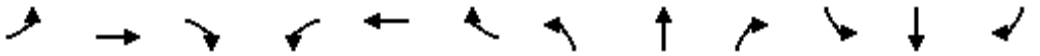
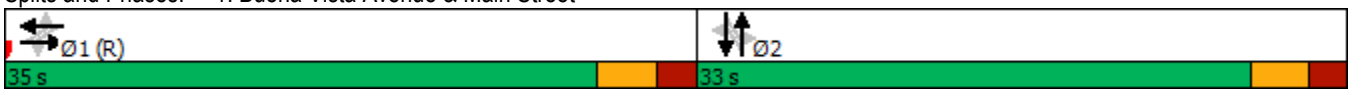


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	45	125	43	33	76	43	227	23	54	183	7
Future Volume (vph)	6	45	125	43	33	76	43	227	23	54	183	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	14	14	14	11	11	11	13	13	13
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.94			0.93			0.99			1.00	
Frt		0.905			0.932			0.989			0.996	
Flt Protected		0.998			0.986			0.993			0.989	
Satd. Flow (prot)	0	1529	0	0	1345	0	0	1477	0	0	1641	0
Flt Permitted		0.991			0.880			0.921			0.868	
Satd. Flow (perm)	0	1519	0	0	1201	0	0	1370	0	0	1440	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		113			249			300			234	
Travel Time (s)		2.6			5.7			6.8			5.3	
Confl. Peds. (#/hr)			52			111			63			41
Peak Hour Factor	0.89	0.89	0.89	0.86	0.86	0.86	0.90	0.90	0.90	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	9%	9%	9%	3%	3%	3%	11%	11%	11%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	14	0
Parking (#/hr)		10			10			10				
Adj. Flow (vph)	7	51	140	50	38	88	48	252	26	59	199	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	198	0	0	176	0	0	326	0	0	266	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	1.05	0.85	0.92	1.13	0.92	1.04	1.28	1.04	0.96	1.03	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Minimum Split (s)	34.0	34.0		34.0	34.0		32.0	32.0		32.0	32.0	
Total Split (s)	35.0	35.0		35.0	35.0		33.0	33.0		33.0	33.0	
Total Split (%)	51.5%	51.5%		51.5%	51.5%		48.5%	48.5%		48.5%	48.5%	
Maximum Green (s)	30.0	30.0		30.0	30.0		28.0	28.0		28.0	28.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag	Lead	Lead		Lead	Lead		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		30.0			30.0			28.0			28.0	
Actuated g/C Ratio		0.44			0.44			0.41			0.41	
v/c Ratio		0.30			0.33			0.58			0.45	
Control Delay		13.8			14.7			20.5			17.5	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.8			14.7			20.5			17.5	
LOS		B			B			C			B	
Approach Delay		13.8			14.7			20.5			17.5	
Approach LOS		B			B			C			B	
Queue Length 50th (ft)		51			46			101			77	
Queue Length 95th (ft)		92			84			179			138	
Internal Link Dist (ft)		33			169			220			154	
Turn Bay Length (ft)												
Base Capacity (vph)		670			529			564			592	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.30			0.33			0.58			0.45	

Intersection Summary			
Area Type:	Other		
Cycle Length: 68			
Actuated Cycle Length: 68			
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green			
Natural Cycle: 70			
Control Type: Pretimed			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 17.2		Intersection LOS: B	
Intersection Capacity Utilization 62.9%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Buena Vista Avenue & Main Street

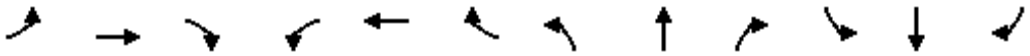


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	27	19	274	35	50	301
Future Volume (vph)	27	19	274	35	50	301
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.945		0.985			
Flt Protected	0.971					0.993
Satd. Flow (prot)	1314	0	1509	0	0	2017
Flt Permitted	0.971					0.993
Satd. Flow (perm)	1314	0	1509	0	0	2017
Link Speed (mph)	30		30			30
Link Distance (ft)	240		235			300
Travel Time (s)	5.5		5.3			6.8
Confl. Peds. (#/hr)	48			4	20	
Peak Hour Factor	0.81	0.81	0.93	0.93	0.83	0.83
Heavy Vehicles (%)	9%	9%	23%	23%	6%	6%
Parking (#/hr)	10		5			
Adj. Flow (vph)	33	23	295	38	60	363
Shared Lane Traffic (%)						
Lane Group Flow (vph)	56	0	333	0	0	423
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.28	1.04	1.01	0.85	0.85	0.85
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Stop			Stop

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 48.5%		ICU Level of Service A	
Analysis Period (min) 15			

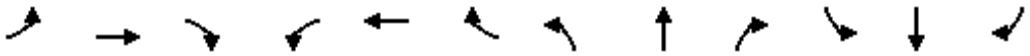
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	198	111	145	231	97
Future Volume (vph)	19	198	111	145	231	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	9	9	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.924			
Flt Protected	0.950					0.966
Satd. Flow (prot)	1891	1692	1280	0	0	1841
Flt Permitted	0.950					0.966
Satd. Flow (perm)	1891	1692	1280	0	0	1841
Link Speed (mph)	30		30			30
Link Distance (ft)	256		433			284
Travel Time (s)	5.8		9.8			6.5
Confl. Peds. (#/hr)	17			5	20	
Peak Hour Factor	0.86	0.86	0.85	0.85	0.82	0.82
Heavy Vehicles (%)	5%	5%	8%	8%	13%	13%
Parking (#/hr)			5			
Adj. Flow (vph)	22	230	131	171	282	118
Shared Lane Traffic (%)						
Lane Group Flow (vph)	22	230	302	0	0	400
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.88	0.88	1.35	1.14	0.85	0.85
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Stop			Stop

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	46.3%	ICU Level of Service	A
Analysis Period (min)	15		



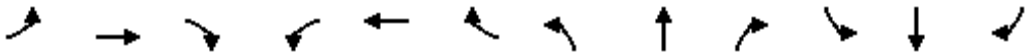
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	97	25	25	126	0	17	0	30	4	0	9
Future Volume (vph)	0	97	25	25	126	0	17	0	30	4	0	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	15	15	15	12	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972						0.865			0.904	
Flt Protected					0.992		0.950				0.986	
Satd. Flow (prot)	0	1599	0	0	1647	0	1770	0	0	0	1660	0
Flt Permitted					0.992		0.950				0.986	
Satd. Flow (perm)	0	1599	0	0	1647	0	1770	0	0	0	1660	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		249			526			222			176	
Travel Time (s)		5.7			12.0			5.0			4.0	
Peak Hour Factor	0.92	0.89	0.89	0.86	0.86	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	8%	8%	7%	7%	2%	2%	2%	2%	2%	2%	2%
Parking (#/hr)		10			10							
Adj. Flow (vph)	0	109	28	29	147	0	18	0	33	4	0	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	137	0	0	176	0	18	33	0	0	14	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			-50	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.09	0.88	0.88	1.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		

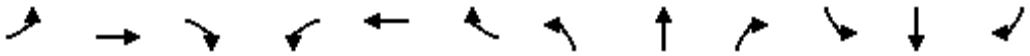


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	84	0	0	0	0	16	46	55	20	0	30
Future Volume (vph)	1	84	0	0	0	0	16	46	55	20	0	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	16	16	16	13	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt								0.936			0.919	
Flt Protected								0.993			0.980	
Satd. Flow (prot)	0	1422	0	0	0	0	0	1578	0	0	1607	0
Flt Permitted								0.993			0.980	
Satd. Flow (perm)	0	1422	0	0	0	0	0	1578	0	0	1607	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		240			538			516			81	
Travel Time (s)		5.5			12.2			11.7			1.8	
Confl. Peds. (#/hr)			22			21			14			39
Peak Hour Factor	0.82	0.82	0.82	0.92	0.92	0.92	0.86	0.86	0.86	0.81	0.81	0.81
Heavy Vehicles (%)	13%	13%	13%	2%	2%	2%	11%	11%	11%	10%	10%	10%
Parking (#/hr)		5						5				
Adj. Flow (vph)	1	102	0	0	0	0	19	53	64	25	0	37
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	103	0	0	0	0	0	136	0	0	62	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.24	1.04	1.00	1.00	1.00	0.85	1.01	0.85	0.96	0.96	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	72	38	49	86	75	19	203	58	102	216	7
Future Volume (vph)	1	72	38	49	86	75	19	203	58	102	216	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	9	13	13	16	16	16	9	11	11
Storage Length (ft)	0		0	60		0	0		0	100		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.954			0.930			0.972			0.995	
Flt Protected				0.950				0.997		0.950		
Satd. Flow (prot)	0	1322	0	1518	1706	0	0	1588	0	1562	1757	0
Flt Permitted		0.999		0.699				0.968		0.337		
Satd. Flow (perm)	0	1320	0	1117	1706	0	0	1542	0	554	1757	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		27			46			16			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		239			672			1367			278	
Travel Time (s)		5.4			15.3			31.1			6.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.86	0.86	0.86	0.92	0.92	0.92
Heavy Vehicles (%)	12%	12%	12%	7%	7%	7%	15%	15%	15%	4%	4%	4%
Parking (#/hr)		5						5				
Adj. Flow (vph)	1	78	41	53	93	82	22	236	67	111	235	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	120	0	53	175	0	0	325	0	111	243	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			9			0			9	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.29	1.09	1.14	0.96	0.96	0.85	1.01	0.85	1.14	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		5.0	10.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		32.0	32.0		10.0	32.0	
Total Split (s)	36.0	36.0		36.0	36.0		47.0	47.0		17.0	64.0	
Total Split (%)	36.0%	36.0%		36.0%	36.0%		47.0%	47.0%		17.0%	64.0%	
Maximum Green (s)	31.0	31.0		31.0	31.0		42.0	42.0		12.0	59.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Ped	Ped		C-Max	C-Max		Ped	Ped		Max	Ped	
Walk Time (s)	15.0	15.0		15.0	15.0		15.0	15.0			15.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0			12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0			0	
Act Effct Green (s)		43.9		43.9	43.9			29.1		46.1	46.1	
Actuated g/C Ratio		0.44		0.44	0.44			0.29		0.46	0.46	
v/c Ratio		0.20		0.11	0.23			0.71		0.30	0.30	
Control Delay		15.3		21.1	16.5			38.9		17.2	17.3	
Queue Delay		0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay		15.3		21.1	16.5			38.9		17.2	17.3	
LOS		B		C	B			D		B	B	
Approach Delay		15.3			17.6			38.9			17.3	
Approach LOS		B			B			D			B	
Queue Length 50th (ft)		33		18	32			181		42	97	
Queue Length 95th (ft)		81		m38	80			236		64	129	
Internal Link Dist (ft)		159			592			1287			198	
Turn Bay Length (ft)				60						100		
Base Capacity (vph)		594		490	774			656		376	1037	
Starvation Cap Reductn		0		0	0			0		0	0	
Spillback Cap Reductn		0		0	0			0		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.20		0.11	0.23			0.50		0.30	0.23	

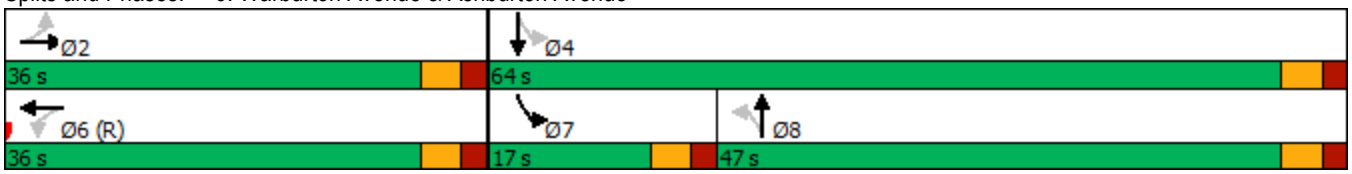
Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 6:WBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 23.9		Intersection LOS: C	

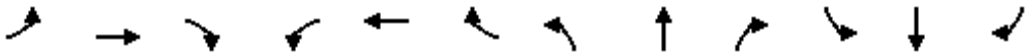
Intersection Capacity Utilization 48.9% ICU Level of Service A

Analysis Period (min) 15

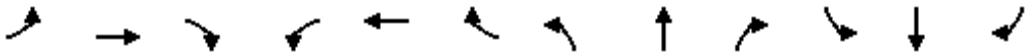
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Warburton Avenue & Ashburton Avenue





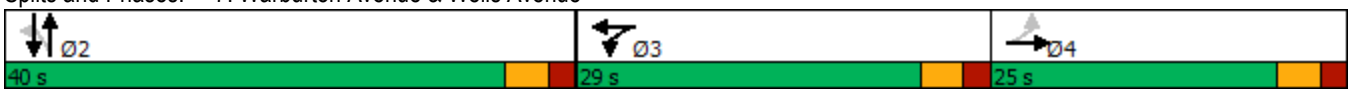
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	9	310	47	106	29	231	0	0	345	7
Future Volume (vph)	2	0	9	310	47	106	29	231	0	0	345	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	9	9	14	14	14	14	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.894			0.896						0.997	
Flt Protected		0.989		0.950				0.994				
Satd. Flow (prot)	0	1647	0	1600	1502	0	0	1679	0	0	1684	0
Flt Permitted		0.879		0.950				0.928				
Satd. Flow (perm)	0	1464	0	1600	1502	0	0	1567	0	0	1684	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		81									1	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		49			114			382			1367	
Travel Time (s)		1.1			2.6			8.7			31.1	
Peak Hour Factor	0.80	0.80	0.80	0.91	0.91	0.91	0.86	0.86	0.86	0.85	0.85	0.85
Parking (#/hr)				5		5		10			10	
Adj. Flow (vph)	3	0	11	341	52	116	34	269	0	0	406	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	14	0	341	168	0	0	303	0	0	414	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.14	1.14	1.14	0.92	1.13	0.92	0.92	1.13	0.92
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2			2	
Detector Template	Left	Thru		Left	Thru		Left	Thru			Thru	
Leading Detector (ft)	20	100		20	100		20	100			100	
Trailing Detector (ft)	0	0		0	0		0	0			0	
Detector 1 Position(ft)	0	0		0	0		0	0			0	
Detector 1 Size(ft)	20	6		20	6		20	6			6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Split	NA		Perm	NA			NA	
Protected Phases		4		3	3			2			2	
Permitted Phases	4						2	2				
Detector Phase	4	4		3	3		2	2			2	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)	24.0	24.0		28.0	28.0		39.0	39.0			39.0	
Total Split (s)	25.0	25.0		29.0	29.0		40.0	40.0			40.0	
Total Split (%)	26.6%	26.6%		30.9%	30.9%		42.6%	42.6%			42.6%	
Maximum Green (s)	20.0	20.0		24.0	24.0		35.0	35.0			35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0			2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	None	None		Ped	Ped		Ped	Ped			Ped	
Walk Time (s)	7.0	7.0		11.0	11.0		24.0	24.0			24.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		10.0	10.0			10.0	
Pedestrian Calls (#/hr)	5	5		0	0		0	0			0	
Act Effct Green (s)		7.8		23.7	23.7			34.7			34.7	
Actuated g/C Ratio		0.10		0.32	0.32			0.47			0.47	
v/c Ratio		0.06		0.67	0.35			0.42			0.53	
Control Delay		0.5		32.4	24.6			17.7			19.4	
Queue Delay		0.0		0.0	0.0			0.3			0.0	
Total Delay		0.5		32.4	24.6			17.9			19.4	
LOS		A		C	C			B			B	
Approach Delay		0.5			29.8			17.9			19.4	
Approach LOS		A			C			B			B	
Queue Length 50th (ft)		0		115	50			71			103	
Queue Length 95th (ft)		0		#335	145			203			278	
Internal Link Dist (ft)		1			34			302			1287	
Turn Bay Length (ft)												
Base Capacity (vph)		458		524	492			748			805	
Starvation Cap Reductn		0		0	0			110			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.03		0.65	0.34			0.47			0.51	

Intersection Summary			
Area Type:	Other		
Cycle Length: 94			
Actuated Cycle Length: 74.5			
Natural Cycle: 95			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.67			
Intersection Signal Delay: 23.1		Intersection LOS: C	
Intersection Capacity Utilization 68.7%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 7: Warburton Avenue & Wells Avenue



Lane Group	NBL2	NBL	NBT	NBR	SBL	SBT	SBR2	NEL2	NEL	NER	NER2	Ø9
Lane Configurations												
Traffic Volume (vph)	1	74	249	155	16	564	84	8	11	29	14	
Future Volume (vph)	1	74	249	155	16	564	84	8	11	29	14	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	12	16	16	12	12	16	12	12	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor			0.96						0.94			
Frt			0.943			0.983			0.907			
Flt Protected		0.950				0.999			0.985			
Satd. Flow (prot)	0	1583	1284	0	0	1822	0	0	1424	0	0	
Flt Permitted		0.332				0.983			0.985			
Satd. Flow (perm)	0	553	1284	0	0	1793	0	0	1424	0	0	
Right Turn on Red				Yes			Yes				Yes	
Satd. Flow (RTOR)			39			84			84			
Link Speed (mph)			30			30			30			
Link Distance (ft)			431			382			174			
Travel Time (s)			9.8			8.7			4.0			
Confl. Peds. (#/hr)				60						23		
Peak Hour Factor	0.86	0.86	0.86	0.86	0.93	0.93	0.93	0.81	0.81	0.81	0.81	
Heavy Vehicles (%)	14%	14%	14%	14%	10%	10%	10%	11%	11%	11%	11%	
Bus Blockages (#/hr)	0	0	0	0	0	13	0	0	0	0	0	
Parking (#/hr)			10						5			
Adj. Flow (vph)	1	86	290	180	17	606	90	10	14	36	17	
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	87	470	0	0	713	0	0	77	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Left	Right	Left	Left	Right	Left	Left	Right	Right	
Median Width(ft)			12			0			16			
Link Offset(ft)			0			0			80			
Crosswalk Width(ft)			16			16			16			
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.23	1.00	0.85	0.91	1.00	1.00	1.01	1.00	1.00	
Turning Speed (mph)	15	15		9	15		9	15	15	9	9	
Number of Detectors	1	1	2		1	2		1	1			
Detector Template	Left	Left	Thru		Left	Thru		Left	Left			
Leading Detector (ft)	20	20	100		20	100		20	20			
Trailing Detector (ft)	0	0	0		0	0		0	0			
Detector 1 Position(ft)	0	0	0		0	0		0	0			
Detector 1 Size(ft)	20	20	6		20	6		20	20			
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 2 Position(ft)			94			94						
Detector 2 Size(ft)			6			6						
Detector 2 Type			Cl+Ex			Cl+Ex						
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0						

Lane Group	NBL2	NBL	NBT	NBR	SBL	SBT	SBR2	NEL2	NEL	NER	NER2	Ø9
Turn Type	Perm	Perm	NA		Perm	NA		Perm	Prot			
Protected Phases			3			3			1			9
Permitted Phases	3	3			3			1				
Detector Phase	3	3	3		3	3		1	1			
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0		5.0	5.0		5.0	5.0			1.0
Minimum Split (s)	13.0	13.0	13.0		13.0	13.0		13.0	13.0			27.0
Total Split (s)	41.0	41.0	41.0		41.0	41.0		23.0	23.0			27.0
Total Split (%)	45.1%	45.1%	45.1%		45.1%	45.1%		25.3%	25.3%			30%
Maximum Green (s)	33.0	33.0	33.0		33.0	33.0		15.0	15.0			25.0
Yellow Time (s)	4.0	4.0	4.0		4.0	4.0		4.0	4.0			2.0
All-Red Time (s)	4.0	4.0	4.0		4.0	4.0		4.0	4.0			0.0
Lost Time Adjust (s)		0.0	0.0			0.0			0.0			
Total Lost Time (s)		8.0	8.0			8.0			8.0			
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0		3.0	3.0			3.0
Recall Mode	Max	Max	Max		Max	Max		Max	Max			None
Walk Time (s)												10.0
Flash Dont Walk (s)												15.0
Pedestrian Calls (#/hr)												5
Act Effct Green (s)		33.7	33.7			33.7			15.3			
Actuated g/C Ratio		0.49	0.49			0.49			0.22			
v/c Ratio		0.32	0.73			0.78			0.20			
Control Delay		18.8	24.3			23.0			8.2			
Queue Delay		0.0	0.0			3.9			0.0			
Total Delay		18.8	24.3			26.9			8.2			
LOS		B	C			C			A			
Approach Delay			23.4			26.9			8.2			
Approach LOS			C			C			A			
Queue Length 50th (ft)		18	116			176			0			
Queue Length 95th (ft)		80	#413			#622			26			
Internal Link Dist (ft)			351			302			94			
Turn Bay Length (ft)												
Base Capacity (vph)		268	642			913			379			
Starvation Cap Reductn		0	0			128			0			
Spillback Cap Reductn		0	0			0			0			
Storage Cap Reductn		0	0			0			0			
Reduced v/c Ratio		0.32	0.73			0.91			0.20			

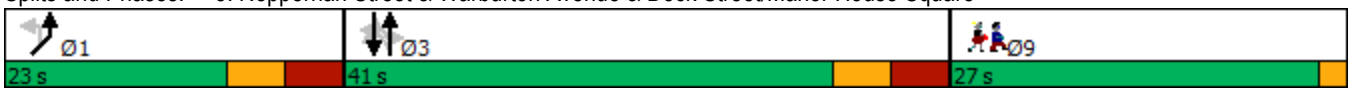
Intersection Summary			
Area Type:	Other		
Cycle Length: 91			
Actuated Cycle Length: 69.4			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 24.4		Intersection LOS: C	
Intersection Capacity Utilization 67.0%		ICU Level of Service C	

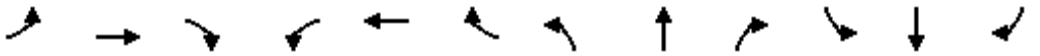
Analysis Period (min) 15

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

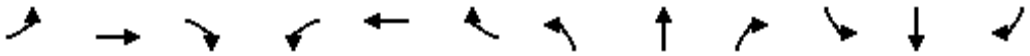
Queue shown is maximum after two cycles.

Splits and Phases: 8: Nepperhan Street & Warburton Avenue & Dock Street/Manor House Square





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	0	90	72	62	72	30	366	0	0	519	59
Future Volume (vph)	41	0	90	72	62	72	30	366	0	0	519	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	13	15	15	9	13	13	12	12	12
Storage Length (ft)	0		0	0		0	75		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor		0.97			0.96						0.99	
Frt		0.907			0.919						0.985	
Flt Protected		0.985		0.950			0.950					
Satd. Flow (prot)	0	1361	0	1622	1363	0	1438	3033	0	0	2932	0
Flt Permitted		0.861		0.639			0.347					
Satd. Flow (perm)	0	1189	0	1091	1363	0	525	3033	0	0	2932	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		111			62						13	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		526			497			325			431	
Travel Time (s)		12.0			11.3			7.4			9.8	
Confl. Peds. (#/hr)			41			65			58			58
Peak Hour Factor	0.81	0.81	0.81	0.86	0.86	0.86	0.89	0.89	0.89	0.96	0.96	0.96
Heavy Vehicles (%)	16%	16%	16%	15%	15%	15%	13%	13%	13%	11%	11%	11%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	10	0	0	0	0
Parking (#/hr)		10			10			5			10	
Adj. Flow (vph)	51	0	111	84	72	84	34	411	0	0	541	61
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	162	0	84	156	0	34	411	0	0	602	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			13			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	1.05	0.85	0.96	1.09	0.88	1.14	1.07	0.96	1.00	1.11	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2			2	
Detector Template	Left	Thru		Left	Thru		Left	Thru			Thru	
Leading Detector (ft)	20	100		20	100		20	100			100	
Trailing Detector (ft)	0	0		0	0		0	0			0	
Detector 1 Position(ft)	0	0		0	0		0	0			0	
Detector 1 Size(ft)	20	6		20	6		20	6			6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	

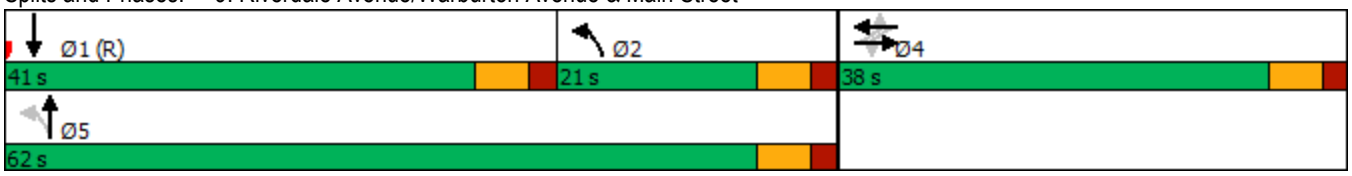


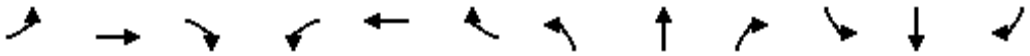
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA			NA	
Protected Phases		4			4		2	5			1	
Permitted Phases	4			4			5					
Detector Phase	4	4		4	4		2	5			1	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)	37.0	37.0		37.0	37.0		11.0	11.0			40.0	
Total Split (s)	38.0	38.0		38.0	38.0		21.0	62.0			41.0	
Total Split (%)	38.0%	38.0%		38.0%	38.0%		21.0%	62.0%			41.0%	
Maximum Green (s)	32.0	32.0		32.0	32.0		15.0	56.0			35.0	
Yellow Time (s)	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	
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				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	Ped	Ped		Ped	Ped		Max	Max			C-Max	
Walk Time (s)	10.0	10.0		10.0	10.0						18.0	
Flash Dont Walk (s)	21.0	21.0		21.0	21.0						16.0	
Pedestrian Calls (#/hr)	0	0		0	0						0	
Act Effct Green (s)		31.0		31.0	31.0		57.0	57.0			36.0	
Actuated g/C Ratio		0.31		0.31	0.31		0.57	0.57			0.36	
v/c Ratio		0.36		0.25	0.34		0.08	0.24			0.57	
Control Delay		12.2		28.3	18.1		10.7	11.1			27.7	
Queue Delay		0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay		12.2		28.3	18.1		10.7	11.1			27.7	
LOS		B		C	B		B	B			C	
Approach Delay		12.2			21.7			11.1			27.7	
Approach LOS		B			C			B			C	
Queue Length 50th (ft)		23		40	44		9	64			156	
Queue Length 95th (ft)		61		76	91		22	89			213	
Internal Link Dist (ft)		446			417			245			351	
Turn Bay Length (ft)							75					
Base Capacity (vph)		455		349	478		436	1728			1063	
Starvation Cap Reductn		0		0	0		0	0			0	
Spillback Cap Reductn		0		0	0		0	0			0	
Storage Cap Reductn		0		0	0		0	0			0	
Reduced v/c Ratio		0.36		0.24	0.33		0.08	0.24			0.57	

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 1:SBT, Start of Green	
Natural Cycle: 90	

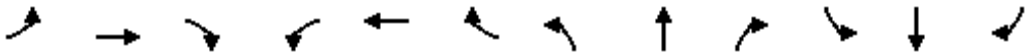
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 19.9	Intersection LOS: B
Intersection Capacity Utilization 86.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 9: Riverdale Avenue/Warburton Avenue & Main Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	92	52	0	0	0	0	381	103	131	550	0
Future Volume (vph)	15	92	52	0	0	0	0	381	103	131	550	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	12	12	12	11	11	11	9	12	12
Storage Length (ft)	0		0	0		0	0		0	125		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor		0.96						0.99				
Frt		0.956						0.968				
Flt Protected		0.995								0.950		
Satd. Flow (prot)	0	1408	0	0	0	0	0	2832	0	1438	2825	0
Flt Permitted		0.995								0.421		
Satd. Flow (perm)	0	1408	0	0	0	0	0	2832	0	637	2825	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		24						39				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		538			379			525			325	
Travel Time (s)		12.2			8.6			11.9			7.4	
Confl. Peds. (#/hr)			82			72			23			42
Peak Hour Factor	0.84	0.84	0.84	0.92	0.92	0.92	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles (%)	19%	19%	19%	2%	2%	2%	14%	14%	14%	13%	13%	13%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	15	0	0	22	0
Parking (#/hr)		10									10	
Adj. Flow (vph)	18	110	62	0	0	0	0	410	111	141	591	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	190	0	0	0	0	0	521	0	141	591	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			8			8	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	1.05	0.85	1.00	1.00	1.00	1.04	1.09	1.04	1.14	1.17	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	

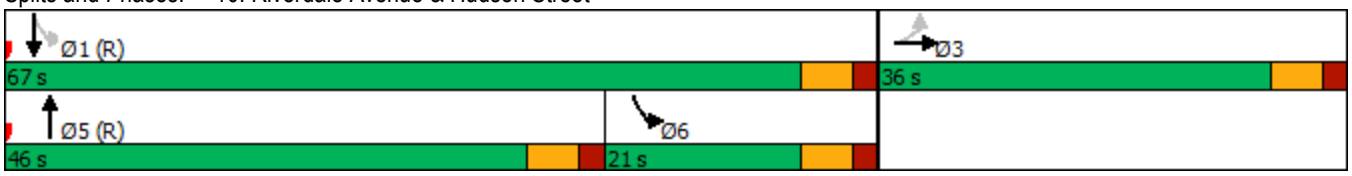


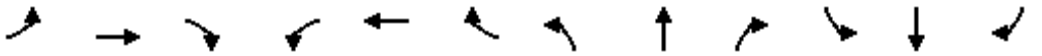
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA		pm+pt	NA	
Protected Phases		3						5		6	1	
Permitted Phases	3									1		
Detector Phase	3	3						5		6	1	
Switch Phase												
Minimum Initial (s)	10.0	10.0						5.0		10.0	5.0	
Minimum Split (s)	30.0	30.0						30.0		16.0	30.0	
Total Split (s)	36.0	36.0						46.0		21.0	67.0	
Total Split (%)	35.0%	35.0%						44.7%		20.4%	65.0%	
Maximum Green (s)	30.0	30.0						40.0		15.0	61.0	
Yellow Time (s)	4.0	4.0						4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0						2.0		2.0	2.0	
Lost Time Adjust (s)		0.0						0.0		0.0	0.0	
Total Lost Time (s)		6.0						6.0		6.0	6.0	
Lead/Lag								Lead		Lag		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Recall Mode	Ped	Ped						C-Max		Max	C-Max	
Walk Time (s)	10.0	10.0						10.0			10.0	
Flash Dont Walk (s)	14.0	14.0						14.0			14.0	
Pedestrian Calls (#/hr)	0	0						0			0	
Act Effct Green (s)		24.2						45.8		66.8	66.8	
Actuated g/C Ratio		0.23						0.44		0.65	0.65	
v/c Ratio		0.54						0.41		0.27	0.32	
Control Delay		36.6						19.1		10.1	8.7	
Queue Delay		0.0						0.0		0.0	1.0	
Total Delay		36.6						19.1		10.1	9.7	
LOS		D						B		B	A	
Approach Delay		36.6						19.1			9.7	
Approach LOS		D						B			A	
Queue Length 50th (ft)		96						108		33	82	
Queue Length 95th (ft)		152						156		59	115	
Internal Link Dist (ft)		458			299			445			245	
Turn Bay Length (ft)										125		
Base Capacity (vph)		427						1279		529	1830	
Starvation Cap Reductn		0						0		0	922	
Spillback Cap Reductn		0						0		0	0	
Storage Cap Reductn		0						0		0	0	
Reduced v/c Ratio		0.44						0.41		0.27	0.65	

Intersection Summary	
Area Type:	Other
Cycle Length: 103	
Actuated Cycle Length: 103	
Offset: 0 (0%), Referenced to phase 1:SBTL and 5:NBT, Start of Green	
Natural Cycle: 80	

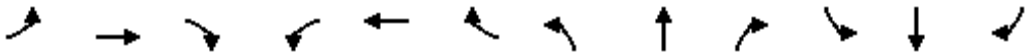
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 16.6	Intersection LOS: B
Intersection Capacity Utilization 63.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 10: Riverdale Avenue & Hudson Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	240	58	391	380	144	79	328	371	141	388	29
Future Volume (vph)	12	240	58	391	380	144	79	328	371	141	388	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	12	12	12	10	11	11	10	11	11
Storage Length (ft)	0		0	160		0	100		0	155		0
Storage Lanes	0		0	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor		0.97				0.87		0.95				0.94
Frt		0.972				0.850		0.920				0.850
Flt Protected		0.998		0.950			0.950			0.950		
Satd. Flow (prot)	0	3474	0	1671	1792	1292	1560	2639	0	1392	3202	1220
Flt Permitted		0.931		0.495			0.259			0.348		
Satd. Flow (perm)	0	3241	0	871	1792	1130	425	2639	0	510	3202	1144
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		26				113						149
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		511			403			1044			525	
Travel Time (s)		11.6			9.2			23.7			11.9	
Confl. Peds. (#/hr)			167			116			75			51
Peak Hour Factor	0.86	0.86	0.86	0.96	0.96	0.96	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles (%)	58%	7%	14%	8%	6%	18%	8%	9%	6%	21%	9%	28%
Bus Blockages (#/hr)	0	1	0	0	0	14	0	0	0	0	0	0
Parking (#/hr)								10				
Adj. Flow (vph)	14	279	67	407	396	150	88	364	412	157	431	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	360	0	407	396	150	88	776	0	157	431	32
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			10			16	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	1.00	1.00	1.08	1.09	1.15	1.04	1.09	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	



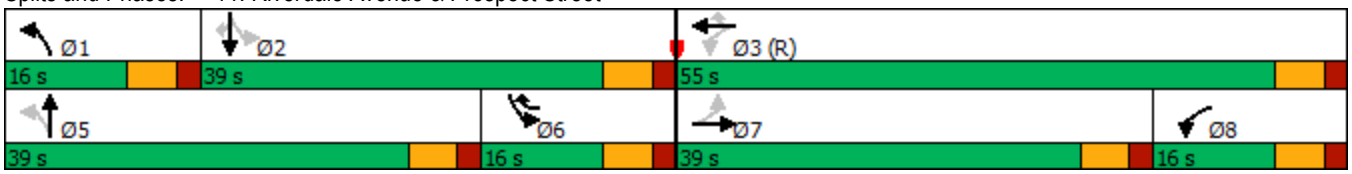
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	Perm
Protected Phases		7		8	3	6	1	5		6	2	
Permitted Phases	7			3		3	5			2		2
Detector Phase	7	7		8	3	6	1	5		6	2	2
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)	39.0	39.0		11.0	39.0	11.0	11.0	39.0		11.0	39.0	39.0
Total Split (s)	39.0	39.0		16.0	55.0	16.0	16.0	39.0		16.0	39.0	39.0
Total Split (%)	35.5%	35.5%		14.5%	50.0%	14.5%	14.5%	35.5%		14.5%	35.5%	35.5%
Maximum Green (s)	33.0	33.0		10.0	49.0	10.0	10.0	33.0		10.0	33.0	33.0
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	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lead		Lag		Lag	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	Ped	Ped		Max	C-Max	Max	Max	Ped		Max	Ped	Ped
Walk Time (s)	7.0	7.0			7.0			15.0			15.0	15.0
Flash Dont Walk (s)	26.0	26.0			26.0			18.0			18.0	18.0
Pedestrian Calls (#/hr)	0	0			0			0			0	0
Act Effct Green (s)		33.0		49.0	49.0	59.0	33.0	33.0		33.0	33.0	33.0
Actuated g/C Ratio		0.30		0.45	0.45	0.54	0.30	0.30		0.30	0.30	0.30
v/c Ratio		0.36		0.88	0.50	0.22	0.38	1.15dr		0.67	0.45	0.07
Control Delay		29.2		31.1	8.9	1.2	42.8	73.2		53.8	33.0	0.3
Queue Delay		0.0		0.0	0.4	0.0	0.0	0.0		6.2	0.0	0.0
Total Delay		29.2		31.1	9.2	1.2	42.8	73.2		60.0	33.0	0.3
LOS		C		C	A	A	D	E		E	C	A
Approach Delay		29.2			17.3			70.1			38.1	
Approach LOS		C			B			E			D	
Queue Length 50th (ft)		96		54	40	2	57	306		87	129	0
Queue Length 95th (ft)		132		#206	53	7	m82	#417		#162	177	0
Internal Link Dist (ft)		431			323			964			445	
Turn Bay Length (ft)				160			100			155		
Base Capacity (vph)		990		460	798	673	230	791		233	960	447
Starvation Cap Reductn		0		0	102	0	0	0		0	0	0
Spillback Cap Reductn		0		0	0	0	0	0		40	0	0
Storage Cap Reductn		0		0	0	0	0	0		0	0	0
Reduced v/c Ratio		0.36		0.88	0.57	0.22	0.38	0.98		0.81	0.45	0.07

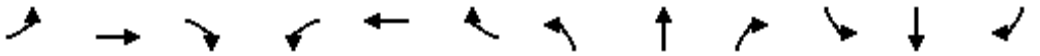
Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 25 (23%), Referenced to phase 3:WBTL, Start of Green	
Natural Cycle: 100	

Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.98	
Intersection Signal Delay: 39.8	Intersection LOS: D
Intersection Capacity Utilization 110.3%	ICU Level of Service H
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

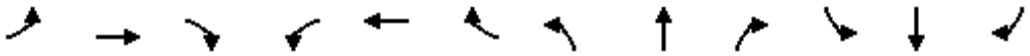
Splits and Phases: 11: Riverdale Avenue & Prospect Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	55	31	36	16	33	19	607	128	107	670	60
Future Volume (vph)	138	55	31	36	16	33	19	607	128	107	670	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	16	16	16	9	12	12	10	13	13
Storage Length (ft)	0		0	0		0	165		0	125		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.981			0.947			0.974			0.988	
Flt Protected		0.970			0.979		0.950			0.950		
Satd. Flow (prot)	0	1832	0	0	1713	0	1593	3193	0	1652	3342	0
Flt Permitted		0.763			0.815		0.143			0.154		
Satd. Flow (perm)	0	1441	0	0	1426	0	240	3193	0	268	3342	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			26			23			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		236			1171			256			1044	
Travel Time (s)		5.4			26.6			5.8			23.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.90	0.90	0.90
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	0	0
Parking (#/hr)					5			5			10	
Adj. Flow (vph)	150	60	34	39	17	36	21	660	139	119	744	67
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	244	0	0	92	0	21	799	0	119	811	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.96	0.96	0.96	0.85	1.01	0.85	1.14	1.10	1.00	1.09	1.06	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Bus Blockages (#/hr)	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		2	5		6	1	
Permitted Phases	4			4			5			1		
Detector Phase	4	4		4	4		2	5		6	1	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Total Split (s)	28.0	28.0		28.0	28.0		15.0	40.0		15.0	40.0	
Total Split (%)	25.5%	25.5%		25.5%	25.5%		13.6%	36.4%		13.6%	36.4%	
Maximum Green (s)	22.0	22.0		22.0	22.0		9.0	34.0		9.0	34.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag		Lag	Lag		Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		Max	Max		None	C-Max		None	C-Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		45.9			45.9		40.9	34.0		44.9	41.3	
Actuated g/C Ratio		0.42			0.42		0.37	0.31		0.41	0.38	
v/c Ratio		0.40			0.15		0.12	0.80		0.59	0.64	
Control Delay		27.6			18.7		22.5	40.8		45.6	28.0	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		27.6			18.7		22.5	40.8		45.6	28.0	
LOS		C			B		C	D		D	C	
Approach Delay		27.6			18.7			40.4			30.3	
Approach LOS		C			B			D			C	
Queue Length 50th (ft)		105			26		9	264		48	169	
Queue Length 95th (ft)		#270			84		23	341		m71	m275	
Internal Link Dist (ft)		156			1091			176			964	
Turn Bay Length (ft)							165			125		
Base Capacity (vph)		605			610		204	1002		226	1259	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.40			0.15		0.10	0.80		0.53	0.64	

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 0 (0%), Referenced to phase 1:SBTL and 5:NBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 33.4	Intersection LOS: C

Lane Group	Ø3
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	24.0
Total Split (s)	27.0
Total Split (%)	25%
Maximum Green (s)	24.0
Yellow Time (s)	3.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lead
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	6.0
Flash Dont Walk (s)	15.0
Pedestrian Calls (#/hr)	5
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

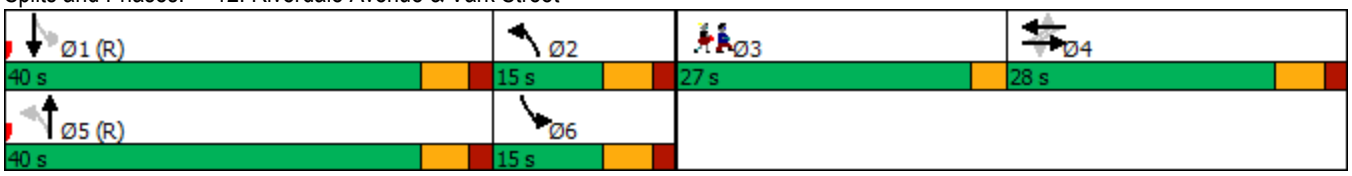
Intersection Capacity Utilization 60.7% ICU Level of Service B

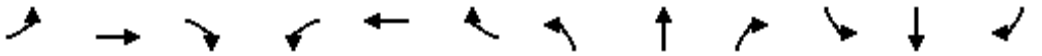
Analysis Period (min) 15

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

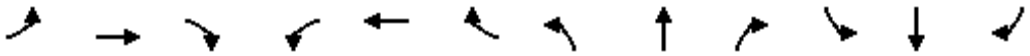
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Riverdale Avenue & Vark Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	212	4	81	175	80	5	205	110	145	235	30
Future Volume (vph)	16	212	4	81	175	80	5	205	110	145	235	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	14	14	14	16	16	16	10	13	13
Storage Length (ft)	0		0	0		0	0		0	80		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.968			0.953			0.983	
Flt Protected		0.997			0.988			0.999		0.950		
Satd. Flow (prot)	0	1499	0	0	1778	0	0	1830	0	1560	1787	0
Flt Permitted		0.967			0.864			0.995		0.289		
Satd. Flow (perm)	0	1454	0	0	1555	0	0	1823	0	475	1787	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		1			19						9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		672			208			1727			316	
Travel Time (s)		15.3			4.7			39.3			7.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	3%	3%	3%	9%	9%	9%	8%	8%	8%	8%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	9	0	0	0	0
Parking (#/hr)		5										
Adj. Flow (vph)	17	230	4	88	190	87	5	223	120	158	255	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	251	0	0	365	0	0	348	0	158	288	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.29	1.09	0.92	0.92	0.92	0.85	0.89	0.85	1.09	0.96	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

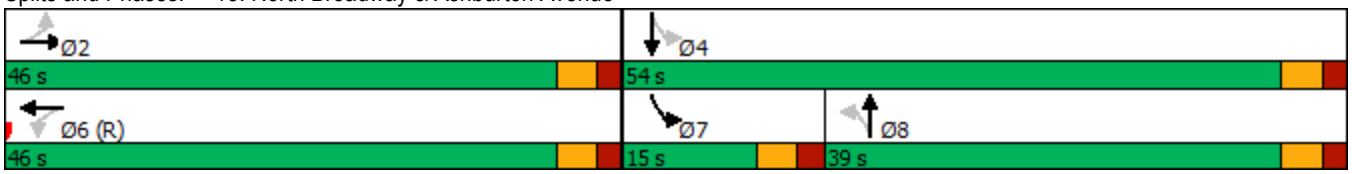


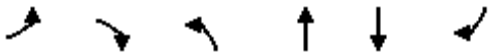
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		5.0	10.0	
Minimum Split (s)	10.0	10.0		32.0	32.0		32.0	32.0		10.0	32.0	
Total Split (s)	46.0	46.0		46.0	46.0		39.0	39.0		15.0	54.0	
Total Split (%)	46.0%	46.0%		46.0%	46.0%		39.0%	39.0%		15.0%	54.0%	
Maximum Green (s)	41.0	41.0		41.0	41.0		34.0	34.0		10.0	49.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0			5.0		5.0	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		C-Max	C-Max		Ped	Ped		Max	Ped	
Walk Time (s)				15.0	15.0		15.0	15.0			15.0	
Flash Dont Walk (s)				12.0	12.0		12.0	12.0			12.0	
Pedestrian Calls (#/hr)				0	0		0	0			0	
Act Effct Green (s)		46.9			46.9			28.1		43.1	43.1	
Actuated g/C Ratio		0.47			0.47			0.28		0.43	0.43	
v/c Ratio		0.37			0.49			0.68		0.50	0.37	
Control Delay		24.4			15.9			39.2		23.6	20.0	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		24.4			15.9			39.2		23.6	20.0	
LOS		C			B			D		C	B	
Approach Delay		24.4			15.9			39.3			21.3	
Approach LOS		C			B			D			C	
Queue Length 50th (ft)		131			95			200		63	120	
Queue Length 95th (ft)		190			132			278		98	167	
Internal Link Dist (ft)		592			128			1647			236	
Turn Bay Length (ft)										80		
Base Capacity (vph)		682			739			619		313	880	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.37			0.49			0.56		0.50	0.33	

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 97 (97%), Referenced to phase 6:WBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	

Intersection Signal Delay: 24.9	Intersection LOS: C
Intersection Capacity Utilization 79.5%	ICU Level of Service D
Analysis Period (min) 15	

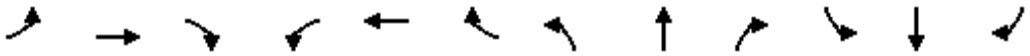
Splits and Phases: 13: North Broadway & Ashburton Avenue





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	200	0	0	392	0	0
Future Volume (vph)	200	0	0	392	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1705	0	0	1794	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1705	0	0	1794	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	226			563	1727	
Travel Time (s)	5.1			12.8	39.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)	10			10		
Adj. Flow (vph)	217	0	0	426	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	217	0	0	426	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	16			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.05	0.85	0.85	1.05	0.85	0.85
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.4%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	145	123	61	269	0	0	0	0
Future Volume (vph)	0	0	0	0	145	123	61	269	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	16	16	16	16	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.938							
Flt Protected								0.991				
Satd. Flow (prot)	0	0	0	0	1980	0	0	2092	0	0	0	0
Flt Permitted								0.991				
Satd. Flow (perm)	0	0	0	0	1980	0	0	2092	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					61			73				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		497			81			184			563	
Travel Time (s)		11.3			1.8			4.2			12.8	
Peak Hour Factor	0.92	0.92	0.92	0.86	0.86	0.86	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	169	143	66	292	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	312	0	0	358	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	0.85	0.85	0.85	0.85	0.85	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					2		1	2				
Detector Template					Thru		Left	Thru				
Leading Detector (ft)					100		20	100				
Trailing Detector (ft)					0		0	0				
Detector 1 Position(ft)					0		0	0				
Detector 1 Size(ft)					6		20	6				
Detector 1 Type					Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)					0.0		0.0	0.0				
Detector 1 Queue (s)					0.0		0.0	0.0				
Detector 1 Delay (s)					0.0		0.0	0.0				
Detector 2 Position(ft)					94			94				
Detector 2 Size(ft)					6			6				
Detector 2 Type					Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				
Turn Type					NA		Perm	NA				
Protected Phases					2 6			3				
Permitted Phases							3					
Detector Phase					2 6		3	3				
Switch Phase												

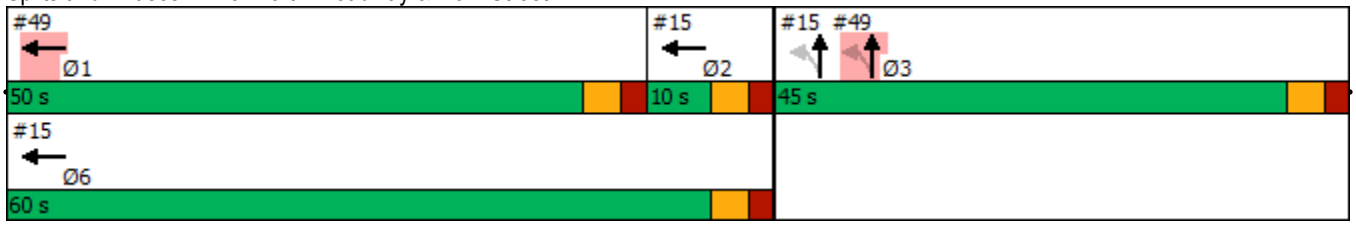
Lane Group	Ø1	Ø2	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			
Turn Type			
Protected Phases	1	2	6
Permitted Phases			
Detector Phase			
Switch Phase			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)							5.0	5.0				
Minimum Split (s)							45.0	45.0				
Total Split (s)							45.0	45.0				
Total Split (%)							42.9%	42.9%				
Maximum Green (s)							40.0	40.0				
Yellow Time (s)							3.0	3.0				
All-Red Time (s)							2.0	2.0				
Lost Time Adjust (s)								0.0				
Total Lost Time (s)								5.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)							3.0	3.0				
Recall Mode							Ped	Ped				
Walk Time (s)							30.0	30.0				
Flash Dont Walk (s)							10.0	10.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)					55.0			40.0				
Actuated g/C Ratio					0.52			0.38				
v/c Ratio					0.29			0.43				
Control Delay					0.6			20.6				
Queue Delay					0.0			0.0				
Total Delay					0.6			20.6				
LOS					A			C				
Approach Delay					0.6			20.6				
Approach LOS					A			C				
Queue Length 50th (ft)					0			137				
Queue Length 95th (ft)					0			217				
Internal Link Dist (ft)		417			1			104			483	
Turn Bay Length (ft)												
Base Capacity (vph)					1066			842				
Starvation Cap Reductn					0			0				
Spillback Cap Reductn					0			0				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					0.29			0.43				

Intersection Summary

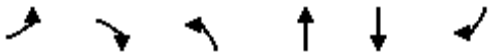
Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 105
Natural Cycle: 105
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.53
Intersection Signal Delay: 11.3 Intersection LOS: B
Intersection Capacity Utilization 41.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 15: North Broadway & Main Street



Lane Group	Ø1	Ø2	Ø6
Minimum Initial (s)	5.0	2.0	5.0
Minimum Split (s)	50.0	7.0	10.0
Total Split (s)	50.0	10.0	60.0
Total Split (%)	48%	10%	57%
Maximum Green (s)	45.0	5.0	55.0
Yellow Time (s)	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	Ped	Max	Max
Walk Time (s)	35.0		
Flash Dont Walk (s)	10.0		
Pedestrian Calls (#/hr)	0		
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

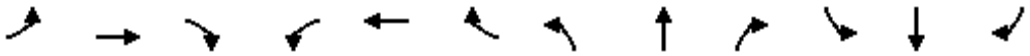
Intersection Summary



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	190	136	0	260	0	0
Future Volume (vph)	190	136	0	260	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	16	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.944					
Flt Protected	0.972					
Satd. Flow (prot)	1649	0	0	1727	0	0
Flt Permitted	0.972					
Satd. Flow (perm)	1649	0	0	1727	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	379			514	155	
Travel Time (s)	8.6			11.7	3.5	
Confl. Peds. (#/hr)	174		161			
Peak Hour Factor	0.86	0.86	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	11%	11%	6%	6%	2%	2%
Bus Blockages (#/hr)	4	0	0	0	0	0
Parking (#/hr)				10		
Adj. Flow (vph)	221	158	0	283	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	379	0	0	283	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	14			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.92	1.00	1.05	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.2%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	653	72	288	807	98	85	135	144	50	63	23
Future Volume (vph)	27	653	72	288	807	98	85	135	144	50	63	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	12	13	10	16	16	12	16	16
Grade (%)		0%			7%			0%			0%	
Storage Length (ft)	107		0	315		0	120		0	100		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.97				0.91		0.97			0.99	
Frt		0.985				0.850		0.923			0.960	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1543	2968	0	1628	3256	1505	1532	1494	0	1612	1544	0
Flt Permitted	0.142			0.339			0.689			0.379		
Satd. Flow (perm)	231	2968	0	581	3256	1374	1111	1494	0	643	1544	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)						101					17	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		403			838			1248			514	
Travel Time (s)		9.2			19.0			28.4			11.7	
Confl. Peds. (#/hr)			156			50			43			20
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.84	0.84	0.84	0.82	0.82	0.82
Heavy Vehicles (%)	17%	17%	17%	7%	7%	7%	10%	10%	10%	12%	12%	12%
Bus Blockages (#/hr)	0	15	0	0	0	0	0	0	0	0	9	0
Parking (#/hr)								10			5	
Adj. Flow (vph)	29	710	78	297	832	101	101	161	171	61	77	28
Shared Lane Traffic (%)												
Lane Group Flow (vph)	29	788	0	297	832	101	101	332	0	61	105	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.05	1.05	1.00	1.09	1.05	0.85	1.00	1.06	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	



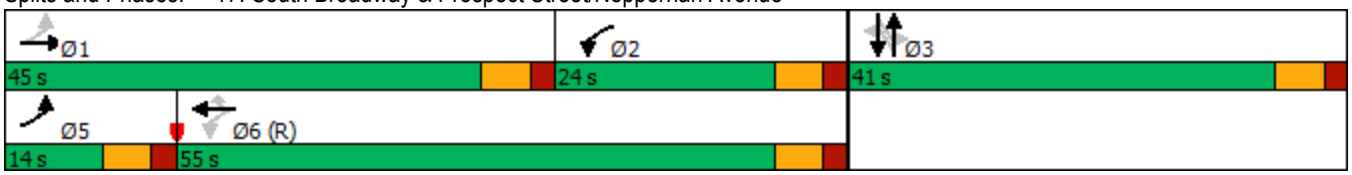
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	1		2	6			3			3	
Permitted Phases	1			6		6	3			3		
Detector Phase	5	1		2	6	6	3	3		3	3	
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)	11.0	41.0		11.0	46.0	46.0	40.0	40.0		40.0	40.0	
Total Split (s)	14.0	45.0		24.0	55.0	55.0	41.0	41.0		41.0	41.0	
Total Split (%)	12.7%	40.9%		21.8%	50.0%	50.0%	37.3%	37.3%		37.3%	37.3%	
Maximum Green (s)	8.0	39.0		18.0	49.0	49.0	35.0	35.0		35.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	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	6.0	
Lead/Lag	Lead	Lead		Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Max	Ped		Max	C-Max	C-Max	Ped	Ped		Ped	Ped	
Walk Time (s)		10.0			20.0	20.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		25.0			20.0	20.0	27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0			0	0	0	0		0	0	
Act Effct Green (s)	36.9	36.9		49.0	49.0	49.0	34.3	34.3		34.3	34.3	
Actuated g/C Ratio	0.34	0.34		0.45	0.45	0.45	0.31	0.31		0.31	0.31	
v/c Ratio	0.16	0.79		0.65	0.57	0.15	0.29	0.71		0.30	0.21	
Control Delay	19.5	33.3		16.0	9.4	1.5	31.4	43.2		33.8	24.5	
Queue Delay	0.0	3.2		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	19.5	36.4		16.0	9.4	1.5	31.4	43.2		33.8	24.5	
LOS	B	D		B	A	A	C	D		C	C	
Approach Delay		35.8			10.3			40.5			27.9	
Approach LOS		D			B			D			C	
Queue Length 50th (ft)	11	290		29	42	0	54	208		33	45	
Queue Length 95th (ft)	m17	m289		m65	m83	m3	93	283		64	79	
Internal Link Dist (ft)		323			758			1168			434	
Turn Bay Length (ft)	107			315			120			100		
Base Capacity (vph)	180	1052		456	1450	668	353	475		204	502	
Starvation Cap Reductn	0	170		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.16	0.89		0.65	0.57	0.15	0.29	0.70		0.30	0.21	

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 15 (14%), Referenced to phase 6:WBTL, Start of Green	

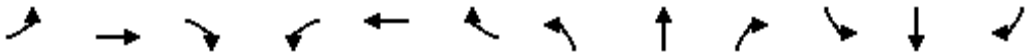
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 24.2	Intersection LOS: C
Intersection Capacity Utilization 98.2%	ICU Level of Service F
Analysis Period (min) 15	

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

Splits and Phases: 17: South Broadway & Prospect Street/Nepperhan Avenue



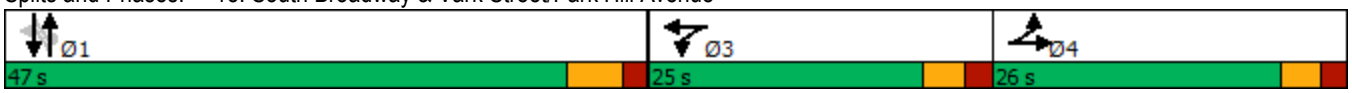
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	180	85	152	46	72	23	267	95	30	377	16
Future Volume (vph)	25	180	85	152	46	72	23	267	95	30	377	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	14	14	14	16	16	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.961			0.964			0.967			0.995	
Flt Protected		0.996			0.973			0.997			0.996	
Satd. Flow (prot)	0	2021	0	0	1864	0	0	1730	0	0	1778	0
Flt Permitted		0.996			0.973			0.956			0.950	
Satd. Flow (perm)	0	2021	0	0	1864	0	0	1659	0	0	1696	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			17			21			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1171			125			465			1248	
Travel Time (s)		26.6			2.8			10.6			28.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.82	0.82	0.82
Parking (#/hr)								10			10	
Adj. Flow (vph)	27	196	92	165	50	78	25	290	103	37	460	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	315	0	0	293	0	0	418	0	0	517	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	0.92	0.92	0.92	0.85	1.05	0.85	0.85	1.05	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		3	3			1			1	
Permitted Phases							1			1		
Detector Phase	4	4		3	3		1	1		1	1	

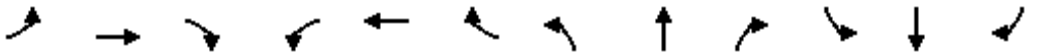


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	25.0	25.0		10.0	10.0		39.0	39.0		39.0	39.0	
Total Split (s)	26.0	26.0		25.0	25.0		47.0	47.0		47.0	47.0	
Total Split (%)	26.5%	26.5%		25.5%	25.5%		48.0%	48.0%		48.0%	48.0%	
Maximum Green (s)	21.0	21.0		20.0	20.0		41.0	41.0		41.0	41.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		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	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			6.0			6.0	
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Ped	Ped		Max	Max		Ped	Ped		Ped	Ped	
Walk Time (s)	5.0	5.0					20.0	20.0		20.0	20.0	
Flash Dont Walk (s)	15.0	15.0					13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		20.4			20.0			36.5			36.5	
Actuated g/C Ratio		0.22			0.22			0.39			0.39	
v/c Ratio		0.69			0.71			0.63			0.78	
Control Delay		40.7			43.2			26.4			33.6	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		40.7			43.2			26.4			33.6	
LOS		D			D			C			C	
Approach Delay		40.7			43.2			26.4			33.6	
Approach LOS		D			D			C			C	
Queue Length 50th (ft)		157			147			183			257	
Queue Length 95th (ft)		267			#280			287			336	
Internal Link Dist (ft)		1091			45			385			1168	
Turn Bay Length (ft)												
Base Capacity (vph)		472			414			744			750	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.67			0.71			0.56			0.69	

Intersection Summary			
Area Type:	Other		
Cycle Length: 98			
Actuated Cycle Length: 93			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 34.9		Intersection LOS: C	
Intersection Capacity Utilization 74.7%		ICU Level of Service D	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

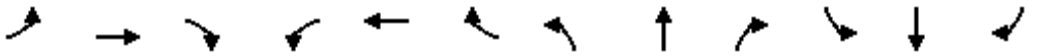
Splits and Phases: 18: South Broadway & Vark Street/Park Hill Avenue



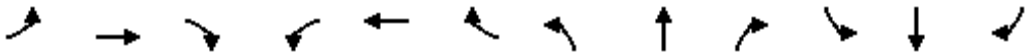


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	149	56	0	0	0	0	38	22	58	47	0
Future Volume (vph)	41	149	56	0	0	0	0	38	22	58	47	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	12	12	12	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.969						0.950				
Flt Protected		0.992									0.973	
Satd. Flow (prot)	0	2029	0	0	0	0	0	1770	0	0	1812	0
Flt Permitted		0.992									0.973	
Satd. Flow (perm)	0	2029	0	0	0	0	0	1770	0	0	1812	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		254			533			222			499	
Travel Time (s)		5.8			12.1			5.0			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	162	61	0	0	0	0	41	24	63	51	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	268	0	0	0	0	0	65	0	0	114	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.5%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	809	28	202	1112	232	14	110	347	0	0	0
Future Volume (vph)	10	809	28	202	1112	232	14	110	347	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	16	16	16	12	12	12
Grade (%)		7%			0%			0%			0%	
Storage Length (ft)	360		0	165		0	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.995				0.850		0.901				
Flt Protected	0.950			0.950				0.999				
Satd. Flow (prot)	1651	4883	0	1770	5085	1419	0	1615	0	0	0	0
Flt Permitted	0.153			0.234				0.999				
Satd. Flow (perm)	266	4883	0	436	5085	1419	0	1615	0	0	0	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		5										
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		838			378			724			411	
Travel Time (s)		19.0			8.6			16.5			9.3	
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	26	0	0	0	0	0	0
Parking (#/hr)								10				
Adj. Flow (vph)	11	879	30	208	1146	239	15	120	377	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	11	909	0	208	1146	239	0	512	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.05	1.05	1.00	1.00	1.15	0.85	1.05	0.85	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2				
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru				
Leading Detector (ft)	20	100		20	100	20	20	100				
Trailing Detector (ft)	0	0		0	0	0	0	0				
Detector 1 Position(ft)	0	0		0	0	0	0	0				
Detector 1 Size(ft)	20	6		20	6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												



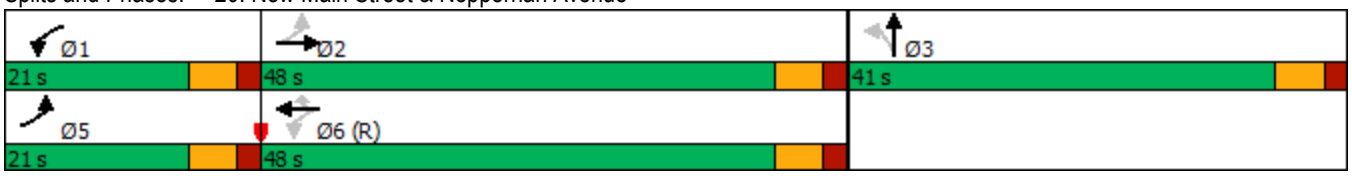
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA				
Protected Phases	5	2		1	6			3				
Permitted Phases	2			6		6	3					
Detector Phase	5	2		1	6	6	3	3				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0				
Minimum Split (s)	11.0	46.0		11.0	46.0	46.0	40.0	40.0				
Total Split (s)	21.0	48.0		21.0	48.0	48.0	41.0	41.0				
Total Split (%)	19.1%	43.6%		19.1%	43.6%	43.6%	37.3%	37.3%				
Maximum Green (s)	15.0	42.0		15.0	42.0	42.0	35.0	35.0				
Yellow Time (s)	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				
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0				
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0		6.0				
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0				
Recall Mode	Max	Ped		Max	C-Max	C-Max	Ped	Ped				
Walk Time (s)		20.0			20.0	20.0	7.0	7.0				
Flash Dont Walk (s)		20.0			20.0	20.0	27.0	27.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	57.0	42.0		57.0	42.0	42.0		35.0				
Actuated g/C Ratio	0.52	0.38		0.52	0.38	0.38		0.32				
v/c Ratio	0.03	0.49		0.51	0.59	0.44		1.00				
Control Delay	4.8	10.3		27.9	8.8	9.8		77.7				
Queue Delay	0.0	0.0		0.0	0.2	0.4		0.0				
Total Delay	4.8	10.3		27.9	9.1	10.2		77.7				
LOS	A	B		C	A	B		E				
Approach Delay		10.2			11.7			77.7				
Approach LOS		B			B			E				
Queue Length 50th (ft)	1	72		57	39	22		359				
Queue Length 95th (ft)	m2	100		m114	59	m40		#583				
Internal Link Dist (ft)		758			298			644			331	
Turn Bay Length (ft)	360			165								
Base Capacity (vph)	326	1867		407	1941	541		513				
Starvation Cap Reductn	0	0		0	220	73		0				
Spillback Cap Reductn	0	0		0	0	0		0				
Storage Cap Reductn	0	0		0	0	0		0				
Reduced v/c Ratio	0.03	0.49		0.51	0.67	0.51		1.00				

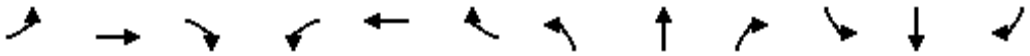
Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 10 (9%), Referenced to phase 6:WBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.00	

Intersection Signal Delay: 22.4	Intersection LOS: C
Intersection Capacity Utilization 70.4%	ICU Level of Service C
Analysis Period (min) 15	

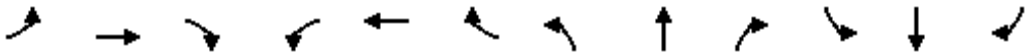
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 20: New Main Street & Nepperhan Avenue





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	78	280	105	177	290	116	68	170	92	0	0	0
Future Volume (vph)	78	280	105	177	290	116	68	170	92	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	15	10	11	11	10	10	10	12	12	12
Storage Length (ft)	75		100	70		0	0		100	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.957				0.850			
Flt Protected	0.950			0.950				0.986				
Satd. Flow (prot)	1533	1574	1676	1604	1674	0	0	1619	1312	0	0	0
Flt Permitted	0.369			0.500				0.986				
Satd. Flow (perm)	595	1574	1676	844	1674	0	0	1619	1312	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			114		27				95			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		436			2061			549			169	
Travel Time (s)		9.9			46.8			12.5			3.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	6%	6%	6%	5%	5%	5%	8%	8%	8%	2%	2%	2%
Bus Blockages (#/hr)	0	6	0	0	0	0	0	0	15	0	0	0
Adj. Flow (vph)	85	304	114	192	315	126	74	185	100	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	85	304	114	192	441	0	0	259	100	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.18	0.88	1.09	1.04	1.04	1.09	1.09	1.18	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1			
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right			
Leading Detector (ft)	20	100	20	20	100		20	100	20			
Trailing Detector (ft)	0	0	0	0	0		0	0	0			
Detector 1 Position(ft)	0	0	0	0	0		0	0	0			
Detector 1 Size(ft)	20	6	20	20	6		20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	Prot			
Protected Phases	5	2		1	6			8	8			
Permitted Phases	2		2	6			8					
Detector Phase	5	2	2	1	6		8	8	8			
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0			
Minimum Split (s)	10.0	37.0	37.0	10.0	37.0		28.0	28.0	28.0			
Total Split (s)	17.0	51.0	51.0	17.0	51.0		32.0	32.0	32.0			
Total Split (%)	17.0%	51.0%	51.0%	17.0%	51.0%		32.0%	32.0%	32.0%			
Maximum Green (s)	12.0	46.0	46.0	12.0	46.0		27.0	27.0	27.0			
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0			
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0			
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0	0.0			
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0			5.0	5.0			
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0			
Recall Mode	Max	Ped	Ped	Max	C-Max		Ped	Ped	Ped			
Walk Time (s)		20.0	20.0		20.0		10.0	10.0	10.0			
Flash Dont Walk (s)		12.0	12.0		12.0		13.0	13.0	13.0			
Pedestrian Calls (#/hr)		0	0		0		0	0	0			
Act Effct Green (s)	61.0	46.0	46.0	61.0	46.0			24.0	24.0			
Actuated g/C Ratio	0.61	0.46	0.46	0.61	0.46			0.24	0.24			
v/c Ratio	0.17	0.42	0.14	0.31	0.56			0.67	0.26			
Control Delay	4.8	16.7	4.4	4.6	8.7			43.4	8.7			
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0			
Total Delay	4.8	16.7	4.4	4.6	8.7			43.4	8.7			
LOS	A	B	A	A	A			D	A			
Approach Delay		11.9			7.4			33.8				
Approach LOS		B			A			C				
Queue Length 50th (ft)	14	120	8	14	44			152	3			
Queue Length 95th (ft)	m27	169	28	m34	m86			228	42			
Internal Link Dist (ft)		356			1981			469			89	
Turn Bay Length (ft)	75		100	70					100			
Base Capacity (vph)	502	724	832	627	784			437	423			
Starvation Cap Reductn	0	0	0	0	0			0	0			
Spillback Cap Reductn	0	0	0	0	0			0	0			
Storage Cap Reductn	0	0	0	0	0			0	0			
Reduced v/c Ratio	0.17	0.42	0.14	0.31	0.56			0.59	0.24			

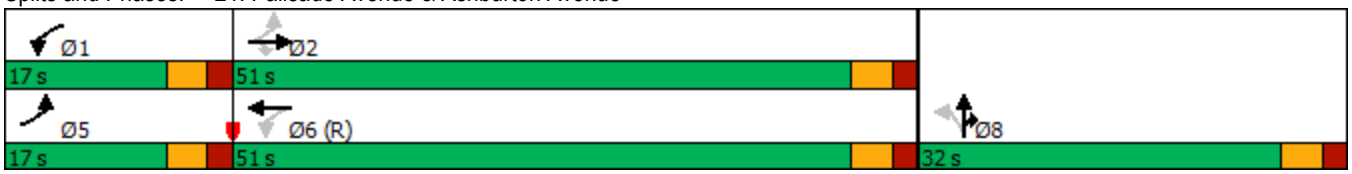
Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 94 (94%), Referenced to phase 6:WBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 15.3	Intersection LOS: B

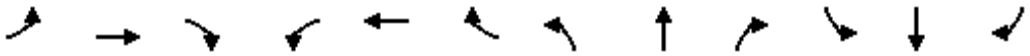
Intersection Capacity Utilization 51.9% ICU Level of Service A

Analysis Period (min) 15

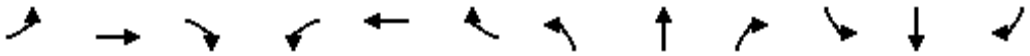
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: Palisade Avenue & Ashburton Avenue





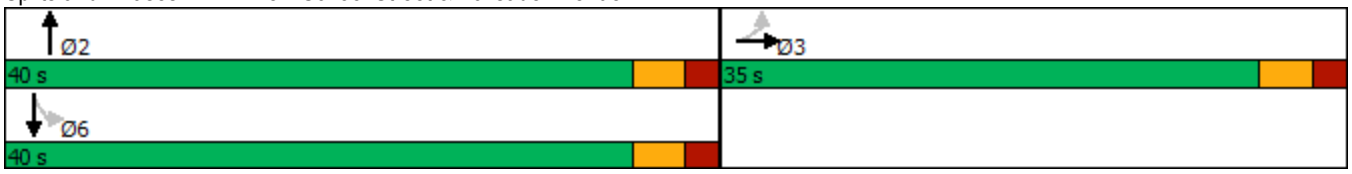
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	53	157	19	0	0	0	0	243	68	137	160	0
Future Volume (vph)	53	157	19	0	0	0	0	243	68	137	160	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	12	12	12	16	16	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.989						0.970				
Flt Protected		0.989									0.977	
Satd. Flow (prot)	0	1807	0	0	0	0	0	2048	0	0	2054	0
Flt Permitted		0.989									0.647	
Satd. Flow (perm)	0	1807	0	0	0	0	0	2048	0	0	1360	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7						25				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		533			736			222			1248	
Travel Time (s)		12.1			16.7			5.0			28.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	1	0
Parking (#/hr)		5										
Adj. Flow (vph)	58	171	21	0	0	0	0	264	74	149	174	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	250	0	0	0	0	0	338	0	0	323	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	1.01	0.85	1.00	1.00	1.00	0.85	0.85	0.85	0.85	0.85	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		3						2			6	
Permitted Phases	3									6		



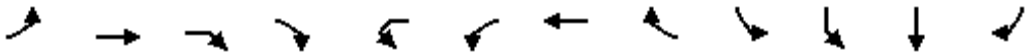
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3	3						2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0		5.0	5.0	
Minimum Split (s)	34.0	34.0						39.0		10.0	10.0	
Total Split (s)	35.0	35.0						40.0		40.0	40.0	
Total Split (%)	46.7%	46.7%						53.3%		53.3%	53.3%	
Maximum Green (s)	30.0	30.0						35.0		35.0	35.0	
Yellow Time (s)	3.0	3.0						3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0						2.0		2.0	2.0	
Lost Time Adjust (s)		0.0						0.0			0.0	
Total Lost Time (s)		5.0						5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Recall Mode	Ped	Ped						Ped		Max	Max	
Walk Time (s)	9.0	9.0						14.0				
Flash Dont Walk (s)	20.0	20.0						20.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)		29.0						35.0			35.0	
Actuated g/C Ratio		0.39						0.47			0.47	
v/c Ratio		0.35						0.34			0.50	
Control Delay		17.2						12.5			16.9	
Queue Delay		0.0						0.0			0.0	
Total Delay		17.2						12.5			16.9	
LOS		B						B			B	
Approach Delay		17.2						12.5			16.9	
Approach LOS		B						B			B	
Queue Length 50th (ft)		76						85			97	
Queue Length 95th (ft)		131						140			168	
Internal Link Dist (ft)		453			656			142			1168	
Turn Bay Length (ft)												
Base Capacity (vph)		736						981			643	
Starvation Cap Reductn		0						0			0	
Spillback Cap Reductn		0						0			0	
Storage Cap Reductn		0						0			0	
Reduced v/c Ratio		0.34						0.34			0.50	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 74			
Natural Cycle: 75			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay: 15.4		Intersection LOS: B	
Intersection Capacity Utilization 57.8%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 22: New School Street & Palisade Avenue



Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	SBL2	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	98	1013	35	10	21	24	1501	213	70	16	6	45
Future Volume (vph)	98	1013	35	10	21	24	1501	213	70	16	6	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	11	12	11	16	16	16	16
Grade (%)		0%					-5%				0%	
Storage Length (ft)	100		0			210		0		0		0
Storage Lanes	1		0			1		1		0		0
Taper Length (ft)	25					25				25		
Lane Util. Factor	1.00	0.91	0.91	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Frt		0.994						0.850			0.956	
Flt Protected	0.950					0.950					0.970	
Satd. Flow (prot)	1711	5055	0	0	0	1753	5212	1569	0	0	1958	0
Flt Permitted	0.091					0.159					0.970	
Satd. Flow (perm)	164	5055	0	0	0	293	5212	1569	0	0	1958	0
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)		1						220			24	
Link Speed (mph)		30					30				30	
Link Distance (ft)		378					492				509	
Travel Time (s)		8.6					11.2				11.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.97	0.92	0.92	0.92	0.92
Adj. Flow (vph)	107	1101	38	11	22	25	1547	220	76	17	7	49
Shared Lane Traffic (%)												
Lane Group Flow (vph)	107	1150	0	0	0	47	1547	220	0	0	149	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Left	Right	Left	Left	Left	Right
Median Width(ft)		12					12				0	
Link Offset(ft)		0					0				0	
Crosswalk Width(ft)		16					16				16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	0.97	1.01	0.97	1.01	0.85	0.85	0.85	0.85
Turning Speed (mph)	15		9	9	15	15		9	15	15		9
Number of Detectors	1	2			1	1	2	1	1	1	2	
Detector Template	Left	Thru			Left	Left	Thru	Right	Left	Left	Thru	
Leading Detector (ft)	20	100			20	20	100	20	20	20	100	
Trailing Detector (ft)	0	0			0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0			0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6			20	20	6	20	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94					94				94	
Detector 2 Size(ft)		6					6				6	
Detector 2 Type		Cl+Ex					Cl+Ex				Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0					0.0				0.0	
Turn Type	pm+pt	NA			pm+pt	pm+pt	NA	Perm	Perm	Perm	NA	



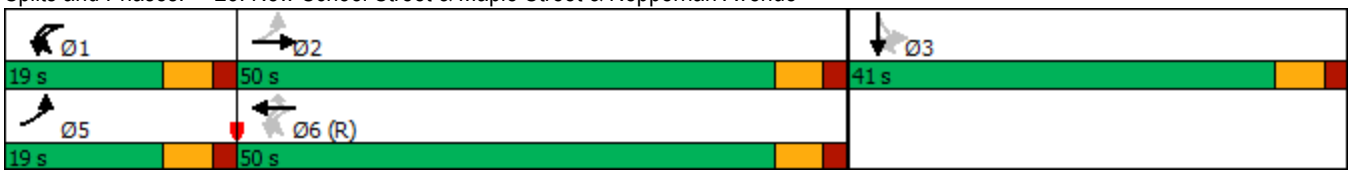
Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	SBL2	SBL	SBT	SBR
Protected Phases	5	2			1	1	6				3	
Permitted Phases	2				6	6		6	3	3		
Detector Phase	5	2			1	1	6	6	3	3	3	
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	11.0	46.0			11.0	11.0	46.0	46.0	40.0	40.0	40.0	
Total Split (s)	19.0	50.0			19.0	19.0	50.0	50.0	41.0	41.0	41.0	
Total Split (%)	17.3%	45.5%			17.3%	17.3%	45.5%	45.5%	37.3%	37.3%	37.3%	
Maximum Green (s)	13.0	44.0			13.0	13.0	44.0	44.0	35.0	35.0	35.0	
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0				0.0	0.0	0.0			0.0	
Total Lost Time (s)	6.0	6.0				6.0	6.0	6.0			6.0	
Lead/Lag	Lead	Lag			Lead	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes			Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Ped			Max	Max	C-Max	C-Max	Ped	Ped	Ped	
Walk Time (s)		20.0					20.0	20.0	7.0	7.0	7.0	
Flash Dont Walk (s)		20.0					20.0	20.0	27.0	27.0	27.0	
Pedestrian Calls (#/hr)		0					0	0	0	0	0	
Act Effct Green (s)	58.0	44.0				58.0	44.0	44.0			34.0	
Actuated g/C Ratio	0.53	0.40				0.53	0.40	0.40			0.31	
v/c Ratio	0.38	0.57				0.14	0.74	0.29			0.24	
Control Delay	26.6	16.1				11.1	30.9	3.9			24.9	
Queue Delay	0.0	0.1				0.0	0.0	0.0			0.0	
Total Delay	26.6	16.2				11.1	30.9	3.9			24.9	
LOS	C	B				B	C	A			C	
Approach Delay		17.1					27.1				24.9	
Approach LOS		B					C				C	
Queue Length 50th (ft)	38	102				13	335	0			65	
Queue Length 95th (ft)	m82	m141				30	393	46			117	
Internal Link Dist (ft)		298					412				429	
Turn Bay Length (ft)	100					210						
Base Capacity (vph)	283	2022				340	2084	759			639	
Starvation Cap Reductn	0	163				0	0	0			0	
Spillback Cap Reductn	0	0				0	0	0			0	
Storage Cap Reductn	0	0				0	0	0			0	
Reduced v/c Ratio	0.38	0.62				0.14	0.74	0.29			0.23	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 10 (9%), Referenced to phase 6:WBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 23.1		Intersection LOS: C	
Intersection Capacity Utilization 57.3%		ICU Level of Service B	

Analysis Period (min) 15

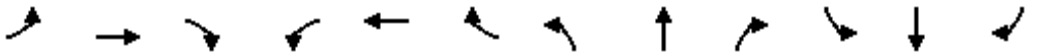
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 23: New School Street & Maple Street & Nepperhan Avenue

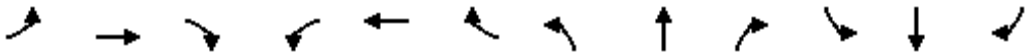


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1083	0	0	1713	46	152
Future Volume (vph)	1083	0	0	1713	46	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	15	15	15
Grade (%)	5%			-5%	0%	
Storage Length (ft)		0	120		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.91	0.91	1.00	0.91	1.00	1.00
Frt					0.896	
Flt Protected					0.989	
Satd. Flow (prot)	4752	0	1909	5535	1816	0
Flt Permitted					0.989	
Satd. Flow (perm)	4752	0	1909	5535	1816	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	492			401	154	
Travel Time (s)	11.2			9.1	3.5	
Peak Hour Factor	0.92	0.92	0.97	0.97	0.92	0.92
Bus Blockages (#/hr)	0	0	0	26	0	0
Parking (#/hr)	5					
Adj. Flow (vph)	1177	0	0	1766	50	165
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1177	0	0	1766	215	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	15	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.03	0.97	0.89	0.88	0.88
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 51.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	360	42	67	345	66	72	500	99	113	292	88
Future Volume (vph)	65	360	42	67	345	66	72	500	99	113	292	88
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	10	11	11	10	13	13	10	12	11
Storage Length (ft)	150		80	120		0	185		0	120		0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850		0.976			0.975				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1504	1640	1346	1546	1645	0	1546	3337	0	1518	3252	1406
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1504	1640	1346	1546	1645	0	1546	3337	0	1518	3252	1406
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			98		10			24				98
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2061			390			1273			212	
Travel Time (s)		46.8			8.9			28.9			4.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	12%	12%	12%	9%	9%	9%	9%	9%	9%	11%	11%	11%
Adj. Flow (vph)	71	391	46	73	375	72	78	543	108	123	317	96
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	391	46	73	447	0	78	651	0	123	317	96
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.09	1.09	1.04	1.04	1.09	0.96	0.96	1.09	1.00	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	pm+ov



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4									6
Detector Phase	7	4	5	3	8		5	2		1	6	7
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	11.0	36.0	11.0	11.0	36.0		11.0	30.0		11.0	30.0	11.0
Total Split (s)	16.0	36.0	16.0	16.0	36.0		16.0	37.0		11.0	32.0	16.0
Total Split (%)	16.0%	36.0%	16.0%	16.0%	36.0%		16.0%	37.0%		11.0%	32.0%	16.0%
Maximum Green (s)	10.0	30.0	10.0	10.0	30.0		10.0	31.0		5.0	26.0	10.0
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	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Ped	None	None	Ped		None	C-Max		None	Ped	None
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		23.0			23.0			17.0			17.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	8.8	32.4	47.3	8.8	30.0		8.9	31.0		6.2	30.7	45.5
Actuated g/C Ratio	0.09	0.32	0.47	0.09	0.30		0.09	0.31		0.06	0.31	0.46
v/c Ratio	0.54	0.74	0.07	0.54	0.89		0.57	0.62		1.32	0.32	0.14
Control Delay	67.9	30.2	1.3	57.9	55.1		59.6	31.4		241.7	29.5	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	67.9	30.2	1.3	57.9	55.1		59.6	31.4		241.7	29.5	4.2
LOS	E	C	A	E	E		E	C		F	C	A
Approach Delay		32.9			55.5			34.4			73.7	
Approach LOS		C			E			C			E	
Queue Length 50th (ft)	38	252	3	45	266		48	178		~113	87	0
Queue Length 95th (ft)	81	#378	8	91	#451		96	239		#228	127	29
Internal Link Dist (ft)		1981			310			1193			132	
Turn Bay Length (ft)	150		80	120			185			120		
Base Capacity (vph)	150	531	701	154	500		154	1051		93	997	708
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.47	0.74	0.07	0.47	0.89		0.51	0.62		1.32	0.32	0.14

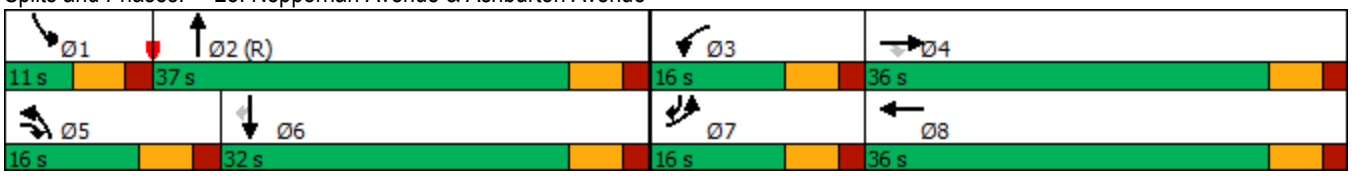
Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green, Master Intersection			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.32			
Intersection Signal Delay: 48.0		Intersection LOS: D	
Intersection Capacity Utilization 69.6%		ICU Level of Service C	

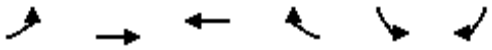
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

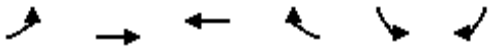
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 25: Nepperhan Avenue & Ashburton Avenue





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	618	401	0	53	29
Future Volume (vph)	0	618	401	0	53	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	16
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt					0.952	
Flt Protected					0.969	
Satd. Flow (prot)	0	3245	3447	0	1947	0
Flt Permitted					0.969	
Satd. Flow (perm)	0	3245	3447	0	1947	0
Right Turn on Red				No		Yes
Satd. Flow (RTOR)					26	
Link Speed (mph)		30	30		30	
Link Distance (ft)		427	310		81	
Travel Time (s)		9.7	7.0		1.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	11	13	0	0	0
Parking (#/hr)		5				
Adj. Flow (vph)	0	672	436	0	58	32
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	672	436	0	90	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.12	1.03	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	
Detector Template		Thru	Thru		Left	
Leading Detector (ft)		100	100		20	
Trailing Detector (ft)		0	0		0	
Detector 1 Position(ft)		0	0		0	
Detector 1 Size(ft)		6	6		20	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	
Protected Phases		2	6		3	
Permitted Phases						

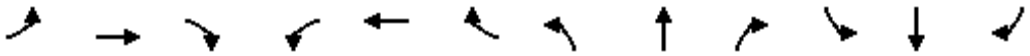


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase		2	6		3	
Switch Phase						
Minimum Initial (s)		5.0	5.0		5.0	
Minimum Split (s)		10.0	10.0		35.0	
Total Split (s)		35.0	35.0		35.0	
Total Split (%)		33.3%	33.3%		33.3%	
Maximum Green (s)		30.0	30.0		30.0	
Yellow Time (s)		3.0	3.0		3.0	
All-Red Time (s)		2.0	2.0		2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		Max	Max		None	
Walk Time (s)					7.0	
Flash Dont Walk (s)					23.0	
Pedestrian Calls (#/hr)					5	
Act Effct Green (s)		30.5	30.5		11.2	
Actuated g/C Ratio		0.36	0.36		0.13	
v/c Ratio		0.58	0.35		0.32	
Control Delay		26.5	23.1		27.5	
Queue Delay		0.0	0.0		0.0	
Total Delay		26.5	23.1		27.5	
LOS		C	C		C	
Approach Delay		26.5	23.1		27.5	
Approach LOS		C	C		C	
Queue Length 50th (ft)		145	85		32	
Queue Length 95th (ft)		281	173		71	
Internal Link Dist (ft)		347	230		1	
Turn Bay Length (ft)						
Base Capacity (vph)		1166	1238		716	
Starvation Cap Reductn		0	0		0	
Spillback Cap Reductn		0	0		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.58	0.35		0.13	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 84.9			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.58			
Intersection Signal Delay: 25.3		Intersection LOS: C	
Intersection Capacity Utilization 30.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Nepperhan Avenue & Copcutt Lane

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	211	134	17	376	0	125	0	1133	102	115	1320	0
Future Volume (vph)	211	134	17	376	0	125	0	1133	102	115	1320	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	16	16	16	12	12	12	11	12	12
Grade (%)		0%			0%			5%			0%	
Storage Length (ft)	0		0	0		0	0		0	140		0
Storage Lanes	1		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Frt		0.984			0.966			0.988				
Flt Protected	0.950				0.964					0.950		
Satd. Flow (prot)	1454	1772	0	0	1720	0	0	4899	0	1711	5085	0
Flt Permitted	0.635				0.654					0.089		
Satd. Flow (perm)	972	1772	0	0	1167	0	0	4899	0	160	5085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			89			15				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		736			401			401			720	
Travel Time (s)		16.7			9.1			9.1			16.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97
Parking (#/hr)	10				5							
Adj. Flow (vph)	229	146	18	409	0	136	0	1232	111	119	1361	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	229	164	0	0	545	0	0	1343	0	119	1361	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.28	1.04	1.04	0.85	1.01	0.85	1.03	1.03	1.03	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2			2		1	2	
Detector Template	Left	Thru		Left	Thru			Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100			100		20	100	
Trailing Detector (ft)	0	0		0	0			0		0	0	
Detector 1 Position(ft)	0	0		0	0			0		0	0	
Detector 1 Size(ft)	20	6		20	6			6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA			NA		pm+pt	NA	
Protected Phases		3			3			2		1	6	
Permitted Phases	3			3						6		
Detector Phase	3	3		3	3			2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Minimum Split (s)	40.0	40.0		40.0	40.0			39.0		11.0	39.0	
Total Split (s)	41.0	41.0		41.0	41.0			48.0		21.0	69.0	
Total Split (%)	37.3%	37.3%		37.3%	37.3%			43.6%		19.1%	62.7%	
Maximum Green (s)	35.0	35.0		35.0	35.0			42.0		15.0	63.0	
Yellow Time (s)	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	
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		Lead		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Recall Mode	Ped	Ped		Ped	Ped			Ped		Max	Ped	
Walk Time (s)	7.0	7.0		7.0	7.0			20.0			20.0	
Flash Dont Walk (s)	27.0	27.0		27.0	27.0			13.0			13.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	35.0	35.0			35.0			38.6		59.7	59.7	
Actuated g/C Ratio	0.33	0.33			0.33			0.36		0.56	0.56	
v/c Ratio	0.72	0.28			1.23			0.75		0.39	0.48	
Control Delay	47.0	27.9			150.9			32.5		17.0	14.8	
Queue Delay	0.0	0.0			0.0			0.0		0.0	0.0	
Total Delay	47.0	27.9			150.9			32.5		17.0	14.8	
LOS	D	C			F			C		B	B	
Approach Delay		39.0			150.9			32.5			14.9	
Approach LOS		D			F			C			B	
Queue Length 50th (ft)	141	82			~434			288		37	193	
Queue Length 95th (ft)	#264	140			#657			343		80	229	
Internal Link Dist (ft)		656			321			321			640	
Turn Bay Length (ft)										140		
Base Capacity (vph)	319	585			443			1938		307	3004	
Starvation Cap Reductn	0	0			0			0		0	0	
Spillback Cap Reductn	0	0			0			0		0	0	
Storage Cap Reductn	0	0			0			0		0	0	
Reduced v/c Ratio	0.72	0.28			1.23			0.69		0.39	0.45	

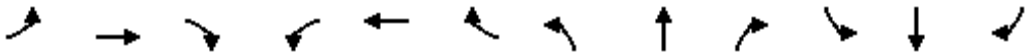
Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 106.7			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.23			
Intersection Signal Delay: 43.4		Intersection LOS: D	
Intersection Capacity Utilization 90.7%		ICU Level of Service E	

Analysis Period (min) 15

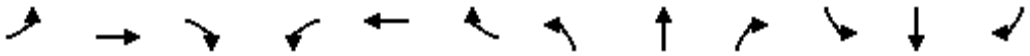
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

Splits and Phases: 27: Nepperhan Avenue & Elm Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	755	10	78	926	58	18	293	217	47	251	61
Future Volume (vph)	86	755	10	78	926	58	18	293	217	47	251	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	13	13	10	13	13	14	14	14	12	12	12
Storage Length (ft)	105		0	130		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.998			0.991			0.944			0.977	
Flt Protected	0.950			0.950				0.998			0.994	
Satd. Flow (prot)	1652	3650	0	1652	3537	0	0	1872	0	0	1532	0
Flt Permitted	0.198			0.273				0.965			0.577	
Satd. Flow (perm)	344	3650	0	475	3537	0	0	1810	0	0	889	0
Right Turn on Red			No			Yes			Yes			No
Satd. Flow (RTOR)					8			31				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1431			1109			369			272	
Travel Time (s)		32.5			25.2			8.4			6.2	
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	12	0	0	0	0	0	8	0
Parking (#/hr)											5	
Adj. Flow (vph)	93	821	11	80	955	60	20	318	236	51	273	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	93	832	0	80	1015	0	0	574	0	0	390	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.96	0.96	1.09	0.99	0.96	0.92	0.92	0.92	1.00	1.23	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			3			3	
Permitted Phases	2			6			3			3		
Detector Phase	5	2		1	6		3	3		3	3	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	16.0		11.0	28.0		35.0	35.0		35.0	35.0	
Total Split (s)	16.0	59.0		16.0	59.0		35.0	35.0		35.0	35.0	
Total Split (%)	14.5%	53.6%		14.5%	53.6%		31.8%	31.8%		31.8%	31.8%	
Maximum Green (s)	10.0	53.0		10.0	53.0		29.0	29.0		29.0	29.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	Ped		Ped	Ped		Ped	Ped	
Walk Time (s)					10.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)					12.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)					0		0	0		0	0	
Act Effct Green (s)	64.5	57.8		63.9	57.5			29.0			29.0	
Actuated g/C Ratio	0.59	0.53		0.58	0.52			0.26			0.26	
v/c Ratio	0.31	0.43		0.22	0.55			1.15			1.67	
Control Delay	11.2	17.7		18.2	34.9			123.6			347.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	11.2	17.7		18.2	34.9			123.6			347.1	
LOS	B	B		B	C			F			F	
Approach Delay		17.1			33.7			123.6			347.1	
Approach LOS		B			C			F			F	
Queue Length 50th (ft)	24	191		41	328			~462			~402	
Queue Length 95th (ft)	45	251		m81	397			#679			#590	
Internal Link Dist (ft)		1351			1029			289			192	
Turn Bay Length (ft)	105			130								
Base Capacity (vph)	324	1917		389	1851			500			234	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.29	0.43		0.21	0.55			1.15			1.67	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 69 (63%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.67			
Intersection Signal Delay: 86.8		Intersection LOS: F	

Intersection Capacity Utilization 85.5% ICU Level of Service E

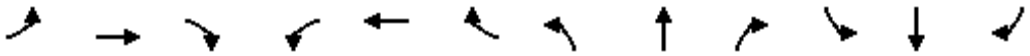
Analysis Period (min) 15

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

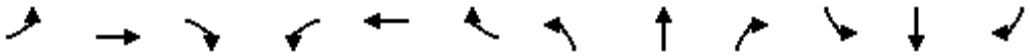
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

Splits and Phases: 28: Walnut Street & Yonkers Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	1007	5	88	1045	16	17	55	251	0	0	0
Future Volume (vph)	7	1007	5	88	1045	16	17	55	251	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	12	12	15	15	15	12	12	12
Storage Length (ft)	85		0	85		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.999			0.998			0.895				
Flt Protected	0.950			0.950				0.997				
Satd. Flow (prot)	1652	3418	0	1652	3447	0	0	1828	0	0	0	0
Flt Permitted	0.261			0.132				0.997				
Satd. Flow (perm)	454	3418	0	229	3447	0	0	1828	0	0	0	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		1			3							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1109			370			410			164	
Travel Time (s)		25.2			8.4			9.3			3.7	
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	12	0	0	0	0	0	0	0
Adj. Flow (vph)	8	1095	5	91	1077	16	18	60	273	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	8	1100	0	91	1093	0	0	351	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.03	1.00	0.88	0.88	0.88	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2				
Detector Template	Left	Thru		Left	Thru		Left	Thru				
Leading Detector (ft)	20	100		20	100		20	100				
Trailing Detector (ft)	0	0		0	0		0	0				
Detector 1 Position(ft)	0	0		0	0		0	0				
Detector 1 Size(ft)	20	6		20	6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA		pm+pt	NA		Perm	NA				



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		2		1	6			3				
Permitted Phases	2			6			3					
Detector Phase	2	2		1	6		3	3				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0				
Minimum Split (s)	11.0	11.0		11.0	11.0		32.0	32.0				
Total Split (s)	57.0	57.0		21.0	78.0		32.0	32.0				
Total Split (%)	51.8%	51.8%		19.1%	70.9%		29.1%	29.1%				
Maximum Green (s)	51.0	51.0		15.0	72.0		26.0	26.0				
Yellow Time (s)	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				
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0				
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0				
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0				
Recall Mode	C-Max	C-Max		Max	Max		Ped	Ped				
Walk Time (s)							7.0	7.0				
Flash Dont Walk (s)							19.0	19.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)	51.0	51.0		72.0	72.0			26.0				
Actuated g/C Ratio	0.46	0.46		0.65	0.65			0.24				
v/c Ratio	0.04	0.69		0.27	0.48			0.81				
Control Delay	13.6	26.5		13.7	7.0			55.9				
Queue Delay	0.0	0.0		0.0	0.1			0.0				
Total Delay	13.6	26.5		13.7	7.0			55.9				
LOS	B	C		B	A			E				
Approach Delay		26.4			7.5			55.9				
Approach LOS		C			A			E				
Queue Length 50th (ft)	2	378		12	80			235				
Queue Length 95th (ft)	m4	m414		m28	78			#380				
Internal Link Dist (ft)		1029			290			330			84	
Turn Bay Length (ft)	85			85								
Base Capacity (vph)	210	1585		343	2257			432				
Starvation Cap Reductn	0	0		0	154			0				
Spillback Cap Reductn	0	0		0	0			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.04	0.69		0.27	0.52			0.81				

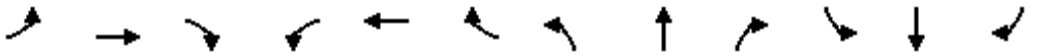
Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 103 (94%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 21.9		Intersection LOS: C	
Intersection Capacity Utilization 67.9%		ICU Level of Service C	

Analysis Period (min) 15

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

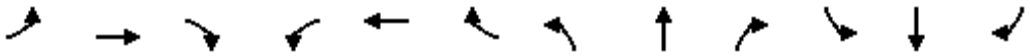
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 29: Prescott Street & Yonkers Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1237	21	4	1115	500	14	0	6	719	0	20
Future Volume (vph)	0	1237	21	4	1115	500	14	0	6	719	0	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	14	12	12	12	11	11	12
Storage Length (ft)	0		0	0		250	0		0	0		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.997				0.850		0.865			0.992	
Flt Protected							0.950			0.950	0.955	
Satd. Flow (prot)	0	3329	0	0	3539	1689	1770	0	0	1625	1601	0
Flt Permitted					0.951		0.950			0.950	0.955	
Satd. Flow (perm)	0	3329	0	0	3366	1689	1770	0	0	1625	1601	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2				515		169			109	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		370			325			129			377	
Travel Time (s)		8.4			7.4			2.9			8.6	
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	12	0	0	0	0	0	0	0	0	3	0
Adj. Flow (vph)	0	1345	23	4	1149	515	15	0	7	782	0	22
Shared Lane Traffic (%)										48%		
Lane Group Flow (vph)	0	1368	0	0	1153	515	15	7	0	407	397	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.08	1.04	1.00	1.00	0.92	1.00	1.00	1.00	1.04	1.06	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2	1	1			1	2	
Detector Template		Thru		Left	Thru	Right	Left			Left	Thru	
Leading Detector (ft)		100		20	100	20	20			20	100	
Trailing Detector (ft)		0		0	0	0	0			0	0	
Detector 1 Position(ft)		0		0	0	0	0			0	0	
Detector 1 Size(ft)		6		20	6	20	20			20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0	0.0	0.0			0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0	0.0	0.0			0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0	0.0	0.0			0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA		Perm	NA	custom	Prot			Split	NA	

Lane Group	Ø1	Ø2
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Bus Blockages (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		1 2			1 2	2 3 4	4			3	3	
Permitted Phases				1 2								
Detector Phase		1 2		1 2	1 2	2 3 4	4			3	3	
Switch Phase												
Minimum Initial (s)							5.0			5.0	5.0	
Minimum Split (s)							10.0			32.0	32.0	
Total Split (s)							10.0			36.0	36.0	
Total Split (%)							9.1%			32.7%	32.7%	
Maximum Green (s)							5.0			30.0	30.0	
Yellow Time (s)							3.0			4.0	4.0	
All-Red Time (s)							2.0			2.0	2.0	
Lost Time Adjust (s)							0.0			0.0	0.0	
Total Lost Time (s)							5.0			6.0	6.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)							3.0			3.0	3.0	
Recall Mode							None			None	None	
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										19.0	19.0	
Pedestrian Calls (#/hr)										0	0	
Act Effct Green (s)		61.3			61.3	86.7	5.0	0.0		29.7	29.7	
Actuated g/C Ratio		0.56			0.56	0.79	0.05	0.00		0.27	0.27	
v/c Ratio		0.74			0.61	0.36	0.19	0.04		0.93	0.78	
Control Delay		8.5			26.3	0.6	56.1	0.0		68.3	38.3	
Queue Delay		0.0			0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		8.5			26.3	0.6	56.1	0.0		68.3	38.3	
LOS		A			C	A	E	A		E	D	
Approach Delay		8.5			18.4			38.3			53.5	
Approach LOS		A			B			D			D	
Queue Length 50th (ft)		117			302	1	10	0		293	201	
Queue Length 95th (ft)		133			382	0	32	0		#489	#353	
Internal Link Dist (ft)		290			245			49			297	
Turn Bay Length (ft)						250						
Base Capacity (vph)		1855			1875	1443	80	169		443	515	
Starvation Cap Reductn		0			0	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.74			0.61	0.36	0.19	0.04		0.92	0.77	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.93			
Intersection Signal Delay: 22.3		Intersection LOS: C	
Intersection Capacity Utilization Err%		ICU Level of Service H	

Lane Group	Ø1	Ø2
Protected Phases	1	2
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	17.0	11.0
Total Split (s)	17.0	47.0
Total Split (%)	15%	43%
Maximum Green (s)	14.0	41.0
Yellow Time (s)	2.0	4.0
All-Red Time (s)	1.0	2.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	C-Max
Walk Time (s)	5.0	
Flash Dont Walk (s)	9.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

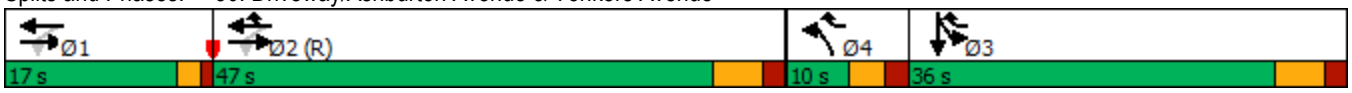
Intersection Summary

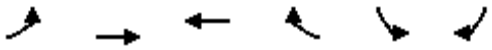
Analysis Period (min) 15

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

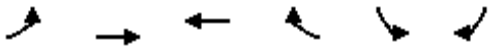
Queue shown is maximum after two cycles.

Splits and Phases: 30: Driveway/Ashburton Avenue & Yonkers Avenue





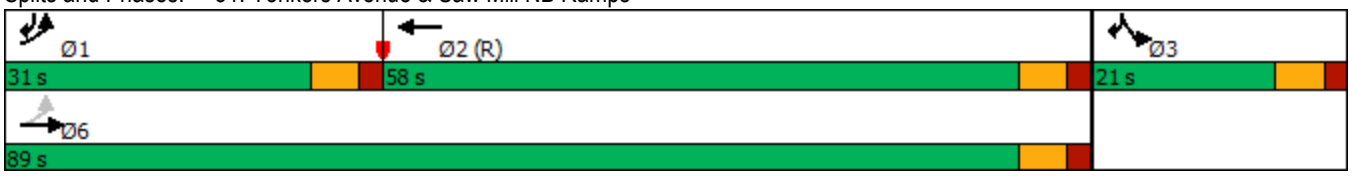
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	328	1254	1170	209	73	283
Future Volume (vph)	328	1254	1170	209	73	283
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	16	11
Storage Length (ft)	180			0	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	3539	3421	1561	2046	1561
Flt Permitted	0.106				0.950	
Satd. Flow (perm)	201	3539	3421	1561	2046	1561
Right Turn on Red				No		Yes
Satd. Flow (RTOR)						35
Link Speed (mph)		30	30		30	
Link Distance (ft)		399	747		226	
Travel Time (s)		9.1	17.0		5.1	
Peak Hour Factor	0.92	0.92	0.97	0.97	0.92	0.92
Heavy Vehicles (%)	0%	2%	2%	0%	0%	0%
Adj. Flow (vph)	357	1363	1206	215	79	308
Shared Lane Traffic (%)						
Lane Group Flow (vph)	357	1363	1206	215	79	308
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.04	1.04	0.85	1.04
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Free	Prot	pt+ov



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Protected Phases	1	6	2		3	1 3
Permitted Phases	6			Free		
Detector Phase	1	6	2		3	1 3
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0		5.0	
Minimum Split (s)	11.0	16.0	16.0		11.0	
Total Split (s)	31.0	89.0	58.0		21.0	
Total Split (%)	28.2%	80.9%	52.7%		19.1%	
Maximum Green (s)	25.0	83.0	52.0		15.0	
Yellow Time (s)	4.0	4.0	4.0		4.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	Max	Max	C-Max		Max	
Act Effct Green (s)	83.0	83.0	52.0	110.0	15.0	46.0
Actuated g/C Ratio	0.75	0.75	0.47	1.00	0.14	0.42
v/c Ratio	0.69	0.51	0.75	0.14	0.28	0.46
Control Delay	28.1	4.9	40.4	0.2	45.7	22.9
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	28.1	5.1	40.4	0.2	45.7	22.9
LOS	C	A	D	A	D	C
Approach Delay		9.8	34.3		27.5	
Approach LOS		A	C		C	
Queue Length 50th (ft)	161	175	463	0	51	135
Queue Length 95th (ft)	m240	m194	181	0	98	215
Internal Link Dist (ft)		319	667		146	
Turn Bay Length (ft)	180					
Base Capacity (vph)	516	2670	1617	1561	279	673
Starvation Cap Reductn	0	487	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.69	0.62	0.75	0.14	0.28	0.46

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 13 (12%), Referenced to phase 2:WBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 21.7		Intersection LOS: C	
Intersection Capacity Utilization 69.7%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 31: Yonkers Avenue & Saw Mill NB Ramps

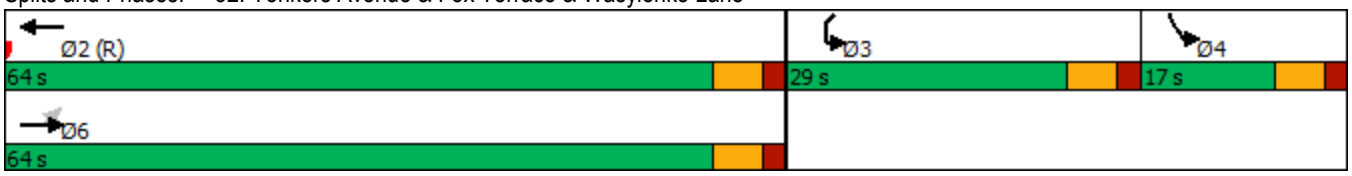


Lane Group	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SWL	SWR
Lane Configurations									
Traffic Volume (vph)	6	1321	1377	18	4	0	1	2	1
Future Volume (vph)	6	1321	1377	18	4	0	1	2	1
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	14	13	13	12	16	16	11	11
Lane Util. Factor	0.95	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.998			0.865		0.955	
Flt Protected								0.968	
Satd. Flow (prot)	0	3685	3650	0	0	1826	0	1665	0
Flt Permitted		0.946						0.968	
Satd. Flow (perm)	0	3486	3650	0	0	1826	0	1665	0
Right Turn on Red					Yes		Yes		
Satd. Flow (RTOR)						328			
Link Speed (mph)		30	30			30		30	
Link Distance (ft)		747	1480			229		264	
Travel Time (s)		17.0	33.6			5.2		6.0	
Peak Hour Factor	0.92	0.92	0.97	0.97	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	12	0	0	0	0	0	0	0
Adj. Flow (vph)	7	1436	1420	19	4	0	1	2	1
Shared Lane Traffic (%)									
Lane Group Flow (vph)	0	1443	1443	0	0	1	0	3	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Right	Left	Right	Left	Right
Median Width(ft)		0	0			16		11	
Link Offset(ft)		0	0			0		0	
Crosswalk Width(ft)		16	16			16		16	
Two way Left Turn Lane									
Headway Factor	1.04	0.95	0.96	0.96	1.00	0.85	0.85	1.04	1.04
Turning Speed (mph)	15			9	9	15	9	15	9
Number of Detectors	1	2	2			1		1	
Detector Template	Left	Thru	Thru			Left		Left	
Leading Detector (ft)	20	100	100			20		20	
Trailing Detector (ft)	0	0	0			0		0	
Detector 1 Position(ft)	0	0	0			0		0	
Detector 1 Size(ft)	20	6	6			20		20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	
Detector 1 Channel									
Detector 1 Extend (s)	0.0	0.0	0.0			0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0			0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0			0.0		0.0	
Detector 2 Position(ft)		94	94						
Detector 2 Size(ft)		6	6						
Detector 2 Type		Cl+Ex	Cl+Ex						
Detector 2 Channel									
Detector 2 Extend (s)		0.0	0.0						
Turn Type	Perm	NA	NA			Prot		Prot	
Protected Phases		6	2			4		3	
Permitted Phases	6								
Detector Phase	6	6	2			4		3	

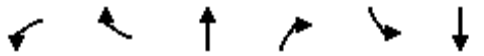
Lane Group	EBL	EBT	WBT	WBR	WBR2	SBL	SBR	SWL	SWR
Switch Phase									
Minimum Initial (s)	10.0	10.0	10.0			5.0		5.0	
Minimum Split (s)	16.0	16.0	16.0			11.0		27.0	
Total Split (s)	64.0	64.0	64.0			17.0		29.0	
Total Split (%)	58.2%	58.2%	58.2%			15.5%		26.4%	
Maximum Green (s)	58.0	58.0	58.0			11.0		23.0	
Yellow Time (s)	4.0	4.0	4.0			4.0		4.0	
All-Red Time (s)	2.0	2.0	2.0			2.0		2.0	
Lost Time Adjust (s)		0.0	0.0			0.0		0.0	
Total Lost Time (s)		6.0	6.0			6.0		6.0	
Lead/Lag						Lag		Lead	
Lead-Lag Optimize?						Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0			3.0		3.0	
Recall Mode	Max	Max	C-Max			None		None	
Walk Time (s)								7.0	
Flash Dont Walk (s)								14.0	
Pedestrian Calls (#/hr)								5	
Act Effct Green (s)		101.1	101.1			5.5		8.7	
Actuated g/C Ratio		0.92	0.92			0.05		0.08	
v/c Ratio		0.45	0.43			0.00		0.02	
Control Delay		3.0	6.8			0.0		42.0	
Queue Delay		0.0	0.0			0.0		0.0	
Total Delay		3.0	6.8			0.0		42.0	
LOS		A	A			A		D	
Approach Delay		3.0	6.8					42.0	
Approach LOS		A	A					D	
Queue Length 50th (ft)		1	6			0		2	
Queue Length 95th (ft)		383	423			0		10	
Internal Link Dist (ft)		667	1400			149		184	
Turn Bay Length (ft)									
Base Capacity (vph)		3204	3355			477		348	
Starvation Cap Reductn		0	0			0		0	
Spillback Cap Reductn		0	0			0		0	
Storage Cap Reductn		0	0			0		0	
Reduced v/c Ratio		0.45	0.43			0.00		0.01	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 13 (12%), Referenced to phase 2:WBT, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.45			
Intersection Signal Delay: 4.9		Intersection LOS: A	
Intersection Capacity Utilization 64.0%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 32: Yonkers Avenue & Fox Terrace & Wasylenko Lane



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	202	413	986	108	274	1049
Future Volume (vph)	202	413	986	108	274	1049
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	9	11
Storage Length (ft)	0	0		100	180	
Storage Lanes	2	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	0.91	0.95	1.00	1.00	0.95
Frt	0.924	0.850		0.850		
Flt Protected	0.976				0.950	
Satd. Flow (prot)	3259	1424	3539	1583	1593	3367
Flt Permitted	0.976				0.125	
Satd. Flow (perm)	3259	1424	3539	1583	210	3367
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	225	224		57		
Link Speed (mph)	30		30			30
Link Distance (ft)	520		563			1480
Travel Time (s)	11.8		12.8			33.6
Peak Hour Factor	0.92	0.92	0.97	0.97	0.92	0.92
Bus Blockages (#/hr)	0	3	0	0	0	8
Adj. Flow (vph)	220	449	1016	111	298	1140
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	445	224	1016	111	298	1140
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.02	1.00	1.00	1.14	1.07
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Prot	NA	Perm	pm+pt	NA



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Protected Phases	3	3	2		1	6
Permitted Phases				2	6	
Detector Phase	3	3	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	38.0	38.0	49.0	49.0	11.0	11.0
Total Split (s)	39.0	39.0	50.0	50.0	21.0	71.0
Total Split (%)	35.5%	35.5%	45.5%	45.5%	19.1%	64.5%
Maximum Green (s)	33.0	33.0	44.0	44.0	15.0	65.0
Yellow Time (s)	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
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	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Ped	Ped	Ped	Ped	Max	C-Max
Walk Time (s)	7.0	7.0	16.0	16.0		
Flash Dont Walk (s)	25.0	25.0	27.0	27.0		
Pedestrian Calls (#/hr)	0	0	0	0		
Act Effct Green (s)	32.0	32.0	44.0	44.0	66.0	66.0
Actuated g/C Ratio	0.29	0.29	0.40	0.40	0.60	0.60
v/c Ratio	0.40	0.39	0.72	0.17	0.91	0.56
Control Delay	16.1	6.1	25.7	5.7	66.2	17.2
Queue Delay	0.0	0.0	0.1	0.0	0.0	0.3
Total Delay	16.1	6.1	25.8	5.7	66.2	17.5
LOS	B	A	C	A	E	B
Approach Delay	12.8		23.8			27.6
Approach LOS	B		C			C
Queue Length 50th (ft)	60	0	338	7	168	212
Queue Length 95th (ft)	105	62	m412	m20	#310	276
Internal Link Dist (ft)	440		483			1400
Turn Bay Length (ft)				100	180	
Base Capacity (vph)	1135	584	1415	667	327	2020
Starvation Cap Reductn	0	0	40	0	0	0
Spillback Cap Reductn	20	0	0	0	0	306
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.38	0.74	0.17	0.91	0.67

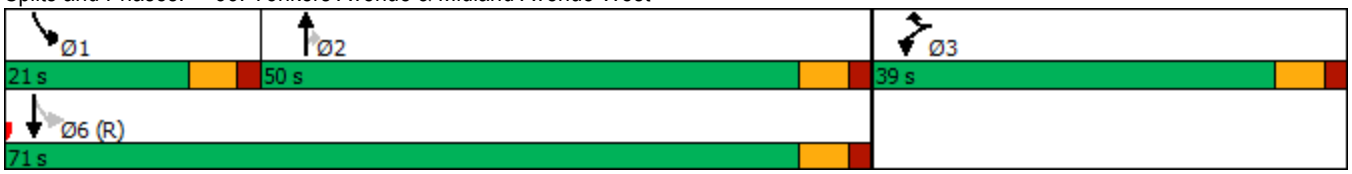
Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.91			
Intersection Signal Delay: 23.2		Intersection LOS: C	
Intersection Capacity Utilization 67.5%		ICU Level of Service C	

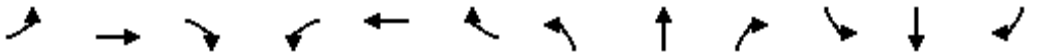
Analysis Period (min) 15

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

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

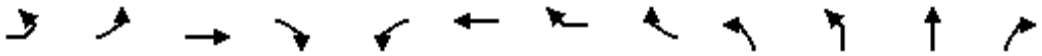
Splits and Phases: 33: Yonkers Avenue & Midland Avenue West





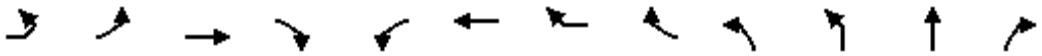
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1582	380	0	1453	0	0	0	0	0	0	166
Future Volume (vph)	0	1582	380	0	1453	0	0	0	0	0	0	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850									0.865
Flt Protected												
Satd. Flow (prot)	0	3539	1615	0	3539	0	0	0	0	0	0	1644
Flt Permitted												
Satd. Flow (perm)	0	3539	1615	0	3539	0	0	0	0	0	0	1644
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		325			399			181			209	
Travel Time (s)		7.4			9.1			4.1			4.8	
Peak Hour Factor	0.92	0.92	0.92	0.97	0.97	0.97	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	1720	413	0	1498	0	0	0	0	0	0	180
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1720	413	0	1498	0	0	0	0	0	0	180
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Free			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 57.1%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	119	205	17	76	1	20	7	32	6	64	857	4
Future Volume (vph)	119	205	17	76	1	20	7	32	6	64	857	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	13	13	13	13	12	11	13	13
Storage Length (ft)		0		0	0		0			100		0
Storage Lanes		1		0	0		0			1		0
Taper Length (ft)		25			25					25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	0.95
Frt			0.877			0.912					0.999	
Flt Protected		0.950				0.999				0.950		
Satd. Flow (prot)	0	1711	1634	0	0	1754	0	0	0	1711	3654	0
Flt Permitted		0.714				0.998				0.082		
Satd. Flow (perm)	0	1286	1634	0	0	1752	0	0	0	148	3654	0
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)			83			35					1	
Link Speed (mph)			30			30					30	
Link Distance (ft)			264			380					327	
Travel Time (s)			6.0			8.6					7.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.97	0.97	0.97	0.97
Adj. Flow (vph)	129	223	18	83	1	22	8	35	6	66	884	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	352	101	0	0	66	0	0	0	72	888	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)			11			11					12	
Link Offset(ft)			0			0					0	
Crosswalk Width(ft)			16			16					16	
Two way Left Turn Lane												
Headway Factor	1.00	1.04	1.00	1.00	0.96	0.96	0.96	0.96	1.00	1.04	0.96	0.96
Turning Speed (mph)	15	15		9	15		9	9	15	15		9
Number of Detectors	1	1	2		1	2			1	1	2	
Detector Template	Left	Left	Thru		Left	Thru			Left	Left	Thru	
Leading Detector (ft)	20	20	100		20	100			20	20	100	
Trailing Detector (ft)	0	0	0		0	0			0	0	0	
Detector 1 Position(ft)	0	0	0		0	0			0	0	0	
Detector 1 Size(ft)	20	20	6		20	6			20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0			0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0			0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0			0.0	0.0	0.0	
Detector 2 Position(ft)			94			94					94	
Detector 2 Size(ft)			6			6					6	
Detector 2 Type			Cl+Ex			Cl+Ex					Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0					0.0	
Turn Type		Perm	NA		Perm	NA				pm+pt	NA	
Protected Phases			3			3				1	6	

Lane Group	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	16	800	164	271
Future Volume (vph)	16	800	164	271
Ideal Flow (vphpl)	1900	1900	1900	1900
Lane Width (ft)	12	12	12	16
Storage Length (ft)	150		210	
Storage Lanes	1		0	
Taper Length (ft)	25			
Lane Util. Factor	1.00	0.95	0.95	0.95
Frt		0.947		
Flt Protected	0.950			
Satd. Flow (prot)	1770	3352	0	0
Flt Permitted	0.320			
Satd. Flow (perm)	596	3352	0	0
Right Turn on Red				Yes
Satd. Flow (RTOR)		38		
Link Speed (mph)		30		
Link Distance (ft)		563		
Travel Time (s)		12.8		
Peak Hour Factor	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	870	178	295
Shared Lane Traffic (%)				
Lane Group Flow (vph)	17	1343	0	0
Enter Blocked Intersection	No	No	No	No
Lane Alignment	Left	Left	Right	Right
Median Width(ft)		12		
Link Offset(ft)		0		
Crosswalk Width(ft)		16		
Two way Left Turn Lane				
Headway Factor	1.00	1.00	1.00	0.85
Turning Speed (mph)	15		9	9
Number of Detectors	1	2		
Detector Template	Left	Thru		
Leading Detector (ft)	20	100		
Trailing Detector (ft)	0	0		
Detector 1 Position(ft)	0	0		
Detector 1 Size(ft)	20	6		
Detector 1 Type	Cl+Ex	Cl+Ex		
Detector 1 Channel				
Detector 1 Extend (s)	0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		
Detector 2 Position(ft)		94		
Detector 2 Size(ft)		6		
Detector 2 Type		Cl+Ex		
Detector 2 Channel				
Detector 2 Extend (s)		0.0		
Turn Type	Perm	NA		
Protected Phases		2		



Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Permitted Phases		3			3					6		
Detector Phase		3	3		3	3				1	6	
Switch Phase												
Minimum Initial (s)		5.0	5.0		5.0	5.0				5.0	5.0	
Minimum Split (s)		39.0	39.0		39.0	39.0				11.0	69.0	
Total Split (s)		40.0	40.0		40.0	40.0				21.0	70.0	
Total Split (%)		36.4%	36.4%		36.4%	36.4%				19.1%	63.6%	
Maximum Green (s)		34.0	34.0		34.0	34.0				15.0	64.0	
Yellow Time (s)		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	
Lost Time Adjust (s)		0.0	0.0			0.0				0.0	0.0	
Total Lost Time (s)		6.0	6.0			6.0				6.0	6.0	
Lead/Lag										Lead		
Lead-Lag Optimize?										Yes		
Vehicle Extension (s)		3.0	3.0		3.0	3.0				3.0	3.0	
Recall Mode		Ped	Ped		Ped	Ped				Max	C-Max	
Walk Time (s)		5.0	5.0		5.0	5.0					38.0	
Flash Dont Walk (s)		28.0	28.0		28.0	28.0					25.0	
Pedestrian Calls (#/hr)		0	0		0	0					0	
Act Effct Green (s)		33.6	33.6			33.6				64.4	64.4	
Actuated g/C Ratio		0.31	0.31			0.31				0.59	0.59	
v/c Ratio		0.90	0.18			0.12				0.24	0.42	
Control Delay		63.4	9.3			15.7				11.9	13.3	
Queue Delay		0.0	0.0			0.0				0.0	0.0	
Total Delay		63.4	9.3			15.7				11.9	13.3	
LOS		E	A			B				B	B	
Approach Delay			51.3			15.7					13.2	
Approach LOS			D			B					B	
Queue Length 50th (ft)		236	9			15				21	171	
Queue Length 95th (ft)		#408	48			48				41	215	
Internal Link Dist (ft)			184			300					247	
Turn Bay Length (ft)										100		
Base Capacity (vph)		397	562			565				305	2139	
Starvation Cap Reductn		0	0			0				0	0	
Spillback Cap Reductn		0	0			0				0	0	
Storage Cap Reductn		0	0			0				0	0	
Reduced v/c Ratio		0.89	0.18			0.12				0.24	0.42	

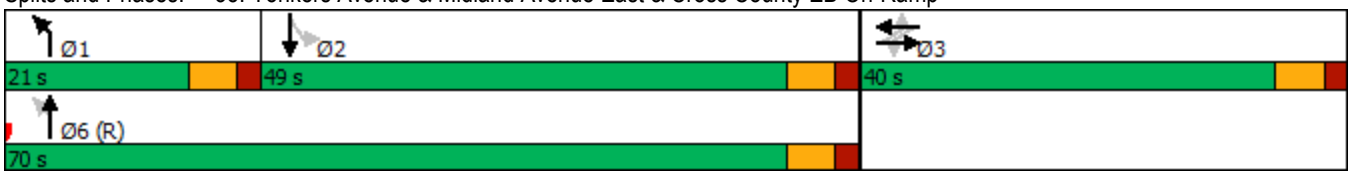
Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 6:NBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 1.01			
Intersection Signal Delay: 37.8		Intersection LOS: D	
Intersection Capacity Utilization 79.8%		ICU Level of Service D	
Analysis Period (min) 15			

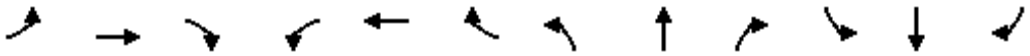
Lane Group	SBL	SBT	SBR	SBR2
Permitted Phases	2			
Detector Phase	2	2		
Switch Phase				
Minimum Initial (s)	5.0	5.0		
Minimum Split (s)	48.0	48.0		
Total Split (s)	49.0	49.0		
Total Split (%)	44.5%	44.5%		
Maximum Green (s)	43.0	43.0		
Yellow Time (s)	4.0	4.0		
All-Red Time (s)	2.0	2.0		
Lost Time Adjust (s)	0.0	0.0		
Total Lost Time (s)	6.0	6.0		
Lead/Lag	Lag	Lag		
Lead-Lag Optimize?	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		
Recall Mode	Ped	Ped		
Walk Time (s)	20.0	20.0		
Flash Dont Walk (s)	22.0	22.0		
Pedestrian Calls (#/hr)	0	0		
Act Effct Green (s)	43.0	43.0		
Actuated g/C Ratio	0.39	0.39		
v/c Ratio	0.07	1.01		
Control Delay	18.8	52.2		
Queue Delay	0.0	0.0		
Total Delay	18.8	52.2		
LOS	B	D		
Approach Delay		51.8		
Approach LOS		D		
Queue Length 50th (ft)	5	~402		
Queue Length 95th (ft)	m11	#638		
Internal Link Dist (ft)		483		
Turn Bay Length (ft)	150			
Base Capacity (vph)	232	1333		
Starvation Cap Reductn	0	0		
Spillback Cap Reductn	0	0		
Storage Cap Reductn	0	0		
Reduced v/c Ratio	0.07	1.01		

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 35: Yonkers Avenue & Midland Avenue East & Cross County EB On-Ramp



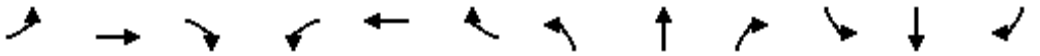


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	37	275	64	107	217	114	0	0	0	0	0	0
Future Volume (vph)	37	275	64	107	217	114	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.975			0.948							
Flt Protected		0.995		0.950								
Satd. Flow (prot)	0	3891	0	2006	2001	0	0	0	0	0	0	0
Flt Permitted		0.995		0.950								
Satd. Flow (perm)	0	3891	0	2006	2001	0	0	0	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		256			511			286			516	
Travel Time (s)		5.8			11.6			6.5			11.7	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	43	320	74	124	252	133	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	437	0	124	385	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.8%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	408	59	46	312	24	55
Future Volume (vph)	408	59	46	312	24	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	14	14	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.983				0.906	
Flt Protected				0.994	0.985	
Satd. Flow (prot)	1549	0	0	1975	1503	0
Flt Permitted				0.994	0.985	
Satd. Flow (perm)	1549	0	0	1975	1503	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	208			436	1494	
Travel Time (s)	4.7			9.9	34.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)	5				5	
Adj. Flow (vph)	443	64	50	339	26	60
Shared Lane Traffic (%)						
Lane Group Flow (vph)	507	0	0	389	86	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	13	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.24	1.04	0.92	0.92	1.14	0.96
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 58.7%		ICU Level of Service B	
Analysis Period (min) 15			

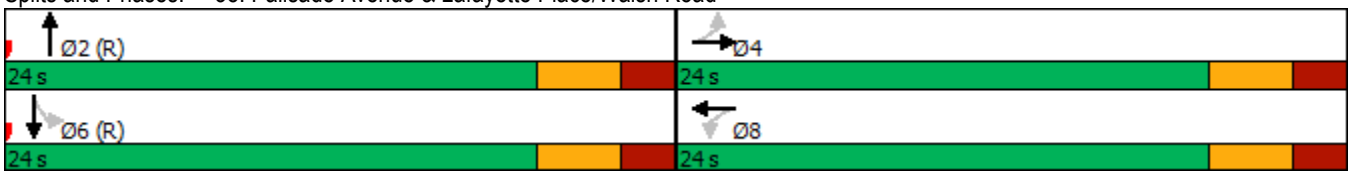


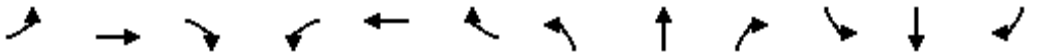
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	8	18	23	0	37	0	266	30	26	256	0
Future Volume (vph)	27	8	18	23	0	37	0	266	30	26	256	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	13	13	13	16	16	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.953			0.917			0.986				
Flt Protected		0.976			0.981						0.995	
Satd. Flow (prot)	0	1668	0	0	1732	0	0	1814	0	0	1831	0
Flt Permitted		0.877			0.907						0.951	
Satd. Flow (perm)	0	1498	0	0	1601	0	0	1814	0	0	1750	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			45			14				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		226			227			1248			549	
Travel Time (s)		5.1			5.2			28.4			12.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	1	0	0	1	0
Parking (#/hr)		5						5			5	
Adj. Flow (vph)	29	9	20	25	0	40	0	289	33	28	278	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	58	0	0	65	0	0	322	0	0	306	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.88	1.05	0.88	0.96	0.96	0.96	0.85	1.02	0.85	0.85	1.02	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8						6		
Minimum Split (s)	10.0	10.0		10.0	10.0			10.0		10.0	10.0	
Total Split (s)	24.0	24.0		24.0	24.0			24.0		24.0	24.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%			50.0%		50.0%	50.0%	
Maximum Green (s)	19.0	19.0		19.0	19.0			19.0		19.0	19.0	
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0			2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		19.0			19.0			19.0			19.0	
Actuated g/C Ratio		0.40			0.40			0.40			0.40	
v/c Ratio		0.10			0.10			0.44			0.44	
Control Delay		7.3			5.2			12.6			13.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		7.3			5.2			12.6			13.2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A			A			B			B	
Approach Delay		7.3			5.3			12.6			13.2	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)		6			3			59			59	
Queue Length 95th (ft)		23			20			113			112	
Internal Link Dist (ft)		146			147			1168			469	
Turn Bay Length (ft)												
Base Capacity (vph)		605			660			726			692	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.10			0.10			0.44			0.44	

Intersection Summary			
Area Type:	Other		
Cycle Length: 48			
Actuated Cycle Length: 48			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 40			
Control Type: Pretimed			
Maximum v/c Ratio: 0.44			
Intersection Signal Delay: 11.8		Intersection LOS: B	
Intersection Capacity Utilization 47.6%		ICU Level of Service A	
Analysis Period (min) 15			

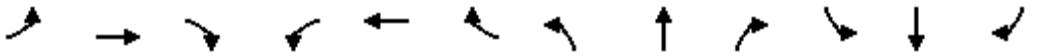
Splits and Phases: 38: Palisade Avenue & Lafayette Place/Walsh Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	268	126	0	120	0	0	0	0
Future Volume (vph)	0	0	0	0	268	126	0	120	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	16	16	16	16	16	16	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.957							
Flt Protected												
Satd. Flow (prot)	0	0	0	0	2020	0	0	1664	0	0	0	0
Flt Permitted												
Satd. Flow (perm)	0	0	0	0	2020	0	0	1664	0	0	0	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		81			430			212			254	
Travel Time (s)		1.8			9.8			4.8			5.8	
Peak Hour Factor	0.92	0.92	0.92	0.86	0.86	0.86	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	53	0	0	0	0
Adj. Flow (vph)	0	0	0	0	312	147	0	130	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	459	0	0	130	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	0.85	0.85	0.85	0.85	1.16	0.85	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					2		1	2				
Detector Template					Thru		Left	Thru				
Leading Detector (ft)					100		20	100				
Trailing Detector (ft)					0		0	0				
Detector 1 Position(ft)					0		0	0				
Detector 1 Size(ft)					6		20	6				
Detector 1 Type					Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)					0.0		0.0	0.0				
Detector 1 Queue (s)					0.0		0.0	0.0				
Detector 1 Delay (s)					0.0		0.0	0.0				
Detector 2 Position(ft)					94			94				
Detector 2 Size(ft)					6			6				
Detector 2 Type					Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				
Turn Type					NA			NA				
Protected Phases					1			3				
Permitted Phases							3					
Detector Phase					1		3	3				

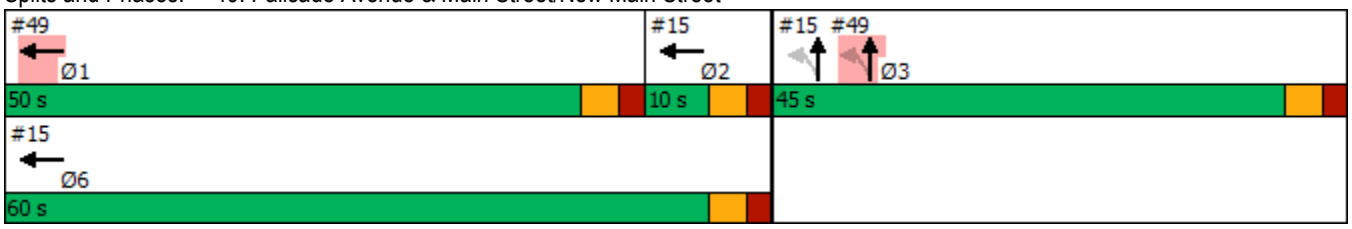
Lane Group	Ø2	Ø6
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Bus Blockages (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	2	6
Permitted Phases		
Detector Phase		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)					5.0		5.0	5.0				
Minimum Split (s)					50.0		45.0	45.0				
Total Split (s)					50.0		45.0	45.0				
Total Split (%)					47.6%		42.9%	42.9%				
Maximum Green (s)					45.0		40.0	40.0				
Yellow Time (s)					3.0		3.0	3.0				
All-Red Time (s)					2.0		2.0	2.0				
Lost Time Adjust (s)					0.0			0.0				
Total Lost Time (s)					5.0			5.0				
Lead/Lag					Lead							
Lead-Lag Optimize?					Yes							
Vehicle Extension (s)					3.0		3.0	3.0				
Recall Mode					Ped		Ped	Ped				
Walk Time (s)					35.0		30.0	30.0				
Flash Dont Walk (s)					10.0		10.0	10.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					45.0			40.0				
Actuated g/C Ratio					0.43			0.38				
v/c Ratio					0.53			0.21				
Control Delay					25.0			22.9				
Queue Delay					0.0			0.0				
Total Delay					25.0			22.9				
LOS					C			C				
Approach Delay					25.0			22.9				
Approach LOS					C			C				
Queue Length 50th (ft)					223			58				
Queue Length 95th (ft)					299			102				
Internal Link Dist (ft)		1			350			132			174	
Turn Bay Length (ft)												
Base Capacity (vph)					865			633				
Starvation Cap Reductn					0			0				
Spillback Cap Reductn					0			0				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					0.53			0.21				

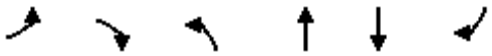
Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Natural Cycle: 105			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 24.5		Intersection LOS: C	
Intersection Capacity Utilization 36.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 49: Palisade Avenue & Main Street/New Main Street



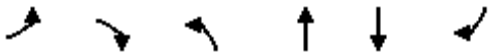
Lane Group	Ø2	Ø6
Switch Phase		
Minimum Initial (s)	2.0	5.0
Minimum Split (s)	7.0	10.0
Total Split (s)	10.0	60.0
Total Split (%)	10%	57%
Maximum Green (s)	5.0	55.0
Yellow Time (s)	3.0	3.0
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	3.0
Recall Mode	Max	Max
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	79	105	0
Future Volume (vph)	0	0	0	79	105	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	126			499	1494	
Travel Time (s)	2.9			11.3	34.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	86	114	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	86	114	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 8.9%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	309	328	0
Future Volume (vph)	0	0	0	309	328	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	172			284	235	
Travel Time (s)	3.9			6.5	5.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	336	357	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	336	357	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 20.6%		ICU Level of Service A	
Analysis Period (min) 15			

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	97	25	25	126	0	17	0	30	4	0	9
Future Vol, veh/h	0	97	25	25	126	0	17	0	30	4	0	9
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	89	89	86	86	92	92	92	92	92	92	92
Heavy Vehicles, %	2	8	8	7	7	2	2	2	2	2	2	2
Mvmt Flow	0	109	28	29	147	0	18	0	33	4	0	10

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	137	0	0	333	-	123	345	342	147
Stage 1	-	-	-	-	-	-	123	-	-	205	205	-
Stage 2	-	-	-	-	-	-	210	-	-	140	137	-
Critical Hdwy	-	-	-	4.17	-	-	7.12	-	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.263	-	-	3.518	-	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1417	-	0	620	0	928	609	580	900
Stage 1	0	-	-	-	-	0	881	0	-	797	732	-
Stage 2	0	-	-	-	-	0	792	0	-	863	783	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1417	-	-	603	-	928	578	567	900
Mov Cap-2 Maneuver	-	-	-	-	-	-	603	-	-	578	567	-
Stage 1	-	-	-	-	-	-	881	-	-	797	716	-
Stage 2	-	-	-	-	-	-	766	-	-	833	783	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	1.3	10	9.8
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	777	-	-	1417	-	768
HCM Lane V/C Ratio	0.066	-	-	0.021	-	0.018
HCM Control Delay (s)	10	-	-	7.6	0	9.8
HCM Lane LOS	B	-	-	A	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	0.1

Intersection	
Int Delay, s/veh	6.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	84	0	0	0	0	16	46	55	20	0	30
Future Vol, veh/h	1	84	0	0	0	0	16	46	55	20	0	30
Conflicting Peds, #/hr	0	0	22	0	0	21	0	0	14	0	0	39
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	82	82	92	92	92	86	86	86	81	81	81
Heavy Vehicles, %	13	13	13	2	2	2	11	11	11	10	10	10
Mvmt Flow	1	102	0	0	0	0	19	53	64	25	0	37

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	0	0	-	162	104	116	177	104	39
Stage 1	-	-	-	104	104	-	0	0	-
Stage 2	-	-	-	58	0	-	177	104	-
Critical Hdwy	4.23	-	-	7.21	6.61	6.31	7.2	6.6	6.3
Critical Hdwy Stg 1	-	-	-	6.21	5.61	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.2	5.6	-
Follow-up Hdwy	2.317	-	-	3.599	4.099	3.399	3.59	4.09	3.39
Pot Cap-1 Maneuver	-	-	0	783	769	912	768	771	1010
Stage 1	-	-	0	880	792	-	-	-	-
Stage 2	-	-	0	-	-	-	806	794	-
Platoon blocked, %		-							
Mov Cap-1 Maneuver	-	-	-	727	769	912	676	771	976
Mov Cap-2 Maneuver	-	-	-	727	769	-	676	771	-
Stage 1	-	-	-	880	792	-	-	-	-
Stage 2	-	-	-	-	-	-	699	794	-

Approach	EB	NB	SB
HCM Control Delay, s		10.2	9.7
HCM LOS		B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	SBLn1
Capacity (veh/h)	823	-	-	829
HCM Lane V/C Ratio	0.165	-	-	0.074
HCM Control Delay (s)	10.2	-	-	9.7
HCM Lane LOS	B	-	-	A
HCM 95th %tile Q(veh)	0.6	-	-	0.2

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	200	0	0	392	0	0
Future Vol, veh/h	200	0	0	392	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	16979	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	217	0	0	426	0	0

Major/Minor	Minor2		Major1	
Conflicting Flow All	426	-	-	0
Stage 1	0	-	-	-
Stage 2	426	-	-	-
Critical Hdwy	6.42	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	-	-	-
Pot Cap-1 Maneuver	585	0	0	-
Stage 1	-	0	0	-
Stage 2	659	0	0	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	585	-	-	-
Mov Cap-2 Maneuver	585	-	-	-
Stage 1	-	-	-	-
Stage 2	659	-	-	-

Approach	EB	NB
HCM Control Delay, s	14.7	0
HCM LOS	B	

Minor Lane/Major Mvmt	NBT	EBLn1
Capacity (veh/h)	-	585
HCM Lane V/C Ratio	-	0.372
HCM Control Delay (s)	-	14.7
HCM Lane LOS	-	B
HCM 95th %tile Q(veh)	-	1.7

Intersection	
Int Delay, s/veh	5.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1083	0	0	1713	46	152
Future Vol, veh/h	1083	0	0	1713	46	152
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	92	92	97	97	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1177	0	0	1766	50	165

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1177	0	1883	589
Stage 1	-	-	-	-	1177	-
Stage 2	-	-	-	-	706	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	321	-	108	387
Stage 1	-	-	-	-	188	-
Stage 2	-	-	-	-	410	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	321	-	108	387
Mov Cap-2 Maneuver	-	-	-	-	108	-
Stage 1	-	-	-	-	188	-
Stage 2	-	-	-	-	410	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	76.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	242	-	-	321	-
HCM Lane V/C Ratio	0.889	-	-	-	-
HCM Control Delay (s)	76.1	-	-	0	-
HCM Lane LOS	F	-	-	A	-
HCM 95th %tile Q(veh)	7.5	-	-	0	-

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑							↱
Traffic Vol, veh/h	0	1582	380	0	1453	0	0	0	0	0	0	166
Future Vol, veh/h	0	1582	380	0	1453	0	0	0	0	0	0	166
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	16965	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	97	97	97	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	0	1720	413	0	1498	0	0	0	0	0	0	180

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	-	0	0	-	-	0			-	-	749
Stage 1	-	-	-	-	-	-			-	-	-
Stage 2	-	-	-	-	-	-			-	-	-
Critical Hdwy	-	-	-	-	-	-			-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-			-	-	-
Follow-up Hdwy	-	-	-	-	-	-			-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	0			0	0	359
Stage 1	0	-	-	0	-	0			0	0	-
Stage 2	0	-	-	0	-	0			0	0	-
Platoon blocked, %		-	-		-						
Mov Cap-1 Maneuver	-	-	-	-	-	-			-	0	359
Mov Cap-2 Maneuver	-	-	-	-	-	-			-	0	-
Stage 1	-	-	-	-	-	-			-	0	-
Stage 2	-	-	-	-	-	-			-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	24.7
HCM LOS			C

Minor Lane/Major Mvmt	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	-	-	-	359
HCM Lane V/C Ratio	-	-	-	0.503
HCM Control Delay (s)	-	-	-	24.7
HCM Lane LOS	-	-	-	C
HCM 95th %tile Q(veh)	-	-	-	2.7

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	408	59	46	312	24	55
Future Vol, veh/h	408	59	46	312	24	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	443	64	50	339	26	60

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	507	0	914	475
Stage 1	-	-	-	-	475	-
Stage 2	-	-	-	-	439	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1058	-	303	590
Stage 1	-	-	-	-	626	-
Stage 2	-	-	-	-	650	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1058	-	285	590
Mov Cap-2 Maneuver	-	-	-	-	285	-
Stage 1	-	-	-	-	626	-
Stage 2	-	-	-	-	612	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	15
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	445	-	-	1058	-
HCM Lane V/C Ratio	0.193	-	-	0.047	-
HCM Control Delay (s)	15	-	-	8.6	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0.1	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	79	105	0
Future Vol, veh/h	0	0	0	79	105	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	86	114	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	200	114	114	0	-	0
Stage 1	114	-	-	-	-	-
Stage 2	86	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	789	939	1475	-	-	-
Stage 1	911	-	-	-	-	-
Stage 2	937	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	789	939	1475	-	-	-
Mov Cap-2 Maneuver	789	-	-	-	-	-
Stage 1	911	-	-	-	-	-
Stage 2	937	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1475	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	309	328	0
Future Vol, veh/h	0	0	0	309	328	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	336	357	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	693	357	357	0	-	0
Stage 1	357	-	-	-	-	-
Stage 2	336	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	409	687	1202	-	-	-
Stage 1	708	-	-	-	-	-
Stage 2	724	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	409	687	1202	-	-	-
Mov Cap-2 Maneuver	409	-	-	-	-	-
Stage 1	708	-	-	-	-	-
Stage 2	724	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1202	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	27	19	274	35	50	301
Future Vol, veh/h	27	19	274	35	50	301
Peak Hour Factor	0.81	0.81	0.93	0.93	0.83	0.83
Heavy Vehicles, %	9	9	23	23	6	6
Mvmt Flow	33	23	295	38	60	363
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	9.2	11.7	12.8
HCM LOS	A	B	B

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	59%	14%
Vol Thru, %	89%	0%	86%
Vol Right, %	11%	41%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	309	46	351
LT Vol	0	27	50
Through Vol	274	0	301
RT Vol	35	19	0
Lane Flow Rate	332	57	423
Geometry Grp	1	1	1
Degree of Util (X)	0.446	0.089	0.536
Departure Headway (Hd)	4.831	5.616	4.563
Convergence, Y/N	Yes	Yes	Yes
Cap	744	635	791
Service Time	2.867	3.677	2.595
HCM Lane V/C Ratio	0.446	0.09	0.535
HCM Control Delay	11.7	9.2	12.8
HCM Lane LOS	B	A	B
HCM 95th-tile Q	2.3	0.3	3.2

Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	198	111	145	231	97
Future Vol, veh/h	19	198	111	145	231	97
Peak Hour Factor	0.86	0.86	0.85	0.85	0.82	0.82
Heavy Vehicles, %	5	5	8	8	13	13
Mvmt Flow	22	230	131	171	282	118
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	11.5	11.7	16.4
HCM LOS	B	B	C

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	70%
Vol Thru, %	43%	0%	0%	30%
Vol Right, %	57%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	256	19	198	328
LT Vol	0	19	0	231
Through Vol	111	0	0	97
RT Vol	145	0	198	0
Lane Flow Rate	301	22	230	400
Geometry Grp	2	7	7	2
Degree of Util (X)	0.421	0.042	0.363	0.603
Departure Headway (Hd)	5.031	6.893	5.674	5.423
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	717	520	633	668
Service Time	3.061	4.63	3.411	3.45
HCM Lane V/C Ratio	0.42	0.042	0.363	0.599
HCM Control Delay	11.7	9.9	11.6	16.4
HCM Lane LOS	B	A	B	C
HCM 95th-tile Q	2.1	0.1	1.7	4.1

Intersection	
Intersection Delay, s/veh	11.7
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	190	136	0	260	0	0
Future Vol, veh/h	190	136	0	260	0	0
Peak Hour Factor	0.86	0.86	0.92	0.92	0.92	0.92
Heavy Vehicles, %	11	11	6	6	2	2
Mvmt Flow	221	158	0	283	0	0
Number of Lanes	1	0	0	1	0	0

Approach	EB	NB
Opposing Approach		
Opposing Lanes	0	0
Conflicting Approach Left		EB
Conflicting Lanes Left	0	1
Conflicting Approach Right	NB	
Conflicting Lanes Right	1	0
HCM Control Delay	12.2	11.1
HCM LOS	B	B

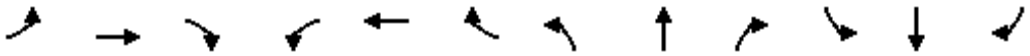
Lane	NBLn1	EBLn1
Vol Left, %	0%	58%
Vol Thru, %	100%	0%
Vol Right, %	0%	42%
Sign Control	Stop	Stop
Traffic Vol by Lane	260	326
LT Vol	0	190
Through Vol	260	0
RT Vol	0	136
Lane Flow Rate	283	379
Geometry Grp	1	1
Degree of Util (X)	0.386	0.492
Departure Headway (Hd)	4.923	4.673
Convergence, Y/N	Yes	Yes
Cap	729	770
Service Time	2.97	2.712
HCM Lane V/C Ratio	0.388	0.492
HCM Control Delay	11.1	12.2
HCM Lane LOS	B	B
HCM 95th-tile Q	1.8	2.7

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	41	149	56	0	0	0	0	38	22	58	47	0
Future Vol, veh/h	41	149	56	0	0	0	0	38	22	58	47	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	45	162	61	0	0	0	0	41	24	63	51	0
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.2	7.9	8.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	17%	55%
Vol Thru, %	63%	61%	45%
Vol Right, %	37%	23%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	60	246	105
LT Vol	0	41	58
Through Vol	38	149	47
RT Vol	22	56	0
Lane Flow Rate	65	267	114
Geometry Grp	1	1	1
Degree of Util (X)	0.081	0.316	0.15
Departure Headway (Hd)	4.458	4.256	4.725
Convergence, Y/N	Yes	Yes	Yes
Cap	804	848	760
Service Time	2.481	2.273	2.747
HCM Lane V/C Ratio	0.081	0.315	0.15
HCM Control Delay	7.9	9.2	8.6
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.3	1.4	0.5



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	37	275	64	107	217	114	0	0	0	0	0	0
Future Volume (Veh/h)	37	275	64	107	217	114	0	0	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	320	74	124	252	133	0	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	259	0	0	234	0	0	0			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	259	0	0	234	0	0	0			0		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	91	64	93	74	72	88	100			100		
cM capacity (veh/h)	477	896	1085	485	896	1085	1623			1623		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2
Volume Total	203	234	124	385
Volume Left	43	0	124	0
Volume Right	0	74	0	133
cSH	755	948	485	953
Volume to Capacity	0.27	0.25	0.26	0.40
Queue Length 95th (ft)	27	24	25	49
Control Delay (s)	11.5	10.0	14.9	11.3
Lane LOS	B	B	B	B
Approach Delay (s)	10.7		12.2	
Approach LOS	B		B	

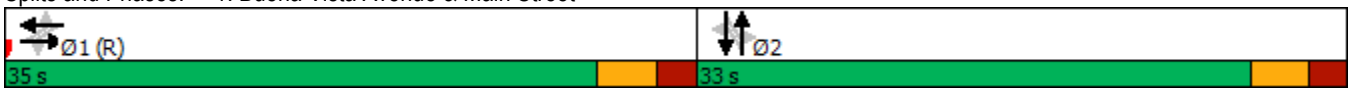
Intersection Summary				
Average Delay	11.5			
Intersection Capacity Utilization	35.8%	ICU Level of Service		A
Analysis Period (min)	15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	174	158	42	84	156	50	103	25	64	353	9
Future Volume (vph)	13	174	158	42	84	156	50	103	25	64	353	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	14	14	14	11	11	11	13	13	13
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.96			0.93			0.98			1.00	
Frt		0.938			0.925			0.981			0.997	
Flt Protected		0.998			0.993			0.986			0.993	
Satd. Flow (prot)	0	1605	0	0	1388	0	0	1449	0	0	1664	0
Flt Permitted		0.984			0.901			0.803			0.919	
Satd. Flow (perm)	0	1583	0	0	1259	0	0	1180	0	0	1540	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		113			249			300			234	
Travel Time (s)		2.6			5.7			6.8			5.3	
Confl. Peds. (#/hr)			67			93			107			49
Peak Hour Factor	0.86	0.86	0.86	0.92	0.92	0.92	0.84	0.84	0.84	0.88	0.88	0.88
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	2%	2%	2%	11%	11%	11%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	12	0
Parking (#/hr)		10			10			10				
Adj. Flow (vph)	15	202	184	46	91	170	60	123	30	73	401	10
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	401	0	0	307	0	0	213	0	0	484	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	1.05	0.85	0.92	1.13	0.92	1.04	1.28	1.04	0.96	1.02	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Minimum Split (s)	34.0	34.0		34.0	34.0		32.0	32.0		32.0	32.0	
Total Split (s)	35.0	35.0		35.0	35.0		33.0	33.0		33.0	33.0	
Total Split (%)	51.5%	51.5%		51.5%	51.5%		48.5%	48.5%		48.5%	48.5%	
Maximum Green (s)	30.0	30.0		30.0	30.0		28.0	28.0		28.0	28.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag	Lead	Lead		Lead	Lead		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		30.0			30.0			28.0			28.0	
Actuated g/C Ratio		0.44			0.44			0.41			0.41	
v/c Ratio		0.57			0.55			0.44			0.76	
Control Delay		18.3			18.8			18.0			27.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		18.3			18.8			18.0			27.2	
LOS		B			B			B			C	
Approach Delay		18.3			18.8			18.0			27.2	
Approach LOS		B			B			B			C	
Queue Length 50th (ft)		119			90			61			167	
Queue Length 95th (ft)		188			164			107			#302	
Internal Link Dist (ft)		33			169			220			154	
Turn Bay Length (ft)												
Base Capacity (vph)		698			555			485			634	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.57			0.55			0.44			0.76	

Intersection Summary			
Area Type:	Other		
Cycle Length: 68			
Actuated Cycle Length: 68			
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green			
Natural Cycle: 70			
Control Type: Pretimed			
Maximum v/c Ratio: 0.76			
Intersection Signal Delay: 21.4		Intersection LOS: C	
Intersection Capacity Utilization 70.9%		ICU Level of Service C	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 1: Buena Vista Avenue & Main Street

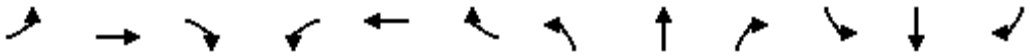


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	43	10	168	32	108	445
Future Volume (vph)	43	10	168	32	108	445
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.974		0.978			
Flt Protected	0.961					0.990
Satd. Flow (prot)	1419	0	1575	0	0	1992
Flt Permitted	0.961					0.990
Satd. Flow (perm)	1419	0	1575	0	0	1992
Link Speed (mph)	30		30			30
Link Distance (ft)	240		235			300
Travel Time (s)	5.5		5.3			6.8
Confl. Peds. (#/hr)	39			9	23	
Peak Hour Factor	0.91	0.91	0.82	0.82	0.87	0.87
Heavy Vehicles (%)	3%	3%	17%	17%	7%	7%
Parking (#/hr)	10		5			
Adj. Flow (vph)	47	11	205	39	124	511
Shared Lane Traffic (%)						
Lane Group Flow (vph)	58	0	244	0	0	635
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.28	1.04	1.01	0.85	0.85	0.85
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Stop			Stop

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 54.3%		ICU Level of Service A	
Analysis Period (min) 15			

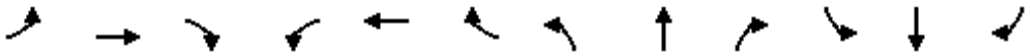
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	81	116	84	111	395	93
Future Volume (vph)	81	116	84	111	395	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	9	9	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.923			
Flt Protected	0.950					0.961
Satd. Flow (prot)	1742	1558	1222	0	0	1952
Flt Permitted	0.950					0.961
Satd. Flow (perm)	1742	1558	1222	0	0	1952
Link Speed (mph)	30		30			30
Link Distance (ft)	256		433			284
Travel Time (s)	5.8		9.8			6.5
Confl. Peds. (#/hr)	40			9	27	
Peak Hour Factor	0.81	0.81	0.82	0.82	0.87	0.87
Heavy Vehicles (%)	14%	14%	13%	13%	6%	6%
Parking (#/hr)			5			
Adj. Flow (vph)	100	143	102	135	454	107
Shared Lane Traffic (%)						
Lane Group Flow (vph)	100	143	237	0	0	561
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.88	0.88	1.35	1.14	0.85	0.85
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Stop			Stop

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 53.4%		ICU Level of Service A	
Analysis Period (min) 15			



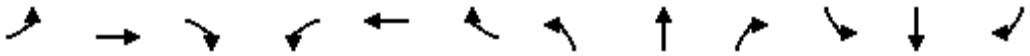
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	187	76	0	187	0	88	0	0	13	0	7
Future Volume (vph)	0	187	76	0	187	0	88	0	0	13	0	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	15	15	15	12	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.961									0.951	
Flt Protected							0.950				0.969	
Satd. Flow (prot)	0	1581	0	0	1676	0	1770	0	0	0	1717	0
Flt Permitted							0.950				0.969	
Satd. Flow (perm)	0	1581	0	0	1676	0	1770	0	0	0	1717	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		249			526			303			162	
Travel Time (s)		5.7			12.0			6.9			3.7	
Peak Hour Factor	0.92	0.86	0.86	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	8%	8%	6%	6%	2%	2%	2%	2%	2%	2%	2%
Parking (#/hr)		10			10							
Adj. Flow (vph)	0	217	88	0	203	0	96	0	0	14	0	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	305	0	0	203	0	96	0	0	0	22	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			-50	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.09	0.88	0.88	1.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.9%		ICU Level of Service A	
Analysis Period (min) 15			

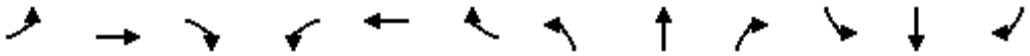


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	136	0	0	0	0	23	84	82	46	0	30
Future Volume (vph)	4	136	0	0	0	0	23	84	82	46	0	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	16	16	16	13	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt								0.941			0.947	
Flt Protected		0.998						0.994			0.971	
Satd. Flow (prot)	0	1458	0	0	0	0	0	1647	0	0	1770	0
Flt Permitted		0.998						0.994			0.971	
Satd. Flow (perm)	0	1458	0	0	0	0	0	1647	0	0	1770	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		240			538			516			303	
Travel Time (s)		5.5			12.2			11.7			6.9	
Confl. Peds. (#/hr)			33			35			16			38
Peak Hour Factor	0.85	0.85	0.85	0.92	0.92	0.92	0.83	0.83	0.83	0.90	0.90	0.90
Heavy Vehicles (%)	10%	10%	10%	2%	2%	2%	7%	7%	7%	2%	2%	2%
Parking (#/hr)		5						5				
Adj. Flow (vph)	5	160	0	0	0	0	28	101	99	51	0	33
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	165	0	0	0	0	0	228	0	0	84	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.24	1.04	1.00	1.00	1.00	0.85	1.01	0.85	0.96	0.96	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 35.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	4	101	21	40	98	44	24	230	88	98	230	5
Future Volume (vph)	4	101	21	40	98	44	24	230	88	98	230	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	9	13	13	16	16	16	9	11	11
Storage Length (ft)	0		0	60		0	0		0	100		0
Storage Lanes	0		0	1		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.977			0.954			0.965			0.997	
Flt Protected		0.999		0.950				0.997		0.950		
Satd. Flow (prot)	0	1364	0	1547	1784	0	0	1590	0	1577	1778	0
Flt Permitted		0.994		0.671				0.964		0.304		
Satd. Flow (perm)	0	1358	0	1093	1784	0	0	1538	0	505	1778	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			23			21			2	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		239			672			1367			278	
Travel Time (s)		5.4			15.3			31.1			6.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.82	0.82	0.82	0.92	0.92	0.92
Heavy Vehicles (%)	11%	11%	11%	5%	5%	5%	14%	14%	14%	3%	3%	3%
Parking (#/hr)		5						5				
Adj. Flow (vph)	4	110	23	43	107	48	29	280	107	107	250	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	137	0	43	155	0	0	416	0	107	255	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			9			0			9	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.29	1.09	1.14	0.96	0.96	0.85	1.01	0.85	1.14	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		5.0	10.0	
Minimum Split (s)	32.0	32.0		32.0	32.0		32.0	32.0		10.0	32.0	
Total Split (s)	36.0	36.0		36.0	36.0		47.0	47.0		17.0	64.0	
Total Split (%)	36.0%	36.0%		36.0%	36.0%		47.0%	47.0%		17.0%	64.0%	
Maximum Green (s)	31.0	31.0		31.0	31.0		42.0	42.0		12.0	59.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0		5.0	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Ped	Ped		C-Max	C-Max		Ped	Ped		Max	Ped	
Walk Time (s)	15.0	15.0		15.0	15.0		15.0	15.0			15.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0		12.0	12.0			12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0			0	
Act Effct Green (s)		40.2		40.2	40.2			32.8		49.8	49.8	
Actuated g/C Ratio		0.40		0.40	0.40			0.33		0.50	0.50	
v/c Ratio		0.25		0.10	0.21			0.80		0.28	0.29	
Control Delay		21.7		24.2	20.2			40.8		14.2	14.7	
Queue Delay		0.0		0.0	0.0			0.0		0.0	0.0	
Total Delay		21.7		24.2	20.2			40.8		14.2	14.7	
LOS		C		C	C			D		B	B	
Approach Delay		21.7			21.1			40.8			14.5	
Approach LOS		C			C			D			B	
Queue Length 50th (ft)		51		14	45			232		36	92	
Queue Length 95th (ft)		113		m32	87			262		53	115	
Internal Link Dist (ft)		159			592			1287			198	
Turn Bay Length (ft)				60						100		
Base Capacity (vph)		551		438	730			658		380	1049	
Starvation Cap Reductn		0		0	0			0		0	0	
Spillback Cap Reductn		0		0	0			0		0	0	
Storage Cap Reductn		0		0	0			0		0	0	
Reduced v/c Ratio		0.25		0.10	0.21			0.63		0.28	0.24	

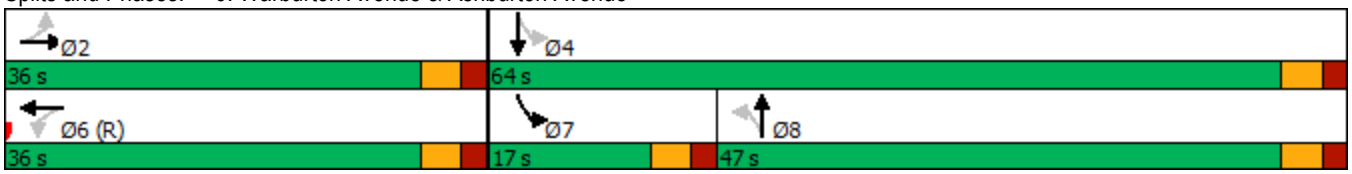
Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 6:WBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	
Intersection Signal Delay: 26.4	Intersection LOS: C

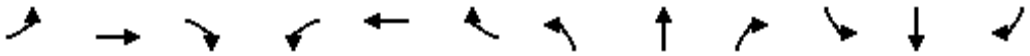
Intersection Capacity Utilization 62.5% ICU Level of Service B

Analysis Period (min) 15

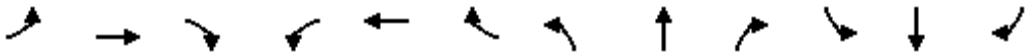
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: Warburton Avenue & Ashburton Avenue





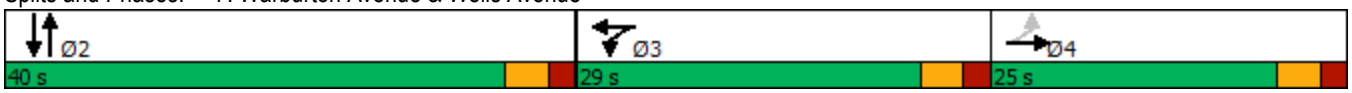
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	0	33	342	2	66	0	176	0	0	348	0
Future Volume (vph)	19	0	33	342	2	66	0	176	0	0	348	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	9	9	14	14	14	14	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.914			0.854							
Flt Protected		0.982		0.950								
Satd. Flow (prot)	0	1672	0	1600	1432	0	0	1689	0	0	1689	0
Flt Permitted		0.852		0.950								
Satd. Flow (perm)	0	1451	0	1600	1432	0	0	1689	0	0	1689	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		81										
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		49			114			382			1367	
Travel Time (s)		1.1			2.6			8.7			31.1	
Peak Hour Factor	0.81	0.81	0.81	0.94	0.94	0.94	0.82	0.82	0.82	0.97	0.97	0.97
Parking (#/hr)				5		5		10			10	
Adj. Flow (vph)	23	0	41	364	2	70	0	215	0	0	359	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	64	0	364	72	0	0	215	0	0	359	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.14	1.14	1.14	0.92	1.13	0.92	0.92	1.13	0.92
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (ft)	20	100		20	100			100			100	
Trailing Detector (ft)	0	0		0	0			0			0	
Detector 1 Position(ft)	0	0		0	0			0			0	
Detector 1 Size(ft)	20	6		20	6			6			6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Split	NA			NA			NA	
Protected Phases		4		3	3			2			2	
Permitted Phases	4											
Detector Phase	4	4		3	3			2			2	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Minimum Split (s)	24.0	24.0		28.0	28.0			39.0			39.0	
Total Split (s)	25.0	25.0		29.0	29.0			40.0			40.0	
Total Split (%)	26.6%	26.6%		30.9%	30.9%			42.6%			42.6%	
Maximum Green (s)	20.0	20.0		24.0	24.0			35.0			35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0			2.0			2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Recall Mode	None	None		Ped	Ped			Ped			Ped	
Walk Time (s)	7.0	7.0		11.0	11.0			24.0			24.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			10.0			10.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		6.1		23.7	23.7			34.2			34.2	
Actuated g/C Ratio		0.08		0.31	0.31			0.45			0.45	
v/c Ratio		0.34		0.74	0.16			0.29			0.48	
Control Delay		11.3		35.4	21.8			15.8			18.6	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		11.3		35.4	21.8			15.8			18.6	
LOS		B		D	C			B			B	
Approach Delay		11.3			33.1			15.8			18.6	
Approach LOS		B			C			B			B	
Queue Length 50th (ft)		0		159	26			66			122	
Queue Length 95th (ft)		20		#299	59			107			208	
Internal Link Dist (ft)		1			34			302			1287	
Turn Bay Length (ft)												
Base Capacity (vph)		440		503	450			775			775	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.15		0.72	0.16			0.28			0.46	

Intersection Summary			
Area Type:	Other		
Cycle Length: 94			
Actuated Cycle Length: 76.6			
Natural Cycle: 95			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.74			
Intersection Signal Delay: 23.5		Intersection LOS: C	
Intersection Capacity Utilization 52.3%		ICU Level of Service A	
Analysis Period (min) 15			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Splits and Phases: 7: Warburton Avenue & Wells Avenue



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR2	NEL2	NEL	NER	NER2	Ø9
Lane Configurations											
Traffic Volume (vph)	132	159	158	25	616	82	16	17	36	36	
Future Volume (vph)	132	159	158	25	616	82	16	17	36	36	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	16	16	12	12	16	12	12	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor		0.90						0.81			
Frt		0.925			0.985			0.908			
Flt Protected	0.950				0.998			0.984			
Satd. Flow (prot)	1703	1268	0	0	1917	0	0	1330	0	0	
Flt Permitted	0.305				0.978			0.984			
Satd. Flow (perm)	547	1268	0	0	1879	0	0	1330	0	0	
Right Turn on Red			Yes			Yes				Yes	
Satd. Flow (RTOR)		62			84			84			
Link Speed (mph)		30			30			30			
Link Distance (ft)		431			382			174			
Travel Time (s)		9.8			8.7			4.0			
Confl. Peds. (#/hr)			134						89		
Peak Hour Factor	0.94	0.94	0.94	0.93	0.93	0.93	0.81	0.81	0.81	0.81	
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	10	0	0	0	0	0	
Parking (#/hr)		10						5			
Adj. Flow (vph)	140	169	168	27	662	88	20	21	44	44	
Shared Lane Traffic (%)											
Lane Group Flow (vph)	140	337	0	0	777	0	0	129	0	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Right	
Median Width(ft)		12			0			16			
Link Offset(ft)		0			0			80			
Crosswalk Width(ft)		16			16			16			
Two way Left Turn Lane											
Headway Factor	1.00	1.23	1.00	0.85	0.89	1.00	1.00	1.01	1.00	1.00	
Turning Speed (mph)	15		9	15		9	15	15	9	9	
Number of Detectors	1	2		1	2		1	1			
Detector Template	Left	Thru		Left	Thru		Left	Left			
Leading Detector (ft)	20	100		20	100		20	20			
Trailing Detector (ft)	0	0		0	0		0	0			
Detector 1 Position(ft)	0	0		0	0		0	0			
Detector 1 Size(ft)	20	6		20	6		20	20			
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			
Detector 1 Channel											
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0			
Detector 2 Position(ft)		94			94						
Detector 2 Size(ft)		6			6						
Detector 2 Type		Cl+Ex			Cl+Ex						
Detector 2 Channel											
Detector 2 Extend (s)		0.0			0.0						

Lane Group	NBL	NBT	NBR	SBL	SBT	SBR2	NEL2	NEL	NER	NER2	Ø9
Turn Type	Perm	NA		Perm	NA		Perm	Prot			
Protected Phases		3			3			1			9
Permitted Phases	3			3			1				
Detector Phase	3	3		3	3		1	1			
Switch Phase											
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0
Minimum Split (s)	13.0	13.0		13.0	13.0		13.0	13.0			27.0
Total Split (s)	41.0	41.0		41.0	41.0		23.0	23.0			27.0
Total Split (%)	45.1%	45.1%		45.1%	45.1%		25.3%	25.3%			30%
Maximum Green (s)	33.0	33.0		33.0	33.0		15.0	15.0			25.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			2.0
All-Red Time (s)	4.0	4.0		4.0	4.0		4.0	4.0			0.0
Lost Time Adjust (s)	0.0	0.0			0.0			0.0			
Total Lost Time (s)	8.0	8.0			8.0			8.0			
Lead/Lag											
Lead-Lag Optimize?											
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0
Recall Mode	Max	Max		Max	Max		Max	Max			None
Walk Time (s)											10.0
Flash Dont Walk (s)											15.0
Pedestrian Calls (#/hr)											5
Act Effct Green (s)	33.7	33.7			33.7			15.3			
Actuated g/C Ratio	0.49	0.49			0.49			0.22			
v/c Ratio	0.53	0.52			0.81			0.36			
Control Delay	25.8	15.7			24.5			14.9			
Queue Delay	0.0	0.0			8.2			0.0			
Total Delay	25.8	15.7			32.7			14.9			
LOS	C	B			C			B			
Approach Delay		18.6			32.7			14.9			
Approach LOS		B			C			B			
Queue Length 50th (ft)	33	62			199			14			
Queue Length 95th (ft)	#165	234			#688			62			
Internal Link Dist (ft)		351			302			94			
Turn Bay Length (ft)											
Base Capacity (vph)	265	646			954			359			
Starvation Cap Reductn	0	0			147			0			
Spillback Cap Reductn	0	0			0			0			
Storage Cap Reductn	0	0			0			0			
Reduced v/c Ratio	0.53	0.52			0.96			0.36			

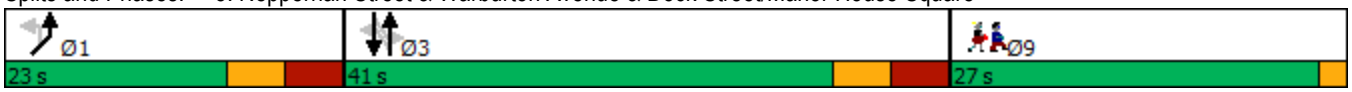
Intersection Summary			
Area Type:	Other		
Cycle Length: 91			
Actuated Cycle Length: 69.4			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.81			
Intersection Signal Delay: 26.2		Intersection LOS: C	
Intersection Capacity Utilization 91.1%		ICU Level of Service F	

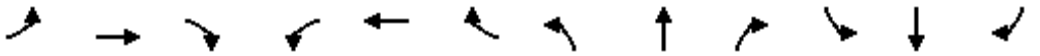
Analysis Period (min) 15

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

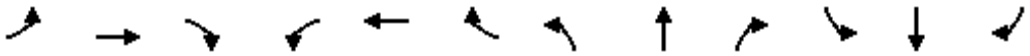
Queue shown is maximum after two cycles.

Splits and Phases: 8: Nepperhan Street & Warburton Avenue & Dock Street/Manor House Square





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	100	0	100	204	105	138	38	211	0	0	608	44
Future Volume (vph)	100	0	100	204	105	138	38	211	0	0	608	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	13	15	15	9	13	13	12	12	12
Storage Length (ft)	0		0	0		0	75		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor		0.96			0.94						0.99	
Frt		0.932			0.915						0.990	
Flt Protected		0.976		0.950			0.950					
Satd. Flow (prot)	0	1371	0	1711	1398	0	1477	3141	0	0	3026	0
Flt Permitted		0.535		0.587			0.278					
Satd. Flow (perm)	0	751	0	1057	1398	0	432	3141	0	0	3026	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		98			69						8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		526			497			325			431	
Travel Time (s)		12.0			11.3			7.4			9.8	
Confl. Peds. (#/hr)			82			104			126			103
Peak Hour Factor	0.82	0.82	0.82	0.83	0.83	0.83	0.98	0.98	0.98	0.91	0.91	0.91
Heavy Vehicles (%)	16%	16%	16%	9%	9%	9%	10%	10%	10%	8%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	0	0
Parking (#/hr)		10			10			5			10	
Adj. Flow (vph)	122	0	122	246	127	166	39	215	0	0	668	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	244	0	246	293	0	39	215	0	0	716	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			13			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	1.05	0.85	0.96	1.09	0.88	1.14	1.06	0.96	1.00	1.11	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2			2	
Detector Template	Left	Thru		Left	Thru		Left	Thru			Thru	
Leading Detector (ft)	20	100		20	100		20	100			100	
Trailing Detector (ft)	0	0		0	0		0	0			0	
Detector 1 Position(ft)	0	0		0	0		0	0			0	
Detector 1 Size(ft)	20	6		20	6		20	6			6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	



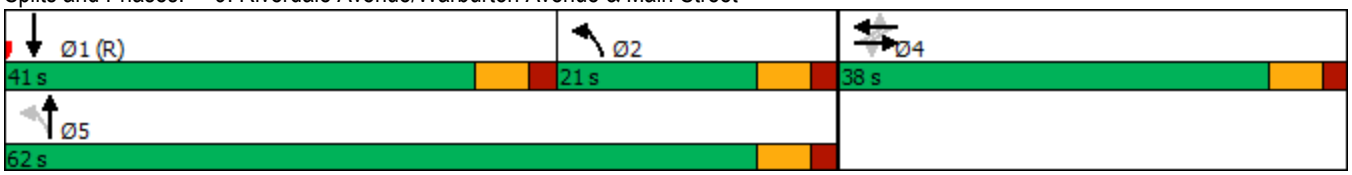
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA			NA	
Protected Phases		4			4		2	5			1	
Permitted Phases	4			4			5					
Detector Phase	4	4		4	4		2	5			1	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)	37.0	37.0		37.0	37.0		11.0	11.0			40.0	
Total Split (s)	38.0	38.0		38.0	38.0		21.0	62.0			41.0	
Total Split (%)	38.0%	38.0%		38.0%	38.0%		21.0%	62.0%			41.0%	
Maximum Green (s)	32.0	32.0		32.0	32.0		15.0	56.0			35.0	
Yellow Time (s)	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	
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				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	Ped	Ped		Ped	Ped		Max	Max			C-Max	
Walk Time (s)	10.0	10.0		10.0	10.0						18.0	
Flash Dont Walk (s)	21.0	21.0		21.0	21.0						16.0	
Pedestrian Calls (#/hr)	0	0		0	0						0	
Act Effct Green (s)		31.5		31.5	31.5		56.5	56.5			35.5	
Actuated g/C Ratio		0.32		0.32	0.32		0.56	0.56			0.36	
v/c Ratio		0.81		0.74	0.60		0.10	0.12			0.66	
Control Delay		40.3		45.8	27.7		11.8	10.5			30.6	
Queue Delay		0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay		40.3		45.8	27.7		11.8	10.5			30.6	
LOS		D		D	C		B	B			C	
Approach Delay		40.3			36.0			10.7			30.6	
Approach LOS		D			D			B			C	
Queue Length 50th (ft)		88		140	120		10	31			197	
Queue Length 95th (ft)		#184		209	182		26	50			265	
Internal Link Dist (ft)		446			417			245			351	
Turn Bay Length (ft)							75					
Base Capacity (vph)		306		338	494		400	1775			1080	
Starvation Cap Reductn		0		0	0		0	0			0	
Spillback Cap Reductn		0		0	0		0	0			0	
Storage Cap Reductn		0		0	0		0	0			0	
Reduced v/c Ratio		0.80		0.73	0.59		0.10	0.12			0.66	

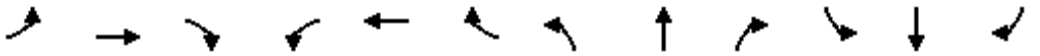
Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 1:SBT, Start of Green	
Natural Cycle: 90	

Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 30.7	Intersection LOS: C
Intersection Capacity Utilization 98.2%	ICU Level of Service F
Analysis Period (min) 15	

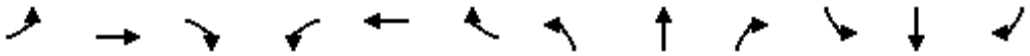
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Riverdale Avenue/Warburton Avenue & Main Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	27	158	79	0	0	0	0	222	208	273	639	0
Future Volume (vph)	27	158	79	0	0	0	0	222	208	273	639	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	12	12	12	11	11	11	9	12	12
Storage Length (ft)	0		0	0		0	0		0	125		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor		0.93						0.84				
Frt		0.960						0.927				
Flt Protected		0.995								0.950		
Satd. Flow (prot)	0	1547	0	0	0	0	0	2413	0	1533	3087	0
Flt Permitted		0.995								0.462		
Satd. Flow (perm)	0	1547	0	0	0	0	0	2413	0	745	3087	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		21						189				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		538			379			525			325	
Travel Time (s)		12.2			8.6			11.9			7.4	
Confl. Peds. (#/hr)			178			100			148			55
Peak Hour Factor	0.85	0.85	0.85	0.92	0.92	0.92	0.94	0.94	0.94	0.93	0.93	0.93
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	11%	11%	11%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	7	0	0	10	0
Parking (#/hr)		10									10	
Adj. Flow (vph)	32	186	93	0	0	0	0	236	221	294	687	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	311	0	0	0	0	0	457	0	294	687	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			8			8	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	1.05	0.85	1.00	1.00	1.00	1.04	1.06	1.04	1.14	1.13	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	

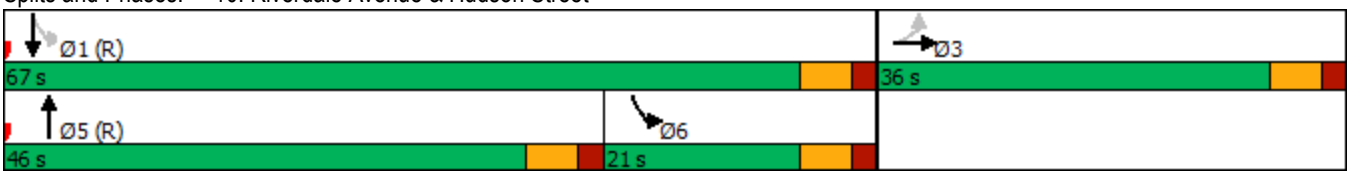


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA		pm+pt	NA	
Protected Phases		3						5		6	1	
Permitted Phases	3									1		
Detector Phase	3	3						5		6	1	
Switch Phase												
Minimum Initial (s)	10.0	10.0						5.0		10.0	5.0	
Minimum Split (s)	30.0	30.0						30.0		16.0	30.0	
Total Split (s)	36.0	36.0						46.0		21.0	67.0	
Total Split (%)	35.0%	35.0%						44.7%		20.4%	65.0%	
Maximum Green (s)	30.0	30.0						40.0		15.0	61.0	
Yellow Time (s)	4.0	4.0						4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0						2.0		2.0	2.0	
Lost Time Adjust (s)		0.0						0.0		0.0	0.0	
Total Lost Time (s)		6.0						6.0		6.0	6.0	
Lead/Lag								Lead		Lag		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Recall Mode	None	None						C-Max		Max	C-Max	
Walk Time (s)	10.0	10.0						10.0			10.0	
Flash Dont Walk (s)	14.0	14.0						14.0			14.0	
Pedestrian Calls (#/hr)	0	0						0			0	
Act Effct Green (s)		24.0						46.0		67.0	67.0	
Actuated g/C Ratio		0.23						0.45		0.65	0.65	
v/c Ratio		0.83						0.39		0.49	0.34	
Control Delay		52.7						12.7		16.0	9.4	
Queue Delay		0.0						0.0		2.8	0.9	
Total Delay		52.7						12.7		18.8	10.3	
LOS		D						B		B	B	
Approach Delay		52.7						12.7			12.9	
Approach LOS		D						B			B	
Queue Length 50th (ft)		181						57		78	99	
Queue Length 95th (ft)		246						107		142	153	
Internal Link Dist (ft)		458			299			445			245	
Turn Bay Length (ft)										125		
Base Capacity (vph)		465						1181		598	2007	
Starvation Cap Reductn		0						0		199	986	
Spillback Cap Reductn		0						0		0	0	
Storage Cap Reductn		0						0		0	0	
Reduced v/c Ratio		0.67						0.39		0.74	0.67	

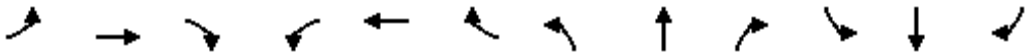
Intersection Summary	
Area Type:	Other
Cycle Length: 103	
Actuated Cycle Length: 103	
Offset: 0 (0%), Referenced to phase 1:SBTL and 5:NBT, Start of Green	
Natural Cycle: 80	

Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 19.9	Intersection LOS: B
Intersection Capacity Utilization 73.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 10: Riverdale Avenue & Hudson Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	320	66	354	539	125	90	294	310	235	436	42
Future Volume (vph)	11	320	66	354	539	125	90	294	310	235	436	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	12	12	12	10	11	11	10	11	11
Storage Length (ft)	0		0	160		0	100		0	155		0
Storage Lanes	0		0	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor		0.97				0.89		0.96				0.94
Frt		0.975				0.850		0.923				0.850
Flt Protected		0.999		0.950			0.950			0.950		
Satd. Flow (prot)	0	3702	0	1719	1845	1379	1685	2782	0	1574	3388	1531
Flt Permitted		0.821		0.428			0.226			0.402		
Satd. Flow (perm)	0	3042	0	774	1845	1234	401	2782	0	666	3388	1439
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		21				136						149
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		511			403			1044			525	
Travel Time (s)		11.6			9.2			23.7			11.9	
Confl. Peds. (#/hr)			193			95			64			49
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93
Heavy Vehicles (%)	27%	3%	3%	5%	3%	12%	0%	3%	3%	7%	3%	2%
Bus Blockages (#/hr)	0	2	0	0	0	11	0	0	0	0	0	0
Parking (#/hr)								10				
Adj. Flow (vph)	12	356	73	385	586	136	98	320	337	253	469	45
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	441	0	385	586	136	98	657	0	253	469	45
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			10			16	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	1.00	1.00	1.06	1.09	1.15	1.04	1.09	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	



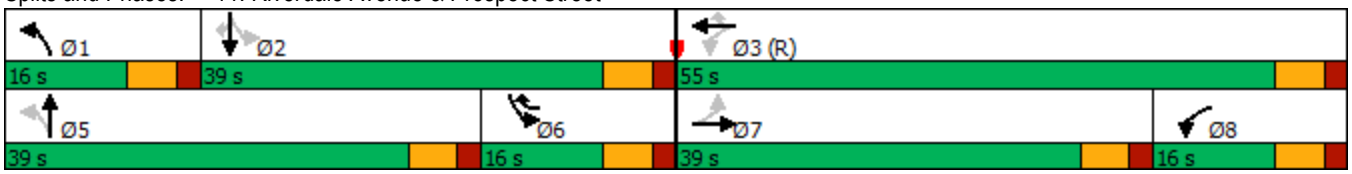
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	Perm
Protected Phases		7		8	3	6	1	5		6	2	
Permitted Phases	7			3		3	5			2		2
Detector Phase	7	7		8	3	6	1	5		6	2	2
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)	39.0	39.0		11.0	39.0	11.0	11.0	39.0		11.0	39.0	39.0
Total Split (s)	39.0	39.0		16.0	55.0	16.0	16.0	39.0		16.0	39.0	39.0
Total Split (%)	35.5%	35.5%		14.5%	50.0%	14.5%	14.5%	35.5%		14.5%	35.5%	35.5%
Maximum Green (s)	33.0	33.0		10.0	49.0	10.0	10.0	33.0		10.0	33.0	33.0
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	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lead		Lag		Lag	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	Ped	Ped		Max	C-Max	Max	Max	Ped		Max	Ped	Ped
Walk Time (s)	7.0	7.0			7.0			15.0			15.0	15.0
Flash Dont Walk (s)	26.0	26.0			26.0			18.0			18.0	18.0
Pedestrian Calls (#/hr)	0	0			0			0			0	0
Act Effct Green (s)		33.0		49.0	49.0	59.0	33.0	33.0		33.0	33.0	33.0
Actuated g/C Ratio		0.30		0.45	0.45	0.54	0.30	0.30		0.30	0.30	0.30
v/c Ratio		0.48		0.90	0.71	0.18	0.41	0.91dr		0.90	0.46	0.08
Control Delay		31.9		35.7	12.8	0.7	42.2	49.1		74.3	33.1	0.3
Queue Delay		0.0		0.0	0.3	0.0	0.0	0.2		53.0	0.0	0.0
Total Delay		31.9		35.7	13.2	0.7	42.2	49.3		127.2	33.1	0.3
LOS		C		D	B	A	D	D		F	C	A
Approach Delay		31.9			19.5			48.4			62.2	
Approach LOS		C			B			D			E	
Queue Length 50th (ft)		126		63	65	0	46	204		149	141	0
Queue Length 95th (ft)		176		#249	218	m4	m112	324		#307	191	0
Internal Link Dist (ft)		431			323			964			445	
Turn Bay Length (ft)				160			100			155		
Base Capacity (vph)		927		430	821	738	237	834		282	1016	536
Starvation Cap Reductn		0		0	32	0	0	0		0	0	0
Spillback Cap Reductn		1		0	0	0	0	13		89	0	0
Storage Cap Reductn		0		0	0	0	0	0		0	0	0
Reduced v/c Ratio		0.48		0.90	0.74	0.18	0.41	0.80		1.31	0.46	0.08

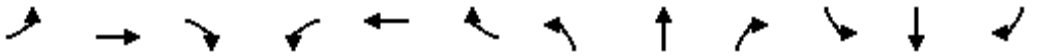
Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 25 (23%), Referenced to phase 3:WBTL, Start of Green	
Natural Cycle: 100	

Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 39.1	Intersection LOS: D
Intersection Capacity Utilization 116.4%	ICU Level of Service H
Analysis Period (min) 15	

\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.
dr Defacto Right Lane. Recode with 1 though lane as a right lane.

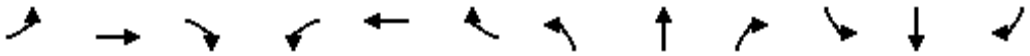
Splits and Phases: 11: Riverdale Avenue & Prospect Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	38	22	33	73	40	33	564	85	161	635	60
Future Volume (vph)	90	38	22	33	73	40	33	564	85	161	635	60
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	16	16	16	9	12	12	10	13	13
Storage Length (ft)	0		0	0		0	165		0	125		0
Storage Lanes	0		0	0		0	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	0.95
Frt		0.980			0.963			0.980			0.987	
Flt Protected		0.971			0.989		0.950			0.950		
Satd. Flow (prot)	0	1832	0	0	1759	0	1593	3232	0	1652	3339	0
Flt Permitted		0.658			0.897		0.298			0.322		
Satd. Flow (perm)	0	1241	0	0	1596	0	500	3232	0	560	3339	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			15			16			9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		236			1171			349			1044	
Travel Time (s)		5.4			26.6			7.9			23.7	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	3	0	0	0	0
Parking (#/hr)					5			5			10	
Adj. Flow (vph)	98	41	24	36	79	43	36	613	92	175	690	65
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	163	0	0	158	0	36	705	0	175	755	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.96	0.96	0.96	0.85	1.01	0.85	1.14	1.10	1.00	1.09	1.06	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	Ø3
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Lane Width (ft)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Bus Blockages (#/hr)	
Parking (#/hr)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		pm+pt	NA	
Protected Phases		4			4		2	5		6	1	
Permitted Phases	4			4			5			1		
Detector Phase	4	4		4	4		2	5		6	1	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Total Split (s)	28.0	28.0		28.0	28.0		15.0	40.0		15.0	40.0	
Total Split (%)	25.5%	25.5%		25.5%	25.5%		13.6%	36.4%		13.6%	36.4%	
Maximum Green (s)	22.0	22.0		22.0	22.0		9.0	34.0		9.0	34.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0			6.0		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lead		Lead	Lead		Lag	Lead		Lag	Lead	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		Max	Max		Max	C-Max		Max	C-Max	
Walk Time (s)												
Flash Dont Walk (s)												
Pedestrian Calls (#/hr)												
Act Effct Green (s)		22.0			22.0		65.2	56.2		65.2	56.2	
Actuated g/C Ratio		0.20			0.20		0.59	0.51		0.59	0.51	
v/c Ratio		0.64			0.48		0.09	0.42		0.42	0.44	
Control Delay		51.7			40.6		11.7	19.1		18.6	14.6	
Queue Delay		0.0			0.0		0.0	0.0		0.0	0.0	
Total Delay		51.7			40.6		11.7	19.1		18.6	14.6	
LOS		D			D		B	B		B	B	
Approach Delay		51.7			40.6			18.8			15.3	
Approach LOS		D			D			B			B	
Queue Length 50th (ft)		102			90		7	138		42	122	
Queue Length 95th (ft)		#179			156		32	281		m90	m187	
Internal Link Dist (ft)		156			1091			269			964	
Turn Bay Length (ft)							165			125		
Base Capacity (vph)		253			331		385	1659		421	1710	
Starvation Cap Reductn		0			0		0	0		0	0	
Spillback Cap Reductn		0			0		0	0		0	0	
Storage Cap Reductn		0			0		0	0		0	0	
Reduced v/c Ratio		0.64			0.48		0.09	0.42		0.42	0.44	

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 0 (0%), Referenced to phase 1:SBTL and 5:NBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 21.6	Intersection LOS: C

Lane Group	Ø3
Turn Type	
Protected Phases	3
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	5.0
Minimum Split (s)	24.0
Total Split (s)	27.0
Total Split (%)	25%
Maximum Green (s)	24.0
Yellow Time (s)	3.0
All-Red Time (s)	0.0
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	6.0
Flash Dont Walk (s)	15.0
Pedestrian Calls (#/hr)	5
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Queue Length 50th (ft)	
Queue Length 95th (ft)	
Internal Link Dist (ft)	
Turn Bay Length (ft)	
Base Capacity (vph)	
Starvation Cap Reductn	
Spillback Cap Reductn	
Storage Cap Reductn	
Reduced v/c Ratio	

Intersection Summary

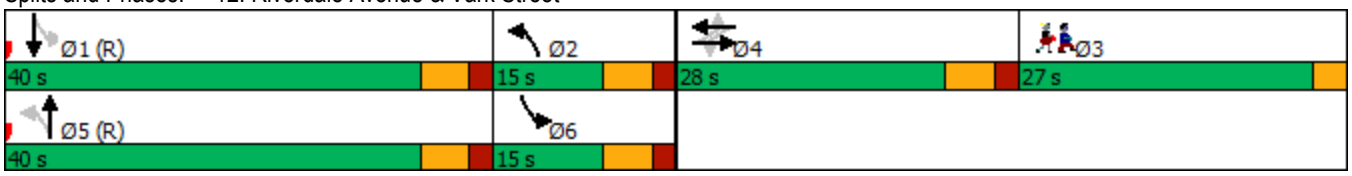
Intersection Capacity Utilization 57.2% ICU Level of Service B

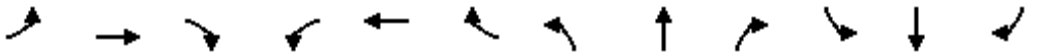
Analysis Period (min) 15

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

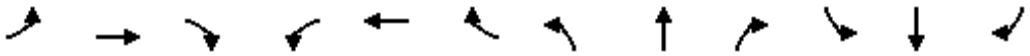
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 12: Riverdale Avenue & Vark Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	250	14	96	148	102	12	192	132	147	165	22
Future Volume (vph)	23	250	14	96	148	102	12	192	132	147	165	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	14	14	14	16	16	16	10	13	13
Storage Length (ft)	0		0	0		0	0		0	80		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.994			0.960			0.947			0.982	
Flt Protected		0.996			0.986			0.998		0.950		
Satd. Flow (prot)	0	1506	0	0	1827	0	0	1892	0	1620	1854	0
Flt Permitted		0.954			0.813			0.987		0.283		
Satd. Flow (perm)	0	1443	0	0	1506	0	0	1871	0	483	1854	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		3			26						9	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		672			208			1727			316	
Travel Time (s)		15.3			4.7			39.3			7.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	2%	2%	5%	5%	5%	5%	5%	5%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	0	0	0	0
Parking (#/hr)		5										
Adj. Flow (vph)	25	272	15	104	161	111	13	209	143	160	179	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	312	0	0	376	0	0	365	0	160	203	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.29	1.09	0.92	0.92	0.92	0.85	0.88	0.85	1.09	0.96	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												

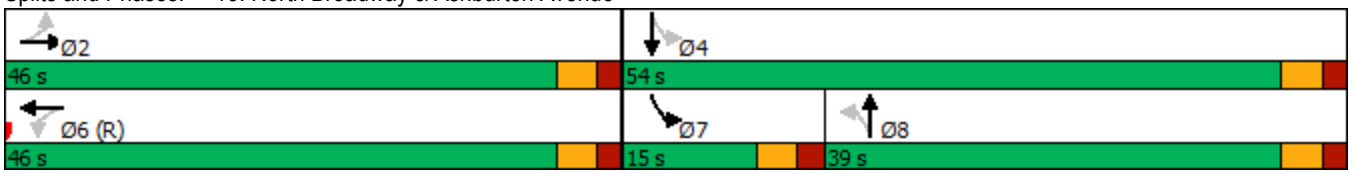


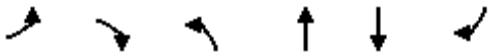
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		Perm	NA		pm+pt	NA	
Protected Phases		2			6			8		7	4	
Permitted Phases	2			6			8			4		
Detector Phase	2	2		6	6		8	8		7	4	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0		5.0	10.0	
Minimum Split (s)	10.0	10.0		32.0	32.0		32.0	32.0		10.0	32.0	
Total Split (s)	46.0	46.0		46.0	46.0		39.0	39.0		15.0	54.0	
Total Split (%)	46.0%	46.0%		46.0%	46.0%		39.0%	39.0%		15.0%	54.0%	
Maximum Green (s)	41.0	41.0		41.0	41.0		34.0	34.0		10.0	49.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0		0.0	0.0	
Total Lost Time (s)		5.0			5.0			5.0		5.0	5.0	
Lead/Lag							Lag	Lag		Lead		
Lead-Lag Optimize?							Yes	Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Max	Max		C-Max	C-Max		Ped	Ped		Max	Ped	
Walk Time (s)				15.0	15.0		15.0	15.0			15.0	
Flash Dont Walk (s)				12.0	12.0		12.0	12.0			12.0	
Pedestrian Calls (#/hr)				0	0		0	0			0	
Act Effct Green (s)		46.7			46.7			28.3		43.3	43.3	
Actuated g/C Ratio		0.47			0.47			0.28		0.43	0.43	
v/c Ratio		0.46			0.52			0.69		0.50	0.25	
Control Delay		21.3			14.5			39.3		23.1	17.8	
Queue Delay		0.0			0.0			0.0		0.0	0.0	
Total Delay		21.3			14.5			39.3		23.1	17.8	
LOS		C			B			D		C	B	
Approach Delay		21.3			14.5			39.3			20.1	
Approach LOS		C			B			D			C	
Queue Length 50th (ft)		149			84			211		64	78	
Queue Length 95th (ft)		210			120			289		98	115	
Internal Link Dist (ft)		592			128			1647			236	
Turn Bay Length (ft)										80		
Base Capacity (vph)		675			717			636		322	913	
Starvation Cap Reductn		0			0			0		0	0	
Spillback Cap Reductn		0			0			0		0	0	
Storage Cap Reductn		0			0			0		0	0	
Reduced v/c Ratio		0.46			0.52			0.57		0.50	0.22	

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 97 (97%), Referenced to phase 6:WBTL, Start of Green	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	

Intersection Signal Delay: 23.8	Intersection LOS: C
Intersection Capacity Utilization 80.1%	ICU Level of Service D
Analysis Period (min) 15	

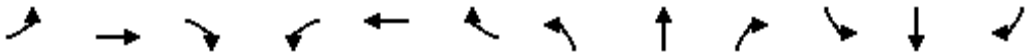
Splits and Phases: 13: North Broadway & Ashburton Avenue





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	219	0	0	361	0	0
Future Volume (vph)	219	0	0	361	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1705	0	0	1794	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1705	0	0	1794	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	226			563	1727	
Travel Time (s)	5.1			12.8	39.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)	10			10		
Adj. Flow (vph)	238	0	0	392	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	238	0	0	392	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	16			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.05	0.85	0.85	1.05	0.85	0.85
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.8%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	341	101	106	260	0	0	0	0
Future Volume (vph)	0	0	0	0	341	101	106	260	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	16	16	16	16	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.969							
Flt Protected								0.986				
Satd. Flow (prot)	0	0	0	0	2046	0	0	2082	0	0	0	0
Flt Permitted								0.986				
Satd. Flow (perm)	0	0	0	0	2046	0	0	2082	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					21			73				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		497			81			184			563	
Travel Time (s)		11.3			1.8			4.2			12.8	
Peak Hour Factor	0.92	0.92	0.92	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	411	122	115	283	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	533	0	0	398	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	0.85	0.85	0.85	0.85	0.85	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					2		1	2				
Detector Template					Thru		Left	Thru				
Leading Detector (ft)					100		20	100				
Trailing Detector (ft)					0		0	0				
Detector 1 Position(ft)					0		0	0				
Detector 1 Size(ft)					6		20	6				
Detector 1 Type					Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)					0.0		0.0	0.0				
Detector 1 Queue (s)					0.0		0.0	0.0				
Detector 1 Delay (s)					0.0		0.0	0.0				
Detector 2 Position(ft)					94			94				
Detector 2 Size(ft)					6			6				
Detector 2 Type					Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				
Turn Type					NA		Perm	NA				
Protected Phases					2 6			3				
Permitted Phases							3					
Detector Phase					2 6		3	3				
Switch Phase												

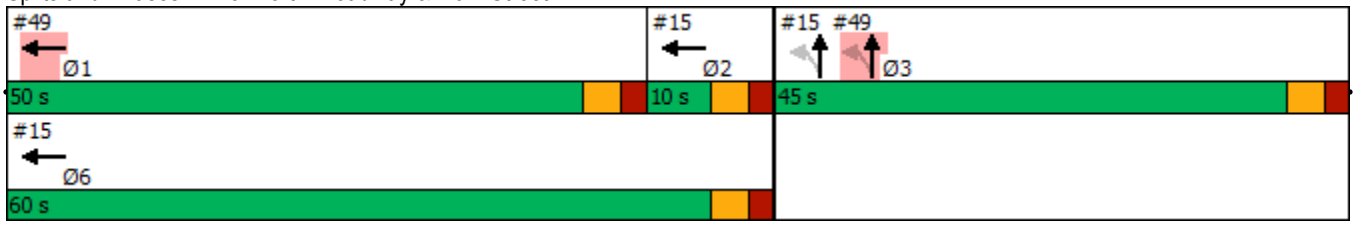
Lane Group	Ø1	Ø2	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			
Turn Type			
Protected Phases	1	2	6
Permitted Phases			
Detector Phase			
Switch Phase			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)							5.0	5.0				
Minimum Split (s)							45.0	45.0				
Total Split (s)							45.0	45.0				
Total Split (%)							42.9%	42.9%				
Maximum Green (s)							40.0	40.0				
Yellow Time (s)							3.0	3.0				
All-Red Time (s)							2.0	2.0				
Lost Time Adjust (s)								0.0				
Total Lost Time (s)								5.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)							3.0	3.0				
Recall Mode							Ped	Ped				
Walk Time (s)							30.0	30.0				
Flash Dont Walk (s)							10.0	10.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)					55.0			40.0				
Actuated g/C Ratio					0.52			0.38				
v/c Ratio					0.49			0.47				
Control Delay					2.1			22.0				
Queue Delay					0.0			0.0				
Total Delay					2.1			22.0				
LOS					A			C				
Approach Delay					2.1			22.0				
Approach LOS					A			C				
Queue Length 50th (ft)					11			161				
Queue Length 95th (ft)					14			248				
Internal Link Dist (ft)		417			1			104			483	
Turn Bay Length (ft)												
Base Capacity (vph)					1081			838				
Starvation Cap Reductn					0			0				
Spillback Cap Reductn					0			0				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					0.49			0.47				

Intersection Summary

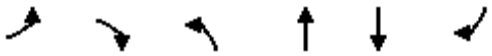
Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 105
Natural Cycle: 105
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.69
Intersection Signal Delay: 10.6 Intersection LOS: B
Intersection Capacity Utilization 52.0% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 15: North Broadway & Main Street



Lane Group	Ø1	Ø2	Ø6
Minimum Initial (s)	5.0	2.0	5.0
Minimum Split (s)	50.0	7.0	10.0
Total Split (s)	50.0	10.0	60.0
Total Split (%)	48%	10%	57%
Maximum Green (s)	45.0	5.0	55.0
Yellow Time (s)	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	Ped	Max	Max
Walk Time (s)	35.0		
Flash Dont Walk (s)	10.0		
Pedestrian Calls (#/hr)	0		
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

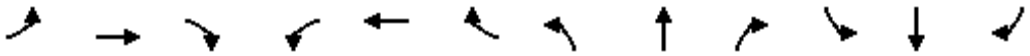
Intersection Summary



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	327	302	0	441	0	0
Future Volume (vph)	327	302	0	441	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	16	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.935					
Flt Protected	0.975					
Satd. Flow (prot)	1697	0	0	1760	0	0
Flt Permitted	0.975					
Satd. Flow (perm)	1697	0	0	1760	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	379			514	155	
Travel Time (s)	8.6			11.7	3.5	
Confl. Peds. (#/hr)	268		141			
Peak Hour Factor	0.97	0.97	0.87	0.87	0.92	0.92
Heavy Vehicles (%)	11%	2%	11%	4%	2%	2%
Bus Blockages (#/hr)	5	0	0	0	0	0
Parking (#/hr)				10		
Adj. Flow (vph)	337	311	0	507	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	648	0	0	507	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	14			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.94	0.92	1.00	1.05	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 66.5%		ICU Level of Service C	
Analysis Period (min) 15			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	756	78	301	874	238	82	172	227	176	64	62
Future Volume (vph)	31	756	78	301	874	238	82	172	227	176	64	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	12	13	10	16	16	12	16	16
Grade (%)		0%			7%			0%			0%	
Storage Length (ft)	107		0	315		0	120		0	100		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.98				0.91		0.98			0.98	
Frt		0.986				0.850		0.915			0.926	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3433	0	1613	3226	1491	1574	1526	0	1687	1558	0
Flt Permitted	0.137			0.227			0.671			0.257		
Satd. Flow (perm)	253	3433	0	385	3226	1363	1112	1526	0	456	1558	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)						251					47	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		403			838			1248			514	
Travel Time (s)		9.2			19.0			28.4			11.7	
Confl. Peds. (#/hr)			132			49			27			32
Peak Hour Factor	0.89	0.89	0.89	0.95	0.95	0.95	0.93	0.93	0.93	0.94	0.94	0.94
Heavy Vehicles (%)	3%	3%	3%	8%	8%	8%	7%	7%	7%	7%	7%	7%
Bus Blockages (#/hr)	0	9	0	0	0	0	0	1	0	0	6	0
Parking (#/hr)								10			5	
Adj. Flow (vph)	35	849	88	317	920	251	88	185	244	187	68	66
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	937	0	317	920	251	88	429	0	187	134	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.98	1.00	1.05	1.05	1.00	1.09	1.05	0.85	1.00	1.04	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	1		2	6			3			3	
Permitted Phases	1			6		6	3			3		
Detector Phase	5	1		2	6	6	3	3		3	3	
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)	11.0	41.0		11.0	46.0	46.0	40.0	40.0		40.0	40.0	
Total Split (s)	14.0	45.0		24.0	55.0	55.0	41.0	41.0		41.0	41.0	
Total Split (%)	12.7%	40.9%		21.8%	50.0%	50.0%	37.3%	37.3%		37.3%	37.3%	
Maximum Green (s)	8.0	39.0		18.0	49.0	49.0	35.0	35.0		35.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	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	6.0	
Lead/Lag	Lead	Lead		Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Max	Ped		Max	C-Max	C-Max	Ped	Ped		Ped	Ped	
Walk Time (s)		10.0			20.0	20.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		25.0			20.0	20.0	27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0			0	0	0	0		0	0	
Act Effct Green (s)	37.2	37.2		49.0	49.0	49.0	35.0	35.0		35.0	35.0	
Actuated g/C Ratio	0.34	0.34		0.45	0.45	0.45	0.32	0.32		0.32	0.32	
v/c Ratio	0.18	0.81		0.81	0.64	0.34	0.25	0.88		1.29	0.25	
Control Delay	22.0	34.2		32.6	12.0	1.7	30.2	57.1		205.8	19.3	
Queue Delay	0.0	13.6		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	22.0	47.8		32.6	12.0	1.7	30.2	57.1		205.8	19.3	
LOS	C	D		C	B	A	C	E		F	B	
Approach Delay		46.9			14.7			52.5			127.9	
Approach LOS		D			B			D			F	
Queue Length 50th (ft)	14	290		50	77	0	46	286		~169	44	
Queue Length 95th (ft)	m19	m365		m#234	m116	m6	88	#470		#311	94	
Internal Link Dist (ft)		323			758			1168			434	
Turn Bay Length (ft)	107			315			120			100		
Base Capacity (vph)	194	1217		393	1437	746	353	485		145	527	
Starvation Cap Reductn	0	276		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	22	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.18	1.00		0.81	0.65	0.34	0.25	0.88		1.29	0.25	

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 15 (14%), Referenced to phase 6:WBTL, Start of Green	

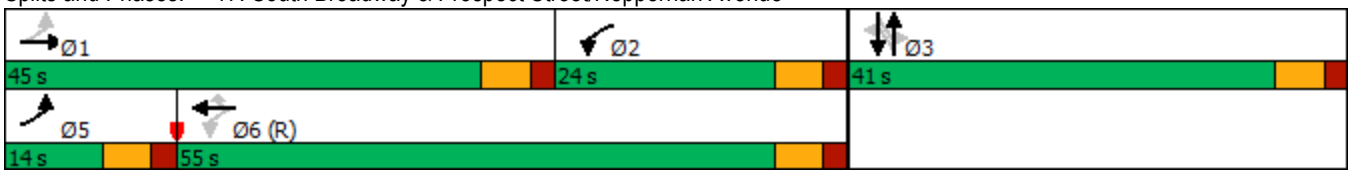
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.29	
Intersection Signal Delay: 41.1	Intersection LOS: D
Intersection Capacity Utilization 103.9%	ICU Level of Service G
Analysis Period (min) 15	

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

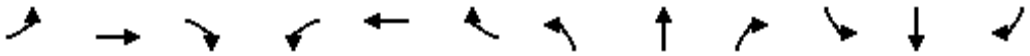
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

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

Splits and Phases: 17: South Broadway & Prospect Street/Nepperhan Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	21	190	73	140	77	40	44	420	71	40	378	25
Future Volume (vph)	21	190	73	140	77	40	44	420	71	40	378	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	14	14	14	16	16	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.965			0.979			0.982			0.992	
Flt Protected		0.996			0.973			0.996			0.996	
Satd. Flow (prot)	0	2029	0	0	1893	0	0	1755	0	0	1773	0
Flt Permitted		0.996			0.973			0.923			0.899	
Satd. Flow (perm)	0	2029	0	0	1893	0	0	1626	0	0	1600	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			8			10			4	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1171			125			465			1248	
Travel Time (s)		26.6			2.8			10.6			28.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)								10			10	
Adj. Flow (vph)	23	207	79	152	84	43	48	457	77	43	411	27
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	309	0	0	279	0	0	582	0	0	481	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	0.92	0.92	0.92	0.85	1.05	0.85	0.85	1.05	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Split	NA		Split	NA		Perm	NA		Perm	NA	
Protected Phases	4	4		3	3			1			1	
Permitted Phases							1			1		
Detector Phase	4	4		3	3		1	1		1	1	

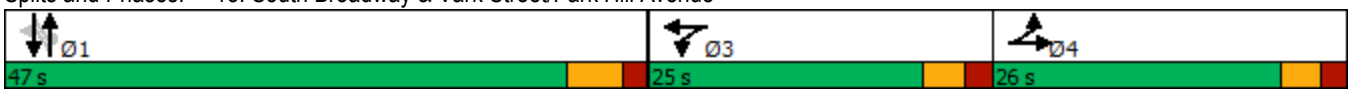


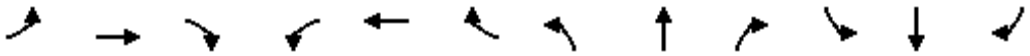
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	25.0	25.0		10.0	10.0		39.0	39.0		39.0	39.0	
Total Split (s)	26.0	26.0		25.0	25.0		47.0	47.0		47.0	47.0	
Total Split (%)	26.5%	26.5%		25.5%	25.5%		48.0%	48.0%		48.0%	48.0%	
Maximum Green (s)	21.0	21.0		20.0	20.0		41.0	41.0		41.0	41.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		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	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			6.0			6.0	
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Ped	Ped		Max	Max		Ped	Ped		Ped	Ped	
Walk Time (s)	5.0	5.0					20.0	20.0		20.0	20.0	
Flash Dont Walk (s)	15.0	15.0					13.0	13.0		13.0	13.0	
Pedestrian Calls (#/hr)	0	0					0	0		0	0	
Act Effct Green (s)		20.4			20.0			38.5			38.5	
Actuated g/C Ratio		0.21			0.21			0.41			0.41	
v/c Ratio		0.69			0.69			0.88			0.74	
Control Delay		42.0			44.3			41.6			31.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		42.0			44.3			41.6			31.8	
LOS		D			D			D			C	
Approach Delay		42.0			44.3			41.6			31.8	
Approach LOS		D			D			D			C	
Queue Length 50th (ft)		170			156			309			236	
Queue Length 95th (ft)		263			#263			#517			365	
Internal Link Dist (ft)		1091			45			385			1168	
Turn Bay Length (ft)												
Base Capacity (vph)		461			405			708			693	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.67			0.69			0.82			0.69	

Intersection Summary			
Area Type:	Other		
Cycle Length: 98			
Actuated Cycle Length: 95			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.88			
Intersection Signal Delay: 39.3		Intersection LOS: D	
Intersection Capacity Utilization 80.2%		ICU Level of Service D	
Analysis Period (min) 15			

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

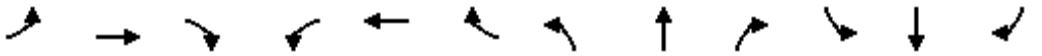
Splits and Phases: 18: South Broadway & Vark Street/Park Hill Avenue



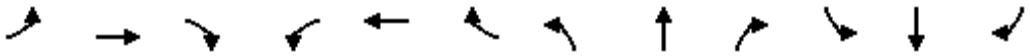


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	323	95	0	0	0	0	38	30	31	39	0
Future Volume (vph)	51	323	95	0	0	0	0	38	30	31	39	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	12	12	12	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.973						0.940				
Flt Protected		0.995									0.978	
Satd. Flow (prot)	0	2044	0	0	0	0	0	1751	0	0	1822	0
Flt Permitted		0.995									0.978	
Satd. Flow (perm)	0	2044	0	0	0	0	0	1751	0	0	1822	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		254			533			222			499	
Travel Time (s)		5.8			12.1			5.0			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	55	351	103	0	0	0	0	41	33	34	42	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	509	0	0	0	0	0	74	0	0	76	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.7%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	1125	23	325	1108	230	54	171	278	0	0	0
Future Volume (vph)	11	1125	23	325	1108	230	54	171	278	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	16	16	16	12	12	12
Grade (%)		7%			0%			0%			0%	
Storage Length (ft)	360		0	165		0	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.997				0.850		0.925				
Flt Protected	0.950			0.950				0.995				
Satd. Flow (prot)	1651	4893	0	1770	5085	1520	0	1652	0	0	0	0
Flt Permitted	0.147			0.115				0.995				
Satd. Flow (perm)	255	4893	0	214	5085	1520	0	1652	0	0	0	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		3										
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		838			378			724			411	
Travel Time (s)		19.0			8.6			16.5			9.3	
Peak Hour Factor	0.89	0.89	0.89	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	10	0	0	0	0	0	0
Parking (#/hr)								10				
Adj. Flow (vph)	12	1264	26	342	1166	242	59	186	302	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	1290	0	342	1166	242	0	547	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.05	1.05	1.00	1.00	1.05	0.85	1.05	0.85	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2				
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru				
Leading Detector (ft)	20	100		20	100	20	20	100				
Trailing Detector (ft)	0	0		0	0	0	0	0				
Detector 1 Position(ft)	0	0		0	0	0	0	0				
Detector 1 Size(ft)	20	6		20	6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA				
Protected Phases	5	2		1	6			3				
Permitted Phases	2			6		6	3					
Detector Phase	5	2		1	6	6	3	3				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0				
Minimum Split (s)	11.0	46.0		11.0	46.0	46.0	40.0	40.0				
Total Split (s)	21.0	48.0		21.0	48.0	48.0	41.0	41.0				
Total Split (%)	19.1%	43.6%		19.1%	43.6%	43.6%	37.3%	37.3%				
Maximum Green (s)	15.0	42.0		15.0	42.0	42.0	35.0	35.0				
Yellow Time (s)	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				
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0				
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0		6.0				
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0				
Recall Mode	Max	Ped		Max	C-Max	C-Max	Ped	Ped				
Walk Time (s)		20.0			20.0	20.0	7.0	7.0				
Flash Dont Walk (s)		20.0			20.0	20.0	27.0	27.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	57.0	42.0		57.0	42.0	42.0		35.0				
Actuated g/C Ratio	0.52	0.38		0.52	0.38	0.38		0.32				
v/c Ratio	0.04	0.69		1.06	0.60	0.42		1.04				
Control Delay	4.7	13.3		106.5	11.7	12.3		88.2				
Queue Delay	0.0	0.0		0.0	0.3	0.5		0.0				
Total Delay	4.7	13.3		106.5	12.0	12.8		88.2				
LOS	A	B		F	B	B		F				
Approach Delay		13.3			30.6			88.2				
Approach LOS		B			C			F				
Queue Length 50th (ft)	1	148		~213	61	35		~419				
Queue Length 95th (ft)	m2	m168		m#392	87	m58		#629				
Internal Link Dist (ft)		758			298			644			331	
Turn Bay Length (ft)	360			165								
Base Capacity (vph)	322	1870		323	1941	580		525				
Starvation Cap Reductn	0	0		0	265	106		0				
Spillback Cap Reductn	0	17		0	0	0		0				
Storage Cap Reductn	0	0		0	0	0		0				
Reduced v/c Ratio	0.04	0.70		1.06	0.70	0.51		1.04				

Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 10 (9%), Referenced to phase 6:WBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.06	

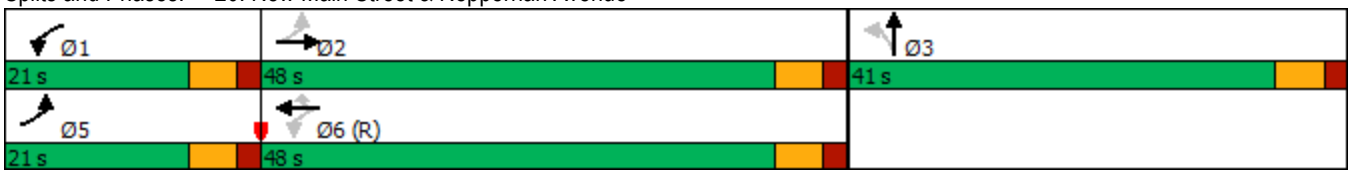
Intersection Signal Delay: 33.1	Intersection LOS: C
Intersection Capacity Utilization 84.3%	ICU Level of Service E
Analysis Period (min) 15	

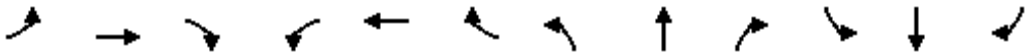
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

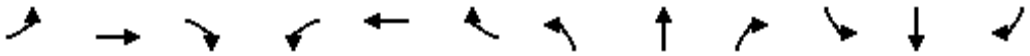
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 20: New Main Street & Nepperhan Avenue





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	55	357	112	235	310	39	77	124	81	0	0	0
Future Volume (vph)	55	357	112	235	310	39	77	124	81	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	9	9	15	10	11	11	10	10	10	12	12	12
Storage Length (ft)	75		100	70		0	0		100	0		0
Storage Lanes	1		1	1		0	0		1	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850		0.983				0.850			
Flt Protected	0.950			0.950				0.981				
Satd. Flow (prot)	1547	1609	1692	1620	1694	0	0	1657	1436	0	0	0
Flt Permitted	0.427			0.418				0.981				
Satd. Flow (perm)	695	1609	1692	713	1694	0	0	1657	1436	0	0	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			105		8				88			
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		436			2061			549			169	
Travel Time (s)		9.9			46.8			12.5			3.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	5%	5%	5%	4%	4%	4%	5%	5%	5%	2%	2%	2%
Bus Blockages (#/hr)	0	3	0	0	6	0	0	0	0	0	0	0
Adj. Flow (vph)	60	388	122	255	337	42	84	135	88	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	60	388	122	255	379	0	0	219	88	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.14	1.16	0.88	1.09	1.08	1.04	1.09	1.09	1.09	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2	1			
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru	Right			
Leading Detector (ft)	20	100	20	20	100		20	100	20			
Trailing Detector (ft)	0	0	0	0	0		0	0	0			
Detector 1 Position(ft)	0	0	0	0	0		0	0	0			
Detector 1 Size(ft)	20	6	20	20	6		20	6	20			
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex			
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0			
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0			
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0			
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA	Perm	pm+pt	NA		Perm	NA	Prot			
Protected Phases	5	2		1	6			8	8			
Permitted Phases	2		2	6			8					
Detector Phase	5	2	2	1	6		8	8	8			
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0			
Minimum Split (s)	10.0	37.0	37.0	10.0	37.0		28.0	28.0	28.0			
Total Split (s)	17.0	51.0	51.0	17.0	51.0		32.0	32.0	32.0			
Total Split (%)	17.0%	51.0%	51.0%	17.0%	51.0%		32.0%	32.0%	32.0%			
Maximum Green (s)	12.0	46.0	46.0	12.0	46.0		27.0	27.0	27.0			
Yellow Time (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0			
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0		2.0	2.0	2.0			
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0			0.0	0.0			
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0			5.0	5.0			
Lead/Lag	Lead	Lag	Lag	Lead	Lag							
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes							
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0			
Recall Mode	Max	Ped	Ped	Max	C-Max		Ped	Ped	Ped			
Walk Time (s)		20.0	20.0		20.0		10.0	10.0	10.0			
Flash Dont Walk (s)		12.0	12.0		12.0		13.0	13.0	13.0			
Pedestrian Calls (#/hr)		0	0		0		0	0	0			
Act Effct Green (s)	61.4	46.0	46.0	61.4	46.0			23.6	23.6			
Actuated g/C Ratio	0.61	0.46	0.46	0.61	0.46			0.24	0.24			
v/c Ratio	0.11	0.52	0.15	0.44	0.48			0.56	0.22			
Control Delay	4.1	17.7	4.8	4.7	6.8			39.8	8.0			
Queue Delay	0.0	0.0	0.0	0.0	0.0			0.0	0.0			
Total Delay	4.1	17.7	4.8	4.7	6.8			39.8	8.0			
LOS	A	B	A	A	A			D	A			
Approach Delay		13.5			5.9			30.7				
Approach LOS		B			A			C				
Queue Length 50th (ft)	9	149	12	14	35			124	0			
Queue Length 95th (ft)	m19	210	31	m27	m53			194	38			
Internal Link Dist (ft)		356			1981			469			89	
Turn Bay Length (ft)	75		100	70					100			
Base Capacity (vph)	558	740	835	578	783			447	451			
Starvation Cap Reductn	0	0	0	0	0			0	0			
Spillback Cap Reductn	0	0	0	0	0			0	0			
Storage Cap Reductn	0	0	0	0	0			0	0			
Reduced v/c Ratio	0.11	0.52	0.15	0.44	0.48			0.49	0.20			

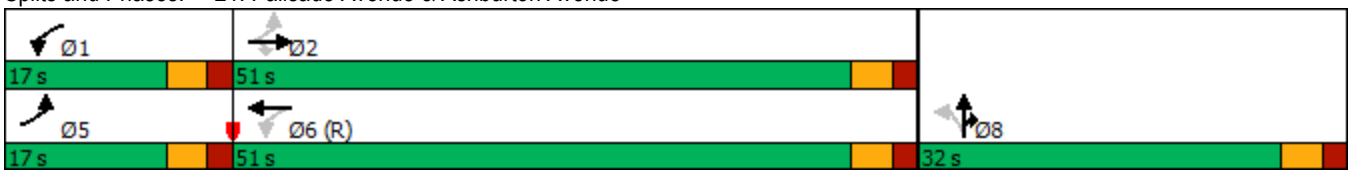
Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 94 (94%), Referenced to phase 6:WBTL, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.56			
Intersection Signal Delay: 13.8		Intersection LOS: B	

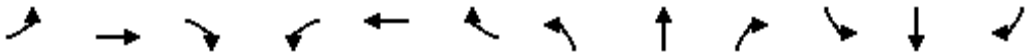
Intersection Capacity Utilization 55.1% ICU Level of Service B

Analysis Period (min) 15

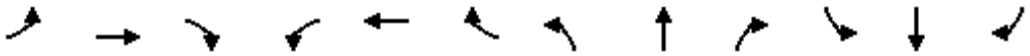
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 21: Palisade Avenue & Ashburton Avenue





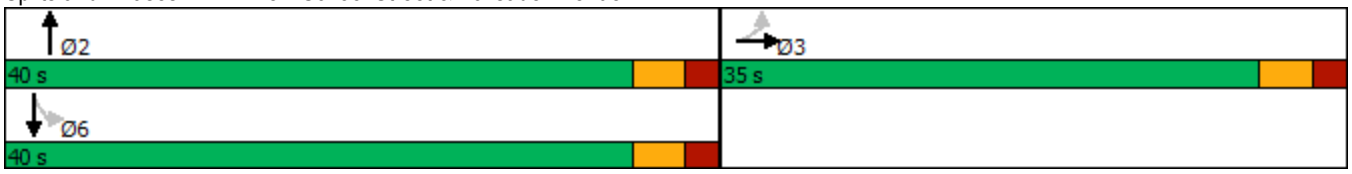
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	226	27	0	0	0	0	147	54	88	304	0
Future Volume (vph)	131	226	27	0	0	0	0	147	54	88	304	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	12	12	12	16	16	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.991						0.964				
Flt Protected		0.983									0.989	
Satd. Flow (prot)	0	1799	0	0	0	0	0	2035	0	0	2071	0
Flt Permitted		0.983									0.876	
Satd. Flow (perm)	0	1799	0	0	0	0	0	2035	0	0	1835	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6						33				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		533			736			222			1248	
Travel Time (s)		12.1			16.7			5.0			28.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	2	0
Parking (#/hr)		5										
Adj. Flow (vph)	142	246	29	0	0	0	0	160	59	96	330	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	417	0	0	0	0	0	219	0	0	426	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	1.01	0.85	1.00	1.00	1.00	0.85	0.85	0.85	0.85	0.86	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		3						2			6	
Permitted Phases	3									6		



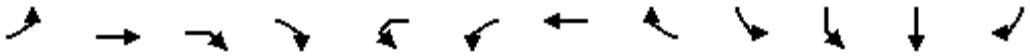
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3	3						2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0		5.0	5.0	
Minimum Split (s)	34.0	34.0						39.0		10.0	10.0	
Total Split (s)	35.0	35.0						40.0		40.0	40.0	
Total Split (%)	46.7%	46.7%						53.3%		53.3%	53.3%	
Maximum Green (s)	30.0	30.0						35.0		35.0	35.0	
Yellow Time (s)	3.0	3.0						3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0						2.0		2.0	2.0	
Lost Time Adjust (s)		0.0						0.0			0.0	
Total Lost Time (s)		5.0						5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Recall Mode	Ped	Ped						Ped		Max	Max	
Walk Time (s)	9.0	9.0						14.0				
Flash Dont Walk (s)	20.0	20.0						20.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)		29.2						35.0			35.0	
Actuated g/C Ratio		0.39						0.47			0.47	
v/c Ratio		0.59						0.22			0.49	
Control Delay		21.6						10.5			16.0	
Queue Delay		0.0						0.0			0.0	
Total Delay		21.6						10.5			16.0	
LOS		C						B			B	
Approach Delay		21.6						10.5			16.0	
Approach LOS		C						B			B	
Queue Length 50th (ft)		145						47			127	
Queue Length 95th (ft)		232						88			207	
Internal Link Dist (ft)		453			656			142			1168	
Turn Bay Length (ft)												
Base Capacity (vph)		730						977			865	
Starvation Cap Reductn		0						0			0	
Spillback Cap Reductn		0						0			0	
Storage Cap Reductn		0						0			0	
Reduced v/c Ratio		0.57						0.22			0.49	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 74.2			
Natural Cycle: 75			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.59			
Intersection Signal Delay: 17.0		Intersection LOS: B	
Intersection Capacity Utilization 65.2%		ICU Level of Service C	
Analysis Period (min) 15			

Splits and Phases: 22: New School Street & Palisade Avenue



Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	SBL2	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	67	1258	71	7	55	39	1479	136	82	26	15	184
Future Volume (vph)	67	1258	71	7	55	39	1479	136	82	26	15	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	11	12	11	16	16	16	16
Grade (%)		0%					-5%				0%	
Storage Length (ft)	100		0			210		0		0		0
Storage Lanes	1		0			1		1		0		0
Taper Length (ft)	25					25				25		
Lane Util. Factor	1.00	0.91	0.91	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Frt		0.991						0.850			0.919	
Flt Protected	0.950					0.950					0.983	
Satd. Flow (prot)	1711	5040	0	0	0	1753	5212	1569	0	0	1907	0
Flt Permitted	0.091					0.091					0.983	
Satd. Flow (perm)	164	5040	0	0	0	168	5212	1569	0	0	1907	0
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)		1						143			72	
Link Speed (mph)		30					30				30	
Link Distance (ft)		378					492				509	
Travel Time (s)		8.6					11.2				11.6	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.95	0.95	0.95	0.95	0.92	0.92	0.92	0.92
Adj. Flow (vph)	75	1413	80	8	58	41	1557	143	89	28	16	200
Shared Lane Traffic (%)												
Lane Group Flow (vph)	75	1501	0	0	0	99	1557	143	0	0	333	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Left	Right	Left	Left	Left	Right
Median Width(ft)		12					12				0	
Link Offset(ft)		0					0				0	
Crosswalk Width(ft)		16					16				16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	0.97	1.01	0.97	1.01	0.85	0.85	0.85	0.85
Turning Speed (mph)	15		9	9	15	15		9	15	15		9
Number of Detectors	1	2			1	1	2	1	1	1	2	
Detector Template	Left	Thru			Left	Left	Thru	Right	Left	Left	Thru	
Leading Detector (ft)	20	100			20	20	100	20	20	20	100	
Trailing Detector (ft)	0	0			0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0			0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6			20	20	6	20	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94					94				94	
Detector 2 Size(ft)		6					6				6	
Detector 2 Type		Cl+Ex					Cl+Ex				Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0					0.0				0.0	
Turn Type	pm+pt	NA			pm+pt	pm+pt	NA	Perm	Perm	Perm	NA	



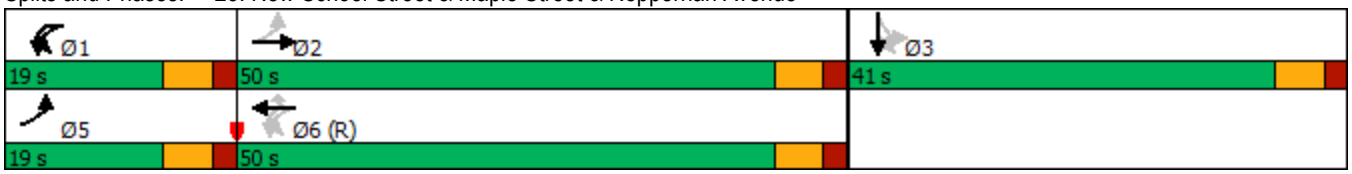
Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	SBL2	SBL	SBT	SBR
Protected Phases	5	2			1	1	6				3	
Permitted Phases	2				6	6		6	3	3		
Detector Phase	5	2			1	1	6	6	3	3	3	
Switch Phase												
Minimum Initial (s)	5.0	5.0			5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	11.0	46.0			11.0	11.0	46.0	46.0	40.0	40.0	40.0	
Total Split (s)	19.0	50.0			19.0	19.0	50.0	50.0	41.0	41.0	41.0	
Total Split (%)	17.3%	45.5%			17.3%	17.3%	45.5%	45.5%	37.3%	37.3%	37.3%	
Maximum Green (s)	13.0	44.0			13.0	13.0	44.0	44.0	35.0	35.0	35.0	
Yellow Time (s)	4.0	4.0			4.0	4.0	4.0	4.0	4.0	4.0	4.0	
All-Red Time (s)	2.0	2.0			2.0	2.0	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0				0.0	0.0	0.0			0.0	
Total Lost Time (s)	6.0	6.0				6.0	6.0	6.0			6.0	
Lead/Lag	Lead	Lag			Lead	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes			Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Recall Mode	Max	Ped			Max	Max	C-Max	C-Max	Ped	Ped	Ped	
Walk Time (s)		20.0					20.0	20.0	7.0	7.0	7.0	
Flash Dont Walk (s)		20.0					20.0	20.0	27.0	27.0	27.0	
Pedestrian Calls (#/hr)		0					0	0	0	0	0	
Act Effct Green (s)	58.0	44.0				58.0	44.0	44.0			34.0	
Actuated g/C Ratio	0.53	0.40				0.53	0.40	0.40			0.31	
v/c Ratio	0.27	0.74				0.34	0.75	0.20			0.52	
Control Delay	21.9	12.7				15.9	31.0	4.2			27.6	
Queue Delay	0.0	0.2				0.0	0.0	0.0			0.0	
Total Delay	21.9	12.9				15.9	31.0	4.2			27.6	
LOS	C	B				B	C	A			C	
Approach Delay		13.4					28.0				27.6	
Approach LOS		B					C				C	
Queue Length 50th (ft)	15	93				29	339	0			150	
Queue Length 95th (ft)	m36	m131				64	397	38			241	
Internal Link Dist (ft)		298					412				429	
Turn Bay Length (ft)	100					210						
Base Capacity (vph)	283	2016				290	2084	713			655	
Starvation Cap Reductn	0	89				0	0	0			0	
Spillback Cap Reductn	0	0				0	0	0			0	
Storage Cap Reductn	0	0				0	0	0			0	
Reduced v/c Ratio	0.27	0.78				0.34	0.75	0.20			0.51	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 10 (9%), Referenced to phase 6:WBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.75			
Intersection Signal Delay: 21.8		Intersection LOS: C	
Intersection Capacity Utilization 65.8%		ICU Level of Service C	

Analysis Period (min) 15

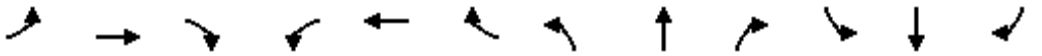
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 23: New School Street & Maple Street & Nepperhan Avenue

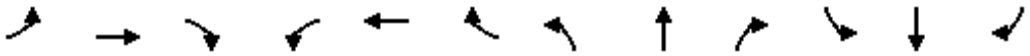


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1340	0	1	1662	47	129
Future Volume (vph)	1340	0	1	1662	47	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	15	15	15
Grade (%)	5%			-5%	0%	
Storage Length (ft)		0	120		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.91	0.91	1.00	0.91	1.00	1.00
Frt					0.901	
Flt Protected			0.950		0.987	
Satd. Flow (prot)	4752	0	1814	5673	1822	0
Flt Permitted			0.950		0.987	
Satd. Flow (perm)	4752	0	1814	5673	1822	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	492			401	154	
Travel Time (s)	11.2			9.1	3.5	
Peak Hour Factor	0.89	0.89	0.95	0.95	0.92	0.92
Bus Blockages (#/hr)	0	0	0	8	0	0
Parking (#/hr)	5					
Adj. Flow (vph)	1506	0	1	1749	51	140
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1506	0	1	1749	191	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	15	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.03	0.97	0.87	0.88	0.88
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	80	381	33	109	361	72	67	316	68	127	309	84
Future Volume (vph)	80	381	33	109	361	72	67	316	68	127	309	84
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	10	10	11	11	10	13	13	10	12	11
Storage Length (ft)	150		80	120		0	185		0	120		0
Storage Lanes	1		1	1		0	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Frt			0.850		0.975			0.973				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1620	1766	1449	1636	1739	0	1636	3524	0	1589	3406	1473
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1620	1766	1449	1636	1739	0	1636	3524	0	1589	3406	1473
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			98		10			25				98
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2061			390			1273			212	
Travel Time (s)		46.8			8.9			28.9			4.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	4%	4%	4%	3%	3%	3%	3%	3%	3%	6%	6%	6%
Adj. Flow (vph)	87	414	36	118	392	78	73	343	74	138	336	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	87	414	36	118	470	0	73	417	0	138	336	91
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			10			10	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.09	1.09	1.04	1.04	1.09	0.96	0.96	1.09	1.00	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	1
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	20
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	0
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Prot	NA	pm+ov	Prot	NA		Prot	NA		Prot	NA	pm+ov



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4									6
Detector Phase	7	4	5	3	8		5	2		1	6	7
Switch Phase												
Minimum Initial (s)	5.0	10.0	5.0	5.0	10.0		5.0	10.0		5.0	10.0	5.0
Minimum Split (s)	11.0	36.0	11.0	11.0	36.0		11.0	30.0		11.0	30.0	11.0
Total Split (s)	16.0	36.0	16.0	16.0	36.0		16.0	32.0		16.0	32.0	16.0
Total Split (%)	16.0%	36.0%	16.0%	16.0%	36.0%		16.0%	32.0%		16.0%	32.0%	16.0%
Maximum Green (s)	10.0	30.0	10.0	10.0	30.0		10.0	26.0		10.0	26.0	10.0
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	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lead	Lag		Lead	Lag		Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	3.0
Recall Mode	None	Ped	None	None	Ped		None	C-Max		None	Ped	None
Walk Time (s)		7.0			7.0			7.0			7.0	
Flash Dont Walk (s)		23.0			23.0			17.0			17.0	
Pedestrian Calls (#/hr)		0			0			0			0	
Act Effct Green (s)	9.0	30.0	44.8	9.6	30.6		8.8	26.3		10.1	30.0	45.0
Actuated g/C Ratio	0.09	0.30	0.45	0.10	0.31		0.09	0.26		0.10	0.30	0.45
v/c Ratio	0.60	0.78	0.05	0.75	0.87		0.51	0.44		0.86	0.33	0.13
Control Delay	82.6	27.9	0.4	73.1	51.2		55.9	30.7		88.7	29.8	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	82.6	27.9	0.4	73.1	51.2		55.9	30.7		88.7	29.8	3.8
LOS	F	C	A	E	D		E	C		F	C	A
Approach Delay		34.9			55.6			34.4			40.0	
Approach LOS		C			E			C			D	
Queue Length 50th (ft)	56	225	0	74	280		45	110		88	92	0
Queue Length 95th (ft)	107	#384	m1	#162	#467		90	156		#200	134	26
Internal Link Dist (ft)		1981			310			1193			132	
Turn Bay Length (ft)	150		80	120			185			120		
Base Capacity (vph)	162	529	719	163	538		163	944		160	1021	730
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.54	0.78	0.05	0.72	0.87		0.45	0.44		0.86	0.33	0.12

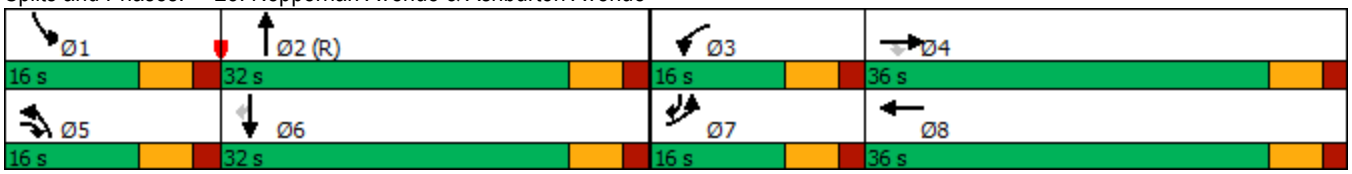
Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Offset: 0 (0%), Referenced to phase 2:NBT, Start of Green			
Natural Cycle: 90			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 41.7		Intersection LOS: D	
Intersection Capacity Utilization 65.7%		ICU Level of Service C	

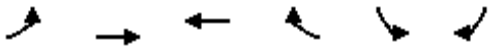
Analysis Period (min) 15

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

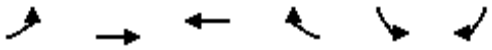
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 25: Nepperhan Avenue & Ashburton Avenue





Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	408	451	0	43	36
Future Volume (vph)	0	408	451	0	43	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	16
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt					0.939	
Flt Protected					0.973	
Satd. Flow (prot)	0	3278	3504	0	1929	0
Flt Permitted					0.973	
Satd. Flow (perm)	0	3278	3504	0	1929	0
Right Turn on Red				No		Yes
Satd. Flow (RTOR)					39	
Link Speed (mph)		30	30		30	
Link Distance (ft)		427	310		81	
Travel Time (s)		9.7	7.0		1.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	6	5	0	0	0
Parking (#/hr)		5				
Adj. Flow (vph)	0	443	490	0	47	39
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	443	490	0	86	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.10	1.01	1.00	0.85	0.85
Turning Speed (mph)	15			9	15	9
Number of Detectors		2	2		1	
Detector Template		Thru	Thru		Left	
Leading Detector (ft)		100	100		20	
Trailing Detector (ft)		0	0		0	
Detector 1 Position(ft)		0	0		0	
Detector 1 Size(ft)		6	6		20	
Detector 1 Type		Cl+Ex	Cl+Ex		Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)		0.0	0.0		0.0	
Detector 1 Queue (s)		0.0	0.0		0.0	
Detector 1 Delay (s)		0.0	0.0		0.0	
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type		NA	NA		Prot	
Protected Phases		2	6		3	
Permitted Phases						

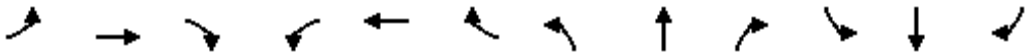


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Detector Phase		2	6		3	
Switch Phase						
Minimum Initial (s)		5.0	5.0		5.0	
Minimum Split (s)		10.0	10.0		35.0	
Total Split (s)		35.0	35.0		35.0	
Total Split (%)		33.3%	33.3%		33.3%	
Maximum Green (s)		30.0	30.0		30.0	
Yellow Time (s)		3.0	3.0		3.0	
All-Red Time (s)		2.0	2.0		2.0	
Lost Time Adjust (s)		0.0	0.0		0.0	
Total Lost Time (s)		5.0	5.0		5.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)		3.0	3.0		3.0	
Recall Mode		Max	Max		None	
Walk Time (s)					7.0	
Flash Dont Walk (s)					23.0	
Pedestrian Calls (#/hr)					5	
Act Effct Green (s)		30.5	30.5		10.7	
Actuated g/C Ratio		0.36	0.36		0.13	
v/c Ratio		0.37	0.39		0.31	
Control Delay		23.2	23.2		22.8	
Queue Delay		0.0	0.0		0.0	
Total Delay		23.2	23.2		22.8	
LOS		C	C		C	
Approach Delay		23.2	23.2		22.8	
Approach LOS		C	C		C	
Queue Length 50th (ft)		86	96		23	
Queue Length 95th (ft)		177	194		61	
Internal Link Dist (ft)		347	230		1	
Turn Bay Length (ft)						
Base Capacity (vph)		1184	1265		722	
Starvation Cap Reductn		0	0		0	
Spillback Cap Reductn		0	0		0	
Storage Cap Reductn		0	0		0	
Reduced v/c Ratio		0.37	0.39		0.12	

Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 84.5			
Natural Cycle: 65			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.39			
Intersection Signal Delay: 23.2		Intersection LOS: C	
Intersection Capacity Utilization 25.4%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 26: Nepperhan Avenue & Copcutt Lane

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	237	107	24	168	0	53	0	1403	66	116	1471	0
Future Volume (vph)	237	107	24	168	0	53	0	1403	66	116	1471	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	16	16	16	12	12	12	11	12	12
Grade (%)		0%			0%			5%			0%	
Storage Length (ft)	0		0	0		0	0		0	140		0
Storage Lanes	1		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Frt		0.973			0.968			0.993				
Flt Protected	0.950				0.963					0.950		
Satd. Flow (prot)	1454	1752	0	0	1722	0	0	4923	0	1711	5085	0
Flt Permitted	0.649				0.679					0.084		
Satd. Flow (perm)	993	1752	0	0	1214	0	0	4923	0	151	5085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			89			7				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		736			401			401			720	
Travel Time (s)		16.7			9.1			9.1			16.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.89	0.89	0.89	0.95	0.95	0.95
Parking (#/hr)	10				5							
Adj. Flow (vph)	258	116	26	183	0	58	0	1576	74	122	1548	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	258	142	0	0	241	0	0	1650	0	122	1548	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.28	1.04	1.04	0.85	1.01	0.85	1.03	1.03	1.03	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2			2		1	2	
Detector Template	Left	Thru		Left	Thru			Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100			100		20	100	
Trailing Detector (ft)	0	0		0	0			0		0	0	
Detector 1 Position(ft)	0	0		0	0			0		0	0	
Detector 1 Size(ft)	20	6		20	6			6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA			NA		pm+pt	NA	
Protected Phases		3			3			2		1	6	
Permitted Phases	3			3						6		
Detector Phase	3	3		3	3			2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Minimum Split (s)	40.0	40.0		40.0	40.0			39.0		11.0	39.0	
Total Split (s)	41.0	41.0		41.0	41.0			48.0		21.0	69.0	
Total Split (%)	37.3%	37.3%		37.3%	37.3%			43.6%		19.1%	62.7%	
Maximum Green (s)	35.0	35.0		35.0	35.0			42.0		15.0	63.0	
Yellow Time (s)	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	
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		Lead		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Recall Mode	Ped	Ped		Ped	Ped			Ped		Max	Ped	
Walk Time (s)	7.0	7.0		7.0	7.0			20.0			20.0	
Flash Dont Walk (s)	27.0	27.0		27.0	27.0			13.0			13.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	34.6	34.6			34.6			41.8		62.8	62.8	
Actuated g/C Ratio	0.32	0.32			0.32			0.38		0.57	0.57	
v/c Ratio	0.82	0.25			0.54			0.87		0.41	0.53	
Control Delay	57.4	27.1			24.3			37.7		18.1	15.1	
Queue Delay	0.0	0.0			0.0			0.0		0.0	0.0	
Total Delay	57.4	27.1			24.3			37.7		18.1	15.1	
LOS	E	C			C			D		B	B	
Approach Delay		46.6			24.3			37.7			15.3	
Approach LOS		D			C			D			B	
Queue Length 50th (ft)	167	68			86			389		37	232	
Queue Length 95th (ft)	#309	120			169			448		85	272	
Internal Link Dist (ft)		656			321			321			640	
Turn Bay Length (ft)										140		
Base Capacity (vph)	317	567			448			1894		300	2928	
Starvation Cap Reductn	0	0			0			0		0	0	
Spillback Cap Reductn	0	0			0			0		0	0	
Storage Cap Reductn	0	0			0			0		0	0	
Reduced v/c Ratio	0.81	0.25			0.54			0.87		0.41	0.53	

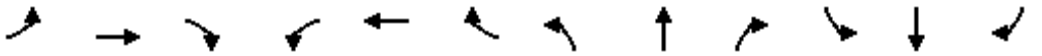
Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 109.4			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.87			
Intersection Signal Delay: 28.3		Intersection LOS: C	
Intersection Capacity Utilization 80.7%		ICU Level of Service D	

Analysis Period (min) 15

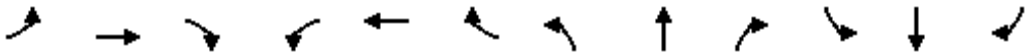
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 27: Nepperhan Avenue & Elm Street



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	168	1005	112	120	998	30	15	91	104	27	129	87
Future Volume (vph)	168	1005	112	120	998	30	15	91	104	27	129	87
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	13	13	10	13	13	14	14	14	12	12	12
Storage Length (ft)	105		0	130		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.985			0.996			0.933			0.951	
Flt Protected	0.950			0.950				0.997			0.995	
Satd. Flow (prot)	1652	3602	0	1652	3621	0	0	1848	0	0	1524	0
Flt Permitted	0.162			0.117				0.969			0.947	
Satd. Flow (perm)	282	3602	0	203	3621	0	0	1796	0	0	1450	0
Right Turn on Red			No			Yes			Yes			No
Satd. Flow (RTOR)					4			44				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1429			1109			369			272	
Travel Time (s)		32.5			25.2			8.4			6.2	
Peak Hour Factor	0.89	0.89	0.89	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	3	0	0	0	0	0	3	0
Parking (#/hr)											5	
Adj. Flow (vph)	189	1129	126	126	1051	32	16	99	113	29	140	95
Shared Lane Traffic (%)												
Lane Group Flow (vph)	189	1255	0	126	1083	0	0	228	0	0	264	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	0.96	0.96	1.09	0.97	0.96	0.92	0.92	0.92	1.00	1.20	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru		Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

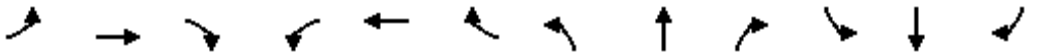


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA		Perm	NA	
Protected Phases	5	2		1	6			3			3	
Permitted Phases	2			6			3			3		
Detector Phase	5	2		1	6		3	3		3	3	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	16.0		11.0	28.0		35.0	35.0		35.0	35.0	
Total Split (s)	16.0	59.0		16.0	59.0		35.0	35.0		35.0	35.0	
Total Split (%)	14.5%	53.6%		14.5%	53.6%		31.8%	31.8%		31.8%	31.8%	
Maximum Green (s)	10.0	53.0		10.0	53.0		29.0	29.0		29.0	29.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0			6.0	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Max		None	Ped		Ped	Ped		Ped	Ped	
Walk Time (s)					10.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)					12.0		22.0	22.0		22.0	22.0	
Pedestrian Calls (#/hr)					0		0	0		0	0	
Act Effct Green (s)	63.9	54.4		62.1	53.5			29.0			29.0	
Actuated g/C Ratio	0.58	0.49		0.56	0.49			0.26			0.26	
v/c Ratio	0.67	0.71		0.56	0.61			0.45			0.69	
Control Delay	23.3	24.5		26.4	38.0			30.4			47.2	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	23.3	24.5		26.4	38.0			30.4			47.2	
LOS	C	C		C	D			C			D	
Approach Delay		24.4			36.8			30.4			47.2	
Approach LOS		C			D			C			D	
Queue Length 50th (ft)	52	350		67	359			108			168	
Queue Length 95th (ft)	98	433		122	428			183			263	
Internal Link Dist (ft)		1349			1029			289			192	
Turn Bay Length (ft)	105			130								
Base Capacity (vph)	289	1780		248	1763			505			382	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.65	0.71		0.51	0.61			0.45			0.69	

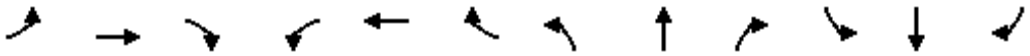
Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 69 (63%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.71			
Intersection Signal Delay: 31.5		Intersection LOS: C	

Intersection Capacity Utilization 73.2% ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 28: Walnut Street & Yonkers Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	1047	51	115	1137	29	11	10	73	0	0	0
Future Volume (vph)	38	1047	51	115	1137	29	11	10	73	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	11	11	10	12	12	15	15	15	12	12	12
Storage Length (ft)	85		0	85		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.993			0.996			0.895				
Flt Protected	0.950			0.950				0.994				
Satd. Flow (prot)	1652	3397	0	1652	3504	0	0	1823	0	0	0	0
Flt Permitted	0.228			0.095				0.994				
Satd. Flow (perm)	396	3397	0	165	3504	0	0	1823	0	0	0	0
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		6			5							
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		1109			370			410			164	
Travel Time (s)		25.2			8.4			9.3			3.7	
Peak Hour Factor	0.89	0.89	0.89	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	3	0	0	0	0	0	0	0
Adj. Flow (vph)	43	1176	57	121	1197	31	12	11	79	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	1233	0	121	1228	0	0	102	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.04	1.04	1.09	1.01	1.00	0.88	0.88	0.88	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2				
Detector Template	Left	Thru		Left	Thru		Left	Thru				
Leading Detector (ft)	20	100		20	100		20	100				
Trailing Detector (ft)	0	0		0	0		0	0				
Detector 1 Position(ft)	0	0		0	0		0	0				
Detector 1 Size(ft)	20	6		20	6		20	6				
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	Perm	NA		pm+pt	NA		Perm	NA				



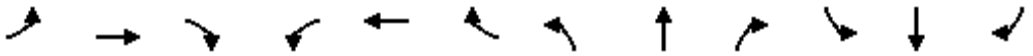
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		2		1	6			3				
Permitted Phases	2			6			3					
Detector Phase	2	2		1	6		3	3				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		10.0	10.0				
Minimum Split (s)	11.0	11.0		11.0	11.0		32.0	32.0				
Total Split (s)	57.0	57.0		21.0	78.0		32.0	32.0				
Total Split (%)	51.8%	51.8%		19.1%	70.9%		29.1%	29.1%				
Maximum Green (s)	51.0	51.0		15.0	72.0		26.0	26.0				
Yellow Time (s)	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				
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0				
Total Lost Time (s)	6.0	6.0		6.0	6.0			6.0				
Lead/Lag	Lag	Lag		Lead								
Lead-Lag Optimize?	Yes	Yes		Yes								
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0				
Recall Mode	C-Max	C-Max		Max	Max		Ped	Ped				
Walk Time (s)							7.0	7.0				
Flash Dont Walk (s)							19.0	19.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)	51.0	51.0		72.0	72.0			26.0				
Actuated g/C Ratio	0.46	0.46		0.65	0.65			0.24				
v/c Ratio	0.23	0.78		0.39	0.54			0.24				
Control Delay	9.4	17.5		29.8	6.4			35.8				
Queue Delay	0.0	0.0		0.0	0.1			0.0				
Total Delay	9.4	17.5		29.8	6.5			35.8				
LOS	A	B		C	A			D				
Approach Delay		17.3			8.6			35.8				
Approach LOS		B			A			D				
Queue Length 50th (ft)	9	426		31	81			59				
Queue Length 95th (ft)	m11	515		m72	77			106				
Internal Link Dist (ft)		1029			290			330			84	
Turn Bay Length (ft)	85			85								
Base Capacity (vph)	183	1578		310	2295			430				
Starvation Cap Reductn	0	0		0	205			0				
Spillback Cap Reductn	0	0		0	0			0				
Storage Cap Reductn	0	0		0	0			0				
Reduced v/c Ratio	0.23	0.78		0.39	0.59			0.24				

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 103 (94%), Referenced to phase 2:EBTL, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 13.7		Intersection LOS: B	
Intersection Capacity Utilization 60.3%		ICU Level of Service B	

Analysis Period (min) 15

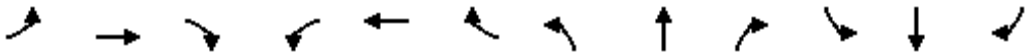
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 29: Prescott Street & Yonkers Avenue



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1079	41	8	1246	463	12	0	2	627	1	23
Future Volume (vph)	0	1079	41	8	1246	463	12	0	2	627	1	23
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	14	12	12	12	11	11	12
Storage Length (ft)	0		0	0		250	0		0	0		0
Storage Lanes	0		0	0		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.995				0.850		0.865			0.989	
Flt Protected							0.950			0.950	0.956	
Satd. Flow (prot)	0	3404	0	0	3539	1689	1770	0	0	1625	1598	0
Flt Permitted					0.946		0.950			0.950	0.956	
Satd. Flow (perm)	0	3404	0	0	3348	1689	1770	0	0	1625	1598	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		5				487		169			3	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		370			325			129			377	
Travel Time (s)		8.4			7.4			2.9			8.6	
Peak Hour Factor	0.89	0.89	0.89	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	3	0
Adj. Flow (vph)	0	1212	46	8	1312	487	13	0	2	682	1	25
Shared Lane Traffic (%)										48%		
Lane Group Flow (vph)	0	1258	0	0	1320	487	13	2	0	355	353	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		10			10			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.04	1.04	1.00	1.00	0.92	1.00	1.00	1.00	1.04	1.06	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors		2		1	2	1	1			1	2	
Detector Template		Thru		Left	Thru	Right	Left			Left	Thru	
Leading Detector (ft)		100		20	100	20	20			20	100	
Trailing Detector (ft)		0		0	0	0	0			0	0	
Detector 1 Position(ft)		0		0	0	0	0			0	0	
Detector 1 Size(ft)		6		20	6	20	20			20	6	
Detector 1 Type		Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)		0.0		0.0	0.0	0.0	0.0			0.0	0.0	
Detector 1 Queue (s)		0.0		0.0	0.0	0.0	0.0			0.0	0.0	
Detector 1 Delay (s)		0.0		0.0	0.0	0.0	0.0			0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type		NA		Perm	NA	custom	Prot			Split	NA	

Lane Group	Ø1	Ø2
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Storage Length (ft)		
Storage Lanes		
Taper Length (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Bus Blockages (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases		1 2			1 2	2 3 4	4			3	3	
Permitted Phases				1 2								
Detector Phase		1 2		1 2	1 2	2 3 4	4			3	3	
Switch Phase												
Minimum Initial (s)							5.0			5.0	5.0	
Minimum Split (s)							10.0			32.0	32.0	
Total Split (s)							10.0			36.0	36.0	
Total Split (%)							9.1%			32.7%	32.7%	
Maximum Green (s)							5.0			30.0	30.0	
Yellow Time (s)							3.0			4.0	4.0	
All-Red Time (s)							2.0			2.0	2.0	
Lost Time Adjust (s)							0.0			0.0	0.0	
Total Lost Time (s)							5.0			6.0	6.0	
Lead/Lag							Lead			Lag	Lag	
Lead-Lag Optimize?												
Vehicle Extension (s)							3.0			3.0	3.0	
Recall Mode							None			None	None	
Walk Time (s)										7.0	7.0	
Flash Dont Walk (s)										19.0	19.0	
Pedestrian Calls (#/hr)										0	0	
Act Effct Green (s)		62.5			62.5	85.5	5.0	0.0		28.5	28.5	
Actuated g/C Ratio		0.57			0.57	0.78	0.05	0.00		0.26	0.26	
v/c Ratio		0.65			0.69	0.34	0.16	0.01		0.84	0.85	
Control Delay		5.1			27.5	0.5	55.2	0.0		57.3	57.7	
Queue Delay		0.1			0.1	0.0	0.0	0.0		0.0	0.0	
Total Delay		5.1			27.6	0.5	55.2	0.0		57.3	57.7	
LOS		A			C	A	E	A		E	E	
Approach Delay		5.1			20.3			47.9			57.5	
Approach LOS		A			C			D			E	
Queue Length 50th (ft)		42			358	0	9	0		245	243	
Queue Length 95th (ft)		97			444	0	30	0		#398	#398	
Internal Link Dist (ft)		290			245			49			297	
Turn Bay Length (ft)						250						
Base Capacity (vph)		1935			1902	1437	80	169		443	438	
Starvation Cap Reductn		55			43	0	0	0		0	0	
Spillback Cap Reductn		0			0	0	0	0		0	0	
Storage Cap Reductn		0			0	0	0	0		0	0	
Reduced v/c Ratio		0.67			0.71	0.34	0.16	0.01		0.80	0.81	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 2:EBWB, Start of Green			
Natural Cycle: 80			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.85			
Intersection Signal Delay: 22.3		Intersection LOS: C	
Intersection Capacity Utilization Err%		ICU Level of Service H	

Lane Group	Ø1	Ø2
Protected Phases	1	2
Permitted Phases		
Detector Phase		
Switch Phase		
Minimum Initial (s)	5.0	5.0
Minimum Split (s)	17.0	11.0
Total Split (s)	17.0	47.0
Total Split (%)	15%	43%
Maximum Green (s)	14.0	41.0
Yellow Time (s)	2.0	4.0
All-Red Time (s)	1.0	2.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes
Vehicle Extension (s)	3.0	3.0
Recall Mode	None	C-Max
Walk Time (s)	5.0	
Flash Dont Walk (s)	9.0	
Pedestrian Calls (#/hr)	0	
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

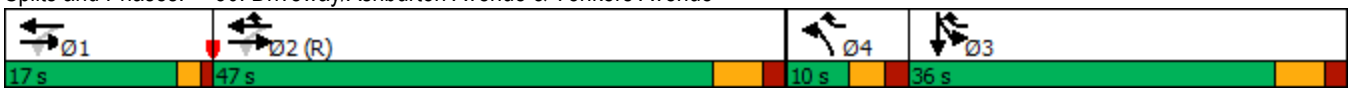
Intersection Summary

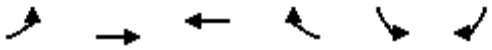
Analysis Period (min) 15

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

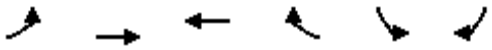
Queue shown is maximum after two cycles.

Splits and Phases: 30: Driveway/Ashburton Avenue & Yonkers Avenue





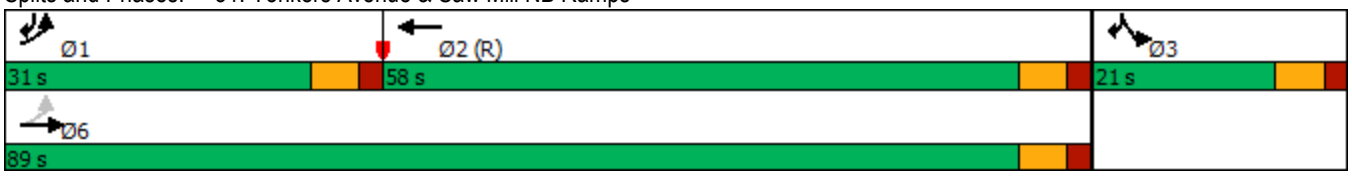
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	232	1182	1192	150	62	292
Future Volume (vph)	232	1182	1192	150	62	292
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	11	11	16	11
Storage Length (ft)	180			0	0	0
Storage Lanes	1			1	1	1
Taper Length (ft)	25				25	
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00
Frt				0.850		0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	3539	3421	1561	2046	1561
Flt Permitted	0.093				0.950	
Satd. Flow (perm)	177	3539	3421	1561	2046	1561
Right Turn on Red				No		Yes
Satd. Flow (RTOR)						30
Link Speed (mph)		30	30		30	
Link Distance (ft)		399	747		226	
Travel Time (s)		9.1	17.0		5.1	
Peak Hour Factor	0.89	0.89	0.95	0.95	0.92	0.92
Heavy Vehicles (%)	0%	2%	2%	0%	0%	0%
Adj. Flow (vph)	261	1328	1255	158	67	317
Shared Lane Traffic (%)						
Lane Group Flow (vph)	261	1328	1255	158	67	317
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		16	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.04	1.04	0.85	1.04
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	1
Detector Template	Left	Thru	Thru	Right	Left	Right
Leading Detector (ft)	20	100	100	20	20	20
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	6	6	20	20	20
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		Cl+Ex	Cl+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Free	Prot	pt+ov



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Protected Phases	1	6	2		3	1 3
Permitted Phases	6			Free		
Detector Phase	1	6	2		3	1 3
Switch Phase						
Minimum Initial (s)	5.0	10.0	10.0		5.0	
Minimum Split (s)	11.0	16.0	16.0		11.0	
Total Split (s)	31.0	89.0	58.0		21.0	
Total Split (%)	28.2%	80.9%	52.7%		19.1%	
Maximum Green (s)	25.0	83.0	52.0		15.0	
Yellow Time (s)	4.0	4.0	4.0		4.0	
All-Red Time (s)	2.0	2.0	2.0		2.0	
Lost Time Adjust (s)	0.0	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.0	6.0		6.0	
Lead/Lag	Lead		Lag			
Lead-Lag Optimize?	Yes		Yes			
Vehicle Extension (s)	3.0	3.0	3.0		3.0	
Recall Mode	Max	Max	C-Max		Max	
Act Effct Green (s)	83.0	83.0	52.0	110.0	15.0	46.0
Actuated g/C Ratio	0.75	0.75	0.47	1.00	0.14	0.42
v/c Ratio	0.52	0.50	0.78	0.10	0.24	0.47
Control Delay	24.7	5.5	42.6	0.1	45.0	23.7
Queue Delay	0.0	0.2	0.0	0.0	0.0	0.0
Total Delay	24.7	5.6	42.6	0.1	45.0	23.7
LOS	C	A	D	A	D	C
Approach Delay		8.8	37.9		27.4	
Approach LOS		A	D		C	
Queue Length 50th (ft)	125	186	485	0	43	144
Queue Length 95th (ft)	m168	201	564	0	86	226
Internal Link Dist (ft)		319	667		146	
Turn Bay Length (ft)	180					
Base Capacity (vph)	503	2670	1617	1561	279	670
Starvation Cap Reductn	0	457	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.60	0.78	0.10	0.24	0.47

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 13 (12%), Referenced to phase 2:WBT, Start of Green			
Natural Cycle: 60			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.78			
Intersection Signal Delay: 23.0		Intersection LOS: C	
Intersection Capacity Utilization 65.0%		ICU Level of Service C	
Analysis Period (min) 15			
m Volume for 95th percentile queue is metered by upstream signal.			

Splits and Phases: 31: Yonkers Avenue & Saw Mill NB Ramps

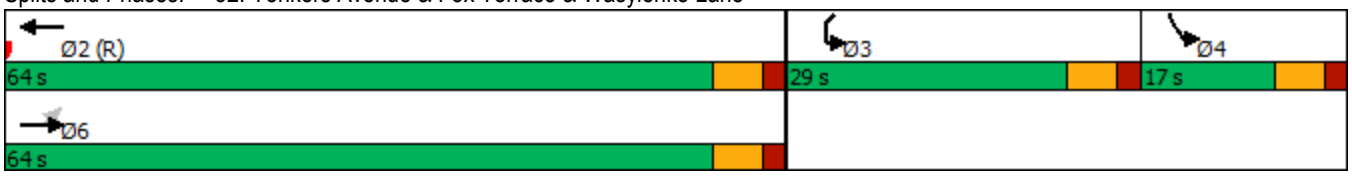


Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	SWL	SWR
Lane Configurations								
Traffic Volume (vph)	4	1240	1332	7	0	1	10	9
Future Volume (vph)	4	1240	1332	7	0	1	10	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	14	13	13	16	16	11	11
Lane Util. Factor	0.95	0.95	0.95	0.95	1.00	1.00	1.00	1.00
Frt			0.999		0.865		0.936	
Flt Protected							0.974	
Satd. Flow (prot)	0	3753	3654	0	1826	0	1642	0
Flt Permitted		0.951					0.974	
Satd. Flow (perm)	0	3569	3654	0	1826	0	1642	0
Right Turn on Red						Yes		
Satd. Flow (RTOR)					313			
Link Speed (mph)		30	30		30		30	
Link Distance (ft)		747	1476		229		311	
Travel Time (s)		17.0	33.5		5.2		7.1	
Peak Hour Factor	0.89	0.89	0.95	0.95	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	3	0	0	0	0	0	0
Adj. Flow (vph)	4	1393	1402	7	0	1	11	10
Shared Lane Traffic (%)								
Lane Group Flow (vph)	0	1397	1409	0	1	0	21	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right	Left	Right
Median Width(ft)		0	0		16		11	
Link Offset(ft)		0	0		0		0	
Crosswalk Width(ft)		16	16		16		16	
Two way Left Turn Lane								
Headway Factor	1.04	0.93	0.96	0.96	0.85	0.85	1.04	1.04
Turning Speed (mph)	15			9	15	9	15	9
Number of Detectors	1	2	2		1		1	
Detector Template	Left	Thru	Thru		Left		Left	
Leading Detector (ft)	20	100	100		20		20	
Trailing Detector (ft)	0	0	0		0		0	
Detector 1 Position(ft)	0	0	0		0		0	
Detector 1 Size(ft)	20	6	6		20		20	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex		Cl+Ex	
Detector 1 Channel								
Detector 1 Extend (s)	0.0	0.0	0.0		0.0		0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0		0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0		0.0	
Detector 2 Position(ft)		94	94					
Detector 2 Size(ft)		6	6					
Detector 2 Type		Cl+Ex	Cl+Ex					
Detector 2 Channel								
Detector 2 Extend (s)		0.0	0.0					
Turn Type	Perm	NA	NA		Prot		Prot	
Protected Phases		6	2		4		3	
Permitted Phases	6							
Detector Phase	6	6	2		4		3	

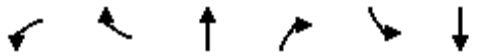
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR	SWL	SWR
Switch Phase								
Minimum Initial (s)	10.0	10.0	10.0		5.0		5.0	
Minimum Split (s)	16.0	16.0	16.0		11.0		27.0	
Total Split (s)	64.0	64.0	64.0		17.0		29.0	
Total Split (%)	58.2%	58.2%	58.2%		15.5%		26.4%	
Maximum Green (s)	58.0	58.0	58.0		11.0		23.0	
Yellow Time (s)	4.0	4.0	4.0		4.0		4.0	
All-Red Time (s)	2.0	2.0	2.0		2.0		2.0	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	
Total Lost Time (s)		6.0	6.0		6.0		6.0	
Lead/Lag					Lag		Lead	
Lead-Lag Optimize?					Yes		Yes	
Vehicle Extension (s)	3.0	3.0	3.0		3.0		3.0	
Recall Mode	Max	Max	C-Max		None		None	
Walk Time (s)							7.0	
Flash Dont Walk (s)							14.0	
Pedestrian Calls (#/hr)							0	
Act Effct Green (s)		99.5	99.5		5.5		7.0	
Actuated g/C Ratio		0.90	0.90		0.05		0.06	
v/c Ratio		0.43	0.43		0.00		0.20	
Control Delay		1.6	6.9		0.0		52.7	
Queue Delay		0.0	0.0		0.0		0.0	
Total Delay		1.6	6.9		0.0		52.7	
LOS		A	A		A		D	
Approach Delay		1.6	6.9				52.7	
Approach LOS		A	A				D	
Queue Length 50th (ft)		0	5		0		14	
Queue Length 95th (ft)		78	392		0		40	
Internal Link Dist (ft)		667	1396		149		231	
Turn Bay Length (ft)								
Base Capacity (vph)		3229	3306		464		343	
Starvation Cap Reductn		4	0		0		0	
Spillback Cap Reductn		0	0		0		0	
Storage Cap Reductn		0	0		0		0	
Reduced v/c Ratio		0.43	0.43		0.00		0.06	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 13 (12%), Referenced to phase 2:WBT, Start of Green			
Natural Cycle: 75			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.43			
Intersection Signal Delay: 4.6		Intersection LOS: A	
Intersection Capacity Utilization 60.4%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 32: Yonkers Avenue & Fox Terrace & Wasylenko Lane



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	158	359	980	143	228	1022
Future Volume (vph)	158	359	980	143	228	1022
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	9	11
Storage Length (ft)	0	0		100	180	
Storage Lanes	2	1		1	1	
Taper Length (ft)	25				25	
Lane Util. Factor	0.97	0.91	0.95	1.00	1.00	0.95
Frt	0.920	0.850		0.850		
Flt Protected	0.977				0.950	
Satd. Flow (prot)	3248	1424	3539	1583	1593	3394
Flt Permitted	0.977				0.119	
Satd. Flow (perm)	3248	1424	3539	1583	200	3394
Right Turn on Red		Yes		Yes		
Satd. Flow (RTOR)	195	195		76		
Link Speed (mph)	30		30			30
Link Distance (ft)	520		563			1476
Travel Time (s)	11.8		12.8			33.5
Peak Hour Factor	0.92	0.92	0.95	0.95	0.89	0.89
Bus Blockages (#/hr)	0	3	0	0	0	4
Adj. Flow (vph)	172	390	1032	151	256	1148
Shared Lane Traffic (%)		50%				
Lane Group Flow (vph)	367	195	1032	151	256	1148
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	24		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.02	1.00	1.00	1.14	1.06
Turning Speed (mph)	15	9		9	15	
Number of Detectors	1	1	2	1	1	2
Detector Template	Left	Right	Thru	Right	Left	Thru
Leading Detector (ft)	20	20	100	20	20	100
Trailing Detector (ft)	0	0	0	0	0	0
Detector 1 Position(ft)	0	0	0	0	0	0
Detector 1 Size(ft)	20	20	6	20	20	6
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	0.0
Detector 2 Position(ft)			94			94
Detector 2 Size(ft)			6			6
Detector 2 Type			Cl+Ex			Cl+Ex
Detector 2 Channel						
Detector 2 Extend (s)			0.0			0.0
Turn Type	Prot	Prot	NA	Perm	pm+pt	NA



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Protected Phases	3	3	2		1	6
Permitted Phases				2	6	
Detector Phase	3	3	2	2	1	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	38.0	38.0	49.0	49.0	11.0	11.0
Total Split (s)	39.0	39.0	50.0	50.0	21.0	71.0
Total Split (%)	35.5%	35.5%	45.5%	45.5%	19.1%	64.5%
Maximum Green (s)	33.0	33.0	44.0	44.0	15.0	65.0
Yellow Time (s)	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
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	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Recall Mode	Ped	Ped	Ped	Ped	Max	C-Max
Walk Time (s)	7.0	7.0	16.0	16.0		
Flash Dont Walk (s)	25.0	25.0	27.0	27.0		
Pedestrian Calls (#/hr)	0	0	0	0		
Act Effct Green (s)	32.0	32.0	44.0	44.0	66.0	66.0
Actuated g/C Ratio	0.29	0.29	0.40	0.40	0.60	0.60
v/c Ratio	0.34	0.35	0.73	0.22	0.80	0.56
Control Delay	14.8	6.2	26.2	6.2	49.9	17.0
Queue Delay	0.0	0.0	0.1	0.0	0.0	0.1
Total Delay	14.8	6.2	26.4	6.2	49.9	17.0
LOS	B	A	C	A	D	B
Approach Delay	11.8		23.8			23.0
Approach LOS	B		C			C
Queue Length 50th (ft)	46	0	344	14	141	256
Queue Length 95th (ft)	85	58	423	36	#238	224
Internal Link Dist (ft)	440		483			1396
Turn Bay Length (ft)				100	180	
Base Capacity (vph)	1110	563	1415	678	322	2036
Starvation Cap Reductn	0	0	38	0	0	0
Spillback Cap Reductn	4	0	0	0	0	86
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.35	0.75	0.22	0.80	0.59

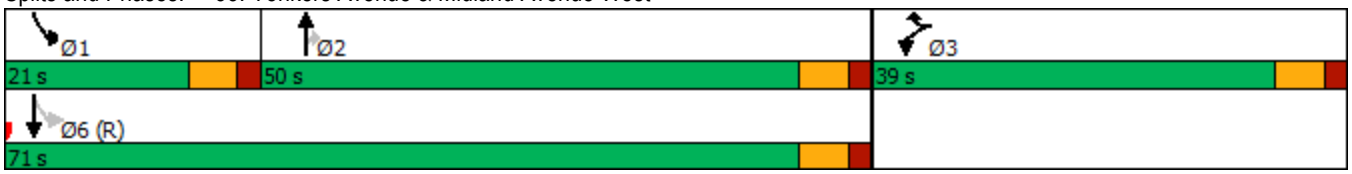
Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 6:SBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.80			
Intersection Signal Delay: 21.3		Intersection LOS: C	
Intersection Capacity Utilization 63.0%		ICU Level of Service B	

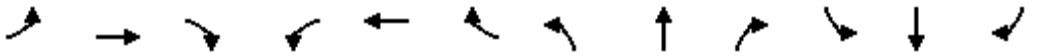
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

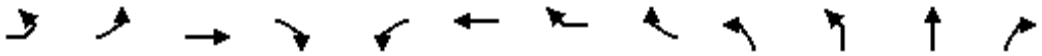
Splits and Phases: 33: Yonkers Avenue & Midland Avenue West





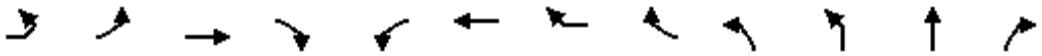
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1414	294	0	1484	0	0	0	0	0	0	233
Future Volume (vph)	0	1414	294	0	1484	0	0	0	0	0	0	233
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850									0.865
Flt Protected												
Satd. Flow (prot)	0	3539	1615	0	3539	0	0	0	0	0	0	1644
Flt Permitted												
Satd. Flow (perm)	0	3539	1615	0	3539	0	0	0	0	0	0	1644
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		325			399			181			209	
Travel Time (s)		7.4			9.1			4.1			4.8	
Peak Hour Factor	0.89	0.89	0.89	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	2%	0%	0%	2%	0%	0%	0%	0%	0%	0%	0%
Adj. Flow (vph)	0	1589	330	0	1562	0	0	0	0	0	0	253
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	1589	330	0	1562	0	0	0	0	0	0	253
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Free			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 62.1%		ICU Level of Service B	
Analysis Period (min) 15			



Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Lane Configurations												
Traffic Volume (vph)	43	194	23	56	5	13	4	46	25	52	883	11
Future Volume (vph)	43	194	23	56	5	13	4	46	25	52	883	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	11	12	12	13	13	13	13	12	11	13	13
Storage Length (ft)		0		0	0		0			100		0
Storage Lanes		1		0	0		0			1		0
Taper Length (ft)		25			25					25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	0.95
Frt			0.894			0.900					0.998	
Flt Protected		0.950				0.997				0.950		
Satd. Flow (prot)	0	1711	1665	0	0	1727	0	0	0	1711	3650	0
Flt Permitted		0.763				0.986				0.082		
Satd. Flow (perm)	0	1374	1665	0	0	1708	0	0	0	148	3650	0
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)			61			50					2	
Link Speed (mph)			30			30					30	
Link Distance (ft)			264			382					327	
Travel Time (s)			6.0			8.7					7.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	211	25	61	5	14	4	50	26	55	929	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	258	86	0	0	73	0	0	0	81	941	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Left	Right	Right	Left	Left	Left	Right
Median Width(ft)			11			11					12	
Link Offset(ft)			0			0					0	
Crosswalk Width(ft)			16			16					16	
Two way Left Turn Lane												
Headway Factor	1.00	1.04	1.00	1.00	0.96	0.96	0.96	0.96	1.00	1.04	0.96	0.96
Turning Speed (mph)	15	15		9	15		9	9	15	15		9
Number of Detectors	1	1	2		1	2			1	1	2	
Detector Template	Left	Left	Thru		Left	Thru			Left	Left	Thru	
Leading Detector (ft)	20	20	100		20	100			20	20	100	
Trailing Detector (ft)	0	0	0		0	0			0	0	0	
Detector 1 Position(ft)	0	0	0		0	0			0	0	0	
Detector 1 Size(ft)	20	20	6		20	6			20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0		0.0	0.0			0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0		0.0	0.0			0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0		0.0	0.0			0.0	0.0	0.0	
Detector 2 Position(ft)			94			94					94	
Detector 2 Size(ft)			6			6					6	
Detector 2 Type			Cl+Ex			Cl+Ex					Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)			0.0			0.0					0.0	
Turn Type		Perm	NA		Perm	NA				pm+pt	NA	
Protected Phases			3			3				1	6	

Lane Group	SBL	SBT	SBR	SBR2
Lane Configurations				
Traffic Volume (vph)	39	739	179	223
Future Volume (vph)	39	739	179	223
Ideal Flow (vphpl)	1900	1900	1900	1900
Lane Width (ft)	12	12	12	16
Storage Length (ft)	150		210	
Storage Lanes	1		0	
Taper Length (ft)	25			
Lane Util. Factor	1.00	0.95	0.95	0.95
Frt		0.947		
Flt Protected	0.950			
Satd. Flow (prot)	1770	3352	0	0
Flt Permitted	0.304			
Satd. Flow (perm)	566	3352	0	0
Right Turn on Red				Yes
Satd. Flow (RTOR)		32		
Link Speed (mph)		30		
Link Distance (ft)		563		
Travel Time (s)		12.8		
Peak Hour Factor	0.89	0.89	0.89	0.89
Adj. Flow (vph)	44	830	201	251
Shared Lane Traffic (%)				
Lane Group Flow (vph)	44	1282	0	0
Enter Blocked Intersection	No	No	No	No
Lane Alignment	Left	Left	Right	Right
Median Width(ft)		12		
Link Offset(ft)		0		
Crosswalk Width(ft)		16		
Two way Left Turn Lane				
Headway Factor	1.00	1.00	1.00	0.85
Turning Speed (mph)	15		9	9
Number of Detectors	1	2		
Detector Template	Left	Thru		
Leading Detector (ft)	20	100		
Trailing Detector (ft)	0	0		
Detector 1 Position(ft)	0	0		
Detector 1 Size(ft)	20	6		
Detector 1 Type	Cl+Ex	Cl+Ex		
Detector 1 Channel				
Detector 1 Extend (s)	0.0	0.0		
Detector 1 Queue (s)	0.0	0.0		
Detector 1 Delay (s)	0.0	0.0		
Detector 2 Position(ft)		94		
Detector 2 Size(ft)		6		
Detector 2 Type		Cl+Ex		
Detector 2 Channel				
Detector 2 Extend (s)		0.0		
Turn Type	Perm	NA		
Protected Phases		2		



Lane Group	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL2	NBL	NBT	NBR
Permitted Phases		3			3					6		
Detector Phase		3	3		3	3				1	6	
Switch Phase												
Minimum Initial (s)		5.0	5.0		5.0	5.0				5.0	5.0	
Minimum Split (s)		39.0	39.0		39.0	39.0				11.0	69.0	
Total Split (s)		40.0	40.0		40.0	40.0				21.0	70.0	
Total Split (%)		36.4%	36.4%		36.4%	36.4%				19.1%	63.6%	
Maximum Green (s)		34.0	34.0		34.0	34.0				15.0	64.0	
Yellow Time (s)		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	
Lost Time Adjust (s)		0.0	0.0			0.0				0.0	0.0	
Total Lost Time (s)		6.0	6.0			6.0				6.0	6.0	
Lead/Lag										Lead		
Lead-Lag Optimize?										Yes		
Vehicle Extension (s)		3.0	3.0		3.0	3.0				3.0	3.0	
Recall Mode		Ped	Ped		Ped	Ped				Max	C-Max	
Walk Time (s)		5.0	5.0		5.0	5.0					38.0	
Flash Dont Walk (s)		28.0	28.0		28.0	28.0					25.0	
Pedestrian Calls (#/hr)		0	0		0	0					0	
Act Effct Green (s)		33.2	33.2			33.2				64.8	64.8	
Actuated g/C Ratio		0.30	0.30			0.30				0.59	0.59	
v/c Ratio		0.62	0.16			0.13				0.26	0.44	
Control Delay		40.7	11.7			12.5				12.0	13.3	
Queue Delay		0.0	0.0			0.0				0.0	0.0	
Total Delay		40.7	11.7			12.5				12.0	13.3	
LOS		D	B			B				B	B	
Approach Delay			33.4			12.5					13.2	
Approach LOS			C			B					B	
Queue Length 50th (ft)		157	13			12				23	180	
Queue Length 95th (ft)		244	49			45				46	231	
Internal Link Dist (ft)			184			302					247	
Turn Bay Length (ft)										100		
Base Capacity (vph)		424	556			562				311	2150	
Starvation Cap Reductn		0	0			0				0	0	
Spillback Cap Reductn		0	0			0				0	0	
Storage Cap Reductn		0	0			0				0	0	
Reduced v/c Ratio		0.61	0.15			0.13				0.26	0.44	

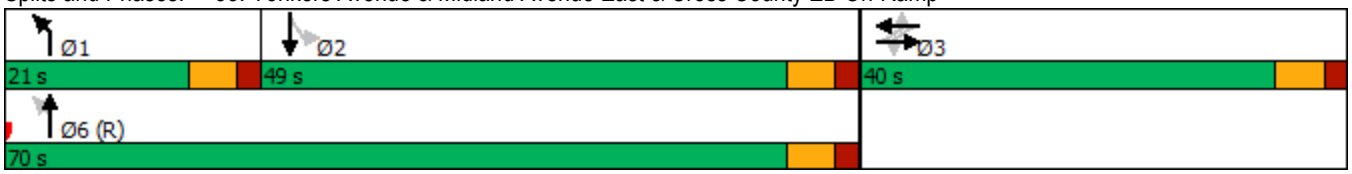
Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 0 (0%), Referenced to phase 6:NBTL, Start of Green			
Natural Cycle: 110			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.96			
Intersection Signal Delay: 28.2		Intersection LOS: C	
Intersection Capacity Utilization 72.4%		ICU Level of Service C	
Analysis Period (min) 15			

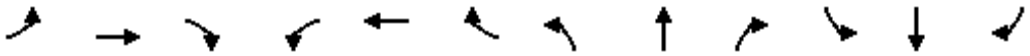
Lane Group	SBL	SBT	SBR	SBR2
Permitted Phases	2			
Detector Phase	2	2		
Switch Phase				
Minimum Initial (s)	5.0	5.0		
Minimum Split (s)	48.0	48.0		
Total Split (s)	49.0	49.0		
Total Split (%)	44.5%	44.5%		
Maximum Green (s)	43.0	43.0		
Yellow Time (s)	4.0	4.0		
All-Red Time (s)	2.0	2.0		
Lost Time Adjust (s)	0.0	0.0		
Total Lost Time (s)	6.0	6.0		
Lead/Lag	Lag	Lag		
Lead-Lag Optimize?	Yes	Yes		
Vehicle Extension (s)	3.0	3.0		
Recall Mode	Ped	Ped		
Walk Time (s)	20.0	20.0		
Flash Dont Walk (s)	22.0	22.0		
Pedestrian Calls (#/hr)	0	0		
Act Effct Green (s)	43.0	43.0		
Actuated g/C Ratio	0.39	0.39		
v/c Ratio	0.20	0.96		
Control Delay	18.7	39.9		
Queue Delay	0.0	0.0		
Total Delay	18.7	39.9		
LOS	B	D		
Approach Delay		39.2		
Approach LOS		D		
Queue Length 50th (ft)	15	340		
Queue Length 95th (ft)	m28	#577		
Internal Link Dist (ft)		483		
Turn Bay Length (ft)	150			
Base Capacity (vph)	221	1329		
Starvation Cap Reductn	0	0		
Spillback Cap Reductn	0	0		
Storage Cap Reductn	0	0		
Reduced v/c Ratio	0.20	0.96		

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 35: Yonkers Avenue & Midland Avenue East & Cross County EB On-Ramp



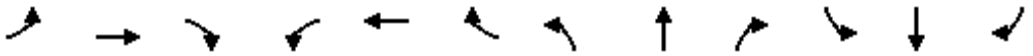


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	50	397	59	160	197	214	0	0	0	0	0	0
Future Volume (vph)	50	397	59	160	197	214	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.922							
Flt Protected		0.995		0.950								
Satd. Flow (prot)	0	3919	0	2006	1946	0	0	0	0	0	0	0
Flt Permitted		0.995		0.950								
Satd. Flow (perm)	0	3919	0	2006	1946	0	0	0	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		256			511			286			516	
Travel Time (s)		5.8			11.6			6.5			11.7	
Peak Hour Factor	0.90	0.90	0.90	0.81	0.81	0.81	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	56	441	66	198	243	264	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	563	0	198	507	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.4%		ICU Level of Service A	
Analysis Period (min) 15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	497	32	63	324	22	27
Future Volume (vph)	497	32	63	324	22	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	14	14	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.992				0.926	
Flt Protected				0.992	0.978	
Satd. Flow (prot)	1563	0	0	1971	1525	0
Flt Permitted				0.992	0.978	
Satd. Flow (perm)	1563	0	0	1971	1525	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	208			436	1494	
Travel Time (s)	4.7			9.9	34.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)	5				5	
Adj. Flow (vph)	540	35	68	352	24	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	575	0	0	420	53	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	13	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.24	1.04	0.92	0.92	1.14	0.96
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 62.0%		ICU Level of Service B	
Analysis Period (min) 15			

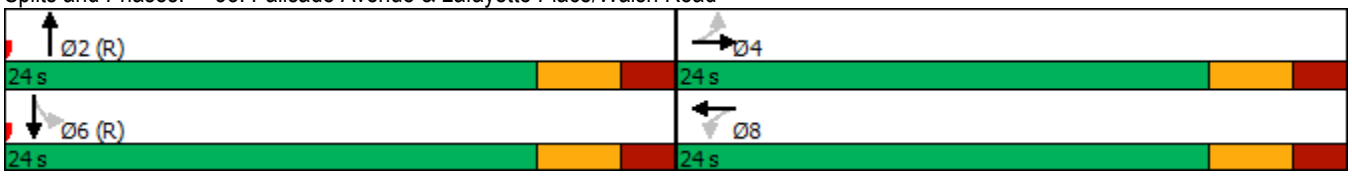


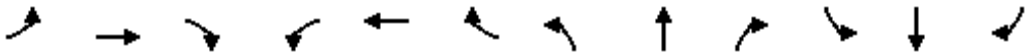
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	5	14	56	0	26	0	242	36	25	322	0
Future Volume (vph)	14	5	14	56	0	26	0	242	36	25	322	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	15	13	13	13	16	16	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.942			0.958			0.983				
Flt Protected		0.979			0.967						0.996	
Satd. Flow (prot)	0	1653	0	0	1783	0	0	1801	0	0	1825	0
Flt Permitted		0.904			0.820						0.963	
Satd. Flow (perm)	0	1527	0	0	1512	0	0	1801	0	0	1765	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		15			45			18				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		226			227			1248			549	
Travel Time (s)		5.1			5.2			28.4			12.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	2	0	0	2	0
Parking (#/hr)		5						5			5	
Adj. Flow (vph)	15	5	15	61	0	28	0	263	39	27	350	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	35	0	0	89	0	0	302	0	0	377	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.88	1.05	0.88	0.96	0.96	0.96	0.85	1.02	0.85	0.85	1.02	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8						6		
Minimum Split (s)	10.0	10.0		10.0	10.0			10.0		10.0	10.0	
Total Split (s)	24.0	24.0		24.0	24.0			24.0		24.0	24.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%			50.0%		50.0%	50.0%	
Maximum Green (s)	19.0	19.0		19.0	19.0			19.0		19.0	19.0	
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0			2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		19.0			19.0			19.0			19.0	
Actuated g/C Ratio		0.40			0.40			0.40			0.40	
v/c Ratio		0.06			0.14			0.42			0.54	
Control Delay		7.0			6.3			12.0			14.7	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		7.0			6.3			12.0			14.7	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
LOS		A			A			B			B	
Approach Delay		7.0			6.3			12.0			14.7	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)		3			7			54			77	
Queue Length 95th (ft)		16			28			104			141	
Internal Link Dist (ft)		146			147			1168			469	
Turn Bay Length (ft)												
Base Capacity (vph)		613			625			723			698	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.06			0.14			0.42			0.54	

Intersection Summary			
Area Type:	Other		
Cycle Length: 48			
Actuated Cycle Length: 48			
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green			
Natural Cycle: 40			
Control Type: Pretimed			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 12.4		Intersection LOS: B	
Intersection Capacity Utilization 53.3%		ICU Level of Service A	
Analysis Period (min) 15			

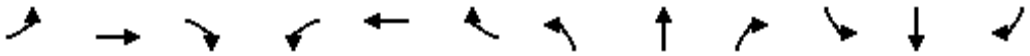
Splits and Phases: 38: Palisade Avenue & Lafayette Place/Walsh Road





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	422	87	20	382	0	0	0	0
Future Volume (vph)	0	0	0	0	422	87	20	382	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	16	16	16	16	16	16	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.977							
Flt Protected								0.997				
Satd. Flow (prot)	0	0	0	0	2063	0	0	1877	0	0	0	0
Flt Permitted								0.997				
Satd. Flow (perm)	0	0	0	0	2063	0	0	1877	0	0	0	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		81			430			212			254	
Travel Time (s)		1.8			9.8			4.8			5.8	
Peak Hour Factor	0.92	0.92	0.92	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	27	0	0	0	0
Adj. Flow (vph)	0	0	0	0	508	105	22	415	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	613	0	0	437	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	0.85	0.85	0.85	0.85	0.99	0.85	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					2		1	2				
Detector Template					Thru		Left	Thru				
Leading Detector (ft)					100		20	100				
Trailing Detector (ft)					0		0	0				
Detector 1 Position(ft)					0		0	0				
Detector 1 Size(ft)					6		20	6				
Detector 1 Type					Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)					0.0		0.0	0.0				
Detector 1 Queue (s)					0.0		0.0	0.0				
Detector 1 Delay (s)					0.0		0.0	0.0				
Detector 2 Position(ft)					94			94				
Detector 2 Size(ft)					6			6				
Detector 2 Type					Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				
Turn Type					NA		Perm	NA				
Protected Phases					1			3				
Permitted Phases							3					
Detector Phase					1		3	3				

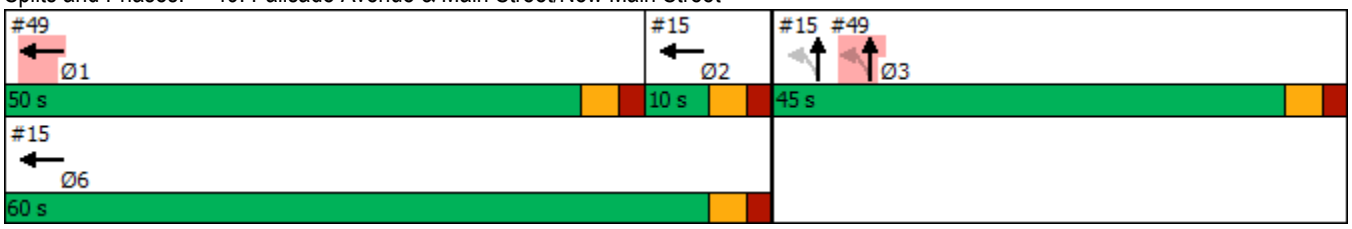
Lane Group	Ø2	Ø6
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Bus Blockages (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	2	6
Permitted Phases		
Detector Phase		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)					5.0		5.0	5.0				
Minimum Split (s)					50.0		45.0	45.0				
Total Split (s)					50.0		45.0	45.0				
Total Split (%)					47.6%		42.9%	42.9%				
Maximum Green (s)					45.0		40.0	40.0				
Yellow Time (s)					3.0		3.0	3.0				
All-Red Time (s)					2.0		2.0	2.0				
Lost Time Adjust (s)					0.0			0.0				
Total Lost Time (s)					5.0			5.0				
Lead/Lag					Lead							
Lead-Lag Optimize?					Yes							
Vehicle Extension (s)					3.0		3.0	3.0				
Recall Mode					Ped		Ped	Ped				
Walk Time (s)					35.0		30.0	30.0				
Flash Dont Walk (s)					10.0		10.0	10.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					45.0			40.0				
Actuated g/C Ratio					0.43			0.38				
v/c Ratio					0.69			0.61				
Control Delay					29.5			30.7				
Queue Delay					0.0			0.0				
Total Delay					29.5			30.7				
LOS					C			C				
Approach Delay					29.5			30.7				
Approach LOS					C			C				
Queue Length 50th (ft)					327			234				
Queue Length 95th (ft)					403			339				
Internal Link Dist (ft)		1			350			132			174	
Turn Bay Length (ft)												
Base Capacity (vph)					884			715				
Starvation Cap Reductn					0			0				
Spillback Cap Reductn					0			0				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					0.69			0.61				

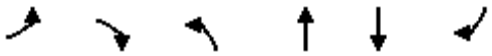
Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Natural Cycle: 105			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.69			
Intersection Signal Delay: 30.0		Intersection LOS: C	
Intersection Capacity Utilization 57.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 49: Palisade Avenue & Main Street/New Main Street



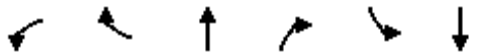
Lane Group	Ø2	Ø6
Switch Phase		
Minimum Initial (s)	2.0	5.0
Minimum Split (s)	7.0	10.0
Total Split (s)	10.0	60.0
Total Split (%)	10%	57%
Maximum Green (s)	5.0	55.0
Yellow Time (s)	3.0	3.0
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	3.0
Recall Mode	Max	Max
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary



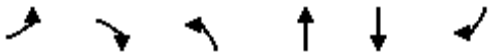
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	89	70	0
Future Volume (vph)	0	0	0	89	70	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	126			499	1494	
Travel Time (s)	2.9			11.3	34.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	97	76	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	97	76	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 8.0%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	0	133	376	36	0	0
Future Volume (vph)	0	133	376	36	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.865	0.988			
Flt Protected						
Satd. Flow (prot)	0	1611	1840	0	0	0
Flt Permitted						
Satd. Flow (perm)	0	1611	1840	0	0	0
Link Speed (mph)	30		30			30
Link Distance (ft)	164		411			430
Travel Time (s)	3.7		9.3			9.8
Confl. Peds. (#/hr)	146					
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	145	409	39	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	145	448	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	0		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.9%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	200	488	0
Future Volume (vph)	0	0	0	200	488	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	172			284	235	
Travel Time (s)	3.9			6.5	5.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	217	530	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	217	530	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.0%		ICU Level of Service A	
Analysis Period (min) 15			

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	187	76	0	187	0	88	0	0	13	0	7
Future Vol, veh/h	0	187	76	0	187	0	88	0	0	13	0	7
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	86	86	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	8	8	6	6	2	2	2	2	2	2	2
Mvmt Flow	0	217	88	0	203	0	96	0	0	14	0	8

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	305	0	0	468	-	-	464	508	203
Stage 1	-	-	-	-	-	-	261	-	-	203	203	-
Stage 2	-	-	-	-	-	-	207	-	-	261	305	-
Critical Hdwy	-	-	-	4.16	-	-	7.12	-	-	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.254	-	-	3.518	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1233	-	0	505	0	0	508	468	838
Stage 1	0	-	-	-	-	0	744	0	0	799	733	-
Stage 2	0	-	-	-	-	0	795	0	0	744	662	-
Platoon blocked, %		-	-		-				-			
Mov Cap-1 Maneuver	-	-	-	1233	-	-	500	-	-	508	468	838
Mov Cap-2 Maneuver	-	-	-	-	-	-	500	-	-	508	468	-
Stage 1	-	-	-	-	-	-	744	-	-	799	733	-
Stage 2	-	-	-	-	-	-	788	-	-	744	662	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	13.9	11.3
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	500	-	-	1233	-	589
HCM Lane V/C Ratio	0.191	-	-	-	-	0.037
HCM Control Delay (s)	13.9	-	-	0	-	11.3
HCM Lane LOS	B	-	-	A	-	B
HCM 95th %tile Q(veh)	0.7	-	-	0	-	0.1

Intersection	
Int Delay, s/veh	7.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	4	136	0	0	0	0	23	84	82	46	0	30
Future Vol, veh/h	4	136	0	0	0	0	23	84	82	46	0	30
Conflicting Peds, #/hr	0	0	33	0	0	35	0	0	16	0	0	38
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	92	92	92	83	83	83	90	90	90
Heavy Vehicles, %	10	10	10	2	2	2	7	7	7	2	2	2
Mvmt Flow	5	160	0	0	0	0	28	101	99	51	0	33

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	0	0	-	225	170	176	286	170	38
Stage 1	-	-	-	170	170	-	0	0	-
Stage 2	-	-	-	55	0	-	286	170	-
Critical Hdwy	4.2	-	-	7.17	6.57	6.27	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	6.17	5.57	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-
Follow-up Hdwy	2.29	-	-	3.563	4.063	3.363	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	0	720	714	854	666	723	1034
Stage 1	-	-	0	820	749	-	-	-	-
Stage 2	-	-	0	-	-	-	721	758	-
Platoon blocked, %		-							
Mov Cap-1 Maneuver	-	-	-	673	714	854	525	723	1000
Mov Cap-2 Maneuver	-	-	-	673	714	-	525	723	-
Stage 1	-	-	-	820	749	-	-	-	-
Stage 2	-	-	-	-	-	-	551	758	-

Approach	EB	NB	SB
HCM Control Delay, s		11.7	11.4
HCM LOS		B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	SBLn1
Capacity (veh/h)	763	-	-	646
HCM Lane V/C Ratio	0.298	-	-	0.131
HCM Control Delay (s)	11.7	-	-	11.4
HCM Lane LOS	B	-	-	B
HCM 95th %tile Q(veh)	1.3	-	-	0.4

Intersection	
Int Delay, s/veh	5.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	219	0	0	361	0	0
Future Vol, veh/h	219	0	0	361	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	16979	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	238	0	0	392	0	0

Major/Minor	Minor2		Major1	
Conflicting Flow All	392	-	-	0
Stage 1	0	-	-	-
Stage 2	392	-	-	-
Critical Hdwy	6.42	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	-	-	-
Pot Cap-1 Maneuver	612	0	0	-
Stage 1	-	0	0	-
Stage 2	683	0	0	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	612	-	-	-
Mov Cap-2 Maneuver	612	-	-	-
Stage 1	-	-	-	-
Stage 2	683	-	-	-

Approach	EB	NB
HCM Control Delay, s	14.6	0
HCM LOS	B	

Minor Lane/Major Mvmt	NBT	EBLn1
Capacity (veh/h)	-	612
HCM Lane V/C Ratio	-	0.389
HCM Control Delay (s)	-	14.6
HCM Lane LOS	-	B
HCM 95th %tile Q(veh)	-	1.8

Intersection	
Int Delay, s/veh	10

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1340	0	1	1662	47	129
Future Vol, veh/h	1340	0	1	1662	47	129
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	89	89	95	95	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1506	0	1	1749	51	140

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1506	0	2208	753
Stage 1	-	-	-	-	1506	-
Stage 2	-	-	-	-	702	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	221	-	72	302
Stage 1	-	-	-	-	117	-
Stage 2	-	-	-	-	412	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	221	-	72	302
Mov Cap-2 Maneuver	-	-	-	-	72	-
Stage 1	-	-	-	-	117	-
Stage 2	-	-	-	-	410	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	181
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	163	-	-	221	-
HCM Lane V/C Ratio	1.174	-	-	0.005	-
HCM Control Delay (s)	181	-	-	21.4	-
HCM Lane LOS	F	-	-	C	-
HCM 95th %tile Q(veh)	10.4	-	-	0	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↱		↑↑							↱
Traffic Vol, veh/h	0	1414	294	0	1484	0	0	0	0	0	0	233
Future Vol, veh/h	0	1414	294	0	1484	0	0	0	0	0	0	233
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	16965	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	95	95	95	92	92	92	92	92	92
Heavy Vehicles, %	0	2	0	0	2	0	0	0	0	0	0	0
Mvmt Flow	0	1589	330	0	1562	0	0	0	0	0	0	253

Major/Minor	Major1			Major2					Minor2		
Conflicting Flow All	-	0	0	-	-	0			-	-	781
Stage 1	-	-	-	-	-	-			-	-	-
Stage 2	-	-	-	-	-	-			-	-	-
Critical Hdwy	-	-	-	-	-	-			-	-	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-			-	-	-
Follow-up Hdwy	-	-	-	-	-	-			-	-	3.3
Pot Cap-1 Maneuver	0	-	-	0	-	0			0	0	342
Stage 1	0	-	-	0	-	0			0	0	-
Stage 2	0	-	-	0	-	0			0	0	-
Platoon blocked, %		-	-		-						
Mov Cap-1 Maneuver	-	-	-	-	-	-			-	0	342
Mov Cap-2 Maneuver	-	-	-	-	-	-			-	0	-
Stage 1	-	-	-	-	-	-			-	0	-
Stage 2	-	-	-	-	-	-			-	0	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	40.3
HCM LOS			E

Minor Lane/Major Mvmt	EBT	EBR	WBT	SBLn1
Capacity (veh/h)	-	-	-	342
HCM Lane V/C Ratio	-	-	-	0.741
HCM Control Delay (s)	-	-	-	40.3
HCM Lane LOS	-	-	-	E
HCM 95th %tile Q(veh)	-	-	-	5.7

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	497	32	63	324	22	27
Future Vol, veh/h	497	32	63	324	22	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	540	35	68	352	24	29

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	575	0	1046	558
Stage 1	-	-	-	-	558	-
Stage 2	-	-	-	-	488	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	998	-	253	529
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	617	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	998	-	231	529
Mov Cap-2 Maneuver	-	-	-	-	231	-
Stage 1	-	-	-	-	573	-
Stage 2	-	-	-	-	565	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	17.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	335	-	-	998	-
HCM Lane V/C Ratio	0.159	-	-	0.069	-
HCM Control Delay (s)	17.8	-	-	8.9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0.2	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	89	70	0
Future Vol, veh/h	0	0	0	89	70	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	97	76	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	173	76	76	0	-	0
Stage 1	76	-	-	-	-	-
Stage 2	97	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	817	985	1523	-	-	-
Stage 1	947	-	-	-	-	-
Stage 2	927	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	817	985	1523	-	-	-
Mov Cap-2 Maneuver	817	-	-	-	-	-
Stage 1	947	-	-	-	-	-
Stage 2	927	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1523	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	3.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	133	376	36	0	0
Future Vol, veh/h	0	133	376	36	0	0
Conflicting Peds, #/hr	146	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	16979
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	145	409	39	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	-	429	0	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	6.22	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	3.318	-	-
Pot Cap-1 Maneuver	0	626	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	626	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	12.5	0
HCM LOS	B	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	626
HCM Lane V/C Ratio	-	-	0.231
HCM Control Delay (s)	-	-	12.5
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.9

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	200	488	0
Future Vol, veh/h	0	0	0	200	488	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	217	530	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	747	530	530	0	-	0
Stage 1	530	-	-	-	-	-
Stage 2	217	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	381	549	1037	-	-	-
Stage 1	590	-	-	-	-	-
Stage 2	819	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	381	549	1037	-	-	-
Mov Cap-2 Maneuver	381	-	-	-	-	-
Stage 1	590	-	-	-	-	-
Stage 2	819	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1037	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Intersection Delay, s/veh	18.7
Intersection LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	43	10	168	32	108	445
Future Vol, veh/h	43	10	168	32	108	445
Peak Hour Factor	0.91	0.91	0.82	0.82	0.87	0.87
Heavy Vehicles, %	3	3	17	17	7	7
Mvmt Flow	47	11	205	39	124	511
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	9.7	10.5	22.7
HCM LOS	A	B	C

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	81%	20%
Vol Thru, %	84%	0%	80%
Vol Right, %	16%	19%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	200	53	553
LT Vol	0	43	108
Through Vol	168	0	445
RT Vol	32	10	0
Lane Flow Rate	244	58	636
Geometry Grp	1	1	1
Degree of Util (X)	0.334	0.096	0.796
Departure Headway (Hd)	4.936	5.954	4.508
Convergence, Y/N	Yes	Yes	Yes
Cap	727	598	801
Service Time	2.979	4.027	2.54
HCM Lane V/C Ratio	0.336	0.097	0.794
HCM Control Delay	10.5	9.7	22.7
HCM Lane LOS	B	A	C
HCM 95th-tile Q	1.5	0.3	8.3

Intersection	
Intersection Delay, s/veh	20.2
Intersection LOS	C

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	81	116	84	111	395	93
Future Vol, veh/h	81	116	84	111	395	93
Peak Hour Factor	0.81	0.81	0.82	0.82	0.87	0.87
Heavy Vehicles, %	14	14	13	13	6	6
Mvmt Flow	100	143	102	135	454	107
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	11.3	11.3	27.8
HCM LOS	B	B	D

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	81%
Vol Thru, %	43%	0%	0%	19%
Vol Right, %	57%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	195	81	116	488
LT Vol	0	81	0	395
Through Vol	84	0	0	93
RT Vol	111	0	116	0
Lane Flow Rate	238	100	143	561
Geometry Grp	2	7	7	2
Degree of Util (X)	0.353	0.203	0.242	0.821
Departure Headway (Hd)	5.345	7.317	6.095	5.269
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	673	491	589	690
Service Time	3.379	5.057	3.835	3.295
HCM Lane V/C Ratio	0.354	0.204	0.243	0.813
HCM Control Delay	11.3	11.9	10.8	27.8
HCM Lane LOS	B	B	B	D
HCM 95th-tile Q	1.6	0.8	0.9	8.7

Intersection	
Intersection Delay, s/veh	44.1
Intersection LOS	E

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	327	302	0	441	0	0
Future Vol, veh/h	327	302	0	441	0	0
Peak Hour Factor	0.97	0.97	0.87	0.87	0.92	0.92
Heavy Vehicles, %	11	2	11	4	2	2
Mvmt Flow	337	311	0	507	0	0
Number of Lanes	1	0	0	1	0	0

Approach	EB	NB
Opposing Approach		
Opposing Lanes	0	0
Conflicting Approach Left		EB
Conflicting Lanes Left	0	1
Conflicting Approach Right	NB	
Conflicting Lanes Right	1	0
HCM Control Delay	54.7	30.6
HCM LOS	F	D

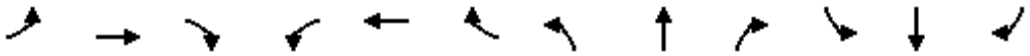
Lane	NBLn1	EBLn1
Vol Left, %	0%	52%
Vol Thru, %	100%	0%
Vol Right, %	0%	48%
Sign Control	Stop	Stop
Traffic Vol by Lane	441	629
LT Vol	0	327
Through Vol	441	0
RT Vol	0	302
Lane Flow Rate	507	648
Geometry Grp	1	1
Degree of Util (X)	0.824	0.985
Departure Headway (Hd)	5.85	5.471
Convergence, Y/N	Yes	Yes
Cap	618	661
Service Time	3.905	3.523
HCM Lane V/C Ratio	0.82	0.98
HCM Control Delay	30.6	54.7
HCM Lane LOS	D	F
HCM 95th-tile Q	8.6	14.9

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	51	323	95	0	0	0	0	38	30	31	39	0
Future Vol, veh/h	51	323	95	0	0	0	0	38	30	31	39	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	55	351	103	0	0	0	0	41	33	34	42	0
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	13.3	8.5	9
HCM LOS	B	A	A

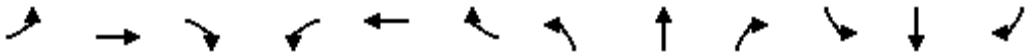
Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	11%	44%
Vol Thru, %	56%	69%	56%
Vol Right, %	44%	20%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	68	469	70
LT Vol	0	51	31
Through Vol	38	323	39
RT Vol	30	95	0
Lane Flow Rate	74	510	76
Geometry Grp	1	1	1
Degree of Util (X)	0.101	0.597	0.111
Departure Headway (Hd)	4.924	4.218	5.271
Convergence, Y/N	Yes	Yes	Yes
Cap	727	856	679
Service Time	2.964	2.24	3.311
HCM Lane V/C Ratio	0.102	0.596	0.112
HCM Control Delay	8.5	13.3	9
HCM Lane LOS	A	B	A
HCM 95th-tile Q	0.3	4.1	0.4



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	397	59	160	197	214	0	0	0	0	0	0
Future Volume (Veh/h)	50	397	59	160	197	214	0	0	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.81	0.81	0.81	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	56	441	66	198	243	264	0	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	386	0	0	286	0	0	0			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	386	0	0	286	0	0	0			0		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	84	51	94	48	73	76	100			100		
cM capacity (veh/h)	343	896	1085	383	896	1085	1623			1623		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2
Volume Total	276	286	198	507
Volume Left	56	0	198	0
Volume Right	0	66	0	264
cSH	675	933	383	985
Volume to Capacity	0.41	0.31	0.52	0.51
Queue Length 95th (ft)	50	33	71	76
Control Delay (s)	14.0	10.6	24.0	12.5
Lane LOS	B	B	C	B
Approach Delay (s)	12.2		15.7	
Approach LOS	B		C	

Intersection Summary				
Average Delay	14.2			
Intersection Capacity Utilization	44.4%	ICU Level of Service	A	
Analysis Period (min)	15			

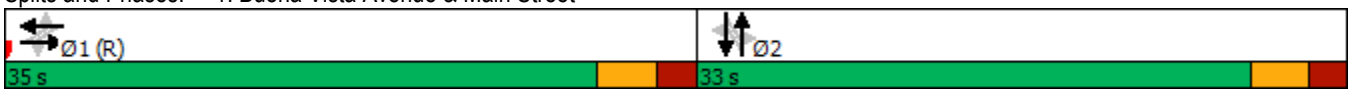


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	41	49	32	45	40	45	58	25	16	52	7
Future Volume (vph)	5	41	49	32	45	40	45	58	25	16	52	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	14	14	14	11	11	11	13	13	13
Storage Length (ft)	150		150	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.95			0.96			0.97			0.99	
Frt		0.931			0.954			0.974			0.987	
Flt Protected		0.997			0.986			0.983			0.990	
Satd. Flow (prot)	0	1583	0	0	1463	0	0	1422	0	0	1653	0
Flt Permitted		0.989			0.915			0.885			0.938	
Satd. Flow (perm)	0	1570	0	0	1358	0	0	1280	0	0	1567	0
Right Turn on Red			No			No			No			No
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		113			249			300			234	
Travel Time (s)		2.6			5.7			6.8			5.3	
Confl. Peds. (#/hr)			67			93			107			49
Peak Hour Factor	0.86	0.86	0.86	0.92	0.92	0.92	0.84	0.84	0.84	0.88	0.88	0.88
Heavy Vehicles (%)	2%	2%	2%	6%	6%	6%	2%	2%	2%	11%	11%	11%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	9	0
Parking (#/hr)		10			10			10				
Adj. Flow (vph)	6	48	57	35	49	43	54	69	30	18	59	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	111	0	0	127	0	0	153	0	0	85	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	1.05	0.85	0.92	1.13	0.92	1.04	1.28	1.04	0.96	1.01	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		1			1			2			2	
Permitted Phases	1			1			2			2		
Minimum Split (s)	34.0	34.0		34.0	34.0		32.0	32.0		32.0	32.0	
Total Split (s)	35.0	35.0		35.0	35.0		33.0	33.0		33.0	33.0	
Total Split (%)	51.5%	51.5%		51.5%	51.5%		48.5%	48.5%		48.5%	48.5%	
Maximum Green (s)	30.0	30.0		30.0	30.0		28.0	28.0		28.0	28.0	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag	Lead	Lead		Lead	Lead		Lag	Lag		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Walk Time (s)	15.0	15.0		15.0	15.0		15.0	15.0		15.0	15.0	
Flash Dont Walk (s)	14.0	14.0		14.0	14.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		30.0			30.0			28.0			28.0	
Actuated g/C Ratio		0.44			0.44			0.41			0.41	
v/c Ratio		0.16			0.21			0.29			0.13	
Control Delay		12.3			12.9			15.3			13.2	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		12.3			12.9			15.3			13.2	
LOS		B			B			B			B	
Approach Delay		12.3			12.9			15.3			13.2	
Approach LOS		B			B			B			B	
Queue Length 50th (ft)		27			31			41			21	
Queue Length 95th (ft)		52			64			75			46	
Internal Link Dist (ft)		33			169			220			154	
Turn Bay Length (ft)												
Base Capacity (vph)		692			599			527			645	
Starvation Cap Reductn		0			0			0			0	
Spillback Cap Reductn		0			0			0			0	
Storage Cap Reductn		0			0			0			0	
Reduced v/c Ratio		0.16			0.21			0.29			0.13	

Intersection Summary			
Area Type:	Other		
Cycle Length: 68			
Actuated Cycle Length: 68			
Offset: 0 (0%), Referenced to phase 1:EBWB, Start of Green			
Natural Cycle: 70			
Control Type: Pretimed			
Maximum v/c Ratio: 0.29			
Intersection Signal Delay: 13.6		Intersection LOS: B	
Intersection Capacity Utilization 55.0%		ICU Level of Service B	
Analysis Period (min) 15			

Splits and Phases: 1: Buena Vista Avenue & Main Street

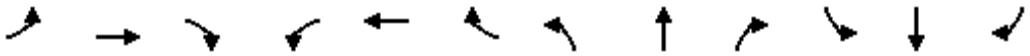


Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	52	8	120	12	9	124
Future Volume (vph)	52	8	120	12	9	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.982		0.987			
Flt Protected	0.959					0.997
Satd. Flow (prot)	1427	0	1589	0	0	2006
Flt Permitted	0.959					0.997
Satd. Flow (perm)	1427	0	1589	0	0	2006
Link Speed (mph)	30		30			30
Link Distance (ft)	240		235			300
Travel Time (s)	5.5		5.3			6.8
Confl. Peds. (#/hr)	39			9	23	
Peak Hour Factor	0.91	0.91	0.82	0.82	0.87	0.87
Heavy Vehicles (%)	3%	3%	17%	17%	7%	7%
Parking (#/hr)	10		5			
Adj. Flow (vph)	57	9	146	15	10	143
Shared Lane Traffic (%)						
Lane Group Flow (vph)	66	0	161	0	0	153
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	11		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.28	1.04	1.01	0.85	0.85	0.85
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Stop			Stop

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.0%		ICU Level of Service A	
Analysis Period (min) 15			

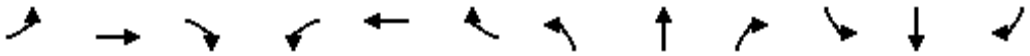
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	19	84	48	60	151	25
Future Volume (vph)	19	84	48	60	151	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	15	15	9	9	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt		0.850	0.925			
Flt Protected	0.950					0.959
Satd. Flow (prot)	1742	1558	1225	0	0	1948
Flt Permitted	0.950					0.959
Satd. Flow (perm)	1742	1558	1225	0	0	1948
Link Speed (mph)	30		30			30
Link Distance (ft)	256		433			284
Travel Time (s)	5.8		9.8			6.5
Confl. Peds. (#/hr)	40			9	27	
Peak Hour Factor	0.81	0.81	0.82	0.82	0.87	0.87
Heavy Vehicles (%)	14%	14%	13%	13%	6%	6%
Parking (#/hr)			5			
Adj. Flow (vph)	23	104	59	73	174	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	104	132	0	0	203
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	20		0			0
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	0.88	0.88	1.35	1.14	0.85	0.85
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Stop			Stop

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 26.3%		ICU Level of Service A	
Analysis Period (min) 15			



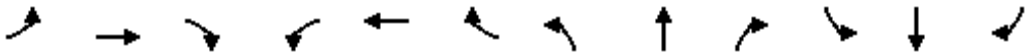
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	74	8	36	88	0	23	0	20	7	0	6
Future Volume (vph)	0	74	8	36	88	0	23	0	20	7	0	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	15	15	15	15	12	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987						0.865			0.937	
Flt Protected					0.986		0.950				0.974	
Satd. Flow (prot)	0	1624	0	0	1652	0	1770	0	0	0	1700	0
Flt Permitted					0.986		0.950				0.974	
Satd. Flow (perm)	0	1624	0	0	1652	0	1770	0	0	0	1700	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		249			526			303			186	
Travel Time (s)		5.7			12.0			6.9			4.2	
Peak Hour Factor	0.92	0.86	0.86	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	8%	8%	6%	6%	2%	2%	2%	2%	2%	2%	2%
Parking (#/hr)		10			10							
Adj. Flow (vph)	0	86	9	39	96	0	25	0	22	8	0	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	95	0	0	135	0	25	22	0	0	15	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			-50	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.09	0.88	0.88	1.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	14	0	0	0	0	32	36	44	16	0	28
Future Volume (vph)	7	14	0	0	0	0	32	36	44	16	0	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	12	12	12	16	16	16	13	13	13
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt								0.947			0.915	
Flt Protected		0.984						0.986			0.982	
Satd. Flow (prot)	0	1438	0	0	0	0	0	1644	0	0	1730	0
Flt Permitted		0.984						0.986			0.982	
Satd. Flow (perm)	0	1438	0	0	0	0	0	1644	0	0	1730	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		240			538			516			303	
Travel Time (s)		5.5			12.2			11.7			6.9	
Confl. Peds. (#/hr)			33			35			16			38
Peak Hour Factor	0.85	0.85	0.85	0.92	0.92	0.92	0.83	0.83	0.83	0.90	0.90	0.90
Heavy Vehicles (%)	10%	10%	10%	2%	2%	2%	7%	7%	7%	2%	2%	2%
Parking (#/hr)		5						5				
Adj. Flow (vph)	8	16	0	0	0	0	39	43	53	18	0	31
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	24	0	0	0	0	0	135	0	0	49	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.04	1.24	1.04	1.00	1.00	1.00	0.85	1.01	0.85	0.96	0.96	0.96
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 29.1%		ICU Level of Service A	
Analysis Period (min) 15			

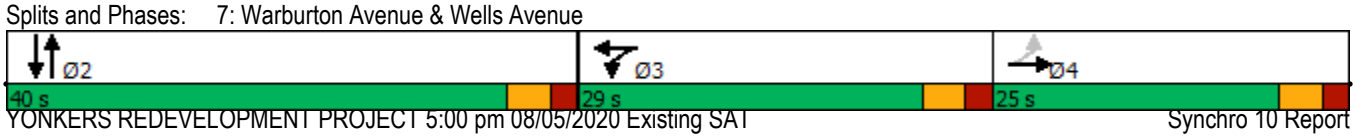


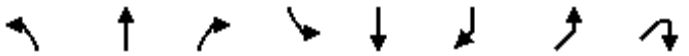
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	0	2	297	0	47	0	166	0	0	230	21
Future Volume (vph)	1	0	2	297	0	47	0	166	0	0	230	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	13	9	9	14	14	14	14	14	14
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.910			0.850						0.989	
Flt Protected		0.984		0.950								
Satd. Flow (prot)	0	1668	0	1554	1425	0	0	1689	0	0	1965	0
Flt Permitted				0.950								
Satd. Flow (perm)	0	1695	0	1554	1425	0	0	1689	0	0	1965	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		81									6	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		49			114			382			684	
Travel Time (s)		1.1			2.6			8.7			15.5	
Peak Hour Factor	0.81	0.81	0.81	0.94	0.94	0.94	0.82	0.82	0.82	0.97	0.97	0.97
Parking (#/hr)				10		5		10				
Adj. Flow (vph)	1	0	2	316	0	50	0	202	0	0	237	22
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	3	0	316	50	0	0	202	0	0	259	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		13			13			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.18	1.14	1.14	0.92	1.13	0.92	0.92	0.92	0.92
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2			2			2	
Detector Template	Left	Thru		Left	Thru			Thru			Thru	
Leading Detector (ft)	20	100		20	100			100			100	
Trailing Detector (ft)	0	0		0	0			0			0	
Detector 1 Position(ft)	0	0		0	0			0			0	
Detector 1 Size(ft)	20	6		20	6			6			6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Split	NA			NA			NA	
Protected Phases		4		3	3			2			2	
Permitted Phases	4											
Detector Phase	4	4		3	3			2			2	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0			5.0			5.0	
Minimum Split (s)	24.0	24.0		28.0	28.0			39.0			39.0	
Total Split (s)	25.0	25.0		29.0	29.0			40.0			40.0	
Total Split (%)	26.6%	26.6%		30.9%	30.9%			42.6%			42.6%	
Maximum Green (s)	20.0	20.0		24.0	24.0			35.0			35.0	
Yellow Time (s)	3.0	3.0		3.0	3.0			3.0			3.0	
All-Red Time (s)	2.0	2.0		2.0	2.0			2.0			2.0	
Lost Time Adjust (s)		0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)		5.0		5.0	5.0			5.0			5.0	
Lead/Lag	Lag	Lag		Lead	Lead							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Recall Mode	None	None		Ped	Ped			Ped			Ped	
Walk Time (s)	7.0	7.0		11.0	11.0			24.0			24.0	
Flash Dont Walk (s)	12.0	12.0		12.0	12.0			10.0			10.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)		5.5		23.3	23.3			34.1			34.1	
Actuated g/C Ratio		0.08		0.34	0.34			0.49			0.49	
v/c Ratio		0.01		0.61	0.10			0.24			0.27	
Control Delay		0.0		25.9	17.8			12.0			11.7	
Queue Delay		0.0		0.0	0.0			0.0			0.0	
Total Delay		0.0		25.9	17.8			12.0			11.7	
LOS		A		C	B			B			B	
Approach Delay					24.8			12.0			11.7	
Approach LOS					C			B			B	
Queue Length 50th (ft)		0		105	14			43			54	
Queue Length 95th (ft)		0		222	43			96			129	
Internal Link Dist (ft)		1			34			302			604	
Turn Bay Length (ft)												
Base Capacity (vph)		548		540	495			856			999	
Starvation Cap Reductn		0		0	0			0			0	
Spillback Cap Reductn		0		0	0			0			0	
Storage Cap Reductn		0		0	0			0			0	
Reduced v/c Ratio		0.01		0.59	0.10			0.24			0.26	

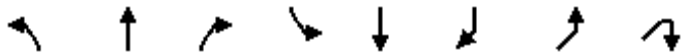
Intersection Summary			
Area Type:	Other		
Cycle Length: 94			
Actuated Cycle Length: 69.3			
Natural Cycle: 95			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.61			
Intersection Signal Delay: 17.5		Intersection LOS: B	
Intersection Capacity Utilization 44.8%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 7: Warburton Avenue & Wells Avenue





Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER2	Ø9
Lane Configurations									
Traffic Volume (vph)	42	156	78	20	466	43	10	13	
Future Volume (vph)	42	156	78	20	466	43	10	13	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width (ft)	12	12	12	16	16	16	16	12	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped Bike Factor		0.93			0.98				
Frt		0.950			0.989		0.923		
Flt Protected	0.950				0.998		0.979		
Satd. Flow (prot)	1703	1350	0	0	1908	0	1669	0	
Flt Permitted	0.411				0.981		0.979		
Satd. Flow (perm)	737	1350	0	0	1876	0	1669	0	
Right Turn on Red			Yes					Yes	
Satd. Flow (RTOR)		31					84		
Link Speed (mph)		30			30		30		
Link Distance (ft)		431			382		174		
Travel Time (s)		9.8			8.7		4.0		
Confl. Peds. (#/hr)			134			139			
Peak Hour Factor	0.94	0.94	0.94	0.93	0.93	0.93	0.81	0.81	
Heavy Vehicles (%)	6%	6%	6%	6%	6%	6%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	8	0	0	0	
Parking (#/hr)		10					5		
Adj. Flow (vph)	45	166	83	22	501	46	12	16	
Shared Lane Traffic (%)									
Lane Group Flow (vph)	45	249	0	0	569	0	28	0	
Enter Blocked Intersection	No	No	No	No	No	No	No	No	
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Right	
Median Width(ft)		12			0		16		
Link Offset(ft)		0			0		80		
Crosswalk Width(ft)		16			16		16		
Two way Left Turn Lane									
Headway Factor	1.00	1.23	1.00	0.85	0.88	0.85	1.01	1.00	
Turning Speed (mph)	15		9	15		9	15	9	
Number of Detectors	1	2		1	2		1		
Detector Template	Left	Thru		Left	Thru		Left		
Leading Detector (ft)	20	100		20	100		20		
Trailing Detector (ft)	0	0		0	0		0		
Detector 1 Position(ft)	0	0		0	0		0		
Detector 1 Size(ft)	20	6		20	6		20		
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex		
Detector 1 Channel									
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0		
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0		
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0		
Detector 2 Position(ft)		94			94				
Detector 2 Size(ft)		6			6				
Detector 2 Type		Cl+Ex			Cl+Ex				
Detector 2 Channel									
Detector 2 Extend (s)		0.0			0.0				



Lane Group	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER2	Ø9
Turn Type	Perm	NA		Perm	NA		Prot		
Protected Phases		3			3		1		9
Permitted Phases	3			3					
Detector Phase	3	3		3	3		1		
Switch Phase									
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0		5.0
Minimum Split (s)	13.0	13.0		13.0	13.0		13.0		27.0
Total Split (s)	41.0	41.0		41.0	41.0		23.0		27.0
Total Split (%)	45.1%	45.1%		45.1%	45.1%		25.3%		30%
Maximum Green (s)	33.0	33.0		33.0	33.0		15.0		25.0
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0		2.0
All-Red Time (s)	4.0	4.0		4.0	4.0		4.0		0.0
Lost Time Adjust (s)	0.0	0.0			0.0		0.0		
Total Lost Time (s)	8.0	8.0			8.0		8.0		
Lead/Lag									
Lead-Lag Optimize?									
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0		3.0
Recall Mode	Max	Max		Max	Max		Max		None
Walk Time (s)									10.0
Flash Dont Walk (s)									15.0
Pedestrian Calls (#/hr)									5
Act Effct Green (s)	33.7	33.7			33.7		15.3		
Actuated g/C Ratio	0.49	0.49			0.49		0.22		
v/c Ratio	0.13	0.37			0.63		0.06		
Control Delay	14.5	14.0			19.7		0.3		
Queue Delay	0.0	0.0			1.5		0.0		
Total Delay	14.5	14.0			21.2		0.3		
LOS	B	B			C		A		
Approach Delay		14.0			21.2		0.3		
Approach LOS		B			C		A		
Queue Length 50th (ft)	8	45			142		0		
Queue Length 95th (ft)	43	167			#476		0		
Internal Link Dist (ft)		351			302		94		
Turn Bay Length (ft)									
Base Capacity (vph)	357	671			910		433		
Starvation Cap Reductn	0	0			177		0		
Spillback Cap Reductn	0	0			0		0		
Storage Cap Reductn	0	0			0		0		
Reduced v/c Ratio	0.13	0.37			0.78		0.06		

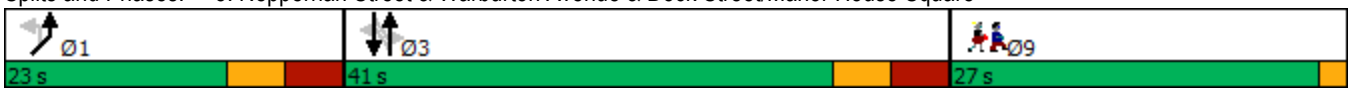
Intersection Summary			
Area Type:	Other		
Cycle Length: 91			
Actuated Cycle Length: 69.4			
Natural Cycle: 70			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.63			
Intersection Signal Delay: 18.2		Intersection LOS: B	
Intersection Capacity Utilization 62.0%		ICU Level of Service B	

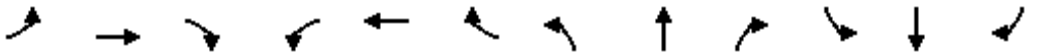
Analysis Period (min) 15

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

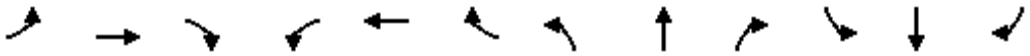
Queue shown is maximum after two cycles.

Splits and Phases: 8: Nepperhan Street & Warburton Avenue & Dock Street/Manor House Square





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	0	65	206	66	65	11	175	0	0	432	47
Future Volume (vph)	36	0	65	206	66	65	11	175	0	0	432	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	13	15	15	9	13	13	12	12	12
Storage Length (ft)	0		0	0		0	75		0	0		0
Storage Lanes	0		0	1		0	1		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	0.95
Ped Bike Factor		0.94			0.95						0.98	
Frt		0.913			0.926						0.985	
Flt Protected		0.982		0.950			0.950					
Satd. Flow (prot)	0	1333	0	1711	1427	0	1477	3154	0	0	2995	0
Flt Permitted		0.851		0.691			0.394					
Satd. Flow (perm)	0	1155	0	1245	1427	0	612	3154	0	0	2995	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		98			52						13	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		526			497			325			431	
Travel Time (s)		12.0			11.3			7.4			9.8	
Confl. Peds. (#/hr)			82			104			126			103
Peak Hour Factor	0.82	0.82	0.82	0.83	0.83	0.83	0.98	0.98	0.98	0.91	0.91	0.91
Heavy Vehicles (%)	16%	16%	16%	9%	9%	9%	10%	10%	10%	8%	8%	8%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	4	0	0	0	0
Parking (#/hr)		10			10			5			10	
Adj. Flow (vph)	44	0	79	248	80	78	11	179	0	0	475	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	123	0	248	158	0	11	179	0	0	527	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	1.05	0.85	0.96	1.09	0.88	1.14	1.05	0.96	1.00	1.11	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2			2	
Detector Template	Left	Thru		Left	Thru		Left	Thru			Thru	
Leading Detector (ft)	20	100		20	100		20	100			100	
Trailing Detector (ft)	0	0		0	0		0	0			0	
Detector 1 Position(ft)	0	0		0	0		0	0			0	
Detector 1 Size(ft)	20	6		20	6		20	6			6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0			0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	

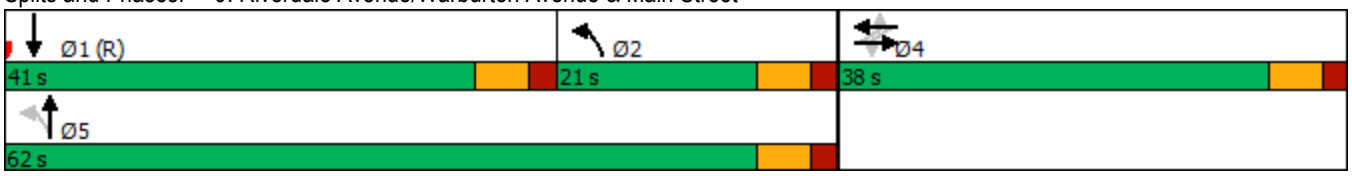


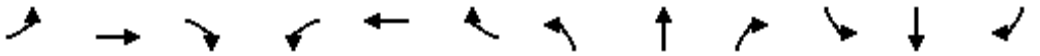
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA			NA	
Protected Phases		4			4		2	5			1	
Permitted Phases	4			4			5					
Detector Phase	4	4		4	4		2	5			1	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0			5.0	
Minimum Split (s)	37.0	37.0		37.0	37.0		11.0	11.0			40.0	
Total Split (s)	38.0	38.0		38.0	38.0		21.0	62.0			41.0	
Total Split (%)	38.0%	38.0%		38.0%	38.0%		21.0%	62.0%			41.0%	
Maximum Green (s)	32.0	32.0		32.0	32.0		15.0	56.0			35.0	
Yellow Time (s)	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	
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				Lead	
Lead-Lag Optimize?							Yes				Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0			3.0	
Recall Mode	Ped	Ped		Ped	Ped		Max	Max			C-Max	
Walk Time (s)	10.0	10.0		10.0	10.0						18.0	
Flash Dont Walk (s)	21.0	21.0		21.0	21.0						16.0	
Pedestrian Calls (#/hr)	0	0		0	0						0	
Act Effct Green (s)		31.2		31.2	31.2		56.8	56.8			35.8	
Actuated g/C Ratio		0.31		0.31	0.31		0.57	0.57			0.36	
v/c Ratio		0.29		0.64	0.33		0.02	0.10			0.49	
Control Delay		9.8		38.3	19.5		10.0	10.1			26.3	
Queue Delay		0.0		0.0	0.0		0.0	0.0			0.0	
Total Delay		9.8		38.3	19.5		10.0	10.1			26.3	
LOS		A		D	B		A	B			C	
Approach Delay		9.8			31.0			10.1			26.3	
Approach LOS		A			C			B			C	
Queue Length 50th (ft)		11		136	50		3	25			132	
Queue Length 95th (ft)		43		197	91		11	42			185	
Internal Link Dist (ft)		446			417			245			351	
Turn Bay Length (ft)							75					
Base Capacity (vph)		436		398	492		477	1791			1080	
Starvation Cap Reductn		0		0	0		0	0			0	
Spillback Cap Reductn		0		0	0		0	0			0	
Storage Cap Reductn		0		0	0		0	0			0	
Reduced v/c Ratio		0.28		0.62	0.32		0.02	0.10			0.49	

Intersection Summary	
Area Type:	Other
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 1:SBT, Start of Green	
Natural Cycle: 90	

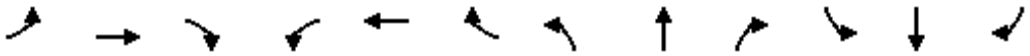
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 23.7	Intersection LOS: C
Intersection Capacity Utilization 80.9%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: Riverdale Avenue/Warburton Avenue & Main Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	25	31	18	0	0	0	0	161	160	206	497	0
Future Volume (vph)	25	31	18	0	0	0	0	161	160	206	497	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	12	12	12	11	11	11	9	12	12
Storage Length (ft)	0		0	0		0	0		0	125		0
Storage Lanes	0		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor		0.94						0.83				
Frt		0.967						0.925				
Flt Protected		0.983								0.950		
Satd. Flow (prot)	0	1561	0	0	0	0	0	2394	0	1533	3119	0
Flt Permitted		0.983								0.547		
Satd. Flow (perm)	0	1561	0	0	0	0	0	2394	0	882	3119	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16						170				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		538			379			525			325	
Travel Time (s)		12.2			8.6			11.9			7.4	
Confl. Peds. (#/hr)			178			100			148			55
Peak Hour Factor	0.85	0.85	0.85	0.92	0.92	0.92	0.94	0.94	0.94	0.93	0.93	0.93
Heavy Vehicles (%)	5%	5%	5%	2%	2%	2%	11%	11%	11%	6%	6%	6%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	7	0	0	5	0
Parking (#/hr)		10									10	
Adj. Flow (vph)	29	36	21	0	0	0	0	171	170	222	534	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	86	0	0	0	0	0	341	0	222	534	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			8			8	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	1.05	0.85	1.00	1.00	1.00	1.04	1.06	1.04	1.14	1.12	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	

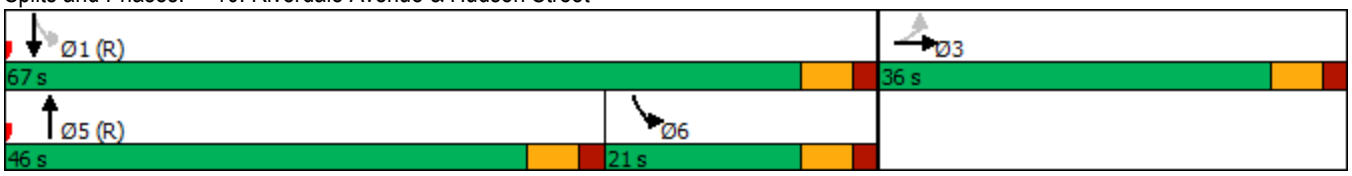


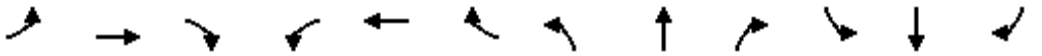
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA		pm+pt	NA	
Protected Phases		3						5		6	1	
Permitted Phases	3									1		
Detector Phase	3	3						5		6	1	
Switch Phase												
Minimum Initial (s)	10.0	10.0						5.0		10.0	5.0	
Minimum Split (s)	30.0	30.0						30.0		16.0	30.0	
Total Split (s)	36.0	36.0						46.0		21.0	67.0	
Total Split (%)	35.0%	35.0%						44.7%		20.4%	65.0%	
Maximum Green (s)	30.0	30.0						40.0		15.0	61.0	
Yellow Time (s)	4.0	4.0						4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0						2.0		2.0	2.0	
Lost Time Adjust (s)		0.0						0.0		0.0	0.0	
Total Lost Time (s)		6.0						6.0		6.0	6.0	
Lead/Lag								Lead		Lag		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Recall Mode	None	None						C-Max		Max	C-Max	
Walk Time (s)	10.0	10.0						10.0			10.0	
Flash Dont Walk (s)	14.0	14.0						14.0			14.0	
Pedestrian Calls (#/hr)	0	0						0			0	
Act Effct Green (s)		11.3						61.9		82.9	84.1	
Actuated g/C Ratio		0.11						0.60		0.80	0.82	
v/c Ratio		0.46						0.23		0.28	0.21	
Control Delay		42.8						5.8		4.6	3.2	
Queue Delay		0.0						0.0		0.9	0.4	
Total Delay		42.8						5.8		5.5	3.6	
LOS		D						A		A	A	
Approach Delay		42.8						5.8			4.2	
Approach LOS		D						A			A	
Queue Length 50th (ft)		44						24		29	37	
Queue Length 95th (ft)		84						52		61	65	
Internal Link Dist (ft)		458			299			445			245	
Turn Bay Length (ft)										125		
Base Capacity (vph)		466						1506		804	2546	
Starvation Cap Reductn		0						0		354	1439	
Spillback Cap Reductn		0						0		0	0	
Storage Cap Reductn		0						0		0	0	
Reduced v/c Ratio		0.18						0.23		0.49	0.48	

Intersection Summary	
Area Type:	Other
Cycle Length: 103	
Actuated Cycle Length: 103	
Offset: 0 (0%), Referenced to phase 1:SBTL and 5:NBT, Start of Green	
Natural Cycle: 80	

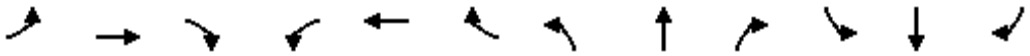
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 7.4	Intersection LOS: A
Intersection Capacity Utilization 66.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 10: Riverdale Avenue & Hudson Street





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	120	10	187	215	120	37	193	273	241	252	22
Future Volume (vph)	8	120	10	187	215	120	37	193	273	241	252	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	12	12	12	10	11	11	10	11	11
Storage Length (ft)	0		0	160		0	100		0	155		0
Storage Lanes	0		0	1		1	1		0	1		1
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00	0.95	1.00
Ped Bike Factor		0.99				0.89		0.96				0.94
Frt		0.989				0.850		0.912				0.850
Flt Protected		0.997		0.950			0.950			0.950		
Satd. Flow (prot)	0	3898	0	1770	1863	1552	1652	2760	0	1652	3421	1531
Flt Permitted		0.935		0.655			0.416			0.465		
Satd. Flow (perm)	0	3655	0	1220	1863	1389	723	2760	0	808	3421	1439
Right Turn on Red			Yes			Yes			No			Yes
Satd. Flow (RTOR)		7				130						149
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		511			403			522			525	
Travel Time (s)		11.6			9.2			11.9			11.9	
Confl. Peds. (#/hr)			193			95			64			49
Peak Hour Factor	0.90	0.90	0.90	0.92	0.92	0.92	0.92	0.92	0.92	0.93	0.93	0.93
Bus Blockages (#/hr)	0	0	0	0	0	5	0	0	0	0	0	0
Parking (#/hr)								10				
Adj. Flow (vph)	9	133	11	203	234	130	40	210	297	259	271	24
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	153	0	203	234	130	40	507	0	259	271	24
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			10			16	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	1.00	1.00	1.03	1.09	1.15	1.04	1.09	1.04	1.04
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	



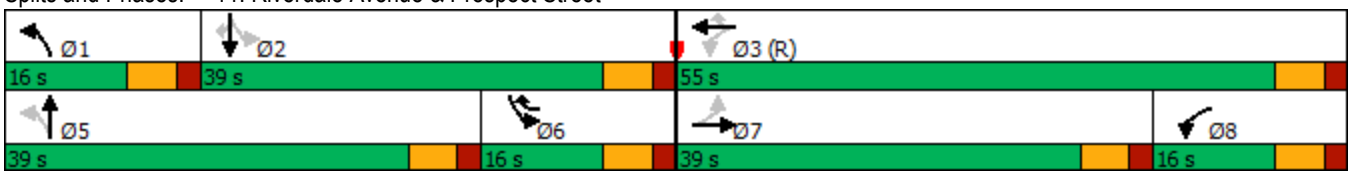
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		pm+pt	NA	pm+ov	pm+pt	NA		pm+pt	NA	Perm
Protected Phases		7		8	3	6	1	5		6	2	
Permitted Phases	7			3		3	5			2		2
Detector Phase	7	7		8	3	6	1	5		6	2	2
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)	39.0	39.0		11.0	39.0	11.0	11.0	39.0		11.0	39.0	39.0
Total Split (s)	39.0	39.0		16.0	55.0	16.0	16.0	39.0		16.0	39.0	39.0
Total Split (%)	35.5%	35.5%		14.5%	50.0%	14.5%	14.5%	35.5%		14.5%	35.5%	35.5%
Maximum Green (s)	33.0	33.0		10.0	49.0	10.0	10.0	33.0		10.0	33.0	33.0
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	0.0
Total Lost Time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	6.0
Lead/Lag	Lead	Lead		Lag		Lag	Lead	Lead		Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes		Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
Recall Mode	Ped	Ped		Max	C-Max	Max	Max	Ped		Max	Ped	Ped
Walk Time (s)	7.0	7.0			7.0			15.0			15.0	15.0
Flash Dont Walk (s)	26.0	26.0			26.0			18.0			18.0	18.0
Pedestrian Calls (#/hr)	0	0			0			0			0	0
Act Effct Green (s)		33.0		49.0	49.0	59.0	33.0	33.0		33.0	33.0	33.0
Actuated g/C Ratio		0.30		0.45	0.45	0.54	0.30	0.30		0.30	0.30	0.30
v/c Ratio		0.14		0.34	0.28	0.16	0.13	0.61		0.81	0.26	0.04
Control Delay		27.2		5.1	4.3	0.5	28.9	36.8		59.4	30.1	0.1
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay		27.2		5.1	4.3	0.5	28.9	36.8		59.4	30.1	0.1
LOS		C		A	A	A	C	D		E	C	A
Approach Delay		27.2			3.7			36.2			42.5	
Approach LOS		C			A			D			D	
Queue Length 50th (ft)		39		12	14	0	20	161		152	76	0
Queue Length 95th (ft)		65		18	20	0	47	219		#280	112	0
Internal Link Dist (ft)		431			323			442			445	
Turn Bay Length (ft)				160			100			155		
Base Capacity (vph)		1101		593	829	820	301	828		319	1026	536
Starvation Cap Reductn		0		0	0	0	0	0		0	0	0
Spillback Cap Reductn		0		0	0	0	0	0		0	0	0
Storage Cap Reductn		0		0	0	0	0	0		0	0	0
Reduced v/c Ratio		0.14		0.34	0.28	0.16	0.13	0.61		0.81	0.26	0.04

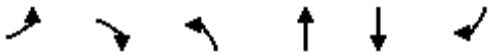
Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 25 (23%), Referenced to phase 3:WBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	

Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 27.3	Intersection LOS: C
Intersection Capacity Utilization 115.9%	ICU Level of Service H
Analysis Period (min) 15	

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

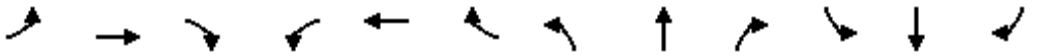
Splits and Phases: 11: Riverdale Avenue & Prospect Street





Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	98	0	0	299	0	0
Future Volume (vph)	98	0	0	299	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected	0.950					
Satd. Flow (prot)	1705	0	0	1794	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1705	0	0	1794	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	226			563	857	
Travel Time (s)	5.1			12.8	19.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Parking (#/hr)	10			10		
Adj. Flow (vph)	107	0	0	325	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	107	0	0	325	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	16			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.05	0.85	0.85	1.05	0.85	0.85
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 27.8%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	249	128	88	171	0	0	0	0
Future Volume (vph)	0	0	0	0	249	128	88	171	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	16	16	16	16	16	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.954							
Flt Protected								0.983				
Satd. Flow (prot)	0	0	0	0	2014	0	0	2075	0	0	0	0
Flt Permitted								0.983				
Satd. Flow (perm)	0	0	0	0	2014	0	0	2075	0	0	0	0
Right Turn on Red			Yes			Yes	Yes		Yes			Yes
Satd. Flow (RTOR)					37			73				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		497			81			184			563	
Travel Time (s)		11.3			1.8			4.2			12.8	
Peak Hour Factor	0.92	0.92	0.92	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	300	154	96	186	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	454	0	0	282	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	0.85	0.85	0.85	0.85	0.85	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					2		1	2				
Detector Template					Thru		Left	Thru				
Leading Detector (ft)					100		20	100				
Trailing Detector (ft)					0		0	0				
Detector 1 Position(ft)					0		0	0				
Detector 1 Size(ft)					6		20	6				
Detector 1 Type					Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)					0.0		0.0	0.0				
Detector 1 Queue (s)					0.0		0.0	0.0				
Detector 1 Delay (s)					0.0		0.0	0.0				
Detector 2 Position(ft)					94			94				
Detector 2 Size(ft)					6			6				
Detector 2 Type					Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				
Turn Type					NA		Perm	NA				
Protected Phases					2 6			3				
Permitted Phases							3					
Detector Phase					2 6		3	3				
Switch Phase												

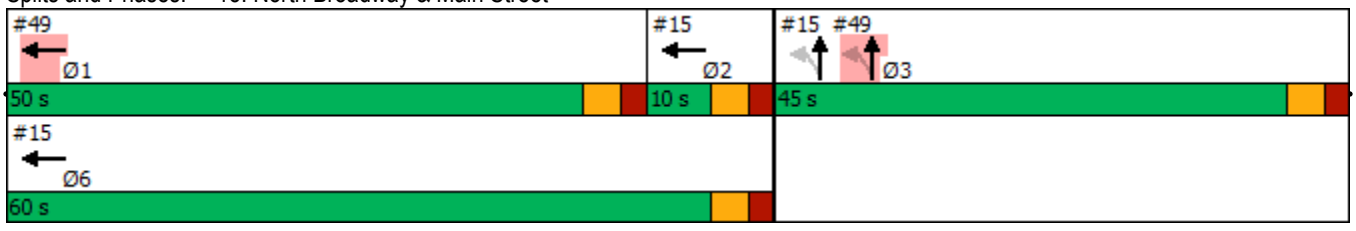
Lane Group	Ø1	Ø2	Ø6
Lane Configurations			
Traffic Volume (vph)			
Future Volume (vph)			
Ideal Flow (vphpl)			
Lane Width (ft)			
Lane Util. Factor			
Frt			
Flt Protected			
Satd. Flow (prot)			
Flt Permitted			
Satd. Flow (perm)			
Right Turn on Red			
Satd. Flow (RTOR)			
Link Speed (mph)			
Link Distance (ft)			
Travel Time (s)			
Peak Hour Factor			
Adj. Flow (vph)			
Shared Lane Traffic (%)			
Lane Group Flow (vph)			
Enter Blocked Intersection			
Lane Alignment			
Median Width(ft)			
Link Offset(ft)			
Crosswalk Width(ft)			
Two way Left Turn Lane			
Headway Factor			
Turning Speed (mph)			
Number of Detectors			
Detector Template			
Leading Detector (ft)			
Trailing Detector (ft)			
Detector 1 Position(ft)			
Detector 1 Size(ft)			
Detector 1 Type			
Detector 1 Channel			
Detector 1 Extend (s)			
Detector 1 Queue (s)			
Detector 1 Delay (s)			
Detector 2 Position(ft)			
Detector 2 Size(ft)			
Detector 2 Type			
Detector 2 Channel			
Detector 2 Extend (s)			
Turn Type			
Protected Phases	1	2	6
Permitted Phases			
Detector Phase			
Switch Phase			

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)							5.0	5.0				
Minimum Split (s)							45.0	45.0				
Total Split (s)							45.0	45.0				
Total Split (%)							42.9%	42.9%				
Maximum Green (s)							40.0	40.0				
Yellow Time (s)							3.0	3.0				
All-Red Time (s)							2.0	2.0				
Lost Time Adjust (s)								0.0				
Total Lost Time (s)								5.0				
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)							3.0	3.0				
Recall Mode							Ped	Ped				
Walk Time (s)							30.0	30.0				
Flash Dont Walk (s)							10.0	10.0				
Pedestrian Calls (#/hr)							0	0				
Act Effct Green (s)					55.0			40.0				
Actuated g/C Ratio					0.52			0.38				
v/c Ratio					0.42			0.34				
Control Delay					2.7			18.1				
Queue Delay					0.0			0.0				
Total Delay					2.7			18.1				
LOS					A			B				
Approach Delay					2.7			18.1				
Approach LOS					A			B				
Queue Length 50th (ft)					7			96				
Queue Length 95th (ft)					20			162				
Internal Link Dist (ft)		417			1			104			483	
Turn Bay Length (ft)												
Base Capacity (vph)					1072			835				
Starvation Cap Reductn					0			0				
Spillback Cap Reductn					0			0				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					0.42			0.34				

Intersection Summary

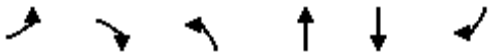
Area Type: Other
Cycle Length: 105
Actuated Cycle Length: 105
Natural Cycle: 105
Control Type: Semi Act-Uncoord
Maximum v/c Ratio: 0.54
Intersection Signal Delay: 8.6 Intersection LOS: A
Intersection Capacity Utilization 43.1% ICU Level of Service A
Analysis Period (min) 15

Splits and Phases: 15: North Broadway & Main Street



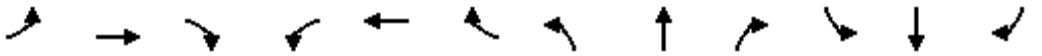
Lane Group	Ø1	Ø2	Ø6
Minimum Initial (s)	5.0	2.0	5.0
Minimum Split (s)	50.0	7.0	10.0
Total Split (s)	50.0	10.0	60.0
Total Split (%)	48%	10%	57%
Maximum Green (s)	45.0	5.0	55.0
Yellow Time (s)	3.0	3.0	3.0
All-Red Time (s)	2.0	2.0	2.0
Lost Time Adjust (s)			
Total Lost Time (s)			
Lead/Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0
Recall Mode	Ped	Max	Max
Walk Time (s)	35.0		
Flash Dont Walk (s)	10.0		
Pedestrian Calls (#/hr)	0		
Act Effct Green (s)			
Actuated g/C Ratio			
v/c Ratio			
Control Delay			
Queue Delay			
Total Delay			
LOS			
Approach Delay			
Approach LOS			
Queue Length 50th (ft)			
Queue Length 95th (ft)			
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)			
Starvation Cap Reductn			
Spillback Cap Reductn			
Storage Cap Reductn			
Reduced v/c Ratio			

Intersection Summary

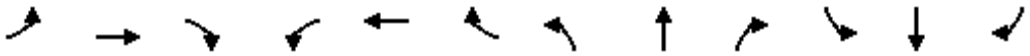


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	247	150	0	271	0	0
Future Volume (vph)	247	150	0	271	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	14	14	12	16	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.949					
Flt Protected	0.970					
Satd. Flow (prot)	1713	0	0	1760	0	0
Flt Permitted	0.970					
Satd. Flow (perm)	1713	0	0	1760	0	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	379			514	155	
Travel Time (s)	8.6			11.7	3.5	
Confl. Peds. (#/hr)	268		141			
Peak Hour Factor	0.97	0.97	0.87	0.87	0.92	0.92
Heavy Vehicles (%)	11%	2%	11%	4%	2%	2%
Bus Blockages (#/hr)	3	0	0	0	0	0
Parking (#/hr)				10		
Adj. Flow (vph)	255	155	0	311	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	410	0	0	311	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	14			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	0.93	0.92	1.00	1.05	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Stop	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	43.8%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	38	573	23	70	490	62	22	171	38	80	60	10
Future Volume (vph)	38	573	23	70	490	62	22	171	38	80	60	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	13	12	12	12	13	10	16	16	12	16	16
Grade (%)		0%			7%			0%			0%	
Storage Length (ft)	107		0	0		0	120		0	100		0
Storage Lanes	1		0	1		1	1		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.99				0.91		0.99			0.99	
Frt		0.994				0.850		0.973			0.978	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3519	0	1613	3226	1491	1574	1646	0	1687	1670	0
Flt Permitted	0.269			0.397			0.708			0.530		
Satd. Flow (perm)	496	3519	0	674	3226	1363	1173	1646	0	941	1670	0
Right Turn on Red			No			Yes			No			Yes
Satd. Flow (RTOR)						89					8	
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		403			838			623			514	
Travel Time (s)		9.2			19.0			14.2			11.7	
Confl. Peds. (#/hr)			132			49			27			32
Peak Hour Factor	0.89	0.89	0.89	0.95	0.95	0.95	0.93	0.93	0.93	0.94	0.94	0.94
Heavy Vehicles (%)	3%	3%	3%	8%	8%	8%	7%	7%	7%	7%	7%	7%
Bus Blockages (#/hr)	0	7	0	0	0	0	0	1	0	0	6	0
Parking (#/hr)								10			5	
Adj. Flow (vph)	43	644	26	74	516	65	24	184	41	85	64	11
Shared Lane Traffic (%)												
Lane Group Flow (vph)	43	670	0	74	516	65	24	225	0	85	75	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			23			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.98	1.00	1.05	1.05	1.00	1.09	1.05	0.85	1.00	1.04	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	



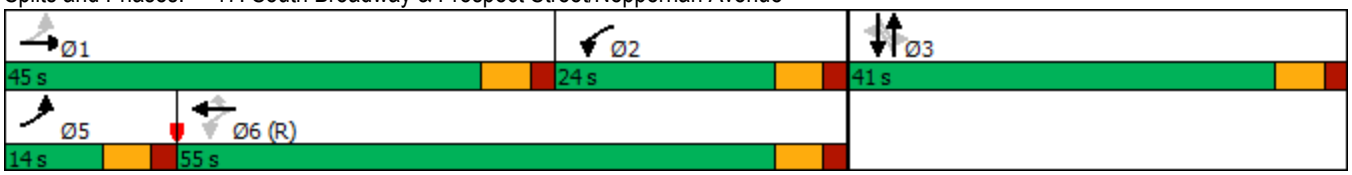
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	5	1		2	6			3			3	
Permitted Phases	1			6		6	3			3		
Detector Phase	5	1		2	6	6	3	3		3	3	
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)	11.0	41.0		11.0	46.0	46.0	40.0	40.0		40.0	40.0	
Total Split (s)	14.0	45.0		24.0	55.0	55.0	41.0	41.0		41.0	41.0	
Total Split (%)	12.7%	40.9%		21.8%	50.0%	50.0%	37.3%	37.3%		37.3%	37.3%	
Maximum Green (s)	8.0	39.0		18.0	49.0	49.0	35.0	35.0		35.0	35.0	
Yellow Time (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0	2.0	2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	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	6.0	
Lead/Lag	Lead	Lead		Lag	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	Max	Ped		Max	C-Max	C-Max	Ped	Ped		Ped	Ped	
Walk Time (s)		10.0			20.0	20.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		25.0			20.0	20.0	27.0	27.0		27.0	27.0	
Pedestrian Calls (#/hr)		0			0	0	0	0		0	0	
Act Effct Green (s)	35.0	35.0		49.0	49.0	49.0	34.0	34.0		34.0	34.0	
Actuated g/C Ratio	0.32	0.32		0.45	0.45	0.45	0.31	0.31		0.31	0.31	
v/c Ratio	0.17	0.60		0.15	0.36	0.10	0.07	0.44		0.29	0.14	
Control Delay	17.4	22.9		5.9	6.0	0.3	27.6	33.8		32.4	25.5	
Queue Delay	0.0	0.7		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	17.4	23.6		5.9	6.0	0.3	27.6	33.8		32.4	25.5	
LOS	B	C		A	A	A	C	C		C	C	
Approach Delay		23.2			5.4			33.2			29.1	
Approach LOS		C			A			C			C	
Queue Length 50th (ft)	16	197		6	23	0	12	127		45	34	
Queue Length 95th (ft)	m23	248		m12	29	m0	32	200		90	70	
Internal Link Dist (ft)		323			758			543			434	
Turn Bay Length (ft)	107						120			100		
Base Capacity (vph)	260	1247		496	1437	656	373	523		299	536	
Starvation Cap Reductn	0	275		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.17	0.69		0.15	0.36	0.10	0.06	0.43		0.28	0.14	

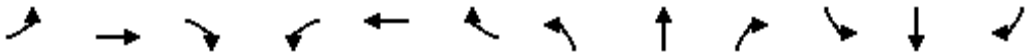
Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 15 (14%), Referenced to phase 6:WBTL, Start of Green	

Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 18.6	Intersection LOS: B
Intersection Capacity Utilization 90.3%	ICU Level of Service E
Analysis Period (min) 15	

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

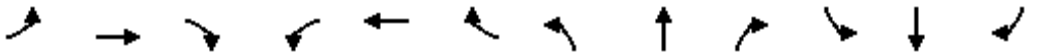
Splits and Phases: 17: South Broadway & Prospect Street/Nepperhan Avenue



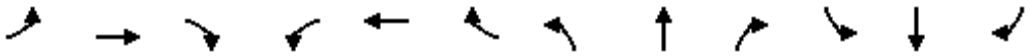


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	190	60	0	0	0	0	27	31	35	30	0
Future Volume (vph)	33	190	60	0	0	0	0	27	31	35	30	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	12	12	12	12	12	12	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.972						0.927				
Flt Protected		0.994									0.974	
Satd. Flow (prot)	0	2040	0	0	0	0	0	1727	0	0	1814	0
Flt Permitted		0.994									0.974	
Satd. Flow (perm)	0	2040	0	0	0	0	0	1727	0	0	1814	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		254			533			222			499	
Travel Time (s)		5.8			12.1			5.0			11.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	36	207	65	0	0	0	0	29	34	38	33	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	308	0	0	0	0	0	63	0	0	71	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.3%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	619	52	301	590	233	32	85	256	0	0	0
Future Volume (vph)	20	619	52	301	590	233	32	85	256	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	12	16	16	16	12	12	12
Grade (%)		7%			0%			0%			0%	
Storage Length (ft)	360		0	180		0	0		0	0		0
Storage Lanes	1		0	1		1	0		0	0		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.988				0.850		0.907				
Flt Protected	0.950			0.950				0.996				
Satd. Flow (prot)	1651	4848	0	1770	5085	1526	0	1621	0	0	0	0
Flt Permitted	0.368			0.301				0.996				
Satd. Flow (perm)	639	4848	0	561	5085	1526	0	1621	0	0	0	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)		14										
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		838			378			724			411	
Travel Time (s)		19.0			8.6			16.5			9.3	
Peak Hour Factor	0.89	0.89	0.89	0.95	0.95	0.95	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	9	0	0	0	0	0	0
Parking (#/hr)								10				
Adj. Flow (vph)	22	696	58	317	621	245	35	92	278	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	22	754	0	317	621	245	0	405	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.09	1.05	1.05	1.00	1.00	1.05	0.85	1.05	0.85	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2				
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru				
Leading Detector (ft)	20	100		20	100	20	20	100				
Trailing Detector (ft)	0	0		0	0	0	0	0				
Detector 1 Position(ft)	0	0		0	0	0	0	0				
Detector 1 Size(ft)	20	6		20	6	20	20	6				
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0				
Detector 2 Position(ft)		94			94			94				
Detector 2 Size(ft)		6			6			6				
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				
Detector 2 Channel												



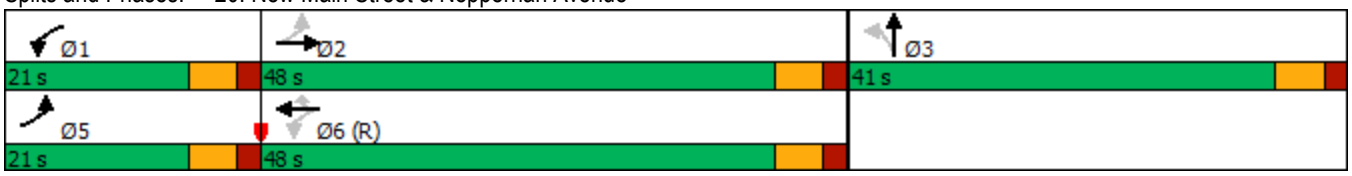
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector 2 Extend (s)		0.0			0.0			0.0				
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA				
Protected Phases	5	2		1	6			3				
Permitted Phases	2			6		6	3					
Detector Phase	5	2		1	6	6	3	3				
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0				
Minimum Split (s)	11.0	46.0		11.0	46.0	46.0	40.0	40.0				
Total Split (s)	21.0	48.0		21.0	48.0	48.0	41.0	41.0				
Total Split (%)	19.1%	43.6%		19.1%	43.6%	43.6%	37.3%	37.3%				
Maximum Green (s)	15.0	42.0		15.0	42.0	42.0	35.0	35.0				
Yellow Time (s)	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				
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0				
Total Lost Time (s)	6.0	6.0		6.0	6.0	6.0		6.0				
Lead/Lag	Lead	Lag		Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0				
Recall Mode	Max	Ped		Max	C-Max	C-Max	Ped	Ped				
Walk Time (s)		20.0			20.0	20.0	7.0	7.0				
Flash Dont Walk (s)		20.0			20.0	20.0	27.0	27.0				
Pedestrian Calls (#/hr)		0			0	0	0	0				
Act Effct Green (s)	57.6	42.0		57.6	42.0	42.0		34.4				
Actuated g/C Ratio	0.52	0.38		0.52	0.38	0.38		0.31				
v/c Ratio	0.05	0.41		0.68	0.32	0.42		0.80				
Control Delay	1.8	6.1		38.9	8.5	10.2		48.0				
Queue Delay	0.0	0.0		0.0	0.0	0.2		0.0				
Total Delay	1.8	6.1		38.9	8.5	10.4		48.0				
LOS	A	A		D	A	B		D				
Approach Delay		6.0			17.0			48.0				
Approach LOS		A			B			D				
Queue Length 50th (ft)	1	36		109	25	28		263				
Queue Length 95th (ft)	m2	42		202	33	42		#408				
Internal Link Dist (ft)		758			298			644			331	
Turn Bay Length (ft)	360			180								
Base Capacity (vph)	478	1859		465	1941	582		515				
Starvation Cap Reductn	0	0		0	0	53		0				
Spillback Cap Reductn	0	0		0	0	0		0				
Storage Cap Reductn	0	0		0	0	0		0				
Reduced v/c Ratio	0.05	0.41		0.68	0.32	0.46		0.79				

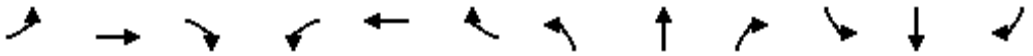
Intersection Summary	
Area Type:	Other
Cycle Length: 110	
Actuated Cycle Length: 110	
Offset: 10 (9%), Referenced to phase 6:WBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.80	

Intersection Signal Delay: 18.7	Intersection LOS: B
Intersection Capacity Utilization 66.8%	ICU Level of Service C
Analysis Period (min) 15	

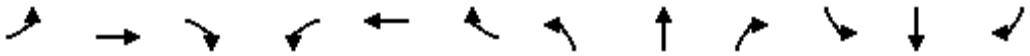
\# 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 20: New Main Street & Nepperhan Avenue





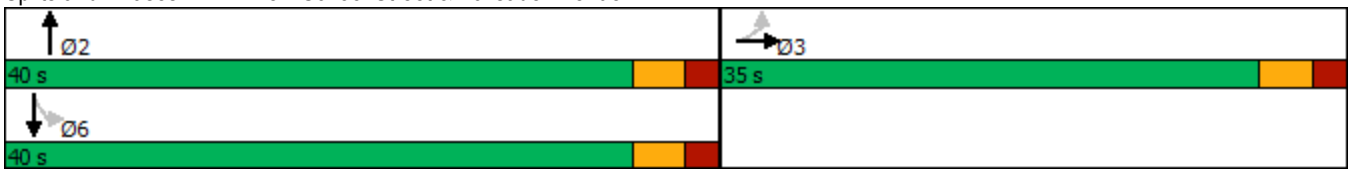
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	79	141	36	0	0	0	0	99	58	65	97	0
Future Volume (vph)	79	141	36	0	0	0	0	99	58	65	97	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	12	12	12	16	16	16	16	16	16
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981						0.950				
Flt Protected		0.985									0.980	
Satd. Flow (prot)	0	1734	0	0	0	0	0	2006	0	0	2019	0
Flt Permitted		0.985									0.833	
Satd. Flow (perm)	0	1734	0	0	0	0	0	2006	0	0	1716	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		13						52				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		533			736			222			625	
Travel Time (s)		12.1			16.7			5.0			14.2	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	6	0
Parking (#/hr)		10										
Adj. Flow (vph)	86	153	39	0	0	0	0	108	63	71	105	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	278	0	0	0	0	0	171	0	0	176	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	1.05	0.85	1.00	1.00	1.00	0.85	0.85	0.85	0.85	0.88	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2						2		1	2	
Detector Template	Left	Thru						Thru		Left	Thru	
Leading Detector (ft)	20	100						100		20	100	
Trailing Detector (ft)	0	0						0		0	0	
Detector 1 Position(ft)	0	0						0		0	0	
Detector 1 Size(ft)	20	6						6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex						Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0						0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0						0.0		0.0	0.0	
Detector 2 Position(ft)		94						94			94	
Detector 2 Size(ft)		6						6			6	
Detector 2 Type		Cl+Ex						Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0						0.0			0.0	
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		3						2			6	
Permitted Phases	3									6		

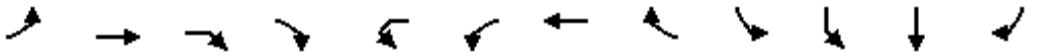


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Detector Phase	3	3						2		6	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0						5.0		5.0	5.0	
Minimum Split (s)	34.0	34.0						39.0		10.0	10.0	
Total Split (s)	35.0	35.0						40.0		40.0	40.0	
Total Split (%)	46.7%	46.7%						53.3%		53.3%	53.3%	
Maximum Green (s)	30.0	30.0						35.0		35.0	35.0	
Yellow Time (s)	3.0	3.0						3.0		3.0	3.0	
All-Red Time (s)	2.0	2.0						2.0		2.0	2.0	
Lost Time Adjust (s)		0.0						0.0			0.0	
Total Lost Time (s)		5.0						5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0						3.0		3.0	3.0	
Recall Mode	Ped	Ped						Ped		Max	Max	
Walk Time (s)	9.0	9.0						14.0				
Flash Dont Walk (s)	20.0	20.0						20.0				
Pedestrian Calls (#/hr)	0	0						0				
Act Effct Green (s)		29.0						35.0			35.0	
Actuated g/C Ratio		0.39						0.47			0.47	
v/c Ratio		0.40						0.18			0.22	
Control Delay		17.7						8.2			12.4	
Queue Delay		0.0						0.0			0.0	
Total Delay		17.7						8.2			12.4	
LOS		B						A			B	
Approach Delay		17.7						8.2			12.4	
Approach LOS		B						A			B	
Queue Length 50th (ft)		85						29			45	
Queue Length 95th (ft)		146						62			82	
Internal Link Dist (ft)		453			656			142			545	
Turn Bay Length (ft)												
Base Capacity (vph)		710						976			811	
Starvation Cap Reductn		0						0			0	
Spillback Cap Reductn		0						0			0	
Storage Cap Reductn		0						0			0	
Reduced v/c Ratio		0.39						0.18			0.22	

Intersection Summary			
Area Type:	Other		
Cycle Length: 75			
Actuated Cycle Length: 74			
Natural Cycle: 75			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.40			
Intersection Signal Delay: 13.6		Intersection LOS: B	
Intersection Capacity Utilization 43.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 22: New School Street & Palisade Avenue





Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	SBL2	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	76	742	53	4	20	35	1034	115	15	15	10	90
Future Volume (vph)	76	742	53	4	20	35	1034	115	15	15	10	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	12	12	12	12	11	12	11	16	16	16	16
Grade (%)		0%					-5%				0%	
Storage Length (ft)	100		0			210		0		0		0
Storage Lanes	1		0			1		1		0		0
Taper Length (ft)	25					25				25		
Lane Util. Factor	1.00	0.91	0.91	0.91	0.91	1.00	0.91	1.00	1.00	1.00	1.00	1.00
Frt		0.989						0.850			0.906	
Flt Protected	0.950					0.950					0.989	
Satd. Flow (prot)	1711	5029	0	0	0	1753	5212	1569	0	0	1892	0
Flt Permitted	0.178					0.244					0.989	
Satd. Flow (perm)	321	5029	0	0	0	450	5212	1569	0	0	1892	0
Right Turn on Red				Yes				Yes				Yes
Satd. Flow (RTOR)		1						121			98	
Link Speed (mph)		30					30				30	
Link Distance (ft)		378					492				509	
Travel Time (s)		8.6					11.2				11.6	
Peak Hour Factor	0.89	0.89	0.89	0.89	0.95	0.95	0.95	0.95	0.92	0.92	0.92	0.92
Adj. Flow (vph)	85	834	60	4	21	37	1088	121	16	16	11	98
Shared Lane Traffic (%)												
Lane Group Flow (vph)	85	898	0	0	0	58	1088	121	0	0	141	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Right	Left	Left	Left	Right	Left	Left	Left	Right
Median Width(ft)		12					12				0	
Link Offset(ft)		0					0				0	
Crosswalk Width(ft)		16					16				16	
Two way Left Turn Lane												
Headway Factor	1.04	1.00	1.00	1.00	0.97	1.01	0.97	1.01	0.85	0.85	0.85	0.85
Turning Speed (mph)	15		9	9	15	15		9	15	15		9
Number of Detectors	1	2			1	1	2	1	1	1	2	
Detector Template	Left	Thru			Left	Left	Thru	Right	Left	Left	Thru	
Leading Detector (ft)	20	100			20	20	100	20	20	20	100	
Trailing Detector (ft)	0	0			0	0	0	0	0	0	0	
Detector 1 Position(ft)	0	0			0	0	0	0	0	0	0	
Detector 1 Size(ft)	20	6			20	20	6	20	20	20	6	
Detector 1 Type	Cl+Ex	Cl+Ex			Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94					94				94	
Detector 2 Size(ft)		6					6				6	
Detector 2 Type		Cl+Ex					Cl+Ex				Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0					0.0				0.0	
Turn Type	pm+pt	NA				pm+pt	NA	Perm		Perm	NA	

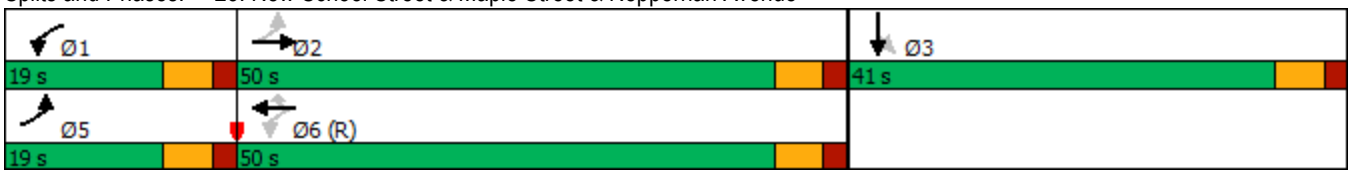
Lane Group	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	SBL2	SBL	SBT	SBR
Protected Phases	5	2				1	6				3	
Permitted Phases	2					6		6		3		
Detector Phase	5	2				1	6	6		3	3	
Switch Phase												
Minimum Initial (s)	5.0	5.0				5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	11.0	46.0				11.0	46.0	46.0		40.0	40.0	
Total Split (s)	19.0	50.0				19.0	50.0	50.0		41.0	41.0	
Total Split (%)	17.3%	45.5%				17.3%	45.5%	45.5%		37.3%	37.3%	
Maximum Green (s)	13.0	44.0				13.0	44.0	44.0		35.0	35.0	
Yellow Time (s)	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	
Lost Time Adjust (s)	0.0	0.0				0.0	0.0	0.0			0.0	
Total Lost Time (s)	6.0	6.0				6.0	6.0	6.0			6.0	
Lead/Lag	Lead	Lag				Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes				Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0				3.0	3.0	3.0		3.0	3.0	
Recall Mode	Max	Ped				Max	C-Max	C-Max		Ped	Ped	
Walk Time (s)		20.0					20.0	20.0		7.0	7.0	
Flash Dont Walk (s)		20.0					20.0	20.0		27.0	27.0	
Pedestrian Calls (#/hr)		0					0	0		0	0	
Act Effct Green (s)	58.0	44.0				58.0	44.0	44.0			34.0	
Actuated g/C Ratio	0.53	0.40				0.53	0.40	0.40			0.31	
v/c Ratio	0.25	0.45				0.14	0.52	0.17			0.22	
Control Delay	9.1	13.7				11.0	26.1	4.5			11.0	
Queue Delay	0.0	0.1				0.0	0.0	0.0			0.0	
Total Delay	9.1	13.8				11.0	26.1	4.5			11.0	
LOS	A	B				B	C	A			B	
Approach Delay		13.4					23.4				11.0	
Approach LOS		B					C				B	
Queue Length 50th (ft)	18	75				17	209	0			21	
Queue Length 95th (ft)	m30	91				35	253	36			68	
Internal Link Dist (ft)		298					412				429	
Turn Bay Length (ft)	100					210						
Base Capacity (vph)	346	2012				403	2084	700			668	
Starvation Cap Reductn	0	319				0	0	0			0	
Spillback Cap Reductn	0	0				0	0	0			0	
Storage Cap Reductn	0	0				0	0	0			0	
Reduced v/c Ratio	0.25	0.53				0.14	0.52	0.17			0.21	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 110			
Offset: 10 (9%), Referenced to phase 6:WBTL, Start of Green			
Natural Cycle: 100			
Control Type: Actuated-Coordinated			
Maximum v/c Ratio: 0.52			
Intersection Signal Delay: 18.5		Intersection LOS: B	
Intersection Capacity Utilization 46.9%		ICU Level of Service A	

Analysis Period (min) 15

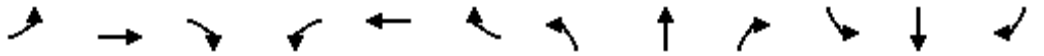
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 23: New School Street & Maple Street & Nepperhan Avenue

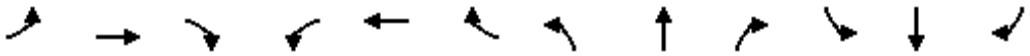


Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	757	0	1	1168	36	112
Future Volume (vph)	757	0	1	1168	36	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	15	15	15
Grade (%)	5%			-5%	0%	
Storage Length (ft)		0	120		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			25		25	
Lane Util. Factor	0.91	0.91	1.00	0.91	1.00	1.00
Frt					0.898	
Flt Protected			0.950		0.988	
Satd. Flow (prot)	4752	0	1814	5703	1818	0
Flt Permitted			0.950		0.988	
Satd. Flow (perm)	4752	0	1814	5703	1818	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	492			401	154	
Travel Time (s)	11.2			9.1	3.5	
Peak Hour Factor	0.89	0.89	0.95	0.95	0.92	0.92
Bus Blockages (#/hr)	0	0	0	4	0	0
Parking (#/hr)	5					
Adj. Flow (vph)	851	0	1	1229	39	122
Shared Lane Traffic (%)						
Lane Group Flow (vph)	851	0	1	1229	161	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	15	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.09	1.03	0.97	0.86	0.88	0.88
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.1%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	186	58	20	134	0	37	0	823	46	60	1015	0
Future Volume (vph)	186	58	20	134	0	37	0	823	46	60	1015	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	16	16	16	12	12	12	11	12	12
Grade (%)		0%			0%			5%			0%	
Storage Length (ft)	0		0	0		0	0		0	140		0
Storage Lanes	1		0	0		0	0		0	1		0
Taper Length (ft)	25			25			25			25		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.91	0.91	1.00	0.91	1.00
Frt		0.961			0.971			0.992				
Flt Protected	0.950				0.962					0.950		
Satd. Flow (prot)	1454	1730	0	0	1725	0	0	4918	0	1711	5085	0
Flt Permitted	0.664				0.716					0.162		
Satd. Flow (perm)	1016	1730	0	0	1284	0	0	4918	0	292	5085	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		17			89			9				
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		736			401			401			583	
Travel Time (s)		16.7			9.1			9.1			13.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.89	0.89	0.89	0.95	0.95	0.95
Parking (#/hr)	10				5							
Adj. Flow (vph)	202	63	22	146	0	40	0	925	52	63	1068	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	202	85	0	0	186	0	0	977	0	63	1068	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		11			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.28	1.04	1.04	0.85	1.01	0.85	1.03	1.03	1.03	1.04	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2			2		1	2	
Detector Template	Left	Thru		Left	Thru			Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100			100		20	100	
Trailing Detector (ft)	0	0		0	0			0		0	0	
Detector 1 Position(ft)	0	0		0	0			0		0	0	
Detector 1 Size(ft)	20	6		20	6			6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex			Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0			0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

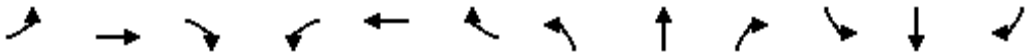


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA			NA		pm+pt	NA	
Protected Phases		3			3			2		1	6	
Permitted Phases	3			3						6		
Detector Phase	3	3		3	3			2		1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0			5.0		5.0	5.0	
Minimum Split (s)	40.0	40.0		40.0	40.0			39.0		11.0	39.0	
Total Split (s)	41.0	41.0		41.0	41.0			48.0		21.0	69.0	
Total Split (%)	37.3%	37.3%		37.3%	37.3%			43.6%		19.1%	62.7%	
Maximum Green (s)	35.0	35.0		35.0	35.0			42.0		15.0	63.0	
Yellow Time (s)	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	
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		Lead		
Lead-Lag Optimize?								Yes		Yes		
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0		3.0	3.0	
Recall Mode	Ped	Ped		Ped	Ped			Ped		Max	Ped	
Walk Time (s)	7.0	7.0		7.0	7.0			20.0			20.0	
Flash Dont Walk (s)	27.0	27.0		27.0	27.0			13.0			13.0	
Pedestrian Calls (#/hr)	0	0		0	0			0			0	
Act Effct Green (s)	34.2	34.2			34.2			33.4		54.4	54.4	
Actuated g/C Ratio	0.34	0.34			0.34			0.33		0.54	0.54	
v/c Ratio	0.59	0.14			0.38			0.60		0.17	0.39	
Control Delay	35.8	19.4			15.5			29.5		12.2	13.9	
Queue Delay	0.0	0.0			0.0			0.0		0.0	0.0	
Total Delay	35.8	19.4			15.5			29.5		12.2	13.9	
LOS	D	B			B			C		B	B	
Approach Delay		30.9			15.5			29.5			13.9	
Approach LOS		C			B			C			B	
Queue Length 50th (ft)	105	29			44			187		18	137	
Queue Length 95th (ft)	189	66			105			231		39	172	
Internal Link Dist (ft)		656			321			321			503	
Turn Bay Length (ft)										140		
Base Capacity (vph)	353	612			504			2057		369	3183	
Starvation Cap Reductn	0	0			0			0		0	0	
Spillback Cap Reductn	0	0			0			0		0	0	
Storage Cap Reductn	0	0			0			0		0	0	
Reduced v/c Ratio	0.57	0.14			0.37			0.47		0.17	0.34	

Intersection Summary			
Area Type:	Other		
Cycle Length: 110			
Actuated Cycle Length: 100.6			
Natural Cycle: 90			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.60			
Intersection Signal Delay: 21.8		Intersection LOS: C	
Intersection Capacity Utilization 52.4%		ICU Level of Service A	

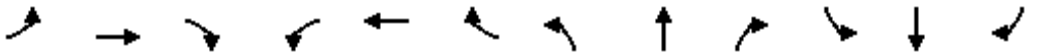
Analysis Period (min) 15

Splits and Phases: 27: Nepperhan Avenue & Elm Street



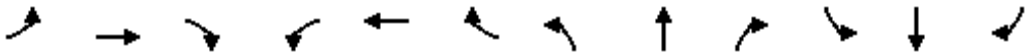
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	138	59	73	103	98	0	0	0	0	0	0
Future Volume (vph)	14	138	59	73	103	98	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	16	16	16	16	16	16	16	16	16	16	16	16
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.958			0.927							
Flt Protected		0.997		0.950								
Satd. Flow (prot)	0	3831	0	2006	1957	0	0	0	0	0	0	0
Flt Permitted		0.997		0.950								
Satd. Flow (perm)	0	3831	0	2006	1957	0	0	0	0	0	0	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		256			511			286			516	
Travel Time (s)		5.8			11.6			6.5			11.7	
Peak Hour Factor	0.90	0.90	0.90	0.81	0.81	0.81	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	16	153	66	90	127	121	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	235	0	90	248	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			24			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 24.2%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	347	54	30	229	0	0	0	0
Future Volume (vph)	0	0	0	0	347	54	30	229	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	16	16	16	16	16	16	12	12	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt					0.982							
Flt Protected								0.994				
Satd. Flow (prot)	0	0	0	0	2073	0	0	1981	0	0	0	0
Flt Permitted								0.994				
Satd. Flow (perm)	0	0	0	0	2073	0	0	1981	0	0	0	0
Right Turn on Red			Yes			No			No			Yes
Satd. Flow (RTOR)												
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		81			430			212			254	
Travel Time (s)		1.8			9.8			4.8			5.8	
Peak Hour Factor	0.92	0.92	0.92	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.92	0.92
Bus Blockages (#/hr)	0	0	0	0	0	0	0	14	0	0	0	0
Adj. Flow (vph)	0	0	0	0	418	65	33	249	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	483	0	0	282	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	0.85	0.85	0.85	0.85	0.92	0.85	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors					2		1	2				
Detector Template					Thru		Left	Thru				
Leading Detector (ft)					100		20	100				
Trailing Detector (ft)					0		0	0				
Detector 1 Position(ft)					0		0	0				
Detector 1 Size(ft)					6		20	6				
Detector 1 Type					Cl+Ex		Cl+Ex	Cl+Ex				
Detector 1 Channel												
Detector 1 Extend (s)					0.0		0.0	0.0				
Detector 1 Queue (s)					0.0		0.0	0.0				
Detector 1 Delay (s)					0.0		0.0	0.0				
Detector 2 Position(ft)					94			94				
Detector 2 Size(ft)					6			6				
Detector 2 Type					Cl+Ex			Cl+Ex				
Detector 2 Channel												
Detector 2 Extend (s)					0.0			0.0				
Turn Type					NA		Perm	NA				
Protected Phases					1			3				
Permitted Phases							3					
Detector Phase					1		3	3				

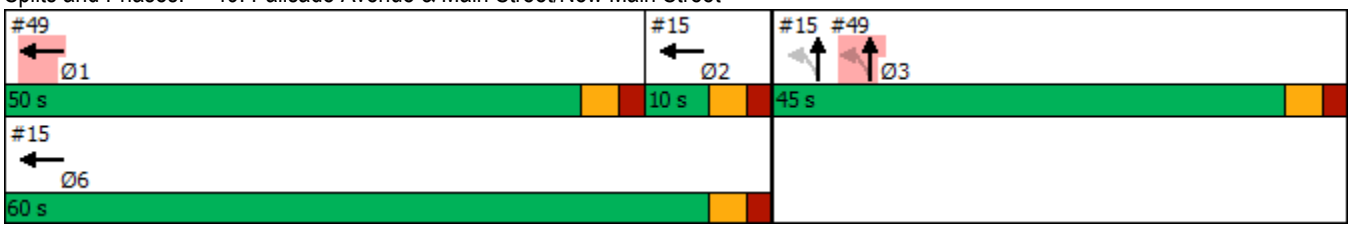
Lane Group	Ø2	Ø6
Lane Configurations		
Traffic Volume (vph)		
Future Volume (vph)		
Ideal Flow (vphpl)		
Lane Width (ft)		
Lane Util. Factor		
Frt		
Flt Protected		
Satd. Flow (prot)		
Flt Permitted		
Satd. Flow (perm)		
Right Turn on Red		
Satd. Flow (RTOR)		
Link Speed (mph)		
Link Distance (ft)		
Travel Time (s)		
Peak Hour Factor		
Bus Blockages (#/hr)		
Adj. Flow (vph)		
Shared Lane Traffic (%)		
Lane Group Flow (vph)		
Enter Blocked Intersection		
Lane Alignment		
Median Width(ft)		
Link Offset(ft)		
Crosswalk Width(ft)		
Two way Left Turn Lane		
Headway Factor		
Turning Speed (mph)		
Number of Detectors		
Detector Template		
Leading Detector (ft)		
Trailing Detector (ft)		
Detector 1 Position(ft)		
Detector 1 Size(ft)		
Detector 1 Type		
Detector 1 Channel		
Detector 1 Extend (s)		
Detector 1 Queue (s)		
Detector 1 Delay (s)		
Detector 2 Position(ft)		
Detector 2 Size(ft)		
Detector 2 Type		
Detector 2 Channel		
Detector 2 Extend (s)		
Turn Type		
Protected Phases	2	6
Permitted Phases		
Detector Phase		



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Switch Phase												
Minimum Initial (s)					5.0		5.0	5.0				
Minimum Split (s)					50.0		45.0	45.0				
Total Split (s)					50.0		45.0	45.0				
Total Split (%)					47.6%		42.9%	42.9%				
Maximum Green (s)					45.0		40.0	40.0				
Yellow Time (s)					3.0		3.0	3.0				
All-Red Time (s)					2.0		2.0	2.0				
Lost Time Adjust (s)					0.0			0.0				
Total Lost Time (s)					5.0			5.0				
Lead/Lag					Lead							
Lead-Lag Optimize?					Yes							
Vehicle Extension (s)					3.0		3.0	3.0				
Recall Mode					Ped		Ped	Ped				
Walk Time (s)					35.0		30.0	30.0				
Flash Dont Walk (s)					10.0		10.0	10.0				
Pedestrian Calls (#/hr)					0		0	0				
Act Effct Green (s)					45.0			40.0				
Actuated g/C Ratio					0.43			0.38				
v/c Ratio					0.54			0.37				
Control Delay					25.2			25.3				
Queue Delay					0.0			0.0				
Total Delay					25.2			25.3				
LOS					C			C				
Approach Delay					25.2			25.3				
Approach LOS					C			C				
Queue Length 50th (ft)					236			135				
Queue Length 95th (ft)					300			205				
Internal Link Dist (ft)		1			350			132			174	
Turn Bay Length (ft)												
Base Capacity (vph)					888			754				
Starvation Cap Reductn					0			0				
Spillback Cap Reductn					0			0				
Storage Cap Reductn					0			0				
Reduced v/c Ratio					0.54			0.37				

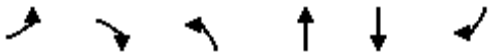
Intersection Summary			
Area Type:	Other		
Cycle Length: 105			
Actuated Cycle Length: 105			
Natural Cycle: 105			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 0.54			
Intersection Signal Delay: 25.2		Intersection LOS: C	
Intersection Capacity Utilization 43.6%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 49: Palisade Avenue & Main Street/New Main Street



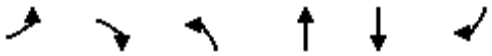
Lane Group	Ø2	Ø6
Switch Phase		
Minimum Initial (s)	2.0	5.0
Minimum Split (s)	7.0	10.0
Total Split (s)	10.0	60.0
Total Split (%)	10%	57%
Maximum Green (s)	5.0	55.0
Yellow Time (s)	3.0	3.0
All-Red Time (s)	2.0	2.0
Lost Time Adjust (s)		
Total Lost Time (s)		
Lead/Lag	Lag	
Lead-Lag Optimize?	Yes	
Vehicle Extension (s)	3.0	3.0
Recall Mode	Max	Max
Walk Time (s)		
Flash Dont Walk (s)		
Pedestrian Calls (#/hr)		
Act Effct Green (s)		
Actuated g/C Ratio		
v/c Ratio		
Control Delay		
Queue Delay		
Total Delay		
LOS		
Approach Delay		
Approach LOS		
Queue Length 50th (ft)		
Queue Length 95th (ft)		
Internal Link Dist (ft)		
Turn Bay Length (ft)		
Base Capacity (vph)		
Starvation Cap Reductn		
Spillback Cap Reductn		
Storage Cap Reductn		
Reduced v/c Ratio		

Intersection Summary



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	60	65	0
Future Volume (vph)	0	0	0	60	65	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	126			499	747	
Travel Time (s)	2.9			11.3	17.0	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	65	71	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	65	71	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 6.8%		ICU Level of Service A	
Analysis Period (min) 15			



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	132	176	0
Future Volume (vph)	0	0	0	132	176	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	172			284	235	
Travel Time (s)	3.9			6.5	5.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	143	191	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	143	191	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	12.6%	ICU Level of Service	A
Analysis Period (min)	15		

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	74	8	36	88	0	23	0	20	7	0	6
Future Vol, veh/h	0	74	8	36	88	0	23	0	20	7	0	6
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	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	0	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	86	86	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	8	8	6	6	2	2	2	2	2	2	2
Mvmt Flow	0	86	9	39	96	0	25	0	22	8	0	7

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	-	0	0	95	0	0	269	-	91	276	269	96
Stage 1	-	-	-	-	-	-	91	-	-	174	174	-
Stage 2	-	-	-	-	-	-	178	-	-	102	95	-
Critical Hdwy	-	-	-	4.16	-	-	7.12	-	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	-	-	6.12	5.52	-
Follow-up Hdwy	-	-	-	2.254	-	-	3.518	-	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	0	-	-	1474	-	0	684	0	967	676	637	960
Stage 1	0	-	-	-	-	0	916	0	-	828	755	-
Stage 2	0	-	-	-	-	0	824	0	-	904	816	-
Platoon blocked, %		-	-		-							
Mov Cap-1 Maneuver	-	-	-	1474	-	-	665	-	967	647	619	960
Mov Cap-2 Maneuver	-	-	-	-	-	-	665	-	-	647	619	-
Stage 1	-	-	-	-	-	-	916	-	-	828	734	-
Stage 2	-	-	-	-	-	-	795	-	-	884	816	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	2.2	9.9	9.8
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	SBLn1
Capacity (veh/h)	778	-	-	1474	-	762
HCM Lane V/C Ratio	0.06	-	-	0.027	-	0.019
HCM Control Delay (s)	9.9	-	-	7.5	0	9.8
HCM Lane LOS	A	-	-	A	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	0.1

Intersection	
Int Delay, s/veh	8.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	7	14	0	0	0	0	32	36	44	16	0	28
Future Vol, veh/h	7	14	0	0	0	0	32	36	44	16	0	28
Conflicting Peds, #/hr	0	0	33	0	0	35	0	0	16	0	0	38
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	16979	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	92	92	92	83	83	83	90	90	90
Heavy Vehicles, %	10	10	10	2	2	2	7	7	7	2	2	2
Mvmt Flow	8	16	0	0	0	0	39	43	53	18	0	31

Major/Minor	Major1			Minor1			Minor2		
Conflicting Flow All	0	0	-	86	32	32	96	32	38
Stage 1	-	-	-	32	32	-	0	0	-
Stage 2	-	-	-	54	0	-	96	32	-
Critical Hdwy	4.2	-	-	7.17	6.57	6.27	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	6.17	5.57	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-
Follow-up Hdwy	2.29	-	-	3.563	4.063	3.363	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	0	888	851	1028	887	861	1034
Stage 1	-	-	0	972	859	-	-	-	-
Stage 2	-	-	0	-	-	-	911	868	-
Platoon blocked, %		-							
Mov Cap-1 Maneuver	-	-	-	832	851	1028	809	861	1000
Mov Cap-2 Maneuver	-	-	-	832	851	-	809	861	-
Stage 1	-	-	-	972	859	-	-	-	-
Stage 2	-	-	-	-	-	-	820	868	-

Approach	EB	NB	SB
HCM Control Delay, s		9.7	9.1
HCM LOS		A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	SBLn1
Capacity (veh/h)	906	-	-	921
HCM Lane V/C Ratio	0.149	-	-	0.053
HCM Control Delay (s)	9.7	-	-	9.1
HCM Lane LOS	A	-	-	A
HCM 95th %tile Q(veh)	0.5	-	-	0.2

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	98	0	0	299	0	0
Future Vol, veh/h	98	0	0	299	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	16979	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	107	0	0	325	0	0

Major/Minor	Minor2		Major1	
Conflicting Flow All	325	-	-	0
Stage 1	0	-	-	-
Stage 2	325	-	-	-
Critical Hdwy	6.42	-	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-
Follow-up Hdwy	3.518	-	-	-
Pot Cap-1 Maneuver	669	0	0	-
Stage 1	-	0	0	-
Stage 2	732	0	0	-
Platoon blocked, %				-
Mov Cap-1 Maneuver	669	-	-	-
Mov Cap-2 Maneuver	669	-	-	-
Stage 1	-	-	-	-
Stage 2	732	-	-	-

Approach	EB	NB
HCM Control Delay, s	11.4	0
HCM LOS	B	

Minor Lane/Major Mvmt	NBT	EBLn1
Capacity (veh/h)	-	669
HCM Lane V/C Ratio	-	0.159
HCM Control Delay (s)	-	11.4
HCM Lane LOS	-	B
HCM 95th %tile Q(veh)	-	0.6

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	757	0	1	1168	36	112
Future Vol, veh/h	757	0	1	1168	36	112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	120	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	5	-	-	-5	0	-
Peak Hour Factor	89	89	95	95	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	851	0	1	1229	39	122

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	851	0	1345	426
Stage 1	-	-	-	-	851	-
Stage 2	-	-	-	-	494	-
Critical Hdwy	-	-	5.34	-	5.74	7.14
Critical Hdwy Stg 1	-	-	-	-	6.64	-
Critical Hdwy Stg 2	-	-	-	-	6.04	-
Follow-up Hdwy	-	-	3.12	-	3.82	3.92
Pot Cap-1 Maneuver	-	-	462	-	207	493
Stage 1	-	-	-	-	298	-
Stage 2	-	-	-	-	529	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	462	-	207	493
Mov Cap-2 Maneuver	-	-	-	-	207	-
Stage 1	-	-	-	-	298	-
Stage 2	-	-	-	-	528	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	22.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	369	-	-	462	-
HCM Lane V/C Ratio	0.436	-	-	0.002	-
HCM Control Delay (s)	22.1	-	-	12.8	-
HCM Lane LOS	C	-	-	B	-
HCM 95th %tile Q(veh)	2.1	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	60	65	0
Future Vol, veh/h	0	0	0	60	65	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	65	71	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	136	71	71	0	-	0
Stage 1	71	-	-	-	-	-
Stage 2	65	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	857	991	1529	-	-	-
Stage 1	952	-	-	-	-	-
Stage 2	958	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	857	991	1529	-	-	-
Mov Cap-2 Maneuver	857	-	-	-	-	-
Stage 1	952	-	-	-	-	-
Stage 2	958	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1529	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	132	176	0
Future Vol, veh/h	0	0	0	132	176	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	143	191	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	334	191	191	0	-	0
Stage 1	191	-	-	-	-	-
Stage 2	143	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	661	851	1383	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	884	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	661	851	1383	-	-	-
Mov Cap-2 Maneuver	661	-	-	-	-	-
Stage 1	841	-	-	-	-	-
Stage 2	884	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1383	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Intersection	
Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	52	8	120	12	9	124
Future Vol, veh/h	52	8	120	12	9	124
Peak Hour Factor	0.91	0.91	0.82	0.82	0.87	0.87
Heavy Vehicles, %	3	3	17	17	7	7
Mvmt Flow	57	9	146	15	10	143
Number of Lanes	1	0	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	1
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	1	0
HCM Control Delay	8.2	8.5	8.4
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	SBLn1
Vol Left, %	0%	87%	7%
Vol Thru, %	91%	0%	93%
Vol Right, %	9%	13%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	132	60	133
LT Vol	0	52	9
Through Vol	120	0	124
RT Vol	12	8	0
Lane Flow Rate	161	66	153
Geometry Grp	1	1	1
Degree of Util (X)	0.195	0.087	0.186
Departure Headway (Hd)	4.469	4.755	4.374
Convergence, Y/N	Yes	Yes	Yes
Cap	808	756	826
Service Time	2.469	2.765	2.374
HCM Lane V/C Ratio	0.199	0.087	0.185
HCM Control Delay	8.5	8.2	8.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.7	0.3	0.7

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	19	84	48	60	151	25
Future Vol, veh/h	19	84	48	60	151	25
Peak Hour Factor	0.81	0.81	0.82	0.82	0.87	0.87
Heavy Vehicles, %	14	14	13	13	6	6
Mvmt Flow	23	104	59	73	174	29
Number of Lanes	1	1	1	0	0	1

Approach	WB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	NB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right	SB	WB	
Conflicting Lanes Right	1	2	0
HCM Control Delay	8.4	8.2	9.3
HCM LOS	A	A	A

Lane	NBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	0%	100%	0%	86%
Vol Thru, %	44%	0%	0%	14%
Vol Right, %	56%	0%	100%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	108	19	84	176
LT Vol	0	19	0	151
Through Vol	48	0	0	25
RT Vol	60	0	84	0
Lane Flow Rate	132	23	104	202
Geometry Grp	2	7	7	2
Degree of Util (X)	0.159	0.039	0.138	0.261
Departure Headway (Hd)	4.34	6.011	4.804	4.636
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	828	597	747	777
Service Time	2.359	3.739	2.531	2.654
HCM Lane V/C Ratio	0.159	0.039	0.139	0.26
HCM Control Delay	8.2	9	8.3	9.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.1	0.5	1

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	247	150	0	271	0	0
Future Vol, veh/h	247	150	0	271	0	0
Peak Hour Factor	0.97	0.97	0.87	0.87	0.92	0.92
Heavy Vehicles, %	11	2	11	4	2	2
Mvmt Flow	255	155	0	311	0	0
Number of Lanes	1	0	0	1	0	0

Approach	EB	NB
Opposing Approach		
Opposing Lanes	0	0
Conflicting Approach Left		EB
Conflicting Lanes Left	0	1
Conflicting Approach Right	NB	
Conflicting Lanes Right	1	0
HCM Control Delay	13.4	11.8
HCM LOS	B	B

Lane	NBLn1	EBLn1
Vol Left, %	0%	62%
Vol Thru, %	100%	0%
Vol Right, %	0%	38%
Sign Control	Stop	Stop
Traffic Vol by Lane	271	397
LT Vol	0	247
Through Vol	271	0
RT Vol	0	150
Lane Flow Rate	311	409
Geometry Grp	1	1
Degree of Util (X)	0.431	0.544
Departure Headway (Hd)	4.981	4.781
Convergence, Y/N	Yes	Yes
Cap	720	749
Service Time	3.038	2.833
HCM Lane V/C Ratio	0.432	0.546
HCM Control Delay	11.8	13.4
HCM Lane LOS	B	B
HCM 95th-tile Q	2.2	3.3

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	190	60	0	0	0	0	27	31	35	30	0
Future Vol, veh/h	33	190	60	0	0	0	0	27	31	35	30	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	207	65	0	0	0	0	29	34	38	33	0
Number of Lanes	0	1	0	0	0	0	0	1	0	0	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9.4	7.8	8.3
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	0%	12%	54%
Vol Thru, %	47%	67%	46%
Vol Right, %	53%	21%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	58	283	65
LT Vol	0	33	35
Through Vol	27	190	30
RT Vol	31	60	0
Lane Flow Rate	63	308	71
Geometry Grp	1	1	1
Degree of Util (X)	0.077	0.347	0.094
Departure Headway (Hd)	4.385	4.06	4.8
Convergence, Y/N	Yes	Yes	Yes
Cap	821	871	750
Service Time	2.388	2.159	2.803
HCM Lane V/C Ratio	0.077	0.354	0.095
HCM Control Delay	7.8	9.4	8.3
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.2	1.6	0.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	138	59	73	103	98	0	0	0	0	0	0
Future Volume (Veh/h)	14	138	59	73	103	98	0	0	0	0	0	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.90	0.90	0.90	0.81	0.81	0.81	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	16	153	66	90	127	121	0	0	0	0	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	184	0	0	142	0	0	0			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	184	0	0	142	0	0	0			0		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	97	83	94	87	86	89	100			100		
cM capacity (veh/h)	615	896	1085	675	896	1085	1623			1623		

Direction, Lane #	EB 1	EB 2	WB 1	WB 2
Volume Total	92	142	90	248
Volume Left	16	0	90	0
Volume Right	0	66	0	121
cSH	830	975	675	979
Volume to Capacity	0.11	0.15	0.13	0.25
Queue Length 95th (ft)	9	13	11	25
Control Delay (s)	9.9	9.3	11.2	9.9
Lane LOS	A	A	B	A
Approach Delay (s)	9.5		10.2	
Approach LOS	A		B	

Intersection Summary				
Average Delay	10.0			
Intersection Capacity Utilization	24.2%	ICU Level of Service	A	
Analysis Period (min)	15			