuated g/C Ratio	0.09	0.09	0.10	0.10	0.10	0.46	0.46	0.14	0.55	0.55
v/c Ratio	0.29	0.11	0.39	0.35	0.38	0.35	0.07	0.63	0.27	0.04
Control Delay	42.7	0.8	43.9	3.8	53.7	10.1	1.2	54.2	14.7	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.7	0.8	43.9	3.8	53.7	10.1	1.2	54.2	14.7	2.2
LOS	D	A	D	A	D	B	A	D	B	A
Approach Delay	24.4		19.0			13.4			22.7	
Approach LOS	C		B			B			C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 29 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 18.6
 Intersection Capacity Utilization 49.6%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service A























Splits and Phases: 10: Main St. & Kroger/Lowes



HCM Signalized Intersection Capacity Analysis

10: Main St. & Kroger/Lowes

Existing
AM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	34	10	34	59	9	111	64	567	54	157	517	39	
Future Volume (vph)	34	10	34	59	9	111	64	567	54	157	517	39	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)		1793	1583		1785	1583	1770	3539	1583	1770	3539	1583	
Flt Permitted		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (perm)		1793	1583		1785	1583	1770	3539	1583	1770	3539	1583	
Peak-hour factor, PHF	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. Flow (vph)	34	10	34	59	9	111	64	567	54	157	517	39	
RTOR Reduction (vph)	0	0	32	0	0	102	0	0	31	0	0	20	
Lane Group Flow (vph)	0	44	2	0	68	9	64	567	23	157	517	19	
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	8	8		4	4		5	2		1	6		
Permitted Phases			8			4			2			6	
Actuated Green, G (s)		6.6	6.6		7.7	7.7	7.5	39.0	39.0	12.7	44.6	44.6	
Effective Green, g (s)		6.6	6.6		7.7	7.7	7.5	39.0	39.0	12.7	44.6	44.6	
Actuated g/C Ratio		0.07	0.07		0.09	0.09	0.08	0.43	0.43	0.14	0.50	0.50	
Clearance Time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		131	116		152	135	147	1533	685	249	1753	784	
v/s Ratio Prot		c0.02			c0.04		0.04	c0.16		c0.09	c0.15		
v/s Ratio Perm			0.00			0.01			0.01			0.01	
v/c Ratio		0.34	0.02		0.45	0.07	0.44	0.37	0.03	0.63	0.29	0.02	
Uniform Delay, d1		39.6	38.7		39.1	37.9	39.2	17.2	14.7	36.4	13.4	11.6	
Progression Factor		1.00	1.00		1.00	1.00	1.27	0.49	1.00	1.19	0.92	1.00	
Incremental Delay, d2		1.5	0.1		2.1	0.2	2.0	0.7	0.1	5.0	0.4	0.1	
Delay (s)		41.1	38.8		41.2	38.1	51.8	9.1	14.8	48.6	12.8	11.6	
Level of Service		D	D		D	D	D	A	B	D	B	B	
Approach Delay (s)		40.1			39.3			13.6			20.6		
Approach LOS		D			D			B			C		
Intersection Summary													
HCM 2000 Control Delay			20.6									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.42										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	24.0
Intersection Capacity Utilization			49.6%									ICU Level of Service	A
Analysis Period (min)			15										

c Critical Lane Group

Timings
10: Main St. & Kroger/Lowes

Background 2030
AM Peak



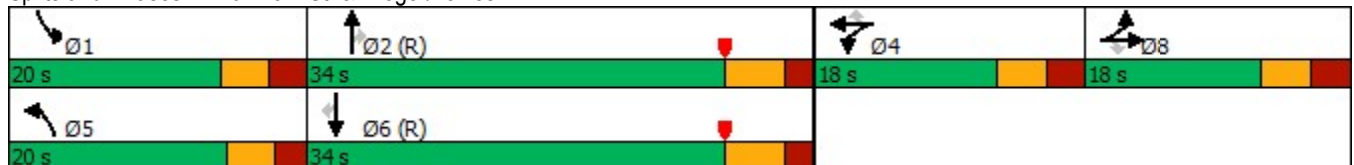
Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↖	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (vph)	10	34	9	111	64	654	54	157	704	39
Future Volume (vph)	10	34	9	111	64	654	54	157	704	39
Turn Type	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8		4		5	2		1	6	
Permitted Phases		8		4			2			6
Detector Phase	8	8	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.0	11.0	24.1	24.1	11.0	24.1	24.1
Total Split (s)	18.0	18.0	18.0	18.0	20.0	34.0	34.0	20.0	34.0	34.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	22.2%	37.8%	37.8%	22.2%	37.8%	37.8%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.8	2.8	2.5	2.5	2.2	2.0	2.0	2.6	2.0	2.0
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)	6.2	6.2	5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	7.7	7.7	8.8	8.8	8.6	41.4	41.4	12.7	49.3	49.3
Actuated g/C Ratio	0.09	0.09	0.10	0.10	0.10	0.46	0.46	0.14	0.55	0.55
v/c Ratio	0.29	0.11	0.39	0.35	0.38	0.40	0.07	0.63	0.36	0.04
Control Delay	42.7	0.8	43.9	3.8	55.5	10.3	1.1	54.9	15.3	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.7	0.8	43.9	3.8	55.5	10.3	1.1	54.9	15.3	1.7
LOS	D	A	D	A	E	B	A	D	B	A
Approach Delay	24.4		19.0			13.4			21.6	
Approach LOS	C		B			B			C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 29 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 18.2
 Intersection Capacity Utilization 52.0%
 Analysis Period (min) 15

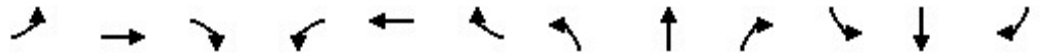
Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 10: Main St. & Kroger/Lowes



HCM Signalized Intersection Capacity Analysis
 10: Main St. & Kroger/Lowes

Background 2030
 AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (vph)	34	10	34	59	9	111	64	654	54	157	704	39
Future Volume (vph)	34	10	34	59	9	111	64	654	54	157	704	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1793	1583		1785	1583	1770	3539	1583	1770	3539	1583
Flt Permitted		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1793	1583		1785	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	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. Flow (vph)	34	10	34	59	9	111	64	654	54	157	704	39
RTOR Reduction (vph)	0	0	32	0	0	102	0	0	31	0	0	20
Lane Group Flow (vph)	0	44	2	0	68	9	64	654	23	157	704	19
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases			8			4			2			6
Actuated Green, G (s)		6.6	6.6		7.7	7.7	7.5	39.0	39.0	12.7	44.6	44.6
Effective Green, g (s)		6.6	6.6		7.7	7.7	7.5	39.0	39.0	12.7	44.6	44.6
Actuated g/C Ratio		0.07	0.07		0.09	0.09	0.08	0.43	0.43	0.14	0.50	0.50
Clearance Time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		131	116		152	135	147	1533	685	249	1753	784
v/s Ratio Prot		c0.02			c0.04		0.04	0.18		c0.09	c0.20	
v/s Ratio Perm			0.00			0.01			0.01			0.01
v/c Ratio		0.34	0.02		0.45	0.07	0.44	0.43	0.03	0.63	0.40	0.02
Uniform Delay, d1		39.6	38.7		39.1	37.9	39.2	17.7	14.7	36.4	14.3	11.6
Progression Factor		1.00	1.00		1.00	1.00	1.32	0.48	1.00	1.22	0.89	1.00
Incremental Delay, d2		1.5	0.1		2.1	0.2	2.0	0.8	0.1	4.9	0.7	0.1
Delay (s)		41.1	38.8		41.2	38.1	53.7	9.4	14.8	49.4	13.4	11.6
Level of Service		D	D		D	D	D	A	B	D	B	B
Approach Delay (s)		40.1			39.3			13.5			19.6	
Approach LOS		D			D			B			B	

Intersection Summary		
HCM 2000 Control Delay	19.8	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.46	B
Actuated Cycle Length (s)	90.0	Sum of lost time (s)
Intersection Capacity Utilization	52.0%	24.0
Analysis Period (min)	15	ICU Level of Service
		A

c Critical Lane Group

Timings
10: Main St. & Kroger/Lowes

2030 Build
Timing Plan: AM Peak



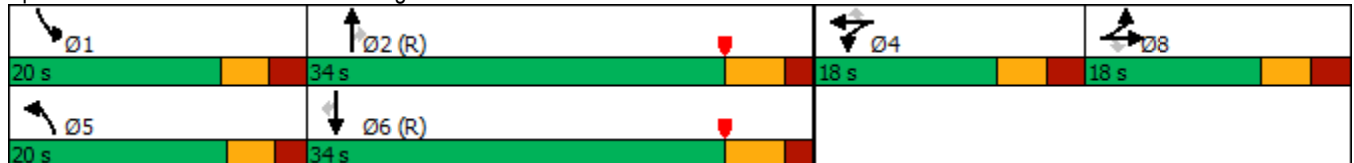
Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕	↕	↕	↕	↕	↕↕	↕	↕	↕↕	↕
Traffic Volume (vph)	10	34	9	111	64	729	54	157	756	39
Future Volume (vph)	10	34	9	111	64	729	54	157	756	39
Turn Type	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8		4		5	2		1	6	
Permitted Phases		8		4			2			6
Detector Phase	8	8	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.0	11.0	24.1	24.1	11.0	24.1	24.1
Total Split (s)	18.0	18.0	18.0	18.0	20.0	34.0	34.0	20.0	34.0	34.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	22.2%	37.8%	37.8%	22.2%	37.8%	37.8%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.8	2.8	2.5	2.5	2.2	2.0	2.0	2.6	2.0	2.0
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)	6.2	6.2	5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	7.7	7.7	8.8	8.8	8.6	41.4	41.4	12.7	49.3	49.3
Actuated g/C Ratio	0.09	0.09	0.10	0.10	0.10	0.46	0.46	0.14	0.55	0.55
v/c Ratio	0.29	0.11	0.39	0.35	0.38	0.45	0.07	0.63	0.39	0.04
Control Delay	42.7	0.8	43.9	3.8	56.5	10.7	1.0	51.8	14.1	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.7	0.8	43.9	3.8	56.5	10.7	1.0	51.8	14.1	0.7
LOS	D	A	D	A	E	B	A	D	B	A
Approach Delay	24.4		19.0			13.5			19.7	
Approach LOS	C		B			B			B	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 29 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 17.3
 Intersection Capacity Utilization 54.1%
 Analysis Period (min) 15

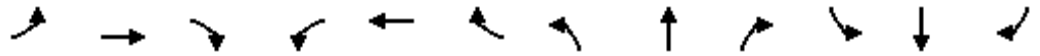
Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 10: Main St. & Kroger/Lowes



HCM Signalized Intersection Capacity Analysis
 10: Main St. & Kroger/Lowes

2030 Build
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↗	↕↕	↗	↗	↕↕	↗
Traffic Volume (vph)	34	10	34	59	9	111	64	729	54	157	756	39
Future Volume (vph)	34	10	34	59	9	111	64	729	54	157	756	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1793	1583		1785	1583	1770	3539	1583	1770	3539	1583
Flt Permitted		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1793	1583		1785	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	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. Flow (vph)	34	10	34	59	9	111	64	729	54	157	756	39
RTOR Reduction (vph)	0	0	32	0	0	102	0	0	31	0	0	20
Lane Group Flow (vph)	0	44	2	0	68	9	64	729	23	157	756	19
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases			8			4			2			6
Actuated Green, G (s)		6.6	6.6		7.7	7.7	7.5	39.0	39.0	12.7	44.6	44.6
Effective Green, g (s)		6.6	6.6		7.7	7.7	7.5	39.0	39.0	12.7	44.6	44.6
Actuated g/C Ratio		0.07	0.07		0.09	0.09	0.08	0.43	0.43	0.14	0.50	0.50
Clearance Time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		131	116		152	135	147	1533	685	249	1753	784
v/s Ratio Prot		c0.02			c0.04		0.04	c0.21		c0.09	c0.21	
v/s Ratio Perm			0.00			0.01			0.01			0.01
v/c Ratio		0.34	0.02		0.45	0.07	0.44	0.48	0.03	0.63	0.43	0.02
Uniform Delay, d1		39.6	38.7		39.1	37.9	39.2	18.2	14.7	36.4	14.6	11.6
Progression Factor		1.00	1.00		1.00	1.00	1.35	0.48	1.00	1.14	0.80	1.00
Incremental Delay, d2		1.5	0.1		2.1	0.2	2.0	1.0	0.1	4.9	0.7	0.1
Delay (s)		41.1	38.8		41.2	38.1	54.8	9.8	14.8	46.3	12.4	11.6
Level of Service		D	D		D	D	D	A	B	D	B	B
Approach Delay (s)		40.1			39.3			13.5			18.0	
Approach LOS		D			D			B			B	

Intersection Summary		
HCM 2000 Control Delay	18.8	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.49	B
Actuated Cycle Length (s)	90.0	Sum of lost time (s)
Intersection Capacity Utilization	54.1%	24.0
Analysis Period (min)	15	ICU Level of Service
		A

c Critical Lane Group

Timings
10: Main St. & Kroger/Lowes

Background 2035
AM Peak



Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↖	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (vph)	10	34	9	111	64	683	54	157	730	39
Future Volume (vph)	10	34	9	111	64	683	54	157	730	39
Turn Type	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8		4		5	2		1	6	
Permitted Phases		8		4			2			6
Detector Phase	8	8	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.0	11.0	24.1	24.1	11.0	24.1	24.1
Total Split (s)	18.0	18.0	18.0	18.0	20.0	34.0	34.0	20.0	34.0	34.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	22.2%	37.8%	37.8%	22.2%	37.8%	37.8%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.8	2.8	2.5	2.5	2.2	2.0	2.0	2.6	2.0	2.0
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)	6.2	6.2	5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	7.7	7.7	8.8	8.8	8.6	41.4	41.4	12.7	49.3	49.3
Actuated g/C Ratio	0.09	0.09	0.10	0.10	0.10	0.46	0.46	0.14	0.55	0.55
v/c Ratio	0.29	0.11	0.39	0.35	0.38	0.42	0.07	0.63	0.38	0.04
Control Delay	42.7	0.8	43.9	3.8	55.7	10.4	1.1	54.9	15.5	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.7	0.8	43.9	3.8	55.7	10.4	1.1	54.9	15.5	1.6
LOS	D	A	D	A	E	B	A	D	B	A
Approach Delay	24.4		19.0			13.4			21.6	
Approach LOS	C		B			B			C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 29 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 18.1
 Intersection Capacity Utilization 52.8%
 Analysis Period (min) 15

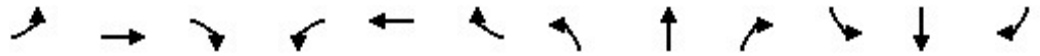
Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 10: Main St. & Kroger/Lowes



HCM Signalized Intersection Capacity Analysis
 10: Main St. & Kroger/Lowes

Background 2035
 AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (vph)	34	10	34	59	9	111	64	683	54	157	730	39
Future Volume (vph)	34	10	34	59	9	111	64	683	54	157	730	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1793	1583		1785	1583	1770	3539	1583	1770	3539	1583
Flt Permitted		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1793	1583		1785	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	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. Flow (vph)	34	10	34	59	9	111	64	683	54	157	730	39
RTOR Reduction (vph)	0	0	32	0	0	102	0	0	31	0	0	20
Lane Group Flow (vph)	0	44	2	0	68	9	64	683	23	157	730	19
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases			8			4			2			6
Actuated Green, G (s)		6.6	6.6		7.7	7.7	7.5	39.0	39.0	12.7	44.6	44.6
Effective Green, g (s)		6.6	6.6		7.7	7.7	7.5	39.0	39.0	12.7	44.6	44.6
Actuated g/C Ratio		0.07	0.07		0.09	0.09	0.08	0.43	0.43	0.14	0.50	0.50
Clearance Time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		131	116		152	135	147	1533	685	249	1753	784
v/s Ratio Prot		c0.02			c0.04		0.04	c0.19		c0.09	c0.21	
v/s Ratio Perm			0.00			0.01			0.01			0.01
v/c Ratio		0.34	0.02		0.45	0.07	0.44	0.45	0.03	0.63	0.42	0.02
Uniform Delay, d1		39.6	38.7		39.1	37.9	39.2	17.9	14.7	36.4	14.4	11.6
Progression Factor		1.00	1.00		1.00	1.00	1.32	0.48	1.00	1.22	0.89	1.00
Incremental Delay, d2		1.5	0.1		2.1	0.2	2.0	0.9	0.1	4.9	0.7	0.1
Delay (s)		41.1	38.8		41.2	38.1	54.0	9.5	14.8	49.5	13.6	11.6
Level of Service		D	D		D	D	D	A	B	D	B	B
Approach Delay (s)		40.1			39.3			13.4			19.6	
Approach LOS		D			D			B			B	

Intersection Summary		
HCM 2000 Control Delay	19.7	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.47	B
Actuated Cycle Length (s)	90.0	Sum of lost time (s)
Intersection Capacity Utilization	52.8%	24.0
Analysis Period (min)	15	ICU Level of Service
		A

c Critical Lane Group

Timings
10: Main St. & Kroger/Lowes

2035 Build
Timing Plan: AM Peak



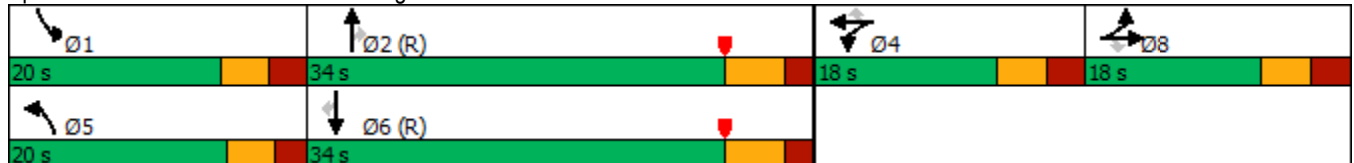
Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕	↗	↕	↗	↘	↕	↗	↘	↕	↗
Traffic Volume (vph)	10	34	9	111	64	758	54	157	782	39
Future Volume (vph)	10	34	9	111	64	758	54	157	782	39
Turn Type	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8		4		5	2		1	6	
Permitted Phases		8		4			2			6
Detector Phase	8	8	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.0	11.0	24.1	24.1	11.0	24.1	24.1
Total Split (s)	18.0	18.0	18.0	18.0	20.0	34.0	34.0	20.0	34.0	34.0
Total Split (%)	20.0%	20.0%	20.0%	20.0%	22.2%	37.8%	37.8%	22.2%	37.8%	37.8%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.8	2.8	2.5	2.5	2.2	2.0	2.0	2.6	2.0	2.0
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)	6.2	6.2	5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	7.7	7.7	8.8	8.8	8.6	41.4	41.4	12.7	49.3	49.3
Actuated g/C Ratio	0.09	0.09	0.10	0.10	0.10	0.46	0.46	0.14	0.55	0.55
v/c Ratio	0.29	0.11	0.39	0.35	0.38	0.47	0.07	0.63	0.40	0.04
Control Delay	42.7	0.8	43.9	3.8	56.9	10.8	1.0	52.0	14.5	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.7	0.8	43.9	3.8	56.9	10.8	1.0	52.0	14.5	0.4
LOS	D	A	D	A	E	B	A	D	B	A
Approach Delay	24.4		19.0			13.5			20.0	
Approach LOS	C		B			B			C	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 29 (32%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.63
 Intersection Signal Delay: 17.4
 Intersection Capacity Utilization 54.9%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 10: Main St. & Kroger/Lowes



HCM Signalized Intersection Capacity Analysis

10: Main St. & Kroger/Lowes

2035 Build
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↗	↕↕	↗	↗	↕↕	↗
Traffic Volume (vph)	34	10	34	59	9	111	64	758	54	157	782	39
Future Volume (vph)	34	10	34	59	9	111	64	758	54	157	782	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1793	1583		1785	1583	1770	3539	1583	1770	3539	1583
Flt Permitted		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1793	1583		1785	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	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. Flow (vph)	34	10	34	59	9	111	64	758	54	157	782	39
RTOR Reduction (vph)	0	0	32	0	0	102	0	0	31	0	0	20
Lane Group Flow (vph)	0	44	2	0	68	9	64	758	23	157	782	19
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases			8			4			2			6
Actuated Green, G (s)		6.6	6.6		7.7	7.7	7.5	39.0	39.0	12.7	44.6	44.6
Effective Green, g (s)		6.6	6.6		7.7	7.7	7.5	39.0	39.0	12.7	44.6	44.6
Actuated g/C Ratio		0.07	0.07		0.09	0.09	0.08	0.43	0.43	0.14	0.50	0.50
Clearance Time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		131	116		152	135	147	1533	685	249	1753	784
v/s Ratio Prot		c0.02			c0.04		0.04	c0.21		c0.09	c0.22	
v/s Ratio Perm			0.00			0.01			0.01			0.01
v/c Ratio		0.34	0.02		0.45	0.07	0.44	0.49	0.03	0.63	0.45	0.02
Uniform Delay, d1		39.6	38.7		39.1	37.9	39.2	18.4	14.7	36.4	14.7	11.6
Progression Factor		1.00	1.00		1.00	1.00	1.36	0.48	1.00	1.14	0.82	1.00
Incremental Delay, d2		1.5	0.1		2.1	0.2	2.0	1.1	0.1	4.9	0.8	0.1
Delay (s)		41.1	38.8		41.2	38.1	55.3	9.9	14.8	46.5	12.9	11.6
Level of Service		D	D		D	D	E	A	B	D	B	B
Approach Delay (s)		40.1			39.3			13.5			18.2	
Approach LOS		D			D			B			B	

Intersection Summary

HCM 2000 Control Delay	18.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	54.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
10: Main St. & Kroger/Lowes

Existing
PM Peak



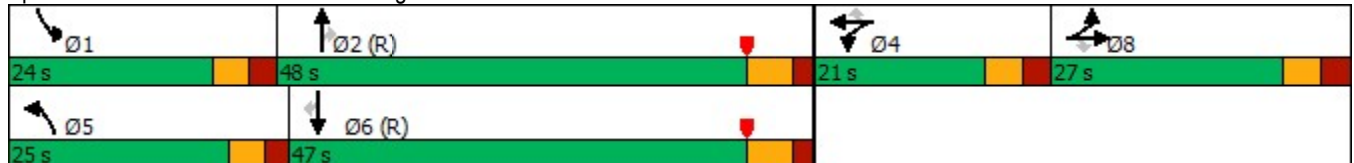
Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↖	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (vph)	21	131	33	166	179	719	67	175	786	89
Future Volume (vph)	21	131	33	166	179	719	67	175	786	89
Turn Type	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8		4		5	2		1	6	
Permitted Phases		8		4			2			6
Detector Phase	8	8	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.0	11.0	24.1	24.1	11.0	24.1	24.1
Total Split (s)	27.0	27.0	21.0	21.0	25.0	48.0	48.0	24.0	47.0	47.0
Total Split (%)	22.5%	22.5%	17.5%	17.5%	20.8%	40.0%	40.0%	20.0%	39.2%	39.2%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.8	2.8	2.5	2.5	2.2	2.0	2.0	2.6	2.0	2.0
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)	6.2	6.2	5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effect Green (s)	14.3	14.3	13.2	13.2	16.7	52.2	52.2	16.2	52.1	52.1
Actuated g/C Ratio	0.12	0.12	0.11	0.11	0.14	0.44	0.44	0.14	0.43	0.43
v/c Ratio	0.63	0.43	0.70	0.52	0.72	0.47	0.09	0.73	0.51	0.12
Control Delay	63.2	11.4	70.2	13.2	86.8	15.9	0.9	82.8	17.5	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.2	11.4	70.2	13.2	86.8	15.9	0.9	82.8	17.5	1.8
LOS	E	B	E	B	F	B	A	F	B	A
Approach Delay	37.7		39.1			28.0			27.1	
Approach LOS	D		D			C			C	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 83 (69%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 85
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 29.9
 Intersection Capacity Utilization 60.5%
 Analysis Period (min) 15























Intersection LOS: C
 ICU Level of Service B

Splits and Phases: 10: Main St. & Kroger/Lowes



HCM Signalized Intersection Capacity Analysis
 10: Main St. & Kroger/Lowes

Existing
 PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	114	21	131	105	33	166	179	719	67	175	786	89
Future Volume (vph)	114	21	131	105	33	166	179	719	67	175	786	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1787	1583		1794	1583	1770	3539	1583	1770	3539	1583
Flt Permitted		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1787	1583		1794	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	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. Flow (vph)	114	21	131	105	33	166	179	719	67	175	786	89
RTOR Reduction (vph)	0	0	115	0	0	148	0	0	38	0	0	50
Lane Group Flow (vph)	0	135	16	0	138	18	179	719	29	175	786	39
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases			8			4			2			6
Actuated Green, G (s)		14.3	14.3		13.2	13.2	16.7	52.3	52.3	16.2	52.2	52.2
Effective Green, g (s)		14.3	14.3		13.2	13.2	16.7	52.3	52.3	16.2	52.2	52.2
Actuated g/C Ratio		0.12	0.12		0.11	0.11	0.14	0.44	0.44	0.13	0.44	0.44
Clearance Time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		212	188		197	174	246	1542	689	238	1539	688
v/s Ratio Prot		c0.08			c0.08		c0.10	0.20		0.10	c0.22	
v/s Ratio Perm			0.01			0.01			0.02			0.02
v/c Ratio		0.64	0.08		0.70	0.10	0.73	0.47	0.04	0.74	0.51	0.06
Uniform Delay, d1		50.4	47.0		51.5	48.1	49.5	24.0	19.5	49.8	24.6	19.6
Progression Factor		1.00	1.00		1.00	1.00	1.45	0.57	1.00	1.33	0.61	1.30
Incremental Delay, d2		6.1	0.2		10.7	0.3	9.5	0.9	0.1	10.6	1.1	0.1
Delay (s)		56.5	47.2		62.2	48.3	81.3	14.7	19.6	76.9	16.2	25.6
Level of Service		E	D		E	D	F	B	B	E	B	C
Approach Delay (s)		51.9			54.6			27.4			27.1	
Approach LOS		D			D			C			C	
Intersection Summary												
HCM 2000 Control Delay			33.0									HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio			0.59									
Actuated Cycle Length (s)			120.0								24.0	
Intersection Capacity Utilization			60.5%									ICU Level of Service B
Analysis Period (min)			15									

c Critical Lane Group

Timings
10: Main St. & Kroger/Lowes

Background 2030
PM Peak



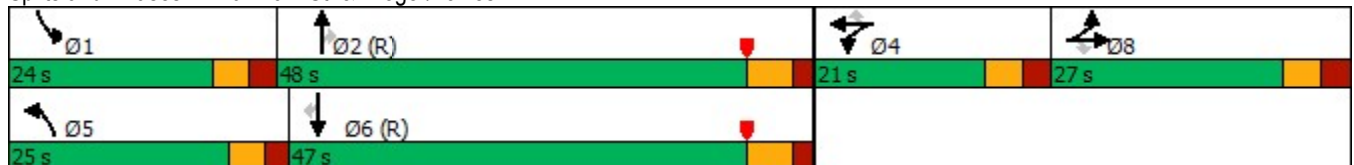
Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↖	↗	↖	↖↗	↗	↖	↖↗	↗
Traffic Volume (vph)	21	131	33	166	179	905	67	175	995	89
Future Volume (vph)	21	131	33	166	179	905	67	175	995	89
Turn Type	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8		4		5	2		1	6	
Permitted Phases		8		4			2			6
Detector Phase	8	8	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.0	11.0	24.1	24.1	11.0	24.1	24.1
Total Split (s)	27.0	27.0	21.0	21.0	25.0	48.0	48.0	24.0	47.0	47.0
Total Split (%)	22.5%	22.5%	17.5%	17.5%	20.8%	40.0%	40.0%	20.0%	39.2%	39.2%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.8	2.8	2.5	2.5	2.2	2.0	2.0	2.6	2.0	2.0
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)	6.2	6.2	5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	14.3	14.3	13.2	13.2	16.7	52.2	52.2	16.2	52.1	52.1
Actuated g/C Ratio	0.12	0.12	0.11	0.11	0.14	0.44	0.44	0.14	0.43	0.43
v/c Ratio	0.63	0.43	0.70	0.52	0.72	0.59	0.09	0.73	0.65	0.12
Control Delay	63.2	11.4	70.2	13.2	87.5	17.0	0.6	82.6	16.4	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.2	11.4	70.2	13.2	87.5	17.0	0.6	82.6	16.4	1.3
LOS	E	B	E	B	F	B	A	F	B	A
Approach Delay	37.7		39.1			27.0			24.6	
Approach LOS	D		D			C			C	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 83 (69%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 28.2
 Intersection Capacity Utilization 66.3%
 Analysis Period (min) 15























Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 10: Main St. & Kroger/Lowes



HCM Signalized Intersection Capacity Analysis
 10: Main St. & Kroger/Lowes

Background 2030
 PM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	114	21	131	105	33	166	179	905	67	175	995	89	
Future Volume (vph)	114	21	131	105	33	166	179	905	67	175	995	89	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)		1787	1583		1794	1583	1770	3539	1583	1770	3539	1583	
Flt Permitted		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (perm)		1787	1583		1794	1583	1770	3539	1583	1770	3539	1583	
Peak-hour factor, PHF	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. Flow (vph)	114	21	131	105	33	166	179	905	67	175	995	89	
RTOR Reduction (vph)	0	0	115	0	0	148	0	0	38	0	0	50	
Lane Group Flow (vph)	0	135	16	0	138	18	179	905	29	175	995	39	
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	8	8		4	4		5	2		1	6		
Permitted Phases			8			4			2			6	
Actuated Green, G (s)		14.3	14.3		13.2	13.2	16.7	52.3	52.3	16.2	52.2	52.2	
Effective Green, g (s)		14.3	14.3		13.2	13.2	16.7	52.3	52.3	16.2	52.2	52.2	
Actuated g/C Ratio		0.12	0.12		0.11	0.11	0.14	0.44	0.44	0.13	0.44	0.44	
Clearance Time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		212	188		197	174	246	1542	689	238	1539	688	
v/s Ratio Prot		c0.08			c0.08		c0.10	0.26		0.10	c0.28		
v/s Ratio Perm			0.01			0.01			0.02			0.02	
v/c Ratio		0.64	0.08		0.70	0.10	0.73	0.59	0.04	0.74	0.65	0.06	
Uniform Delay, d1		50.4	47.0		51.5	48.1	49.5	25.7	19.5	49.8	26.6	19.6	
Progression Factor		1.00	1.00		1.00	1.00	1.48	0.56	1.00	1.34	0.50	0.87	
Incremental Delay, d2		6.1	0.2		10.7	0.3	9.0	1.4	0.1	10.2	1.9	0.1	
Delay (s)		56.5	47.2		62.2	48.3	82.2	15.8	19.6	76.9	15.2	17.2	
Level of Service		E	D		E	D	F	B	B	E	B	B	
Approach Delay (s)		51.9			54.6			26.3			23.9		
Approach LOS		D			D			C			C		
Intersection Summary													
HCM 2000 Control Delay			30.5									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.67										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	24.0
Intersection Capacity Utilization			66.3%									ICU Level of Service	C
Analysis Period (min)			15										

c Critical Lane Group

Timings
10: Main St. & Kroger/Lowes

2030 Build
Timing Plan: PM Peak



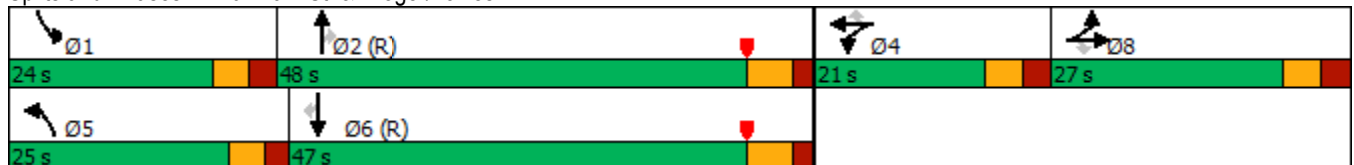
Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕	↕	↕	↕	↕	↕↕	↕	↕	↕↕	↕
Traffic Volume (vph)	21	131	33	166	179	964	67	175	1065	89
Future Volume (vph)	21	131	33	166	179	964	67	175	1065	89
Turn Type	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8		4		5	2		1	6	
Permitted Phases		8		4			2			6
Detector Phase	8	8	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.0	11.0	24.1	24.1	11.0	24.1	24.1
Total Split (s)	27.0	27.0	21.0	21.0	25.0	48.0	48.0	24.0	47.0	47.0
Total Split (%)	22.5%	22.5%	17.5%	17.5%	20.8%	40.0%	40.0%	20.0%	39.2%	39.2%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.8	2.8	2.5	2.5	2.2	2.0	2.0	2.6	2.0	2.0
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)	6.2	6.2	5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	14.3	14.3	13.2	13.2	16.7	52.2	52.2	16.2	52.1	52.1
Actuated g/C Ratio	0.12	0.12	0.11	0.11	0.14	0.44	0.44	0.14	0.43	0.43
v/c Ratio	0.63	0.43	0.70	0.52	0.72	0.63	0.09	0.73	0.69	0.12
Control Delay	63.2	11.4	70.2	13.2	81.9	11.8	0.6	79.1	20.7	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.2	11.4	70.2	13.2	81.9	11.8	0.6	79.1	20.7	1.5
LOS	E	B	E	B	F	B	A	E	C	A
Approach Delay	37.7		39.1			21.5			27.1	
Approach LOS	D		D			C			C	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 83 (69%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 27.0
 Intersection Capacity Utilization 68.2%
 Analysis Period (min) 15

Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 10: Main St. & Kroger/Lowes



HCM Signalized Intersection Capacity Analysis
 10: Main St. & Kroger/Lowes

2030 Build
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↖	↗		↖	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	114	21	131	105	33	166	179	964	67	175	1065	89
Future Volume (vph)	114	21	131	105	33	166	179	964	67	175	1065	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1787	1583		1794	1583	1770	3539	1583	1770	3539	1583
Flt Permitted		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1787	1583		1794	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	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. Flow (vph)	114	21	131	105	33	166	179	964	67	175	1065	89
RTOR Reduction (vph)	0	0	115	0	0	148	0	0	38	0	0	50
Lane Group Flow (vph)	0	135	16	0	138	18	179	964	29	175	1065	39
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases			8			4			2			6
Actuated Green, G (s)		14.3	14.3		13.2	13.2	16.7	52.3	52.3	16.2	52.2	52.2
Effective Green, g (s)		14.3	14.3		13.2	13.2	16.7	52.3	52.3	16.2	52.2	52.2
Actuated g/C Ratio		0.12	0.12		0.11	0.11	0.14	0.44	0.44	0.13	0.44	0.44
Clearance Time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		212	188		197	174	246	1542	689	238	1539	688
v/s Ratio Prot		c0.08			c0.08		c0.10	0.27		0.10	c0.30	
v/s Ratio Perm			0.01			0.01			0.02			0.02
v/c Ratio		0.64	0.08		0.70	0.10	0.73	0.63	0.04	0.74	0.69	0.06
Uniform Delay, d1		50.4	47.0		51.5	48.1	49.5	26.2	19.5	49.8	27.4	19.6
Progression Factor		1.00	1.00		1.00	1.00	1.37	0.36	1.00	1.27	0.60	1.03
Incremental Delay, d2		6.1	0.2		10.7	0.3	8.8	1.6	0.1	10.1	2.3	0.1
Delay (s)		56.5	47.2		62.2	48.3	76.7	11.0	19.6	73.4	18.8	20.3
Level of Service		E	D		E	D	E	B	B	E	B	C
Approach Delay (s)		51.9			54.6			21.2			26.1	
Approach LOS		D			D			C			C	

Intersection Summary		
HCM 2000 Control Delay	29.2	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.69	C
Actuated Cycle Length (s)	120.0	Sum of lost time (s)
Intersection Capacity Utilization	68.2%	ICU Level of Service
Analysis Period (min)	15	C

c Critical Lane Group

Timings
10: Main St. & Kroger/Lowes

Background 2035
PM Peak



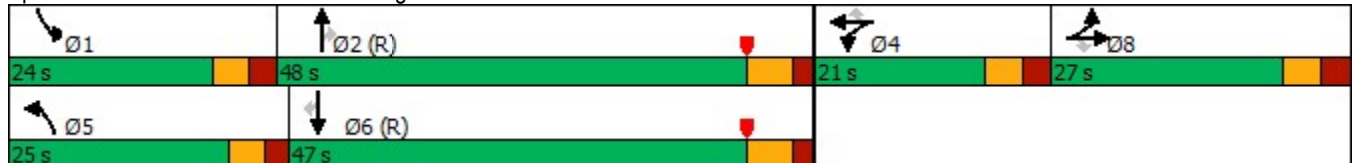
Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↕ ↕	↖ ↗	↖ ↗	↕ ↕	↖ ↗
Traffic Volume (vph)	21	131	33	166	179	941	67	175	1035	89
Future Volume (vph)	21	131	33	166	179	941	67	175	1035	89
Turn Type	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8		4		5	2		1	6	
Permitted Phases		8		4			2			6
Detector Phase	8	8	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.0	11.0	24.1	24.1	11.0	24.1	24.1
Total Split (s)	27.0	27.0	21.0	21.0	25.0	48.0	48.0	24.0	47.0	47.0
Total Split (%)	22.5%	22.5%	17.5%	17.5%	20.8%	40.0%	40.0%	20.0%	39.2%	39.2%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.8	2.8	2.5	2.5	2.2	2.0	2.0	2.6	2.0	2.0
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)	6.2	6.2	5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	14.3	14.3	13.2	13.2	16.7	52.2	52.2	16.2	52.1	52.1
Actuated g/C Ratio	0.12	0.12	0.11	0.11	0.14	0.44	0.44	0.14	0.43	0.43
v/c Ratio	0.63	0.43	0.70	0.52	0.72	0.61	0.09	0.73	0.67	0.12
Control Delay	63.2	11.4	70.2	13.2	87.5	16.9	0.6	82.1	16.6	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.2	11.4	70.2	13.2	87.5	16.9	0.6	82.1	16.6	1.3
LOS	E	B	E	B	F	B	A	F	B	A
Approach Delay	37.7		39.1			26.6			24.4	
Approach LOS	D		D			C			C	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 83 (69%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 27.9
 Intersection Capacity Utilization 67.4%
 Analysis Period (min) 15























Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 10: Main St. & Kroger/Lowes



HCM Signalized Intersection Capacity Analysis
10: Main St. & Kroger/Lowes

Background 2035
PM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	114	21	131	105	33	166	179	941	67	175	1035	89	
Future Volume (vph)	114	21	131	105	33	166	179	941	67	175	1035	89	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)		1787	1583		1794	1583	1770	3539	1583	1770	3539	1583	
Flt Permitted		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (perm)		1787	1583		1794	1583	1770	3539	1583	1770	3539	1583	
Peak-hour factor, PHF	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. Flow (vph)	114	21	131	105	33	166	179	941	67	175	1035	89	
RTOR Reduction (vph)	0	0	115	0	0	148	0	0	38	0	0	50	
Lane Group Flow (vph)	0	135	16	0	138	18	179	941	29	175	1035	39	
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	8	8		4	4		5	2		1	6		
Permitted Phases			8			4			2			6	
Actuated Green, G (s)		14.3	14.3		13.2	13.2	16.7	52.3	52.3	16.2	52.2	52.2	
Effective Green, g (s)		14.3	14.3		13.2	13.2	16.7	52.3	52.3	16.2	52.2	52.2	
Actuated g/C Ratio		0.12	0.12		0.11	0.11	0.14	0.44	0.44	0.13	0.44	0.44	
Clearance Time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		212	188		197	174	246	1542	689	238	1539	688	
v/s Ratio Prot		c0.08			c0.08		c0.10	0.27		0.10	c0.29		
v/s Ratio Perm			0.01			0.01			0.02			0.02	
v/c Ratio		0.64	0.08		0.70	0.10	0.73	0.61	0.04	0.74	0.67	0.06	
Uniform Delay, d1		50.4	47.0		51.5	48.1	49.5	26.0	19.5	49.8	27.1	19.6	
Progression Factor		1.00	1.00		1.00	1.00	1.48	0.54	1.00	1.33	0.48	0.83	
Incremental Delay, d2		6.1	0.2		10.7	0.3	8.9	1.6	0.1	10.1	2.1	0.1	
Delay (s)		56.5	47.2		62.2	48.3	82.4	15.7	19.6	76.4	15.1	16.5	
Level of Service		E	D		E	D	F	B	B	E	B	B	
Approach Delay (s)		51.9			54.6			26.0			23.4		
Approach LOS		D			D			C			C		
Intersection Summary													
HCM 2000 Control Delay			30.0									HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.68										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	24.0
Intersection Capacity Utilization			67.4%									ICU Level of Service	C
Analysis Period (min)			15										

c Critical Lane Group

Timings
10: Main St. & Kroger/Lowes

2035 Build
Timing Plan: PM Peak



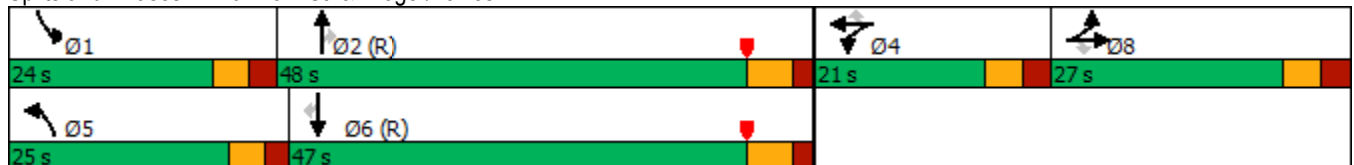
Lane Group	EBT	EBR	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕	↕	↕	↕	↕	↕↕	↕	↕	↕↕	↕
Traffic Volume (vph)	21	131	33	166	179	1000	67	175	1105	89
Future Volume (vph)	21	131	33	166	179	1000	67	175	1105	89
Turn Type	NA	Perm	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8		4		5	2		1	6	
Permitted Phases		8		4			2			6
Detector Phase	8	8	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.2	24.2	24.0	24.0	11.0	24.1	24.1	11.0	24.1	24.1
Total Split (s)	27.0	27.0	21.0	21.0	25.0	48.0	48.0	24.0	47.0	47.0
Total Split (%)	22.5%	22.5%	17.5%	17.5%	20.8%	40.0%	40.0%	20.0%	39.2%	39.2%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.8	2.8	2.5	2.5	2.2	2.0	2.0	2.6	2.0	2.0
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)	6.2	6.2	5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	14.3	14.3	13.2	13.2	16.7	52.2	52.2	16.2	52.1	52.1
Actuated g/C Ratio	0.12	0.12	0.11	0.11	0.14	0.44	0.44	0.14	0.43	0.43
v/c Ratio	0.63	0.43	0.70	0.52	0.72	0.65	0.09	0.73	0.72	0.12
Control Delay	63.2	11.4	70.2	13.2	81.8	12.3	0.6	78.9	18.8	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.2	11.4	70.2	13.2	81.8	12.3	0.6	78.9	18.8	1.6
LOS	E	B	E	B	F	B	A	E	B	A
Approach Delay	37.7		39.1			21.6			25.4	
Approach LOS	D		D			C			C	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 83 (69%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 95
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 26.2
 Intersection Capacity Utilization 69.3%
 Analysis Period (min) 15

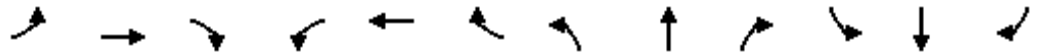
Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 10: Main St. & Kroger/Lowes



HCM Signalized Intersection Capacity Analysis
 10: Main St. & Kroger/Lowes

2035 Build
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗	↗	↕↕	↗	↗	↕↕	↗
Traffic Volume (vph)	114	21	131	105	33	166	179	1000	67	175	1105	89
Future Volume (vph)	114	21	131	105	33	166	179	1000	67	175	1105	89
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		1.00	0.85		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1787	1583		1794	1583	1770	3539	1583	1770	3539	1583
Flt Permitted		0.96	1.00		0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)		1787	1583		1794	1583	1770	3539	1583	1770	3539	1583
Peak-hour factor, PHF	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. Flow (vph)	114	21	131	105	33	166	179	1000	67	175	1105	89
RTOR Reduction (vph)	0	0	115	0	0	148	0	0	38	0	0	50
Lane Group Flow (vph)	0	135	16	0	138	18	179	1000	29	175	1105	39
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases			8			4			2			6
Actuated Green, G (s)		14.3	14.3		13.2	13.2	16.7	52.3	52.3	16.2	52.2	52.2
Effective Green, g (s)		14.3	14.3		13.2	13.2	16.7	52.3	52.3	16.2	52.2	52.2
Actuated g/C Ratio		0.12	0.12		0.11	0.11	0.14	0.44	0.44	0.13	0.44	0.44
Clearance Time (s)		6.2	6.2		5.9	5.9	5.4	6.1	6.1	5.8	6.1	6.1
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		212	188		197	174	246	1542	689	238	1539	688
v/s Ratio Prot		c0.08			c0.08		c0.10	0.28		0.10	c0.31	
v/s Ratio Perm			0.01			0.01			0.02			0.02
v/c Ratio		0.64	0.08		0.70	0.10	0.73	0.65	0.04	0.74	0.72	0.06
Uniform Delay, d1		50.4	47.0		51.5	48.1	49.5	26.6	19.5	49.8	27.9	19.6
Progression Factor		1.00	1.00		1.00	1.00	1.37	0.36	1.00	1.27	0.51	1.15
Incremental Delay, d2		6.1	0.2		10.7	0.3	8.7	1.8	0.1	9.8	2.5	0.1
Delay (s)		56.5	47.2		62.2	48.3	76.7	11.4	19.6	73.4	16.9	22.7
Level of Service		E	D		E	D	E	B	B	E	B	C
Approach Delay (s)		51.9			54.6			21.2			24.5	
Approach LOS		D			D			C			C	

Intersection Summary

HCM 2000 Control Delay	28.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	24.0
Intersection Capacity Utilization	69.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Timings
11: Main St. & Walmart

Existing
AM Peak

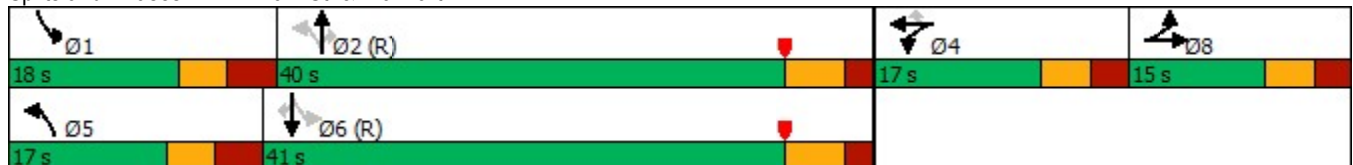


Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↖	↗	↖	↖	↕	↖	↖	↕	↖
Traffic Volume (vph)	2	83	4	43	5	622	84	49	555	32
Future Volume (vph)	2	83	4	43	5	622	84	49	555	32
Turn Type	NA	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8	4	4		5	2		1	6	
Permitted Phases				4	2		2	6		6
Detector Phase	8	4	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.4	26.2	26.2	11.6	24.1	24.1
Total Split (s)	15.0	17.0	17.0	17.0	17.0	40.0	40.0	18.0	41.0	41.0
Total Split (%)	16.7%	18.9%	18.9%	18.9%	18.9%	44.4%	44.4%	20.0%	45.6%	45.6%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	3.2	2.0	2.0	3.4	2.0	2.0
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)	5.9	5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	7.0	7.8	7.8	7.8	59.1	57.2	57.2	62.8	63.0	63.0
Actuated g/C Ratio	0.08	0.09	0.09	0.09	0.66	0.64	0.64	0.70	0.70	0.70
v/c Ratio	0.22	0.29	0.30	0.14	0.01	0.28	0.08	0.09	0.22	0.03
Control Delay	39.3	43.0	43.1	1.0	7.2	8.9	0.1	15.5	16.4	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	43.0	43.1	1.0	7.2	8.9	0.1	15.5	16.4	1.4
LOS	D	D	D	A	A	A	A	B	B	A
Approach Delay	39.3		29.1			7.8			15.5	
Approach LOS	D		C			A			B	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 11 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.30
 Intersection Signal Delay: 13.6
 Intersection Capacity Utilization 45.3%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A























Splits and Phases: 11: Main St. & Walmart



HCM Signalized Intersection Capacity Analysis

11: Main St. & Walmart

Existing
AM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	26	2	3	83	4	43	5	622	84	49	555	32	
Future Volume (vph)	26	2	3	83	4	43	5	622	84	49	555	32	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1	
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frt		0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected		0.96		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)		1764		1681	1693	1583	1770	3539	1583	1770	3539	1583	
Flt Permitted		0.96		0.95	0.96	1.00	0.44	1.00	1.00	0.37	1.00	1.00	
Satd. Flow (perm)		1764		1681	1693	1583	827	3539	1583	687	3539	1583	
Peak-hour factor, PHF	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. Flow (vph)	26	2	3	83	4	43	5	622	84	49	555	32	
RTOR Reduction (vph)	0	3	0	0	0	40	0	0	37	0	0	13	
Lane Group Flow (vph)	0	28	0	43	44	3	5	622	47	49	555	19	
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	8	8		4	4		5	2		1	6		
Permitted Phases						4	2		2	6		6	
Actuated Green, G (s)		4.7		6.7	6.7	6.7	51.1	49.9	49.9	57.3	53.1	53.1	
Effective Green, g (s)		4.7		6.7	6.7	6.7	51.1	49.9	49.9	57.3	53.1	53.1	
Actuated g/C Ratio		0.05		0.07	0.07	0.07	0.57	0.55	0.55	0.64	0.59	0.59	
Clearance Time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		92		125	126	117	482	1962	877	487	2088	933	
v/s Ratio Prot		c0.02		0.03	c0.03		0.00	c0.18		c0.00	c0.16		
v/s Ratio Perm						0.00	0.01		0.03	0.06		0.01	
v/c Ratio		0.31		0.34	0.35	0.03	0.01	0.32	0.05	0.10	0.27	0.02	
Uniform Delay, d1		41.1		39.6	39.6	38.6	8.4	10.8	9.2	6.3	9.0	7.7	
Progression Factor		1.00		1.00	1.00	1.00	0.92	0.72	1.00	2.16	1.95	1.00	
Incremental Delay, d2		1.9		1.7	1.7	0.1	0.0	0.4	0.1	0.1	0.3	0.0	
Delay (s)		43.0		41.2	41.3	38.7	7.8	8.2	9.3	13.7	17.8	7.7	
Level of Service		D		D	D	D	A	A	A	B	B	A	
Approach Delay (s)		43.0			40.4			8.3			17.0		
Approach LOS		D			D			A			B		
Intersection Summary													
HCM 2000 Control Delay			15.5		HCM 2000 Level of Service					B			
HCM 2000 Volume to Capacity ratio			0.31										
Actuated Cycle Length (s)			90.0		Sum of lost time (s)					24.5			
Intersection Capacity Utilization			45.3%		ICU Level of Service					A			
Analysis Period (min)			15										

c Critical Lane Group

Timings
11: Main St. & Walmart

Background 2030
AM Peak



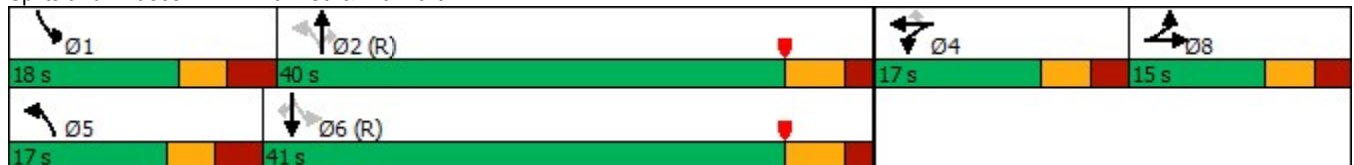
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↖	↗	↗	↖	↑↑	↗	↖	↑↑	↗
Traffic Volume (vph)	2	83	4	43	5	712	84	49	744	32
Future Volume (vph)	2	83	4	43	5	712	84	49	744	32
Turn Type	NA	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8	4	4		5	2		1	6	
Permitted Phases				4	2		2	6		6
Detector Phase	8	4	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.4	26.2	26.2	11.6	24.1	24.1
Total Split (s)	15.0	17.0	17.0	17.0	17.0	40.0	40.0	18.0	41.0	41.0
Total Split (%)	16.7%	18.9%	18.9%	18.9%	18.9%	44.4%	44.4%	20.0%	45.6%	45.6%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	3.2	2.0	2.0	3.4	2.0	2.0
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)	5.9	5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	7.0	7.8	7.8	7.8	59.1	57.2	57.2	62.8	63.0	63.0
Actuated g/C Ratio	0.08	0.09	0.09	0.09	0.66	0.64	0.64	0.70	0.70	0.70
v/c Ratio	0.22	0.29	0.30	0.14	0.01	0.32	0.08	0.10	0.30	0.03
Control Delay	39.3	43.0	43.1	1.0	7.2	8.9	0.1	15.8	17.5	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	43.0	43.1	1.0	7.2	8.9	0.1	15.8	17.5	1.2
LOS	D	D	D	A	A	A	A	B	B	A
Approach Delay	39.3		29.1			8.0			16.8	
Approach LOS	D		C			A			B	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 11 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.32
 Intersection Signal Delay: 14.1
 Intersection Capacity Utilization 48.5%
 Analysis Period (min) 15























Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 11: Main St. & Walmart



HCM Signalized Intersection Capacity Analysis
11: Main St. & Walmart

Background 2030
AM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	26	2	3	83	4	43	5	712	84	49	744	32	
Future Volume (vph)	26	2	3	83	4	43	5	712	84	49	744	32	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1	
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frt		0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected		0.96		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)		1764		1681	1693	1583	1770	3539	1583	1770	3539	1583	
Flt Permitted		0.96		0.95	0.96	1.00	0.36	1.00	1.00	0.33	1.00	1.00	
Satd. Flow (perm)		1764		1681	1693	1583	674	3539	1583	607	3539	1583	
Peak-hour factor, PHF	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. Flow (vph)	26	2	3	83	4	43	5	712	84	49	744	32	
RTOR Reduction (vph)	0	3	0	0	0	40	0	0	37	0	0	13	
Lane Group Flow (vph)	0	28	0	43	44	3	5	712	47	49	744	19	
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	8	8		4	4			2			6		
Permitted Phases						4	2		2	6		6	
Actuated Green, G (s)		4.7		6.7	6.7	6.7	51.1	49.9	49.9	57.3	53.1	53.1	
Effective Green, g (s)		4.7		6.7	6.7	6.7	51.1	49.9	49.9	57.3	53.1	53.1	
Actuated g/C Ratio		0.05		0.07	0.07	0.07	0.57	0.55	0.55	0.64	0.59	0.59	
Clearance Time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		92		125	126	117	397	1962	877	440	2088	933	
v/s Ratio Prot		c0.02		0.03	c0.03		0.00	0.20		c0.01	c0.21		
v/s Ratio Perm						0.00	0.01		0.03	0.07		0.01	
v/c Ratio		0.31		0.34	0.35	0.03	0.01	0.36	0.05	0.11	0.36	0.02	
Uniform Delay, d1		41.1		39.6	39.6	38.6	8.4	11.2	9.2	6.5	9.6	7.7	
Progression Factor		1.00		1.00	1.00	1.00	0.92	0.70	1.00	2.20	1.97	1.00	
Incremental Delay, d2		1.9		1.7	1.7	0.1	0.0	0.5	0.1	0.1	0.5	0.0	
Delay (s)		43.0		41.2	41.3	38.7	7.8	8.3	9.3	14.3	19.3	7.7	
Level of Service		D		D	D	D	A	A	A	B	B	A	
Approach Delay (s)		43.0			40.4			8.4			18.6		
Approach LOS		D			D			A			B		
Intersection Summary													
HCM 2000 Control Delay			16.0									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.35										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	24.5
Intersection Capacity Utilization			48.5%									ICU Level of Service	A
Analysis Period (min)			15										

c Critical Lane Group

Timings
11: Main St. & Walmart

2030 Build
Timing Plan: AM Peak



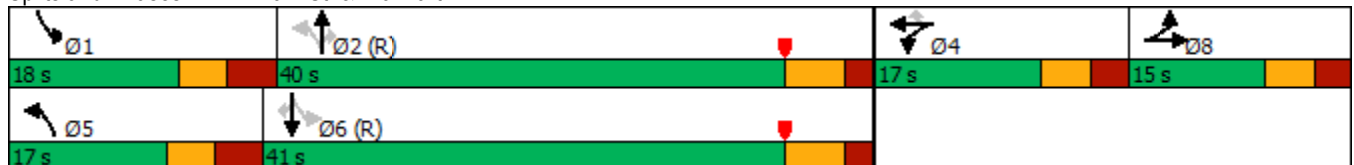
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↖	↗	↖	↖	↕	↖	↖	↕	↖
Traffic Volume (vph)	2	83	4	43	5	787	84	49	796	32
Future Volume (vph)	2	83	4	43	5	787	84	49	796	32
Turn Type	NA	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8	4	4		5	2		1	6	
Permitted Phases				4	2		2	6		6
Detector Phase	8	4	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.4	26.2	26.2	11.6	24.1	24.1
Total Split (s)	15.0	17.0	17.0	17.0	17.0	40.0	40.0	18.0	41.0	41.0
Total Split (%)	16.7%	18.9%	18.9%	18.9%	18.9%	44.4%	44.4%	20.0%	45.6%	45.6%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	3.2	2.0	2.0	3.4	2.0	2.0
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)	5.9	5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	7.0	7.8	7.8	7.8	59.1	57.2	57.2	62.8	63.0	63.0
Actuated g/C Ratio	0.08	0.09	0.09	0.09	0.66	0.64	0.64	0.70	0.70	0.70
v/c Ratio	0.22	0.29	0.30	0.14	0.01	0.35	0.08	0.10	0.32	0.03
Control Delay	39.3	43.0	43.1	1.0	7.0	9.0	0.1	16.8	18.1	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	43.0	43.1	1.0	7.0	9.0	0.1	16.8	18.1	1.3
LOS	D	D	D	A	A	A	A	B	B	A
Approach Delay	39.3		29.1			8.1			17.4	
Approach LOS	D		C			A			B	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 11 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.35
 Intersection Signal Delay: 14.3
 Intersection Capacity Utilization 49.9%
 Analysis Period (min) 15

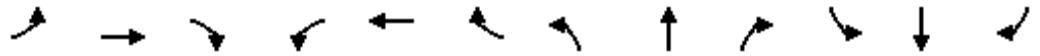
Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 11: Main St. & Walmart



HCM Signalized Intersection Capacity Analysis
 11: Main St. & Walmart

2030 Build
 Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↖	↖	↖	↕	↖	↖	↕	↖
Traffic Volume (vph)	26	2	3	83	4	43	5	787	84	49	796	32
Future Volume (vph)	26	2	3	83	4	43	5	787	84	49	796	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1764		1681	1693	1583	1770	3539	1583	1770	3539	1583
Flt Permitted		0.96		0.95	0.96	1.00	0.34	1.00	1.00	0.29	1.00	1.00
Satd. Flow (perm)		1764		1681	1693	1583	629	3539	1583	546	3539	1583
Peak-hour factor, PHF	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. Flow (vph)	26	2	3	83	4	43	5	787	84	49	796	32
RTOR Reduction (vph)	0	3	0	0	0	40	0	0	37	0	0	13
Lane Group Flow (vph)	0	28	0	43	44	3	5	787	47	49	796	19
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases						4	2		2	6		6
Actuated Green, G (s)		4.7		6.7	6.7	6.7	51.1	49.9	49.9	57.3	53.1	53.1
Effective Green, g (s)		4.7		6.7	6.7	6.7	51.1	49.9	49.9	57.3	53.1	53.1
Actuated g/C Ratio		0.05		0.07	0.07	0.07	0.57	0.55	0.55	0.64	0.59	0.59
Clearance Time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		92		125	126	117	372	1962	877	404	2088	933
v/s Ratio Prot		c0.02		0.03	c0.03		0.00	c0.22		c0.01	c0.22	
v/s Ratio Perm						0.00	0.01		0.03	0.07		0.01
v/c Ratio		0.31		0.34	0.35	0.03	0.01	0.40	0.05	0.12	0.38	0.02
Uniform Delay, d1		41.1		39.6	39.6	38.6	8.5	11.5	9.2	6.6	9.8	7.7
Progression Factor		1.00		1.00	1.00	1.00	0.90	0.68	1.00	2.33	2.00	1.00
Incremental Delay, d2		1.9		1.7	1.7	0.1	0.0	0.6	0.1	0.1	0.5	0.0
Delay (s)		43.0		41.2	41.3	38.7	7.6	8.4	9.3	15.5	20.0	7.7
Level of Service		D		D	D	D	A	A	A	B	C	A
Approach Delay (s)		43.0			40.4			8.5			19.3	
Approach LOS		D			D			A			B	

Intersection Summary

HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.5
Intersection Capacity Utilization	49.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
11: Main St. & Walmart

Background 2035
AM Peak

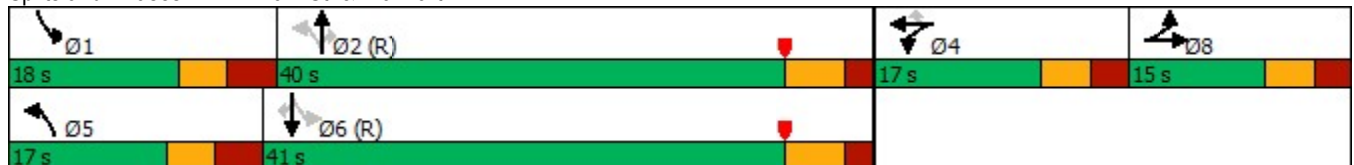


Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↖	↗	↖	↖	↕	↖	↖	↕	↖
Traffic Volume (vph)	2	83	4	43	5	743	84	49	772	32
Future Volume (vph)	2	83	4	43	5	743	84	49	772	32
Turn Type	NA	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8	4	4		5	2		1	6	
Permitted Phases				4	2		2	6		6
Detector Phase	8	4	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.4	26.2	26.2	11.6	24.1	24.1
Total Split (s)	15.0	17.0	17.0	17.0	17.0	40.0	40.0	18.0	41.0	41.0
Total Split (%)	16.7%	18.9%	18.9%	18.9%	18.9%	44.4%	44.4%	20.0%	45.6%	45.6%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	3.2	2.0	2.0	3.4	2.0	2.0
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)	5.9	5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	7.0	7.8	7.8	7.8	59.1	57.2	57.2	62.8	63.0	63.0
Actuated g/C Ratio	0.08	0.09	0.09	0.09	0.66	0.64	0.64	0.70	0.70	0.70
v/c Ratio	0.22	0.29	0.30	0.14	0.01	0.33	0.08	0.10	0.31	0.03
Control Delay	39.3	43.0	43.1	1.0	7.2	9.0	0.1	15.7	17.5	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	43.0	43.1	1.0	7.2	9.0	0.1	15.7	17.5	1.2
LOS	D	D	D	A	A	A	A	B	B	A
Approach Delay	39.3		29.1			8.1			16.8	
Approach LOS	D		C			A			B	

Intersection Summary























Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 11 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.33
 Intersection Signal Delay: 14.1
 Intersection Capacity Utilization 49.2%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 11: Main St. & Walmart



HCM Signalized Intersection Capacity Analysis
11: Main St. & Walmart

Background 2035
AM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	26	2	3	83	4	43	5	743	84	49	772	32	
Future Volume (vph)	26	2	3	83	4	43	5	743	84	49	772	32	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1	
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frt		0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected		0.96		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)		1764		1681	1693	1583	1770	3539	1583	1770	3539	1583	
Flt Permitted		0.96		0.95	0.96	1.00	0.35	1.00	1.00	0.31	1.00	1.00	
Satd. Flow (perm)		1764		1681	1693	1583	649	3539	1583	582	3539	1583	
Peak-hour factor, PHF	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. Flow (vph)	26	2	3	83	4	43	5	743	84	49	772	32	
RTOR Reduction (vph)	0	3	0	0	0	40	0	0	37	0	0	13	
Lane Group Flow (vph)	0	28	0	43	44	3	5	743	47	49	772	19	
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	8	8		4	4		5	2		1	6		
Permitted Phases						4	2		2	6		6	
Actuated Green, G (s)		4.7		6.7	6.7	6.7	51.1	49.9	49.9	57.3	53.1	53.1	
Effective Green, g (s)		4.7		6.7	6.7	6.7	51.1	49.9	49.9	57.3	53.1	53.1	
Actuated g/C Ratio		0.05		0.07	0.07	0.07	0.57	0.55	0.55	0.64	0.59	0.59	
Clearance Time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		92		125	126	117	383	1962	877	425	2088	933	
v/s Ratio Prot		c0.02		0.03	c0.03		0.00	0.21		c0.01	c0.22		
v/s Ratio Perm						0.00	0.01		0.03	0.07		0.01	
v/c Ratio		0.31		0.34	0.35	0.03	0.01	0.38	0.05	0.12	0.37	0.02	
Uniform Delay, d1		41.1		39.6	39.6	38.6	8.4	11.3	9.2	6.5	9.7	7.7	
Progression Factor		1.00		1.00	1.00	1.00	0.92	0.69	1.00	2.18	1.95	1.00	
Incremental Delay, d2		1.9		1.7	1.7	0.1	0.0	0.5	0.1	0.1	0.5	0.0	
Delay (s)		43.0		41.2	41.3	38.7	7.8	8.4	9.3	14.3	19.4	7.7	
Level of Service		D		D	D	D	A	A	A	B	B	A	
Approach Delay (s)		43.0			40.4			8.5			18.6		
Approach LOS		D			D			A			B		
Intersection Summary													
HCM 2000 Control Delay			16.0									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.36										
Actuated Cycle Length (s)			90.0									Sum of lost time (s)	24.5
Intersection Capacity Utilization			49.2%									ICU Level of Service	A
Analysis Period (min)			15										

c Critical Lane Group

Timings
11: Main St. & Walmart

2035 Build
Timing Plan: AM Peak



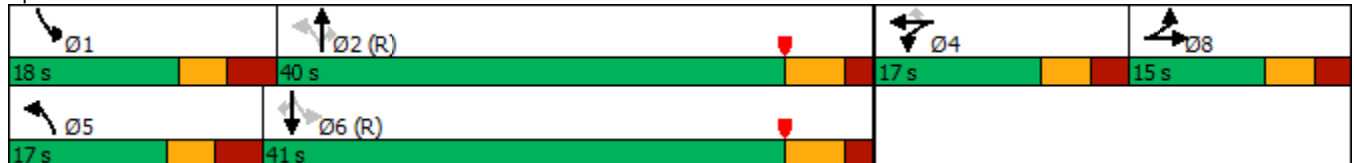
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↖	↗	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	2	83	4	43	5	818	84	49	824	32
Future Volume (vph)	2	83	4	43	5	818	84	49	824	32
Turn Type	NA	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8	4	4		5	2		1	6	
Permitted Phases				4	2		2	6		6
Detector Phase	8	4	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.4	26.2	26.2	11.6	24.1	24.1
Total Split (s)	15.0	17.0	17.0	17.0	17.0	40.0	40.0	18.0	41.0	41.0
Total Split (%)	16.7%	18.9%	18.9%	18.9%	18.9%	44.4%	44.4%	20.0%	45.6%	45.6%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	3.2	2.0	2.0	3.4	2.0	2.0
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)	5.9	5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	7.0	7.8	7.8	7.8	59.1	57.2	57.2	62.8	63.0	63.0
Actuated g/C Ratio	0.08	0.09	0.09	0.09	0.66	0.64	0.64	0.70	0.70	0.70
v/c Ratio	0.22	0.29	0.30	0.14	0.01	0.36	0.08	0.11	0.33	0.03
Control Delay	39.3	43.0	43.1	1.0	7.2	9.0	0.1	16.9	18.3	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	43.0	43.1	1.0	7.2	9.0	0.1	16.9	18.3	1.2
LOS	D	D	D	A	A	A	A	B	B	A
Approach Delay	39.3		29.1			8.2			17.6	
Approach LOS	D		C			A			B	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 11 (12%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.36
 Intersection Signal Delay: 14.4
 Intersection Capacity Utilization 50.7%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service A

Splits and Phases: 11: Main St. & Walmart



HCM Signalized Intersection Capacity Analysis

11: Main St. & Walmart

2035 Build
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↖	↖	↖	↖	↕	↖	↖	↕	↖
Traffic Volume (vph)	26	2	3	83	4	43	5	818	84	49	824	32
Future Volume (vph)	26	2	3	83	4	43	5	818	84	49	824	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.96		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1764		1681	1693	1583	1770	3539	1583	1770	3539	1583
Flt Permitted		0.96		0.95	0.96	1.00	0.32	1.00	1.00	0.28	1.00	1.00
Satd. Flow (perm)		1764		1681	1693	1583	605	3539	1583	522	3539	1583
Peak-hour factor, PHF	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. Flow (vph)	26	2	3	83	4	43	5	818	84	49	824	32
RTOR Reduction (vph)	0	3	0	0	0	40	0	0	37	0	0	13
Lane Group Flow (vph)	0	28	0	43	44	3	5	818	47	49	824	19
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases						4	2		2	6		6
Actuated Green, G (s)		4.7		6.7	6.7	6.7	51.1	49.9	49.9	57.3	53.1	53.1
Effective Green, g (s)		4.7		6.7	6.7	6.7	51.1	49.9	49.9	57.3	53.1	53.1
Actuated g/C Ratio		0.05		0.07	0.07	0.07	0.57	0.55	0.55	0.64	0.59	0.59
Clearance Time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		92		125	126	117	359	1962	877	390	2088	933
v/s Ratio Prot		c0.02		0.03	c0.03		0.00	c0.23		c0.01	c0.23	
v/s Ratio Perm						0.00	0.01		0.03	0.07		0.01
v/c Ratio		0.31		0.34	0.35	0.03	0.01	0.42	0.05	0.13	0.39	0.02
Uniform Delay, d1		41.1		39.6	39.6	38.6	8.5	11.6	9.2	6.7	9.9	7.7
Progression Factor		1.00		1.00	1.00	1.00	0.92	0.68	1.00	2.34	2.00	1.00
Incremental Delay, d2		1.9		1.7	1.7	0.1	0.0	0.6	0.1	0.1	0.5	0.0
Delay (s)		43.0		41.2	41.3	38.7	7.8	8.5	9.3	15.8	20.3	7.7
Level of Service		D		D	D	D	A	A	A	B	C	A
Approach Delay (s)		43.0			40.4			8.6			19.6	
Approach LOS		D			D			A			B	

Intersection Summary

HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.5
Intersection Capacity Utilization	50.7%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
11: Main St. & Walmart

Existing
PM Peak



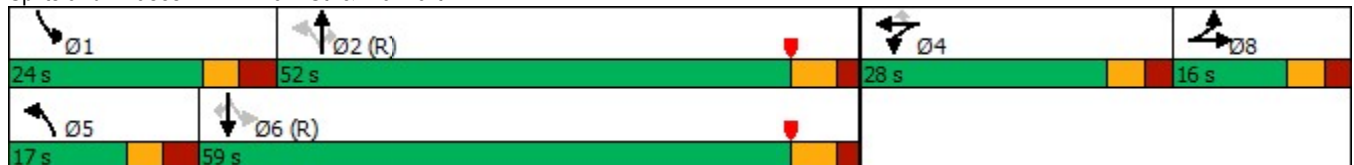
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕	↖	↗	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	12	205	10	89	27	862	92	78	992	57
Future Volume (vph)	12	205	10	89	27	862	92	78	992	57
Turn Type	NA	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8	4	4		5	2		1	6	
Permitted Phases				4	2		2	6		6
Detector Phase	8	4	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.4	26.2	26.2	11.6	24.1	24.1
Total Split (s)	16.0	28.0	28.0	28.0	17.0	52.0	52.0	24.0	59.0	59.0
Total Split (%)	13.3%	23.3%	23.3%	23.3%	14.2%	43.3%	43.3%	20.0%	49.2%	49.2%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	3.2	2.0	2.0	3.4	2.0	2.0
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)	5.9	5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	10.3	13.1	13.1	13.1	71.8	67.0	67.0	75.5	70.9	70.9
Actuated g/C Ratio	0.09	0.11	0.11	0.11	0.60	0.56	0.56	0.63	0.59	0.59
v/c Ratio	0.56	0.58	0.58	0.25	0.08	0.44	0.09	0.20	0.47	0.06
Control Delay	56.8	62.7	62.7	1.7	5.5	8.9	0.4	10.9	13.1	1.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.8	62.7	62.7	1.7	5.5	8.9	0.4	10.9	13.1	1.1
LOS	E	E	E	A	A	A	A	B	B	A
Approach Delay	56.8		44.9			8.0			12.3	
Approach LOS	E		D			A			B	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 75 (63%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.58
 Intersection Signal Delay: 16.2
 Intersection Capacity Utilization 58.8%
 Analysis Period (min) 15

Intersection LOS: B
 ICU Level of Service B

Splits and Phases: 11: Main St. & Walmart



HCM Signalized Intersection Capacity Analysis

11: Main St. & Walmart

Existing
PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (vph)	50	12	29	205	10	89	27	862	92	78	992	57
Future Volume (vph)	50	12	29	205	10	89	27	862	92	78	992	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.97		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1735		1681	1693	1583	1770	3539	1583	1770	3539	1583
Flt Permitted		0.97		0.95	0.96	1.00	0.23	1.00	1.00	0.26	1.00	1.00
Satd. Flow (perm)		1735		1681	1693	1583	436	3539	1583	480	3539	1583
Peak-hour factor, PHF	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. Flow (vph)	50	12	29	205	10	89	27	862	92	78	992	57
RTOR Reduction (vph)	0	14	0	0	0	79	0	0	42	0	0	25
Lane Group Flow (vph)	0	77	0	107	108	10	27	862	50	78	992	32
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases						4	2		2	6		6
Actuated Green, G (s)		10.3		13.1	13.1	13.1	69.7	65.7	65.7	74.7	68.3	68.3
Effective Green, g (s)		10.3		13.1	13.1	13.1	69.7	65.7	65.7	74.7	68.3	68.3
Actuated g/C Ratio		0.09		0.11	0.11	0.11	0.58	0.55	0.55	0.62	0.57	0.57
Clearance Time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		148		183	184	172	297	1937	866	367	2014	900
v/s Ratio Prot		c0.04		0.06	c0.06		0.00	0.24		c0.01	c0.28	
v/s Ratio Perm						0.01	0.05		0.03	0.12		0.02
v/c Ratio		0.52		0.58	0.59	0.06	0.09	0.45	0.06	0.21	0.49	0.04
Uniform Delay, d1		52.5		50.9	50.9	47.9	11.4	16.2	12.7	10.0	15.5	11.4
Progression Factor		1.00		1.00	1.00	1.00	0.52	0.47	1.00	1.06	0.75	1.00
Incremental Delay, d2		3.3		4.7	4.7	0.1	0.1	0.7	0.1	0.3	0.8	0.1
Delay (s)		55.8		55.6	55.6	48.0	6.1	8.3	12.8	10.9	12.4	11.4
Level of Service		E		E	E	D	A	A	B	B	B	B
Approach Delay (s)		55.8			53.4			8.6			12.3	
Approach LOS		E			D			A			B	

Intersection Summary		
HCM 2000 Control Delay	17.4	HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio	0.50	B
Actuated Cycle Length (s)	120.0	Sum of lost time (s)
Intersection Capacity Utilization	58.8%	24.5
Analysis Period (min)	15	ICU Level of Service
		B

c Critical Lane Group

Timings
11: Main St. & Walmart

Background 2030
PM Peak

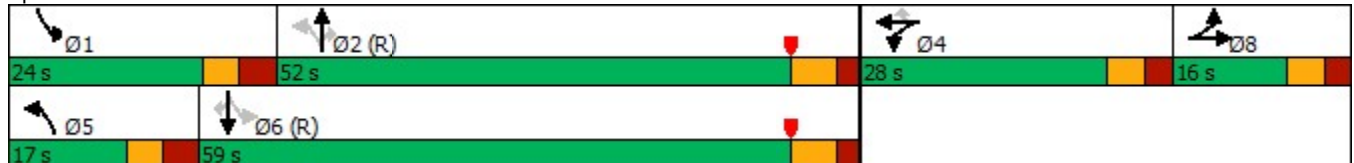


Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕	↖	↗	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	12	205	10	89	27	1055	92	78	1212	57
Future Volume (vph)	12	205	10	89	27	1055	92	78	1212	57
Turn Type	NA	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8	4	4		5	2		1	6	
Permitted Phases				4	2		2	6		6
Detector Phase	8	4	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.4	26.2	26.2	11.6	24.1	24.1
Total Split (s)	16.0	28.0	28.0	28.0	17.0	52.0	52.0	24.0	59.0	59.0
Total Split (%)	13.3%	23.3%	23.3%	23.3%	14.2%	43.3%	43.3%	20.0%	49.2%	49.2%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	3.2	2.0	2.0	3.4	2.0	2.0
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)	5.9	5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	10.3	13.1	13.1	13.1	71.8	67.0	67.0	75.5	70.9	70.9
Actuated g/C Ratio	0.09	0.11	0.11	0.11	0.60	0.56	0.56	0.63	0.59	0.59
v/c Ratio	0.56	0.58	0.58	0.25	0.11	0.53	0.09	0.25	0.58	0.06
Control Delay	56.8	62.7	62.7	1.7	5.4	9.0	0.2	14.3	17.7	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.8	62.7	62.7	1.7	5.4	9.0	0.2	14.3	17.7	2.1
LOS	E	E	E	A	A	A	A	B	B	A
Approach Delay	56.8		44.9			8.2			16.8	
Approach LOS	E		D			A			B	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 75 (63%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.58
 Intersection Signal Delay: 17.5
 Intersection Capacity Utilization 64.8%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 11: Main St. & Walmart



HCM Signalized Intersection Capacity Analysis
11: Main St. & Walmart

Background 2030
PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	50	12	29	205	10	89	27	1055	92	78	1212	57	
Future Volume (vph)	50	12	29	205	10	89	27	1055	92	78	1212	57	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1	
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frt		0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected		0.97		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)		1735		1681	1693	1583	1770	3539	1583	1770	3539	1583	
Flt Permitted		0.97		0.95	0.96	1.00	0.16	1.00	1.00	0.19	1.00	1.00	
Satd. Flow (perm)		1735		1681	1693	1583	303	3539	1583	352	3539	1583	
Peak-hour factor, PHF	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. Flow (vph)	50	12	29	205	10	89	27	1055	92	78	1212	57	
RTOR Reduction (vph)	0	14	0	0	0	79	0	0	42	0	0	25	
Lane Group Flow (vph)	0	77	0	107	108	10	27	1055	50	78	1212	32	
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	8	8		4	4		5	2		1	6		
Permitted Phases						4	2		2	6		6	
Actuated Green, G (s)		10.3		13.1	13.1	13.1	69.7	65.7	65.7	74.7	68.3	68.3	
Effective Green, g (s)		10.3		13.1	13.1	13.1	69.7	65.7	65.7	74.7	68.3	68.3	
Actuated g/C Ratio		0.09		0.11	0.11	0.11	0.58	0.55	0.55	0.62	0.57	0.57	
Clearance Time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		148		183	184	172	224	1937	866	294	2014	900	
v/s Ratio Prot		c0.04		0.06	c0.06		0.00	0.30		c0.01	c0.34		
v/s Ratio Perm						0.01	0.07		0.03	0.15		0.02	
v/c Ratio		0.52		0.58	0.59	0.06	0.12	0.54	0.06	0.27	0.60	0.04	
Uniform Delay, d1		52.5		50.9	50.9	47.9	12.4	17.5	12.7	11.1	16.9	11.4	
Progression Factor		1.00		1.00	1.00	1.00	0.49	0.42	1.00	1.36	0.93	1.00	
Incremental Delay, d2		3.3		4.7	4.7	0.1	0.2	0.9	0.1	0.4	1.1	0.1	
Delay (s)		55.8		55.6	55.6	48.0	6.3	8.4	12.8	15.5	16.8	11.4	
Level of Service		E		E	E	D	A	A	B	B	B	B	
Approach Delay (s)		55.8			53.4			8.7			16.5		
Approach LOS		E			D			A			B		
Intersection Summary													
HCM 2000 Control Delay			18.4									HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio			0.58										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	24.5
Intersection Capacity Utilization			64.8%									ICU Level of Service	C
Analysis Period (min)			15										

c Critical Lane Group

Timings
11: Main St. & Walmart

2030 Build
Timing Plan: PM Peak



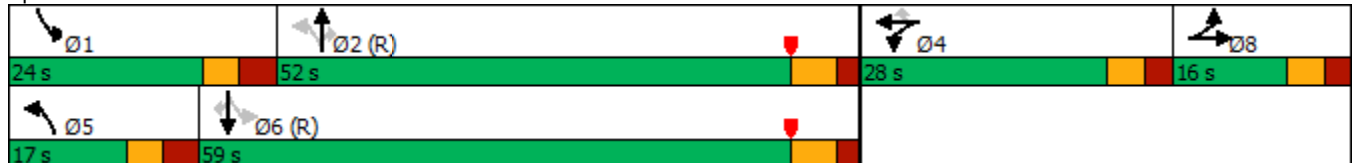
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↖	↗	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	12	205	10	89	27	1114	92	78	1282	57
Future Volume (vph)	12	205	10	89	27	1114	92	78	1282	57
Turn Type	NA	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8	4	4		5	2		1	6	
Permitted Phases				4	2		2	6		6
Detector Phase	8	4	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.4	26.2	26.2	11.6	24.1	24.1
Total Split (s)	16.0	28.0	28.0	28.0	17.0	52.0	52.0	24.0	59.0	59.0
Total Split (%)	13.3%	23.3%	23.3%	23.3%	14.2%	43.3%	43.3%	20.0%	49.2%	49.2%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	3.2	2.0	2.0	3.4	2.0	2.0
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)	5.9	5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	10.3	13.1	13.1	13.1	71.7	66.9	66.9	75.6	70.9	70.9
Actuated g/C Ratio	0.09	0.11	0.11	0.11	0.60	0.56	0.56	0.63	0.59	0.59
v/c Ratio	0.56	0.58	0.58	0.25	0.11	0.56	0.09	0.27	0.61	0.06
Control Delay	56.8	62.7	62.7	1.7	16.0	19.0	3.2	15.3	18.6	2.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.8	62.7	62.7	1.7	16.0	19.0	3.2	15.3	18.6	2.2
LOS	E	E	E	A	B	B	A	B	B	A
Approach Delay	56.8		44.9			17.8			17.8	
Approach LOS	E		D			B			B	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 75 (63%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.61
 Intersection Signal Delay: 21.6
 Intersection Capacity Utilization 66.8%
 Analysis Period (min) 15























Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 11: Main St. & Walmart



HCM Signalized Intersection Capacity Analysis
 11: Main St. & Walmart

2030 Build
 Timing Plan: PM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	50	12	29	205	10	89	27	1114	92	78	1282	57	
Future Volume (vph)	50	12	29	205	10	89	27	1114	92	78	1282	57	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1	
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frt		0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected		0.97		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)		1735		1681	1693	1583	1770	3539	1583	1770	3539	1583	
Flt Permitted		0.97		0.95	0.96	1.00	0.14	1.00	1.00	0.17	1.00	1.00	
Satd. Flow (perm)		1735		1681	1693	1583	266	3539	1583	317	3539	1583	
Peak-hour factor, PHF	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. Flow (vph)	50	12	29	205	10	89	27	1114	92	78	1282	57	
RTOR Reduction (vph)	0	14	0	0	0	79	0	0	42	0	0	25	
Lane Group Flow (vph)	0	77	0	107	108	10	27	1114	50	78	1282	32	
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	8	8		4	4		5	2		1	6		
Permitted Phases						4	2		2	6		6	
Actuated Green, G (s)		10.3		13.1	13.1	13.1	69.6	65.6	65.6	74.8	68.3	68.3	
Effective Green, g (s)		10.3		13.1	13.1	13.1	69.6	65.6	65.6	74.8	68.3	68.3	
Actuated g/C Ratio		0.09		0.11	0.11	0.11	0.58	0.55	0.55	0.62	0.57	0.57	
Clearance Time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		148		183	184	172	204	1934	865	276	2014	900	
v/s Ratio Prot		c0.04		0.06	c0.06		0.00	0.31		c0.02	c0.36		
v/s Ratio Perm						0.01	0.07		0.03	0.16		0.02	
v/c Ratio		0.52		0.58	0.59	0.06	0.13	0.58	0.06	0.28	0.64	0.04	
Uniform Delay, d1		52.5		50.9	50.9	47.9	12.9	18.0	12.7	11.5	17.5	11.4	
Progression Factor		1.00		1.00	1.00	1.00	1.58	0.92	1.00	1.46	0.94	1.00	
Incremental Delay, d2		3.3		4.7	4.7	0.1	0.2	1.0	0.1	0.5	1.3	0.1	
Delay (s)		55.8		55.6	55.6	48.0	20.7	17.5	12.8	17.2	17.7	11.4	
Level of Service		E		E	E	D	C	B	B	B	B	B	
Approach Delay (s)		55.8		53.4				17.2			17.4		
Approach LOS		E		D				B			B		
Intersection Summary													
HCM 2000 Control Delay			22.1		HCM 2000 Level of Service					C			
HCM 2000 Volume to Capacity ratio			0.61										
Actuated Cycle Length (s)			120.0		Sum of lost time (s)					24.5			
Intersection Capacity Utilization			66.8%		ICU Level of Service					C			
Analysis Period (min)			15										

c Critical Lane Group

Timings
11: Main St. & Walmart

Background 2035
PM Peak

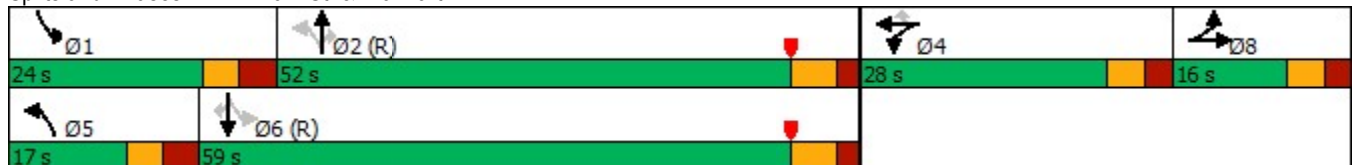


Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕	↖	↗	↗	↖	↕	↗	↖	↕	↗
Traffic Volume (vph)	12	205	10	89	27	1098	92	78	1261	57
Future Volume (vph)	12	205	10	89	27	1098	92	78	1261	57
Turn Type	NA	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8	4	4		5	2		1	6	
Permitted Phases				4	2		2	6		6
Detector Phase	8	4	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.4	26.2	26.2	11.6	24.1	24.1
Total Split (s)	16.0	28.0	28.0	28.0	17.0	52.0	52.0	24.0	59.0	59.0
Total Split (%)	13.3%	23.3%	23.3%	23.3%	14.2%	43.3%	43.3%	20.0%	49.2%	49.2%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	3.2	2.0	2.0	3.4	2.0	2.0
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)	5.9	5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	10.3	13.1	13.1	13.1	71.8	66.9	66.9	75.5	70.9	70.9
Actuated g/C Ratio	0.09	0.11	0.11	0.11	0.60	0.56	0.56	0.63	0.59	0.59
v/c Ratio	0.56	0.58	0.58	0.25	0.11	0.56	0.09	0.26	0.60	0.06
Control Delay	56.8	62.7	62.7	1.7	5.3	8.9	0.2	14.8	18.4	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.8	62.7	62.7	1.7	5.3	8.9	0.2	14.8	18.4	2.1
LOS	E	E	E	A	A	A	A	B	B	A
Approach Delay	56.8		44.9			8.2			17.5	
Approach LOS	E		D			A			B	

Intersection Summary























Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 75 (63%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.60
 Intersection Signal Delay: 17.7
 Intersection Capacity Utilization 66.2%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 11: Main St. & Walmart



HCM Signalized Intersection Capacity Analysis
11: Main St. & Walmart

Background 2035
PM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	50	12	29	205	10	89	27	1098	92	78	1261	57	
Future Volume (vph)	50	12	29	205	10	89	27	1098	92	78	1261	57	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1	
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frt		0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	
Flt Protected		0.97		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00	
Satd. Flow (prot)		1735		1681	1693	1583	1770	3539	1583	1770	3539	1583	
Flt Permitted		0.97		0.95	0.96	1.00	0.15	1.00	1.00	0.17	1.00	1.00	
Satd. Flow (perm)		1735		1681	1693	1583	277	3539	1583	326	3539	1583	
Peak-hour factor, PHF	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. Flow (vph)	50	12	29	205	10	89	27	1098	92	78	1261	57	
RTOR Reduction (vph)	0	14	0	0	0	79	0	0	42	0	0	25	
Lane Group Flow (vph)	0	77	0	107	108	10	27	1098	50	78	1261	32	
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	
Protected Phases	8	8		4	4		5	2		1	6		
Permitted Phases						4	2		2	6		6	
Actuated Green, G (s)		10.3		13.1	13.1	13.1	69.6	65.6	65.6	74.8	68.3	68.3	
Effective Green, g (s)		10.3		13.1	13.1	13.1	69.6	65.6	65.6	74.8	68.3	68.3	
Actuated g/C Ratio		0.09		0.11	0.11	0.11	0.58	0.55	0.55	0.62	0.57	0.57	
Clearance Time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		148		183	184	172	210	1934	865	281	2014	900	
v/s Ratio Prot		c0.04		0.06	c0.06		0.00	0.31		c0.02	c0.36		
v/s Ratio Perm						0.01	0.07		0.03	0.16		0.02	
v/c Ratio		0.52		0.58	0.59	0.06	0.13	0.57	0.06	0.28	0.63	0.04	
Uniform Delay, d1		52.5		50.9	50.9	47.9	12.8	17.9	12.7	11.4	17.3	11.4	
Progression Factor		1.00		1.00	1.00	1.00	0.47	0.41	1.00	1.40	0.94	1.00	
Incremental Delay, d2		3.3		4.7	4.7	0.1	0.2	1.0	0.1	0.4	1.2	0.1	
Delay (s)		55.8		55.6	55.6	48.0	6.3	8.3	12.8	16.4	17.5	11.4	
Level of Service		E		E	E	D	A	A	B	B	B	B	
Approach Delay (s)		55.8			53.4			8.6			17.2		
Approach LOS		E			D			A			B		
Intersection Summary													
HCM 2000 Control Delay			18.5		HCM 2000 Level of Service						B		
HCM 2000 Volume to Capacity ratio			0.60										
Actuated Cycle Length (s)			120.0		Sum of lost time (s)						24.5		
Intersection Capacity Utilization			66.2%		ICU Level of Service						C		
Analysis Period (min)			15										

c Critical Lane Group

Timings
11: Main St. & Walmart

2035 Build
Timing Plan: PM Peak



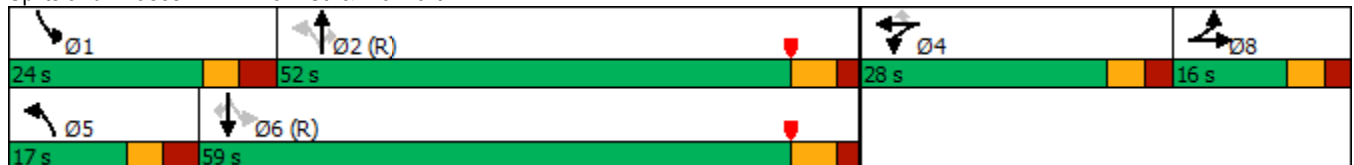
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↖	↗	↖	↖	↕	↖	↖	↕	↖
Traffic Volume (vph)	12	205	10	89	27	1157	92	78	1331	57
Future Volume (vph)	12	205	10	89	27	1157	92	78	1331	57
Turn Type	NA	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8	4	4		5	2		1	6	
Permitted Phases				4	2		2	6		6
Detector Phase	8	4	4	4	5	2	2	1	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.0	24.0	24.0	24.0	11.4	26.2	26.2	11.6	24.1	24.1
Total Split (s)	16.0	28.0	28.0	28.0	17.0	52.0	52.0	24.0	59.0	59.0
Total Split (%)	13.3%	23.3%	23.3%	23.3%	14.2%	43.3%	43.3%	20.0%	49.2%	49.2%
Yellow Time (s)	3.4	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1	4.1
All-Red Time (s)	2.5	2.5	2.5	2.5	3.2	2.0	2.0	3.4	2.0	2.0
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)	5.9	5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1
Lead/Lag					Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	10.3	13.1	13.1	13.1	71.7	66.8	66.8	75.6	70.9	70.9
Actuated g/C Ratio	0.09	0.11	0.11	0.11	0.60	0.56	0.56	0.63	0.59	0.59
v/c Ratio	0.56	0.58	0.58	0.25	0.12	0.59	0.09	0.28	0.64	0.06
Control Delay	56.8	62.7	62.7	1.7	16.1	19.5	3.3	16.4	19.6	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.8	62.7	62.7	1.7	16.1	19.5	3.3	16.4	19.6	2.1
LOS	E	E	E	A	B	B	A	B	B	A
Approach Delay	56.8		44.9			18.2			18.8	
Approach LOS	E		D			B			B	

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 75 (63%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.64
 Intersection Signal Delay: 22.2
 Intersection Capacity Utilization 68.1%
 Analysis Period (min) 15

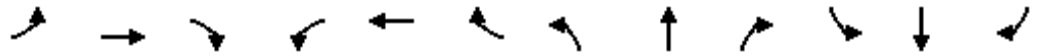
Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 11: Main St. & Walmart



HCM Signalized Intersection Capacity Analysis
 11: Main St. & Walmart

2035 Build
 Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↖	↖	↖	↖	↕	↖	↖	↕	↖
Traffic Volume (vph)	50	12	29	205	10	89	27	1157	92	78	1331	57
Future Volume (vph)	50	12	29	205	10	89	27	1157	92	78	1331	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt		0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.97		0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1735		1681	1693	1583	1770	3539	1583	1770	3539	1583
Flt Permitted		0.97		0.95	0.96	1.00	0.13	1.00	1.00	0.16	1.00	1.00
Satd. Flow (perm)		1735		1681	1693	1583	243	3539	1583	292	3539	1583
Peak-hour factor, PHF	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. Flow (vph)	50	12	29	205	10	89	27	1157	92	78	1331	57
RTOR Reduction (vph)	0	14	0	0	0	79	0	0	42	0	0	25
Lane Group Flow (vph)	0	77	0	107	108	10	27	1157	50	78	1331	32
Turn Type	Split	NA		Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases						4	2		2	6		6
Actuated Green, G (s)		10.3		13.1	13.1	13.1	69.5	65.5	65.5	74.9	68.3	68.3
Effective Green, g (s)		10.3		13.1	13.1	13.1	69.5	65.5	65.5	74.9	68.3	68.3
Actuated g/C Ratio		0.09		0.11	0.11	0.11	0.58	0.55	0.55	0.62	0.57	0.57
Clearance Time (s)		5.9		5.9	5.9	5.9	6.4	6.1	6.1	6.6	6.1	6.1
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)		148		183	184	172	191	1931	864	263	2014	900
v/s Ratio Prot		c0.04		0.06	c0.06		0.00	0.33		c0.02	c0.38	
v/s Ratio Perm						0.01	0.08		0.03	0.17		0.02
v/c Ratio		0.52		0.58	0.59	0.06	0.14	0.60	0.06	0.30	0.66	0.04
Uniform Delay, d1		52.5		50.9	50.9	47.9	13.4	18.4	12.8	11.9	17.9	11.4
Progression Factor		1.00		1.00	1.00	1.00	1.58	0.92	1.00	1.55	0.97	1.00
Incremental Delay, d2		3.3		4.7	4.7	0.1	0.3	1.0	0.1	0.5	1.4	0.1
Delay (s)		55.8		55.6	55.6	48.0	21.4	17.9	12.9	19.0	18.7	11.4
Level of Service		E		E	E	D	C	B	B	B	B	B
Approach Delay (s)		55.8			53.4			17.6			18.4	
Approach LOS		E			D			B			B	

Intersection Summary		
HCM 2000 Control Delay	22.6	HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio	0.63	
Actuated Cycle Length (s)	120.0	Sum of lost time (s) 24.5
Intersection Capacity Utilization	68.1%	ICU Level of Service C
Analysis Period (min)	15	

c Critical Lane Group

Timings
12: Main St. & Suffolk Plaza Center

Existing
AM Peak



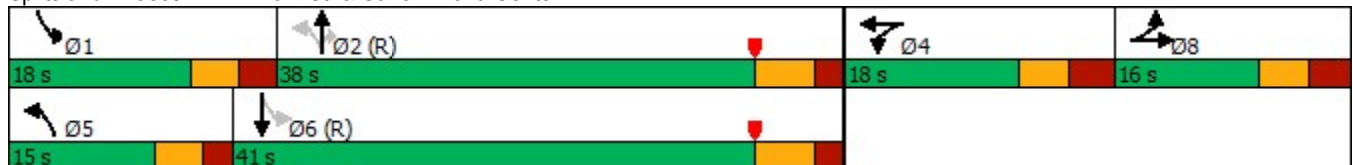
Lane Group	WBL	WBT	NBL	NBT	NBR	SBL	SBT	Ø8
Lane Configurations								
Traffic Volume (vph)	78	1	1	701	113	80	576	
Future Volume (vph)	78	1	1	701	113	80	576	
Turn Type	Split	NA	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	4	4	5	2		1	6	8
Permitted Phases			2		2	6		
Detector Phase	4	4	5	2	2	1	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.4	24.4	11.0	24.1	24.1	11.0	24.1	30.4
Total Split (s)	18.0	18.0	15.0	38.0	38.0	18.0	41.0	16.0
Total Split (%)	20.0%	20.0%	16.7%	42.2%	42.2%	20.0%	45.6%	18%
Yellow Time (s)	3.4	3.4	3.2	4.1	4.1	3.2	4.1	3.4
All-Red Time (s)	3.0	3.0	2.0	2.0	2.0	2.6	2.0	2.9
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	5.2	6.1	6.1	5.8	6.1	
Lead/Lag			Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	None
Act Effct Green (s)	8.4	8.4	66.8	62.7	62.7	71.2	70.6	
Actuated g/C Ratio	0.09	0.09	0.74	0.70	0.70	0.79	0.78	
v/c Ratio	0.35	0.30	0.00	0.28	0.10	0.14	0.21	
Control Delay	43.8	25.7	3.0	7.6	0.4	2.3	3.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	43.8	25.7	3.0	7.6	0.4	2.3	3.1	
LOS	D	C	A	A	A	A	A	
Approach Delay		35.0		6.6			3.0	
Approach LOS		C		A			A	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 12 (13%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.35
 Intersection Signal Delay: 7.1
 Intersection Capacity Utilization 43.2%
 Analysis Period (min) 15

Intersection LOS: A
 ICU Level of Service A






















Splits and Phases: 12: Main St. & Suffolk Plaza Center



HCM Signalized Intersection Capacity Analysis

12: Main St. & Suffolk Plaza Center

Existing
AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	78	1	28	1	701	113	80	576	0
Future Volume (vph)	0	0	0	78	1	28	1	701	113	80	576	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Lane Util. Factor				0.95	0.95		1.00	0.95	1.00	1.00	0.95	
Fr _t				1.00	0.92		1.00	1.00	0.85	1.00	1.00	
Fl _t Protected				0.95	0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1681	1591		1770	3539	1583	1770	3539	
Fl _t Permitted				0.95	0.98		0.44	1.00	1.00	0.34	1.00	
Satd. Flow (perm)				1681	1591		811	3539	1583	641	3539	
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	78	1	28	1	701	113	80	576	0
RTOR Reduction (vph)	0	0	0	0	26	0	0	0	39	0	0	0
Lane Group Flow (vph)	0	0	0	55	26	0	1	701	74	80	576	0
Turn Type				Split	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)				7.3	7.3		60.1	59.0	59.0	69.3	63.9	
Effective Green, g (s)				7.3	7.3		60.1	59.0	59.0	69.3	63.9	
Actuated g/C Ratio				0.08	0.08		0.67	0.66	0.66	0.77	0.71	
Clearance Time (s)				6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Vehicle Extension (s)				3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)				136	129		553	2320	1037	561	2512	
v/s Ratio Prot				c0.03	0.02		0.00	c0.20		c0.01	c0.16	
v/s Ratio Perm							0.00		0.05	0.10		
v/c Ratio				0.40	0.20		0.00	0.30	0.07	0.14	0.23	
Uniform Delay, d ₁				39.3	38.6		5.0	6.7	5.6	2.8	4.5	
Progression Factor				1.00	1.00		1.00	1.00	1.00	0.64	0.74	
Incremental Delay, d ₂				2.0	0.8		0.0	0.3	0.1	0.1	0.2	
Delay (s)				41.2	39.4		5.0	7.0	5.7	1.9	3.5	
Level of Service				D	D		A	A	A	A	A	
Approach Delay (s)		0.0			40.4			6.8			3.3	
Approach LOS		A			D			A			A	
Intersection Summary												
HCM 2000 Control Delay			7.6	HCM 2000 Level of Service				A				
HCM 2000 Volume to Capacity ratio			0.33									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				24.6				
Intersection Capacity Utilization			43.2%	ICU Level of Service				A				
Analysis Period (min)			15									
c Critical Lane Group												

Timings
12: Main St. & Suffolk Plaza Center

Background 2030
AM Peak

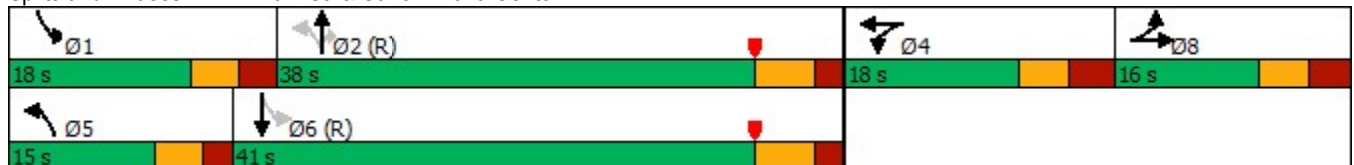
Lane Group	WBL	WBT	NBL	NBT	NBR	SBL	SBT	Ø8
Lane Configurations								
Traffic Volume (vph)	78	1	1	795	113	80	766	
Future Volume (vph)	78	1	1	795	113	80	766	
Turn Type	Split	NA	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	4	4	5	2		1	6	8
Permitted Phases			2		2	6		
Detector Phase	4	4	5	2	2	1	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.4	24.4	11.0	24.1	24.1	11.0	24.1	30.4
Total Split (s)	18.0	18.0	15.0	38.0	38.0	18.0	41.0	16.0
Total Split (%)	20.0%	20.0%	16.7%	42.2%	42.2%	20.0%	45.6%	18%
Yellow Time (s)	3.4	3.4	3.2	4.1	4.1	3.2	4.1	3.4
All-Red Time (s)	3.0	3.0	2.0	2.0	2.0	2.6	2.0	2.9
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	5.2	6.1	6.1	5.8	6.1	
Lead/Lag			Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	None
Act Effct Green (s)	8.4	8.4	66.8	62.7	62.7	71.2	70.6	
Actuated g/C Ratio	0.09	0.09	0.74	0.70	0.70	0.79	0.78	
v/c Ratio	0.35	0.30	0.00	0.32	0.10	0.15	0.28	
Control Delay	43.8	25.7	3.0	7.9	0.4	3.6	4.9	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	43.8	25.7	3.0	7.9	0.4	3.6	4.9	
LOS	D	C	A	A	A	A	A	
Approach Delay		35.0		7.0			4.8	
Approach LOS		C		A			A	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 12 (13%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.35
 Intersection Signal Delay: 7.6
 Intersection Capacity Utilization 45.8%
 Analysis Period (min) 15






















Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 12: Main St. & Suffolk Plaza Center



HCM Signalized Intersection Capacity Analysis
12: Main St. & Suffolk Plaza Center

Background 2030
AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	78	1	28	1	795	113	80	766	0
Future Volume (vph)	0	0	0	78	1	28	1	795	113	80	766	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Lane Util. Factor				0.95	0.95		1.00	0.95	1.00	1.00	0.95	
Frt				1.00	0.92		1.00	1.00	0.85	1.00	1.00	
Flt Protected				0.95	0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1681	1591		1770	3539	1583	1770	3539	
Flt Permitted				0.95	0.98		0.36	1.00	1.00	0.31	1.00	
Satd. Flow (perm)				1681	1591		673	3539	1583	570	3539	
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	78	1	28	1	795	113	80	766	0
RTOR Reduction (vph)	0	0	0	0	26	0	0	0	39	0	0	0
Lane Group Flow (vph)	0	0	0	55	26	0	1	795	74	80	766	0
Turn Type				Split	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)				7.3	7.3		60.1	59.0	59.0	69.3	63.9	
Effective Green, g (s)				7.3	7.3		60.1	59.0	59.0	69.3	63.9	
Actuated g/C Ratio				0.08	0.08		0.67	0.66	0.66	0.77	0.71	
Clearance Time (s)				6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Vehicle Extension (s)				3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)				136	129		462	2320	1037	510	2512	
v/s Ratio Prot				c0.03	0.02		0.00	c0.22		c0.01	c0.22	
v/s Ratio Perm							0.00		0.05	0.11		
v/c Ratio				0.40	0.20		0.00	0.34	0.07	0.16	0.30	
Uniform Delay, d1				39.3	38.6		5.0	6.9	5.6	2.9	4.8	
Progression Factor				1.00	1.00		1.00	1.00	1.00	1.06	1.10	
Incremental Delay, d2				2.0	0.8		0.0	0.4	0.1	0.1	0.3	
Delay (s)				41.2	39.4		5.0	7.3	5.7	3.2	5.6	
Level of Service				D	D		A	A	A	A	A	
Approach Delay (s)		0.0			40.4			7.1			5.4	
Approach LOS		A			D			A			A	
Intersection Summary												
HCM 2000 Control Delay			8.2	HCM 2000 Level of Service				A				
HCM 2000 Volume to Capacity ratio			0.37									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				24.6				
Intersection Capacity Utilization			45.8%	ICU Level of Service				A				
Analysis Period (min)			15									
c Critical Lane Group												

Timings
12: Main St. & Suffolk Plaza Center

2030 Build
Timing Plan: AM Peak

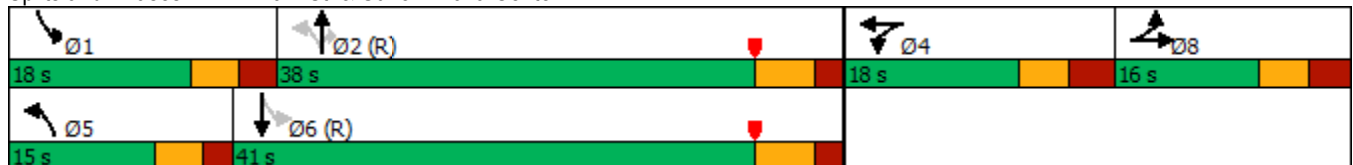


Lane Group	WBL	WBT	NBL	NBT	NBR	SBL	SBT	Ø8
Lane Configurations								
Traffic Volume (vph)	78	1	1	870	113	80	818	
Future Volume (vph)	78	1	1	870	113	80	818	
Turn Type	Split	NA	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	4	4	5	2		1	6	8
Permitted Phases			2		2	6		
Detector Phase	4	4	5	2	2	1	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.4	24.4	11.0	24.1	24.1	11.0	24.1	30.4
Total Split (s)	18.0	18.0	15.0	38.0	38.0	18.0	41.0	16.0
Total Split (%)	20.0%	20.0%	16.7%	42.2%	42.2%	20.0%	45.6%	18%
Yellow Time (s)	3.4	3.4	3.2	4.1	4.1	3.2	4.1	3.4
All-Red Time (s)	3.0	3.0	2.0	2.0	2.0	2.6	2.0	2.9
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	5.2	6.1	6.1	5.8	6.1	
Lead/Lag			Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	None
Act Effct Green (s)	8.4	8.4	66.8	62.7	62.7	71.2	70.6	
Actuated g/C Ratio	0.09	0.09	0.74	0.70	0.70	0.79	0.78	
v/c Ratio	0.35	0.30	0.00	0.35	0.10	0.16	0.29	
Control Delay	43.8	25.7	3.0	8.2	0.4	3.9	5.3	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	43.8	25.7	3.0	8.2	0.4	3.9	5.3	
LOS	D	C	A	A	A	A	A	
Approach Delay		35.0		7.3			5.2	
Approach LOS		C		A			A	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 12 (13%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.35
 Intersection Signal Delay: 7.8
 Intersection Capacity Utilization 47.9%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 12: Main St. & Suffolk Plaza Center



HCM Signalized Intersection Capacity Analysis

12: Main St. & Suffolk Plaza Center

2030 Build
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↖	↔		↖	↑↑	↖	↖	↑↑	
Traffic Volume (vph)	0	0	0	78	1	28	1	870	113	80	818	0
Future Volume (vph)	0	0	0	78	1	28	1	870	113	80	818	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Lane Util. Factor				0.95	0.95		1.00	0.95	1.00	1.00	0.95	
Fr _t				1.00	0.92		1.00	1.00	0.85	1.00	1.00	
Fl _t Protected				0.95	0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1681	1591		1770	3539	1583	1770	3539	
Fl _t Permitted				0.95	0.98		0.34	1.00	1.00	0.28	1.00	
Satd. Flow (perm)				1681	1591		639	3539	1583	518	3539	
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	78	1	28	1	870	113	80	818	0
RTOR Reduction (vph)	0	0	0	0	26	0	0	0	39	0	0	0
Lane Group Flow (vph)	0	0	0	55	26	0	1	870	74	80	818	0
Turn Type				Split	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)				7.3	7.3		60.1	59.0	59.0	69.3	63.9	
Effective Green, g (s)				7.3	7.3		60.1	59.0	59.0	69.3	63.9	
Actuated g/C Ratio				0.08	0.08		0.67	0.66	0.66	0.77	0.71	
Clearance Time (s)				6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Vehicle Extension (s)				3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)				136	129		440	2320	1037	473	2512	
v/s Ratio Prot				c0.03	0.02		0.00	c0.25		c0.01	c0.23	
v/s Ratio Perm							0.00		0.05	0.12		
v/c Ratio				0.40	0.20		0.00	0.38	0.07	0.17	0.33	
Uniform Delay, d ₁				39.3	38.6		5.0	7.1	5.6	3.1	4.9	
Progression Factor				1.00	1.00		1.00	1.00	1.00	1.13	1.17	
Incremental Delay, d ₂				2.0	0.8		0.0	0.5	0.1	0.2	0.3	
Delay (s)				41.2	39.4		5.0	7.5	5.7	3.6	6.1	
Level of Service				D	D		A	A	A	A	A	
Approach Delay (s)		0.0			40.4			7.3			5.9	
Approach LOS		A			D			A			A	

Intersection Summary

HCM 2000 Control Delay	8.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.6
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
12: Main St. & Suffolk Plaza Center

Background 2035
AM Peak

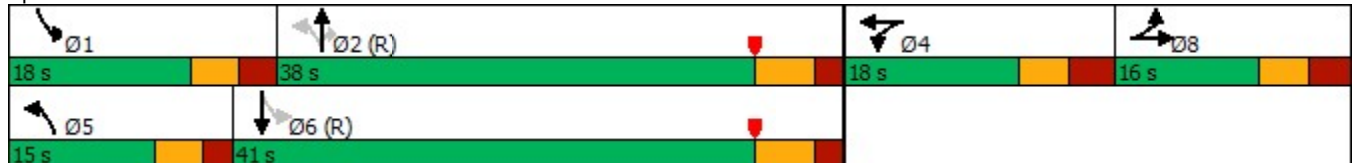


Lane Group	WBL	WBT	NBL	NBT	NBR	SBL	SBT	Ø8
Lane Configurations								
Traffic Volume (vph)	78	1	1	830	113	80	795	
Future Volume (vph)	78	1	1	830	113	80	795	
Turn Type	Split	NA	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	4	4	5	2		1	6	8
Permitted Phases			2		2	6		
Detector Phase	4	4	5	2	2	1	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.4	24.4	11.0	24.1	24.1	11.0	24.1	30.4
Total Split (s)	18.0	18.0	15.0	38.0	38.0	18.0	41.0	16.0
Total Split (%)	20.0%	20.0%	16.7%	42.2%	42.2%	20.0%	45.6%	18%
Yellow Time (s)	3.4	3.4	3.2	4.1	4.1	3.2	4.1	3.4
All-Red Time (s)	3.0	3.0	2.0	2.0	2.0	2.6	2.0	2.9
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	5.2	6.1	6.1	5.8	6.1	
Lead/Lag			Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	None
Act Effct Green (s)	8.4	8.4	66.8	62.7	62.7	71.2	70.6	
Actuated g/C Ratio	0.09	0.09	0.74	0.70	0.70	0.79	0.78	
v/c Ratio	0.35	0.30	0.00	0.34	0.10	0.15	0.29	
Control Delay	43.8	25.7	3.0	8.0	0.4	3.7	5.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	43.8	25.7	3.0	8.0	0.4	3.7	5.1	
LOS	D	C	A	A	A	A	A	
Approach Delay		35.0		7.1			5.0	
Approach LOS		C		A			A	

Intersection Summary






















Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 12 (13%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.35
 Intersection Signal Delay: 7.7
 Intersection Capacity Utilization 46.8%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 12: Main St. & Suffolk Plaza Center



HCM Signalized Intersection Capacity Analysis
12: Main St. & Suffolk Plaza Center

Background 2035
AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	78	1	28	1	830	113	80	795	0
Future Volume (vph)	0	0	0	78	1	28	1	830	113	80	795	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Lane Util. Factor				0.95	0.95		1.00	0.95	1.00	1.00	0.95	
Frt				1.00	0.92		1.00	1.00	0.85	1.00	1.00	
Flt Protected				0.95	0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1681	1591		1770	3539	1583	1770	3539	
Flt Permitted				0.95	0.98		0.35	1.00	1.00	0.29	1.00	
Satd. Flow (perm)				1681	1591		654	3539	1583	545	3539	
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	78	1	28	1	830	113	80	795	0
RTOR Reduction (vph)	0	0	0	0	26	0	0	0	39	0	0	0
Lane Group Flow (vph)	0	0	0	55	26	0	1	830	74	80	795	0
Turn Type				Split	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)				7.3	7.3		60.1	59.0	59.0	69.3	63.9	
Effective Green, g (s)				7.3	7.3		60.1	59.0	59.0	69.3	63.9	
Actuated g/C Ratio				0.08	0.08		0.67	0.66	0.66	0.77	0.71	
Clearance Time (s)				6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Vehicle Extension (s)				3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)				136	129		450	2320	1037	493	2512	
v/s Ratio Prot				c0.03	0.02		0.00	c0.23		c0.01	c0.22	
v/s Ratio Perm							0.00		0.05	0.12		
v/c Ratio				0.40	0.20		0.00	0.36	0.07	0.16	0.32	
Uniform Delay, d1				39.3	38.6		5.0	7.0	5.6	3.0	4.9	
Progression Factor				1.00	1.00		1.00	1.00	1.00	1.10	1.13	
Incremental Delay, d2				2.0	0.8		0.0	0.4	0.1	0.2	0.3	
Delay (s)				41.2	39.4		5.0	7.4	5.7	3.4	5.8	
Level of Service				D	D		A	A	A	A	A	
Approach Delay (s)		0.0			40.4			7.2			5.6	
Approach LOS		A			D			A			A	
Intersection Summary												
HCM 2000 Control Delay			8.3	HCM 2000 Level of Service				A				
HCM 2000 Volume to Capacity ratio			0.39									
Actuated Cycle Length (s)			90.0	Sum of lost time (s)				24.6				
Intersection Capacity Utilization			46.8%	ICU Level of Service				A				
Analysis Period (min)			15									
c Critical Lane Group												

Timings
12: Main St. & Suffolk Plaza Center

2035 Build
Timing Plan: AM Peak

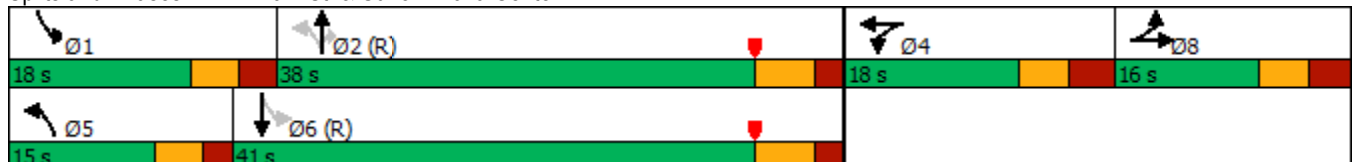


Lane Group	WBL	WBT	NBL	NBT	NBR	SBL	SBT	Ø8
Lane Configurations								
Traffic Volume (vph)	78	1	1	905	113	80	847	
Future Volume (vph)	78	1	1	905	113	80	847	
Turn Type	Split	NA	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	4	4	5	2		1	6	8
Permitted Phases			2		2	6		
Detector Phase	4	4	5	2	2	1	6	
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.4	24.4	11.0	24.1	24.1	11.0	24.1	30.4
Total Split (s)	18.0	18.0	15.0	38.0	38.0	18.0	41.0	16.0
Total Split (%)	20.0%	20.0%	16.7%	42.2%	42.2%	20.0%	45.6%	18%
Yellow Time (s)	3.4	3.4	3.2	4.1	4.1	3.2	4.1	3.4
All-Red Time (s)	3.0	3.0	2.0	2.0	2.0	2.6	2.0	2.9
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	5.2	6.1	6.1	5.8	6.1	
Lead/Lag			Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?			Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	C-Max	C-Max	None	C-Max	None
Act Effct Green (s)	8.4	8.4	66.8	62.7	62.7	71.2	70.6	
Actuated g/C Ratio	0.09	0.09	0.74	0.70	0.70	0.79	0.78	
v/c Ratio	0.35	0.30	0.00	0.37	0.10	0.17	0.31	
Control Delay	43.8	25.7	3.0	8.3	0.4	4.0	5.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	43.8	25.7	3.0	8.3	0.4	4.0	5.5	
LOS	D	C	A	A	A	A	A	
Approach Delay		35.0		7.4			5.4	
Approach LOS		C		A			A	

Intersection Summary

Cycle Length: 90
 Actuated Cycle Length: 90
 Offset: 12 (13%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.37
 Intersection Signal Delay: 7.9
 Intersection Capacity Utilization 48.9%
 Analysis Period (min) 15
 Intersection LOS: A
 ICU Level of Service A

Splits and Phases: 12: Main St. & Suffolk Plaza Center



HCM Signalized Intersection Capacity Analysis

12: Main St. & Suffolk Plaza Center

2035 Build
Timing Plan: AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↖	↔		↖	↑↑	↖	↖	↑↓	
Traffic Volume (vph)	0	0	0	78	1	28	1	905	113	80	847	0
Future Volume (vph)	0	0	0	78	1	28	1	905	113	80	847	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Lane Util. Factor				0.95	0.95		1.00	0.95	1.00	1.00	0.95	
Fr _t				1.00	0.92		1.00	1.00	0.85	1.00	1.00	
Fl _t Protected				0.95	0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)				1681	1591		1770	3539	1583	1770	3539	
Fl _t Permitted				0.95	0.98		0.33	1.00	1.00	0.27	1.00	
Satd. Flow (perm)				1681	1591		621	3539	1583	495	3539	
Peak-hour factor, PHF	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. Flow (vph)	0	0	0	78	1	28	1	905	113	80	847	0
RTOR Reduction (vph)	0	0	0	0	26	0	0	0	39	0	0	0
Lane Group Flow (vph)	0	0	0	55	26	0	1	905	74	80	847	0
Turn Type				Split	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)				7.3	7.3		60.1	59.0	59.0	69.3	63.9	
Effective Green, g (s)				7.3	7.3		60.1	59.0	59.0	69.3	63.9	
Actuated g/C Ratio				0.08	0.08		0.67	0.66	0.66	0.77	0.71	
Clearance Time (s)				6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Vehicle Extension (s)				3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)				136	129		428	2320	1037	457	2512	
v/s Ratio Prot				c0.03	0.02		0.00	c0.26		c0.01	c0.24	
v/s Ratio Perm							0.00		0.05	0.12		
v/c Ratio				0.40	0.20		0.00	0.39	0.07	0.18	0.34	
Uniform Delay, d ₁				39.3	38.6		5.0	7.2	5.6	3.1	5.0	
Progression Factor				1.00	1.00		1.00	1.00	1.00	1.16	1.19	
Incremental Delay, d ₂				2.0	0.8		0.0	0.5	0.1	0.2	0.4	
Delay (s)				41.2	39.4		5.0	7.7	5.7	3.8	6.3	
Level of Service				D	D		A	A	A	A	A	
Approach Delay (s)		0.0			40.4			7.5			6.0	
Approach LOS		A			D			A			A	

Intersection Summary

HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	24.6
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Timings
12: Main St. & Suffolk Plaza Center

Existing
PM Peak

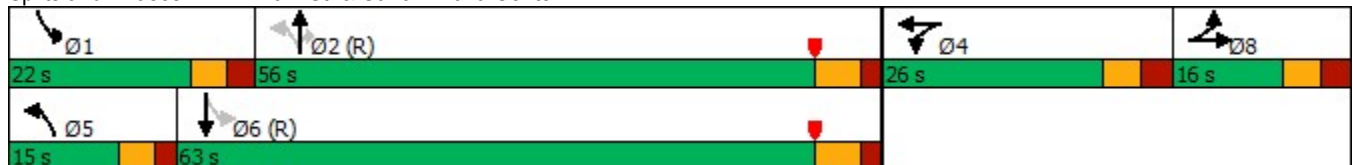


Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↕	↗	↕	↗	↑↑	↗	↗	↑↑
Traffic Volume (vph)	2	188	2	18	998	130	133	1124
Future Volume (vph)	2	188	2	18	998	130	133	1124
Turn Type	NA	Split	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	8	4	4	5	2		1	6
Permitted Phases				2		2	6	
Detector Phase	8	4	4	5	2	2	1	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)	30.4	24.4	24.4	11.0	24.1	24.1	11.0	24.1
Total Split (s)	16.0	26.0	26.0	15.0	56.0	56.0	22.0	63.0
Total Split (%)	13.3%	21.7%	21.7%	12.5%	46.7%	46.7%	18.3%	52.5%
Yellow Time (s)	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1
All-Red Time (s)	2.9	3.0	3.0	2.0	2.0	2.0	2.6	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.2	6.1	6.1	5.8	6.1
Lead/Lag				Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	6.2	14.4	14.4	80.3	73.5	73.5	87.7	83.1
Actuated g/C Ratio	0.05	0.12	0.12	0.67	0.61	0.61	0.73	0.69
v/c Ratio	0.13	0.65	0.55	0.05	0.46	0.12	0.35	0.47
Control Delay	44.0	64.5	42.5	12.3	22.1	5.6	10.9	17.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.0	64.5	42.5	12.3	22.1	5.6	10.9	17.0
LOS	D	E	D	B	C	A	B	B
Approach Delay	44.0		53.8		20.1			16.4
Approach LOS	D		D		C			B

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 52 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 21.6
 Intersection Capacity Utilization 63.0%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service B






















Splits and Phases: 12: Main St. & Suffolk Plaza Center



HCM Signalized Intersection Capacity Analysis

12: Main St. & Suffolk Plaza Center

Existing
PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	2	5	188	2	63	18	998	130	133	1124	22
Future Volume (vph)	5	2	5	188	2	63	18	998	130	133	1124	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3		6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95	1.00	1.00	0.95	
Frt		0.94		1.00	0.92		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1722		1681	1596		1770	3539	1583	1770	3529	
Flt Permitted		0.98		0.95	0.98		0.21	1.00	1.00	0.21	1.00	
Satd. Flow (perm)		1722		1681	1596		398	3539	1583	391	3529	
Peak-hour factor, PHF	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. Flow (vph)	5	2	5	188	2	63	18	998	130	133	1124	22
RTOR Reduction (vph)	0	5	0	0	33	0	0	0	54	0	1	0
Lane Group Flow (vph)	0	7	0	130	90	0	18	998	76	133	1145	0
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)		2.8		14.4	14.4		72.4	69.8	69.8	84.0	76.2	
Effective Green, g (s)		2.8		14.4	14.4		72.4	69.8	69.8	84.0	76.2	
Actuated g/C Ratio		0.02		0.12	0.12		0.60	0.58	0.58	0.70	0.64	
Clearance Time (s)		6.3		6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		40		201	191		269	2058	920	370	2240	
v/s Ratio Prot		c0.00		c0.08	0.06		0.00	0.28		c0.03	c0.32	
v/s Ratio Perm							0.04		0.05	0.23		
v/c Ratio		0.18		0.65	0.47		0.07	0.48	0.08	0.36	0.51	
Uniform Delay, d1		57.5		50.4	49.2		9.9	14.6	11.0	8.1	11.8	
Progression Factor		1.00		1.00	1.00		1.65	1.45	9.35	1.35	1.43	
Incremental Delay, d2		2.1		7.0	1.8		0.1	0.7	0.1	0.5	0.8	
Delay (s)		59.6		57.3	51.1		16.5	21.8	103.2	11.6	17.7	
Level of Service		E		E	D		B	C	F	B	B	
Approach Delay (s)		59.6			54.3			31.0			17.1	
Approach LOS		E			D			C			B	
Intersection Summary												
HCM 2000 Control Delay			26.7			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.53									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			24.6			
Intersection Capacity Utilization			63.0%			ICU Level of Service			B			
Analysis Period (min)			15									

c Critical Lane Group

Timings
12: Main St. & Suffolk Plaza Center

Background 2030
PM Peak

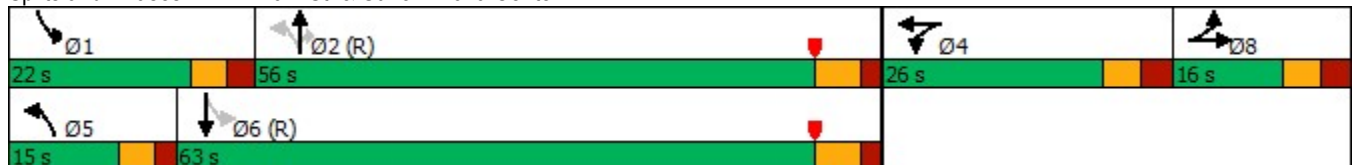


Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↕	↗	↕	↗	↑↑	↗	↗	↑↑
Traffic Volume (vph)	2	188	2	18	1198	130	133	1350
Future Volume (vph)	2	188	2	18	1198	130	133	1350
Turn Type	NA	Split	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	8	4	4	5	2		1	6
Permitted Phases				2		2	6	
Detector Phase	8	4	4	5	2	2	1	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)	30.4	24.4	24.4	11.0	24.1	24.1	11.0	24.1
Total Split (s)	16.0	26.0	26.0	15.0	56.0	56.0	22.0	63.0
Total Split (%)	13.3%	21.7%	21.7%	12.5%	46.7%	46.7%	18.3%	52.5%
Yellow Time (s)	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1
All-Red Time (s)	2.9	3.0	3.0	2.0	2.0	2.0	2.6	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.2	6.1	6.1	5.8	6.1
Lead/Lag				Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	6.2	14.4	14.4	78.7	71.9	71.9	88.0	83.1
Actuated g/C Ratio	0.05	0.12	0.12	0.66	0.60	0.60	0.73	0.69
v/c Ratio	0.13	0.65	0.55	0.07	0.57	0.13	0.41	0.56
Control Delay	44.0	64.5	42.5	12.3	26.7	5.3	14.5	21.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.0	64.5	42.5	12.3	26.7	5.3	14.5	21.0
LOS	D	E	D	B	C	A	B	C
Approach Delay	44.0		53.8		24.5			20.4
Approach LOS	D		D		C			C

Intersection Summary






















Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 52 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 25.0
 Intersection Capacity Utilization 69.2%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 12: Main St. & Suffolk Plaza Center



HCM Signalized Intersection Capacity Analysis
12: Main St. & Suffolk Plaza Center

Background 2030
PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	2	5	188	2	63	18	1198	130	133	1350	22
Future Volume (vph)	5	2	5	188	2	63	18	1198	130	133	1350	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3		6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95	1.00	1.00	0.95	
Frt		0.94		1.00	0.92		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1722		1681	1596		1770	3539	1583	1770	3531	
Flt Permitted		0.98		0.95	0.98		0.15	1.00	1.00	0.15	1.00	
Satd. Flow (perm)		1722		1681	1596		286	3539	1583	275	3531	
Peak-hour factor, PHF	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. Flow (vph)	5	2	5	188	2	63	18	1198	130	133	1350	22
RTOR Reduction (vph)	0	5	0	0	33	0	0	0	56	0	1	0
Lane Group Flow (vph)	0	7	0	130	90	0	18	1198	74	133	1371	0
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)		2.8		14.4	14.4		70.8	68.2	68.2	84.0	76.2	
Effective Green, g (s)		2.8		14.4	14.4		70.8	68.2	68.2	84.0	76.2	
Actuated g/C Ratio		0.02		0.12	0.12		0.59	0.57	0.57	0.70	0.64	
Clearance Time (s)		6.3		6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		40		201	191		200	2011	899	317	2242	
v/s Ratio Prot		c0.00		c0.08	0.06		0.00	0.34		c0.03	c0.39	
v/s Ratio Perm							0.05		0.05	0.26		
v/c Ratio		0.18		0.65	0.47		0.09	0.60	0.08	0.42	0.61	
Uniform Delay, d1		57.5		50.4	49.2		11.2	16.9	11.7	10.4	13.1	
Progression Factor		1.00		1.00	1.00		1.58	1.49	7.97	1.77	1.58	
Incremental Delay, d2		2.1		7.0	1.8		0.1	0.8	0.1	0.8	1.1	
Delay (s)		59.6		57.3	51.1		17.9	26.0	93.5	19.2	21.8	
Level of Service		E		E	D		B	C	F	B	C	
Approach Delay (s)		59.6			54.3			32.4			21.5	
Approach LOS		E			D			C			C	
Intersection Summary												
HCM 2000 Control Delay			29.0			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			24.6			
Intersection Capacity Utilization			69.2%			ICU Level of Service			C			
Analysis Period (min)			15									

c Critical Lane Group

Timings
12: Main St. & Suffolk Plaza Center

2030 Build
Timing Plan: PM Peak

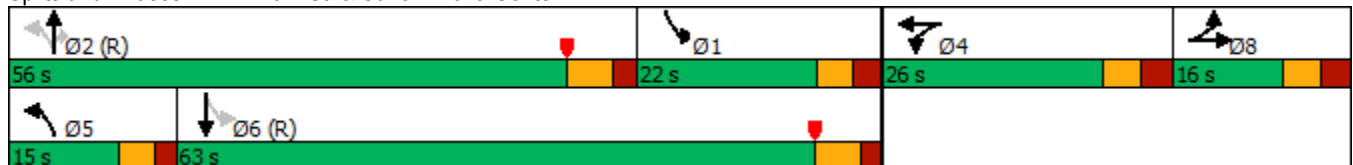


Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↕	↗	↕	↗	↑↑	↗	↗	↑↑
Traffic Volume (vph)	2	188	2	18	1257	130	133	1420
Future Volume (vph)	2	188	2	18	1257	130	133	1420
Turn Type	NA	Split	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	8	4	4	5	2		1	6
Permitted Phases				2		2	6	
Detector Phase	8	4	4	5	2	2	1	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)	30.4	24.4	24.4	11.0	24.1	24.1	11.0	24.1
Total Split (s)	16.0	26.0	26.0	15.0	56.0	56.0	22.0	63.0
Total Split (%)	13.3%	21.7%	21.7%	12.5%	46.7%	46.7%	18.3%	52.5%
Yellow Time (s)	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1
All-Red Time (s)	2.9	3.0	3.0	2.0	2.0	2.0	2.6	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.2	6.1	6.1	5.8	6.1
Lead/Lag				Lead	Lead	Lead	Lag	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	6.2	14.4	14.4	66.6	65.7	65.7	83.2	82.9
Actuated g/C Ratio	0.05	0.12	0.12	0.56	0.55	0.55	0.69	0.69
v/c Ratio	0.13	0.65	0.55	0.11	0.65	0.14	0.35	0.59
Control Delay	44.0	64.5	42.5	17.2	24.5	5.3	12.6	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.0	64.5	42.5	17.2	24.5	5.3	12.6	6.6
LOS	D	E	D	B	C	A	B	A
Approach Delay	44.0		53.8		22.7			7.1
Approach LOS	D		D		C			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 80 (67%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 17.6
 Intersection Capacity Utilization 71.2%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 12: Main St. & Suffolk Plaza Center



HCM Signalized Intersection Capacity Analysis

12: Main St. & Suffolk Plaza Center

2030 Build
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕↕	↕	↕	↕↕	
Traffic Volume (vph)	5	2	5	188	2	63	18	1257	130	133	1420	22
Future Volume (vph)	5	2	5	188	2	63	18	1257	130	133	1420	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3		6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95	1.00	1.00	0.95	
Frt		0.94		1.00	0.92		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1722		1681	1596		1770	3539	1583	1770	3531	
Flt Permitted		0.98		0.95	0.98		0.08	1.00	1.00	0.14	1.00	
Satd. Flow (perm)		1722		1681	1596		152	3539	1583	257	3531	
Peak-hour factor, PHF	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. Flow (vph)	5	2	5	188	2	63	18	1257	130	133	1420	22
RTOR Reduction (vph)	0	5	0	0	33	0	0	0	66	0	1	0
Lane Group Flow (vph)	0	7	0	130	90	0	18	1257	64	133	1441	0
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)		2.8		14.4	14.4		58.8	58.8	58.8	76.3	76.0	
Effective Green, g (s)		2.8		14.4	14.4		58.8	58.8	58.8	76.3	76.0	
Actuated g/C Ratio		0.02		0.12	0.12		0.49	0.49	0.49	0.64	0.63	
Clearance Time (s)		6.3		6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		40		201	191		112	1734	775	408	2236	
v/s Ratio Prot		c0.00		c0.08	0.06		0.00	c0.36		0.05	c0.41	
v/s Ratio Perm							0.07		0.04	0.15		
v/c Ratio		0.18		0.65	0.47		0.16	0.72	0.08	0.33	0.64	
Uniform Delay, d1		57.5		50.4	49.2		20.0	24.2	16.3	26.1	13.6	
Progression Factor		1.00		1.00	1.00		1.01	1.10	2.00	0.50	0.42	
Incremental Delay, d2		2.1		7.0	1.8		0.4	1.5	0.1	0.4	1.2	
Delay (s)		59.6		57.3	51.1		20.7	28.2	32.7	13.5	7.0	
Level of Service		E		E	D		C	C	C	B	A	
Approach Delay (s)		59.6			54.3			28.5			7.5	
Approach LOS		E			D			C			A	

Intersection Summary

HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	24.6
Intersection Capacity Utilization	71.2%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Timings
12: Main St. & Suffolk Plaza Center

Background 2035
PM Peak

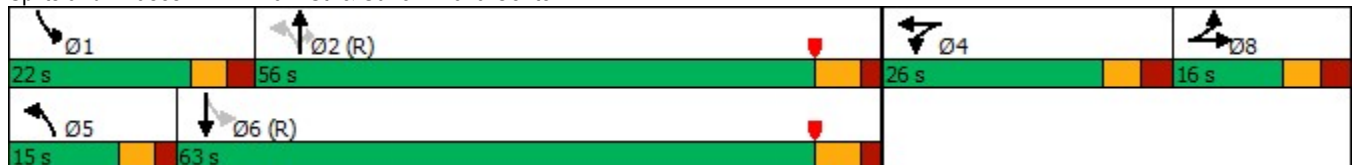


Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↕	↗	↕	↗	↑↑	↗	↗	↑↑
Traffic Volume (vph)	2	188	2	18	1248	130	133	1406
Future Volume (vph)	2	188	2	18	1248	130	133	1406
Turn Type	NA	Split	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	8	4	4	5	2		1	6
Permitted Phases				2		2	6	
Detector Phase	8	4	4	5	2	2	1	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)	30.4	24.4	24.4	11.0	24.1	24.1	11.0	24.1
Total Split (s)	16.0	26.0	26.0	15.0	56.0	56.0	22.0	63.0
Total Split (%)	13.3%	21.7%	21.7%	12.5%	46.7%	46.7%	18.3%	52.5%
Yellow Time (s)	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1
All-Red Time (s)	2.9	3.0	3.0	2.0	2.0	2.0	2.6	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.2	6.1	6.1	5.8	6.1
Lead/Lag				Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	6.2	14.4	14.4	78.5	71.7	71.7	88.0	83.1
Actuated g/C Ratio	0.05	0.12	0.12	0.65	0.60	0.60	0.73	0.69
v/c Ratio	0.13	0.65	0.55	0.07	0.59	0.13	0.42	0.58
Control Delay	44.0	64.5	42.5	12.4	27.3	5.2	15.3	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.0	64.5	42.5	12.4	27.3	5.2	15.3	21.8
LOS	D	E	D	B	C	A	B	C
Approach Delay	44.0		53.8		25.1			21.2
Approach LOS	D		D		C			C

Intersection Summary






















Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 52 (43%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.65
 Intersection Signal Delay: 25.5
 Intersection Capacity Utilization 70.8%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service C

Splits and Phases: 12: Main St. & Suffolk Plaza Center



HCM Signalized Intersection Capacity Analysis
12: Main St. & Suffolk Plaza Center

Background 2035
PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	2	5	188	2	63	18	1248	130	133	1406	22
Future Volume (vph)	5	2	5	188	2	63	18	1248	130	133	1406	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3		6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95	1.00	1.00	0.95	
Frt		0.94		1.00	0.92		1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1722		1681	1596		1770	3539	1583	1770	3531	
Flt Permitted		0.98		0.95	0.98		0.14	1.00	1.00	0.13	1.00	
Satd. Flow (perm)		1722		1681	1596		260	3539	1583	249	3531	
Peak-hour factor, PHF	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. Flow (vph)	5	2	5	188	2	63	18	1248	130	133	1406	22
RTOR Reduction (vph)	0	5	0	0	33	0	0	0	56	0	1	0
Lane Group Flow (vph)	0	7	0	130	90	0	18	1248	74	133	1427	0
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)		2.8		14.4	14.4		70.5	67.9	67.9	84.0	76.2	
Effective Green, g (s)		2.8		14.4	14.4		70.5	67.9	67.9	84.0	76.2	
Actuated g/C Ratio		0.02		0.12	0.12		0.59	0.57	0.57	0.70	0.64	
Clearance Time (s)		6.3		6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		40		201	191		185	2002	895	304	2242	
v/s Ratio Prot		c0.00		c0.08	0.06		0.00	0.35		c0.04	c0.40	
v/s Ratio Perm							0.05		0.05	0.27		
v/c Ratio		0.18		0.65	0.47		0.10	0.62	0.08	0.44	0.64	
Uniform Delay, d1		57.5		50.4	49.2		11.6	17.5	11.9	11.2	13.4	
Progression Factor		1.00		1.00	1.00		1.58	1.47	7.76	1.83	1.59	
Incremental Delay, d2		2.1		7.0	1.8		0.1	0.9	0.1	0.9	1.2	
Delay (s)		59.6		57.3	51.1		18.5	26.6	92.2	21.4	22.5	
Level of Service		E		E	D		B	C	F	C	C	
Approach Delay (s)		59.6			54.3			32.6			22.4	
Approach LOS		E			D			C			C	
Intersection Summary												
HCM 2000 Control Delay			29.5			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.64									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			24.6			
Intersection Capacity Utilization			70.8%			ICU Level of Service			C			
Analysis Period (min)			15									

c Critical Lane Group

Timings
12: Main St. & Suffolk Plaza Center

2035 Build
Timing Plan: PM Peak

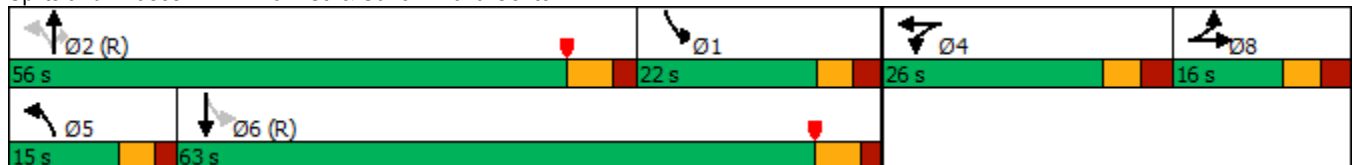


Lane Group	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations	↕	↗	↕	↗	↑↑	↗	↗	↑↑
Traffic Volume (vph)	2	188	2	18	1307	130	133	1476
Future Volume (vph)	2	188	2	18	1307	130	133	1476
Turn Type	NA	Split	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	8	4	4	5	2		1	6
Permitted Phases				2		2	6	
Detector Phase	8	4	4	5	2	2	1	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)	30.4	24.4	24.4	11.0	24.1	24.1	11.0	24.1
Total Split (s)	16.0	26.0	26.0	15.0	56.0	56.0	22.0	63.0
Total Split (%)	13.3%	21.7%	21.7%	12.5%	46.7%	46.7%	18.3%	52.5%
Yellow Time (s)	3.4	3.4	3.4	3.2	4.1	4.1	3.2	4.1
All-Red Time (s)	2.9	3.0	3.0	2.0	2.0	2.0	2.6	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.3	6.4	6.4	5.2	6.1	6.1	5.8	6.1
Lead/Lag				Lead	Lead	Lead	Lag	Lag
Lead-Lag Optimize?				Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	6.2	14.4	14.4	66.6	65.7	65.7	83.2	82.9
Actuated g/C Ratio	0.05	0.12	0.12	0.56	0.55	0.55	0.69	0.69
v/c Ratio	0.13	0.65	0.55	0.11	0.67	0.14	0.36	0.61
Control Delay	44.0	64.5	42.5	17.3	24.9	5.2	13.6	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	44.0	64.5	42.5	17.3	24.9	5.2	13.6	6.6
LOS	D	E	D	B	C	A	B	A
Approach Delay	44.0		53.8		23.1			7.1
Approach LOS	D		D		C			A

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 80 (67%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow
 Natural Cycle: 120
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 17.7
 Intersection Capacity Utilization 72.7%
 Analysis Period (min) 15
 Intersection LOS: B
 ICU Level of Service C

Splits and Phases: 12: Main St. & Suffolk Plaza Center



HCM Signalized Intersection Capacity Analysis

12: Main St. & Suffolk Plaza Center

2035 Build
Timing Plan: PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕↕	↕	↕	↕↕	
Traffic Volume (vph)	5	2	5	188	2	63	18	1307	130	133	1476	22
Future Volume (vph)	5	2	5	188	2	63	18	1307	130	133	1476	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3		6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Lane Util. Factor		1.00		0.95	0.95		1.00	0.95	1.00	1.00	0.95	
Fr _t		0.94		1.00	0.92		1.00	1.00	0.85	1.00	1.00	
Fl _t Protected		0.98		0.95	0.98		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1722		1681	1596		1770	3539	1583	1770	3531	
Fl _t Permitted		0.98		0.95	0.98		0.07	1.00	1.00	0.12	1.00	
Satd. Flow (perm)		1722		1681	1596		133	3539	1583	229	3531	
Peak-hour factor, PHF	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. Flow (vph)	5	2	5	188	2	63	18	1307	130	133	1476	22
RTOR Reduction (vph)	0	5	0	0	33	0	0	0	66	0	1	0
Lane Group Flow (vph)	0	7	0	130	90	0	18	1307	64	133	1497	0
Turn Type	Split	NA		Split	NA		pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	8	8		4	4		5	2		1	6	
Permitted Phases							2		2	6		
Actuated Green, G (s)		2.8		14.4	14.4		58.8	58.8	58.8	76.3	76.0	
Effective Green, g (s)		2.8		14.4	14.4		58.8	58.8	58.8	76.3	76.0	
Actuated g/C Ratio		0.02		0.12	0.12		0.49	0.49	0.49	0.64	0.63	
Clearance Time (s)		6.3		6.4	6.4		5.2	6.1	6.1	5.8	6.1	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		40		201	191		103	1734	775	394	2236	
v/s Ratio Prot		c0.00		c0.08	0.06		0.00	c0.37		0.05	c0.42	
v/s Ratio Perm							0.08		0.04	0.16		
v/c Ratio		0.18		0.65	0.47		0.17	0.75	0.08	0.34	0.67	
Uniform Delay, d ₁		57.5		50.4	49.2		20.7	24.7	16.3	28.4	14.0	
Progression Factor		1.00		1.00	1.00		1.02	1.10	1.97	0.52	0.41	
Incremental Delay, d ₂		2.1		7.0	1.8		0.4	1.6	0.1	0.4	1.3	
Delay (s)		59.6		57.3	51.1		21.5	28.7	32.2	15.1	7.0	
Level of Service		E		E	D		C	C	C	B	A	
Approach Delay (s)		59.6			54.3			28.9			7.7	
Approach LOS		E			D			C			A	

Intersection Summary

HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	24.6
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Timings
13: Main St. & Constance Road

Existing
AM Peak

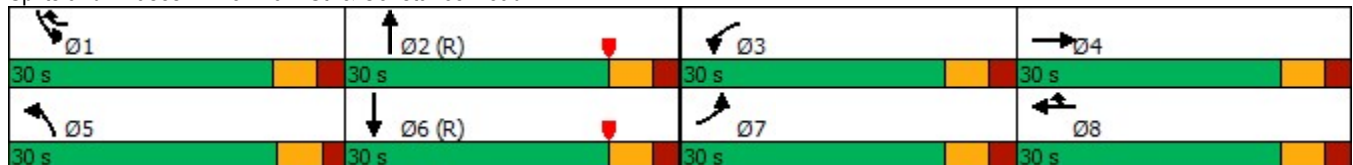


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖↗	↕	↖	↕	↗	↖	↕	↖	↕
Traffic Volume (vph)	195	182	116	174	268	16	387	150	361
Future Volume (vph)	195	182	116	174	268	16	387	150	361
Turn Type	Prot	NA	Prot	NA	pt+ov	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	8 1	5	2	1	6
Permitted Phases									
Detector Phase	7	4	3	8	8 1	5	2	1	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)	11.5	24.5	11.5	24.5		11.0	24.5	11.5	24.5
Total Split (s)	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%		25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5		2.0	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)	6.5	6.5	6.5	6.5		6.0	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag		Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None		None	C-Max	None	C-Max
Act Effct Green (s)	12.1	15.8	13.2	16.8	38.7	6.7	49.6	15.4	66.0
Actuated g/C Ratio	0.10	0.13	0.11	0.14	0.32	0.06	0.41	0.13	0.55
v/c Ratio	0.56	0.41	0.60	0.67	0.42	0.16	0.30	0.66	0.26
Control Delay	57.4	49.0	63.1	61.0	10.4	57.1	26.0	63.1	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.4	49.0	63.1	61.0	10.4	57.1	26.0	63.1	15.8
LOS	E	D	E	E	B	E	C	E	B
Approach Delay		53.3		37.1			27.1		26.8
Approach LOS		D		D			C		C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 23.5 (20%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.67
 Intersection Signal Delay: 34.7
 Intersection Capacity Utilization 56.9%
 Analysis Period (min) 15
 Intersection LOS: C
 ICU Level of Service B



























Splits and Phases: 13: Main St. & Constance Road



HCM Signalized Intersection Capacity Analysis

13: Main St. & Constance Road

Existing
AM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	 	 				 		 			 		
Traffic Volume (vph)	195	182	8	116	174	268	16	387	47	150	361	136	
Future Volume (vph)	195	182	8	116	174	268	16	387	47	150	361	136	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.0	6.5		6.5	6.5		
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95		
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.96		
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	3433	3517		1770	1863	1583	1770	3482		1770	3394		
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (perm)	3433	3517		1770	1863	1583	1770	3482		1770	3394		
Peak-hour factor, PHF	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. Flow (vph)	195	182	8	116	174	268	16	387	47	150	361	136	
RTOR Reduction (vph)	0	3	0	0	0	128	0	6	0	0	19	0	
Lane Group Flow (vph)	195	187	0	116	174	140	16	428	0	150	478	0	
Turn Type	Prot	NA		Prot	NA	pt+ov	Prot	NA		Prot	NA		
Protected Phases	7	4		3	8	8 1	5	2		1	6		
Permitted Phases													
Actuated Green, G (s)	12.1	15.8		13.2	16.9	38.8	3.1	49.6		15.4	62.4		
Effective Green, g (s)	12.1	15.8		13.2	16.9	38.8	3.1	49.6		15.4	62.4		
Actuated g/C Ratio	0.10	0.13		0.11	0.14	0.32	0.03	0.41		0.13	0.52		
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.5		6.5	6.5		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	346	463		194	262	511	45	1439		227	1764		
v/s Ratio Prot	0.06	0.05		c0.07	c0.09	0.09	0.01	c0.12		c0.08	0.14		
v/s Ratio Perm													
v/c Ratio	0.56	0.40		0.60	0.66	0.27	0.36	0.30		0.66	0.27		
Uniform Delay, d1	51.4	47.8		50.9	48.9	30.1	57.5	23.5		49.8	16.1		
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00		
Incremental Delay, d2	2.1	0.6		4.9	6.2	0.3	4.8	0.5		7.0	0.4		
Delay (s)	53.5	48.4		55.8	55.1	30.4	62.2	24.1		56.8	16.5		
Level of Service	D	D		E	E	C	E	C		E	B		
Approach Delay (s)		51.0			43.4			25.4			25.8		
Approach LOS		D			D			C			C		
Intersection Summary													
HCM 2000 Control Delay			35.3									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.47										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	26.0
Intersection Capacity Utilization			56.9%									ICU Level of Service	B
Analysis Period (min)			15										

c Critical Lane Group

Timings
13: Main St. & Constance Road

Background 2030
AM Peak

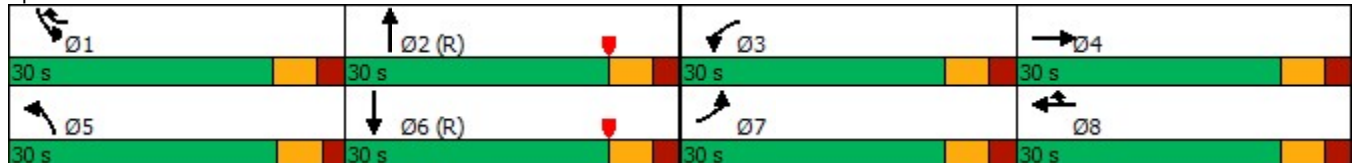


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	223	191	122	183	301	17	427	211	434
Future Volume (vph)	223	191	122	183	301	17	427	211	434
Turn Type	Prot	NA	Prot	NA	pt+ov	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	8 1	5	2	1	6
Permitted Phases									
Detector Phase	7	4	3	8	8 1	5	2	1	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)	11.5	24.5	11.5	24.5		11.0	24.5	11.5	24.5
Total Split (s)	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%		25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5		2.0	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)	6.5	6.5	6.5	6.5		6.0	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag		Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None		None	C-Max	None	C-Max
Act Effct Green (s)	13.1	17.0	13.6	17.5	43.6	6.8	43.8	19.6	64.3
Actuated g/C Ratio	0.11	0.14	0.11	0.15	0.36	0.06	0.36	0.16	0.54
v/c Ratio	0.60	0.40	0.61	0.68	0.45	0.17	0.37	0.73	0.34
Control Delay	57.4	47.6	63.2	60.3	14.2	57.2	31.4	62.0	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.4	47.6	63.2	60.3	14.2	57.2	31.4	62.0	17.6
LOS	E	D	E	E	B	E	C	E	B
Approach Delay		52.8		38.0			32.3		28.7
Approach LOS		D		D			C		C

Intersection Summary























Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 23.5 (20%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 36.1
 Intersection Capacity Utilization 62.7%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service B

Splits and Phases: 13: Main St. & Constance Road



HCM Signalized Intersection Capacity Analysis
 13: Main St. & Constance Road

Background 2030
 AM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	223	191	8	122	183	301	17	427	49	211	434	196	
Future Volume (vph)	223	191	8	122	183	301	17	427	49	211	434	196	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.0	6.5		6.5	6.5		
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95		
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.95		
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	3433	3518		1770	1863	1583	1770	3485		1770	3374		
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (perm)	3433	3518		1770	1863	1583	1770	3485		1770	3374		
Peak-hour factor, PHF	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. Flow (vph)	223	191	8	122	183	301	17	427	49	211	434	196	
RTOR Reduction (vph)	0	3	0	0	0	97	0	6	0	0	27	0	
Lane Group Flow (vph)	223	196	0	122	183	204	17	470	0	211	603	0	
Turn Type	Prot	NA		Prot	NA	pt+ov	Prot	NA		Prot	NA		
Protected Phases	7	4		3	8	8 1	5	2		1	6		
Permitted Phases													
Actuated Green, G (s)	13.1	17.0		13.6	17.5	43.6	3.2	43.8		19.6	60.7		
Effective Green, g (s)	13.1	17.0		13.6	17.5	43.6	3.2	43.8		19.6	60.7		
Actuated g/C Ratio	0.11	0.14		0.11	0.15	0.36	0.03	0.36		0.16	0.51		
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.5		6.5	6.5		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	374	498		200	271	575	47	1272		289	1706		
v/s Ratio Prot	0.06	0.06		c0.07	c0.10	0.13	0.01	0.13		c0.12	c0.18		
v/s Ratio Perm													
v/c Ratio	0.60	0.39		0.61	0.68	0.35	0.36	0.37		0.73	0.35		
Uniform Delay, d1	50.9	46.8		50.7	48.6	27.9	57.4	28.0		47.7	17.8		
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00		
Incremental Delay, d2	2.6	0.5		5.2	6.5	0.4	4.7	0.8		9.1	0.6		
Delay (s)	53.5	47.3		55.9	55.1	28.3	62.1	28.8		56.8	18.4		
Level of Service	D	D		E	E	C	E	C		E	B		
Approach Delay (s)		50.6			41.9			29.9			28.1		
Approach LOS		D			D			C			C		
Intersection Summary													
HCM 2000 Control Delay			36.0									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.54										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	26.0
Intersection Capacity Utilization			62.7%									ICU Level of Service	B
Analysis Period (min)			15										

c Critical Lane Group

Timings
13: Main St. & Constance Road

2030 Build
Timing Plan: AM Peak



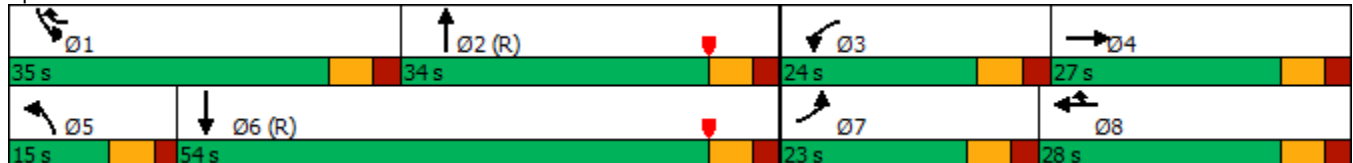
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations	↖↗	↕	↖	↕	↗	↖	↕	↖	↕
Traffic Volume (vph)	243	191	122	183	321	17	462	225	458
Future Volume (vph)	243	191	122	183	321	17	462	225	458
Turn Type	Prot	NA	Prot	NA	pt+ov	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	8 1	5	2	1	6
Permitted Phases									
Detector Phase	7	4	3	8	8 1	5	2	1	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)	11.5	24.5	11.5	24.5		11.0	24.5	11.5	24.5
Total Split (s)	23.0	27.0	24.0	28.0		15.0	34.0	35.0	54.0
Total Split (%)	19.2%	22.5%	20.0%	23.3%		12.5%	28.3%	29.2%	45.0%
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5		2.0	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)	6.5	6.5	6.5	6.5		6.0	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag		Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None		None	C-Max	None	C-Max
Act Effct Green (s)	13.6	18.9	13.3	18.6	45.7	6.8	41.2	20.6	62.8
Actuated g/C Ratio	0.11	0.16	0.11	0.16	0.38	0.06	0.34	0.17	0.52
v/c Ratio	0.63	0.36	0.62	0.64	0.49	0.17	0.42	0.74	0.37
Control Delay	72.8	42.3	69.0	58.1	18.4	54.1	33.1	61.4	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.8	42.3	69.0	58.1	18.4	54.1	33.1	61.4	17.8
LOS	E	D	E	E	B	D	C	E	B
Approach Delay		59.1		39.8			33.8		28.8
Approach LOS		E		D			C		C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 23.5 (20%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 38.0
 Intersection Capacity Utilization 65.0%
 Analysis Period (min) 15



























Intersection LOS: D
 ICU Level of Service C

Splits and Phases: 13: Main St. & Constance Road



HCM Signalized Intersection Capacity Analysis
 13: Main St. & Constance Road

2030 Build
 Timing Plan: AM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	 	 				 		 			 		
Traffic Volume (vph)	243	191	8	122	183	321	17	462	49	225	458	210	
Future Volume (vph)	243	191	8	122	183	321	17	462	49	225	458	210	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.0	6.5		6.5	6.5		
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95		
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	0.95		
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	3433	3518		1770	1863	1583	1770	3488		1770	3372		
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (perm)	3433	3518		1770	1863	1583	1770	3488		1770	3372		
Peak-hour factor, PHF	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. Flow (vph)	243	191	8	122	183	321	17	462	49	225	458	210	
RTOR Reduction (vph)	0	3	0	0	0	56	0	6	0	0	37	0	
Lane Group Flow (vph)	243	196	0	122	183	265	17	505	0	225	631	0	
Turn Type	Prot	NA		Prot	NA	pt+ov	Prot	NA		Prot	NA		
Protected Phases	7	4		3	8	8 1	5	2		1	6		
Permitted Phases													
Actuated Green, G (s)	13.6	18.9		13.3	18.6	45.7	3.2	41.2		20.6	59.1		
Effective Green, g (s)	13.6	18.9		13.3	18.6	45.7	3.2	41.2		20.6	59.1		
Actuated g/C Ratio	0.11	0.16		0.11	0.16	0.38	0.03	0.34		0.17	0.49		
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.5		6.5	6.5		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	389	554		196	288	602	47	1197		303	1660		
v/s Ratio Prot	c0.07	0.06		0.07	c0.10	0.17	0.01	c0.14		c0.13	0.19		
v/s Ratio Perm													
v/c Ratio	0.62	0.35		0.62	0.64	0.44	0.36	0.42		0.74	0.38		
Uniform Delay, d1	50.8	45.1		51.0	47.5	27.6	57.4	30.3		47.2	19.0		
Progression Factor	1.30	0.92		1.09	1.02	0.86	0.94	0.99		1.00	1.00		
Incremental Delay, d2	3.0	0.4		5.9	4.5	0.5	4.6	1.1		9.4	0.7		
Delay (s)	69.0	42.0		61.7	53.0	24.3	58.7	30.9		56.6	19.7		
Level of Service	E	D		E	D	C	E	C		E	B		
Approach Delay (s)		56.8			40.0			31.8			29.0		
Approach LOS		E			D			C			C		
Intersection Summary													
HCM 2000 Control Delay			37.3									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.56										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	26.0
Intersection Capacity Utilization			65.0%									ICU Level of Service	C
Analysis Period (min)			15										

c Critical Lane Group

Timings
13: Main St. & Constance Road

Background 2035
AM Peak



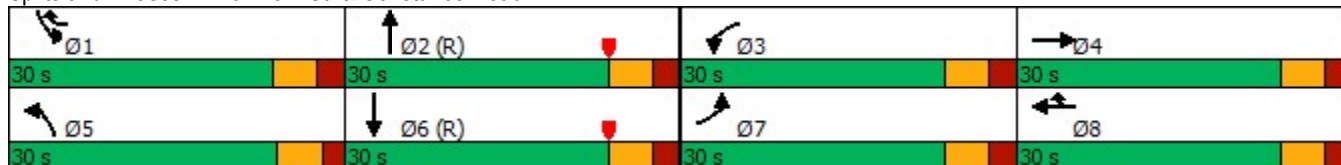
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	233	200	128	191	315	18	447	218	452
Future Volume (vph)	233	200	128	191	315	18	447	218	452
Turn Type	Prot	NA	Prot	NA	pt+ov	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	8 1	5	2	1	6
Permitted Phases									
Detector Phase	7	4	3	8	8 1	5	2	1	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)	11.5	24.5	11.5	24.5		11.0	24.5	11.5	24.5
Total Split (s)	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%		25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5		2.0	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)	6.5	6.5	6.5	6.5		6.0	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag		Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None		None	C-Max	None	C-Max
Act Effct Green (s)	13.4	17.5	14.0	18.0	44.5	6.8	42.5	20.0	63.5
Actuated g/C Ratio	0.11	0.15	0.12	0.15	0.37	0.06	0.35	0.17	0.53
v/c Ratio	0.61	0.41	0.62	0.68	0.47	0.18	0.40	0.74	0.36
Control Delay	57.3	47.5	63.1	60.3	15.9	57.5	32.8	61.9	18.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.3	47.5	63.1	60.3	15.9	57.5	32.8	61.9	18.4
LOS	E	D	E	E	B	E	C	E	B
Approach Delay		52.7		38.8			33.7		29.3
Approach LOS		D		D			C		C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 23.5 (20%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.74
 Intersection Signal Delay: 36.8
 Intersection Capacity Utilization 64.5%
 Analysis Period (min) 15
























Intersection LOS: D
 ICU Level of Service C

Splits and Phases: 13: Main St. & Constance Road



HCM Signalized Intersection Capacity Analysis
13: Main St. & Constance Road

Background 2035
AM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	233	200	9	128	191	315	18	447	52	218	452	203	
Future Volume (vph)	233	200	9	128	191	315	18	447	52	218	452	203	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.0	6.5		6.5	6.5		
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95		
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.98		1.00	0.95		
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	3433	3516		1770	1863	1583	1770	3484		1770	3375		
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (perm)	3433	3516		1770	1863	1583	1770	3484		1770	3375		
Peak-hour factor, PHF	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. Flow (vph)	233	200	9	128	191	315	18	447	52	218	452	203	
RTOR Reduction (vph)	0	3	0	0	0	89	0	6	0	0	27	0	
Lane Group Flow (vph)	233	206	0	128	191	226	18	493	0	218	628	0	
Turn Type	Prot	NA		Prot	NA	pt+ov	Prot	NA		Prot	NA		
Protected Phases	7	4		3	8	8 1	5	2		1	6		
Permitted Phases													
Actuated Green, G (s)	13.4	17.5		14.0	18.1	44.6	3.2	42.5		20.0	59.8		
Effective Green, g (s)	13.4	17.5		14.0	18.1	44.6	3.2	42.5		20.0	59.8		
Actuated g/C Ratio	0.11	0.15		0.12	0.15	0.37	0.03	0.35		0.17	0.50		
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.5		6.5	6.5		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	383	512		206	281	588	47	1233		295	1681		
v/s Ratio Prot	0.07	0.06		c0.07	c0.10	0.14	0.01	c0.14		c0.12	0.19		
v/s Ratio Perm													
v/c Ratio	0.61	0.40		0.62	0.68	0.39	0.38	0.40		0.74	0.37		
Uniform Delay, d1	50.8	46.5		50.5	48.2	27.6	57.4	29.2		47.5	18.6		
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.00	1.00		
Incremental Delay, d2	2.7	0.5		5.7	6.4	0.4	5.1	1.0		9.3	0.6		
Delay (s)	53.5	47.0		56.2	54.6	28.1	62.6	30.1		56.8	19.2		
Level of Service	D	D		E	D	C	E	C		E	B		
Approach Delay (s)		50.5			41.7			31.3			28.6		
Approach LOS		D			D			C			C		
Intersection Summary													
HCM 2000 Control Delay			36.5									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.56										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	26.0
Intersection Capacity Utilization			64.5%									ICU Level of Service	C
Analysis Period (min)			15										

c Critical Lane Group

Timings
13: Main St. & Constance Road

2035 Build
Timing Plan: AM Peak



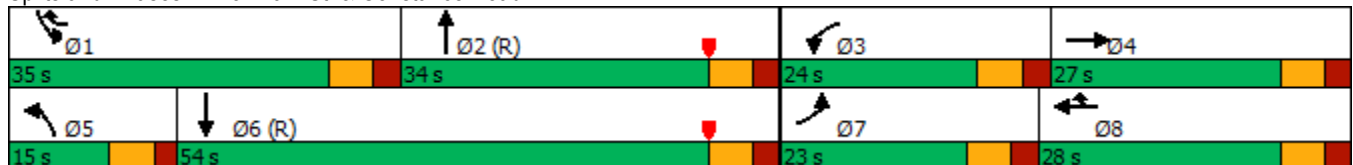
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	253	200	128	191	335	18	482	232	476
Future Volume (vph)	253	200	128	191	335	18	482	232	476
Turn Type	Prot	NA	Prot	NA	pt+ov	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	8 1	5	2	1	6
Permitted Phases									
Detector Phase	7	4	3	8	8 1	5	2	1	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)	11.5	24.5	11.5	24.5		11.0	24.5	11.5	24.5
Total Split (s)	23.0	27.0	24.0	28.0		15.0	34.0	35.0	54.0
Total Split (%)	19.2%	22.5%	20.0%	23.3%		12.5%	28.3%	29.2%	45.0%
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5		2.0	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)	6.5	6.5	6.5	6.5		6.0	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag		Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None		None	C-Max	None	C-Max
Act Effct Green (s)	13.8	19.4	13.6	19.2	46.7	6.8	40.0	21.0	61.9
Actuated g/C Ratio	0.12	0.16	0.11	0.16	0.39	0.06	0.33	0.18	0.52
v/c Ratio	0.64	0.37	0.64	0.64	0.50	0.18	0.46	0.75	0.39
Control Delay	73.3	41.7	69.6	57.2	18.5	54.7	34.2	61.4	18.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.3	41.7	69.6	57.2	18.5	54.7	34.2	61.4	18.4
LOS	E	D	E	E	B	D	C	E	B
Approach Delay		59.0		39.8			34.9		29.2
Approach LOS		E		D			C		C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 23.5 (20%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.75
 Intersection Signal Delay: 38.4
 Intersection Capacity Utilization 66.8%
 Analysis Period (min) 15
























Intersection LOS: D
 ICU Level of Service C

Splits and Phases: 13: Main St. & Constance Road



HCM Signalized Intersection Capacity Analysis
 13: Main St. & Constance Road

2035 Build
 Timing Plan: AM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (vph)	253	200	9	128	191	335	18	482	52	232	476	217	
Future Volume (vph)	253	200	9	128	191	335	18	482	52	232	476	217	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.0	6.5		6.5	6.5		
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95		
Frt	1.00	0.99		1.00	1.00	0.85	1.00	0.99		1.00	0.95		
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	3433	3516		1770	1863	1583	1770	3488		1770	3373		
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (perm)	3433	3516		1770	1863	1583	1770	3488		1770	3373		
Peak-hour factor, PHF	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. Flow (vph)	253	200	9	128	191	335	18	482	52	232	476	217	
RTOR Reduction (vph)	0	3	0	0	0	56	0	6	0	0	38	0	
Lane Group Flow (vph)	253	206	0	128	191	279	18	528	0	232	655	0	
Turn Type	Prot	NA		Prot	NA	pt+ov	Prot	NA		Prot	NA		
Protected Phases	7	4		3	8	8 1	5	2		1	6		
Permitted Phases													
Actuated Green, G (s)	13.8	19.4		13.6	19.2	46.7	3.2	40.0		21.0	58.3		
Effective Green, g (s)	13.8	19.4		13.6	19.2	46.7	3.2	40.0		21.0	58.3		
Actuated g/C Ratio	0.12	0.16		0.11	0.16	0.39	0.03	0.33		0.18	0.49		
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.5		6.5	6.5		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	394	568		200	298	616	47	1162		309	1638		
v/s Ratio Prot	c0.07	0.06		0.07	c0.10	0.18	0.01	c0.15		c0.13	0.19		
v/s Ratio Perm													
v/c Ratio	0.64	0.36		0.64	0.64	0.45	0.38	0.45		0.75	0.40		
Uniform Delay, d1	50.7	44.8		50.9	47.2	27.2	57.4	31.4		47.0	19.7		
Progression Factor	1.30	0.91		1.10	1.01	0.86	0.95	0.98		1.00	1.00		
Incremental Delay, d2	3.4	0.4		6.7	4.6	0.5	5.1	1.3		9.8	0.7		
Delay (s)	69.6	41.2		62.6	52.0	23.9	59.5	32.1		56.9	20.4		
Level of Service	E	D		E	D	C	E	C		E	C		
Approach Delay (s)		56.8			39.7			33.0			29.6		
Approach LOS		E			D			C			C		
Intersection Summary													
HCM 2000 Control Delay			37.7									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.59										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	26.0
Intersection Capacity Utilization			66.8%									ICU Level of Service	C
Analysis Period (min)			15										

c Critical Lane Group

Timings
13: Main St. & Constance Road

Existing
PM Peak

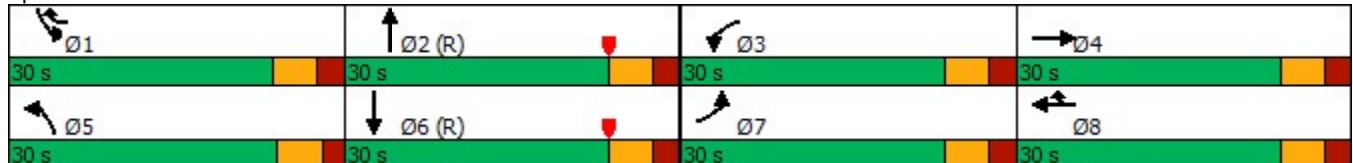


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	339	210	99	231	369	21	534	351	643
Future Volume (vph)	339	210	99	231	369	21	534	351	643
Turn Type	Prot	NA	Prot	NA	pt+ov	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	8 1	5	2	1	6
Permitted Phases									
Detector Phase	7	4	3	8	8 1	5	2	1	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)	11.5	24.5	11.5	24.5		11.0	24.5	11.5	24.5
Total Split (s)	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%		25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5		2.0	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)	6.5	6.5	6.5	6.5		6.0	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag		Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None		None	C-Max	None	C-Max
Act Effct Green (s)	17.1	25.5	12.0	20.4	55.8	7.0	27.6	28.8	57.2
Actuated g/C Ratio	0.14	0.21	0.10	0.17	0.46	0.06	0.23	0.24	0.48
v/c Ratio	0.69	0.32	0.56	0.73	0.47	0.20	0.74	0.83	0.57
Control Delay	56.4	38.4	62.8	60.2	18.1	57.8	49.7	61.5	32.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.4	38.4	62.8	60.2	18.1	57.8	49.7	61.5	32.1
LOS	E	D	E	E	B	E	D	E	C
Approach Delay		49.0		38.3			50.0		40.1
Approach LOS		D		D			D		D

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 23.5 (20%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.83
 Intersection Signal Delay: 43.3
 Intersection Capacity Utilization 79.8%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service D



























Splits and Phases: 13: Main St. & Constance Road



HCM Signalized Intersection Capacity Analysis

13: Main St. & Constance Road

Existing
PM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	 	 				 		 			 		
Traffic Volume (vph)	339	210	26	99	231	369	21	534	66	351	643	296	
Future Volume (vph)	339	210	26	99	231	369	21	534	66	351	643	296	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.0	6.5		6.5	6.5		
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95		
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.95		
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	3433	3481		1770	1863	1583	1770	3481		1770	3372		
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (perm)	3433	3481		1770	1863	1583	1770	3481		1770	3372		
Peak-hour factor, PHF	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. Flow (vph)	339	210	26	99	231	369	21	534	66	351	643	296	
RTOR Reduction (vph)	0	8	0	0	0	49	0	8	0	0	31	0	
Lane Group Flow (vph)	339	228	0	99	231	320	21	592	0	351	908	0	
Turn Type	Prot	NA		Prot	NA	pt+ov	Prot	NA		Prot	NA		
Protected Phases	7	4		3	8	8 1	5	2		1	6		
Permitted Phases													
Actuated Green, G (s)	17.1	25.5		12.0	20.4	55.7	3.3	27.7		28.8	53.7		
Effective Green, g (s)	17.1	25.5		12.0	20.4	55.7	3.3	27.7		28.8	53.7		
Actuated g/C Ratio	0.14	0.21		0.10	0.17	0.46	0.03	0.23		0.24	0.45		
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.5		6.5	6.5		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	489	739		177	316	734	48	803		424	1508		
v/s Ratio Prot	c0.10	c0.07		0.06	c0.12	0.20	0.01	c0.17		c0.20	0.27		
v/s Ratio Perm													
v/c Ratio	0.69	0.31		0.56	0.73	0.44	0.44	0.74		0.83	0.60		
Uniform Delay, d1	49.0	39.8		51.5	47.2	21.6	57.4	42.8		43.2	25.1		
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.05	1.26		
Incremental Delay, d2	4.2	0.2		3.8	8.4	0.4	6.3	6.0		11.4	1.6		
Delay (s)	53.2	40.1		55.3	55.6	22.0	63.7	48.8		56.7	33.2		
Level of Service	D	D		E	E	C	E	D		E	C		
Approach Delay (s)		47.8			37.8			49.3			39.6		
Approach LOS		D			D			D			D		
Intersection Summary													
HCM 2000 Control Delay			42.6									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.76										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	26.0
Intersection Capacity Utilization			79.8%									ICU Level of Service	D
Analysis Period (min)			15										

c Critical Lane Group

Timings
13: Main St. & Constance Road

Background 2030
PM Peak

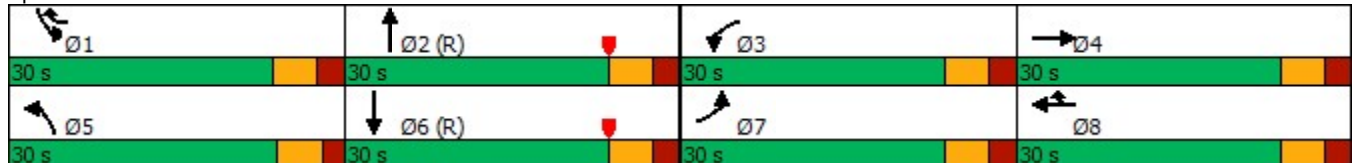


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	406	221	104	243	437	22	611	424	733
Future Volume (vph)	406	221	104	243	437	22	611	424	733
Turn Type	Prot	NA	Prot	NA	pt+ov	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	8 1	5	2	1	6
Permitted Phases									
Detector Phase	7	4	3	8	8 1	5	2	1	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)	11.5	24.5	11.5	24.5		11.0	24.5	11.5	24.5
Total Split (s)	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%		25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5		2.0	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)	6.5	6.5	6.5	6.5		6.0	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag		Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None		None	C-Max	None	C-Max
Act Effct Green (s)	19.2	28.8	12.4	21.9	57.8	7.1	23.5	29.3	51.0
Actuated g/C Ratio	0.16	0.24	0.10	0.18	0.48	0.06	0.20	0.24	0.42
v/c Ratio	0.74	0.29	0.57	0.71	0.54	0.21	0.99	0.98	0.75
Control Delay	56.2	36.1	62.9	58.0	20.4	58.0	78.9	85.6	38.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.2	36.1	62.9	58.0	20.4	58.0	78.9	85.6	38.1
LOS	E	D	E	E	C	E	E	F	D
Approach Delay		48.6		37.7			78.3		51.3
Approach LOS		D		D			E		D

Intersection Summary



























Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 23.5 (20%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.99
 Intersection Signal Delay: 53.1
 Intersection Capacity Utilization 88.6%
 Analysis Period (min) 15
 Intersection LOS: D
 ICU Level of Service E

Splits and Phases: 13: Main St. & Constance Road



HCM Signalized Intersection Capacity Analysis
 13: Main St. & Constance Road

Background 2030
 PM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	 	 				 		 			 		
Traffic Volume (vph)	406	221	27	104	243	437	22	611	69	424	733	368	
Future Volume (vph)	406	221	27	104	243	437	22	611	69	424	733	368	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.0	6.5		6.5	6.5		
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95		
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.95		
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	3433	3481		1770	1863	1583	1770	3485		1770	3362		
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (perm)	3433	3481		1770	1863	1583	1770	3485		1770	3362		
Peak-hour factor, PHF	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. Flow (vph)	406	221	27	104	243	437	22	611	69	424	733	368	
RTOR Reduction (vph)	0	8	0	0	0	47	0	7	0	0	39	0	
Lane Group Flow (vph)	406	240	0	104	243	390	22	673	0	424	1062	0	
Turn Type	Prot	NA		Prot	NA	pt+ov	Prot	NA		Prot	NA		
Protected Phases	7	4		3	8	8 1	5	2		1	6		
Permitted Phases													
Actuated Green, G (s)	19.2	28.8		12.4	22.0	57.8	4.8	23.5		29.3	48.5		
Effective Green, g (s)	19.2	28.8		12.4	22.0	57.8	4.8	23.5		29.3	48.5		
Actuated g/C Ratio	0.16	0.24		0.10	0.18	0.48	0.04	0.20		0.24	0.40		
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.5		6.5	6.5		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	549	835		182	341	762	70	682		432	1358		
v/s Ratio Prot	c0.12	0.07		0.06	c0.13	0.25	0.01	c0.19		c0.24	0.32		
v/s Ratio Perm													
v/c Ratio	0.74	0.29		0.57	0.71	0.51	0.31	0.99		0.98	0.78		
Uniform Delay, d1	48.0	37.2		51.3	46.0	21.4	56.0	48.1		45.1	31.1		
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.10	1.16		
Incremental Delay, d2	5.2	0.2		4.3	6.9	0.6	2.6	31.3		34.9	3.9		
Delay (s)	53.2	37.4		55.6	52.9	22.0	58.6	79.4		84.6	40.1		
Level of Service	D	D		E	D	C	E	E		F	D		
Approach Delay (s)		47.2			36.0			78.8			52.5		
Approach LOS		D			D			E			D		
Intersection Summary													
HCM 2000 Control Delay			53.0									HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio			0.87										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	26.0
Intersection Capacity Utilization			88.6%									ICU Level of Service	E
Analysis Period (min)			15										

c Critical Lane Group

Timings
13: Main St. & Constance Road

2030 Build
Timing Plan: PM Peak



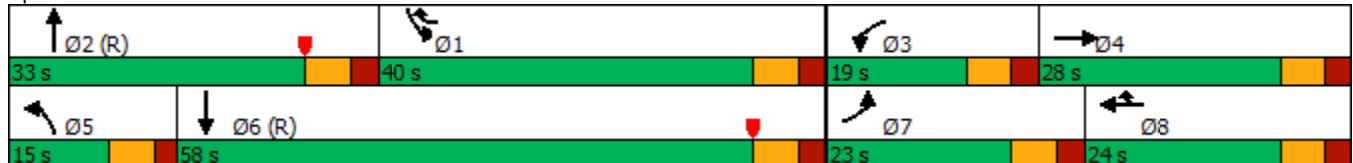
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	422	221	104	243	454	22	637	442	767
Future Volume (vph)	422	221	104	243	454	22	637	442	767
Turn Type	Prot	NA	Prot	NA	pt+ov	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	8 1	5	2	1	6
Permitted Phases									
Detector Phase	7	4	3	8	8 1	5	2	1	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)	11.5	24.5	11.5	24.5		11.0	24.5	11.5	24.5
Total Split (s)	23.0	28.0	19.0	24.0		15.0	33.0	40.0	58.0
Total Split (%)	19.2%	23.3%	15.8%	20.0%		12.5%	27.5%	33.3%	48.3%
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5		2.0	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)	6.5	6.5	6.5	6.5		6.0	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag		Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None		None	C-Max	None	C-Max
Act Effct Green (s)	16.4	22.6	11.1	17.2	50.7	7.0	26.9	33.5	58.5
Actuated g/C Ratio	0.14	0.19	0.09	0.14	0.42	0.06	0.22	0.28	0.49
v/c Ratio	0.90	0.37	0.64	0.91	0.60	0.21	0.90	0.89	0.68
Control Delay	70.3	36.4	84.7	83.4	10.8	53.8	55.4	53.9	17.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	70.3	36.4	84.7	83.4	10.8	53.8	55.4	53.9	17.8
LOS	E	D	F	F	B	D	E	D	B
Approach Delay		57.8		42.4			55.3		27.8
Approach LOS		E		D			E		C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 2.5 (2%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 100
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.91
 Intersection Signal Delay: 41.4
 Intersection Capacity Utilization 90.8%
 Analysis Period (min) 15



























Intersection LOS: D
 ICU Level of Service E

Splits and Phases: 13: Main St. & Constance Road



HCM Signalized Intersection Capacity Analysis
 13: Main St. & Constance Road

2030 Build
 Timing Plan: PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 				 		 			 	
Traffic Volume (vph)	422	221	27	104	243	454	22	637	69	442	767	386
Future Volume (vph)	422	221	27	104	243	454	22	637	69	442	767	386
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.0	6.5		6.5	6.5	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3481		1770	1863	1583	1770	3487		1770	3361	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3481		1770	1863	1583	1770	3487		1770	3361	
Peak-hour factor, PHF	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. Flow (vph)	422	221	27	104	243	454	22	637	69	442	767	386
RTOR Reduction (vph)	0	7	0	0	0	81	0	7	0	0	49	0
Lane Group Flow (vph)	422	241	0	104	243	373	22	699	0	442	1104	0
Turn Type	Prot	NA		Prot	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.4	22.6		11.1	17.3	53.1	4.7	24.5		35.8	56.1	
Effective Green, g (s)	16.4	22.6		11.1	17.3	53.1	4.7	24.5		35.8	56.1	
Actuated g/C Ratio	0.14	0.19		0.09	0.14	0.44	0.04	0.20		0.30	0.47	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	469	655		163	268	700	69	711		528	1571	
v/s Ratio Prot	c0.12	c0.07		0.06	c0.13	0.24	0.01	c0.20		c0.25	0.33	
v/s Ratio Perm												
v/c Ratio	0.90	0.37		0.64	0.91	0.53	0.32	0.98		0.84	0.70	
Uniform Delay, d1	51.0	42.5		52.5	50.6	24.4	56.1	47.5		39.4	25.3	
Progression Factor	0.97	0.84		1.29	0.93	0.80	0.92	0.89		0.83	0.69	
Incremental Delay, d2	17.9	0.3		7.7	30.7	0.8	2.6	29.4		9.3	2.2	
Delay (s)	67.2	36.1		75.2	77.7	20.3	54.4	71.9		41.9	19.6	
Level of Service	E	D		E	E	C	D	E		D	B	
Approach Delay (s)		55.7			44.9			71.4			25.8	
Approach LOS		E			D			E			C	
Intersection Summary												
HCM 2000 Control Delay			43.8									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			120.0								26.0	Sum of lost time (s)
Intersection Capacity Utilization			90.8%									ICU Level of Service E
Analysis Period (min)			15									

c Critical Lane Group

Timings
13: Main St. & Constance Road

Background 2035
PM Peak

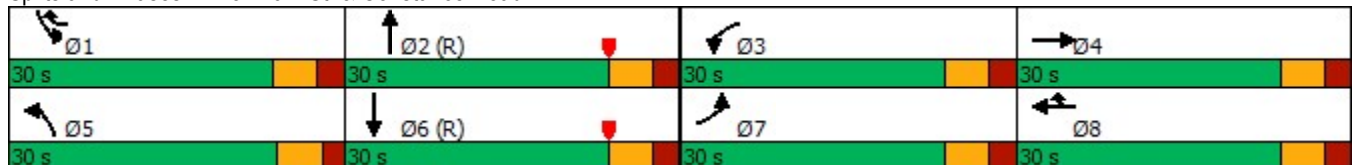


Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	423	231	109	254	456	23	637	441	765
Future Volume (vph)	423	231	109	254	456	23	637	441	765
Turn Type	Prot	NA	Prot	NA	pt+ov	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	8 1	5	2	1	6
Permitted Phases									
Detector Phase	7	4	3	8	8 1	5	2	1	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)	11.5	24.5	11.5	24.5		11.0	24.5	11.5	24.5
Total Split (s)	30.0	30.0	30.0	30.0		30.0	30.0	30.0	30.0
Total Split (%)	25.0%	25.0%	25.0%	25.0%		25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5		2.0	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)	6.5	6.5	6.5	6.5		6.0	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag		Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None		None	C-Max	None	C-Max
Act Effct Green (s)	19.6	29.5	12.7	22.6	57.4	7.1	23.5	28.3	49.9
Actuated g/C Ratio	0.16	0.25	0.11	0.19	0.48	0.06	0.20	0.24	0.42
v/c Ratio	0.75	0.30	0.58	0.73	0.57	0.22	1.03	1.06	0.80
Control Delay	56.6	35.9	63.0	58.1	21.5	58.1	89.0	104.8	40.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.6	35.9	63.0	58.1	21.5	58.1	89.0	104.8	40.1
LOS	E	D	E	E	C	E	F	F	D
Approach Delay		48.7		38.3			88.1		58.0
Approach LOS		D		D			F		E

Intersection Summary


























Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 23.5 (20%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.06
 Intersection Signal Delay: 57.9
 Intersection Capacity Utilization 91.5%
 Analysis Period (min) 15
 Intersection LOS: E
 ICU Level of Service F

Splits and Phases: 13: Main St. & Constance Road



HCM Signalized Intersection Capacity Analysis
13: Main St. & Constance Road

Background 2035
PM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	 	 						 			 		
Traffic Volume (vph)	423	231	29	109	254	456	23	637	73	441	765	383	
Future Volume (vph)	423	231	29	109	254	456	23	637	73	441	765	383	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.0	6.5		6.5	6.5		
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95		
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.95		
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (prot)	3433	3480		1770	1863	1583	1770	3485		1770	3362		
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00		
Satd. Flow (perm)	3433	3480		1770	1863	1583	1770	3485		1770	3362		
Peak-hour factor, PHF	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. Flow (vph)	423	231	29	109	254	456	23	637	73	441	765	383	
RTOR Reduction (vph)	0	8	0	0	0	47	0	7	0	0	39	0	
Lane Group Flow (vph)	423	252	0	109	254	409	23	703	0	441	1109	0	
Turn Type	Prot	NA		Prot	NA	pt+ov	Prot	NA		Prot	NA		
Protected Phases	7	4		3	8	8 1	5	2		1	6		
Permitted Phases													
Actuated Green, G (s)	19.6	29.5		12.7	22.6	57.4	4.8	23.5		28.3	47.5		
Effective Green, g (s)	19.6	29.5		12.7	22.6	57.4	4.8	23.5		28.3	47.5		
Actuated g/C Ratio	0.16	0.25		0.11	0.19	0.48	0.04	0.20		0.24	0.40		
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.5		6.5	6.5		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0		
Lane Grp Cap (vph)	560	855		187	350	757	70	682		417	1330		
v/s Ratio Prot	c0.12	0.07		0.06	c0.14	0.26	0.01	c0.20		c0.25	0.33		
v/s Ratio Perm													
v/c Ratio	0.76	0.30		0.58	0.73	0.54	0.33	1.03		1.06	0.83		
Uniform Delay, d1	47.9	36.8		51.1	45.8	22.0	56.0	48.2		45.9	32.7		
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		1.10	1.15		
Incremental Delay, d2	5.8	0.2		4.6	7.3	0.7	2.7	42.5		56.2	5.3		
Delay (s)	53.7	37.0		55.7	53.1	22.8	58.8	90.7		106.7	42.8		
Level of Service	D	D		E	D	C	E	F		F	D		
Approach Delay (s)		47.3			36.5			89.7			60.5		
Approach LOS		D			D			F			E		
Intersection Summary													
HCM 2000 Control Delay			58.6									HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio			0.91										
Actuated Cycle Length (s)			120.0									Sum of lost time (s)	26.0
Intersection Capacity Utilization			91.5%									ICU Level of Service	F
Analysis Period (min)			15										

c Critical Lane Group

Timings
13: Main St. & Constance Road

2035 Build
Timing Plan: PM Peak



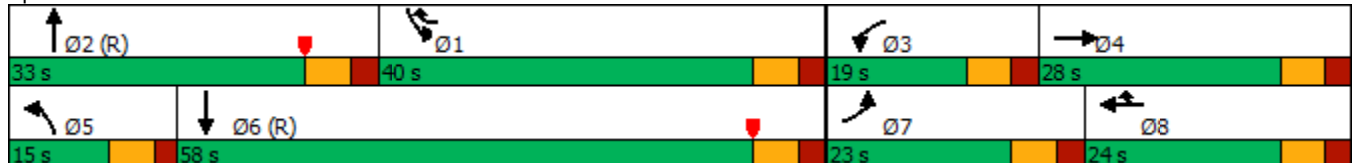
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	439	231	109	254	473	23	663	459	799
Future Volume (vph)	439	231	109	254	473	23	663	459	799
Turn Type	Prot	NA	Prot	NA	pt+ov	Prot	NA	Prot	NA
Protected Phases	7	4	3	8	8 1	5	2	1	6
Permitted Phases									
Detector Phase	7	4	3	8	8 1	5	2	1	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)	11.5	24.5	11.5	24.5		11.0	24.5	11.5	24.5
Total Split (s)	23.0	28.0	19.0	24.0		15.0	33.0	40.0	58.0
Total Split (%)	19.2%	23.3%	15.8%	20.0%		12.5%	27.5%	33.3%	48.3%
Yellow Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0	4.0
All-Red Time (s)	2.5	2.5	2.5	2.5		2.0	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)	6.5	6.5	6.5	6.5		6.0	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag		Lead	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None		None	C-Max	None	C-Max
Act Effct Green (s)	16.5	22.8	11.2	17.5	51.0	7.1	26.5	33.5	58.1
Actuated g/C Ratio	0.14	0.19	0.09	0.15	0.42	0.06	0.22	0.28	0.48
v/c Ratio	0.93	0.39	0.66	0.94	0.63	0.22	0.95	0.93	0.72
Control Delay	74.9	36.7	85.7	88.0	11.5	54.5	63.1	58.8	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	74.9	36.7	85.7	88.0	11.5	54.5	63.1	58.8	19.0
LOS	E	D	F	F	B	D	E	E	B
Approach Delay		60.7		44.4			62.8		30.0
Approach LOS		E		D			E		C

Intersection Summary

Cycle Length: 120
 Actuated Cycle Length: 120
 Offset: 2.5 (2%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
 Natural Cycle: 110
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.95
 Intersection Signal Delay: 44.8
 Intersection Capacity Utilization 93.6%
 Analysis Period (min) 15


























Intersection LOS: D
 ICU Level of Service F

Splits and Phases: 13: Main St. & Constance Road



HCM Signalized Intersection Capacity Analysis
13: Main St. & Constance Road

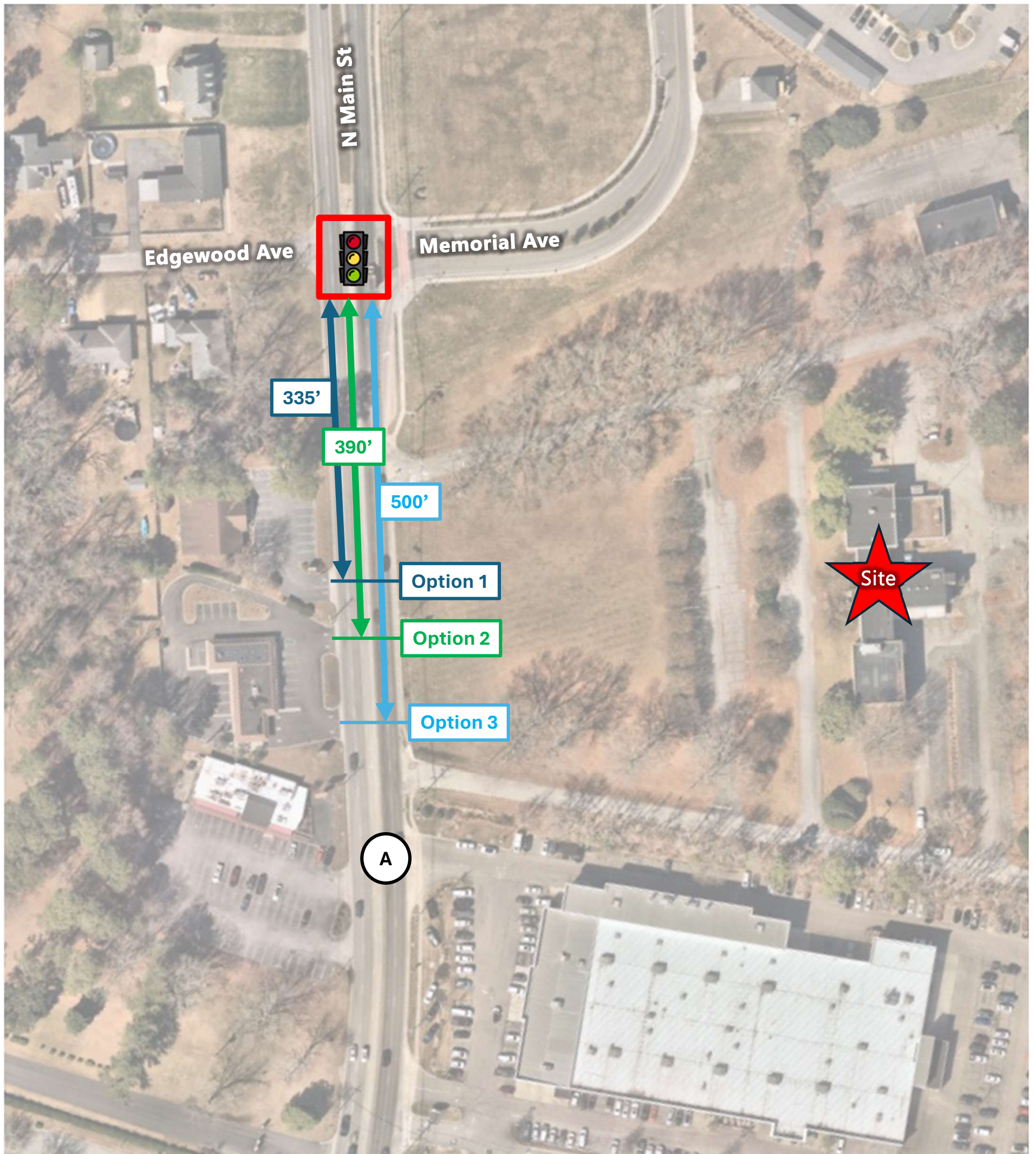
2035 Build
Timing Plan: PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 						 			 	
Traffic Volume (vph)	439	231	29	109	254	473	23	663	73	459	799	401
Future Volume (vph)	439	231	29	109	254	473	23	663	73	459	799	401
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5	6.5	6.0	6.5		6.5	6.5	
Lane Util. Factor	0.97	0.95		1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3480		1770	1863	1583	1770	3487		1770	3362	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3480		1770	1863	1583	1770	3487		1770	3362	
Peak-hour factor, PHF	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. Flow (vph)	439	231	29	109	254	473	23	663	73	459	799	401
RTOR Reduction (vph)	0	8	0	0	0	80	0	7	0	0	49	0
Lane Group Flow (vph)	439	252	0	109	254	393	23	729	0	459	1151	0
Turn Type	Prot	NA		Prot	NA	pt+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	8 1	5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.5	22.8		11.2	17.5	53.4	4.8	24.1		35.9	55.7	
Effective Green, g (s)	16.5	22.8		11.2	17.5	53.4	4.8	24.1		35.9	55.7	
Actuated g/C Ratio	0.14	0.19		0.09	0.15	0.44	0.04	0.20		0.30	0.46	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.5		6.5	6.5	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	472	661		165	271	704	70	700		529	1560	
v/s Ratio Prot	c0.13	c0.07		0.06	c0.14	0.25	0.01	c0.21		c0.26	0.34	
v/s Ratio Perm												
v/c Ratio	0.93	0.38		0.66	0.94	0.56	0.33	1.04		0.87	0.74	
Uniform Delay, d1	51.2	42.4		52.6	50.7	24.6	56.0	48.0		39.8	26.2	
Progression Factor	0.97	0.85		1.28	0.93	0.81	0.93	0.90		0.83	0.70	
Incremental Delay, d2	23.1	0.3		9.3	37.0	0.9	2.7	44.8		11.7	2.6	
Delay (s)	72.5	36.3		76.4	84.3	20.9	54.9	87.9		44.9	21.0	
Level of Service	E	D		E	F	C	D	F		D	C	
Approach Delay (s)		59.0			47.4			86.9			27.6	
Approach LOS		E			D			F			C	
Intersection Summary												
HCM 2000 Control Delay			48.7									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			0.93									
Actuated Cycle Length (s)			120.0								26.0	Sum of lost time (s)
Intersection Capacity Utilization			93.6%									ICU Level of Service F
Analysis Period (min)			15									

c Critical Lane Group

G Site Access Options / Alternatives

Proposed Locations for Full-Movement Site Access



Reasons options were ruled out:

- **Option 1** – Not enough space to construct all necessary turn lanes
- **Option 2** – Too close to the driveways at Options 1 and 3 to provide full-movement
- **Option 3** – Would require closing the private driveway at marker 'A'

****All options displayed for potential full-movement access points require closure of existing private site driveways to neighboring facilities****