2017 BASE CONDITIONS

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	13	12	11	11	11	12
Grade (%)	-6%		-2%			-5%
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1883	1631	3330		1753	3628
Flt Permitted	0.95	1.00	1.00		0.12	1.00
Satd. Flow (perm)	1883	1631	3330		217	3628
Volume (vph)	365	169	1580	343	142	1169
Peak-hour factor, PHF	0.83	0.83	0.98	0.98	0.83	0.83
Adj. Flow (vph)	440	204	1612	350	171	1408
RTOR Reduction (vph)	0	86	0	0	0	0
Lane Group Flow (vph)	440	118	1962	0	171	1408
Heavy Vehicles (%)	2%	2%	3%	3%	2%	2%
Turn Type		Perm			pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	21.4	21.4	26.1		39.0	39.0
Effective Green, g (s)	24.4	24.4	30.1		43.0	43.0
Actuated g/C Ratio	0.32	0.32	0.40		0.57	0.57
Clearance Time (s)	7.0	7.0	8.0		6.0	8.0
Vehicle Extension (s)	3.0	3.0	6.0		3.0	6.0
Lane Grp Cap (vph)	609	528	1329		305	2069
v/s Ratio Prot	c0.23		c0.59		0.07	c0.39
v/s Ratio Perm		0.07			0.25	
v/c Ratio	0.72	0.22	1.48		0.56	0.68
Uniform Delay, d1	22.5	18.6	22.7		32.5	11.4
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	4.2	0.2	218.5		2.4	1.4
Delay (s)	26.7	18.8	241.1		34.8	12.8
Level of Service	C	B	F		C	B
Approach Delay (s)	24.2		241.1			15.2
Approach LOS	C		F			B

Intersection Summary			
HCM Average Control Delay	122.5	HCM Level of Service	F
HCM Volume to Capacity ratio	1.09		
Actuated Cycle Length (s)	75.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	92.7%	ICU Level of Service	F
Analysis Period (min)	15		

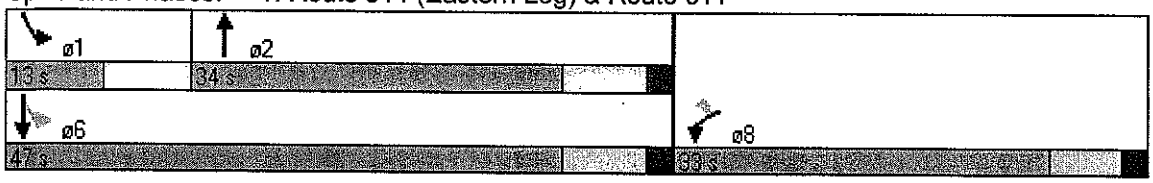
c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	365	169	1580	142	1169
Lane Group Flow (vph)	440	204	1962	171	1408
Turn Type		Perm		pm+pt	
Protected Phases	8		2	1	6
Permitted Phases		8		6	
Detector Phases	8	8	2	1	6
Minimum Initial (s)	1.0	1.0	15.0	1.0	15.0
Minimum Split (s)	8.0	8.0	23.0	7.0	23.0
Total Split (s)	33.0	33.0	34.0	13.0	47.0
Total Split (%)	41.3%	41.3%	42.5%	16.3%	58.8%
Yellow Time (s)	5.0	5.0	6.0	6.0	6.0
All-Red Time (s)	2.0	2.0	2.0	0.0	2.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	None	Min
v/c Ratio	0.72	0.33	1.48	0.56	0.68
Control Delay	27.3	8.9	241.6	18.0	14.4
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	27.3	8.9	241.6	18.0	14.4
Queue Length 50th (ft)	180	25	~711	38	242
Queue Length 95th (ft)	247	61	#879	78	294
Internal Link Dist (ft)	1091		2024		1031
Turn Bay Length (ft)		72		175	
Base Capacity (vph)	684	673	1329	307	2070
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	0.64	0.30	1.48	0.56	0.68

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 75.5
Natural Cycle: 100
Control Type: Semi Act-Uncoord
~ 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: 1: Route 314 (Eastern Leg) & Route 611



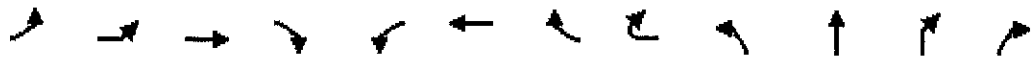
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)	4%			7%	-6%	
Storage Length (ft)	50	0	143			0
Storage Lanes	1	1	1			0
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.993	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1587	1420	1708	3415	3585	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1587	1420	1708	3415	3585	0
Headway Factor	1.12	1.12	1.05	1.05	0.96	0.96
Link Speed (mph)	40			45	45	
Link Distance (ft)	3960			1111	2283	
Travel Time (s)	67.5			16.8	34.6	
Volume (vph)	14	197	401	1348	1114	51
Peak Hour Factor	0.67	0.67	0.95	0.95	0.76	0.76
Heavy Vehicles (%)	4%	4%	2%	2%	3%	3%
Adj. Flow (vph)	21	294	422	1419	1466	67
Lane Group Flow (vph)	21	294	422	1419	1533	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 68.0%		ICU Level of Service C	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	4%			7%	-6%	
Volume (veh/h)	14	197	401	1348	1114	51
Peak Hour Factor	0.67	0.67	0.95	0.95	0.76	0.76
Hourly flow rate (vph)	21	294	422	1419	1466	67
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				1111		
pX, platoon unblocked	0.68					
vC, conflicting volume	3053	766	1533			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3556	766	1533			
tC, single (s)	6.9	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	14	2			
cM capacity (veh/h)	0	340	430			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	21	294	422	709	709	977	556
Volume Left	21	0	422	0	0	0	0
Volume Right	0	294	0	0	0	0	67
cSH	0	340	430	1700	1700	1700	1700
Volume to Capacity	407.38	0.86	0.98	0.42	0.42	0.57	0.33
Queue Length 95th (ft)	Err	200	302	0	0	0	0
Control Delay (s)	Err	55.9	70.1	0.0	0.0	0.0	0.0
Lane LOS	F	F	F				
Approach Delay (s)	715.7		16.1			0.0	
Approach LOS	F						

Intersection Summary			
Average Delay	69.1		
Intersection Capacity Utilization	68.0%	ICU Level of Service	C
Analysis Period (min)	15		



Movement	EBL2	EBL	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations			↕			↕			↰	↑↕		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	15	15	15	15	13	13	13	13	11	12	12	12
Grade (%)			6%			5%				3%		
Total Lost time (s)			4.0			4.0			4.0	4.0		
Lane Util. Factor			1.00			1.00			1.00	0.95		
Frt			0.96			0.94			1.00	0.99		
Flt Protected			0.98			0.98			0.95	1.00		
Satd. Flow (prot)			1861			1719			1685	3445		
Flt Permitted			0.87			0.83			0.18	1.00		
Satd. Flow (perm)			1661			1460			315	3445		
Volume (vph)	5	1	3	4	107	9	94	1	6	1248	1	107
Peak-hour factor, PHF	0.56	0.56	0.56	0.56	0.89	0.89	0.89	0.89	0.99	0.99	0.99	0.99
Adj. Flow (vph)	9	2	5	7	120	10	106	1	6	1261	1	108
RTOR Reduction (vph)	0	0	5	0	0	0	0	0	0	5	0	0
Lane Group Flow (vph)	0	0	18	0	0	237	0	0	6	1365	0	0
Turn Type	Perm	Perm			Perm				Perm			
Protected Phases			4			8				2		
Permitted Phases	4	4			8				2			
Actuated Green, G (s)			16.4			16.4			32.3	32.3		
Effective Green, g (s)			18.4			18.4			35.8	35.8		
Actuated g/C Ratio			0.23			0.23			0.45	0.45		
Clearance Time (s)			6.0			6.0			7.5	7.5		
Vehicle Extension (s)			3.0			3.0			5.0	5.0		
Lane Grp Cap (vph)			383			337			141	1546		
v/s Ratio Prot										c0.40		
v/s Ratio Perm			0.01			c0.16			0.02			
v/c Ratio			0.05			0.70			0.04	0.88		
Uniform Delay, d1			23.9			28.2			12.4	20.1		
Progression Factor			1.00			1.00			1.00	1.00		
Incremental Delay, d2			0.0			6.5			0.3	6.8		
Delay (s)			23.9			34.7			12.6	26.9		
Level of Service			C			C			B	C		
Approach Delay (s)			23.9			34.7				26.8		
Approach LOS			C			C				C		

Intersection Summary			
HCM Average Control Delay	20.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	79.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	76.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

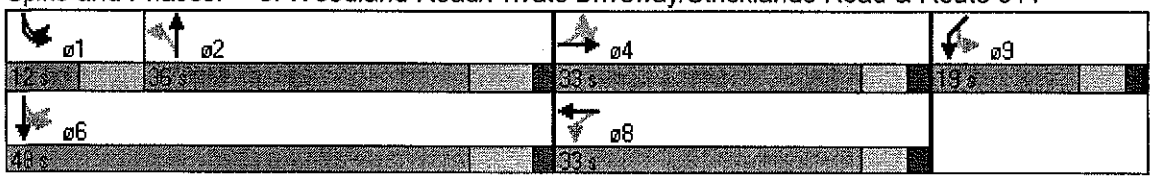
Movement	SBL2	SBL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	12	11	11	11	11
Grade (%)			-7%			-2%		
Total Lost time (s)		4.0	4.0			4.0		
Lane Util. Factor		1.00	0.95			1.00		
Frt		1.00	1.00			0.93		
Flt Protected		0.95	1.00			0.98		
Satd. Flow (prot)		1770	3658			1655		
Flt Permitted		0.10	1.00			0.98		
Satd. Flow (perm)		187	3658			1655		
Volume (vph)	1	63	1054	9	1	1	1	1
Peak-hour factor, PHF	0.82	0.82	0.82	0.82	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1	77	1285	11	1	1	1	1
RTOR Reduction (vph)	0	0	0	0	0	1	0	0
Lane Group Flow (vph)	0	78	1296	0	0	3	0	0
Turn Type	pm+pt	pm+pt			Perm			
Protected Phases	1	1	6			9		
Permitted Phases	6	6			9			
Actuated Green, G (s)		42.8	42.8			1.1		
Effective Green, g (s)		46.3	46.3			3.1		
Actuated g/C Ratio		0.58	0.58			0.04		
Clearance Time (s)		5.5	7.5			6.0		
Vehicle Extension (s)		3.0	5.0			3.0		
Lane Grp Cap (vph)		237	2122			64		
v/s Ratio Prot		0.03	c0.35					
v/s Ratio Perm		0.16				0.00		
v/c Ratio		0.33	0.61			0.05		
Uniform Delay, d1		13.4	10.9			36.9		
Progression Factor		1.00	1.00			1.00		
Incremental Delay, d2		0.8	0.8			0.3		
Delay (s)		14.3	11.6			37.2		
Level of Service		B	B			D		
Approach Delay (s)			11.8			37.2		
Approach LOS			B			D		

Intersection Summary

Lane Group	EBL2	EBL	EBT	WBR	WBT	NBL	NBT	SBL2	SBR	SBT	SWL
Lane Configurations			↕		↕	↰	↑↑		↰	↑↑	↓
Volume (vph)	5	1	3	107	9	6	1248	1	63	1054	1
Lane Group Flow (vph)	0	0	23	0	237	6	1370	0	78	1296	4
Turn Type	Perm	Perm		Perm		Perm		pm+pt	pm+pt		
Protected Phases			4		8		2	1	1	6	9
Permitted Phases	4	4		8		2		6	6		
Detector Phases	4	4	4	8	8	2	2	1	1	6	9
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	10.0	4.0	4.0	10.0	7.0
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0	17.5	17.5	9.5	9.5	17.5	13.0
Total Split (s)	33.0	33.0	33.0	33.0	33.0	36.0	36.0	12.0	12.0	48.0	19.0
Total Split (%)	33.0%	33.0%	33.0%	33.0%	33.0%	36.0%	36.0%	12.0%	12.0%	48.0%	19.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.5	5.5	5.5	5.5	5.5	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
Lead/Lag						Lag	Lag	Lead	Lead		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Min	Min	None	None	Min	None
v/c Ratio			0.06		0.65	0.06	0.82		0.28	0.58	0.02
Control Delay			17.1		27.6	19.0	25.4		11.3	12.2	34.0
Queue Delay			0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay			17.1		27.6	19.0	25.4		11.3	12.2	34.0
Queue Length 50th (ft)			5		90	1	267		12	150	1
Queue Length 95th (ft)			14		189	12	#650		46	349	12
Internal Link Dist (ft)			105		2012		2203			2327	625
Turn Bay Length (ft)						73			183		
Base Capacity (vph)			574		507	108	1675		288	2241	277
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			0.04		0.47	0.06	0.82		0.27	0.58	0.01

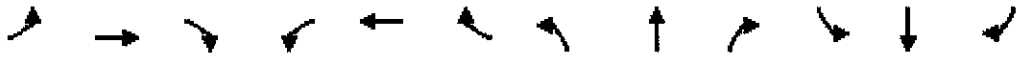
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 73.8
Natural Cycle: 80
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Woodland Road/Private Driveway/Stricklands Road & Route 611



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↖	↑↑↗		↖	↑↑↗	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	12	12	12	11	12	12	11	12	12
Grade (%)		2%			8%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
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		0.865			0.883							
Flt Protected					0.997		0.950			0.950		
Satd. Flow (prot)	0	1648	0	0	1574	0	1702	3522	0	1670	3455	0
Flt Permitted					0.997		0.950			0.950		
Satd. Flow (perm)	0	1648	0	0	1574	0	1702	3522	0	1670	3455	0
Headway Factor	0.97	0.97	0.97	1.05	1.05	1.05	1.05	1.01	1.01	1.04	0.99	0.99
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		158			1027			2407			3261	
Travel Time (s)		3.1			20.0			36.5			49.4	
Volume (vph)	0	0	4	1	1	13	4	1342	1	6	1121	1
Peak Hour Factor	0.75	0.75	0.75	0.50	0.50	0.50	0.97	0.97	0.97	0.83	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%	5%	5%
Adj. Flow (vph)	0	0	5	2	2	26	4	1384	1	7	1351	1
Lane Group Flow (vph)	0	5	0	0	30	0	4	1385	0	7	1352	0
Sign Control		Stop			Stop			Free			Free	

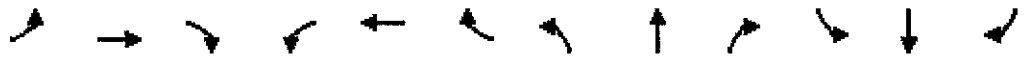
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱		↰	↑↑↱	
Sign Control		Stop			Stop			Free			Free	
Grade		2%			8%			1%			-1%	
Volume (veh/h)	0	0	4	1	1	13	4	1342	1	6	1121	1
Peak Hour Factor	0.75	0.75	0.75	0.50	0.50	0.50	0.97	0.97	0.97	0.83	0.83	0.83
Hourly flow rate (vph)	0	0	5	2	2	26	4	1384	1	7	1351	1
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	2093	2758	676	2087	2759	692	1352			1385		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2093	2758	676	2087	2759	692	1352			1385		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	6.9	4.1			4.2		
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 %	100	100	99	93	89	93	99			98		
cM capacity (veh/h)	25	19	396	29	19	386	505			475		

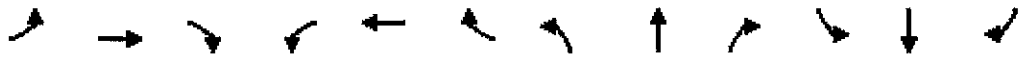
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	5	30	4	922	462	7	900	451
Volume Left	0	2	4	0	0	7	0	0
Volume Right	5	26	0	0	1	0	0	1
cSH	396	123	505	1700	1700	475	1700	1700
Volume to Capacity	0.01	0.24	0.01	0.54	0.27	0.02	0.53	0.27
Queue Length 95th (ft)	1	22	1	0	0	1	0	0
Control Delay (s)	14.2	43.4	12.2	0.0	0.0	12.7	0.0	0.0
Lane LOS	B	E	B			B		
Approach Delay (s)	14.2	43.4	0.0			0.1		
Approach LOS	B	E						

Intersection Summary				
Average Delay	0.5			
Intersection Capacity Utilization	47.1%	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		↕			↕		↰	↑↱		↰	↑↱	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	10	11	12	12	11	12	12
Grade (%)		0%			9%			2%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
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		0.938			0.934			0.998			0.996	
Flt Protected		0.978			0.983		0.950			0.950		
Satd. Flow (prot)	0	1709	0	0	1524	0	1694	3497	0	1753	3613	0
Flt Permitted		0.978			0.983		0.950			0.950		
Satd. Flow (perm)	0	1709	0	0	1524	0	1694	3497	0	1753	3613	0
Headway Factor	1.00	1.00	1.00	1.16	1.16	1.16	1.06	1.01	1.01	1.01	0.97	0.97
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		294			1492			3261			2754	
Travel Time (s)		6.7			33.9			49.4			41.7	
Volume (vph)	20	4	20	13	7	18	31	1304	20	22	1095	31
Peak Hour Factor	0.90	0.90	0.90	0.75	0.90	0.75	0.90	0.97	0.97	0.77	0.77	0.90
Adj. Flow (vph)	22	4	22	17	8	24	34	1344	21	29	1422	34
Lane Group Flow (vph)	0	48	0	0	49	0	34	1365	0	29	1456	0
Sign Control		Stop			Stop			Free			Free	

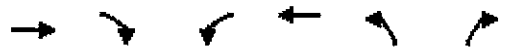
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 47.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱		↰	↑↑↱	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			9%			2%			-5%	
Volume (veh/h)	20	4	20	13	7	18	31	1304	20	22	1095	31
Peak Hour Factor	0.90	0.90	0.90	0.75	0.90	0.75	0.90	0.97	0.97	0.77	0.77	0.90
Hourly flow rate (vph)	22	4	22	17	8	24	34	1344	21	29	1422	34
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	2265	2930	728	2216	2937	682	1457			1365		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2265	2930	728	2216	2937	682	1457			1365		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	66	94	0	38	94	93			94		
cM capacity (veh/h)	10	13	366	15	13	391	460			499		

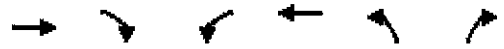
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	49	49	34	896	469	29	948	508
Volume Left	22	17	34	0	0	29	0	0
Volume Right	22	24	0	0	21	0	0	34
cSH	18	27	460	1700	1700	499	1700	1700
Volume to Capacity	2.71	1.84	0.07	0.53	0.28	0.06	0.56	0.30
Queue Length 95th (ft)	166	148	6	0	0	5	0	0
Control Delay (s)	1213.2	711.5	13.5	0.0	0.0	12.6	0.0	0.0
Lane LOS	F	F	B			B		
Approach Delay (s)	1213.2	711.5	0.3			0.2		
Approach LOS	F	F						

Intersection Summary			
Average Delay	31.9		
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	11	11
Grade (%)	1%			-3%	0%	
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.964				0.962	
Flt Protected				0.994	0.965	
Satd. Flow (prot)	1590	0	0	1688	1672	0
Flt Permitted				0.994	0.965	
Satd. Flow (perm)	1590	0	0	1688	1672	0
Headway Factor	1.10	1.10	1.07	1.07	1.04	1.04
Link Speed (mph)	40			40	25	
Link Distance (ft)	2092			650	499	
Travel Time (s)	35.7			11.1	13.6	
Volume (vph)	126	47	20	150	60	24
Peak Hour Factor	0.82	0.82	0.79	0.79	0.53	0.53
Heavy Vehicles (%)	7%	7%	6%	6%	2%	2%
Adj. Flow (vph)	154	57	25	190	113	45
Lane Group Flow (vph)	211	0	0	215	158	0
Sign Control	Free			Free	Stop	

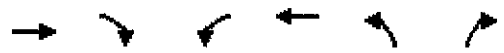
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 33.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	1%			-3%	0%	
Volume (veh/h)	126	47	20	150	60	24
Peak Hour Factor	0.82	0.82	0.79	0.79	0.53	0.53
Hourly flow rate (vph)	154	57	25	190	113	45
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			211		423	182
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			211		423	182
tC, single (s)			4.2		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.3		3.5	3.3
p0 queue free %			98		80	95
cM capacity (veh/h)			1336		577	860

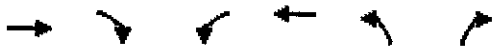
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	211	215	158
Volume Left	0	25	113
Volume Right	57	0	45
cSH	1700	1336	637
Volume to Capacity	0.12	0.02	0.25
Queue Length 95th (ft)	0	1	24
Control Delay (s)	0.0	1.1	12.5
Lane LOS		A	B
Approach Delay (s)	0.0	1.1	12.5
Approach LOS			B

Intersection Summary			
Average Delay	3.8		
Intersection Capacity Utilization	33.3%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WB	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	10	10
Grade (%)	1%			1%	-1%	
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.970				0.964	
Flt Protected				0.997	0.965	
Satd. Flow (prot)	1738	0	0	1752	1625	0
Flt Permitted				0.997	0.965	
Satd. Flow (perm)	1738	0	0	1752	1625	0
Headway Factor	1.05	1.05	1.05	1.05	1.09	1.09
Link Speed (mph)	40			40	35	
Link Distance (ft)	650			936	704	
Travel Time (s)	11.1			16.0	13.7	
Volume (vph)	117	33	10	132	38	14
Peak Hour Factor	0.72	0.72	0.80	0.80	0.25	0.25
Heavy Vehicles (%)	2%	2%	4%	4%	2%	2%
Adj. Flow (vph)	163	46	13	165	152	56
Lane Group Flow (vph)	208	0	0	177	208	0
Sign Control	Free			Free	Stop	

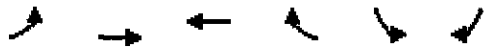
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 25.2%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	1%			1%	-1%	
Volume (veh/h)	117	33	10	132	38	14
Peak Hour Factor	0.72	0.72	0.80	0.80	0.25	0.25
Hourly flow rate (vph)	162	46	12	165	152	56
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			208		375	185
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			208		375	185
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		75	93
cM capacity (veh/h)			1351		620	857

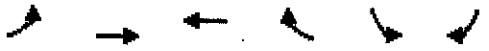
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	208	178	208
Volume Left	0	12	152
Volume Right	46	0	56
cSH	1700	1351	670
Volume to Capacity	0.12	0.01	0.31
Queue Length 95th (ft)	0	1	33
Control Delay (s)	0.0	0.6	12.8
Lane LOS		A	B
Approach Delay (s)	0.0	0.6	12.8
Approach LOS			B

Intersection Summary			
Average Delay	4.7		
Intersection Capacity Utilization	25.2%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	10	10
Grade (%)		-4%	2%		-6%	
Turning Speed (mph)	15			9	15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.999		0.932	
Flt Protected		0.999			0.976	
Satd. Flow (prot)	0	1835	1747	0	1629	0
Flt Permitted		0.999			0.976	
Satd. Flow (perm)	0	1835	1747	0	1629	0
Headway Factor	1.02	1.02	1.06	1.06	1.05	1.05
Link Speed (mph)		40	40		35	
Link Distance (ft)		936	819		1342	
Travel Time (s)		16.0	14.0		26.1	
Volume (vph)	3	128	139	1	3	3
Peak Hour Factor	0.84	0.84	0.77	0.77	0.50	0.50
Heavy Vehicles (%)	2%	2%	4%	4%	2%	2%
Adj. Flow (vph)	4	152	181	1	6	6
Lane Group Flow (vph)	0	156	182	0	12	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	19.1%	ICU Level of Service	A
Analysis Period (min)	15		



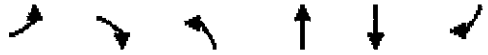
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		-4%	2%		-6%	
Volume (veh/h)	3	128	139	1	3	3
Peak Hour Factor	0.84	0.84	0.77	0.77	0.50	0.50
Hourly flow rate (vph)	4	152	181	1	6	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	182				341	181
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	182				341	181
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	99
cM capacity (veh/h)	1393				654	862

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	156	182	12
Volume Left	4	0	6
Volume Right	0	1	6
cSH	1393	1700	744
Volume to Capacity	0.00	0.11	0.02
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.2	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	0.2	0.0	9.9
Approach LOS			A

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	19.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-3%			-5%	4%	
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.992				0.938	
Flt Protected	0.955			0.998		
Satd. Flow (prot)	1672	0	0	1842	1639	0
Flt Permitted	0.955			0.998		
Satd. Flow (perm)	1672	0	0	1842	1639	0
Headway Factor	1.07	1.07	1.01	1.01	1.07	1.07
Link Speed (mph)	40			45	45	
Link Distance (ft)	1794			1439	1446	
Travel Time (s)	30.6			21.8	21.9	
Volume (vph)	124	7	7	190	159	133
Peak Hour Factor	0.82	0.82	0.96	0.96	0.81	0.81
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Adj. Flow (vph)	151	9	7	198	196	164
Lane Group Flow (vph)	160	0	0	205	360	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	30.5%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	-3%			-5%	4%	
Volume (veh/h)	124	7	7	190	159	133
Peak Hour Factor	0.82	0.82	0.96	0.96	0.81	0.81
Hourly flow rate (vph)	151	9	7	198	196	164
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	491	278	360			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	491	278	360			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	72	99	99			
cM capacity (veh/h)	534	761	1198			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	160	205	360
Volume Left	151	7	0
Volume Right	9	0	164
cSH	543	1198	1700
Volume to Capacity	0.29	0.01	0.21
Queue Length 95th (ft)	31	0	0
Control Delay (s)	14.4	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	14.4	0.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	3.3		
Intersection Capacity Utilization	30.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	8	8	8
Grade (%)		-4%			4%			1%			-1%	
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			1.00			0.88			0.96	
Flt Protected		1.00			0.98			0.99			0.99	
Satd. Flow (prot)		1815			1738			1543			1551	
Flt Permitted		1.00			0.52			0.95			0.83	
Satd. Flow (perm)		1808			921			1473			1299	
Volume (vph)	4	578	53	230	523	1	41	3	269	3	9	4
Peak-hour factor, PHF	0.86	0.86	0.86	0.98	0.98	0.98	0.87	0.87	0.87	0.60	0.60	0.60
Adj. Flow (vph)	5	672	62	235	534	1	47	3	309	5	15	7
RTOR Reduction (vph)	0	4	0	0	0	0	0	269	0	0	6	0
Lane Group Flow (vph)	0	735	0	0	770	0	0	90	0	0	21	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		42.1			61.1			9.7			9.7	
Effective Green, g (s)		44.1			63.1			10.7			10.7	
Actuated g/C Ratio		0.54			0.77			0.13			0.13	
Clearance Time (s)		6.0			6.0			5.0			5.0	
Vehicle Extension (s)		6.0			6.0			3.0			3.0	
Lane Grp Cap (vph)		975			860			193			170	
v/s Ratio Prot					c0.16							
v/s Ratio Perm		0.41			c0.53			c0.06			0.02	
v/c Ratio		0.75			0.90			0.47			0.12	
Uniform Delay, d1		14.6			6.9			32.9			31.4	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		4.4			13.0			1.8			0.3	
Delay (s)		19.1			19.9			34.7			31.7	
Level of Service		B			B			C			C	
Approach Delay (s)		19.1			19.9			34.7			31.7	
Approach LOS		B			B			C			C	

Intersection Summary			
HCM Average Control Delay	22.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	81.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	107.3%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕		↕		↕
Volume (vph)	4	578	230	523	41	3	3	9
Lane Group Flow (vph)	0	739	0	770	0	359	0	27
Turn Type	Perm		pm+pt		Perm		Perm	
Protected Phases		2	1	6		8		4
Permitted Phases	2		6		8		4	
Detector Phases	2	2	1	6 1	8	8	4	4
Minimum Initial (s)	10.0	10.0	4.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	16.0	16.0	10.0	16.0	11.0	11.0	11.0	11.0
Total Split (s)	48.0	48.0	19.0	67.0	20.0	20.0	20.0	20.0
Total Split (%)	55.2%	55.2%	21.8%	77.0%	23.0%	23.0%	23.0%	23.0%
Yellow Time (s)	4.5	4.5	4.0	4.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	2.0	1.5	1.5	1.5	1.5	1.5
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	Min	Min	None	Min	None	None	None	None
v/c Ratio		0.76		0.94		0.78		0.15
Control Delay		21.8		28.5		14.1		25.8
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		21.8		28.5		14.1		25.8
Queue Length 50th (ft)		264		114		23		9
Queue Length 95th (ft)		439		#457		100		20
Internal Link Dist (ft)		1322		1070		1366		73
Turn Bay Length (ft)								
Base Capacity (vph)		978		821		525		250
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		0.76		0.94		0.68		0.11

Intersection Summary

Cycle Length: 87

Actuated Cycle Length: 81.9

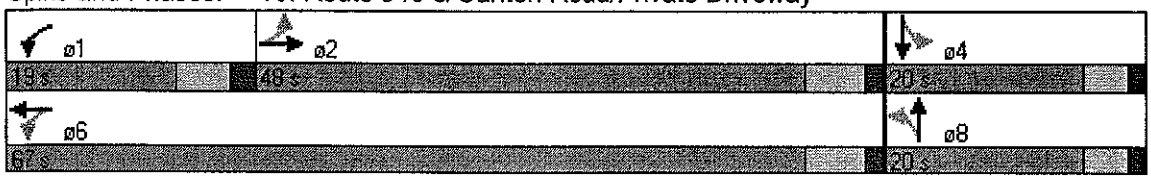
Natural Cycle: 75

Control Type: Semi Act-Uncoord

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

Queue shown is maximum after two cycles.

Splits and Phases: 10: Route 940 & Carlton Road/Private Driveway



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	14	14
Grade (%)		-2%	2%		-4%	
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	0.99		0.87	
Flt Protected		0.97	1.00		1.00	
Satd. Flow (prot)		1765	1770		1724	
Flt Permitted		0.45	1.00		1.00	
Satd. Flow (perm)		815	1770		1724	
Volume (vph)	513	337	326	18	12	428
Peak-hour factor, PHF	0.89	0.89	0.93	0.93	0.80	0.80
Adj. Flow (vph)	576	379	351	19	15	535
RTOR Reduction (vph)	0	0	2	0	480	0
Lane Group Flow (vph)	0	955	368	0	70	0
Heavy Vehicles (%)	2%	2%	2%	2%	4%	4%
Turn Type	pm+pt					
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)		81.0	45.0		8.4	
Effective Green, g (s)		83.0	47.0		10.4	
Actuated g/C Ratio		0.82	0.46		0.10	
Clearance Time (s)		6.0	6.0		6.0	
Vehicle Extension (s)		6.0	6.0		3.0	
Lane Grp Cap (vph)		967	820		177	
v/s Ratio Prot		c0.31	0.21		c0.04	
v/s Ratio Perm		c0.50				
v/c Ratio		0.99	0.45		0.39	
Uniform Delay, d1		8.7	18.4		42.6	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		25.9	1.1		1.5	
Delay (s)		34.6	19.5		44.0	
Level of Service		C	B		D	
Approach Delay (s)		34.6	19.5		44.0	
Approach LOS		C	B		D	

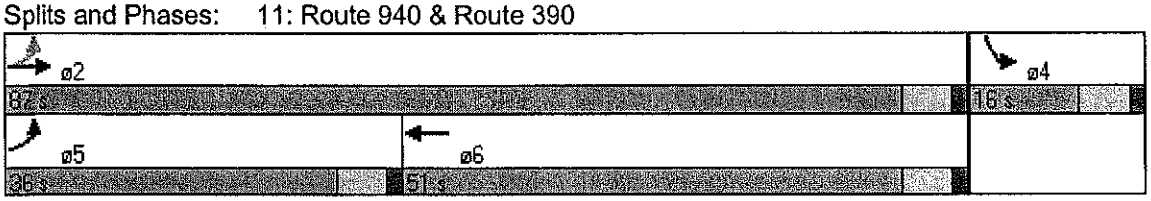
Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	101.4	Sum of lost time (s)	8.0
Intersection Capacity Utilization	101.5%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Volume (vph)	513	337	326	12
Lane Group Flow (vph)	0	955	370	550
Turn Type	pm+pt			
Protected Phases	5	2	6	4
Permitted Phases	2			
Detector Phases	5	2 5	6	4
Minimum Initial (s)	4.0	10.0	10.0	7.0
Minimum Split (s)	10.0	16.0	16.0	13.0
Total Split (s)	36.0	87.0	51.0	16.0
Total Split (%)	35.0%	84.5%	49.5%	15.5%
Yellow Time (s)	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	Min	Min	None
v/c Ratio		0.99	0.45	0.84
Control Delay		38.2	20.7	15.6
Queue Delay		0.0	0.0	0.0
Total Delay		38.2	20.7	15.6
Queue Length 50th (ft)		287	154	9
Queue Length 95th (ft)		#531	241	54
Internal Link Dist (ft)		491	1298	1509
Turn Bay Length (ft)				
Base Capacity (vph)		963	822	674
Starvation Cap Reductn		0	0	0
Spillback Cap Reductn		0	0	0
Storage Cap Reductn		0	0	0
Reduced v/c Ratio		0.99	0.45	0.82

Intersection Summary
Cycle Length: 103
Actuated Cycle Length: 101.4
Natural Cycle: 150
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: Route 940 & Route 390



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	8	8	8	11	11	11
Grade (%)		-2%			2%			-3%			-1%	
Turning Speed (mph)	15		9	15		9	15		9	15		9
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			0.961			0.979			0.974	
Flt Protected		0.993			0.999			0.989			0.963	
Satd. Flow (prot)	0	1802	0	0	1711	0	0	1587	0	0	1697	0
Flt Permitted		0.993			0.999			0.989			0.963	
Satd. Flow (perm)	0	1802	0	0	1711	0	0	1587	0	0	1697	0
Headway Factor	1.03	1.03	1.03	1.06	1.06	1.06	1.18	1.18	1.18	1.04	1.04	1.04
Link Speed (mph)		45			45			35			45	
Link Distance (ft)		1662			865			282			1220	
Travel Time (s)		25.2			13.1			5.5			18.5	
Volume (vph)	46	298	5	6	313	132	5	13	3	103	5	26
Peak Hour Factor	0.90	0.90	0.90	0.84	0.84	0.84	0.80	0.80	0.80	0.87	0.87	0.87
Adj. Flow (vph)	51	331	6	7	373	157	6	16	4	118	6	30
Lane Group Flow (vph)	0	388	0	0	537	0	0	26	0	0	154	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 65.7%	ICU Level of Service C
Analysis Period (min) 15	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		-2%			2%			-3%			-1%	
Volume (veh/h)	46	298	5	6	313	132	5	13	3	103	5	26
Peak Hour Factor	0.90	0.90	0.90	0.84	0.84	0.84	0.80	0.80	0.80	0.87	0.87	0.87
Hourly flow rate (vph)	51	331	6	7	373	157	6	16	4	118	6	30
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	530			337			934	980	334	913	904	451
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	530			337			934	980	334	913	904	451
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			99			97	93	99	48	98	95
cM capacity (veh/h)	1037			1223			221	236	708	230	262	608

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	388	537	26	154
Volume Left	51	7	6	118
Volume Right	6	157	4	30
cSH	1037	1223	256	263
Volume to Capacity	0.05	0.01	0.10	0.59
Queue Length 95th (ft)	4	0	8	85
Control Delay (s)	1.6	0.2	20.6	36.5
Lane LOS	A	A	C	E
Approach Delay (s)	1.6	0.2	20.6	36.5
Approach LOS			C	E

Intersection Summary			
Average Delay	6.2		
Intersection Capacity Utilization	65.7%	ICU Level of Service	C
Analysis Period (min)	15		

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	13	12	11	11	11	12
Grade (%)	-6%		-2%			-5%
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1883	1631	3393		1753	3628
Flt Permitted	0.95	1.00	1.00		0.09	1.00
Satd. Flow (perm)	1883	1631	3393		167	3628
Volume (vph)	122	75	1435	197	79	1201
Peak-hour factor, PHF	0.90	0.90	0.94	0.94	0.94	0.94
Adj. Flow (vph)	136	83	1527	210	84	1278
RTOR Reduction (vph)	0	69	0	0	0	0
Lane Group Flow (vph)	136	14	1737	0	84	1278
Turn Type		Perm			pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	9.5	9.5	36.1		47.9	47.9
Effective Green, g (s)	12.5	12.5	40.1		51.9	51.9
Actuated g/C Ratio	0.17	0.17	0.55		0.72	0.72
Clearance Time (s)	7.0	7.0	8.0		6.0	8.0
Vehicle Extension (s)	3.0	3.0	6.0		3.0	6.0
Lane Grp Cap (vph)	325	282	1879		291	2601
v/s Ratio Prot	c0.07		c0.51		0.03	c0.35
v/s Ratio Perm		0.01			0.18	
v/c Ratio	0.42	0.05	0.92		0.29	0.49
Uniform Delay, d1	26.7	25.0	14.8		11.8	4.5
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	0.9	0.1	8.9		0.6	0.4
Delay (s)	27.6	25.1	23.6		12.3	4.9
Level of Service	C	C	C		B	A
Approach Delay (s)	26.6		23.6			5.4
Approach LOS	C		C			A

Intersection Summary			
HCM Average Control Delay	16.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	72.4	Sum of lost time (s)	12.0
Intersection Capacity Utilization	67.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	122	75	1435	79	1201
Lane Group Flow (vph)	136	83	1737	84	1278
Turn Type		Perm		pm+pt	
Protected Phases	8		2	1	6
Permitted Phases		8		6	
Detector Phases	8	8	2	1	6
Minimum Initial (s)	1.0	1.0	15.0	1.0	15.0
Minimum Split (s)	8.0	8.0	23.0	7.0	23.0
Total Split (s)	33.0	33.0	34.0	13.0	47.0
Total Split (%)	41.3%	41.3%	42.5%	16.3%	58.8%
Yellow Time (s)	5.0	5.0	6.0	6.0	6.0
All-Red Time (s)	2.0	2.0	2.0	0.0	2.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	None	Min
v/c Ratio	0.38	0.22	0.89	0.25	0.48
Control Delay	22.2	6.1	26.5	5.8	5.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	22.2	6.1	26.5	5.8	5.9
Queue Length 50th (ft)	45	0	~404	9	106
Queue Length 95th (ft)	89	30	#590	26	184
Internal Link Dist (ft)	1091		2024		1031
Turn Bay Length (ft)		72		175	
Base Capacity (vph)	632	602	1943	347	2652
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	0.22	0.14	0.89	0.24	0.48

Intersection Summary

Cycle Length: 80

Actuated Cycle Length: 71.2

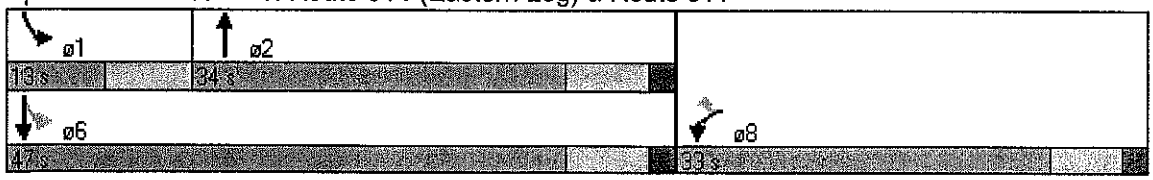
Natural Cycle: 60

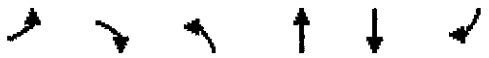
Control Type: Semi Act-Uncoord

~ 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: 1: Route 314 (Eastern Leg) & Route 611





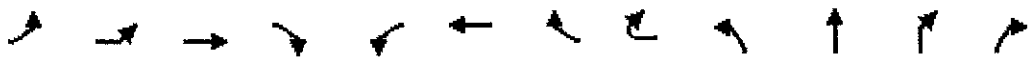
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)	4%			7%	-6%	
Storage Length (ft)	50	0	143			0
Storage Lanes	1	1	1			0
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.997	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1587	1420	1708	3415	3634	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1587	1420	1708	3415	3634	0
Headway Factor	1.12	1.12	1.05	1.05	0.96	0.96
Link Speed (mph)	40			45	45	
Link Distance (ft)	3960			1111	2283	
Travel Time (s)	67.5			16.8	34.6	
Volume (vph)	22	160	187	1323	1120	23
Peak Hour Factor	0.96	0.96	0.96	0.96	0.97	0.97
Heavy Vehicles (%)	4%	4%	2%	2%	2%	2%
Adj. Flow (vph)	23	167	195	1378	1155	24
Lane Group Flow (vph)	23	167	195	1378	1179	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 55.4%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	4%			7%	-6%	
Volume (veh/h)	22	160	187	1323	1120	23
Peak Hour Factor	0.96	0.96	0.96	0.96	0.97	0.97
Hourly flow rate (vph)	23	167	195	1378	1155	24
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				1111		
pX, platoon unblocked	0.68					
vC, conflicting volume	2245	589	1178			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2360	589	1178			
tC, single (s)	6.9	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	63	67			
cM capacity (veh/h)	13	446	588			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	23	167	195	689	689	770	409
Volume Left	23	0	195	0	0	0	0
Volume Right	0	167	0	0	0	0	24
cSH	13	446	588	1700	1700	1700	1700
Volume to Capacity	1.76	0.37	0.33	0.41	0.41	0.45	0.24
Queue Length 95th (ft)	90	43	36	0	0	0	0
Control Delay (s)	949.2	17.8	14.1	0.0	0.0	0.0	0.0
Lane LOS	F	C	B				
Approach Delay (s)	130.4		1.7			0.0	
Approach LOS	F						

Intersection Summary			
Average Delay	9.3		
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		



Movement	EBL	EBL2	EBT	EBR	WBL	WBT	WBR	WBR2	NBL	NBT	NBR	NBR2
Lane Configurations			↕			↕			↰	↑↕		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	15	15	15	15	13	13	13	13	11	12	12	12
Grade (%)			6%			5%				3%		
Total Lost time (s)			4.0			4.0			4.0	4.0		
Lane Util. Factor			1.00			1.00			1.00	0.95		
Frt			0.91			0.98			1.00	0.99		
Flt Protected			0.99			0.96			0.95	1.00		
Satd. Flow (prot)			1786			1774			1685	3452		
Flt Permitted			0.90			0.74			0.25	1.00		
Satd. Flow (perm)			1637			1373			436	3452		
Volume (vph)	6	1	1	16	66	5	8	1	17	1242	3	83
Peak-hour factor, PHF	0.61	0.61	0.61	0.61	0.92	0.92	0.92	0.92	0.98	0.98	0.98	0.98
Adj. Flow (vph)	10	2	2	26	72	5	9	1	17	1267	3	85
RTOR Reduction (vph)	0	0	22	0	0	1	0	0	0	3	0	0
Lane Group Flow (vph)	0	0	18	0	0	86	0	0	17	1352	0	0
Turn Type	Perm	Perm			Perm				Perm			
Protected Phases			4			8				2		
Permitted Phases	4	4			8				2			
Actuated Green, G (s)			10.7			10.7			47.7	47.7		
Effective Green, g (s)			12.7			12.7			51.2	51.2		
Actuated g/C Ratio			0.15			0.15			0.60	0.60		
Clearance Time (s)			6.0			6.0			7.5	7.5		
Vehicle Extension (s)			3.0			3.0			5.0	5.0		
Lane Grp Cap (vph)			242			203			260	2060		
v/s Ratio Prot										c0.39		
v/s Ratio Perm			0.01			c0.06			0.04			
v/c Ratio			0.07			0.42			0.07	0.66		
Uniform Delay, d1			31.5			33.2			7.3	11.5		
Progression Factor			1.00			1.00			1.00	1.00		
Incremental Delay, d2			0.1			1.4			0.2	1.0		
Delay (s)			31.6			34.7			7.5	12.5		
Level of Service			C			C			A	B		
Approach Delay (s)			31.6			34.7				12.4		
Approach LOS			C			C				B		

Intersection Summary			
HCM Average Control Delay	11.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	85.8	Sum of lost time (s)	16.0
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

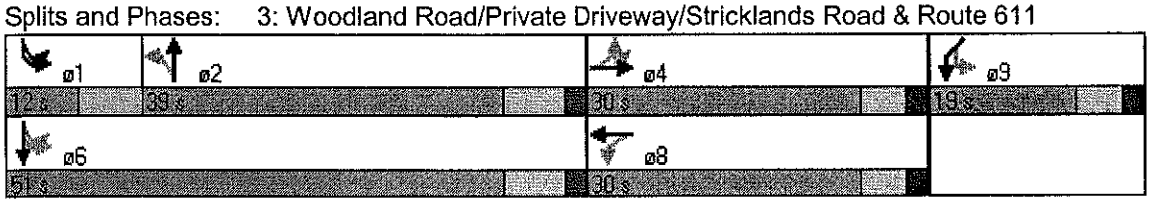
Movement	SEL2	SHL	SBT	SBR	SWL2	SWL	SWR	SWR2
Lane Configurations								
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	12	12	11	11	11	11
Grade (%)			-7%			-2%		
Total Lost time (s)		4.0	4.0			4.0		
Lane Util. Factor		1.00	0.95			1.00		
Frt		1.00	1.00			0.93		
Flt Protected		0.95	1.00			0.98		
Satd. Flow (prot)		1770	3655			1655		
Flt Permitted		0.12	1.00			0.98		
Satd. Flow (perm)		220	3655			1655		
Volume (vph)	1	5	1061	17	1	1	1	1
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	1.00	1.00	1.00	1.00
Adj. Flow (vph)	1	5	1083	17	1	1	1	1
RTOR Reduction (vph)	0	0	1	0	0	1	0	0
Lane Group Flow (vph)	0	6	1099	0	0	3	0	0
Turn Type	pm+pt	pm+pt			Perm			
Protected Phases	1	1	6			9		
Permitted Phases	6	6			9			
Actuated Green, G (s)		54.3	54.3			1.3		
Effective Green, g (s)		57.8	57.8			3.3		
Actuated g/C Ratio		0.67	0.67			0.04		
Clearance Time (s)		5.5	7.5			6.0		
Vehicle Extension (s)		3.0	5.0			3.0		
Lane Grp Cap (vph)		195	2462			64		
v/s Ratio Prot		0.00	c0.30					
v/s Ratio Perm		0.02				0.00		
v/c Ratio		0.03	0.45			0.05		
Uniform Delay, d1		7.6	6.5			39.7		
Progression Factor		1.00	1.00			1.00		
Incremental Delay, d2		0.1	0.3			0.3		
Delay (s)		7.7	6.8			40.0		
Level of Service		A	A			D		
Approach Delay (s)			6.8			40.0		
Approach LOS			A			D		

Intersection Summary

Lane Group	EBL2	EBL	EBT	WBL	WBT	NBL	NBT	SBL2	SBL	SBT	SWL
Lane Configurations											
Volume (vph)	6	1	1	66	5	17	1242	1	5	1061	1
Lane Group Flow (vph)	0	0	40	0	87	17	1355	0	6	1100	4
Turn Type	Perm	Perm		Perm		Perm		pm+pt	pm+pt		
Protected Phases			4		8		2	1	1	6	9
Permitted Phases	4	4		8		2		6	6		
Detector Phases	4	4	4	8	8	2	2	1	1	6	9
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	10.0	10.0	4.0	4.0	10.0	7.0
Minimum Split (s)	13.0	13.0	13.0	13.0	13.0	17.5	17.5	9.5	9.5	17.5	13.0
Total Split (s)	30.0	30.0	30.0	30.0	30.0	39.0	39.0	12.0	12.0	51.0	19.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	30.0%	39.0%	39.0%	12.0%	12.0%	51.0%	19.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	5.5	5.5	5.5	5.5	5.5	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	0.0	0.0	2.0	2.0
Lead/Lag						Lag	Lag	Lead	Lead		
Lead-Lag Optimize?						Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Min	Min	None	None	Min	None
v/c Ratio			0.13		0.37	0.08	0.59		0.02	0.44	0.02
Control Delay			13.3		23.6	11.0	11.6		8.2	6.8	28.2
Queue Delay			0.0		0.0	0.0	0.0		0.0	0.0	0.0
Total Delay			13.3		23.6	11.0	11.6		8.2	6.8	28.2
Queue Length 50th (ft)			4		25	2	103		1	72	1
Queue Length 95th (ft)			18		m81	20	#506		7	238	11
Internal Link Dist (ft)			105		2012		2203			2327	625
Turn Bay Length (ft)						73			183		
Base Capacity (vph)			524		423	226	2294		271	2617	279
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			0.08		0.21	0.08	0.59		0.02	0.42	0.01

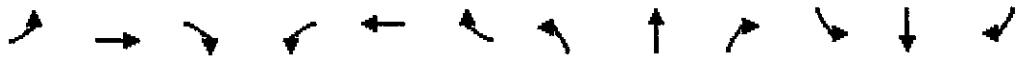
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 77.5
Natural Cycle: 70
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Woodland Road/Private Driveway/Stricklands Road & Route 611



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	12	12	12	11	12	12	11	12	12
Grade (%)		2%			8%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
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		0.892			0.938							
Flt Protected		0.990			0.991		0.950			0.950		
Satd. Flow (prot)	0	1683	0	0	1662	0	1702	3522	0	1719	3557	0
Flt Permitted		0.990			0.991		0.950			0.950		
Satd. Flow (perm)	0	1683	0	0	1662	0	1702	3522	0	1719	3557	0
Headway Factor	0.97	0.97	0.97	1.05	1.05	1.05	1.05	1.01	1.01	1.04	0.99	0.99
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		158			1027			2407			3261	
Travel Time (s)		3.1			20.0			36.5			49.4	
Volume (vph)	1	0	4	4	8	10	8	1247	1	1	1075	1
Peak Hour Factor	0.50	0.50	0.50	0.39	0.39	0.39	0.92	0.92	0.92	0.89	0.89	0.89
Adj. Flow (vph)	2	0	8	10	21	26	9	1355	1	1	1208	1
Lane Group Flow (vph)	0	10	0	0	57	0	9	1356	0	1	1209	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 44.5%		ICU Level of Service A	
Analysis Period (min) 15			



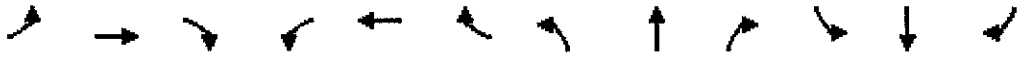
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↱		↰	↑↱	
Sign Control		Stop			Stop			Free			Free	
Grade		2%			8%			1%			-1%	
Volume (veh/h)	1	0	4	4	8	10	8	1247	1	1	1075	1
Peak Hour Factor	0.50	0.50	0.50	0.39	0.39	0.39	0.92	0.92	0.92	0.89	0.89	0.89
Hourly flow rate (vph)	2	0	8	10	21	26	9	1355	1	1	1208	1
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	1942	2585	604	1988	2585	678	1209			1357		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1942	2585	604	1988	2585	678	1209			1357		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	81	100	98	70	16	93	98			100		
cM capacity (veh/h)	10	25	441	35	24	394	573			503		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	10	56	9	904	453	1	805	404
Volume Left	2	10	9	0	0	1	0	0
Volume Right	8	26	0	0	1	0	0	1
cSH	48	47	573	1700	1700	503	1700	1700
Volume to Capacity	0.21	1.21	0.02	0.53	0.27	0.00	0.47	0.24
Queue Length 95th (ft)	17	131	1	0	0	0	0	0
Control Delay (s)	99.6	337.5	11.4	0.0	0.0	12.2	0.0	0.0
Lane LOS	F	F	B			B		
Approach Delay (s)	99.6	337.5	0.1			0.0		
Approach LOS	F	F						

Intersection Summary			
Average Delay	7.6		
Intersection Capacity Utilization	44.5%	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		↕			↕		↰	↑↕		↰	↑↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	10	11	12	12	11	12	12
Grade (%)		0%			9%			2%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
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		0.940			0.958			0.996			0.996	
Flt Protected		0.978			0.971		0.950			0.950		
Satd. Flow (prot)	0	1712	0	0	1544	0	1694	3490	0	1753	3613	0
Flt Permitted		0.978			0.971		0.950			0.950		
Satd. Flow (perm)	0	1712	0	0	1544	0	1694	3490	0	1753	3613	0
Headway Factor	1.00	1.00	1.00	1.16	1.16	1.16	1.06	1.01	1.01	1.01	0.97	0.97
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		485			1492			3261			2754	
Travel Time (s)		11.0			33.9			49.4			41.7	
Volume (vph)	28	6	27	34	6	17	25	1197	36	16	1016	26
Peak Hour Factor	0.90	0.90	0.90	0.72	0.90	0.72	0.90	0.94	0.94	0.95	0.95	0.90
Adj. Flow (vph)	31	7	30	47	7	24	28	1273	38	17	1069	29
Lane Group Flow (vph)	0	68	0	0	78	0	28	1311	0	17	1098	0
Sign Control		Stop			Stop			Free			Free	

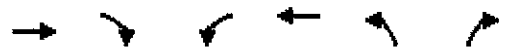
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 45.5%	ICU Level of Service A
Analysis Period (min) 15	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱		↰	↑↑↱	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			9%			2%			-5%	
Volume (veh/h)	28	6	27	34	6	17	25	1197	36	16	1016	26
Peak Hour Factor	0.90	0.90	0.90	0.72	0.90	0.72	0.90	0.94	0.94	0.95	0.95	0.90
Hourly flow rate (vph)	31	7	30	47	7	24	28	1273	38	17	1069	29
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	1837	2485	549	1950	2480	656	1098			1312		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1837	2485	549	1950	2480	656	1098			1312		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	8	75	94	0	75	94	96			97		
cM capacity (veh/h)	34	27	479	27	27	407	631			523		

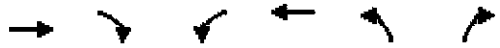
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	68	78	28	849	463	17	713	385
Volume Left	31	47	28	0	0	17	0	0
Volume Right	30	24	0	0	38	0	0	29
cSH	55	38	631	1700	1700	523	1700	1700
Volume to Capacity	1.23	2.03	0.04	0.50	0.27	0.03	0.42	0.23
Queue Length 95th (ft)	147	210	3	0	0	2	0	0
Control Delay (s)	319.8	706.6	11.0	0.0	0.0	12.1	0.0	0.0
Lane LOS	F	F	B			B		
Approach Delay (s)	319.8	706.6	0.2			0.2		
Approach LOS	F	F						

Intersection Summary			
Average Delay	29.6		
Intersection Capacity Utilization	45.5%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	10	10	11	11
Grade (%)	1%			-3%	0%	
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.987					
Flt Protected				0.998	0.950	
Satd. Flow (prot)	1707	0	0	1761	1711	0
Flt Permitted				0.998	0.950	
Satd. Flow (perm)	1707	0	0	1761	1711	0
Headway Factor	1.10	1.10	1.07	1.07	1.04	1.04
Link Speed (mph)	40			40	25	
Link Distance (ft)	2092			650	499	
Travel Time (s)	35.7			11.1	13.6	
Volume (vph)	80	8	3	73	6	0
Peak Hour Factor	0.92	0.92	0.90	0.90	0.63	0.63
Adj. Flow (vph)	87	9	3	81	10	0
Lane Group Flow (vph)	96	0	0	84	10	0
Sign Control	Free			Free	Stop	

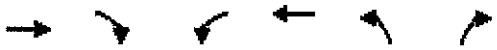
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	1%			-3%	0%	
Volume (veh/h)	80	8	3	73	6	0
Peak Hour Factor	0.92	0.92	0.90	0.90	0.63	0.63
Hourly flow rate (vph)	87	9	3	81	10	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			96		179	91
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			96		179	91
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	100
cM capacity (veh/h)			1498		809	966

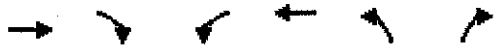
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	96	84	10
Volume Left	0	3	10
Volume Right	9	0	0
cSH	1700	1498	809
Volume to Capacity	0.06	0.00	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.3	9.5
Lane LOS		A	A
Approach Delay (s)	0.0	0.3	9.5
Approach LOS			A

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	16.3%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	10	10
Grade (%)	1%			1%	-1%	
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.995				0.910	
Flt Protected				0.997	0.984	
Satd. Flow (prot)	1783	0	0	1786	1565	0
Flt Permitted				0.997	0.984	
Satd. Flow (perm)	1783	0	0	1786	1565	0
Headway Factor	1.05	1.05	1.05	1.05	1.09	1.09
Link Speed (mph)	40			40	35	
Link Distance (ft)	650			936	704	
Travel Time (s)	11.1			16.0	13.7	
Volume (vph)	77	3	5	73	3	6
Peak Hour Factor	0.81	0.81	0.85	0.85	0.50	0.50
Adj. Flow (vph)	95	4	6	86	6	12
Lane Group Flow (vph)	99	0	0	92	18	0
Sign Control	Free			Free	Stop	

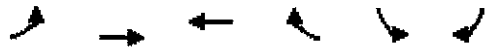
Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 17.9%	ICU Level of Service A
Analysis Period (min) 15	



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	1%			1%	-1%	
Volume (veh/h)	77	3	5	73	3	6
Peak Hour Factor	0.81	0.81	0.85	0.85	0.50	0.50
Hourly flow rate (vph)	95	4	6	86	6	12
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			99		195	97
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			99		195	97
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			1494		791	959

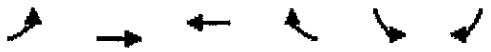
Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	99	92	18
Volume Left	0	6	6
Volume Right	4	0	12
cSH	1700	1494	896
Volume to Capacity	0.06	0.00	0.02
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.0	0.5	9.1
Lane LOS		A	A
Approach Delay (s)	0.0	0.5	9.1
Approach LOS			A

Intersection Summary			
Average Delay	1.0		
Intersection Capacity Utilization	17.9%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	10	10
Grade (%)		-4%	2%		-6%	
Turning Speed (mph)	15			9	15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.984		0.939	
Flt Protected		0.998			0.973	
Satd. Flow (prot)	0	1833	1754	0	1636	0
Flt Permitted		0.998			0.973	
Satd. Flow (perm)	0	1833	1754	0	1636	0
Headway Factor	1.02	1.02	1.06	1.06	1.05	1.05
Link Speed (mph)		40	40		35	
Link Distance (ft)		936	819		1342	
Travel Time (s)		16.0	14.0		26.1	
Volume (vph)	3	80	75	10	4	3
Peak Hour Factor	0.95	0.95	0.93	0.93	0.63	0.63
Adj. Flow (vph)	3	84	81	11	6	5
Lane Group Flow (vph)	0	87	92	0	11	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 16.6%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		-4%	2%		-6%	
Volume (veh/h)	3	80	75	10	4	3
Peak Hour Factor	0.95	0.95	0.93	0.93	0.63	0.63
Hourly flow rate (vph)	3	84	81	11	6	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	91				177	86
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	91				177	86
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				99	100
cM capacity (veh/h)	1503				812	973

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	87	91	11
Volume Left	3	0	6
Volume Right	0	11	5
cSH	1503	1700	874
Volume to Capacity	0.00	0.05	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.3	0.0	9.2
Lane LOS	A		A
Approach Delay (s)	0.3	0.0	9.2
Approach LOS			A

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	16.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	WBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-3%			-5%	4%	
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.999				0.948	
Flt Protected	0.953			0.999		
Satd. Flow (prot)	1680	0	0	1844	1673	0
Flt Permitted	0.953			0.999		
Satd. Flow (perm)	1680	0	0	1844	1673	0
Headway Factor	1.07	1.07	1.01	1.01	1.07	1.07
Link Speed (mph)	40			45	45	
Link Distance (ft)	1794			1439	1446	
Travel Time (s)	30.6			21.8	21.9	
Volume (vph)	83	1	4	136	128	81
Peak Hour Factor	0.82	0.82	0.75	0.75	0.86	0.86
Adj. Flow (vph)	101	1	5	181	149	94
Lane Group Flow (vph)	102	0	0	186	243	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 23.0%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	-3%			-5%	4%	
Volume (veh/h)	83	1	4	136	128	81
Peak Hour Factor	0.82	0.82	0.75	0.75	0.86	0.86
Hourly flow rate (vph)	101	1	5	181	149	94
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	388	196	243			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	388	196	243			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	84	100	100			
cM capacity (veh/h)	613	845	1323			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	102	187	243
Volume Left	101	5	0
Volume Right	1	0	94
cSH	615	1323	1700
Volume to Capacity	0.17	0.00	0.14
Queue Length 95th (ft)	15	0	0
Control Delay (s)	12.0	0.3	0.0
Lane LOS	B	A	
Approach Delay (s)	12.0	0.3	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	23.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	11	11	11	11	11	8	8	8
Grade (%)		-4%			4%			1%			-1%	
Total Lost time (s)		4.0			4.0			4.0			4.0	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.99			1.00			0.88			0.88	
Flt Protected		1.00			0.99			1.00			1.00	
Satd. Flow (prot)		1825			1740			1566			1418	
Flt Permitted		0.99			0.60			0.97			0.92	
Satd. Flow (perm)		1815			1053			1522			1318	
Volume (vph)	4	459	21	188	469	0	21	1	197	1	0	8
Peak-hour factor, PHF	0.84	0.84	0.84	0.93	0.93	0.93	0.71	0.71	0.71	0.88	0.88	0.88
Adj. Flow (vph)	5	546	25	202	504	0	30	1	277	1	0	9
RTOR Reduction (vph)	0	2	0	0	0	0	0	234	0	0	8	0
Lane Group Flow (vph)	0	574	0	0	706	0	0	74	0	0	2	0
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		26.8			45.0			9.0			9.0	
Effective Green, g (s)		28.8			47.0			10.0			10.0	
Actuated g/C Ratio		0.44			0.72			0.15			0.15	
Clearance Time (s)		6.0			6.0			5.0			5.0	
Vehicle Extension (s)		6.0			6.0			3.0			3.0	
Lane Grp Cap (vph)		804			911			234			203	
v/s Ratio Prot					c0.17							
v/s Ratio Perm		0.32			c0.39			c0.05			0.00	
v/c Ratio		0.71			0.77			0.31			0.01	
Uniform Delay, d1		14.7			5.7			24.5			23.3	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		4.3			5.3			0.8			0.0	
Delay (s)		19.1			10.9			25.2			23.3	
Level of Service		B			B			C			C	
Approach Delay (s)		19.1			10.9			25.2			23.3	
Approach LOS		B			B			C			C	

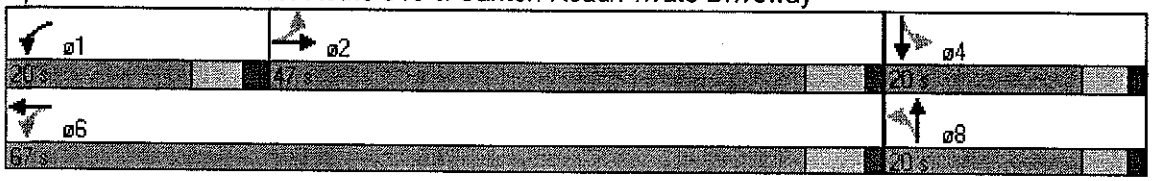
Intersection Summary			
HCM Average Control Delay	16.7	HCM Level of Service	B
HCM Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	87.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕		↕		↕		↕
Volume (vph)	4	459	188	469	21	1	1	0
Lane Group Flow (vph)	0	576	0	706	0	308	0	10
Turn Type	Perm		pm+pt		Perm		Perm	
Protected Phases		2	1	6		8		4
Permitted Phases	2		6		8		4	
Detector Phases	2	2	1	6 1	8	8	4	4
Minimum Initial (s)	10.0	10.0	4.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	16.0	16.0	10.0	16.0	11.0	11.0	11.0	11.0
Total Split (s)	47.0	47.0	20.0	67.0	20.0	20.0	20.0	20.0
Total Split (%)	54.0%	54.0%	23.0%	77.0%	23.0%	23.0%	23.0%	23.0%
Yellow Time (s)	4.5	4.5	4.0	4.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	2.0	1.5	1.5	1.5	1.5	1.5
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	Min	Min	None	Min	None	None	None	None
v/c Ratio		0.73		0.78		0.66		0.05
Control Delay		17.8		9.1		10.4		17.9
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		17.8		9.1		10.4		17.9
Queue Length 50th (ft)		175		84		12		0
Queue Length 95th (ft)		297		#230		35		13
Internal Link Dist (ft)		1322		1070		1366		73
Turn Bay Length (ft)								
Base Capacity (vph)		994		1055		570		327
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		0.58		0.67		0.54		0.03

Intersection Summary

Cycle Length: 87
Actuated Cycle Length: 66
Natural Cycle: 60
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Route 940 & Carlton Road/Private Driveway



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	14	14
Grade (%)		-2%	2%		-4%	
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	0.99		0.88	
Flt Protected		0.98	1.00		0.99	
Satd. Flow (prot)		1756	1768		1774	
Flt Permitted		0.46	1.00		0.99	
Satd. Flow (perm)		828	1768		1774	
Volume (vph)	335	322	305	19	45	352
Peak-hour factor, PHF	0.79	0.79	0.84	0.84	0.81	0.81
Adj. Flow (vph)	424	408	363	23	56	435
RTOR Reduction (vph)	0	0	2	0	280	0
Lane Group Flow (vph)	0	832	384	0	211	0
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Turn Type	pm+pt					
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)		74.1	44.1		13.9	
Effective Green, g (s)		76.1	46.1		15.9	
Actuated g/C Ratio		0.76	0.46		0.16	
Clearance Time (s)		6.0	6.0		6.0	
Vehicle Extension (s)		6.0	6.0		3.0	
Lane Grp Cap (vph)		871	815		282	
v/s Ratio Prot		c0.25	0.22		c0.12	
v/s Ratio Perm		c0.48				
v/c Ratio		0.96	0.47		0.75	
Uniform Delay, d1		10.5	18.6		40.1	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		21.0	1.2		10.3	
Delay (s)		31.4	19.8		50.5	
Level of Service		C	B		D	
Approach Delay (s)		31.4	19.8		50.5	
Approach LOS		C	B		D	

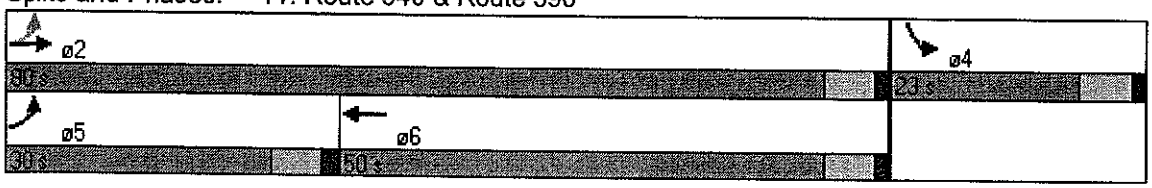
Intersection Summary			
HCM Average Control Delay	34.3	HCM Level of Service	C
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	86.9%	ICU Level of Service	E
Analysis Period (min)	15		

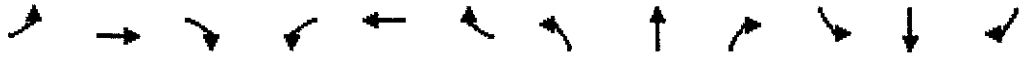
c Critical Lane Group

Lane Group	EBT	WBL	WBT	SBR
Lane Configurations				
Volume (vph)	335	322	305	45
Lane Group Flow (vph)	0	832	386	491
Turn Type	pm+pt			
Protected Phases	5	2	6	4
Permitted Phases	2			
Detector Phases	5	2 5	6	4
Minimum Initial (s)	4.0	10.0	10.0	7.0
Minimum Split (s)	10.0	16.0	16.0	13.0
Total Split (s)	30.0	80.0	50.0	23.0
Total Split (%)	29.1%	77.7%	48.5%	22.3%
Yellow Time (s)	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	Min	Min	None
v/c Ratio		0.97	0.47	0.87
Control Delay		33.9	21.5	25.6
Queue Delay		0.0	0.0	0.0
Total Delay		33.9	21.5	25.6
Queue Length 50th (ft)		248	173	99
Queue Length 95th (ft)		#307	234	171
Internal Link Dist (ft)		491	1298	1730
Turn Bay Length (ft)				
Base Capacity (vph)		861	816	599
Starvation Cap Reductn		0	0	0
Spillback Cap Reductn		0	0	0
Storage Cap Reductn		0	0	0
Reduced v/c Ratio		0.97	0.47	0.82

Intersection Summary
Cycle Length: 103
Actuated Cycle Length: 100.1
Natural Cycle: 80
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: Route 940 & Route 390





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	8	8	8	11	11	11
Grade (%)		-2%			2%			-3%			-1%	
Turning Speed (mph)	15		9	15		9	15		9	15		9
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			0.964			0.965			0.969	
Flt Protected		0.994			0.999			0.984			0.967	
Satd. Flow (prot)	0	1787	0	0	1717	0	0	1556	0	0	1696	0
Flt Permitted		0.994			0.999			0.984			0.967	
Satd. Flow (perm)	0	1787	0	0	1717	0	0	1556	0	0	1696	0
Headway Factor	1.03	1.03	1.03	1.06	1.06	1.06	1.18	1.18	1.18	1.04	1.04	1.04
Link Speed (mph)		45			45			35			45	
Link Distance (ft)		1662			865			282			1220	
Travel Time (s)		25.2			13.1			5.5			18.5	
Volume (vph)	45	317	5	5	285	106	4	5	3	103	14	35
Peak Hour Factor	0.89	0.89	0.89	0.81	0.81	0.81	0.45	0.45	0.45	0.88	0.88	0.88
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	51	356	6	6	352	131	9	11	7	117	16	40
Lane Group Flow (vph)	0	413	0	0	489	0	0	27	0	0	173	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 66.4%		ICU Level of Service C	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		-2%			2%			-3%			-1%	
Volume (veh/h)	45	317	5	5	285	106	4	5	3	103	14	35
Peak Hour Factor	0.89	0.89	0.89	0.81	0.81	0.81	0.45	0.45	0.45	0.88	0.88	0.88
Hourly flow rate (vph)	51	356	6	6	352	131	9	11	7	117	16	40
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	483			362			937	955	359	902	893	417
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	483			362			937	955	359	902	893	417
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			99			96	95	99	51	94	94
cM capacity (veh/h)	1075			1197			211	245	686	238	267	636

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	412	489	27	173
Volume Left	51	6	9	117
Volume Right	6	131	7	40
cSH	1075	1197	274	281
Volume to Capacity	0.05	0.01	0.10	0.61
Queue Length 95th (ft)	4	0	8	94
Control Delay (s)	1.5	0.2	19.5	36.3
Lane LOS	A	A	C	E
Approach Delay (s)	1.5	0.2	19.5	36.3
Approach LOS			C	E

Intersection Summary				
Average Delay	6.8			
Intersection Capacity Utilization	66.4%	ICU Level of Service	C	
Analysis Period (min)	15			

2017 PROJECTED CONDITIONS

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	13	12	11	11	11	12
Grade (%)	-6%		-2%			-5%
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1883	1631	3332		1753	3628
Flt Permitted	0.95	1.00	1.00		0.08	1.00
Satd. Flow (perm)	1883	1631	3332		142	3628
Volume (vph)	408	169	1905	403	142	1404
Peak-hour factor, PHF	0.83	0.83	0.98	0.98	0.83	0.83
Adj. Flow (vph)	492	204	1944	411	171	1692
RTOR Reduction (vph)	0	59	0	0	0	0
Lane Group Flow (vph)	492	145	2355	0	171	1692
Heavy Vehicles (%)	2%	2%	3%	3%	2%	2%
Turn Type		Perm			pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	26.1	26.1	44.1		57.9	57.9
Effective Green, g (s)	29.1	29.1	48.1		61.9	61.9
Actuated g/C Ratio	0.29	0.29	0.49		0.63	0.63
Clearance Time (s)	7.0	7.0	8.0		6.0	8.0
Vehicle Extension (s)	3.0	3.0	6.0		3.0	6.0
Lane Grp Cap (vph)	553	479	1619		248	2268
v/s Ratio Prot	c0.26		c0.71		0.07	c0.47
v/s Ratio Perm		0.09			0.36	
v/c Ratio	0.89	0.30	1.45		0.69	0.75
Uniform Delay, d1	33.4	27.1	25.4		25.2	13.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	16.0	0.4	208.1		7.8	1.9
Delay (s)	49.4	27.5	233.5		32.9	14.9
Level of Service	D	C	F		C	B
Approach Delay (s)	43.0		233.5			16.5
Approach LOS	D		F			B

Intersection Summary			
HCM Average Control Delay	124.3	HCM Level of Service	F
HCM Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	99.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	106.0%	ICU Level of Service	G
Analysis Period (min)	15		

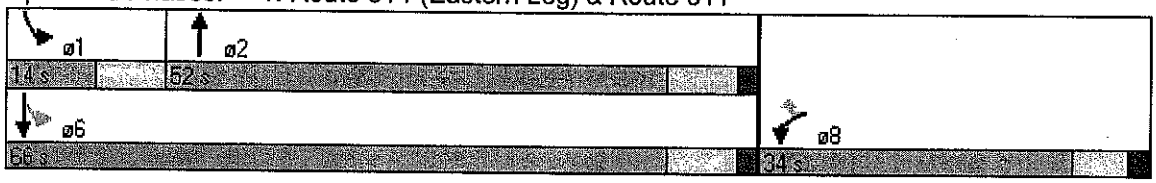
c Critical Lane Group

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	408	169	1905	142	1404
Lane Group Flow (vph)	492	204	2355	171	1692
Turn Type		Perm		pm+pt	
Protected Phases	8		2	1	6
Permitted Phases		8		6	
Detector Phases	8	8	2	1	6
Minimum Initial (s)	1.0	1.0	15.0	1.0	15.0
Minimum Split (s)	8.0	8.0	23.0	7.0	23.0
Total Split (s)	34.0	34.0	52.0	14.0	66.0
Total Split (%)	34.0%	34.0%	52.0%	14.0%	66.0%
Yellow Time (s)	5.0	5.0	6.0	6.0	6.0
All-Red Time (s)	2.0	2.0	2.0	0.0	2.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	None	Min
v/c Ratio	0.89	0.38	1.46	0.69	0.75
Control Delay	51.0	18.2	233.5	32.3	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	18.2	233.5	32.3	15.8
Queue Length 50th (ft)	296	58	~1092	54	371
Queue Length 95th (ft)	#410	105	#1229	109	391
Internal Link Dist (ft)	1091		2024		1031
Turn Bay Length (ft)		72		175	
Base Capacity (vph)	566	548	1618	251	2270
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	0.87	0.37	1.46	0.68	0.75

Intersection Summary

Cycle Length: 100
Actuated Cycle Length: 99
Natural Cycle: 110
Control Type: Semi Act-Uncoord
~ 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: 1: Route 314 (Eastern Leg) & Route 611



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)	4%			7%	-6%	
Storage Length (ft)	50	0	143			0
Storage Lanes	1	1	1			0
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.992	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1587	1420	1708	3415	3581	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1587	1420	1708	3415	3581	0
Headway Factor	1.12	1.12	1.05	1.05	0.96	0.96
Link Speed (mph)	40			45	45	
Link Distance (ft)	3960			1111	2283	
Travel Time (s)	67.5			16.8	34.6	
Volume (vph)	44	197	401	1673	1349	73
Peak Hour Factor	0.67	0.67	0.95	0.95	0.76	0.76
Heavy Vehicles (%)	4%	4%	2%	2%	3%	3%
Adj. Flow (vph)	66	294	422	1761	1775	96
Lane Group Flow (vph)	66	294	422	1761	1871	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 75.2%		ICU Level of Service D	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	4%			7%	-6%	
Volume (veh/h)	44	197	401	1673	1349	73
Peak Hour Factor	0.67	0.67	0.95	0.95	0.76	0.76
Hourly flow rate (vph)	66	294	422	1761	1775	96
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				1111		
pX, platoon unblocked	0.45					
vC, conflicting volume	3548	936	1871			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	5450	936	1871			
tC, single (s)	6.9	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	0	0			
cM capacity (veh/h)	0	263	318			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	66	294	422	881	881	1183	688
Volume Left	66	0	422	0	0	0	0
Volume Right	0	294	0	0	0	0	96
cSH	0	263	318	1700	1700	1700	1700
Volume to Capacity	Err	1.12	1.33	0.52	0.52	0.70	0.40
Queue Length 95th (ft)	Err	316	517	0	0	0	0
Control Delay (s)	Err	133.0	200.7	0.0	0.0	0.0	0.0
Lane LOS	F	F	F				
Approach Delay (s)	Err		38.8			0.0	
Approach LOS	F						

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	15	15	15	12	12	14	11	12	14	11	12	12
Grade (%)		6%			5%			3%			-7%	
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1858		1639	1647	1647	1685	3486	1664	1770	3658	
Flt Permitted		0.98		0.95	0.95	1.00	0.21	1.00	1.00	0.13	1.00	
Satd. Flow (perm)		1858		1639	1647	1647	364	3486	1664	245	3658	
Volume (vph)	5	3	4	364	9	154	6	1249	462	146	1054	9
Peak-hour factor, PHF	0.56	0.56	0.56	0.89	0.89	0.89	0.99	0.99	0.99	0.82	0.82	0.82
Adj. Flow (vph)	9	5	7	409	10	173	6	1262	467	178	1285	11
RTOR Reduction (vph)	0	7	0	0	0	103	0	0	193	0	1	0
Lane Group Flow (vph)	0	14	0	205	214	70	6	1262	274	178	1295	0
Turn Type	Split			Split		pm+ov	Perm		pm+ov	pm+pt		
Protected Phases	4	4		8	8	1		2	8	1	6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)		1.4		10.3	10.3	16.7	22.9	22.9	33.2	34.8	34.8	
Effective Green, g (s)		3.4		12.3	12.3	20.2	26.4	26.4	38.7	38.3	38.3	
Actuated g/C Ratio		0.05		0.19	0.19	0.31	0.40	0.40	0.59	0.58	0.58	
Clearance Time (s)		6.0		6.0	6.0	5.5	7.5	7.5	6.0	5.5	7.5	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	5.0	5.0	3.0	3.0	5.0	
Lane Grp Cap (vph)		96		305	307	604	146	1394	976	325	2123	
v/s Ratio Prot		c0.01		0.13	c0.13	0.01		c0.36	0.05	0.07	c0.35	
v/s Ratio Perm						0.03	0.02		0.11	0.25		
v/c Ratio		0.15		0.67	0.70	0.12	0.04	0.91	0.28	0.55	0.61	
Uniform Delay, d1		29.9		25.0	25.1	16.5	12.1	18.6	6.8	11.4	9.0	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.7		5.7	6.7	0.1	0.2	9.1	0.2	1.9	0.8	
Delay (s)		30.6		30.7	31.8	16.6	12.3	27.8	6.9	13.3	9.8	
Level of Service		C		C	C	B	B	C	A	B	A	
Approach Delay (s)		30.6			27.0			22.1			10.2	
Approach LOS		C			C			C			B	

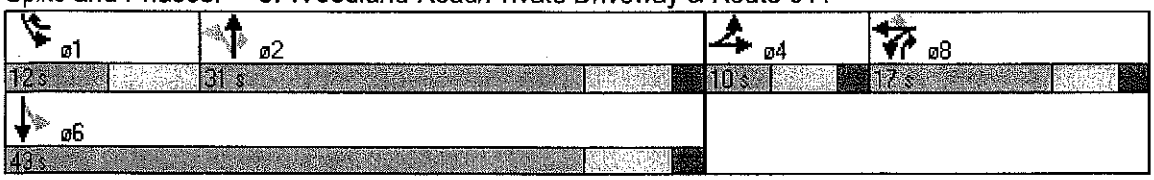
Intersection Summary			
HCM Average Control Delay	18.3	HCM Level of Service	B
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	66.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	3	364	9	154	6	1249	462	146	1054
Lane Group Flow (vph)	21	205	214	173	6	1262	467	178	1296
Turn Type		Split		pm+ov	Perm		pm+ov	pm+pt	
Protected Phases	4	8	8	1		2	8	1	6
Permitted Phases				8	2		2	6	
Detector Phases	4	8	8	1	2	2	8	1	6
Minimum Initial (s)	4.0	7.0	7.0	4.0	10.0	10.0	7.0	4.0	10.0
Minimum Split (s)	10.0	13.0	13.0	9.5	17.5	17.5	13.0	9.5	17.5
Total Split (s)	10.0	17.0	17.0	12.0	31.0	31.0	17.0	12.0	43.0
Total Split (%)	14.3%	24.3%	24.3%	17.1%	44.3%	44.3%	24.3%	17.1%	61.4%
Yellow Time (s)	4.0	4.0	4.0	5.5	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0
Lead/Lag				Lead	Lag	Lag		Lead	
Lead-Lag Optimize?				Yes	Yes	Yes		Yes	
Recall Mode	None	None	None	None	Min	Min	None	None	Min
v/c Ratio	0.12	0.63	0.65	0.24	0.04	0.86	0.37	0.52	0.58
Control Delay	25.4	33.6	34.6	5.2	14.2	24.7	1.3	13.5	9.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.4	33.6	34.6	5.2	14.2	24.7	1.3	13.5	9.4
Queue Length 50th (ft)	5	70	73	5	1	195	0	21	110
Queue Length 95th (ft)	14	#174	#184	42	9	#405	14	66	210
Internal Link Dist (ft)	105		2012			2203			2327
Turn Bay Length (ft)		250		250	73		350	183	
Base Capacity (vph)	170	341	343	713	145	1502	1265	345	2271
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	0.12	0.60	0.62	0.24	0.04	0.84	0.37	0.52	0.57

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 62.4
Natural Cycle: 70
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Woodland Road/Private Driveway & Route 611



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↑↱		↰	↑↱	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	12	12	12	11	12	12	11	12	12
Grade (%)		2%			8%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
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		0.865			0.879							
Flt Protected					0.997		0.950			0.950		
Satd. Flow (prot)	0	1648	0	0	1567	0	1702	3522	0	1670	3455	0
Flt Permitted					0.997		0.950			0.950		
Satd. Flow (perm)	0	1648	0	0	1567	0	1702	3522	0	1670	3455	0
Headway Factor	0.97	0.97	0.97	1.05	1.05	1.05	1.05	1.01	1.01	1.04	0.99	0.99
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		158			1027			2407			3261	
Travel Time (s)		3.1			20.0			36.5			49.4	
Volume (vph)	0	0	4	1	1	17	4	1402	1	12	1204	1
Peak Hour Factor	0.75	0.75	0.75	0.50	0.50	0.50	0.97	0.97	0.97	0.83	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%	5%	5%
Adj. Flow (vph)	0	0	5	2	2	34	4	1445	1	14	1451	1
Lane Group Flow (vph)	0	5	0	0	38	0	4	1446	0	14	1452	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 48.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱		↰	↑↑↱	
Sign Control		Stop			Stop			Free			Free	
Grade		2%			8%			1%			-1%	
Volume (veh/h)	0	0	4	1	1	17	4	1402	1	12	1204	1
Peak Hour Factor	0.75	0.75	0.75	0.50	0.50	0.50	0.97	0.97	0.97	0.83	0.83	0.83
Hourly flow rate (vph)	0	0	5	2	2	34	4	1445	1	14	1451	1
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	2246	2935	726	2214	2935	723	1452			1446		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2246	2935	726	2214	2935	723	1452			1446		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	6.9	4.1			4.2		
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 %	100	100	99	91	86	91	99			97		
cM capacity (veh/h)	18	14	367	23	14	368	462			450		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	5	38	4	964	483	14	967	485
Volume Left	0	2	4	0	0	14	0	0
Volume Right	5	34	0	0	1	0	0	1
cSH	367	118	462	1700	1700	450	1700	1700
Volume to Capacity	0.01	0.32	0.01	0.57	0.28	0.03	0.57	0.29
Queue Length 95th (ft)	1	32	1	0	0	2	0	0
Control Delay (s)	15.0	49.5	12.9	0.0	0.0	13.3	0.0	0.0
Lane LOS	B	E	B			B		
Approach Delay (s)	15.0	49.5	0.0			0.1		
Approach LOS	B	E						

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	48.8%	ICU Level of Service	A
Analysis Period (min)	15		

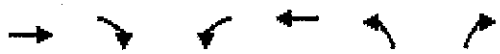
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↑↕		↰	↑↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	10	11	12	12	11	12	12
Grade (%)		0%			9%			2%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
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		0.938			0.934			0.998			0.997	
Flt Protected		0.978			0.983		0.950			0.950		
Satd. Flow (prot)	0	1709	0	0	1524	0	1694	3497	0	1753	3617	0
Flt Permitted		0.978			0.983		0.950			0.950		
Satd. Flow (perm)	0	1709	0	0	1524	0	1694	3497	0	1753	3617	0
Headway Factor	1.00	1.00	1.00	1.16	1.16	1.16	1.06	1.01	1.01	1.01	0.97	0.97
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		294			1492			3261			2754	
Travel Time (s)		6.7			33.9			49.4			41.7	
Volume (vph)	20	4	20	13	7	18	31	1368	20	22	1184	31
Peak Hour Factor	0.90	0.90	0.90	0.75	0.90	0.75	0.90	0.97	0.97	0.77	0.77	0.90
Adj. Flow (vph)	22	4	22	17	8	24	34	1410	21	29	1538	34
Lane Group Flow (vph)	0	48	0	0	49	0	34	1431	0	29	1572	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 48.9%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			9%			2%			-5%	
Volume (veh/h)	20	4	20	13	7	18	31	1368	20	22	1184	31
Peak Hour Factor	0.90	0.90	0.90	0.75	0.90	0.75	0.90	0.97	0.97	0.77	0.77	0.90
Hourly flow rate (vph)	22	4	22	17	8	24	34	1410	21	29	1538	34
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	2414	3112	786	2340	3119	715	1572			1431		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2414	3112	786	2340	3119	715	1572			1431		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	54	93	0	18	94	92			94		
cM capacity (veh/h)	5	10	335	10	9	372	415			471		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	49	49	34	940	491	29	1025	547
Volume Left	22	17	34	0	0	29	0	0
Volume Right	22	24	0	0	21	0	0	34
cSH	9	19	415	1700	1700	471	1700	1700
Volume to Capacity	5.43	2.56	0.08	0.55	0.29	0.06	0.60	0.32
Queue Length 95th (ft)	Err	164	7	0	0	5	0	0
Control Delay (s)	Err	1127.9	14.4	0.0	0.0	13.1	0.0	0.0
Lane LOS	F	F	B			B		
Approach Delay (s)	Err	1127.9	0.3			0.2		
Approach LOS	F	F						

Intersection Summary			
Average Delay	172.3		
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	15		



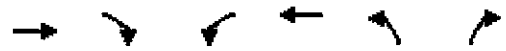
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	14	11	11
Grade (%)	1%			-3%	0%	
Storage Length (ft)		250	100		0	0
Storage Lanes		1	1		1	0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.962	
Flt Protected			0.950		0.965	
Satd. Flow (prot)	1767	1602	1728	1941	1672	0
Flt Permitted			0.950		0.965	
Satd. Flow (perm)	1767	1602	1728	1941	1672	0
Headway Factor	1.01	0.92	0.98	0.90	1.04	1.04
Link Speed (mph)	40			40	25	
Link Distance (ft)	2092			650	499	
Travel Time (s)	35.7			11.1	13.6	
Volume (vph)	564	47	20	467	60	24
Peak Hour Factor	0.82	0.82	0.79	0.79	0.53	0.53
Heavy Vehicles (%)	7%	7%	6%	6%	2%	2%
Adj. Flow (vph)	688	57	25	591	113	45
Lane Group Flow (vph)	688	57	25	591	158	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.1%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	1%			-3%	0%	
Volume (veh/h)	564	47	20	467	60	24
Peak Hour Factor	0.82	0.82	0.79	0.79	0.53	0.53
Hourly flow rate (vph)	688	57	25	591	113	45
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					TWLTL	
Median storage veh)					1	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			745		1330	688
vC1, stage 1 conf vol					688	
vC2, stage 2 conf vol					642	
vCu, unblocked vol			745		1330	688
tC, single (s)			4.2		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.3		3.5	3.3
p0 queue free %			97		63	90
cM capacity (veh/h)			845		305	446

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	688	57	25	591	158
Volume Left	0	0	25	0	113
Volume Right	0	57	0	0	45
cSH	1700	1700	845	1700	336
Volume to Capacity	0.40	0.03	0.03	0.35	0.47
Queue Length 95th (ft)	0	0	2	0	60
Control Delay (s)	0.0	0.0	9.4	0.0	25.0
Lane LOS			A		C
Approach Delay (s)	0.0		0.4		25.0
Approach LOS					C

Intersection Summary			
Average Delay	2.8		
Intersection Capacity Utilization	41.1%	ICU Level of Service	A
Analysis Period (min)	15		



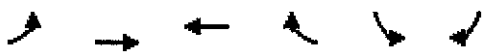
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	14	10	10
Grade (%)	1%			1%	-1%	
Storage Length (ft)		250	100		0	0
Storage Lanes		1	1		1	0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.908	
Flt Protected			0.950		0.984	
Satd. Flow (prot)	1853	1680	1727	1939	1561	0
Flt Permitted			0.950		0.984	
Satd. Flow (perm)	1853	1680	1727	1939	1561	0
Headway Factor	1.01	0.92	1.01	0.92	1.09	1.09
Link Speed (mph)	40			40	35	
Link Distance (ft)	650			936	704	
Travel Time (s)	11.1			16.0	13.7	
Volume (vph)	554	33	57	449	38	80
Peak Hour Factor	0.72	0.72	0.80	0.80	0.90	0.90
Heavy Vehicles (%)	2%	2%	4%	4%	2%	2%
Adj. Flow (vph)	769	46	71	561	42	89
Lane Group Flow (vph)	769	46	71	561	131	0
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 49.5%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	1%			1%	-1%	
Volume (veh/h)	554	33	57	449	38	80
Peak Hour Factor	0.72	0.72	0.80	0.80	0.90	0.90
Hourly flow rate (vph)	769	46	71	561	42	89
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					TWLTL	
Median storage veh)					1	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			815		1473	769
vC1, stage 1 conf vol					769	
vC2, stage 2 conf vol					704	
vCu, unblocked vol			815		1473	769
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			91		84	78
cM capacity (veh/h)			803		264	401

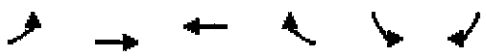
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	769	46	71	561	131
Volume Left	0	0	71	0	42
Volume Right	0	46	0	0	89
cSH	1700	1700	803	1700	344
Volume to Capacity	0.45	0.03	0.09	0.33	0.38
Queue Length 95th (ft)	0	0	7	0	43
Control Delay (s)	0.0	0.0	9.9	0.0	21.8
Lane LOS			A		C
Approach Delay (s)	0.0		1.1		21.8
Approach LOS					C

Intersection Summary			
Average Delay	2.3		
Intersection Capacity Utilization	49.5%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	14	14	10	10
Grade (%)		-4%	2%		-6%	
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	0
Turning Speed (mph)	15			9	15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.999		0.966	
Flt Protected	0.950				0.964	
Satd. Flow (prot)	1805	2027	1927	0	1668	0
Flt Permitted	0.950				0.964	
Satd. Flow (perm)	1805	2027	1927	0	1668	0
Headway Factor	0.97	0.89	0.93	0.93	1.05	1.05
Link Speed (mph)		40	40		35	
Link Distance (ft)		936	400		1342	
Travel Time (s)		16.0	6.8		26.1	
Volume (vph)	3	632	503	5	9	3
Peak Hour Factor	0.84	0.84	0.77	0.77	0.50	0.50
Heavy Vehicles (%)	2%	2%	4%	4%	2%	2%
Adj. Flow (vph)	4	752	653	6	18	6
Lane Group Flow (vph)	4	752	659	0	24	0
Sign Control		Free	Free		Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.3%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		-4%	2%		-6%	
Volume (veh/h)	3	632	503	5	9	3
Peak Hour Factor	0.84	0.84	0.77	0.77	0.50	0.50
Hourly flow rate (vph)	4	752	653	6	18	6
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					TWLTL	
Median storage veh)					1	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	660				1416	656
vC1, stage 1 conf vol					656	
vC2, stage 2 conf vol					760	
vCu, unblocked vol	660				1416	656
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	100				94	99
cM capacity (veh/h)	928				291	466

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	4	752	660	24
Volume Left	4	0	0	18
Volume Right	0	0	6	6
cSH	928	1700	1700	321
Volume to Capacity	0.00	0.44	0.39	0.07
Queue Length 95th (ft)	0	0	0	6
Control Delay (s)	8.9	0.0	0.0	17.1
Lane LOS	A			C
Approach Delay (s)	0.0		0.0	17.1
Approach LOS				C

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	43.3%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-3%			-5%	4%	
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.992				0.923	
Flt Protected	0.955			0.997		
Satd. Flow (prot)	1672	0	0	1840	1613	0
Flt Permitted	0.955			0.997		
Satd. Flow (perm)	1672	0	0	1840	1613	0
Headway Factor	1.07	1.07	1.01	1.01	1.07	1.07
Link Speed (mph)	40			45	45	
Link Distance (ft)	1794			1439	1446	
Travel Time (s)	30.6			21.8	21.9	
Volume (vph)	180	11	12	190	159	210
Peak Hour Factor	0.82	0.82	0.96	0.96	0.81	0.81
Heavy Vehicles (%)	2%	2%	2%	2%	3%	3%
Adj. Flow (vph)	220	13	13	198	196	259
Lane Group Flow (vph)	233	0	0	210	455	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 38.5%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	-3%			-5%	4%	
Volume (veh/h)	180	11	12	190	159	210
Peak Hour Factor	0.82	0.82	0.96	0.96	0.81	0.81
Hourly flow rate (vph)	220	13	12	198	196	259
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	549	326	456			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	549	326	456			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	55	98	99			
cM capacity (veh/h)	492	715	1105			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	233	210	456
Volume Left	220	12	0
Volume Right	13	0	259
cSH	501	1105	1700
Volume to Capacity	0.47	0.01	0.27
Queue Length 95th (ft)	61	1	0
Control Delay (s)	18.3	0.6	0.0
Lane LOS	C	A	
Approach Delay (s)	18.3	0.6	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	38.5%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	11	11	11	11	11	8	8	8
Grade (%)		-4%			4%			1%			-1%	
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frt		0.98		1.00	1.00			0.89			0.96	
Flt Protected		1.00		0.95	1.00			0.99			0.99	
Satd. Flow (prot)		1803		1619	1764			1551			1551	
Flt Permitted		1.00		0.24	1.00			0.93			0.85	
Satd. Flow (perm)		1798		402	1764			1455			1332	
Volume (vph)	4	578	89	271	523	1	67	3	299	3	9	4
Peak-hour factor, PHF	0.86	0.86	0.86	0.98	0.98	0.98	0.87	0.87	0.87	0.60	0.60	0.60
Adj. Flow (vph)	5	672	103	277	534	1	77	3	344	5	15	7
RTOR Reduction (vph)	0	9	0	0	0	0	0	261	0	0	6	0
Lane Group Flow (vph)	0	771	0	277	535	0	0	163	0	0	21	0
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		25.4		37.4	37.4			8.9			8.9	
Effective Green, g (s)		27.4		39.4	39.4			9.9			9.9	
Actuated g/C Ratio		0.48		0.69	0.69			0.17			0.17	
Clearance Time (s)		6.0		6.0	6.0			5.0			5.0	
Vehicle Extension (s)		6.0		3.0	6.0			3.0			3.0	
Lane Grp Cap (vph)		860		446	1213			251			230	
v/s Ratio Prot				c0.09	0.30							
v/s Ratio Perm		c0.43		0.34				c0.11			0.02	
v/c Ratio		0.90		0.62	0.44			0.65			0.09	
Uniform Delay, d1		13.6		7.0	4.0			22.1			19.9	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		13.1		2.7	0.7			5.7			0.2	
Delay (s)		26.7		9.7	4.7			27.7			20.1	
Level of Service		C		A	A			C			C	
Approach Delay (s)		26.7			6.4			27.7			20.1	
Approach LOS		C			A			C			C	

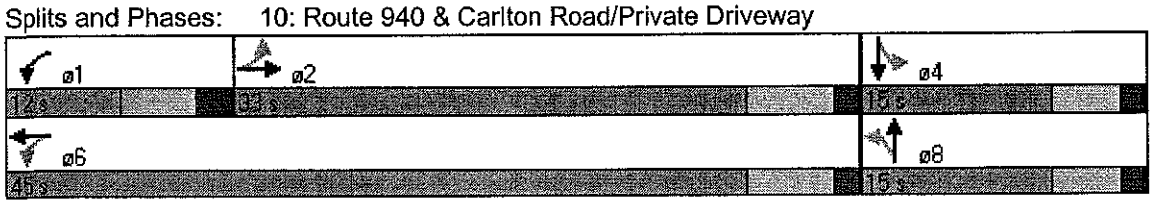
Intersection Summary			
HCM Average Control Delay	18.8	HCM Level of Service	B
HCM Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	57.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	102.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↔	↰	↑		↔		↔
Volume (vph)	4	578	271	523	67	3	3	9
Lane Group Flow (vph)	0	780	277	535	0	424	0	27
Turn Type	Perm		pm+pt		Perm		Perm	
Protected Phases		2	1	6		8		4
Permitted Phases	2		6		8		4	
Detector Phases	2	2	1	6	8	8	4	4
Minimum Initial (s)	10.0	10.0	4.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	16.0	16.0	10.0	16.0	11.0	11.0	11.0	11.0
Total Split (s)	33.0	33.0	12.0	45.0	15.0	15.0	15.0	15.0
Total Split (%)	55.0%	55.0%	20.0%	75.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.5	4.5	4.0	4.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	2.0	1.5	1.5	1.5	1.5	1.5
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	Min	Min	None	Min	None	None	None	None
v/c Ratio		0.90	0.62	0.44		0.83		0.11
Control Delay		27.4	10.6	5.5		20.8		18.1
Queue Delay		0.0	0.0	0.0		0.0		0.0
Total Delay		27.4	10.6	5.5		20.8		18.1
Queue Length 50th (ft)		233	30	69		35		6
Queue Length 95th (ft)		#418	#66	117		#155		15
Internal Link Dist (ft)		1322		1070		1366		73
Turn Bay Length (ft)			100					
Base Capacity (vph)		893	449	1228		531		259
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		0.87	0.62	0.44		0.80		0.10

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 57.4
Natural Cycle: 60
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 10: Route 940 & Carlton Road/Private Driveway



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	14	14
Grade (%)		-2%	2%		-4%	
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	0.99		0.87	
Flt Protected		0.97	1.00		1.00	
Satd. Flow (prot)		1765	1771		1724	
Flt Permitted		0.47	1.00		1.00	
Satd. Flow (perm)		857	1771		1724	
Volume (vph)	534	346	339	18	12	457
Peak-hour factor, PHF	0.89	0.89	0.93	0.93	0.80	0.80
Adj. Flow (vph)	600	389	365	19	15	571
RTOR Reduction (vph)	0	0	1	0	512	0
Lane Group Flow (vph)	0	989	383	0	74	0
Heavy Vehicles (%)	2%	2%	2%	2%	4%	4%
Turn Type	pm+pt					
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)		94.1	59.1		9.9	
Effective Green, g (s)		96.1	61.1		11.9	
Actuated g/C Ratio		0.83	0.53		0.10	
Clearance Time (s)		6.0	6.0		6.0	
Vehicle Extension (s)		6.0	6.0		3.0	
Lane Grp Cap (vph)		953	933		177	
v/s Ratio Prot		c0.28	0.22		c0.04	
v/s Ratio Perm		c0.58				
v/c Ratio		1.04	0.41		0.42	
Uniform Delay, d1		10.0	16.6		48.8	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		39.4	0.8		1.6	
Delay (s)		49.3	17.4		50.4	
Level of Service		D	B		D	
Approach Delay (s)		49.3	17.4		50.4	
Approach LOS		D	B		D	

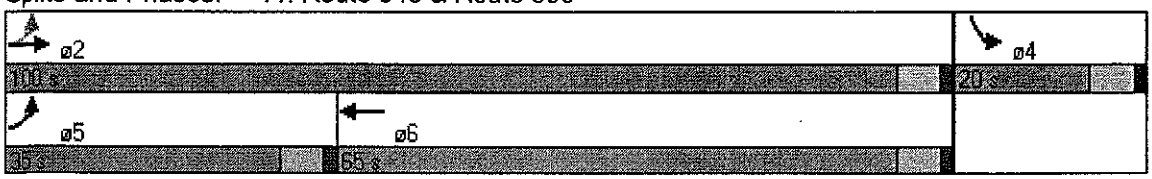
Intersection Summary			
HCM Average Control Delay	43.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	116.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	105.6%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Volume (vph)	534	346	339	12
Lane Group Flow (vph)	0	989	384	586
Turn Type	pm+pt			
Protected Phases	5	2	6	4
Permitted Phases	2			
Detector Phases	5	2 5	6	4
Minimum Initial (s)	4.0	10.0	10.0	7.0
Minimum Split (s)	10.0	16.0	16.0	13.0
Total Split (s)	35.0	100.0	65.0	20.0
Total Split (%)	29.2%	83.3%	54.2%	16.7%
Yellow Time (s)	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	Min	Min	None
v/c Ratio		1.05	0.41	0.85
Control Delay		54.5	18.6	14.5
Queue Delay		0.0	0.0	0.0
Total Delay		54.5	18.6	14.5
Queue Length 50th (ft)		~398	158	10
Queue Length 95th (ft)		#784	259	51
Internal Link Dist (ft)		491	1298	1509
Turn Bay Length (ft)				
Base Capacity (vph)		943	933	725
Starvation Cap Reductn		0	0	0
Spillback Cap Reductn		0	0	0
Storage Cap Reductn		0	0	0
Reduced v/c Ratio		1.05	0.41	0.81

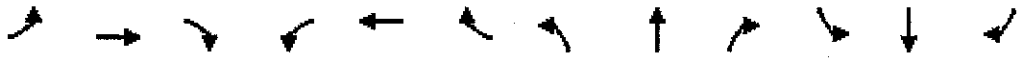
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 115.9
Natural Cycle: 150
Control Type: Semi Act-Uncoord
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: Route 940 & Route 390



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	8	8	8	11	11	11
Grade (%)		-2%			2%			-3%			-1%	
Turning Speed (mph)	15		9	15		9	15		9	15		9
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			0.962			0.979			0.974	
Flt Protected		0.994			0.999			0.989			0.963	
Satd. Flow (prot)	0	1804	0	0	1713	0	0	1587	0	0	1697	0
Flt Permitted		0.994			0.999			0.989			0.963	
Satd. Flow (perm)	0	1804	0	0	1713	0	0	1587	0	0	1697	0
Headway Factor	1.03	1.03	1.03	1.06	1.06	1.06	1.18	1.18	1.18	1.04	1.04	1.04
Link Speed (mph)		45			45			35			45	
Link Distance (ft)		1662			865			282			1220	
Travel Time (s)		25.2			13.1			5.5			18.5	
Volume (vph)	46	307	5	6	325	132	5	13	3	103	5	26
Peak Hour Factor	0.90	0.90	0.90	0.84	0.84	0.84	0.80	0.80	0.80	0.87	0.87	0.87
Adj. Flow (vph)	51	341	6	7	387	157	6	16	4	118	6	30
Lane Group Flow (vph)	0	398	0	0	551	0	0	26	0	0	154	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 66.3%	ICU Level of Service C
Analysis Period (min) 15	



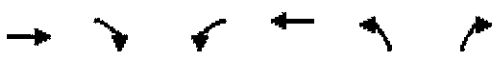
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		-2%			2%			-3%			-1%	
Volume (veh/h)	46	307	5	6	325	132	5	13	3	103	5	26
Peak Hour Factor	0.90	0.90	0.90	0.84	0.84	0.84	0.80	0.80	0.80	0.87	0.87	0.87
Hourly flow rate (vph)	51	341	6	7	387	157	6	16	4	118	6	30
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	544			347			959	1004	344	938	929	465
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	544			347			959	1004	344	938	929	465
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			99			97	93	99	46	98	95
cM capacity (veh/h)	1025			1212			212	229	699	221	253	597

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	398	551	26	154
Volume Left	51	7	6	118
Volume Right	6	157	4	30
cSH	1025	1212	248	253
Volume to Capacity	0.05	0.01	0.11	0.61
Queue Length 95th (ft)	4	0	9	91
Control Delay (s)	1.6	0.2	21.2	39.2
Lane LOS	A	A	C	E
Approach Delay (s)	1.6	0.2	21.2	39.2
Approach LOS			C	E

Intersection Summary				
Average Delay	6.5			
Intersection Capacity Utilization	66.3%	ICU Level of Service	C	
Analysis Period (min)	15			

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	14	12	14
Grade (%)	-3%			2%	0%	
Storage Length (ft)		250	100		0	0
Storage Lanes		1	1		1	1
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1891	1714	1752	1967	1770	1689
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1891	1714	1752	1967	1770	1689
Headway Factor	0.98	0.90	1.01	0.93	1.00	0.92
Link Speed (mph)	40			40	20	
Link Distance (ft)	863			1227	233	
Travel Time (s)	14.7			20.9	7.9	
Volume (vph)	261	380	24	325	184	30
Peak Hour Factor	0.82	0.90	0.90	0.75	0.90	0.90
Adj. Flow (vph)	318	422	27	433	204	33
Lane Group Flow (vph)	318	422	27	433	204	33
Sign Control	Free			Free	Stop	

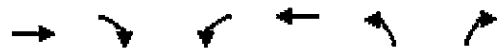
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 36.8%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	-3%			2%	0%	
Volume (veh/h)	261	380	24	325	184	30
Peak Hour Factor	0.82	0.90	0.90	0.75	0.90	0.90
Hourly flow rate (vph)	318	422	27	433	204	33
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			318		805	318
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			318		805	318
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		41	95
cM capacity (veh/h)			1242		344	722

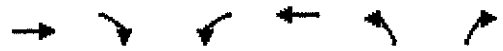
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	318	422	27	433	204	33
Volume Left	0	0	27	0	204	0
Volume Right	0	422	0	0	0	33
cSH	1700	1700	1242	1700	344	722
Volume to Capacity	0.19	0.25	0.02	0.25	0.59	0.05
Queue Length 95th (ft)	0	0	2	0	91	4
Control Delay (s)	0.0	0.0	8.0	0.0	29.7	10.2
Lane LOS			A		D	B
Approach Delay (s)	0.0		0.5		26.9	
Approach LOS					D	

Intersection Summary			
Average Delay	4.6		
Intersection Capacity Utilization	36.8%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	14	12	14
Grade (%)	-3%			2%	0%	
Storage Length (ft)		250	100		0	0
Storage Lanes		1	1		1	1
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1891	1714	1752	1967	1770	1689
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1891	1714	1752	1967	1770	1689
Headway Factor	0.98	0.90	1.01	0.93	1.00	0.92
Link Speed (mph)	40			40	20	
Link Distance (ft)	1227			2146	250	
Travel Time (s)	20.9			36.6	8.5	
Volume (vph)	161	130	58	165	184	30
Peak Hour Factor	0.82	0.90	0.90	0.75	0.90	0.90
Adj. Flow (vph)	196	144	64	220	204	33
Lane Group Flow (vph)	196	144	64	220	204	33
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	-3%			2%	0%	
Volume (veh/h)	161	130	58	165	184	30
Peak Hour Factor	0.82	0.90	0.90	0.75	0.90	0.90
Hourly flow rate (vph)	196	144	64	220	204	33
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			196		545	196
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			196		545	196
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		57	96
cM capacity (veh/h)			1376		476	845

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	196	144	64	220	204	33
Volume Left	0	0	64	0	204	0
Volume Right	0	144	0	0	0	33
cSH	1700	1700	1376	1700	476	845
Volume to Capacity	0.12	0.08	0.05	0.13	0.43	0.04
Queue Length 95th (ft)	0	0	4	0	53	3
Control Delay (s)	0.0	0.0	7.7	0.0	18.1	9.4
Lane LOS			A		C	A
Approach Delay (s)	0.0		1.8		16.9	
Approach LOS					C	

Intersection Summary			
Average Delay	5.2		
Intersection Capacity Utilization	32.0%	ICU Level of Service	A
Analysis Period (min)	15		

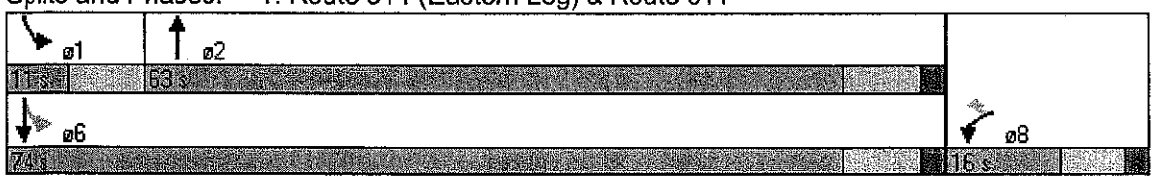
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	13	12	11	11	11	12
Grade (%)	-6%		-2%			-5%
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0
Lane Util. Factor	1.00	1.00	0.95		1.00	0.95
Frt	1.00	0.85	0.98		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1883	1631	3389		1753	3628
Flt Permitted	0.95	1.00	1.00		0.06	1.00
Satd. Flow (perm)	1883	1631	3389		116	3628
Volume (vph)	172	75	1786	261	79	1477
Peak-hour factor, PHF	0.90	0.90	0.94	0.94	0.94	0.94
Adj. Flow (vph)	191	83	1900	278	84	1571
RTOR Reduction (vph)	0	68	0	0	0	0
Lane Group Flow (vph)	191	15	2178	0	84	1571
Turn Type		Perm			pm+pt	
Protected Phases	8		2		1	6
Permitted Phases		8			6	
Actuated Green, G (s)	9.0	9.0	55.4		65.3	65.3
Effective Green, g (s)	12.0	12.0	59.4		69.3	69.3
Actuated g/C Ratio	0.13	0.13	0.67		0.78	0.78
Clearance Time (s)	7.0	7.0	8.0		6.0	8.0
Vehicle Extension (s)	3.0	3.0	6.0		3.0	6.0
Lane Grp Cap (vph)	253	219	2254		198	2815
v/s Ratio Prot	c0.10		c0.64		0.03	c0.43
v/s Ratio Perm		0.01			0.30	
v/c Ratio	0.75	0.07	0.97		0.42	0.56
Uniform Delay, d1	37.2	33.8	14.0		19.9	4.0
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	12.1	0.1	12.3		1.5	0.5
Delay (s)	49.3	33.9	26.3		21.4	4.5
Level of Service	D	C	C		C	A
Approach Delay (s)	44.6		26.3			5.3
Approach LOS	D		C			A

Intersection Summary			
HCM Average Control Delay	19.1	HCM Level of Service	B
HCM Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	89.3	Sum of lost time (s)	12.0
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Volume (vph)	172	75	1786	79	1477
Lane Group Flow (vph)	191	83	2178	84	1571
Turn Type		Perm		pm+pt	
Protected Phases	8		2	1	6
Permitted Phases		8		6	
Detector Phases	8	8	2	1	6
Minimum Initial (s)	1.0	1.0	15.0	1.0	15.0
Minimum Split (s)	8.0	8.0	23.0	7.0	23.0
Total Split (s)	16.0	16.0	63.0	11.0	74.0
Total Split (%)	17.8%	17.8%	70.0%	12.2%	82.2%
Yellow Time (s)	5.0	5.0	6.0	6.0	6.0
All-Red Time (s)	2.0	2.0	2.0	0.0	2.0
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?			Yes	Yes	
Recall Mode	None	None	Min	None	Min
v/c Ratio	0.75	0.29	0.95	0.39	0.56
Control Delay	55.9	12.7	25.6	11.5	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	55.9	12.7	25.6	11.5	4.9
Queue Length 50th (ft)	106	3	557	9	142
Queue Length 95th (ft)	#211	43	#809	39	180
Internal Link Dist (ft)	1091		2024		1031
Turn Bay Length (ft)		72		175	
Base Capacity (vph)	257	290	2288	215	2823
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	0.74	0.29	0.95	0.39	0.56

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 88
Natural Cycle: 90
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 1: Route 314 (Eastern Leg) & Route 611



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	12	12	12	12
Grade (%)	4%			7%	-6%	
Storage Length (ft)	50	0	143			0
Storage Lanes	1	1	1			0
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	0.95
Frt		0.850			0.995	
Flt Protected	0.950		0.950			
Satd. Flow (prot)	1587	1420	1708	3415	3627	0
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1587	1420	1708	3415	3627	0
Headway Factor	1.12	1.12	1.05	1.05	0.96	0.96
Link Speed (mph)	40			45	45	
Link Distance (ft)	3960			1111	2283	
Travel Time (s)	67.5			16.8	34.6	
Volume (vph)	54	160	187	1674	1396	48
Peak Hour Factor	0.96	0.96	0.96	0.96	0.97	0.97
Heavy Vehicles (%)	4%	4%	2%	2%	2%	2%
Adj. Flow (vph)	56	167	195	1744	1439	49
Lane Group Flow (vph)	56	167	195	1744	1488	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 63.8%		ICU Level of Service B	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	4%			7%	-6%	
Volume (veh/h)	54	160	187	1674	1396	48
Peak Hour Factor	0.96	0.96	0.96	0.96	0.97	0.97
Hourly flow rate (vph)	56	167	195	1744	1439	49
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)				1111		
pX, platoon unblocked	0.46					
vC, conflicting volume	2725	744	1489			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	3587	744	1489			
tC, single (s)	6.9	7.0	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	0	53	56			
cM capacity (veh/h)	1	352	447			

Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	56	167	195	872	872	959	529
Volume Left	56	0	195	0	0	0	0
Volume Right	0	167	0	0	0	0	49
cSH	1	352	447	1700	1700	1700	1700
Volume to Capacity	56.43	0.47	0.44	0.51	0.51	0.56	0.31
Queue Length 95th (ft)	Err	61	54	0	0	0	0
Control Delay (s)	Err	24.1	19.1	0.0	0.0	0.0	0.0
Lane LOS	F	C	C				
Approach Delay (s)	2541.1		1.9			0.0	
Approach LOS	F						

Intersection Summary			
Average Delay	156.2		
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	15	15	15	12	12	14	11	12	14	11	12	12
Grade (%)		6%			5%			3%			-7%	
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1781		1639	1645	1647	1685	3486	1664	1770	3655	
Flt Permitted		0.99		0.95	0.95	1.00	0.26	1.00	1.00	0.13	1.00	
Satd. Flow (perm)		1781		1639	1645	1647	460	3486	1664	244	3655	
Volume (vph)	6	1	16	367	5	79	17	1245	466	94	1061	17
Peak-hour factor, PHF	0.61	0.61	0.61	0.92	0.92	0.92	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	10	2	26	399	5	86	17	1270	476	96	1083	17
RTOR Reduction (vph)	0	24	0	0	0	62	0	0	192	0	2	0
Lane Group Flow (vph)	0	14	0	200	204	24	17	1270	284	96	1098	0
Turn Type	Split			Split		pm+ov	Perm		pm+ov	pm+pt		
Protected Phases	4	4		8	8	1		2	8	1	6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)		2.1		10.3	10.3	15.0	23.0	23.0	33.3	33.2	33.2	
Effective Green, g (s)		4.1		12.3	12.3	18.5	26.5	26.5	38.8	36.7	36.7	
Actuated g/C Ratio		0.06		0.19	0.19	0.28	0.41	0.41	0.60	0.56	0.56	
Clearance Time (s)		6.0		6.0	6.0	5.5	7.5	7.5	6.0	5.5	7.5	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	5.0	5.0	3.0	3.0	5.0	
Lane Grp Cap (vph)		112		310	311	569	187	1419	992	283	2060	
v/s Ratio Prot		c0.01		0.12	c0.12	0.00		c0.36	0.05	0.03	c0.30	
v/s Ratio Perm						0.01	0.04		0.12	0.16		
v/c Ratio		0.12		0.65	0.66	0.04	0.09	0.89	0.29	0.34	0.53	
Uniform Delay, d1		28.8		24.4	24.4	16.9	11.9	18.0	6.4	11.0	8.9	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5		4.6	4.9	0.0	0.4	8.2	0.2	0.7	0.5	
Delay (s)		29.3		28.9	29.4	16.9	12.3	26.2	6.6	11.7	9.3	
Level of Service		C		C	C	B	B	C	A	B	A	
Approach Delay (s)		29.3			27.0			20.8			9.5	
Approach LOS		C			C			C			A	

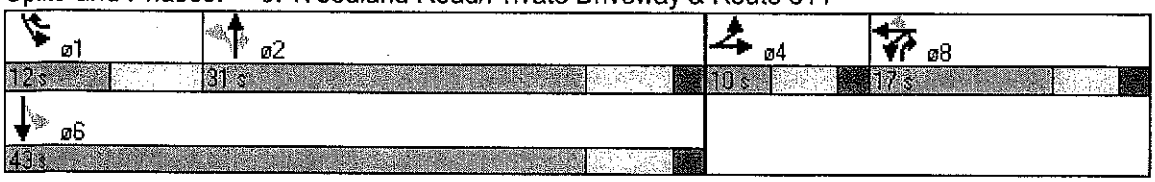
Intersection Summary				
HCM Average Control Delay	17.9	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	65.1	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	66.6%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	1	367	5	79	17	1245	466	94	1061
Lane Group Flow (vph)	38	200	204	86	17	1270	476	96	1100
Turn Type		Split		pm+ov	Perm		pm+ov	pm+pt	
Protected Phases	4	8	8	1		2	8	1	6
Permitted Phases				8	2		2	6	
Detector Phases	4	8	8	1	2	2	8	1	6
Minimum Initial (s)	4.0	7.0	7.0	4.0	10.0	10.0	7.0	4.0	10.0
Minimum Split (s)	10.0	13.0	13.0	9.5	17.5	17.5	13.0	9.5	17.5
Total Split (s)	10.0	17.0	17.0	12.0	31.0	31.0	17.0	12.0	43.0
Total Split (%)	14.3%	24.3%	24.3%	17.1%	44.3%	44.3%	24.3%	17.1%	61.4%
Yellow Time (s)	4.0	4.0	4.0	5.5	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0
Lead/Lag				Lead	Lag	Lag		Lead	
Lead-Lag Optimize?				Yes	Yes	Yes		Yes	
Recall Mode	None	None	None	None	Min	Min	None	None	Min
v/c Ratio	0.20	0.60	0.61	0.13	0.09	0.84	0.37	0.30	0.52
Control Delay	19.1	33.2	33.6	4.7	15.4	24.5	1.3	9.3	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.1	33.2	33.6	4.7	15.4	24.5	1.3	9.3	9.5
Queue Length 50th (ft)	5	85	87	0	5	270	0	18	143
Queue Length 95th (ft)	17	#171	#175	26	17	#410	14	37	193
Internal Link Dist (ft)	105		2012			2203			2327
Turn Bay Length (ft)		250		250	73		350	183	
Base Capacity (vph)	190	354	355	635	204	1551	1296	326	2208
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	0.20	0.56	0.57	0.14	0.08	0.82	0.37	0.29	0.50

Intersection Summary

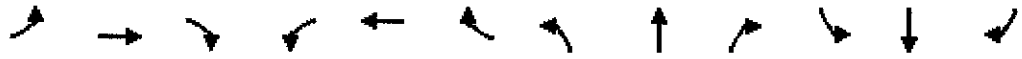
Cycle Length: 70
Actuated Cycle Length: 61.6
Natural Cycle: 65
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Woodland Road/Private Driveway & Route 611



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↑↑↱		↰	↑↑↱	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	12	12	12	11	12	12	11	12	12
Grade (%)		2%			8%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
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		0.892			0.923							
Flt Protected		0.990			0.993		0.950			0.950		
Satd. Flow (prot)	0	1683	0	0	1639	0	1702	3522	0	1719	3557	0
Flt Permitted		0.990			0.993		0.950			0.950		
Satd. Flow (perm)	0	1683	0	0	1639	0	1702	3522	0	1719	3557	0
Headway Factor	0.97	0.97	0.97	1.05	1.05	1.05	1.05	1.01	1.01	1.04	0.99	0.99
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		158			1027			2407			3261	
Travel Time (s)		3.1			20.0			36.5			49.4	
Volume (vph)	1	0	4	4	8	16	8	1317	1	7	1164	1
Peak Hour Factor	0.50	0.50	0.50	0.39	0.39	0.39	0.92	0.92	0.92	0.89	0.89	0.89
Adj. Flow (vph)	2	0	8	10	21	41	9	1432	1	8	1308	1
Lane Group Flow (vph)	0	10	0	0	72	0	9	1433	0	8	1309	0
Sign Control		Stop			Stop			Free			Free	

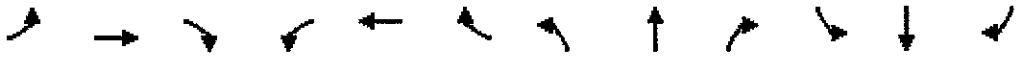
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 46.4%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↑↑↱			↑↑↱	
Sign Control		Stop			Stop			Free			Free	
Grade		2%			8%			1%			-1%	
Volume (veh/h)	1	0	4	4	8	16	8	1317	1	7	1164	1
Peak Hour Factor	0.50	0.50	0.50	0.39	0.39	0.39	0.92	0.92	0.92	0.89	0.89	0.89
Hourly flow rate (vph)	2	0	8	10	21	41	9	1432	1	8	1308	1
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	2109	2774	654	2127	2774	716	1309			1433		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2109	2774	654	2127	2774	716	1309			1433		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	98	62	0	89	98			98		
cM capacity (veh/h)	0	18	409	27	18	372	525			470		

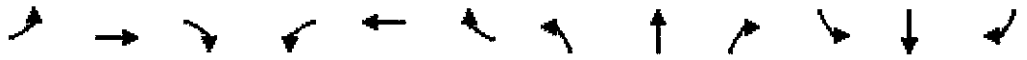
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	10	72	9	954	478	8	872	437
Volume Left	2	10	9	0	0	8	0	0
Volume Right	8	41	0	0	1	0	0	1
cSH	0	44	525	1700	1700	470	1700	1700
Volume to Capacity	Err	1.64	0.02	0.56	0.28	0.02	0.51	0.26
Queue Length 95th (ft)	Err	180	1	0	0	1	0	0
Control Delay (s)	Err	514.3	12.0	0.0	0.0	12.8	0.0	0.0
Lane LOS	F	F	B			B		
Approach Delay (s)	Err	514.3	0.1			0.1		
Approach LOS	F	F						

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	46.4%	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		↕			↕		↰	↑↕		↰	↑↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	10	11	12	12	11	12	12
Grade (%)		0%			9%			2%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
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		0.940			0.958			0.996			0.996	
Flt Protected		0.978			0.971		0.950			0.950		
Satd. Flow (prot)	0	1712	0	0	1544	0	1694	3490	0	1753	3613	0
Flt Permitted		0.978			0.971		0.950			0.950		
Satd. Flow (perm)	0	1712	0	0	1544	0	1694	3490	0	1753	3613	0
Headway Factor	1.00	1.00	1.00	1.16	1.16	1.16	1.06	1.01	1.01	1.01	0.97	0.97
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		294			1492			3261			2754	
Travel Time (s)		6.7			33.9			49.4			41.7	
Volume (vph)	28	6	27	34	6	17	25	1273	36	16	1111	26
Peak Hour Factor	0.90	0.90	0.90	0.72	0.90	0.72	0.90	0.94	0.94	0.95	0.95	0.90
Adj. Flow (vph)	31	7	30	47	7	24	28	1354	38	17	1169	29
Lane Group Flow (vph)	0	68	0	0	78	0	28	1392	0	17	1198	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 47.6%	ICU Level of Service A
Analysis Period (min) 15	



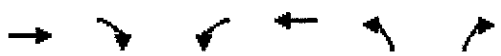
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↑↑↱		↰	↑↑↱	
Sign Control		Stop			Stop			Free			Free	
Grade		0%			9%			2%			-5%	
Volume (veh/h)	28	6	27	34	6	17	25	1273	36	16	1111	26
Peak Hour Factor	0.90	0.90	0.90	0.72	0.90	0.72	0.90	0.94	0.94	0.95	0.95	0.90
Hourly flow rate (vph)	31	7	30	47	7	24	28	1354	38	17	1169	29
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	1977	2666	599	2081	2661	696	1198			1393		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1977	2666	599	2081	2661	696	1198			1393		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	67	93	0	67	94	95			97		
cM capacity (veh/h)	24	20	445	20	20	383	578			487		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	68	78	28	903	490	17	780	419
Volume Left	31	47	28	0	0	17	0	0
Volume Right	30	24	0	0	38	0	0	29
cSH	40	28	578	1700	1700	487	1700	1700
Volume to Capacity	1.68	2.77	0.05	0.53	0.29	0.03	0.46	0.25
Queue Length 95th (ft)	176	233	4	0	0	3	0	0
Control Delay (s)	549.3	1095.2	11.5	0.0	0.0	12.7	0.0	0.0
Lane LOS	F	F	B			B		
Approach Delay (s)	549.3	1095.2	0.2			0.2		
Approach LOS	F	F						

Intersection Summary			
Average Delay	44.1		
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	14	11	11
Grade (%)	1%			-3%	0%	
Storage Length (ft)		250	100		0	0
Storage Lanes		1	1		1	0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1853	1680	1796	2017	1711	0
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1853	1680	1796	2017	1711	0
Headway Factor	1.01	0.92	0.98	0.90	1.04	1.04
Link Speed (mph)	40			40	25	
Link Distance (ft)	2092			650	499	
Travel Time (s)	35.7			11.1	13.6	
Volume (vph)	552	8	3	444	6	0
Peak Hour Factor	0.92	0.92	0.90	0.90	0.63	0.63
Adj. Flow (vph)	600	9	3	493	10	0
Lane Group Flow (vph)	600	9	3	493	10	0
Sign Control	Free			Free	Stop	

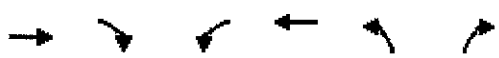
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 39.1%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	1%			-3%	0%	
Volume (veh/h)	552	8	3	444	6	0
Peak Hour Factor	0.92	0.92	0.90	0.90	0.63	0.63
Hourly flow rate (vph)	600	9	3	493	10	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					TWLTL	
Median storage veh)					1	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			609		1100	600
vC1, stage 1 conf vol					600	
vC2, stage 2 conf vol					500	
vCu, unblocked vol			609		1100	600
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		97	100
cM capacity (veh/h)			970		369	501

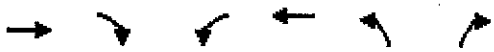
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	600	9	3	493	10
Volume Left	0	0	3	0	10
Volume Right	0	9	0	0	0
cSH	1700	1700	970	1700	369
Volume to Capacity	0.35	0.01	0.00	0.29	0.03
Queue Length 95th (ft)	0	0	0	0	2
Control Delay (s)	0.0	0.0	8.7	0.0	15.0
Lane LOS			A		C
Approach Delay (s)	0.0		0.1		15.0
Approach LOS					C

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	39.1%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	⋎	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	14	10	10
Grade (%)	1%			1%	-1%	
Storage Length (ft)		250	100		0	0
Storage Lanes		1	1		1	0
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850			0.870	
Flt Protected			0.950		0.998	
Satd. Flow (prot)	1853	1680	1761	1977	1517	0
Flt Permitted			0.950		0.998	
Satd. Flow (perm)	1853	1680	1761	1977	1517	0
Headway Factor	1.01	0.92	1.01	0.92	1.09	1.09
Link Speed (mph)	40			40	35	
Link Distance (ft)	650			936	704	
Travel Time (s)	11.1			16.0	13.7	
Volume (vph)	549	3	60	444	3	76
Peak Hour Factor	0.81	0.81	0.85	0.85	0.50	0.50
Adj. Flow (vph)	678	4	71	522	6	152
Lane Group Flow (vph)	678	4	71	522	158	0
Sign Control	Free			Free	Stop	

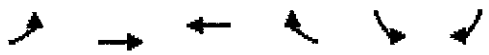
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min) 15			



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	1%			1%	-1%	
Volume (veh/h)	549	3	60	444	3	76
Peak Hour Factor	0.81	0.81	0.85	0.85	0.50	0.50
Hourly flow rate (vph)	678	4	71	522	6	152
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					TWLTL	
Median storage veh)					1	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			681		1341	678
vC1, stage 1 conf vol					678	
vC2, stage 2 conf vol					664	
vCu, unblocked vol			681		1341	678
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			92		98	66
cM capacity (veh/h)			911		293	452

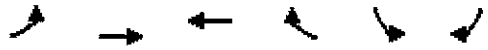
Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1
Volume Total	678	4	71	522	158
Volume Left	0	0	71	0	6
Volume Right	0	4	0	0	152
cSH	1700	1700	911	1700	443
Volume to Capacity	0.40	0.00	0.08	0.31	0.36
Queue Length 95th (ft)	0	0	6	0	40
Control Delay (s)	0.0	0.0	9.3	0.0	17.6
Lane LOS			A		C
Approach Delay (s)	0.0		1.1		17.6
Approach LOS					C

Intersection Summary			
Average Delay	2.4		
Intersection Capacity Utilization	47.1%	ICU Level of Service	A
Analysis Period (min)	15		



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	14	14	10	10
Grade (%)		-4%	2%		-6%	
Storage Length (ft)	100			0	0	0
Storage Lanes	1			0	1	0
Turning Speed (mph)	15			9	15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.996		0.968	
Flt Protected	0.950				0.963	
Satd. Flow (prot)	1805	2027	1959	0	1669	0
Flt Permitted	0.950				0.963	
Satd. Flow (perm)	1805	2027	1959	0	1669	0
Headway Factor	0.97	0.89	0.93	0.93	1.05	1.05
Link Speed (mph)		40	40		35	
Link Distance (ft)		936	400		1342	
Travel Time (s)		16.0	6.8		26.1	
Volume (vph)	3	622	501	16	10	3
Peak Hour Factor	0.95	0.95	0.93	0.93	0.63	0.63
Adj. Flow (vph)	3	655	539	17	16	5
Lane Group Flow (vph)	3	655	556	0	21	0
Sign Control		Free	Free		Stop	

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



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Sign Control		Free	Free		Stop	
Grade		-4%	2%		-6%	
Volume (veh/h)	3	622	501	16	10	3
Peak Hour Factor	0.95	0.95	0.93	0.93	0.63	0.63
Hourly flow rate (vph)	3	655	539	17	16	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					TWLTL	
Median storage veh)					1	
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	556				1208	547
vC1, stage 1 conf vol					547	
vC2, stage 2 conf vol					661	
vCu, unblocked vol	556				1208	547
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)	2.2				3.5	3.3
p0 queue free %	100				95	99
cM capacity (veh/h)	1015				340	537

Direction, Lane #	EB 1	EB 2	WB 1	SB 1
Volume Total	3	655	556	21
Volume Left	3	0	0	16
Volume Right	0	0	17	5
cSH	1015	1700	1700	372
Volume to Capacity	0.00	0.39	0.33	0.06
Queue Length 95th (ft)	0	0	0	4
Control Delay (s)	8.6	0.0	0.0	15.3
Lane LOS	A			C
Approach Delay (s)	0.0		0.0	15.3
Approach LOS				C

Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	42.7%	ICU Level of Service	A
Analysis Period (min)	15		

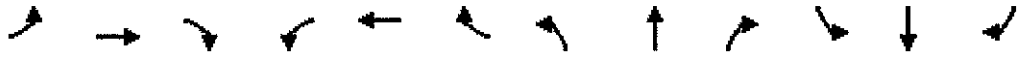
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	10	10	11	11	11	11
Grade (%)	-3%			-5%	4%	
Turning Speed (mph)	15	9	15			9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.995				0.924	
Flt Protected	0.954			0.996		
Satd. Flow (prot)	1675	0	0	1838	1631	0
Flt Permitted	0.954			0.996		
Satd. Flow (perm)	1675	0	0	1838	1631	0
Headway Factor	1.07	1.07	1.01	1.01	1.07	1.07
Link Speed (mph)	40			45	45	
Link Distance (ft)	1794			1439	1446	
Travel Time (s)	30.6			21.8	21.9	
Volume (vph)	148	6	11	136	128	164
Peak Hour Factor	0.82	0.82	0.75	0.75	0.86	0.86
Adj. Flow (vph)	180	7	15	181	149	191
Lane Group Flow (vph)	187	0	0	196	340	0
Sign Control	Stop			Free	Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 32.0%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	-3%			-5%	4%	
Volume (veh/h)	148	6	11	136	128	164
Peak Hour Factor	0.82	0.82	0.75	0.75	0.86	0.86
Hourly flow rate (vph)	180	7	15	181	149	191
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	455	244	340			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	455	244	340			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	68	99	99			
cM capacity (veh/h)	557	795	1220			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	188	196	340
Volume Left	180	15	0
Volume Right	7	0	191
cSH	563	1220	1700
Volume to Capacity	0.33	0.01	0.20
Queue Length 95th (ft)	36	1	0
Control Delay (s)	14.6	0.7	0.0
Lane LOS	B	A	
Approach Delay (s)	14.6	0.7	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	4.0		
Intersection Capacity Utilization	32.0%	ICU Level of Service	A
Analysis Period (min)	15		



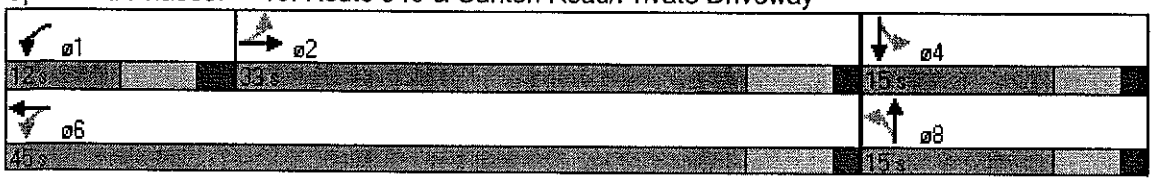
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	10	11	11	11	11	11	8	8	8
Grade (%)		-4%			4%			1%			-1%	
Total Lost time (s)		4.0		4.0	4.0			4.0			4.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frt		0.98		1.00	1.00			0.89			0.88	
Flt Protected		1.00		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1808		1619	1765			1580			1418	
Flt Permitted		1.00		0.28	1.00			0.93			0.93	
Satd. Flow (perm)		1801		485	1765			1489			1329	
Volume (vph)	4	459	59	233	469	0	51	1	232	1	0	8
Peak-hour factor, PHF	0.84	0.84	0.84	0.93	0.93	0.93	0.71	0.71	0.71	0.88	0.88	0.88
Adj. Flow (vph)	5	546	70	251	504	0	72	1	327	1	0	9
RTOR Reduction (vph)	0	8	0	0	0	0	0	265	0	0	7	0
Lane Group Flow (vph)	0	613	0	251	504	0	0	135	0	0	3	0
Turn Type	Perm			pm+pt			Perm			Perm		
Protected Phases		2		1	6			8			4	
Permitted Phases	2			6			8			4		
Actuated Green, G (s)		20.6		31.0	31.0			8.6			8.6	
Effective Green, g (s)		22.6		33.0	33.0			9.6			9.6	
Actuated g/C Ratio		0.45		0.65	0.65			0.19			0.19	
Clearance Time (s)		6.0		6.0	6.0			5.0			5.0	
Vehicle Extension (s)		6.0		3.0	6.0			3.0			3.0	
Lane Grp Cap (vph)		804		460	1151			282			252	
v/s Ratio Prot				c0.07	0.29							
v/s Ratio Perm		c0.34		0.29				c0.09			0.00	
v/c Ratio		0.76		0.55	0.44			0.48			0.01	
Uniform Delay, d1		11.7		6.1	4.3			18.3			16.6	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		5.5		1.3	0.8			1.3			0.0	
Delay (s)		17.3		7.4	5.0			19.6			16.7	
Level of Service		B		A	A			B			B	
Approach Delay (s)		17.3			5.8			19.6			16.7	
Approach LOS		B			A			B			B	

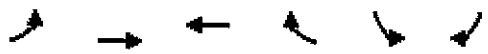
Intersection Summary			
HCM Average Control Delay	12.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	50.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	86.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↕	↰	↱		↕		↕
Volume (vph)	4	459	233	469	51	1	1	0
Lane Group Flow (vph)	0	621	251	504	0	400	0	10
Turn Type	Perm		pm+pt		Perm		Perm	
Protected Phases		2	1	6		8		4
Permitted Phases	2		6		8		4	
Detector Phases	2	2	1	6	8	8	4	4
Minimum Initial (s)	10.0	10.0	4.0	10.0	6.0	6.0	6.0	6.0
Minimum Split (s)	16.0	16.0	10.0	16.0	11.0	11.0	11.0	11.0
Total Split (s)	33.0	33.0	12.0	45.0	15.0	15.0	15.0	15.0
Total Split (%)	55.0%	55.0%	20.0%	75.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	4.5	4.5	4.0	4.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.5	1.5	2.0	1.5	1.5	1.5	1.5	1.5
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	Min	Min	None	Min	None	None	None	None
v/c Ratio		0.75	0.52	0.45		0.72		0.04
Control Delay		15.6	7.9	5.5		13.2		13.1
Queue Delay		0.0	0.0	0.0		0.0		0.0
Total Delay		15.6	7.9	5.5		13.2		13.1
Queue Length 50th (ft)		158	26	62		21		0
Queue Length 95th (ft)		238	49	108		45		11
Internal Link Dist (ft)		1322		1070		1366		73
Turn Bay Length (ft)			100					
Base Capacity (vph)		954	484	1241		591		311
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		0.65	0.52	0.41		0.68		0.03

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 50
Natural Cycle: 55
Control Type: Semi Act-Uncoord

Splits and Phases: 10: Route 940 & Carlton Road/Private Driveway





Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	11	11	11	11	14	14
Grade (%)		-2%	2%		-4%	
Total Lost time (s)		4.0	4.0		4.0	
Lane Util. Factor		1.00	1.00		1.00	
Frt		1.00	0.99		0.88	
Flt Protected		0.97	1.00		0.99	
Satd. Flow (prot)		1755	1769		1773	
Flt Permitted		0.46	1.00		0.99	
Satd. Flow (perm)		820	1769		1773	
Volume (vph)	360	332	318	19	45	384
Peak-hour factor, PHF	0.79	0.79	0.84	0.84	0.81	0.81
Adj. Flow (vph)	456	420	379	23	56	474
RTOR Reduction (vph)	0	0	3	0	381	0
Lane Group Flow (vph)	0	876	399	0	149	0
Heavy Vehicles (%)	3%	3%	2%	2%	2%	2%
Turn Type	pm+pt					
Protected Phases	5	2	6		4	
Permitted Phases	2					
Actuated Green, G (s)		61.0	36.0		7.0	
Effective Green, g (s)		63.0	38.0		9.0	
Actuated g/C Ratio		0.79	0.48		0.11	
Clearance Time (s)		6.0	6.0		6.0	
Vehicle Extension (s)		6.0	6.0		3.0	
Lane Grp Cap (vph)		891	840		199	
v/s Ratio Prot		c0.26	0.23		c0.08	
v/s Ratio Perm		c0.52				
v/c Ratio		0.98	0.48		0.75	
Uniform Delay, d1		8.0	14.2		34.4	
Progression Factor		1.00	1.00		1.00	
Incremental Delay, d2		26.2	1.2		14.7	
Delay (s)		34.2	15.4		49.1	
Level of Service		C	B		D	
Approach Delay (s)		34.2	15.4		49.1	
Approach LOS		C	B		D	

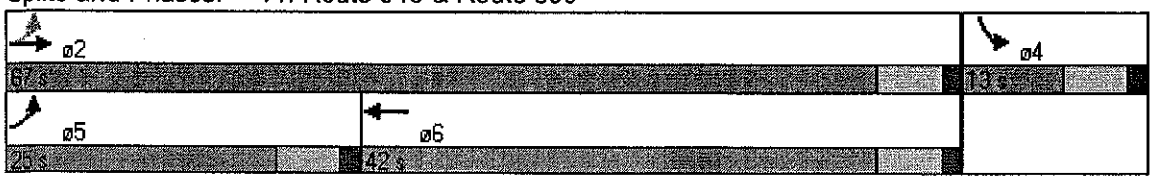
Intersection Summary			
HCM Average Control Delay	34.4	HCM Level of Service	C
HCM Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	91.5%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL
Lane Configurations				
Volume (vph)	360	332	318	45
Lane Group Flow (vph)	0	876	402	530
Turn Type	pm+pt			
Protected Phases	5	2	6	4
Permitted Phases	2			
Detector Phases	5	2 5	6	4
Minimum Initial (s)	4.0	10.0	10.0	7.0
Minimum Split (s)	10.0	16.0	16.0	13.0
Total Split (s)	25.0	67.0	42.0	13.0
Total Split (%)	31.3%	83.8%	52.5%	16.3%
Yellow Time (s)	4.5	4.5	4.5	4.5
All-Red Time (s)	1.5	1.5	1.5	1.5
Lead/Lag	Lead		Lag	
Lead-Lag Optimize?	Yes		Yes	
Recall Mode	None	Min	Min	None
v/c Ratio		0.98	0.48	0.91
Control Delay		35.4	16.4	30.9
Queue Delay		0.0	0.0	0.0
Total Delay		35.4	16.4	30.9
Queue Length 50th (ft)		167	128	48
Queue Length 95th (ft)		#206	184	#154
Internal Link Dist (ft)		491	1298	1509
Turn Bay Length (ft)				
Base Capacity (vph)		891	842	580
Starvation Cap Reductn		0	0	0
Spillback Cap Reductn		0	0	0
Storage Cap Reductn		0	0	0
Reduced v/c Ratio		0.98	0.48	0.91

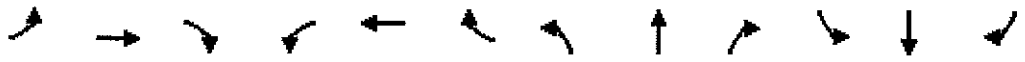
Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 80
Natural Cycle: 80
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 11: Route 940 & Route 390



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	11	11	11	11	11	11	8	8	8	11	11	11
Grade (%)		-2%			2%			-3%			-1%	
Turning Speed (mph)	15		9	15		9	15		9	15		9
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			0.965			0.965			0.969	
Flt Protected		0.994			0.999			0.984			0.967	
Satd. Flow (prot)	0	1787	0	0	1719	0	0	1556	0	0	1696	0
Flt Permitted		0.994			0.999			0.984			0.967	
Satd. Flow (perm)	0	1787	0	0	1719	0	0	1556	0	0	1696	0
Headway Factor	1.03	1.03	1.03	1.06	1.06	1.06	1.18	1.18	1.18	1.04	1.04	1.04
Link Speed (mph)		45			45			35			45	
Link Distance (ft)		1662			865			282			1220	
Travel Time (s)		25.2			13.1			5.5			18.5	
Volume (vph)	45	327	5	5	298	106	4	5	3	103	14	35
Peak Hour Factor	0.89	0.89	0.89	0.81	0.81	0.81	0.45	0.45	0.45	0.88	0.88	0.88
Heavy Vehicles (%)	3%	3%	3%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Adj. Flow (vph)	51	367	6	6	368	131	9	11	7	117	16	40
Lane Group Flow (vph)	0	424	0	0	505	0	0	27	0	0	173	0
Sign Control		Free			Free			Stop			Stop	

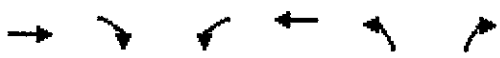
Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 67.7%		ICU Level of Service C	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Sign Control		Free			Free			Stop			Stop	
Grade		-2%			2%			-3%			-1%	
Volume (veh/h)	45	327	5	5	298	106	4	5	3	103	14	35
Peak Hour Factor	0.89	0.89	0.89	0.81	0.81	0.81	0.45	0.45	0.45	0.88	0.88	0.88
Hourly flow rate (vph)	51	367	6	6	368	131	9	11	7	117	16	40
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	499			373			965	982	370	929	920	433
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	499			373			965	982	370	929	920	433
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			99			96	95	99	48	94	94
cM capacity (veh/h)	1060			1185			201	236	676	227	257	623

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	424	505	27	173
Volume Left	51	6	9	117
Volume Right	6	131	7	40
cSH	1060	1185	264	270
Volume to Capacity	0.05	0.01	0.10	0.64
Queue Length 95th (ft)	4	0	8	100
Control Delay (s)	1.5	0.2	20.2	39.4
Lane LOS	A	A	C	E
Approach Delay (s)	1.5	0.2	20.2	39.4
Approach LOS			C	E

Intersection Summary				
Average Delay	7.1			
Intersection Capacity Utilization	67.7%	ICU Level of Service	C	
Analysis Period (min)	15			



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	14	12	14
Grade (%)	-3%			2%	0%	
Storage Length (ft)		250	100		0	0
Storage Lanes		1	1		1	1
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1891	1714	1752	1967	1770	1689
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1891	1714	1752	1967	1770	1689
Headway Factor	0.98	0.90	1.01	0.93	1.00	0.92
Link Speed (mph)	40			40	20	
Link Distance (ft)	863			1227	233	
Travel Time (s)	14.7			20.9	7.9	
Volume (vph)	224	408	26	301	216	35
Peak Hour Factor	0.85	0.90	0.90	0.84	0.90	0.90
Adj. Flow (vph)	264	453	29	358	240	39
Lane Group Flow (vph)	264	453	29	358	240	39
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 37.1%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Sign Control	Free			Free	Stop	
Grade	-3%			2%	0%	
Volume (veh/h)	224	408	26	301	216	35
Peak Hour Factor	0.85	0.90	0.90	0.84	0.90	0.90
Hourly flow rate (vph)	264	453	29	358	240	39
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			264		680	264
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			264		680	264
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			98		41	95
cM capacity (veh/h)			1301		408	775

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	264	453	29	358	240	39
Volume Left	0	0	29	0	240	0
Volume Right	0	453	0	0	0	39
cSH	1700	1700	1301	1700	408	775
Volume to Capacity	0.16	0.27	0.02	0.21	0.59	0.05
Queue Length 95th (ft)	0	0	2	0	91	4
Control Delay (s)	0.0	0.0	7.8	0.0	25.7	9.9
Lane LOS			A		D	A
Approach Delay (s)	0.0		0.6		23.5	
Approach LOS					C	

Intersection Summary			
Average Delay	4.9		
Intersection Capacity Utilization	37.1%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	14	12	14
Grade (%)	-3%			2%	0%	
Storage Length (ft)		250	100		0	0
Storage Lanes		1	1		1	1
Turning Speed (mph)		9	15		15	9
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.850				0.850
Flt Protected			0.950		0.950	
Satd. Flow (prot)	1891	1714	1752	1967	1770	1689
Flt Permitted			0.950		0.950	
Satd. Flow (perm)	1891	1714	1752	1967	1770	1689
Headway Factor	0.98	0.90	1.01	0.93	1.00	0.92
Link Speed (mph)	40			40	20	
Link Distance (ft)	1227			2146	250	
Travel Time (s)	20.9			36.6	8.5	
Volume (vph)	119	140	64	111	216	35
Peak Hour Factor	0.85	0.90	0.90	0.84	0.90	0.90
Adj. Flow (vph)	140	156	71	132	240	39
Lane Group Flow (vph)	140	156	71	132	240	39
Sign Control	Free			Free	Stop	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 28.8%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Sign Control	Free			Free	Stop	
Grade	-3%			2%	0%	
Volume (veh/h)	119	140	64	111	216	35
Peak Hour Factor	0.85	0.90	0.90	0.84	0.90	0.90
Hourly flow rate (vph)	140	156	71	132	240	39
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type					None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			140		414	140
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			140		414	140
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			95		58	96
cM capacity (veh/h)			1443		565	908

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	140	156	71	132	240	39
Volume Left	0	0	71	0	240	0
Volume Right	0	156	0	0	0	39
cSH	1700	1700	1443	1700	565	908
Volume to Capacity	0.08	0.09	0.05	0.08	0.42	0.04
Queue Length 95th (ft)	0	0	4	0	53	3
Control Delay (s)	0.0	0.0	7.6	0.0	16.0	9.1
Lane LOS			A		C	A
Approach Delay (s)	0.0		2.7		15.0	
Approach LOS					C	

Intersection Summary			
Average Delay	6.1		
Intersection Capacity Utilization	28.8%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX G

ROUTE 611/ROUTE 314 (WESTERN LEG)
SIGNALIZATION INFO

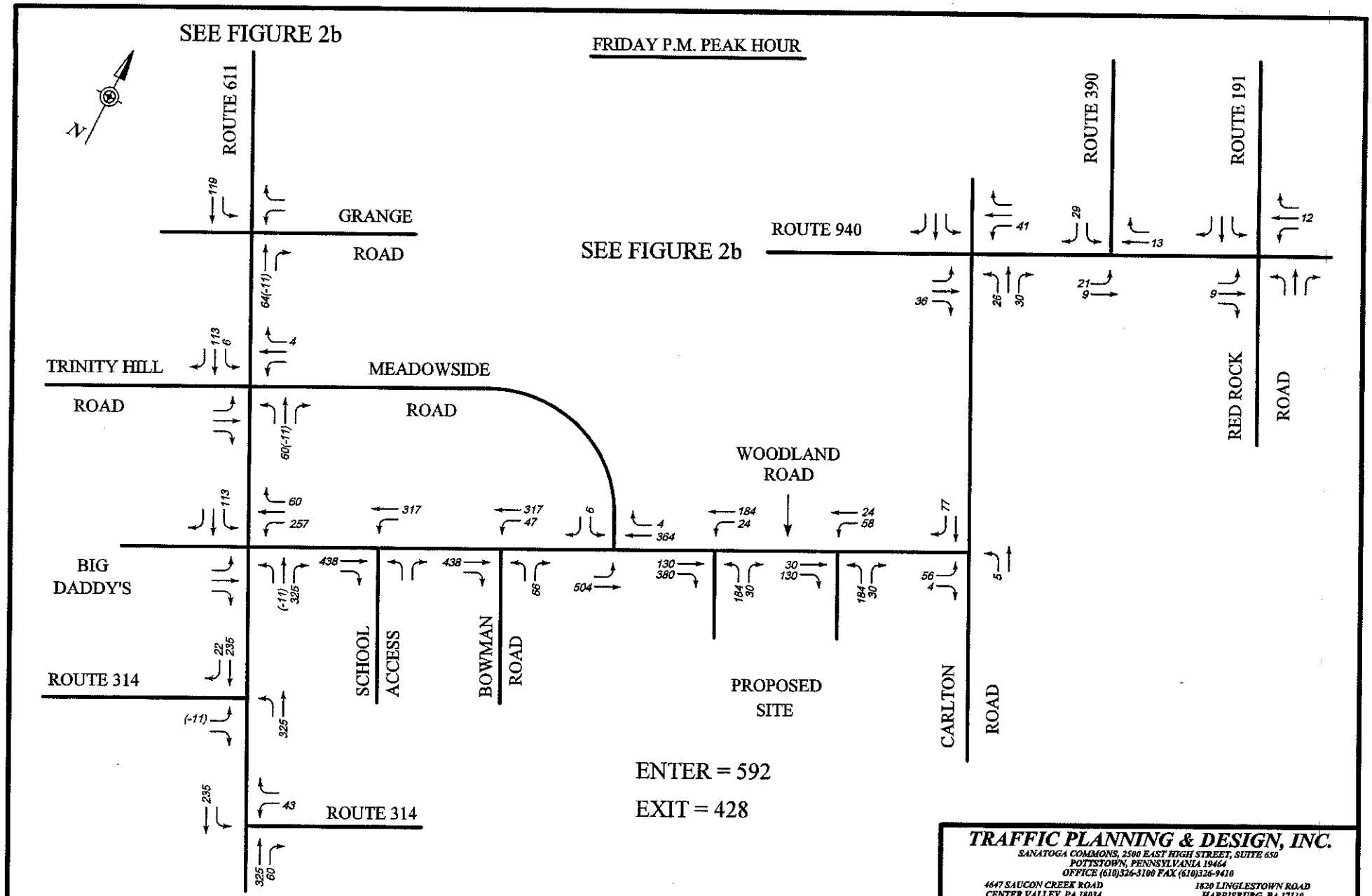


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FIGURE G-1

2007 TRIP DISTRIBUTION - 611/314 SIGNALIZATION
FRIDAY P.M. PEAK HOUR

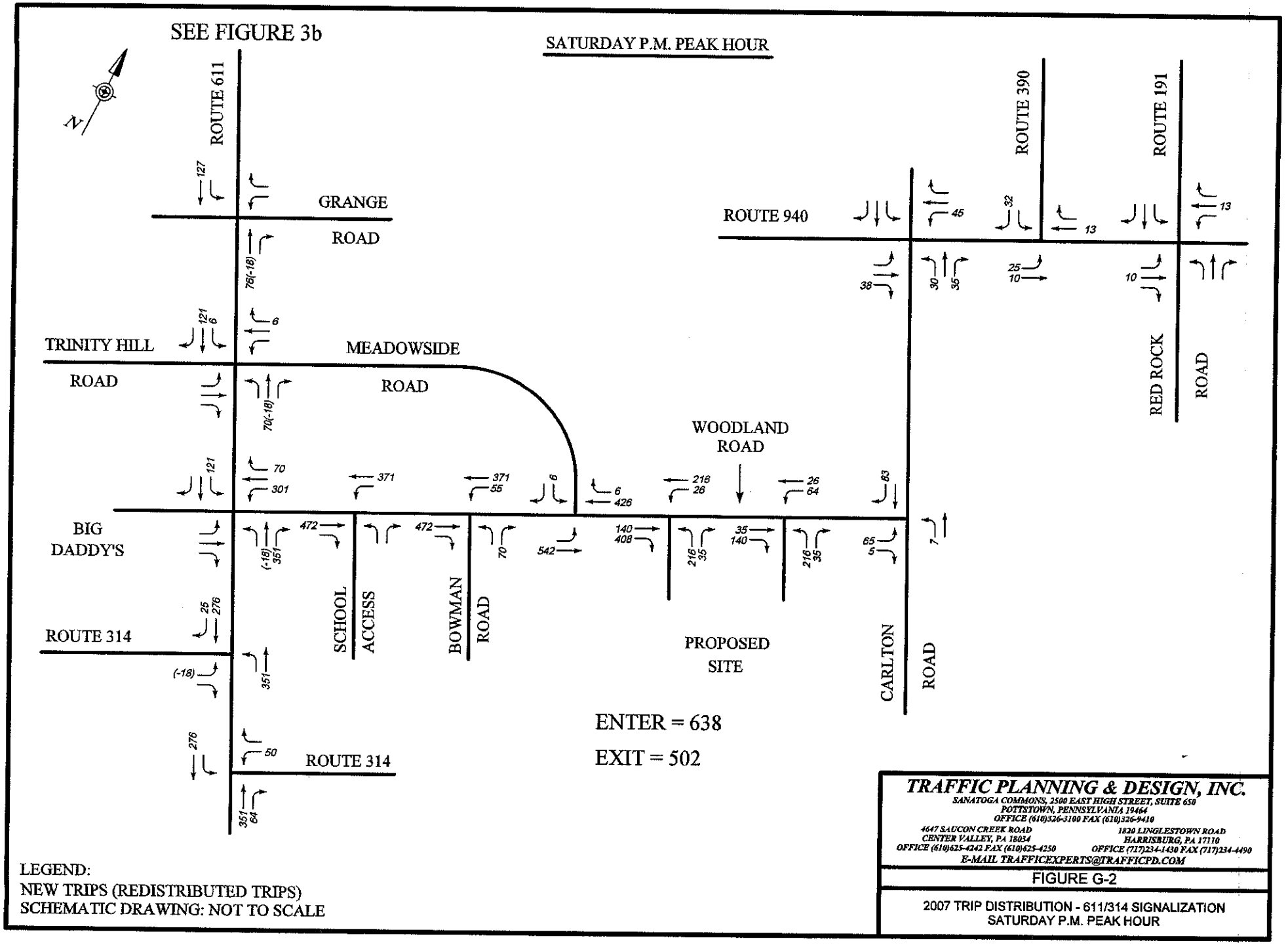

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FIGURE G-2

2007 TRIP DISTRIBUTION - 611/314 SIGNALIZATION
SATURDAY P.M. PEAK HOUR

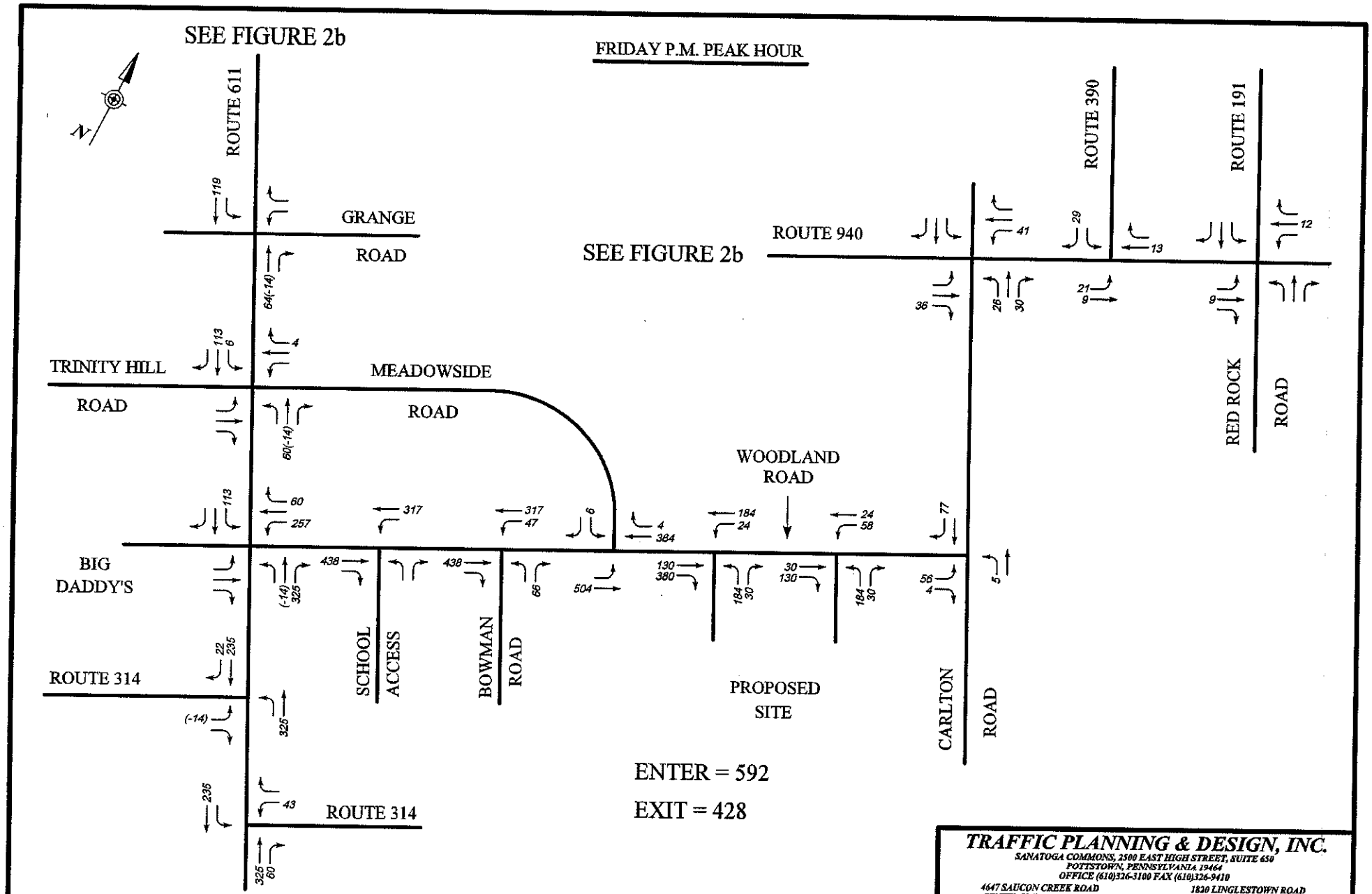

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FIGURE G-3

2017 TRIP DISTRIBUTION - 611/314 SIGNALIZATION
FRIDAY P.M. PEAK HOUR

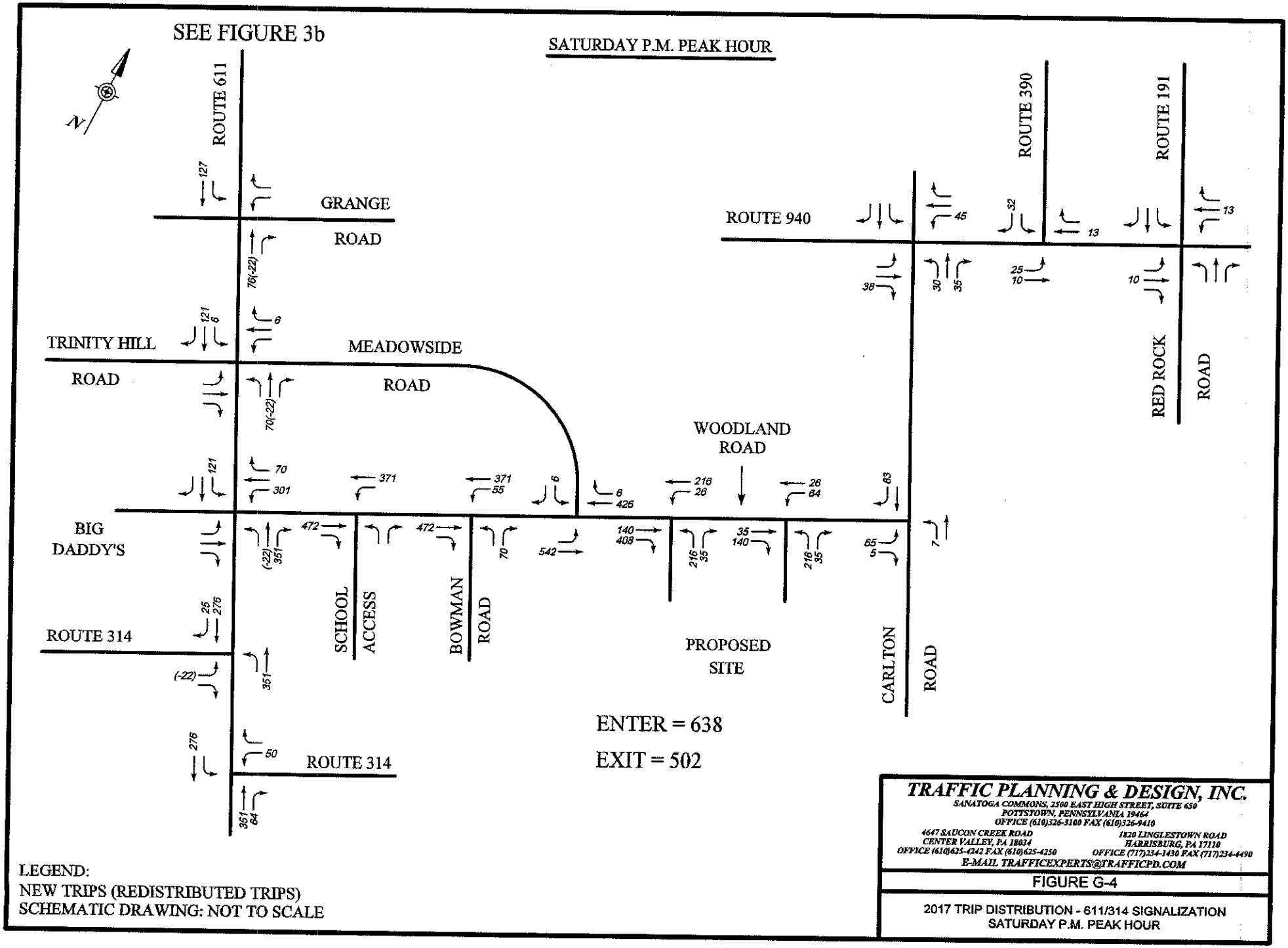

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FIGURE G-4

2017 TRIP DISTRIBUTION - 611/314 SIGNALIZATION
SATURDAY P.M. PEAK HOUR

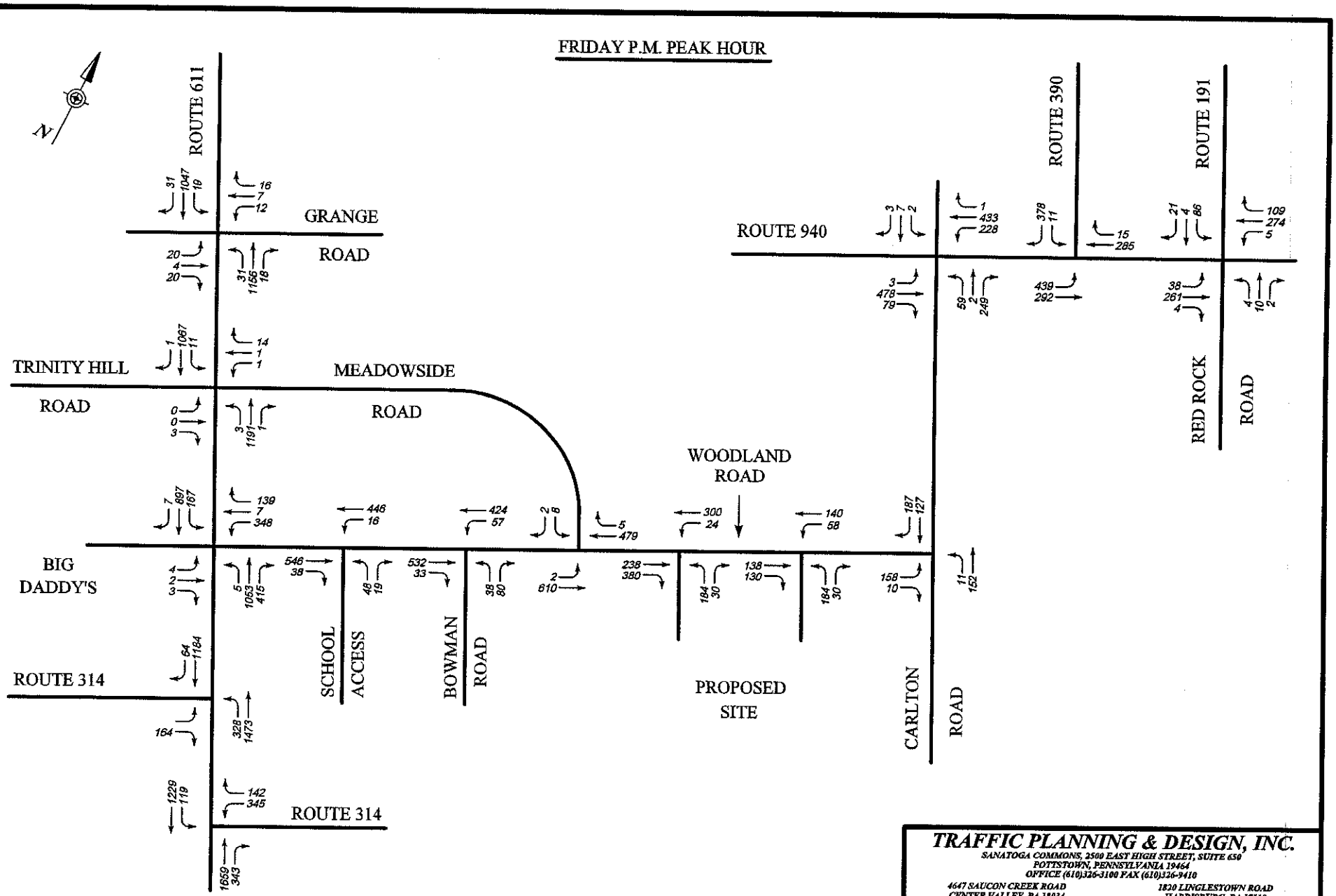

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FIGURE G-5

2007 PROJECTED CONDITIONS - 611/314 SIGNALIZATION
FRIDAY P.M. PEAK HOUR
TRAFFIC VOLUMES

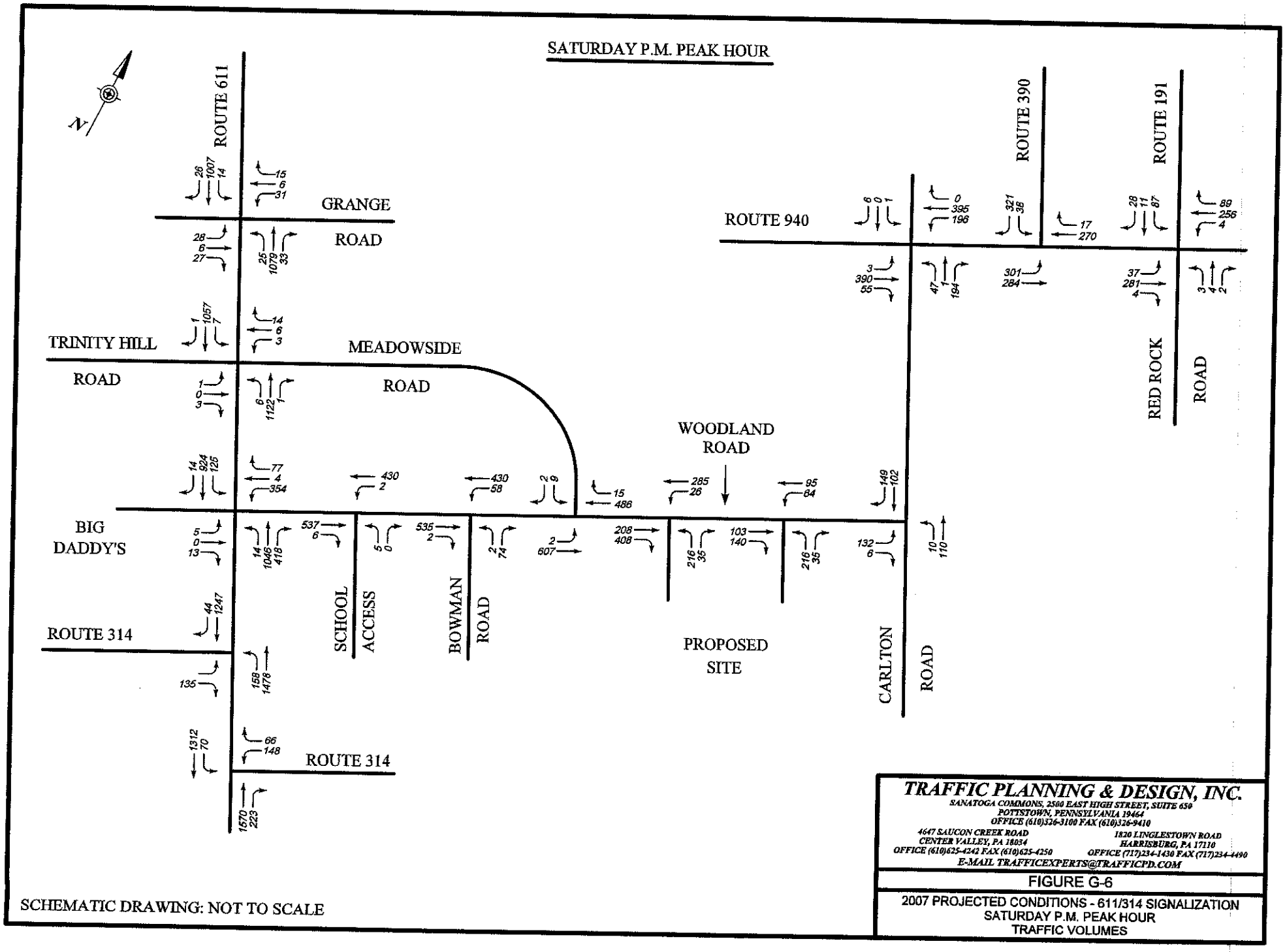

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FIGURE G-6

2007 PROJECTED CONDITIONS - 611/314 SIGNALIZATION
SATURDAY P.M. PEAK HOUR
TRAFFIC VOLUMES

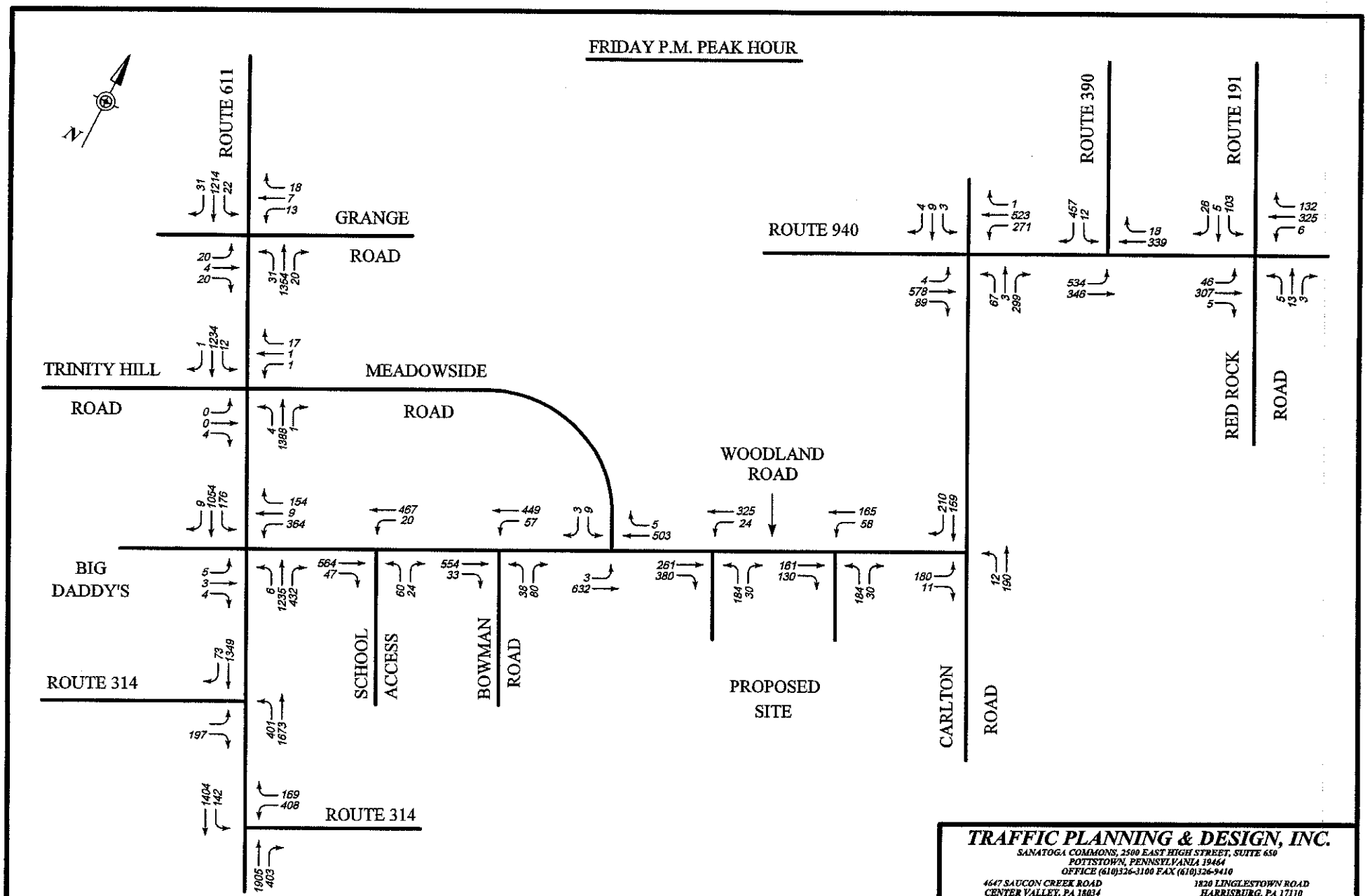

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FIGURE G-7

2017 PROJECTED CONDITIONS - 611/314 SIGNALIZATION
FRIDAY P.M. PEAK HOUR
TRAFFIC VOLUMES

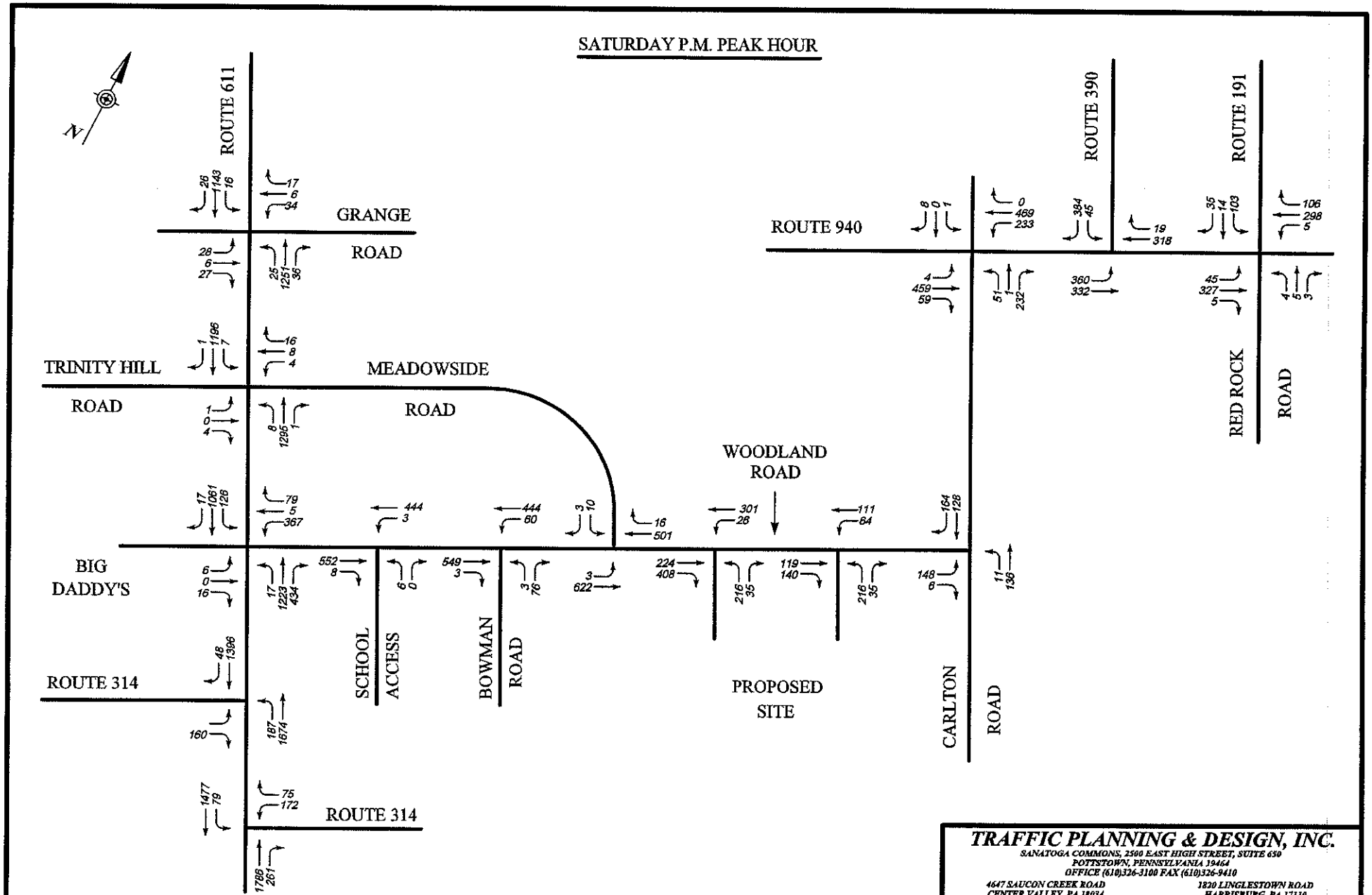

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FIGURE G-8

2017 PROJECTED CONDITIONS - 611/314 SIGNALIZATION
SATURDAY P.M. PEAK HOUR
TRAFFIC VOLUMES

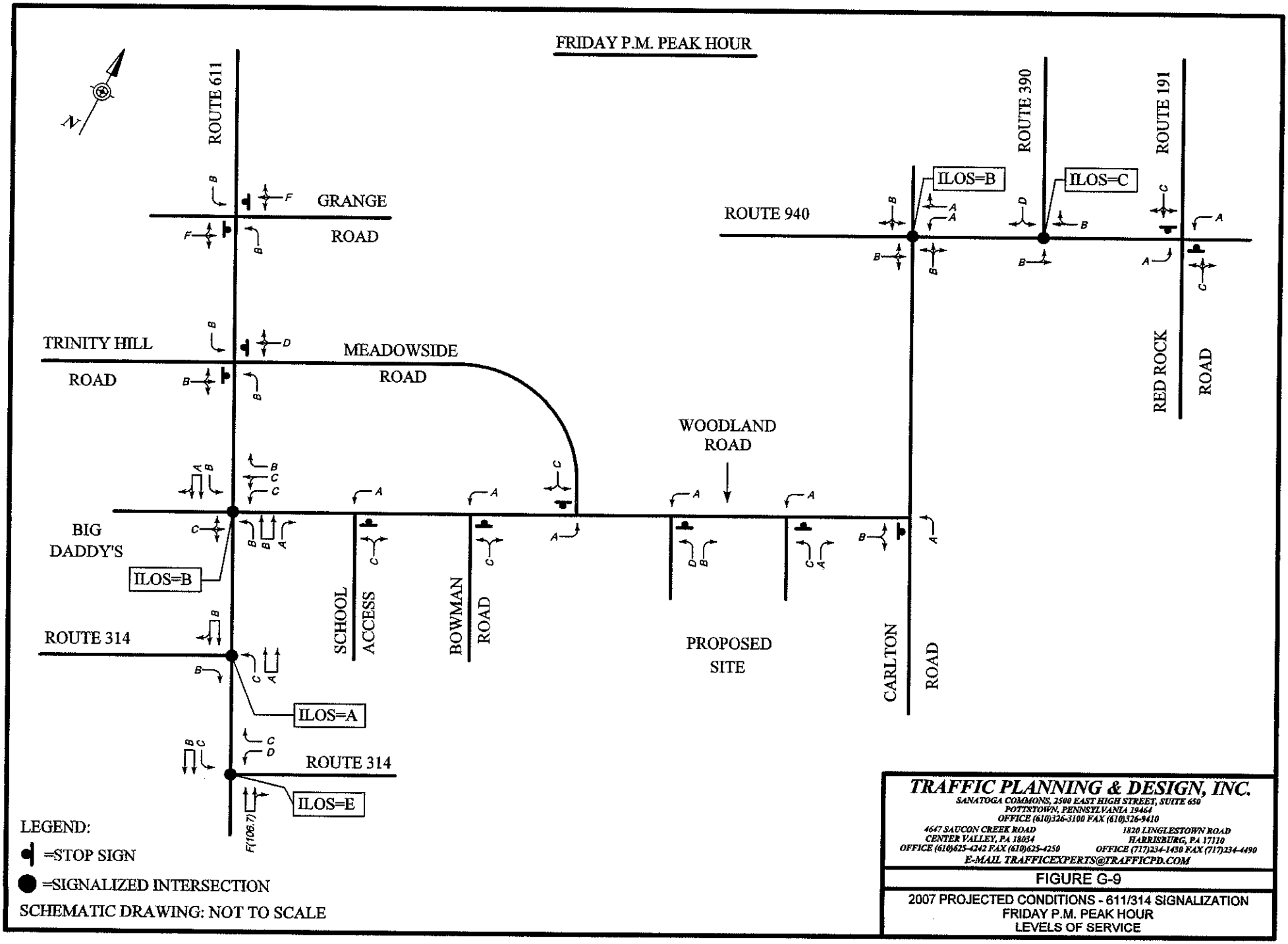

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FIGURE G-9

2007 PROJECTED CONDITIONS - 611/314 SIGNALIZATION
FRIDAY P.M. PEAK HOUR
LEVELS OF SERVICE

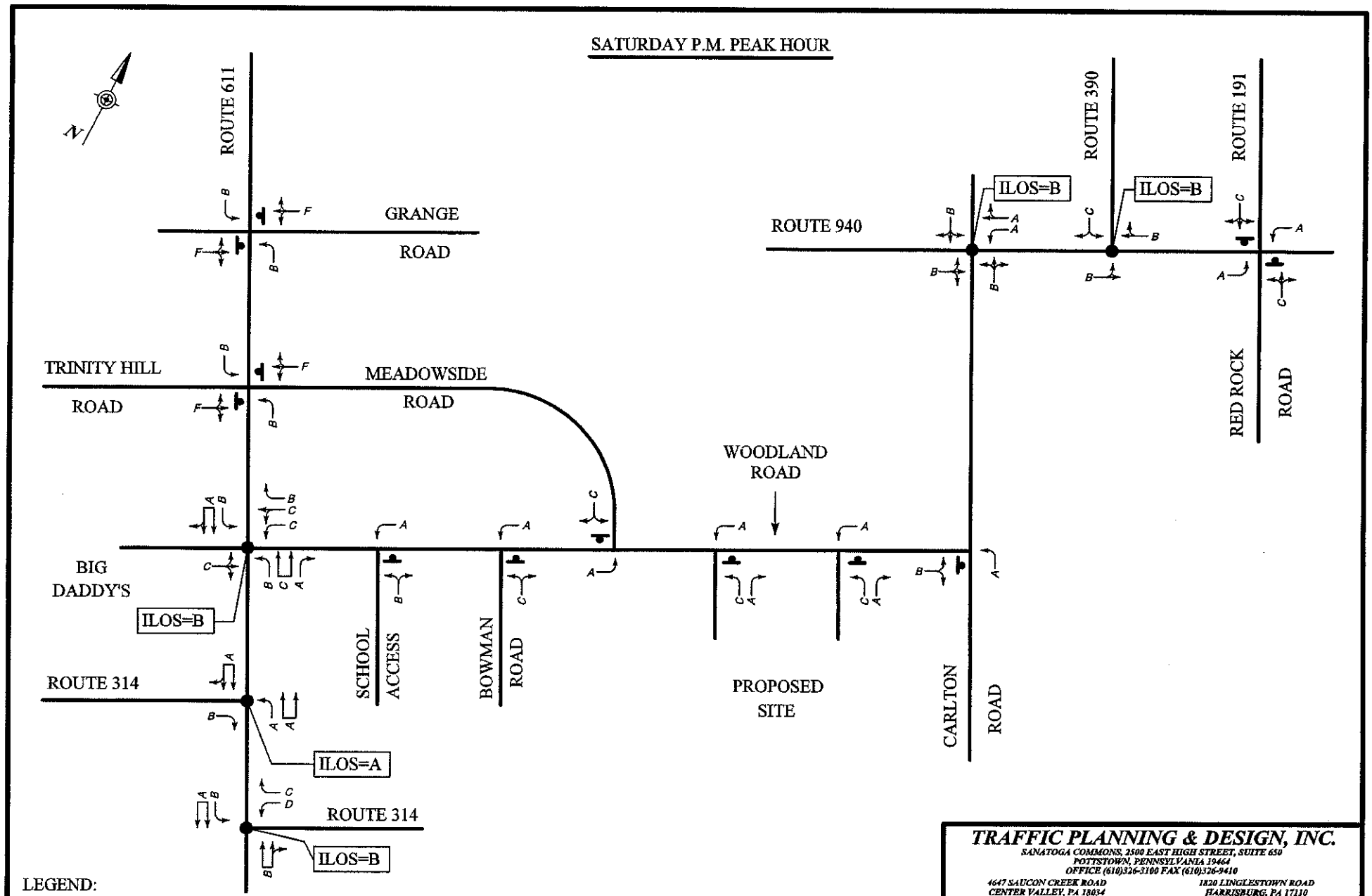

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FIGURE G-10

2007 PROJECTED CONDITIONS - 611/314 SIGNALIZATION
SATURDAY P.M. PEAK HOUR
LEVELS OF SERVICE

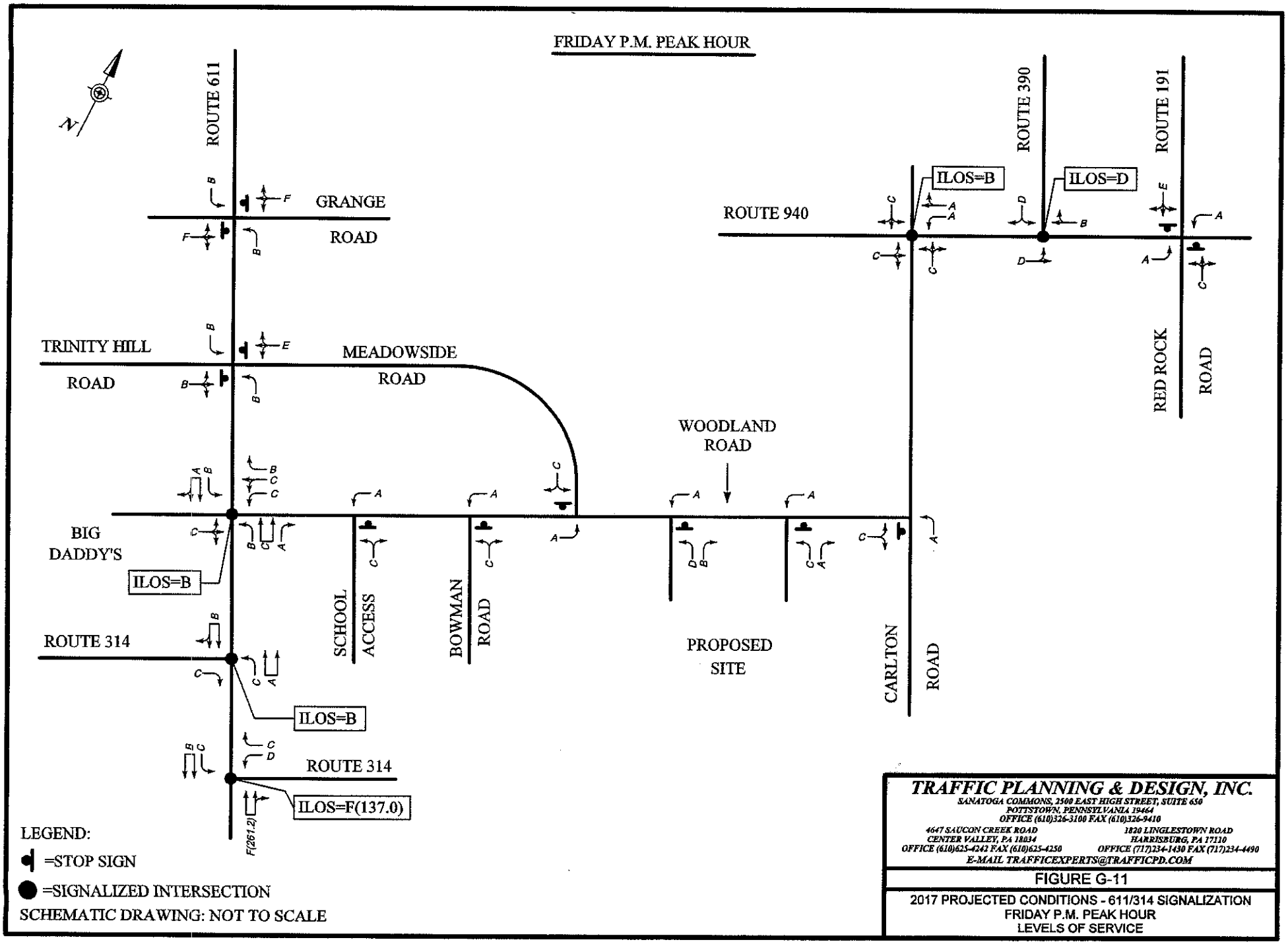

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FIGURE G-11

2017 PROJECTED CONDITIONS - 611/314 SIGNALIZATION
FRIDAY P.M. PEAK HOUR
LEVELS OF SERVICE

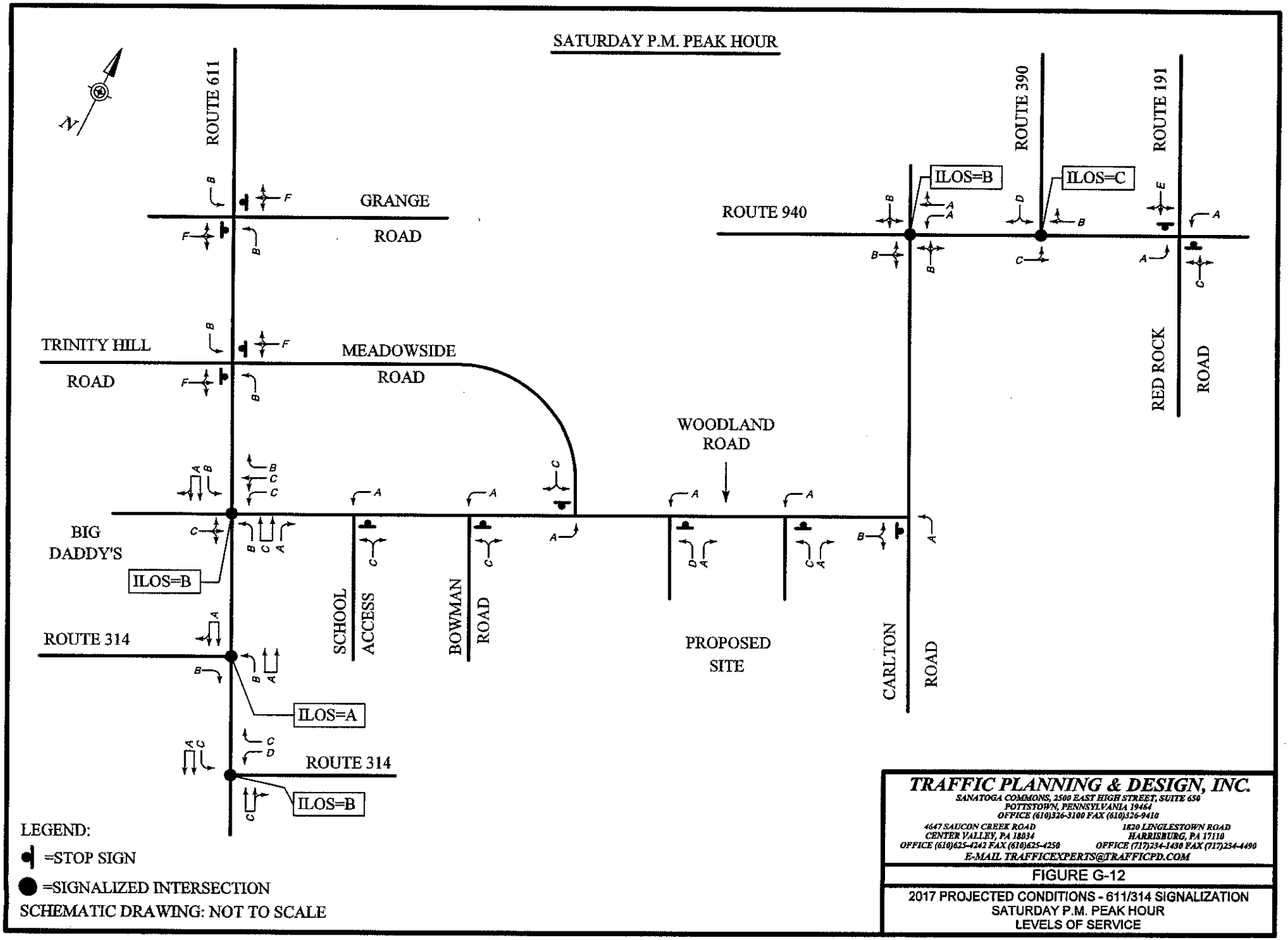

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FIGURE G-12

2017 PROJECTED CONDITIONS - 611/314 SIGNALIZATION
SATURDAY P.M. PEAK HOUR
LEVELS OF SERVICE

CAPACITY ANALYSIS WORKSHEETS

2007 PROJECTED CONDITIONS

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12
Grade (%)	4%			7%	-6%	
Total Lost time (s)		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.95	0.95	
Frt		0.86	1.00	1.00	0.99	
Flt Protected		1.00	0.95	1.00	1.00	
Satd. Flow (prot)		1445	1708	3415	3582	
Flt Permitted		1.00	0.95	1.00	1.00	
Satd. Flow (perm)		1445	1708	3415	3582	
Volume (vph)	0	164	328	1473	1184	64
Peak-hour factor, PHF	0.67	0.67	0.95	0.95	0.76	0.76
Adj. Flow (vph)	0	245	345	1551	1558	84
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	245	345	1551	1642	0
Heavy Vehicles (%)	4%	4%	2%	2%	3%	3%
Turn Type		Over	Prot			
Protected Phases		5	5	2	6	
Permitted Phases						
Actuated Green, G (s)		14.0	14.0	55.8	29.8	
Effective Green, g (s)		16.0	16.0	55.8	31.8	
Actuated g/C Ratio		0.29	0.29	1.00	0.57	
Clearance Time (s)		6.0	6.0	6.0	6.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		414	490	3415	2041	
v/s Ratio Prot		0.17	c0.20	0.45	c0.46	
v/s Ratio Perm						
v/c Ratio		0.59	0.70	0.45	0.80	
Uniform Delay, d1		17.1	17.8	0.0	9.5	
Progression Factor		1.00	1.00	1.00	1.00	
Incremental Delay, d2		2.3	4.6	0.1	2.4	
Delay (s)		19.4	22.3	0.1	11.9	
Level of Service		B	C	A	B	
Approach Delay (s)	19.4			4.1	11.9	
Approach LOS	B			A	B	

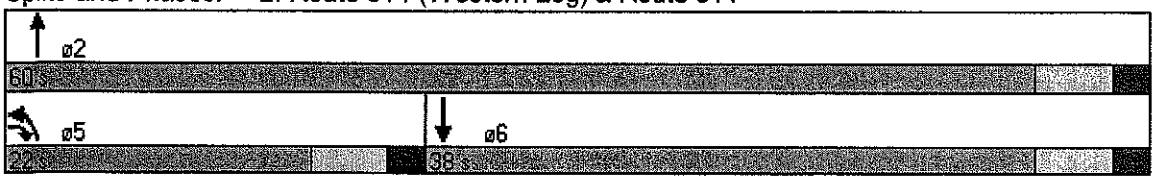
Intersection Summary			
HCM Average Control Delay	8.5	HCM Level of Service	A
HCM Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	55.8	Sum of lost time (s)	8.0
Intersection Capacity Utilization	59.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBR	NBL	NBT	SBT
Lane Configurations				
Volume (vph)	164	328	1473	1184
Lane Group Flow (vph)	245	345	1551	1642
Turn Type	Over	Prot		
Protected Phases	5	5	2	6
Permitted Phases				
Detector Phases	5	5	2	6
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	22.0	22.0
Total Split (s)	22.0	22.0	60.0	38.0
Total Split (%)	36.7%	36.7%	100.0%	63.3%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lead		Lag
Lead-Lag Optimize?	Yes	Yes		Yes
Recall Mode	None	None	Min	Min
v/c Ratio	0.59	0.71	0.45	0.81
Control Delay	22.9	25.1	0.4	13.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	22.9	25.1	0.4	13.4
Queue Length 50th (ft)	74	108	0	222
Queue Length 95th (ft)	94	#195	0	221
Internal Link Dist (ft)			1033	2203
Turn Bay Length (ft)		143		
Base Capacity (vph)	453	534	3415	2100
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	0.54	0.65	0.45	0.78

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 55.9
Natural Cycle: 50
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Route 314 (Western Leg) & Route 611



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	15	15	15	12	12	14	11	12	14	11	12	12
Grade (%)		6%			5%			3%			-7%	
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1863		1639	1646	1647	1685	3486	1664	1770	3659	
Flt Permitted		0.98		0.95	0.95	1.00	0.26	1.00	1.00	0.14	1.00	
Satd. Flow (perm)		1863		1639	1646	1647	459	3486	1664	254	3659	
Volume (vph)	4	2	3	348	7	139	5	1053	415	167	897	7
Peak-hour factor, PHF	0.56	0.56	0.56	0.89	0.89	0.89	0.99	0.99	0.99	0.82	0.82	0.82
Adj. Flow (vph)	7	4	5	391	8	156	5	1064	419	204	1094	9
RTOR Reduction (vph)	0	5	0	0	0	108	0	0	176	0	1	0
Lane Group Flow (vph)	0	11	0	196	203	48	5	1064	243	204	1102	0
Turn Type	Split			Split		pm+ov	Perm		pm+ov	pm+pt		
Protected Phases	4	4		8	8	1		2	8	1	6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)		0.7		9.5	9.5	16.0	21.9	21.9	31.4	33.9	33.9	
Effective Green, g (s)		2.7		11.5	11.5	19.5	25.4	25.4	36.9	37.4	37.4	
Actuated g/C Ratio		0.04		0.18	0.18	0.31	0.40	0.40	0.58	0.59	0.59	
Clearance Time (s)		6.0		6.0	6.0	5.5	7.5	7.5	6.0	5.5	7.5	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	5.0	5.0	3.0	3.0	5.0	
Lane Grp Cap (vph)		79		296	298	609	183	1392	965	340	2152	
v/s Ratio Prot		c0.01		0.12	c0.12	0.01		c0.31	0.05	c0.08	0.30	
v/s Ratio Perm						0.02	0.01		0.10	0.28		
v/c Ratio		0.14		0.66	0.68	0.08	0.03	0.76	0.25	0.60	0.51	
Uniform Delay, d1		29.3		24.2	24.3	15.7	11.6	16.5	6.6	9.6	7.7	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.8		5.5	6.3	0.1	0.1	3.0	0.1	3.0	0.4	
Delay (s)		30.2		29.7	30.6	15.7	11.7	19.5	6.7	12.6	8.1	
Level of Service		C		C	C	B	B	B	A	B	A	
Approach Delay (s)		30.2			26.1			15.9			8.8	
Approach LOS		C			C			B			A	

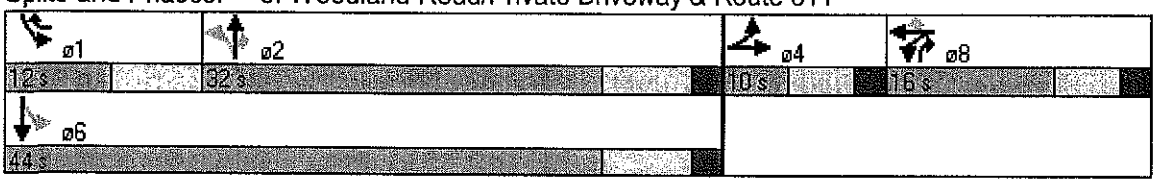
Intersection Summary			
HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	63.6	Sum of lost time (s)	16.0
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

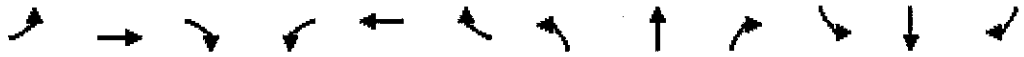
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	2	348	7	139	5	1053	415	167	897
Lane Group Flow (vph)	16	196	203	156	5	1064	419	204	1103
Turn Type		Split		pm+ov	Perm		pm+ov	pm+pt	
Protected Phases	4	8	8	1		2	8	1	6
Permitted Phases				8	2		2	6	
Detector Phases	4	8	8	1	2	2	8	1	6
Minimum Initial (s)	4.0	7.0	7.0	4.0	10.0	10.0	7.0	4.0	10.0
Minimum Split (s)	10.0	13.0	13.0	9.5	17.5	17.5	13.0	9.5	17.5
Total Split (s)	10.0	16.0	16.0	12.0	32.0	32.0	16.0	12.0	44.0
Total Split (%)	14.3%	22.9%	22.9%	17.1%	45.7%	45.7%	22.9%	17.1%	62.9%
Yellow Time (s)	4.0	4.0	4.0	5.5	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0
Lead/Lag				Lead	Lag	Lag		Lead	
Lead-Lag Optimize?				Yes	Yes	Yes		Yes	
Recall Mode	None	None	None	None	Min	Min	None	None	Min
v/c Ratio	0.09	0.61	0.63	0.21	0.03	0.71	0.33	0.57	0.47
Control Delay	26.0	32.4	33.1	3.9	11.6	16.7	1.1	15.3	6.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.0	32.4	33.1	3.9	11.6	16.7	1.1	15.3	6.8
Queue Length 50th (ft)	4	65	67	0	1	145	0	22	80
Queue Length 95th (ft)	12	#174	#182	34	8	274	14	81	161
Internal Link Dist (ft)	105		2012			2203			2327
Turn Bay Length (ft)		250		250	73		350	183	
Base Capacity (vph)	173	335	337	731	210	1598	1276	361	2394
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	0.09	0.59	0.60	0.21	0.02	0.67	0.33	0.57	0.46

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 58.7
Natural Cycle: 60
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

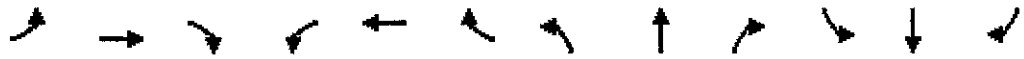
Splits and Phases: 3: Woodland Road/Private Driveway & Route 611





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↑↱		↰	↑↑↱	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	12	12	12	11	12	12	11	12	12
Grade (%)		2%			8%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
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		0.865			0.882							
Flt Protected					0.997		0.950			0.950		
Satd. Flow (prot)	0	1648	0	0	1572	0	1702	3522	0	1670	3455	0
Flt Permitted					0.997		0.950			0.950		
Satd. Flow (perm)	0	1648	0	0	1572	0	1702	3522	0	1670	3455	0
Headway Factor	0.97	0.97	0.97	1.05	1.05	1.05	1.05	1.01	1.01	1.04	0.99	0.99
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		158			1027			2407			3261	
Travel Time (s)		3.1			20.0			36.5			49.4	
Volume (vph)	0	0	3	1	1	14	3	1191	1	11	1067	1
Peak Hour Factor	0.75	0.75	0.75	0.50	0.50	0.50	0.97	0.97	0.97	0.83	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%	5%	5%
Adj. Flow (vph)	0	0	4	2	2	28	3	1228	1	13	1286	1
Lane Group Flow (vph)	0	4	0	0	32	0	3	1229	0	13	1287	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 43.0%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		2%			8%			1%			-1%	
Volume (veh/h)	0	0	3	1	1	14	3	1191	1	11	1067	1
Peak Hour Factor	0.75	0.75	0.75	0.50	0.50	0.50	0.97	0.97	0.97	0.83	0.83	0.83
Hourly flow rate (vph)	0	0	4	2	2	28	3	1228	1	13	1286	1
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	1962	2548	643	1908	2548	614	1287			1229		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1962	2548	643	1908	2548	614	1287			1229		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	6.9	4.1			4.2		
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 %	100	100	99	95	92	94	99			98		
cM capacity (veh/h)	32	26	416	40	25	434	535			547		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	4	32	3	819	410	13	857	430
Volume Left	0	2	3	0	0	13	0	0
Volume Right	4	28	0	0	1	0	0	1
cSH	416	165	535	1700	1700	547	1700	1700
Volume to Capacity	0.01	0.19	0.01	0.48	0.24	0.02	0.50	0.25
Queue Length 95th (ft)	1	17	0	0	0	2	0	0
Control Delay (s)	13.7	31.9	11.8	0.0	0.0	11.8	0.0	0.0
Lane LOS	B	D	B			B		
Approach Delay (s)	13.7	31.9	0.0			0.1		
Approach LOS	B	D						

Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	43.0%	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												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	10	11	12	12	11	12	12
Grade (%)		0%			9%			2%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
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		0.938			0.937			0.998			0.996	
Flt Protected		0.978			0.983		0.950			0.950		
Satd. Flow (prot)	0	1709	0	0	1529	0	1694	3497	0	1753	3613	0
Flt Permitted		0.978			0.983		0.950			0.950		
Satd. Flow (perm)	0	1709	0	0	1529	0	1694	3497	0	1753	3613	0
Headway Factor	1.00	1.00	1.00	1.16	1.16	1.16	1.06	1.01	1.01	1.01	0.97	0.97
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		294			1492			3261			2754	
Travel Time (s)		6.7			33.9			49.4			41.7	
Volume (vph)	20	4	20	12	7	16	31	1156	18	19	1047	31
Peak Hour Factor	0.90	0.90	0.90	0.75	0.90	0.75	0.90	0.97	0.97	0.77	0.77	0.90
Adj. Flow (vph)	22	4	22	16	8	21	34	1192	19	25	1360	34
Lane Group Flow (vph)	0	48	0	0	45	0	34	1211	0	25	1394	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 42.9%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			9%			2%			-5%	
Volume (veh/h)	20	4	20	12	7	16	31	1156	18	19	1047	31
Peak Hour Factor	0.90	0.90	0.90	0.75	0.90	0.75	0.90	0.97	0.97	0.77	0.77	0.90
Hourly flow rate (vph)	22	4	22	16	8	21	34	1192	19	25	1360	34
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	2116	2706	697	2024	2713	605	1394			1210		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2116	2706	697	2024	2713	605	1394			1210		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	76	94	32	57	95	93			96		
cM capacity (veh/h)	17	19	383	24	18	440	486			572		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	49	45	34	795	416	25	906	488
Volume Left	22	16	34	0	0	25	0	0
Volume Right	22	21	0	0	19	0	0	34
cSH	30	39	486	1700	1700	572	1700	1700
Volume to Capacity	1.62	1.15	0.07	0.47	0.24	0.04	0.53	0.29
Queue Length 95th (ft)	140	113	6	0	0	3	0	0
Control Delay (s)	591.8	353.5	13.0	0.0	0.0	11.6	0.0	0.0
Lane LOS	F	F	B			B		
Approach Delay (s)	591.8	353.5	0.4			0.2		
Approach LOS	F	F						

Intersection Summary			
Average Delay	16.5		
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12
Grade (%)	4%			7%	-6%	
Total Lost time (s)		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.95	0.95	
Frt		0.86	1.00	1.00	0.99	
Flt Protected		1.00	0.95	1.00	1.00	
Satd. Flow (prot)		1445	1708	3415	3627	
Flt Permitted		1.00	0.13	1.00	1.00	
Satd. Flow (perm)		1445	242	3415	3627	
Volume (vph)	0	135	158	1478	1247	44
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.97	0.97
Adj. Flow (vph)	0	141	165	1540	1286	45
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	141	165	1540	1331	0
Heavy Vehicles (%)	4%	4%	2%	2%	2%	2%
Turn Type		Over	pm+pt			
Protected Phases		5	5	2	6	
Permitted Phases			2			
Actuated Green, G (s)		10.6	47.5	54.5	30.9	
Effective Green, g (s)		12.6	50.5	54.5	33.9	
Actuated g/C Ratio		0.23	0.93	1.00	0.62	
Clearance Time (s)		6.0	6.0	7.0	7.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		334	563	3415	2256	
v/s Ratio Prot		0.10	0.07	c0.45	c0.37	
v/s Ratio Perm			0.20			
v/c Ratio		0.42	0.29	0.45	0.59	
Uniform Delay, d1		17.8	3.0	0.0	6.2	
Progression Factor		1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.9	0.3	0.1	0.4	
Delay (s)		18.7	3.3	0.1	6.5	
Level of Service		B	A	A	A	
Approach Delay (s)	18.7			0.4	6.5	
Approach LOS	B			A	A	

Intersection Summary			
HCM Average Control Delay	3.8	HCM Level of Service	A
HCM Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	54.5	Sum of lost time (s)	4.0
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	15		

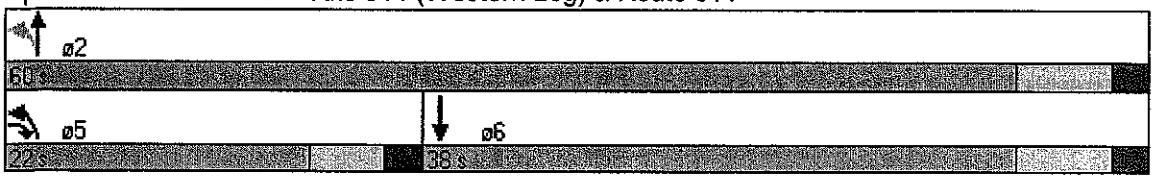
c Critical Lane Group

Lane Group	EBR	NBL	NBT	SBT
Lane Configurations				
Volume (vph)	135	158	1478	1247
Lane Group Flow (vph)	141	165	1540	1331
Turn Type	Over	pm+pt		
Protected Phases	5	5	2	6
Permitted Phases		2		
Detector Phases	5	5	2	6
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	23.0	23.0
Total Split (s)	22.0	22.0	60.0	38.0
Total Split (%)	36.7%	36.7%	100.0%	63.3%
Yellow Time (s)	4.0	4.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lead		Lag
Lead-Lag Optimize?	Yes	Yes		Yes
Recall Mode	None	None	Min	Min
v/c Ratio	0.42	0.31	0.45	0.59
Control Delay	18.1	3.0	0.4	8.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	18.1	3.0	0.4	8.0
Queue Length 50th (ft)	32	0	0	106
Queue Length 95th (ft)	81	23	0	209
Internal Link Dist (ft)			1031	2203
Turn Bay Length (ft)		143		
Base Capacity (vph)	442	633	3415	2339
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	0.32	0.26	0.45	0.57

Intersection Summary

Cycle Length: 60
Actuated Cycle Length: 54.7
Natural Cycle: 40
Control Type: Semi Act-Uncoord

Splits and Phases: 2: Route 314 (Western Leg) & Route 611



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	15	15	15	12	12	14	11	12	14	11	12	12
Grade (%)		6%			5%			3%			-7%	
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1783		1639	1645	1647	1685	3486	1664	1770	3655	
Flt Permitted		0.99		0.95	0.95	1.00	0.30	1.00	1.00	0.14	1.00	
Satd. Flow (perm)		1783		1639	1645	1647	531	3486	1664	264	3655	
Volume (vph)	5	1	13	354	4	77	14	1046	418	125	924	14
Peak-hour factor, PHF	0.61	0.61	0.61	0.92	0.92	0.92	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	8	2	21	385	4	84	14	1067	427	128	943	14
RTOR Reduction (vph)	0	20	0	0	0	59	0	0	175	0	1	0
Lane Group Flow (vph)	0	11	0	193	196	25	14	1067	252	128	956	0
Turn Type	Split			Split		pm+ov	Perm		pm+ov	pm+pt		
Protected Phases	4	4		8	8	1		2	8	1	6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)		1.3		10.4	10.4	15.1	20.7	20.7	31.1	30.9	30.9	
Effective Green, g (s)		3.3		12.4	12.4	18.6	24.2	24.2	36.6	34.4	34.4	
Actuated g/C Ratio		0.05		0.20	0.20	0.30	0.39	0.39	0.59	0.55	0.55	
Clearance Time (s)		6.0		6.0	6.0	5.5	7.5	7.5	6.0	5.5	7.5	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	5.0	5.0	3.0	3.0	5.0	
Lane Grp Cap (vph)		95		327	328	599	207	1358	981	297	2025	
v/s Ratio Prot		c0.01		0.12	c0.12	0.00		c0.31	0.05	0.04	c0.26	
v/s Ratio Perm						0.01	0.03		0.10	0.20		
v/c Ratio		0.12		0.59	0.60	0.04	0.07	0.79	0.26	0.43	0.47	
Uniform Delay, d1		28.0		22.5	22.6	15.4	11.9	16.7	6.2	9.6	8.4	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.6		2.8	2.9	0.0	0.3	3.6	0.1	1.0	0.4	
Delay (s)		28.6		25.4	25.5	15.5	12.2	20.2	6.3	10.6	8.7	
Level of Service		C		C	C	B	B	C	A	B	A	
Approach Delay (s)		28.6			23.7			16.2			8.9	
Approach LOS		C			C			B			A	

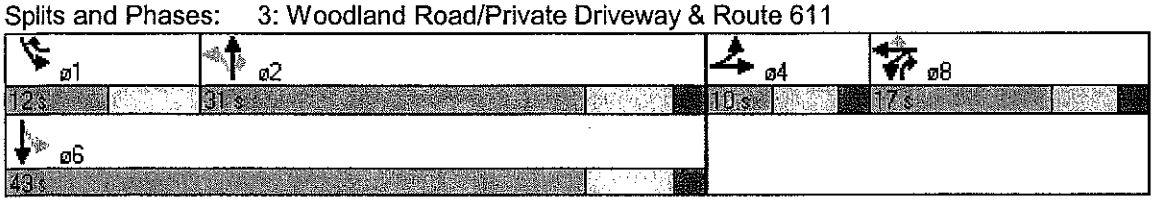
Intersection Summary			
HCM Average Control Delay	14.9	HCM Level of Service	B
HCM Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	62.1	Sum of lost time (s)	16.0
Intersection Capacity Utilization	62.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	1	354	4	77	14	1046	418	125	924
Lane Group Flow (vph)	31	193	196	84	14	1067	427	128	957
Turn Type		Split		pm+ov	Perm		pm+ov	pm+pt	
Protected Phases	4	8	8	1		2	8	1	6
Permitted Phases				8	2		2	6	
Detector Phases	4	8	8	1	2	2	8	1	6
Minimum Initial (s)	4.0	7.0	7.0	4.0	10.0	10.0	7.0	4.0	10.0
Minimum Split (s)	10.0	13.0	13.0	9.5	17.5	17.5	13.0	9.5	17.5
Total Split (s)	10.0	17.0	17.0	12.0	31.0	31.0	17.0	12.0	43.0
Total Split (%)	14.3%	24.3%	24.3%	17.1%	44.3%	44.3%	24.3%	17.1%	61.4%
Yellow Time (s)	4.0	4.0	4.0	5.5	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0
Lead/Lag				Lead	Lag	Lag		Lead	
Lead-Lag Optimize?				Yes	Yes	Yes		Yes	
Recall Mode	None	None	None	None	Min	Min	None	None	Min
v/c Ratio	0.16	0.54	0.55	0.12	0.06	0.72	0.32	0.38	0.46
Control Delay	19.3	29.8	30.0	4.7	14.0	18.2	1.1	9.6	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.3	29.8	30.0	4.7	14.0	18.2	1.1	9.6	8.0
Queue Length 50th (ft)	3	65	66	0	3	152	0	14	71
Queue Length 95th (ft)	16	#163	#166	26	15	283	14	47	161
Internal Link Dist (ft)	105		2012			2203			2327
Turn Bay Length (ft)		250		250	73		350	183	
Base Capacity (vph)	194	385	387	670	243	1598	1318	342	2282
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	0.16	0.50	0.51	0.13	0.06	0.67	0.32	0.37	0.42

Intersection Summary

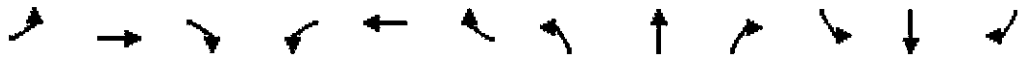
Cycle Length: 70
Actuated Cycle Length: 57.7
Natural Cycle: 60
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Woodland Road/Private Driveway & Route 611



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↰	↑↱		↰	↑↱	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	12	12	12	11	12	12	11	12	12
Grade (%)		2%			8%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
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		0.899			0.918							
Flt Protected		0.988			0.993		0.950			0.950		
Satd. Flow (prot)	0	1693	0	0	1630	0	1702	3522	0	1719	3557	0
Flt Permitted		0.988			0.993		0.950			0.950		
Satd. Flow (perm)	0	1693	0	0	1630	0	1702	3522	0	1719	3557	0
Headway Factor	0.97	0.97	0.97	1.05	1.05	1.05	1.05	1.01	1.01	1.04	0.99	0.99
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		158			1027			2407			3261	
Travel Time (s)		3.1			20.0			36.5			49.4	
Volume (vph)	1	0	3	3	6	14	6	1122	1	7	1057	1
Peak Hour Factor	0.50	0.50	0.50	0.39	0.39	0.39	0.92	0.92	0.92	0.89	0.89	0.89
Adj. Flow (vph)	2	0	6	8	15	36	7	1220	1	8	1188	1
Lane Group Flow (vph)	0	8	0	0	59	0	7	1221	0	8	1189	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	41.0%
ICU Level of Service	A
Analysis Period (min)	15



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		2%			8%			1%			-1%	
Volume (veh/h)	1	0	3	3	6	14	6	1122	1	7	1057	1
Peak Hour Factor	0.50	0.50	0.50	0.39	0.39	0.39	0.92	0.92	0.92	0.89	0.89	0.89
Hourly flow rate (vph)	2	0	6	8	15	36	7	1220	1	8	1188	1
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	1870	2438	594	1849	2438	610	1189			1221		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1870	2438	594	1849	2438	610	1189			1221		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	92	100	99	83	49	92	99			99		
cM capacity (veh/h)	24	30	448	44	30	437	583			567		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	8	59	7	813	408	8	792	397
Volume Left	2	8	7	0	0	8	0	0
Volume Right	6	36	0	0	1	0	0	1
cSH	82	77	583	1700	1700	567	1700	1700
Volume to Capacity	0.10	0.77	0.01	0.48	0.24	0.01	0.47	0.23
Queue Length 95th (ft)	8	93	1	0	0	1	0	0
Control Delay (s)	53.5	137.4	11.2	0.0	0.0	11.4	0.0	0.0
Lane LOS	F	F	B			B		
Approach Delay (s)	53.5	137.4	0.1			0.1		
Approach LOS	F	F						

Intersection Summary			
Average Delay	3.5		
Intersection Capacity Utilization	41.0%	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		↔			↔		↰	↑↱		↰	↑↱	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	10	11	12	12	11	12	12
Grade (%)		0%			9%			2%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
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		0.940			0.960			0.996			0.996	
Flt Protected		0.978			0.971		0.950			0.950		
Satd. Flow (prot)	0	1712	0	0	1548	0	1694	3490	0	1753	3613	0
Flt Permitted		0.978			0.971		0.950			0.950		
Satd. Flow (perm)	0	1712	0	0	1548	0	1694	3490	0	1753	3613	0
Headway Factor	1.00	1.00	1.00	1.16	1.16	1.16	1.06	1.01	1.01	1.01	0.97	0.97
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		294			1492			3261			2754	
Travel Time (s)		6.7			33.9			49.4			41.7	
Volume (vph)	28	6	27	31	6	15	25	1079	33	14	1007	26
Peak Hour Factor	0.90	0.90	0.90	0.72	0.90	0.72	0.90	0.94	0.94	0.95	0.95	0.90
Adj. Flow (vph)	31	7	30	43	7	21	28	1148	35	15	1060	29
Lane Group Flow (vph)	0	68	0	0	71	0	28	1183	0	15	1089	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 41.7%		ICU Level of Service A	
Analysis Period (min) 15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			9%			2%			-5%	
Volume (veh/h)	28	6	27	31	6	15	25	1079	33	14	1007	26
Peak Hour Factor	0.90	0.90	0.90	0.72	0.90	0.72	0.90	0.94	0.94	0.95	0.95	0.90
Hourly flow rate (vph)	31	7	30	43	7	21	28	1148	35	15	1060	29
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	1758	2342	544	1814	2339	591	1089			1183		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1758	2342	544	1814	2339	591	1089			1183		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	25	80	94	0	80	95	96			97		
cM capacity (veh/h)	41	33	483	37	33	449	636			586		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	68	71	28	765	418	15	707	382
Volume Left	31	43	28	0	0	15	0	0
Volume Right	30	21	0	0	35	0	0	29
cSH	67	50	636	1700	1700	586	1700	1700
Volume to Capacity	1.01	1.42	0.04	0.45	0.25	0.03	0.42	0.22
Queue Length 95th (ft)	128	166	3	0	0	2	0	0
Control Delay (s)	219.0	409.3	10.9	0.0	0.0	11.3	0.0	0.0
Lane LOS	F	F	B			B		
Approach Delay (s)	219.0	409.3	0.3			0.2		
Approach LOS	F	F						

Intersection Summary			
Average Delay	18.0		
Intersection Capacity Utilization	41.7%	ICU Level of Service	A
Analysis Period (min)	15		

2017 PROJECTED CONDITIONS

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12
Grade (%)	4%			7%	-6%	
Total Lost time (s)		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.95	0.95	
Frt		0.86	1.00	1.00	0.99	
Flt Protected		1.00	0.95	1.00	1.00	
Satd. Flow (prot)		1445	1708	3415	3582	
Flt Permitted		1.00	0.95	1.00	1.00	
Satd. Flow (perm)		1445	1708	3415	3582	
Volume (vph)	0	197	401	1673	1349	73
Peak-hour factor, PHF	0.67	0.67	0.95	0.95	0.76	0.76
Adj. Flow (vph)	0	294	422	1761	1775	96
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	294	422	1761	1871	0
Heavy Vehicles (%)	4%	4%	2%	2%	3%	3%
Turn Type		Over	Prot			
Protected Phases		5	5	2	6	
Permitted Phases						
Actuated Green, G (s)		15.4	15.4	59.0	32.1	
Effective Green, g (s)		17.4	17.4	59.0	33.6	
Actuated g/C Ratio		0.29	0.29	1.00	0.57	
Clearance Time (s)		6.0	6.0	7.0	5.5	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		426	504	3415	2040	
v/s Ratio Prot		0.20	c0.25	0.52	c0.52	
v/s Ratio Perm						
v/c Ratio		0.69	0.84	0.52	0.92	
Uniform Delay, d1		18.4	19.5	0.0	11.4	
Progression Factor		1.00	1.00	1.00	1.00	
Incremental Delay, d2		4.8	11.6	0.1	7.0	
Delay (s)		23.2	31.0	0.1	18.5	
Level of Service		C	C	A	B	
Approach Delay (s)	23.2			6.1	18.5	
Approach LOS	C			A	B	

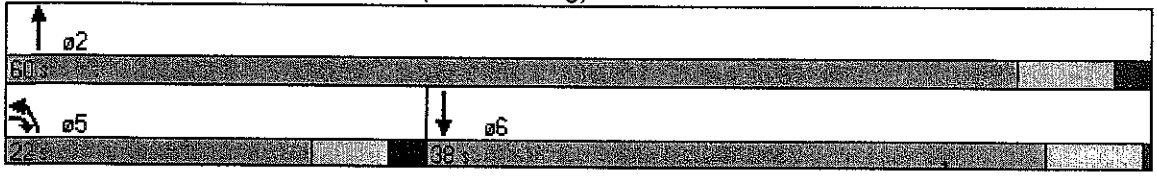
Intersection Summary			
HCM Average Control Delay	12.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	59.0	Sum of lost time (s)	8.0
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBR	NBL	NBT	SBT
Lane Configurations				
Volume (vph)	197	401	1673	1349
Lane Group Flow (vph)	294	422	1761	1871
Turn Type	Over	Prot		
Protected Phases	5	5	2	6
Permitted Phases				
Detector Phases	5	5	2	6
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	11.0	11.0	23.0	21.5
Total Split (s)	22.0	22.0	60.0	38.0
Total Split (%)	36.7%	36.7%	100.0%	63.3%
Yellow Time (s)	4.0	4.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	0.5
Lead/Lag	Lead	Lead		Lag
Lead-Lag Optimize?	Yes	Yes		Yes
Recall Mode	None	None	Min	Min
v/c Ratio	0.69	0.84	0.52	0.92
Control Delay	28.0	35.4	0.6	20.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	28.0	35.4	0.6	20.7
Queue Length 50th (ft)	92	140	0	286
Queue Length 95th (ft)	113	#280	0	277
Internal Link Dist (ft)			1029	2209
Turn Bay Length (ft)		143		
Base Capacity (vph)	437	516	3415	2050
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	0.82	0.52	0.91

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 59
Natural Cycle: 65
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 2: Route 314 (Western Leg) & Route 611



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	15	15	15	12	12	14	11	12	14	11	12	12
Grade (%)		6%			5%			3%			-7%	
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98		0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1858		1639	1647	1647	1685	3486	1664	1770	3658	
Flt Permitted		0.98		0.95	0.95	1.00	0.21	1.00	1.00	0.13	1.00	
Satd. Flow (perm)		1858		1639	1647	1647	367	3486	1664	244	3658	
Volume (vph)	5	3	4	364	9	154	6	1235	432	176	1054	9
Peak-hour factor, PHF	0.56	0.56	0.56	0.89	0.89	0.89	0.99	0.99	0.99	0.82	0.82	0.82
Adj. Flow (vph)	9	5	7	409	10	173	6	1247	436	215	1285	11
RTOR Reduction (vph)	0	7	0	0	0	104	0	0	181	0	1	0
Lane Group Flow (vph)	0	14	0	205	214	69	6	1247	255	215	1295	0
Turn Type	Split			Split		pm+ov	Perm		pm+ov	pm+pt		
Protected Phases	4	4		8	8	1		2	8	1	6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)		1.4		10.3	10.3	16.9	23.0	23.0	33.3	35.1	35.1	
Effective Green, g (s)		3.4		12.3	12.3	20.4	26.5	26.5	38.8	38.6	38.6	
Actuated g/C Ratio		0.05		0.19	0.19	0.31	0.40	0.40	0.59	0.58	0.58	
Clearance Time (s)		6.0		6.0	6.0	5.5	7.5	7.5	6.0	5.5	7.5	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	5.0	5.0	3.0	3.0	5.0	
Lane Grp Cap (vph)		95		304	306	606	147	1393	974	328	2130	
v/s Ratio Prot		c0.01		0.13	c0.13	0.01		c0.36	0.05	0.08	c0.35	
v/s Ratio Perm						0.03	0.02		0.10	0.30		
v/c Ratio		0.15		0.67	0.70	0.11	0.04	0.90	0.26	0.66	0.61	
Uniform Delay, d1		30.1		25.1	25.3	16.5	12.1	18.6	6.7	11.6	9.0	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.7		5.8	6.8	0.1	0.2	8.3	0.1	4.7	0.7	
Delay (s)		30.8		30.9	32.1	16.6	12.4	26.9	6.9	16.3	9.7	
Level of Service		C		C	C	B	B	C	A	B	A	
Approach Delay (s)		30.8			27.2			21.7			10.6	
Approach LOS		C			C			C			B	

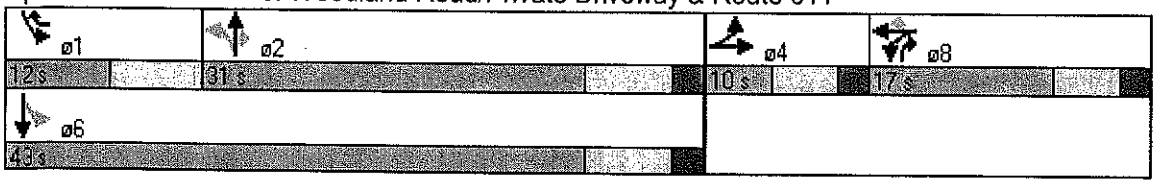
Intersection Summary				
HCM Average Control Delay	18.2	HCM Level of Service	B	
HCM Volume to Capacity ratio	0.77			
Actuated Cycle Length (s)	66.3	Sum of lost time (s)	16.0	
Intersection Capacity Utilization	70.9%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

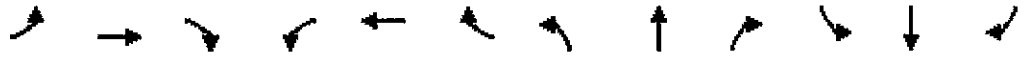
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	3	364	9	154	6	1235	432	176	1054
Lane Group Flow (vph)	21	205	214	173	6	1247	436	215	1296
Turn Type		Split		pm+ov	Perm		pm+ov	pm+pt	
Protected Phases	4	8	8	1		2	8	1	6
Permitted Phases				8	2		2	6	
Detector Phases	4	8	8	1	2	2	8	1	6
Minimum Initial (s)	4.0	7.0	7.0	4.0	10.0	10.0	7.0	4.0	10.0
Minimum Split (s)	10.0	13.0	13.0	9.5	17.5	17.5	13.0	9.5	17.5
Total Split (s)	10.0	17.0	17.0	12.0	31.0	31.0	17.0	12.0	43.0
Total Split (%)	14.3%	24.3%	24.3%	17.1%	44.3%	44.3%	24.3%	17.1%	61.4%
Yellow Time (s)	4.0	4.0	4.0	5.5	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0
Lead/Lag				Lead	Lag	Lag		Lead	
Lead-Lag Optimize?				Yes	Yes	Yes		Yes	
Recall Mode	None	None	None	None	Min	Min	None	None	Min
v/c Ratio	0.12	0.63	0.66	0.24	0.04	0.85	0.35	0.62	0.57
Control Delay	25.5	33.8	34.7	5.1	14.2	24.3	1.2	18.9	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	25.5	33.8	34.7	5.1	14.2	24.3	1.2	18.9	9.3
Queue Length 50th (ft)	5	70	73	5	1	191	0	26	110
Queue Length 95th (ft)	14	#174	#184	42	9	#398	14	#94	210
Internal Link Dist (ft)	105		2012			2209			2327
Turn Bay Length (ft)		250		250	73		350	183	
Base Capacity (vph)	169	339	341	735	145	1498	1253	346	2271
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	0.12	0.60	0.63	0.24	0.04	0.83	0.35	0.62	0.57

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 62.7
Natural Cycle: 70
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

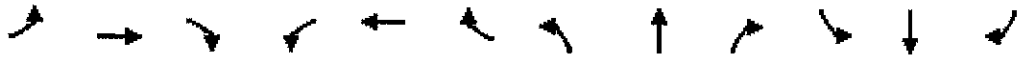
Splits and Phases: 3: Woodland Road/Private Driveway & Route 611





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↑↑			↑↑	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	12	12	12	11	12	12	11	12	12
Grade (%)		2%			8%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
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		0.865			0.879							
Flt Protected					0.997		0.950			0.950		
Satd. Flow (prot)	0	1648	0	0	1567	0	1702	3522	0	1670	3455	0
Flt Permitted					0.997		0.950			0.950		
Satd. Flow (perm)	0	1648	0	0	1567	0	1702	3522	0	1670	3455	0
Headway Factor	0.97	0.97	0.97	1.05	1.05	1.05	1.05	1.01	1.01	1.04	0.99	0.99
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		158			1027			2407			3261	
Travel Time (s)		3.1			20.0			36.5			49.4	
Volume (vph)	0	0	4	1	1	17	4	1388	1	12	1234	1
Peak Hour Factor	0.75	0.75	0.75	0.50	0.50	0.50	0.97	0.97	0.97	0.83	0.83	0.83
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	5%	5%	5%
Adj. Flow (vph)	0	0	5	2	2	34	4	1431	1	14	1487	1
Lane Group Flow (vph)	0	5	0	0	38	0	4	1432	0	14	1488	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization 48.4%		ICU Level of Service A	
Analysis Period (min) 15			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		2%			8%			1%			-1%	
Volume (veh/h)	0	0	4	1	1	17	4	1388	1	12	1234	1
Peak Hour Factor	0.75	0.75	0.75	0.50	0.50	0.50	0.97	0.97	0.97	0.83	0.83	0.83
Hourly flow rate (vph)	0	0	5	2	2	34	4	1431	1	14	1487	1
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	2275	2956	744	2217	2957	716	1488			1432		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2275	2956	744	2217	2957	716	1488			1432		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	6.9	4.1			4.2		
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 %	100	100	99	91	85	91	99			97		
cM capacity (veh/h)	17	14	357	23	14	372	448			456		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	5	38	4	954	478	14	991	497
Volume Left	0	2	4	0	0	14	0	0
Volume Right	5	34	0	0	1	0	0	1
cSH	357	116	448	1700	1700	456	1700	1700
Volume to Capacity	0.01	0.33	0.01	0.56	0.28	0.03	0.58	0.29
Queue Length 95th (ft)	1	32	1	0	0	2	0	0
Control Delay (s)	15.2	50.4	13.1	0.0	0.0	13.2	0.0	0.0
Lane LOS	C	F	B			B		
Approach Delay (s)	15.2	50.4	0.0			0.1		
Approach LOS	C	F						

Intersection Summary			
Average Delay	0.8		
Intersection Capacity Utilization	48.4%	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												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	10	11	12	12	11	12	12
Grade (%)		0%			9%			2%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
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		0.938			0.934			0.998			0.997	
Flt Protected		0.978			0.983		0.950			0.950		
Satd. Flow (prot)	0	1709	0	0	1524	0	1694	3497	0	1753	3617	0
Flt Permitted		0.978			0.983		0.950			0.950		
Satd. Flow (perm)	0	1709	0	0	1524	0	1694	3497	0	1753	3617	0
Headway Factor	1.00	1.00	1.00	1.16	1.16	1.16	1.06	1.01	1.01	1.01	0.97	0.97
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		294			1492			3261			2754	
Travel Time (s)		6.7			33.9			49.4			41.7	
Volume (vph)	20	4	20	13	7	18	31	1354	20	22	1214	31
Peak Hour Factor	0.90	0.90	0.90	0.75	0.90	0.75	0.90	0.97	0.97	0.77	0.77	0.90
Adj. Flow (vph)	22	4	22	17	8	24	34	1396	21	29	1577	34
Lane Group Flow (vph)	0	48	0	0	49	0	34	1417	0	29	1611	0
Sign Control		Stop			Stop			Free			Free	

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			9%			2%			-5%	
Volume (veh/h)	20	4	20	13	7	18	31	1354	20	22	1214	31
Peak Hour Factor	0.90	0.90	0.90	0.75	0.90	0.75	0.90	0.97	0.97	0.77	0.77	0.90
Hourly flow rate (vph)	22	4	22	17	8	24	34	1396	21	29	1577	34
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	2446	3136	806	2345	3143	708	1611			1416		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2446	3136	806	2345	3143	708	1611			1416		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	52	93	0	14	94	91			94		
cM capacity (veh/h)	4	9	325	10	9	376	401			477		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	49	49	34	931	486	29	1051	560
Volume Left	22	17	34	0	0	29	0	0
Volume Right	22	24	0	0	21	0	0	34
cSH	8	18	401	1700	1700	477	1700	1700
Volume to Capacity	6.44	2.66	0.09	0.55	0.29	0.06	0.62	0.33
Queue Length 95th (ft)	Err	165	7	0	0	5	0	0
Control Delay (s)	Err	1183.1	14.8	0.0	0.0	13.0	0.0	0.0
Lane LOS	F	F	B			B		
Approach Delay (s)	Err	1183.1	0.4			0.2		
Approach LOS	F	F						

Intersection Summary				
Average Delay	171.8			
Intersection Capacity Utilization	48.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	10	10	12	12	12	12
Grade (%)	4%			7%	-6%	
Total Lost time (s)		4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00	1.00	0.95	0.95	
Frt		0.86	1.00	1.00	1.00	
Flt Protected		1.00	0.95	1.00	1.00	
Satd. Flow (prot)		1445	1708	3415	3627	
Flt Permitted		1.00	0.95	1.00	1.00	
Satd. Flow (perm)		1445	1708	3415	3627	
Volume (vph)	0	160	187	1674	1396	48
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.97	0.97
Adj. Flow (vph)	0	167	195	1744	1439	49
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	167	195	1744	1488	0
Heavy Vehicles (%)	4%	4%	2%	2%	2%	2%
Turn Type		Over	Prot			
Protected Phases		5	5	2	6	
Permitted Phases						
Actuated Green, G (s)		11.3	11.3	54.4	30.1	
Effective Green, g (s)		13.3	13.3	54.4	33.1	
Actuated g/C Ratio		0.24	0.24	1.00	0.61	
Clearance Time (s)		6.0	6.0	7.0	7.0	
Vehicle Extension (s)		3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		353	418	3415	2207	
v/s Ratio Prot		0.12	0.11	c0.51	c0.41	
v/s Ratio Perm						
v/c Ratio		0.47	0.47	0.51	0.67	
Uniform Delay, d1		17.6	17.5	0.0	7.1	
Progression Factor		1.00	1.00	1.00	1.00	
Incremental Delay, d2		1.0	0.8	0.1	0.8	
Delay (s)		18.6	18.4	0.1	7.9	
Level of Service		B	B	A	A	
Approach Delay (s)	18.6			2.0	7.9	
Approach LOS	B			A	A	

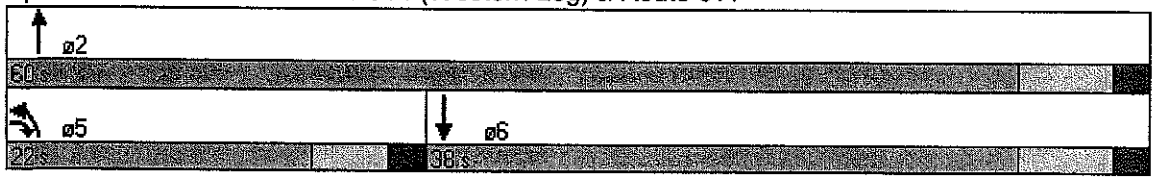
Intersection Summary			
HCM Average Control Delay	5.2	HCM Level of Service	A
HCM Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	54.4	Sum of lost time (s)	4.0
Intersection Capacity Utilization	57.1%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	EBR	NBL	NBT	SBT
Lane Configurations				
Volume (vph)	160	187	1674	1396
Lane Group Flow (vph)	167	195	1744	1488
Turn Type	Over	Prot		
Protected Phases	5	5	2	6
Permitted Phases				
Detector Phases	5	5	2	6
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	10.0	10.0	23.0	23.0
Total Split (s)	22.0	22.0	60.0	38.0
Total Split (%)	36.7%	36.7%	100.0%	63.3%
Yellow Time (s)	4.0	4.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0
Lead/Lag	Lead	Lead		Lag
Lead-Lag Optimize?	Yes	Yes		Yes
Recall Mode	None	None	Min	Min
v/c Ratio	0.47	0.47	0.51	0.68
Control Delay	19.6	19.0	0.5	9.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	19.6	19.0	0.5	9.5
Queue Length 50th (ft)	45	52	0	141
Queue Length 95th (ft)	94	104	0	256
Internal Link Dist (ft)			1033	2203
Turn Bay Length (ft)		143		
Base Capacity (vph)	442	522	3415	2257
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	0.38	0.37	0.51	0.66

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 54.5
Natural Cycle: 40
Control Type: Semi Act-Uncoord

Splits and Phases: 2: Route 314 (Western Leg) & Route 611



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	15	15	15	12	12	14	11	12	14	11	12	12
Grade (%)		6%			5%			3%			-7%	
Total Lost time (s)		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		0.91		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1781		1639	1645	1647	1685	3486	1664	1770	3655	
Flt Permitted		0.99		0.95	0.95	1.00	0.26	1.00	1.00	0.13	1.00	
Satd. Flow (perm)		1781		1639	1645	1647	460	3486	1664	246	3655	
Volume (vph)	6	1	16	367	5	79	17	1223	434	126	1061	17
Peak-hour factor, PHF	0.61	0.61	0.61	0.92	0.92	0.92	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	10	2	26	399	5	86	17	1248	443	129	1083	17
RTOR Reduction (vph)	0	24	0	0	0	61	0	0	180	0	2	0
Lane Group Flow (vph)	0	14	0	200	204	25	17	1248	263	129	1098	0
Turn Type	Split			Split		pm+ov	Perm		pm+ov	pm+pt		
Protected Phases	4	4		8	8	1		2	8	1	6	
Permitted Phases						8	2		2	6		
Actuated Green, G (s)		2.1		10.3	10.3	15.1	22.8	22.8	33.1	33.1	33.1	
Effective Green, g (s)		4.1		12.3	12.3	18.6	26.3	26.3	38.6	36.6	36.6	
Actuated g/C Ratio		0.06		0.19	0.19	0.29	0.40	0.40	0.59	0.56	0.56	
Clearance Time (s)		6.0		6.0	6.0	5.5	7.5	7.5	6.0	5.5	7.5	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	5.0	5.0	3.0	3.0	5.0	
Lane Grp Cap (vph)		112		310	311	573	186	1410	988	286	2058	
v/s Ratio Prot		c0.01		0.12	c0.12	0.00		c0.36	0.05	0.04	c0.30	
v/s Ratio Perm						0.01	0.04		0.11	0.21		
v/c Ratio		0.12		0.65	0.66	0.04	0.09	0.89	0.27	0.45	0.53	
Uniform Delay, d1		28.8		24.3	24.4	16.8	12.0	17.9	6.4	11.1	8.9	
Progression Factor		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.5		4.6	4.9	0.0	0.4	7.5	0.1	1.1	0.5	
Delay (s)		29.2		28.9	29.3	16.8	12.4	25.5	6.5	12.2	9.4	
Level of Service		C		C	C	B	B	C	A	B	A	
Approach Delay (s)		29.2			26.9			20.4			9.7	
Approach LOS		C			C			C			A	

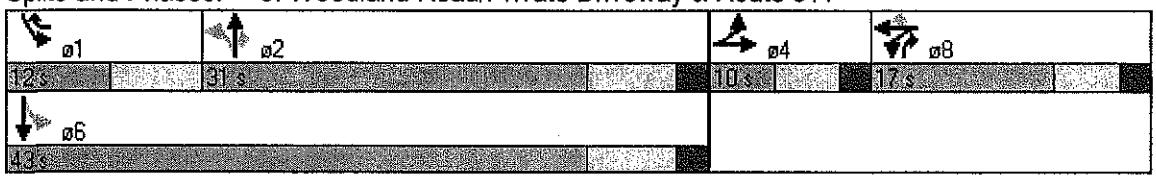
Intersection Summary					
HCM Average Control Delay	17.6	HCM Level of Service		B	
HCM Volume to Capacity ratio	0.73				
Actuated Cycle Length (s)	65.0	Sum of lost time (s)		16.0	
Intersection Capacity Utilization	67.8%	ICU Level of Service		C	
Analysis Period (min)	15				
c Critical Lane Group					

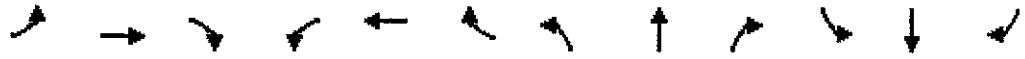
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Volume (vph)	1	367	5	79	17	1223	434	126	1061
Lane Group Flow (vph)	38	200	204	86	17	1248	443	129	1100
Turn Type		Split		pm+ov	Perm		pm+ov	pm+pt	
Protected Phases	4	8	8	1		2	8	1	6
Permitted Phases				8	2		2	6	
Detector Phases	4	8	8	1	2	2	8	1	6
Minimum Initial (s)	4.0	7.0	7.0	4.0	10.0	10.0	7.0	4.0	10.0
Minimum Split (s)	10.0	13.0	13.0	9.5	17.5	17.5	13.0	9.5	17.5
Total Split (s)	10.0	17.0	17.0	12.0	31.0	31.0	17.0	12.0	43.0
Total Split (%)	14.3%	24.3%	24.3%	17.1%	44.3%	44.3%	24.3%	17.1%	61.4%
Yellow Time (s)	4.0	4.0	4.0	5.5	5.5	5.5	4.0	5.5	5.5
All-Red Time (s)	2.0	2.0	2.0	0.0	2.0	2.0	2.0	0.0	2.0
Lead/Lag				Lead	Lag	Lag		Lead	
Lead-Lag Optimize?				Yes	Yes	Yes		Yes	
Recall Mode	None	None	None	None	Min	Min	None	None	Min
v/c Ratio	0.20	0.60	0.61	0.13	0.09	0.83	0.34	0.40	0.52
Control Delay	19.1	33.2	33.5	4.7	15.4	23.9	1.2	10.7	9.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.1	33.2	33.5	4.7	15.4	23.9	1.2	10.7	9.5
Queue Length 50th (ft)	5	85	87	0	5	263	0	24	143
Queue Length 95th (ft)	17	#171	#175	26	17	#398	14	48	193
Internal Link Dist (ft)	105		2012			2203			2327
Turn Bay Length (ft)		250		250	73		350	183	
Base Capacity (vph)	190	356	357	658	204	1549	1285	327	2208
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	0.20	0.56	0.57	0.13	0.08	0.81	0.34	0.39	0.50

Intersection Summary

Cycle Length: 70
Actuated Cycle Length: 61.5
Natural Cycle: 65
Control Type: Semi Act-Uncoord
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Woodland Road/Private Driveway & Route 611





Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	13	13	13	12	12	12	11	12	12	11	12	12
Grade (%)		2%			8%			1%			-1%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
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		0.892			0.923							
Flt Protected		0.990			0.993		0.950			0.950		
Satd. Flow (prot)	0	1683	0	0	1639	0	1702	3522	0	1719	3557	0
Flt Permitted		0.990			0.993		0.950			0.950		
Satd. Flow (perm)	0	1683	0	0	1639	0	1702	3522	0	1719	3557	0
Headway Factor	0.97	0.97	0.97	1.05	1.05	1.05	1.05	1.01	1.01	1.04	0.99	0.99
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		158			1027			2407			3261	
Travel Time (s)		3.1			20.0			36.5			49.4	
Volume (vph)	1	0	4	4	8	16	8	1295	1	7	1196	1
Peak Hour Factor	0.50	0.50	0.50	0.39	0.39	0.39	0.92	0.92	0.92	0.89	0.89	0.89
Adj. Flow (vph)	2	0	8	10	21	41	9	1408	1	8	1344	1
Lane Group Flow (vph)	0	10	0	0	72	0	9	1409	0	8	1345	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	45.8%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		2%			8%			1%			-1%	
Volume (veh/h)	1	0	4	4	8	16	8	1295	1	7	1196	1
Peak Hour Factor	0.50	0.50	0.50	0.39	0.39	0.39	0.92	0.92	0.92	0.89	0.89	0.89
Hourly flow rate (vph)	2	0	8	10	21	41	9	1408	1	8	1344	1
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	2133	2786	672	2121	2786	704	1345			1409		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2133	2786	672	2121	2786	704	1345			1409		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	98	62	0	89	98			98		
cM capacity (veh/h)	0	18	398	27	18	379	508			480		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	10	72	9	938	470	8	896	449
Volume Left	2	10	9	0	0	8	0	0
Volume Right	8	41	0	0	1	0	0	1
cSH	0	43	508	1700	1700	480	1700	1700
Volume to Capacity	Err	1.65	0.02	0.55	0.28	0.02	0.53	0.26
Queue Length 95th (ft)	Err	181	1	0	0	1	0	0
Control Delay (s)	Err	522.3	12.2	0.0	0.0	12.6	0.0	0.0
Lane LOS	F	F	B			B		
Approach Delay (s)	Err	522.3	0.1			0.1		
Approach LOS	F	F						

Intersection Summary			
Average Delay	Err		
Intersection Capacity Utilization	45.8%	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		↕			↕		↰	↑↑↱		↰	↑↑↱	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	10	10	10	11	12	12	11	12	12
Grade (%)		0%			9%			2%			-5%	
Storage Length (ft)	0		0	0		0	100		0	100		0
Storage Lanes	0		0	0		0	1		0	1		0
Turning Speed (mph)	15		9	15		9	15		9	15		9
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		0.940			0.958			0.996			0.996	
Flt Protected		0.978			0.971		0.950			0.950		
Satd. Flow (prot)	0	1712	0	0	1544	0	1694	3490	0	1753	3613	0
Flt Permitted		0.978			0.971		0.950			0.950		
Satd. Flow (perm)	0	1712	0	0	1544	0	1694	3490	0	1753	3613	0
Headway Factor	1.00	1.00	1.00	1.16	1.16	1.16	1.06	1.01	1.01	1.01	0.97	0.97
Link Speed (mph)		30			30			45			45	
Link Distance (ft)		294			1492			3261			2754	
Travel Time (s)		6.7			33.9			49.4			41.7	
Volume (vph)	28	6	27	34	6	17	25	1251	36	16	1143	26
Peak Hour Factor	0.90	0.90	0.90	0.72	0.90	0.72	0.90	0.94	0.94	0.95	0.95	0.90
Adj. Flow (vph)	31	7	30	47	7	24	28	1331	38	17	1203	29
Lane Group Flow (vph)	0	68	0	0	78	0	28	1369	0	17	1232	0
Sign Control		Stop			Stop			Free			Free	

Intersection Summary			
Area Type:	Other		
Control Type: Unsignalized			
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Free			Free	
Grade		0%			9%			2%			-5%	
Volume (veh/h)	28	6	27	34	6	17	25	1251	36	16	1143	26
Peak Hour Factor	0.90	0.90	0.90	0.72	0.90	0.72	0.90	0.94	0.94	0.95	0.95	0.90
Hourly flow rate (vph)	31	7	30	47	7	24	28	1331	38	17	1203	29
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	1999	2676	616	2074	2671	685	1232			1369		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1999	2676	616	2074	2671	685	1232			1369		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	67	93	0	67	94	95			97		
cM capacity (veh/h)	23	20	433	20	20	390	561			497		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	68	78	28	887	482	17	802	430
Volume Left	31	47	28	0	0	17	0	0
Volume Right	30	24	0	0	38	0	0	29
cSH	39	28	561	1700	1700	497	1700	1700
Volume to Capacity	1.75	2.76	0.05	0.52	0.28	0.03	0.47	0.25
Queue Length 95th (ft)	179	233	4	0	0	3	0	0
Control Delay (s)	583.3	1093.0	11.7	0.0	0.0	12.5	0.0	0.0
Lane LOS	F	F	B			B		
Approach Delay (s)	583.3	1093.0	0.2			0.2		
Approach LOS	F	F						

Intersection Summary			
Average Delay	44.7		
Intersection Capacity Utilization	47.0%	ICU Level of Service	A
Analysis Period (min)	15		

APPENDIX H

SIGNAL WARRANT ANALYIS WORKSHEETS

Traffic Signal Warrant Summary
PennDOT Warrant (xi) - Peak Hour Volume

Municipality:	Paradise Township	Analyst:	EMM
County:	Monroe	TPD Project #:	CECO.A.00008

	Street Name	Lanes	Speed	Direction
Major Street:	Route 611	2	45	North-South
Minor Street:	Route 314	2		East-West

Volume Level Criteria

1. Is the critical speed of major street > 40 mph? Yes
2. Is the intersection in a built-up area of isolated community of <10,000 population? No

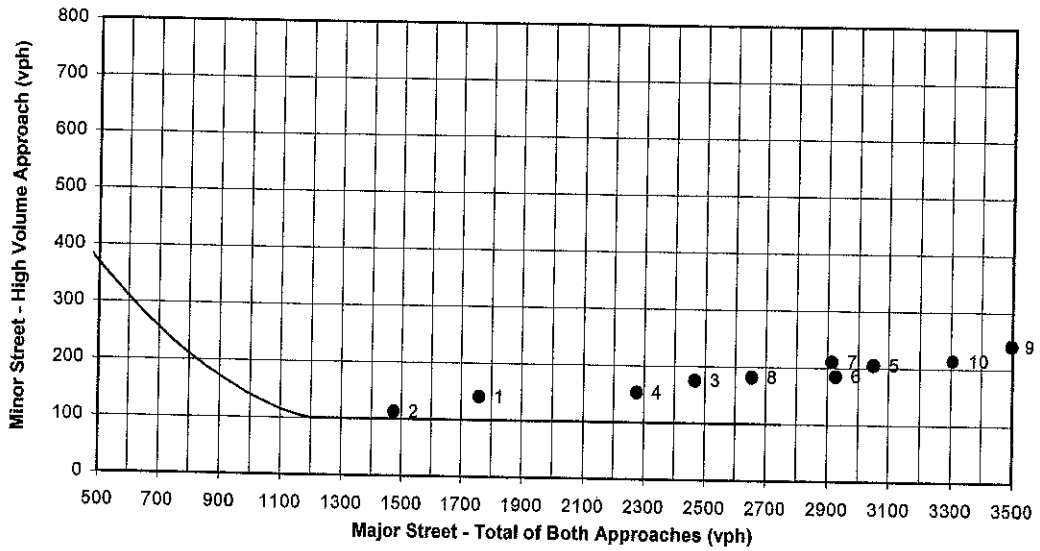
70% factor applied to volume thresholds

PennDOT Warrant xi - Peak Hour

Condition	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2005 Existing FRI	9	0	132	0	0	0	287	791	0	0	643	38
2005 Existing SAT	17	0	96	0	0	0	115	757	0	0	583	18
2007 Base FRI	11	0	164	0	0	0	328	1148	0	0	949	42
2007 Base SAT	18	0	135	0	0	0	158	1127	0	0	971	19
2007 Projected FRI	41	0	164	0	0	0	328	1473	0	0	1184	64
2007 Projected SAT	50	0	135	0	0	0	158	1478	0	0	1247	44
2017 Base FRI	14	0	197	0	0	0	401	1348	0	0	1114	51
2017 Base SAT	22	0	160	0	0	0	187	1323	0	0	1120	23
2017 Projected FRI	44	0	197	0	0	0	401	1673	0	0	1349	73
2017 Projected SAT	54	0	160	0	0	0	187	1674	0	0	1396	48

Results

	Condition	Major Street Volume	Minor Street Volume	Minor Street Warrant	Meets Warrant?
1	2005 Existing FRI	1759	141	100	yes
2	2005 Existing SAT	1473	113	100	yes
3	2007 Base FRI	2467	175	100	yes
4	2007 Base SAT	2275	153	100	yes
5	2007 Projected FRI	3049	205	100	yes
6	2007 Projected SAT	2927	185	100	yes
7	2017 Base FRI	2914	211	100	yes
8	2017 Base SAT	2653	182	100	yes
9	2017 Projected FRI	3496	241	100	yes
10	2017 Projected SAT	3305	214	100	yes



Traffic Signal Warrant Summary
PennDOT Warrant (xi) - Peak Hour Volume

Municipality:	Paradise Township	Analyst:	EMM
County:	Monroe	TPD Project #:	CECO.A.00008

	Street Name	Lanes	Speed	Direction
Major Street:	Route 611	2	45	North-South
Minor Street:	Meadowside Road/Trinity Hill Road	1		East-West

Volume Level Criteria

1. Is the critical speed of major street > 40 mph? Yes
2. Is the intersection in a built-up area of isolated community of <10,000 population? No

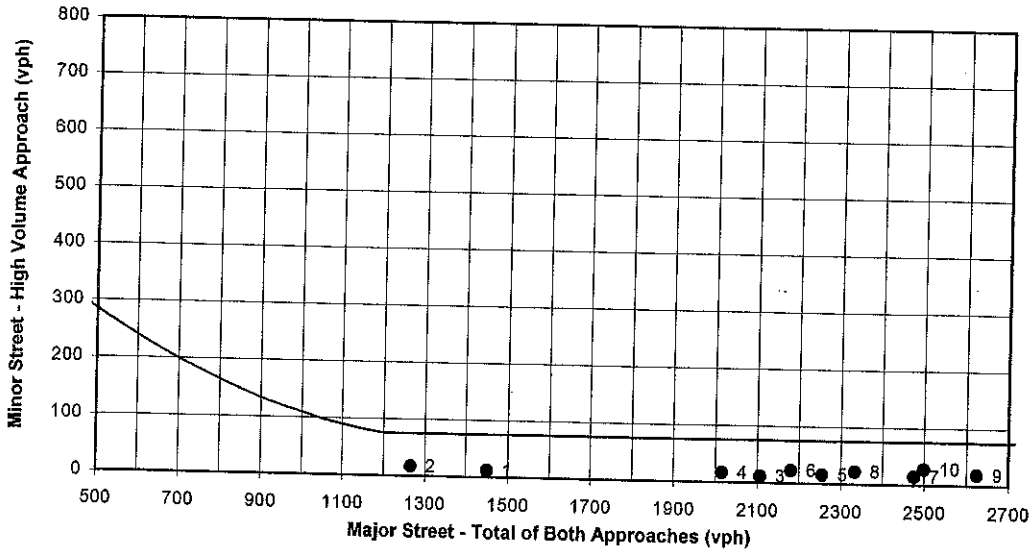
70% factor applied to volume thresholds

PennDOT Warrant xi - Peak Hour

Condition	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2005 Existing FRI	0	0	3	1	1	10	3	786	1	5	654	1
2005 Existing SAT	1	0	3	3	6	8	6	705	1	1	551	1
2007 Base FRI	0	0	3	1	1	10	3	1142	1	5	954	1
2007 Base SAT	1	0	3	3	6	8	6	1070	1	1	936	1
2007 Projected FRI	0	0	3	1	1	14	3	1202	1	11	1037	1
2007 Projected SAT	1	0	3	3	6	14	6	1140	1	7	1025	1
2017 Base FRI	0	0	4	1	1	13	4	1342	1	6	1121	1
2017 Base SAT	1	0	4	4	8	10	8	1247	1	1	1075	1
2017 Projected FRI	0	0	4	1	1	17	4	1402	1	12	1204	1
2017 Projected SAT	1	0	4	4	8	16	8	1317	1	7	1164	1

Results

	Condition	Major Street Volume	Minor Street Volume	Minor Street Warrant	Meets Warrant?
1	2005 Existing FRI	1450	12	75	no
2	2005 Existing SAT	1265	17	75	no
3	2007 Base FRI	2106	12	75	no
4	2007 Base SAT	2015	17	75	no
5	2007 Projected FRI	2255	16	75	no
6	2007 Projected SAT	2180	23	75	no
7	2017 Base FRI	2475	15	75	no
8	2017 Base SAT	2333	22	75	no
9	2017 Projected FRI	2624	19	75	no
10	2017 Projected SAT	2498	28	75	no



Traffic Signal Warrant Summary
PennDOT Warrant (xi) - Peak Hour Volume

Municipality:	Paradise Township	Analyst:	EMM
County:	Monroe	TPD Project #:	CECO.A.00008

	Street Name	Lanes	Speed	Direction
Major Street:	Route 611	2	45	North-South
Minor Street:	Grange Road/Green Springs Driveway	1		East-West

Volume Level Criteria

1. Is the critical speed of major street > 40 mph? Yes
2. Is the intersection in a built-up area of isolated community of <10,000 population? No

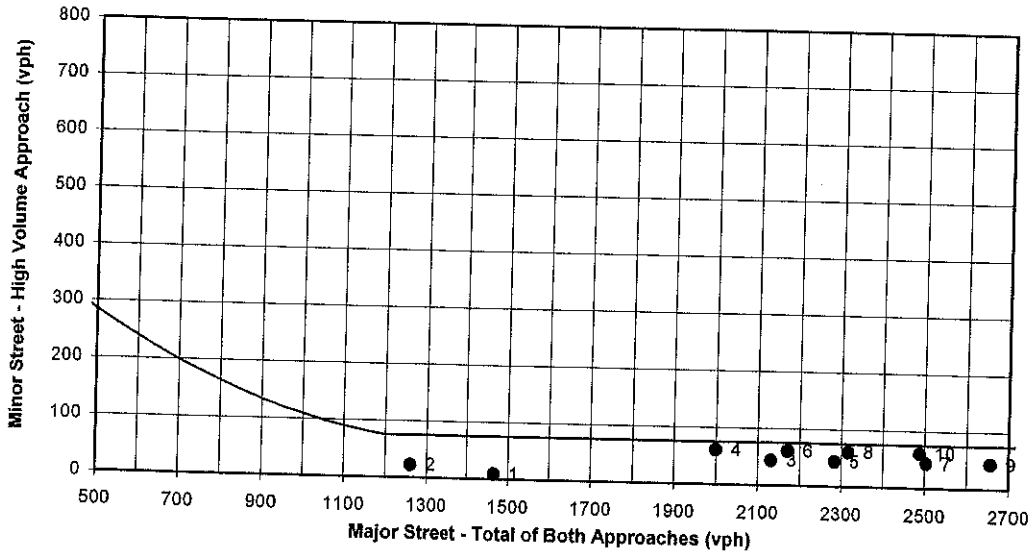
70% factor applied to volume thresholds

PennDOT Warrant xi - Peak Hour

Condition	Eastbound			Westbound			Northbound			Southbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2005 Existing FRI	0	0	0	2	0	7	0	788	8	12	658	0
2005 Existing SAT	0	0	0	15	0	8	0	699	15	7	538	0
2007 Base FRI	20	4	20	12	7	16	31	1103	18	19	928	31
2007 Base SAT	28	6	27	31	6	15	25	1021	33	14	880	26
2007 Projected FRI	20	4	20	12	7	16	31	1167	18	19	1017	31
2007 Projected SAT	28	6	27	31	6	15	25	1097	33	14	975	26
2017 Base FRI	20	4	20	13	7	18	31	1304	20	22	1095	31
2017 Base SAT	28	6	27	34	6	17	25	1197	36	16	1016	26
2017 Projected FRI	20	4	20	13	7	18	31	1368	20	22	1184	31
2017 Projected SAT	28	6	27	34	6	17	25	1273	36	16	1111	26

Results

	Condition	Major Street Volume	Minor Street Volume	Minor Street Warrant	Meets Warrant?
1	2005 Existing FRI	1466	9	75	no
2	2005 Existing SAT	1259	23	75	no
3	2007 Base FRI	2130	44	75	no
4	2007 Base SAT	1999	61	75	no
5	2007 Projected FRI	2283	44	75	no
6	2007 Projected SAT	2170	61	75	no
7	2017 Base FRI	2503	44	75	no
8	2017 Base SAT	2316	61	75	no
9	2017 Projected FRI	2656	44	75	no
10	2017 Projected SAT	2487	61	75	no



APPENDIX I

AUXILARY LANE ANALYIS WORKSHEETS

LEFT-TURN LANE WARRANTS

Unsignalized Intersection Left-Turn Storage Lane Warrant Analysis

Based on Highway Research Record 211
"Volume Warrants for Left-Turn Storage Lanes At Unsignalized Grade Intersection"
M.D. Harmelink

PROJECT INFORMATION

TPD Project Number:	CECO.A.00008
Intersection:	Woodland Road and Eastern Site Driveway
Movement:	Left Turns into Eastern Site Driveway
Analysis Period:	2007 Projected Conditions, Friday P.M. Peak Hour
Analyst:	EMM

INPUTS

Advancing Volume (V_A) =	324
Opposing Volume (V_O) =	618
Number of Left Turns =	24
Speed Limit =	40
Proportion of Left Turns =	0.07

t_w = 2.92
t_A = 11.11
λ = 14.45

Headway range, sec	Percent Headways in each range		Opposing Volume	Number of Headways in Range	Average Headway, sec	Duration, sec
0-1	7	0	618	41.07	0.5	20.53
1-2	37	7	618	187.56	1.5	281.35
2-3	58	37	618	132.34	2.5	330.84
			Total	360.97		632.72

Unblocked Time = 2324.70

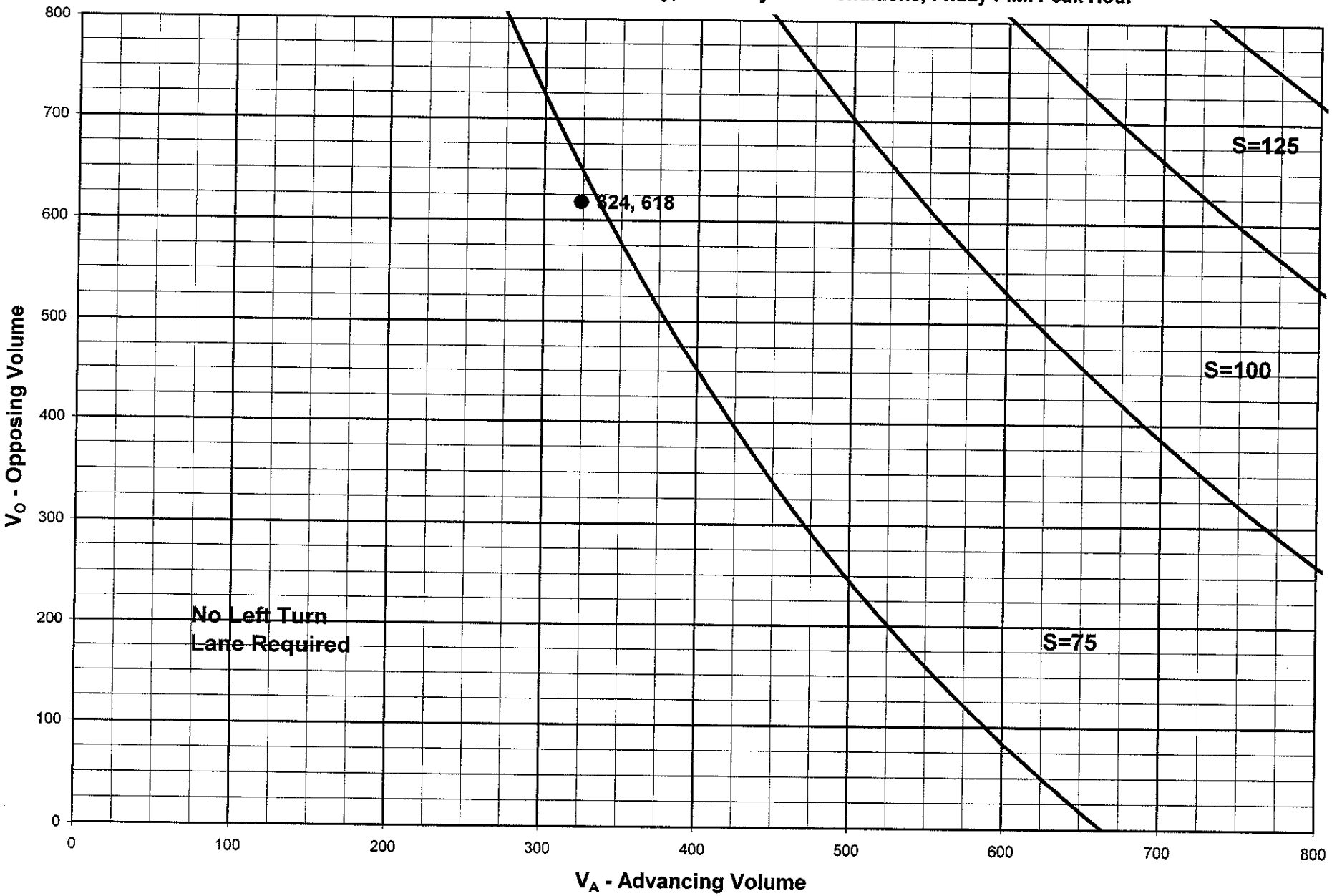
μ = 774.90

Left turn lane warrants are for ρ > than
8.00E-06 for 40 mph

ρ =	0.0187
75 foot lane ρ^3 =	6.49E-06
100 foot lane ρ^4 =	1.21E-07
125 foot lane ρ^5 =	2.26E-09
150 foot lane ρ^6 =	4.21E-11
175 foot lane ρ^7 =	7.85E-13

Volume Warrants for Left Turn Storage Lanes at Unsignalized Grade Intersections V = 40 m.p.h.; L = 7%

Woodland Road and Eastern Site Driveway, 2007 Projected Conditions, Friday P.M. Peak Hour



Unsignalized Intersection Left-Turn Storage Lane Warrant Analysis

Based on Highway Research Record 211
"Volume Warrants for Left-Turn Storage Lanes At Unsignalized Grade Intersection"
M.D. Harmelink

PROJECT INFORMATION

TPD Project Number:	CECO.A.00008
Intersection:	Woodland Road and Western Site Driveway
Movement:	Left Turns into Western Site Driveway
Analysis Period:	2007 Projected Conditions, Friday P.M. Peak Hour
Analyst:	EMM

INPUTS

Advancing Volume (V_A) =	198
Opposing Volume (V_O) =	268
Number of Left Turns =	58
Speed Limit =	40
Proportion of Left Turns =	0.29

t_w = 1.06
t_A = 18.18
λ = 10.01

Headway range, sec	Percent Headways in each range		Opposing Volume	Number of Headways in Range	Average Headway, sec	Duration, sec
0-1	3	0	268	9.03	0.5	4.51
1-2	28	3	268	66.99	1.5	100.48
2-3	44	28	268	42.21	2.5	105.52
			Total	118.22		210.51

Unblocked Time = 3015.04

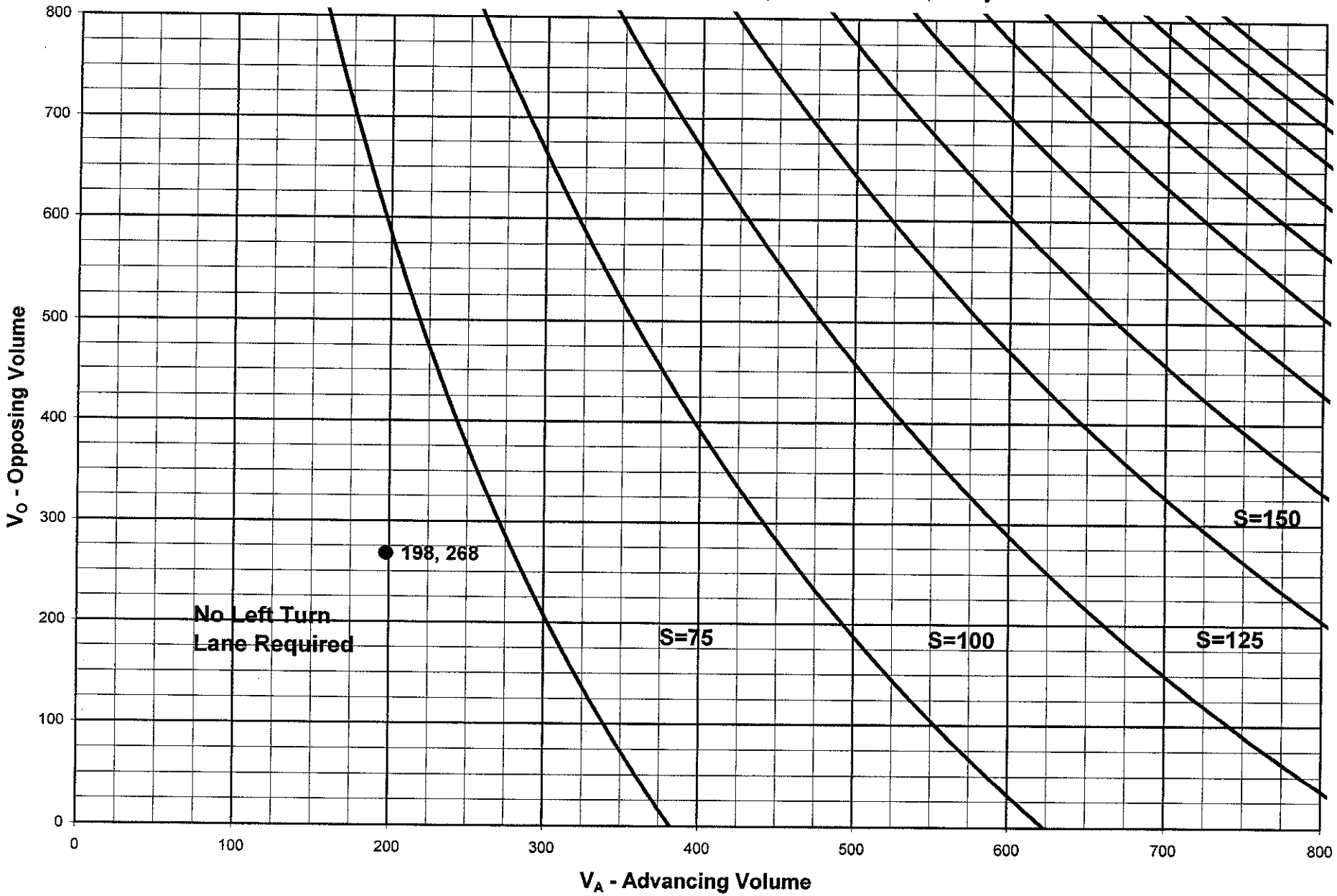
μ = 1005.01

Left turn lane warrants are for ρ > than
8.00E-06 for 40 mph

ρ =	0.0100
75 foot lane ρ^3 =	9.87E-07
100 foot lane ρ^4 =	9.83E-09
125 foot lane ρ^5 =	9.79E-11
150 foot lane ρ^6 =	9.74E-13
175 foot lane ρ^7 =	9.70E-15

Volume Warrants for Left Turn Storage Lanes at Unsignalized Grade Intersections V = 40 m.p.h.; L = 29%

Woodland Road and Western Site Driveway, 2007 Projected Conditions, Friday P.M. Peak Hour



Unsignalized Intersection Left-Turn Storage Lane Warrant Analysis

Based on Highway Research Record 211
"Volume Warrants for Left-Turn Storage Lanes At Unsignalized Grade Intersection"
M.D. Harmelink

PROJECT INFORMATION

TPD Project Number:	CECO.A.00008
Intersection:	Woodland Road and Eastern Site Driveway
Movement:	Left Turns into Eastern Site Driveway
Analysis Period:	2007 Projected Conditions, Saturday P.M. Peak Hour
Analyst:	EMM

INPUTS

Advancing Volume (V_A) =	311
Opposing Volume (V_O) =	616
Number of Left Turns =	26
Speed Limit =	40
Proportion of Left Turns =	0.08

t_w = 2.91
t_A = 11.58
λ = 14.84

Headway range, sec	Percent Headways in each range		Opposing Volume	Number of Headways in Range	Average Headway, sec	Duration, sec
0-1	7	0	616	40.83	0.5	20.41
1-2	37	7	616	186.83	1.5	280.24
2-3	58	37	616	131.75	2.5	329.38
			Total	359.41		630.04

Unblocked Time = 2328.48

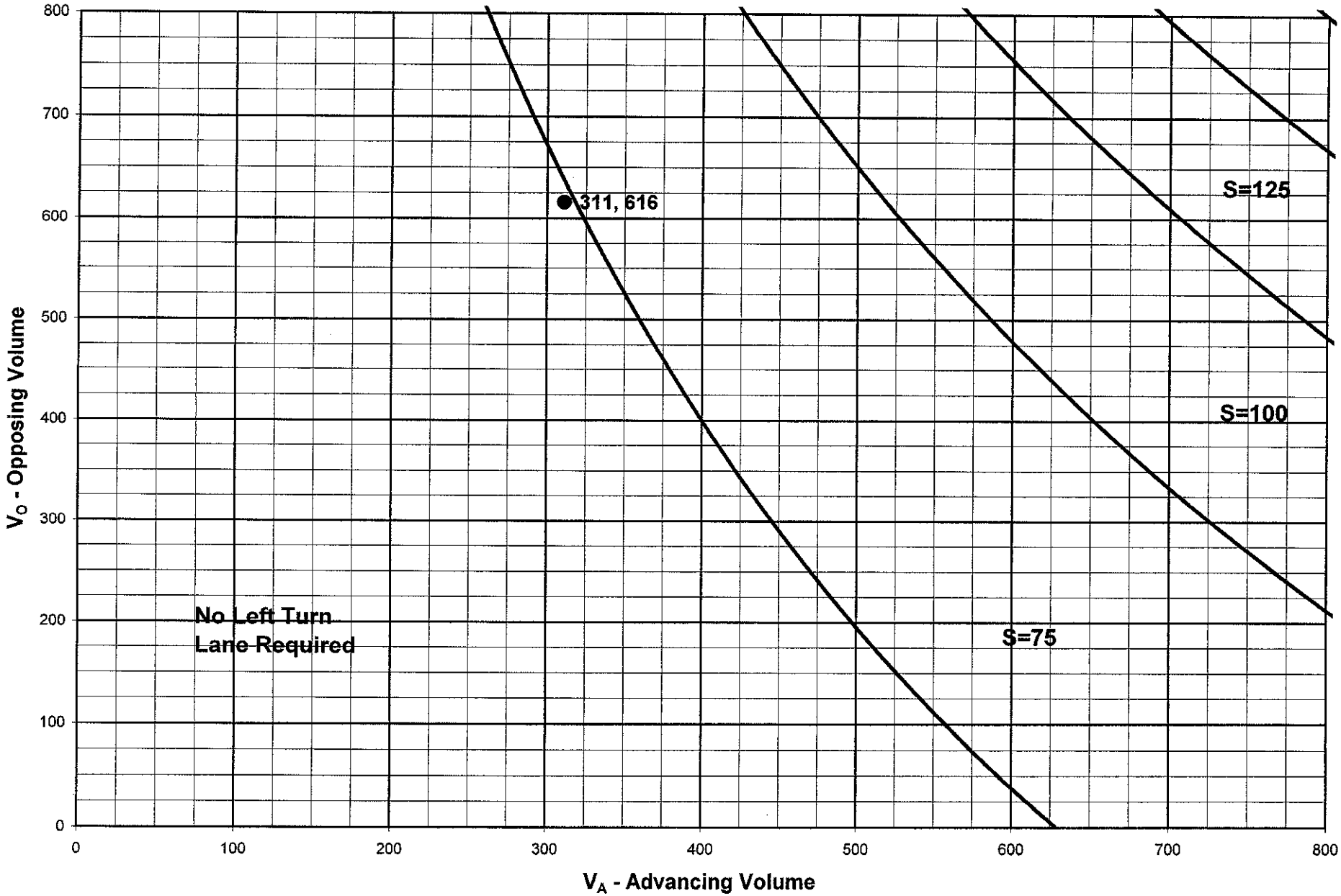
μ = 776.16

Left turn lane warrants are for ρ > than
8.00E-06 for 40 mph

ρ =	0.0191
75 foot lane ρ^3 =	6.98E-06
100 foot lane ρ^4 =	1.34E-07
125 foot lane ρ^5 =	2.55E-09
150 foot lane ρ^6 =	4.88E-11
175 foot lane ρ^7 =	9.32E-13

Volume Warrants for Left Turn Storage Lanes at Unsignalized Grade Intersections V = 40 m.p.h.; L = 8%

Woodland Road and Eastern Site Driveway, 2007 Projected Conditions, Saturday P.M. Peak Hour



Unsignalized Intersection Left-Turn Storage Lane Warrant Analysis

Based on Highway Research Record 211
"Volume Warrants for Left-Turn Storage Lanes At Unsignalized Grade Intersection"
M.D. Harmelink

PROJECT INFORMATION

TPD Project Number:	CECO.A.00008
Intersection:	Woodland Road and Western Site Driveway
Movement:	Left Turns into Western Site Driveway
Analysis Period:	2007 Projected Conditions, Saturday P.M. Peak Hour
Analyst:	EMM

INPUTS

Advancing Volume (V_A) =	159
Opposing Volume (V_O) =	243
Number of Left Turns =	64
Speed Limit =	40
Proportion of Left Turns =	0.40

t_w = 0.95
t_A = 22.64
λ = 7.21

Headway range, sec	Percent Headways in each range		Opposing Volume	Number of Headways in Range	Average Headway, sec	Duration, sec
0-1	3	0	243	7.56	0.5	3.78
1-2	27	3	243	59.25	1.5	88.87
2-3	43	27	243	36.91	2.5	92.28
			Total	103.72		184.94

Unblocked Time = 3066.87

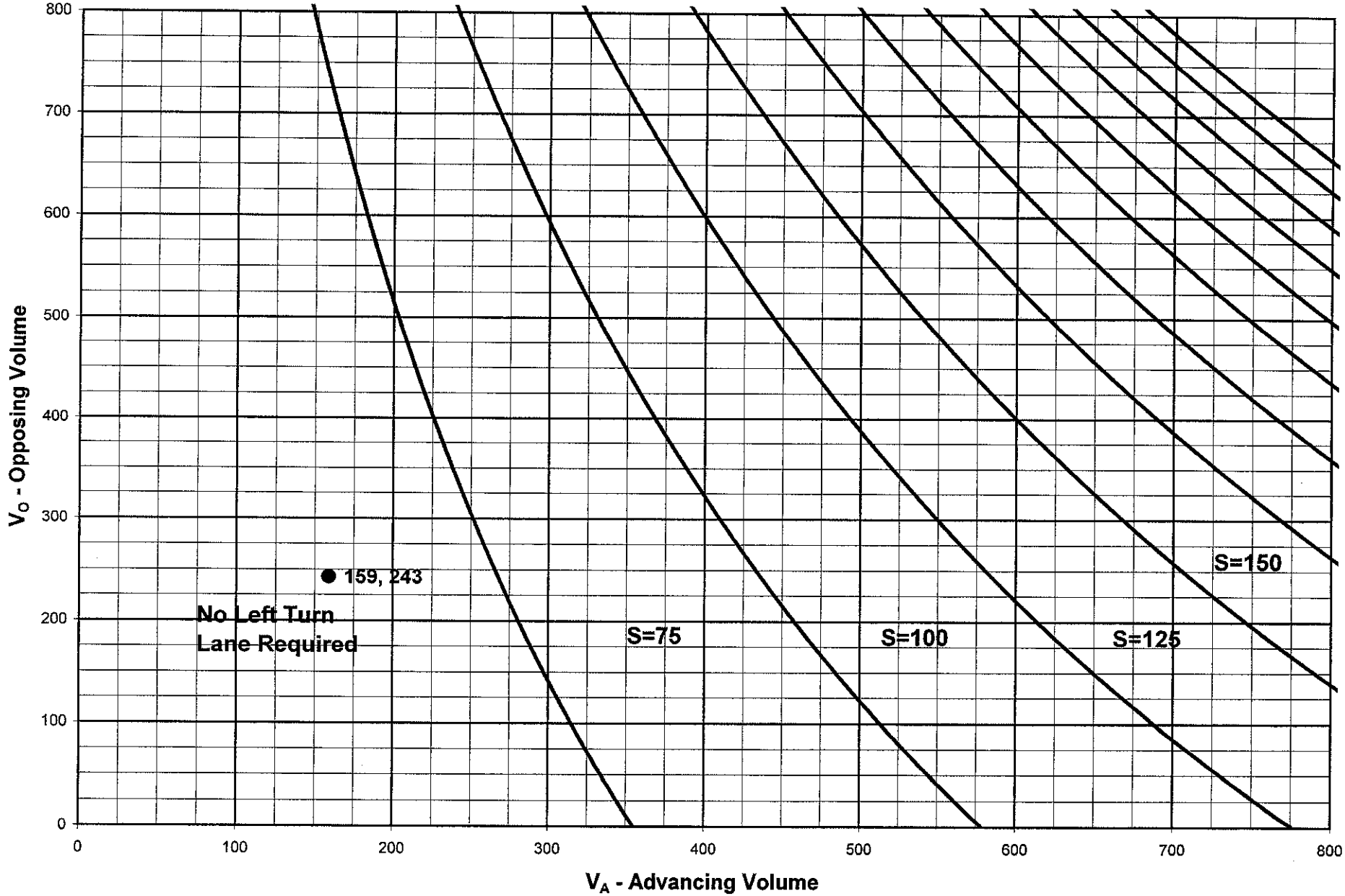
μ = 1022.29

Left turn lane warrants are for ρ > than
8.00E-06 for 40 mph

ρ =	0.0071
75 foot lane ρ^3 =	3.51E-07
100 foot lane ρ^4 =	2.48E-09
125 foot lane ρ^5 =	1.75E-11
150 foot lane ρ^6 =	1.23E-13
175 foot lane ρ^7 =	8.71E-16

Volume Warrants for Left Turn Storage Lanes at Unsignalized Grade Intersections V = 40 m.p.h.; L = 40%

Woodland Road and Western Site Driveway, 2007 Projected Conditions, Saturday P.M. Peak Hour



Unsignalized Intersection Left-Turn Storage Lane Warrant Analysis

Based on Highway Research Record 211
"Volume Warrants for Left-Turn Storage Lanes At Unsignalized Grade Intersection"
M.D. Harmelink

PROJECT INFORMATION

TPD Project Number:	CECO.A.00008
Intersection:	Woodland Road and Eastern Site Driveway
Movement:	Left Turns into Eastern Site Driveway
Analysis Period:	2017 Projected Conditions, Friday P.M. Peak Hour
Analyst:	EMM

INPUTS

Advancing Volume (V_A) =	349
Opposing Volume (V_O) =	641
Number of Left Turns =	24
Speed Limit =	40
Proportion of Left Turns =	0.07

t_w = 3.06
t_A = 10.32
λ = 16.13

Headway range, sec	Percent Headways in each range		Opposing Volume	Number of Headways in Range	Average Headway, sec	Duration, sec
0-1	7	0	641	43.88	0.5	21.94
1-2	37	7	641	196.03	1.5	294.05
2-3	59	37	641	139.11	2.5	347.79
			Total	379.03		663.77

Unblocked Time = 2281.29

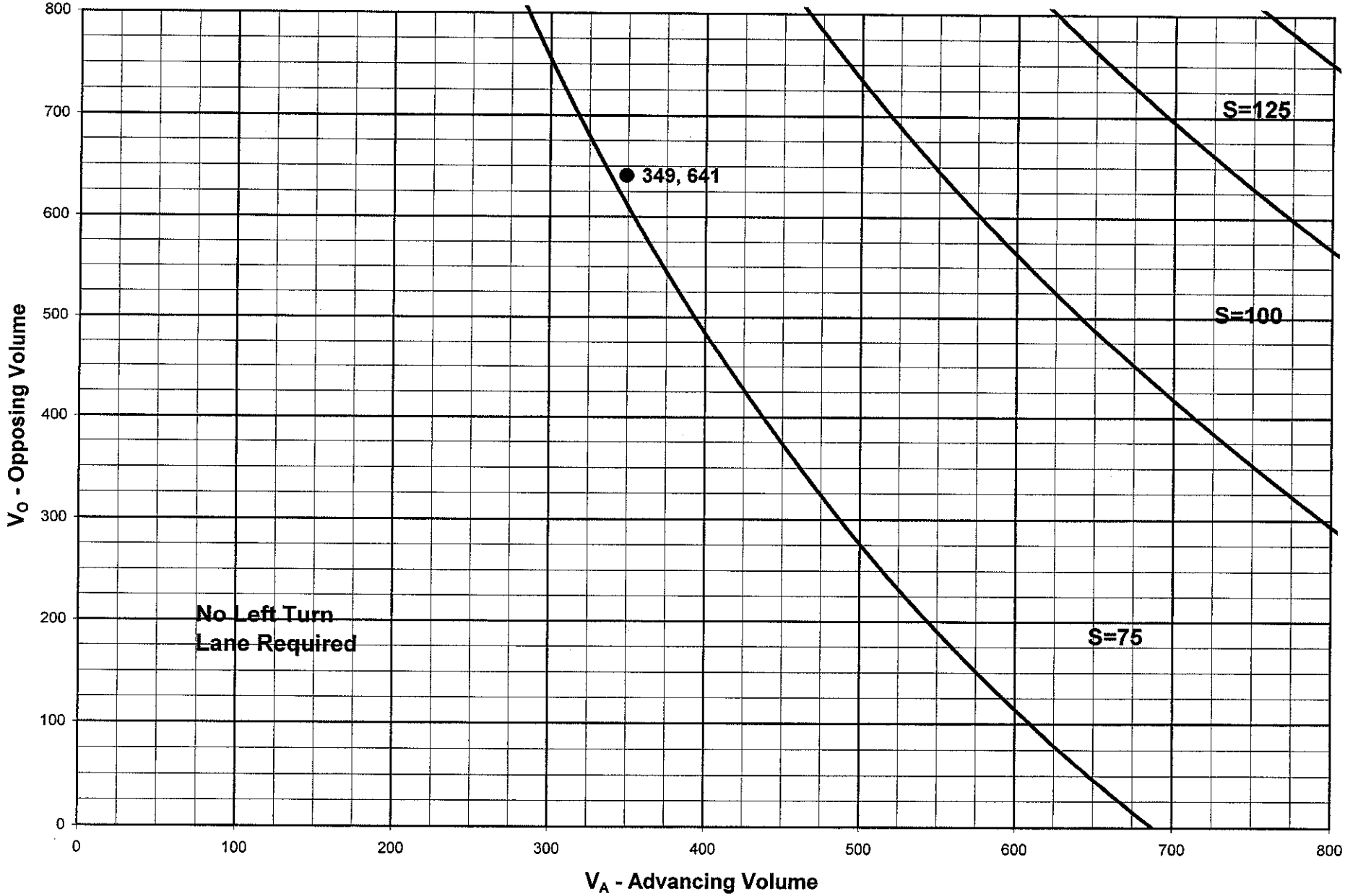
μ = 760.43

Left turn lane warrants are for ρ > than 8.00E-06 for 40 mph

ρ =	0.0212	
75 foot lane ρ^3 =	9.55E-06	satisfied
100 foot lane ρ^4 =	2.03E-07	
125 foot lane ρ^5 =	4.30E-09	
150 foot lane ρ^6 =	9.12E-11	
175 foot lane ρ^7 =	1.93E-12	

Volume Warrants for Left Turn Storage Lanes at Unsignalized Grade Intersections V = 40 m.p.h.; L = 7%

Woodland Road and Eastern Site Driveway, 2017 Projected Conditions, Friday P.M. Peak Hour



Unsignalized Intersection Left-Turn Storage Lane Warrant Analysis

Based on Highway Research Record 211
"Volume Warrants for Left-Turn Storage Lanes At Unsignalized Grade Intersection"
M.D. Harmelink

PROJECT INFORMATION

TPD Project Number:	CECO.A.00008
Intersection:	Woodland Road and Western Site Driveway
Movement:	Left Turns into Western Site Driveway
Analysis Period:	2017 Projected Conditions, Friday P.M. Peak Hour
Analyst:	EMM

INPUTS

Advancing Volume (V_A) =	223
Opposing Volume (V_O) =	291
Number of Left Turns =	58
Speed Limit =	40
Proportion of Left Turns =	0.26

t_w = 1.16
t_A = 16.14
λ = 12.21

Headway range, sec	Percent Headways in each range		Opposing Volume	Number of Headways in Range	Average Headway, sec	Duration, sec
0-1	4	0	291	10.48	0.5	5.24
1-2	29	4	291	74.24	1.5	111.37
2-3	45	29	291	47.24	2.5	118.10
			Total	131.97		234.71

Unblocked Time = 2967.71

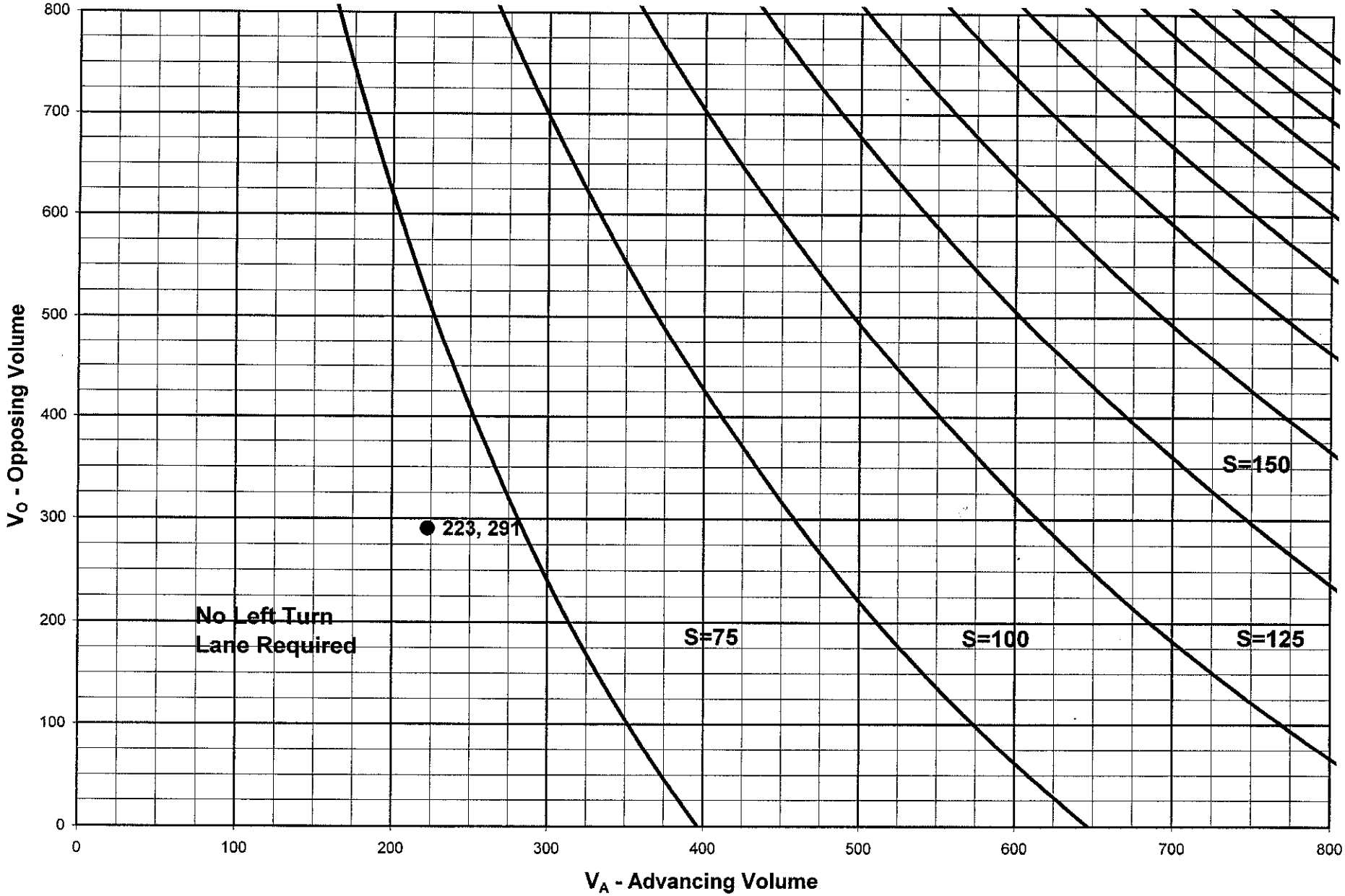
μ = 989.24

Left turn lane warrants are for ρ > than
8.00E-06 for 40 mph

ρ =	0.0123
75 foot lane ρ^3 =	1.88E-06
100 foot lane ρ^4 =	2.32E-08
125 foot lane ρ^5 =	2.86E-10
150 foot lane ρ^6 =	3.53E-12
175 foot lane ρ^7 =	4.36E-14

Volume Warrants for Left Turn Storage Lanes at Unsignalized Grade Intersections V = 40 m.p.h.; L = 26%

Woodland Road and Western Site Driveway, 2017 Projected Conditions, Friday P.M. Peak Hour



Unsignalized Intersection Left-Turn Storage Lane Warrant Analysis

Based on Highway Research Record 211
"Volume Warrants for Left-Turn Storage Lanes At Unsignalized Grade Intersection"
M.D. Harmelink

PROJECT INFORMATION

TPD Project Number:	CECO.A.00008
Intersection:	Woodland Road and Eastern Site Driveway
Movement:	Left Turns into Eastern Site Driveway
Analysis Period:	2017 Projected Conditions, Saturday P.M. Peak Hour
Analyst:	EMM

INPUTS

Advancing Volume (V_A) =	327
Opposing Volume (V_O) =	632
Number of Left Turns =	26
Speed Limit =	40
Proportion of Left Turns =	0.08

t_w = 3.01
t_A = 11.01
λ = 16.00

Headway range, sec	Percent Headways in each range		Opposing Volume	Number of Headways in Range	Average Headway, sec	Duration, sec
0-1	7	0	632	42.77	0.5	21.38
1-2	37	7	632	192.71	1.5	289.07
2-3	59	37	632	136.45	2.5	341.13
			Total	371.93		651.58

Unblocked Time = 2298.25

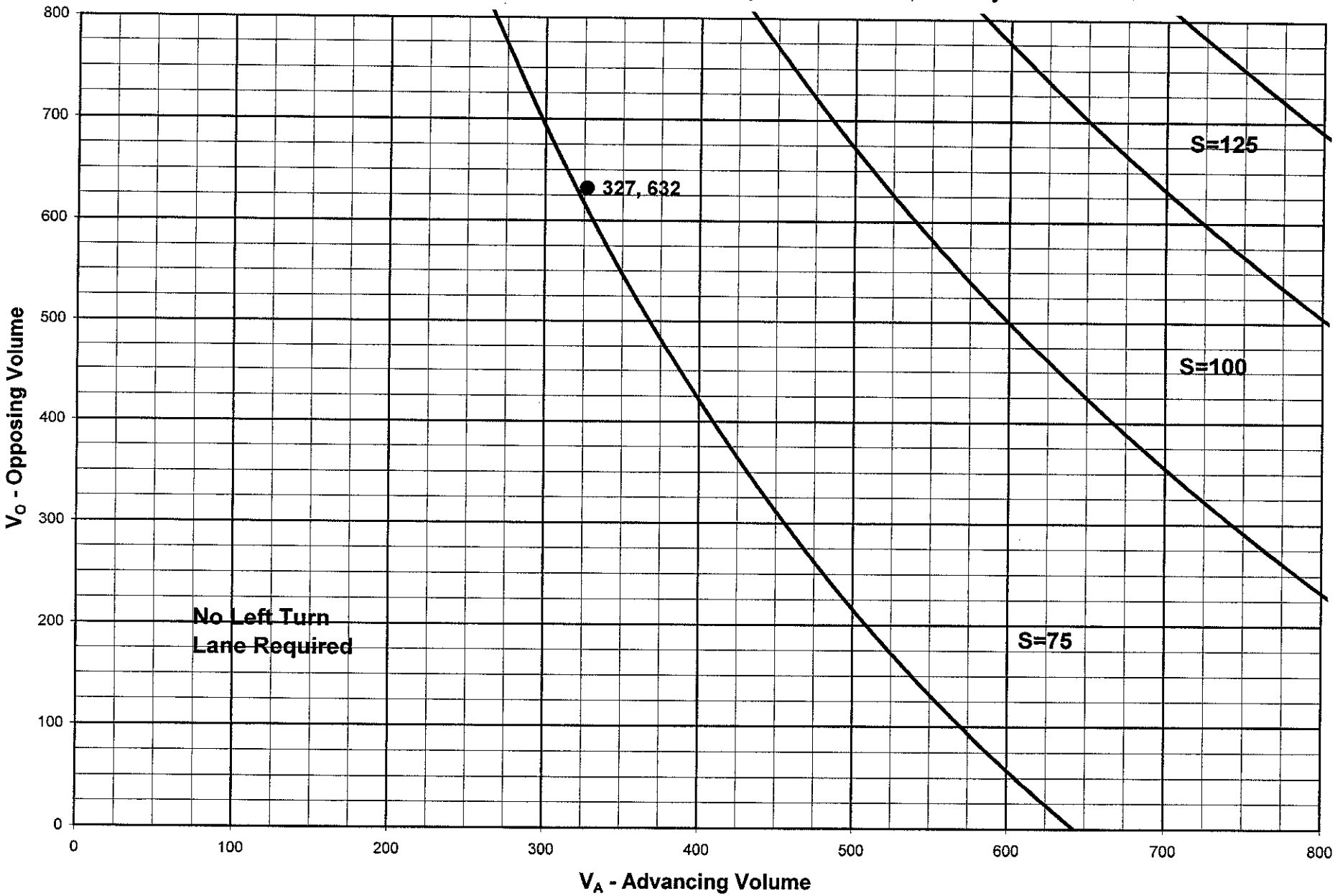
μ = 766.08

Left turn lane warrants are for ρ > than 8.00E-06 for 40 mph

ρ =	0.0209	
75 foot lane ρ^3 =	9.11E-06	satisfied
100 foot lane ρ^4 =	1.90E-07	
125 foot lane ρ^5 =	3.97E-09	
150 foot lane ρ^6 =	8.30E-11	
175 foot lane ρ^7 =	1.73E-12	

Volume Warrants for Left Turn Storage Lanes at Unsignalized Grade Intersections V = 40 m.p.h.; L = 8%

Woodland Road and Eastern Site Driveway, 2017 Projected Conditions, Saturday P.M. Peak Hour



Unsignalized Intersection Left-Turn Storage Lane Warrant Analysis

Based on Highway Research Record 211
"Volume Warrants for Left-Turn Storage Lanes At Unsignalized Grade Intersection"
M.D. Harmelink

PROJECT INFORMATION

TPD Project Number:	CECO.A.00008
Intersection:	Woodland Road and Western Site Driveway
Movement:	Left Turns into Western Site Driveway
Analysis Period:	2017 Projected Conditions, Saturday P.M. Peak Hour
Analyst:	EMM

INPUTS

Advancing Volume (V_A) =	175
Opposing Volume (V_O) =	259
Number of Left Turns =	64
Speed Limit =	40
Proportion of Left Turns =	0.37

t_w = 1.02
t_A = 20.57
λ = 8.64

Headway range, sec	Percent Headways in each range		Opposing Volume	Number of Headways in Range	Average Headway, sec	Duration, sec
0-1	3	0	259	8.49	0.5	4.24
1-2	28	3	259	64.18	1.5	96.27
2-3	44	28	259	40.28	2.5	100.70
			Total	112.95		201.21

Unblocked Time = 3033.65

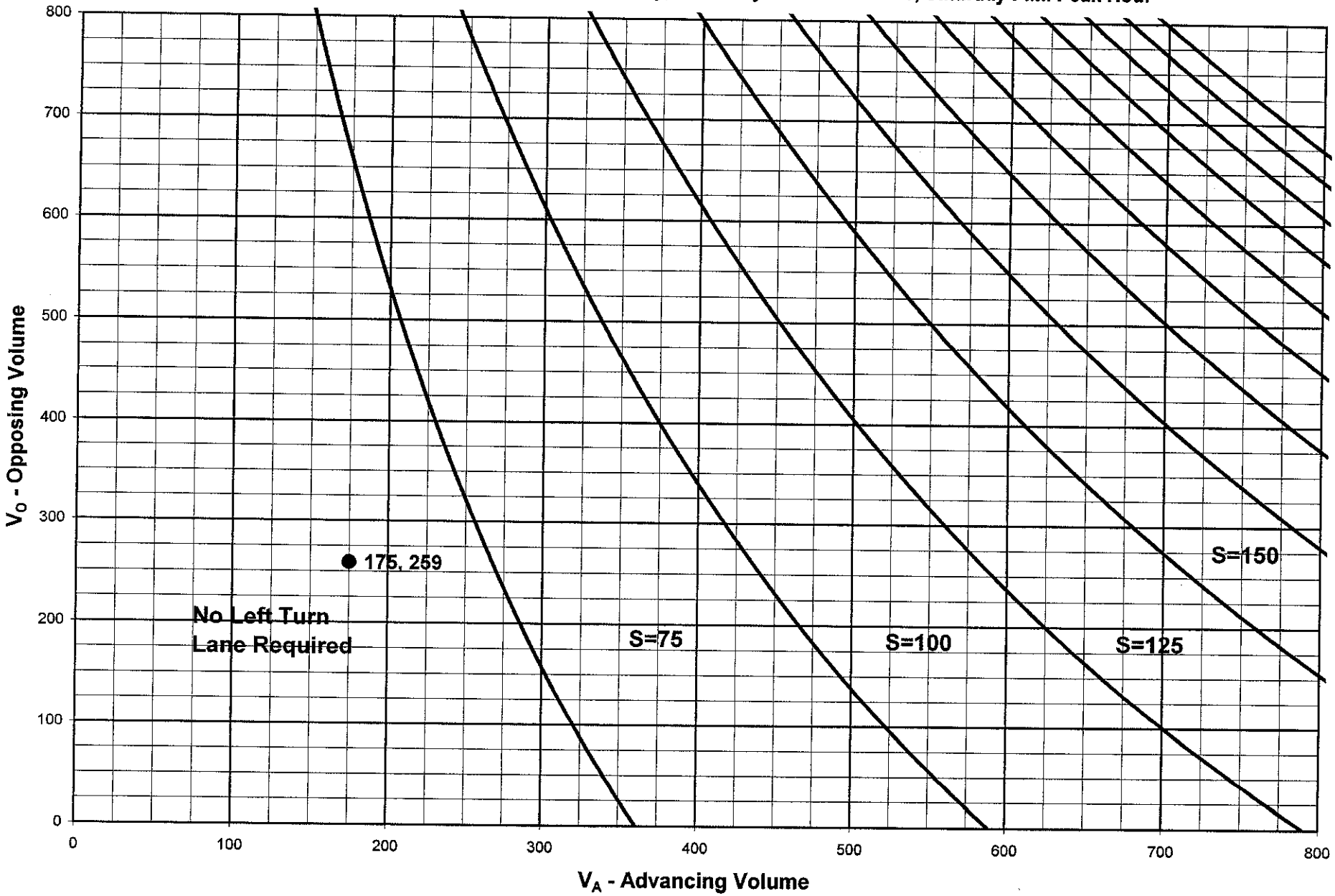
μ = 1011.22

Left turn lane warrants are for ρ > than
8.00E-06 for 40 mph

ρ =	0.0085
75 foot lane ρ^3 =	6.23E-07
100 foot lane ρ^4 =	5.32E-09
125 foot lane ρ^5 =	4.54E-11
150 foot lane ρ^6 =	3.88E-13
175 foot lane ρ^7 =	3.31E-15

Volume Warrants for Left Turn Storage Lanes at Unsignalized Grade Intersections V = 40 m.p.h.; L = 37%

Woodland Road and Western Site Driveway, 2017 Projected Conditions, Saturday P.M. Peak Hour



RIGHT-TURN DECELERATION LANE WARRANTS

Guidelines for Right Turn Treatments

Two-Lane Highways

NCHRP Report 279

"Intersection Channelization Guide"

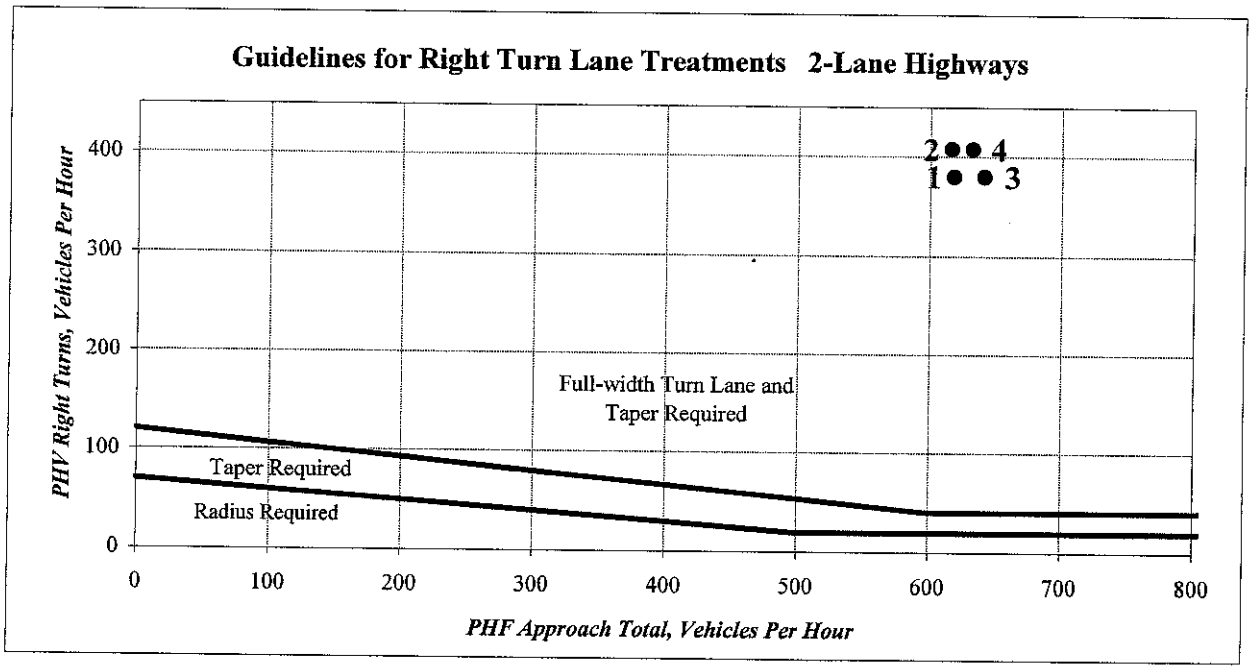
Project Number: CECO.A.00008

Intersection: Woodland Road & Eastern Site Driveway

Movement: Right Turns from Eastbound Woodland Road into Eastern Site Driveway

Analyst: EMM

	Condition	PHV Approach Total	PHV Right Turns	Taper Threshold	Full Lane Threshold	Treatment
1	2007 Projected FRI	618	380	20	40	Full-width Lane and Taper Required
2	2007 Projected SAT	616	408	20	40	Full-width Lane and Taper Required
3	2017 Projected FRI	641	380	20	40	Full-width Lane and Taper Required
4	2017 Projected SAT	632	408	20	40	Full-width Lane and Taper Required



Guidelines for Right Turn Treatments

Two-Lane Highways

NCHRP Report 279

"Intersection Channelization Guide"

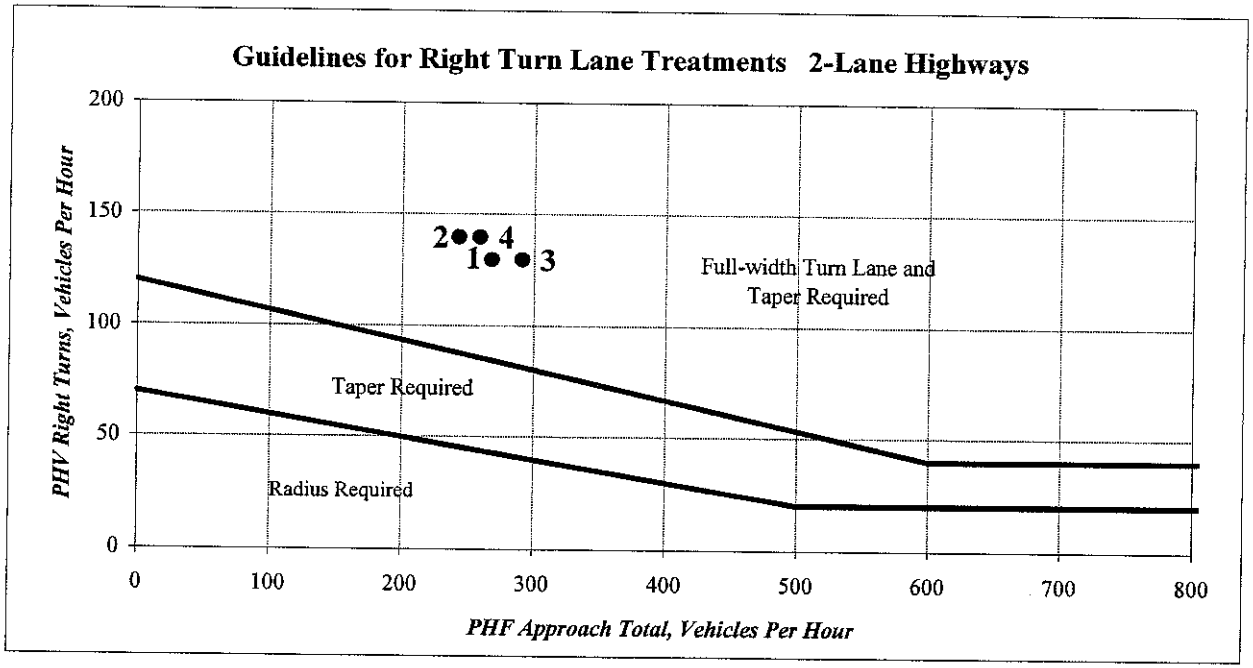
Project Number: CECO.A.00008

Intersection: Woodland Road & Western Site Driveway

Movement: Right Turns from Eastbound Woodland Road intoWestern Site Driveway

Analyst: EMM

	Condition	PHV Approach Total	PHV Right Turns	Taper Threshold	Full Lane Threshold	Treatment
1	2007 Projected FRI	268	130	43	84	Full-width Lane and Taper Required
2	2007 Projected SAT	243	140	46	88	Full-width Lane and Taper Required
3	2017 Projected FRI	291	130	41	81	Full-width Lane and Taper Required
4	2017 Projected SAT	259	140	44	85	Full-width Lane and Taper Required



APPENDIX J

95TH PERCENTILE QUEUE LENGTH SUMMARY

TABLE J-1
95TH PERCENTILE QUEUE LENGTHS
FRIDAY P.M. PEAK HOUR

Intersection	Approach/ Movement		Storage Length	2005 Existing	2007 Base	2007 Projected*	2017 Base	2017 Projected*
Route 611 & Route 314 (Eastern Leg)	WB	L	---	160'	200'	369'	247'	410'
	WB	R	72'	30'	45'	94'	61'	105'
	NB	T/R	---	459'	702'	941'	879'	1229'
	SB	L	175'	44'	59'	88'	78'	109'
	SB	T	---	142'	232'	265'	294'	391'
Route 611 & Route 314 (Western Leg)	EB	L	50'	31'	**	**	**	**
	EB	R	---	40'	96'	155'	200'	316'
	NB	L	143'	49'	118'	223'	302'	517'
Route 611 & Woodland Road/ Strickland's Road/ Big Daddy's Driveway	EB	L/T/R	---	25'	25'	25'	25'	25'
	WB	L	**250'**	119'	175'	163'	189'	174'
	WB	L/T	---			171'		184'
	WB	R	**250'**			33'		42'
	NB	L	73'	25'	25'	25'	25'	25'
	NB	T	---	245'	417'	285'	650'	405'
	NB	R	**350'**			25'		25'
	SB	L	183'	26'	35''	59'	46'	66'
	SB	T/R	---	148'	242'	167'	349'	210'
	SWB	L/T/R	---	25'	25'	---	25'	---
Route 611 & Meadowside Road/ Trinity Hill Road	EB	L/T/R	---	25'	25'	25'	25'	25'
	WB	L/T/R	---	25'	25'	25'	25'	32'
	NB	L	**100'**	25'	25'	25'	25'	25'
	SB	L	**100'**	25'	25'	25'	25'	25'
Route 611 & Grange Road/ Green Springs Driveway	EB	L/T/R	---	---	111'	136'	166'	**
	WB	L/T/R	---	25'	91'	111'	148'	164'
	NB	L	**100'**	25'	25'	25'	25'	25'
	SB	L	**100'**	25'	25'	25'	25'	25'

* = With Site-Related Recommendations
** = Unable to Calculate (No Capacity Available)
Existing Storage Length (**Proposed Storage Length**)

TABLE J-1 (CONTINUED)

Intersection	Approach/ Movement		Storage Length	2005 Existing	2007 Base	2007 Projected*	2017 Base	2017 Projected*
Woodland Road & Pocono Mountain School Road	WB	L	**100'**	25'	25'	25'	25'	25'
	NB	L/R	---	25'	25'	40'	25'	60'
Woodland Road & Bowman Road	WB	L	100'	25'	25'	25'	25'	25'
	NB	L/R	---	25'	30'	41'	33'	43'
Woodland Road & Meadowside Road	EB	L	**100'**	25'	25'	25'	25'	25'
	SB	L/R	---	25'	25'	25'	25'	25'
Woodland Road & Carlton Road	EB	L/T	---	25'	25'	41'	31'	61'
	NB	L	---	25'	25'	25'	25'	25'
Route 940 & Carlton Road/ Caesar's Resort Driveway	EB	L	---	25'	314'	266'	439'	418'
	EB	T/R	---	---				
	WB	L	**100'**	25'	201'	45'	457'	66'
	WB	T/R	---	---		91'		117'
	NB	L/T/R	---	121'	84'	112'	100'	155'
	SB	L/T/R	---	25'	25'	25'	25'	25'
Route 940 & Route 390	EB	L	---	34'	328'	286'	531'	784'
	EB	T	---	---				
	WB	T/R	---	---	204	211'	241'	259'
	SB	L	50'	25'	52'	54'	54'	51'
	SB	R	---	67'				
Route 940 & Route 191/ Red Rock Road	EB	L/T/R	---	25'	25'	25'	25'	25'
	WB	L/T/R	---	25'	25'	25'	25'	25'
	NB	L/T/R	---	25'	25'	25'	25'	25'
	SB	L/T/R	---	25'	43'	46'	85'	91'
Woodland Road & Eastern Site Driveway	WB	L	**100'**	---	---	25'	---	25'
	NB	L	---	---	---	47'	---	53'
	NB	R	---	---	---	25'	---	25'
Woodland Road & Western Site Driveway	WB	L	**100'**	---	---	25'	---	25'
	NB	L	---	---	---	79'	---	91'
	NB	R	---	---	---	25'	---	25'

Existing Storage Length (**Proposed Storage Length**)
* = With Site-Related Recommendations

TABLE J-2
95TH PERCENTILE QUEUE LENGTHS
SATURDAY P.M. PEAK HOUR

Intersection	Approach/ Movement		Storage Length	2005 Existing	2007 Base	2007 Projected*	2017 Base	2017 Projected*
Route 611 & Route 314 (Eastern Leg)	WB	L	---	72'	75'	169'	89'	211'
	WB	R	72'	25'	28'	38'	30'	43'
	NB	T/R	---	232'	443'	520'	590'	809'
	SB	L	175'	25'	25'	31'	26'	39'
	SB	T	---	75'	138'	148'	184'	180'
Route 611 & Route 314 (Western Leg)	EB	L	50'	25'	47'	**	90'	**
	EB	R	---	25'	28'	39'	43'	61'
	NB	L	143'	25'	25'	34'	36'	54'
Route 611 & Woodland Road/ Strickland's Road/ Big Daddy's Driveway	EB	L/T/R	---	25'	25'	25'	25'	25'
	WB	L	**250'**	61'	63'	163'	81'	171'
	WB	L/T	---			166'		175'
	WB	R	**250'**			26'		26'
	NB	L	73'	25'	25'	25'	25'	25'
	NB	T	---	203'	382'	290'	506'	410'
	NB	R	**350'**			25'		25'
	SB	L	183'	25'	25'	37'	25'	37'
	SB	T/R	---	100'	187'	161'	238'	193'
	SWB	L/T/R	---	25'	25'	---	25'	---
Route 611 & Meadowside Road/ Trinity Hill Road	EB	L/T/R	---	25'	25'	25'	25'	**
	WB	L/T/R	---	25'	60'	92'	131'	180'
	NB	L	**100'**	25'	25'	25'	25'	25'
	SB	L	**100'**	25'	25'	25'	25'	25'
Route 611 & Grange Road/ Green Springs Driveway	EB	L/T/R	---	---	94'	123'	147'	176'
	WB	L/T/R	---	25'	137'	163'	210'	233'
	NB	L	**100'**	---	25'	25'	25'	25'
	SB	L	**100'**	25'	25'	25'	25'	25'

* = With Site-Related Recommendations
** = Unable to Calculate (No Capacity Available)
Existing Storage Length (**Proposed Storage Length**)

TABLE J-2 (CONTINUED)

Intersection	Approach/ Movement		Storage Length	2005 Existing	2007 Base	2007 Projected*	2017 Base	2017 Projected*
Woodland Road & Pocono Mountain School Road	WB	L	**100'**	25'	25'	25'	25'	25'
	NB	L/R	---	25'	25'	25'	25'	25'
Woodland Road & Bowman Road	WB	L	100'	25'	25'	25'	25'	25'
	NB	L/R	---	25'	25'	36	25'	40'
Woodland Road & Meadowside Road	EB	L	**100'**	25'	25'	25'	25'	25'
	SB	L/R	---	25'	25'	25'	25'	25'
Woodland Road & Carlton Road	EB	L/T	---	25'	25'	27'	25'	36'
	NB	L	---	25'	25'	25'	25'	25'
Route 940 & Carlton Road/ Caesar's Resort Driveway	EB	L	---	25'	224'	191'	297'	238'
	EB	T/R	---	---				
	WB	L	**100'**	25'	172'	41'	230'	49'
	WB	T/R	---	---		86'		108'
	NB	L/T/R	---	50'	33'	44'	35'	45'
	SB	L/T/R	---	25'	25'	25'	25'	25'
Route 940 & Route 390	EB	L	---	25'	183'	118'	307'	206'
	EB	T	---	---				
	WB	T/R	---	---	198'	153'	234'	184'
	SB	L	50'	25'	105'	75'	171'	154'
	SB	R	---	43'				
Route 940 & Route 191/ Red Rock Road	EB	L/T/R	---	25'	25'	25'	25'	25'
	WB	L/T/R	---	25'	25'	25'	25'	25'
	NB	L/T/R	---	25'	25'	25'	25'	25'
	SB	L/T/R	---	25'	49'	52'	94'	100'
Woodland Road & Eastern Site Driveway	WB	L	**100'**	---	---	25'	---	25'
	NB	L	---	---	---	49'	---	53'
	NB	R	---	---	---	25'	---	25'
Woodland Road & Western Site Driveway	WB	L	**100'**	---	---	25'	---	25'
	NB	L	---	---	---	83'	---	91'
	NB	R	---	---	---	25'	---	25'

Existing Storage Length (**Proposed Storage Length**)
* = With Site-Related Recommendations

APPENDIX K

SIGNAL DIAGRAMS

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
5-0	MONROE	611	03S	1 OF 1
	POCONO TOWNSHIP SR 611, AND SR 314 WESTBOUND			
PERMIT NO. 45-209-12		SHEET 2 OF 2		
DATE ISSUED 9-18-91		DATE REVISED 10-21-04 ▲		

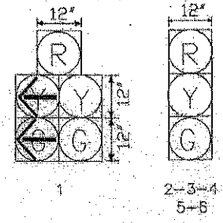
▲ CONDITION DIAGRAM ONLY

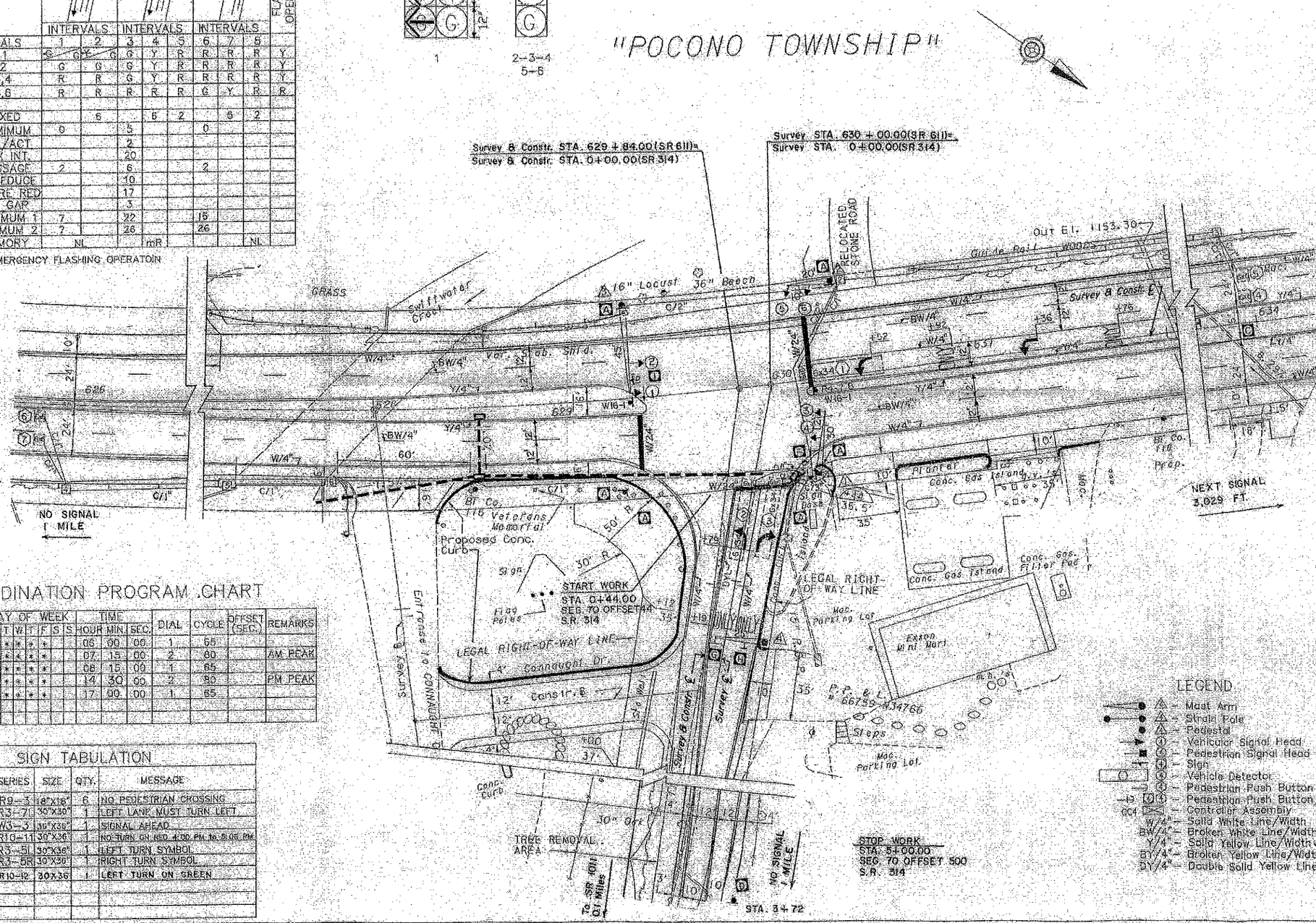
PHASING, TIMING and COLOR SEQUENCE CHART

	PHASE 1		PHASE 2			PHASE 3			① FLASHING OPERATION
	INTERVALS		INTERVALS			INTERVALS			
SIGNALS	1	2	3	4	5	6	7	8	
1	G	Y	G	Y	R	R	R	R	Y
2	G	G	G	Y	R	R	R	R	Y
3,4	R	R	G	Y	R	R	R	R	Y
5,6	R	R	R	R	R	G	Y	R	R
FIXED		6		5	2		6	2	
MINIMUM	0		5			0			
SEC./ACT.			2						
MAX. INT.			20						
PASSAGE	2		6			2			
TO REDUCE			10						
BEFORE RED			17						
MIN. GAP			3						
MAXIMUM 1	7		22			15			
MAXIMUM 2	7		26			26			
MEMORY	NL		mR				NL		

① EMERGENCY FLASHING OPERATOIN

SIGNAL INDICATIONS





COORDINATION PROGRAM CHART

EVENT NO.	DAY OF WEEK M	T	W	T	F	S	S	TIME HOUR	MIN.	SEC.	DIAL	CYCLE	OFFSET (SEC.)	REMARKS
1	*	*	*	*	*			06	00	00	1	65		
2	*	*	*	*	*			07	15	00	2	80		AM PEAK
3	*	*	*	*	*			08	15	00	1	65		
4	*	*	*	*	*			14	30	00	2	80		PM PEAK
5	*	*	*	*	*			17	00	00	1	65		

SIGN TABULATION

PLAN SYMBOL	SERIES	SIZE	QTY.	MESSAGE
A	R9-3	18"X18"	6	NO PEDESTRIAN CROSSING
C	R3-7	30"X30"	1	LEFT LANE MUST TURN LEFT
D	W3-3	36"X36"	1	SIGNAL AHEAD
F	R10-11	30"X36"	1	NO TURN ON RED 4:00 PM to 6:00 PM
G	R3-5L	30"X36"	1	LEFT TURN SYMBOL
H	R3-5R	30"X36"	1	RIGHT TURN SYMBOL
I	R10-12	30X36	1	LEFT TURN ON GREEN

GENERAL NOTES

Installation, operation and maintenance of this traffic signal to be in accordance with Pennsylvania Department of Transportation Regulations on Official Traffic Control Devices.

No modifications of this installation are permitted unless prior approval is granted, in writing, by the Department.

All maintenance necessary for proper visibility of the signals, including trimming trees, is the responsibility of the Permittee.

All signs and pavement markings indicated on this drawing are considered part of the permit and are to be installed and maintained by the Permittee, unless otherwise indicated, except the longitudinal pavement markings on State highways which will be maintained by the Department.

Install post mounted signals with the signal heads a minimum of 2 feet behind the face of the curb or edge of the shoulder. Support poles for overhead signals will have a minimum horizontal clearance of 2 feet.

The bottom of signal heads and signs erected over the roadway are not to be less than 15 feet nor more than 19 feet above the roadway. The bottom of post mounted signal heads are to be not less than 8 feet nor more than 15 feet above the sidewalk or pavement grade.

The minimum horizontal distance between signal heads measured at right angles to the approach is to be 8 feet.

In addition to this signal permit, the Permittee will obtain a Highway Occupancy Permit prior to any openings being made in or under any portion of a State Highway.

This drawing cannot be used as a construction drawing unless the Permittee complies with the provisions of Act 172, Prevention of Damage to Underground Utilities. Prior to construction consult with utility companies to resolve any problems which may be created due to the location of utilities.

Place pavement markings in accordance with the Department of Transportation Pavement Marking Handbook.

LEGEND

- Mast Arm
- Strain Pole
- Pedestal
- Vehicular Signal Head
- Pedestrian Signal Head
- Sign
- Vehicle Detector
- Pedestrian Push Button
- Pedestrian Push Button/Sign
- Controller Assembly
- W/4" – Solid White Line/Width
- BW/4" – Broken White Line/Width
- Y/4" – Solid Yellow Line/Width
- BY/4" – Broken Yellow Line/Width
- DY/4" – Double Solid Yellow Line/Width

(12)

County: MONROE

Municipality: POCONO TOWNSHIP

Intersection: SR 611 AND SR 314 WESTBOUND

Reviewed: _____ Municipal Official — Date 4/2/91

Reviewed: _____ District Traffic Signals Div. — Date 4/5/91

Recommended: _____ District Traffic Engineer — Date 4/16/91

Scale: 25 0 25 50

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
5-0	MONROE	611	03S	1 OF 1
PARADISE TOWNSHIP				
SR 611, SR 1013 (WOODLAND ROAD) AND T-612 (STRICKLAND ROAD)				
PERMIT NO. 45-208-003		SHEET 2 OF 2		
DATE ISSUED 9-18-91		DATE REVISED 10/20/93		

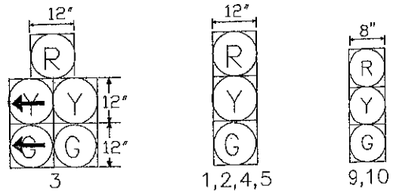
PHASING, TIMING and COLOR SEQUENCE CHART

	PHASE 1		PHASE 2			PHASE 3			PHASE 4			FLASHING OPERATION
	②											①
	INTERVALS		INTERVALS			INTERVALS			INTERVALS			
SIGNALS	1	2	3	4	5	6	7	8	9	10	11	
1,2	R	R	G	Y	R	R	R	R	R	R	R	Y
3	G	G	G	Y	R	R	R	R	R	R	R	Y
4	G	G	G	Y	R	R	R	R	R	R	R	Y
5,6	R	R	R	R	R	G	Y	R	R	R	R	R
7,8	R	R	R	R	R	R	R	R	G	Y	R	R
9,10	R	R	R	R	R	G	Y	R	R	R	R	R
FIXED TIME		5.5		5.5	2		4	2		4	2	
MINIMUM	0		10			7			7			
SEC./ACT.			2									
MAX INITIAL			20									
PASSAGE	2		5			4			4			
TO REDUCE			15									
BEFORE RED			17									
MIN. GAP			3									
MAXIMUM 1	7		24			14			10			
MAXIMUM 2	7		27			28			13			
MAXIMUM 3	7		17			48			13			
MEMORY	NL		mR			NL			NL			

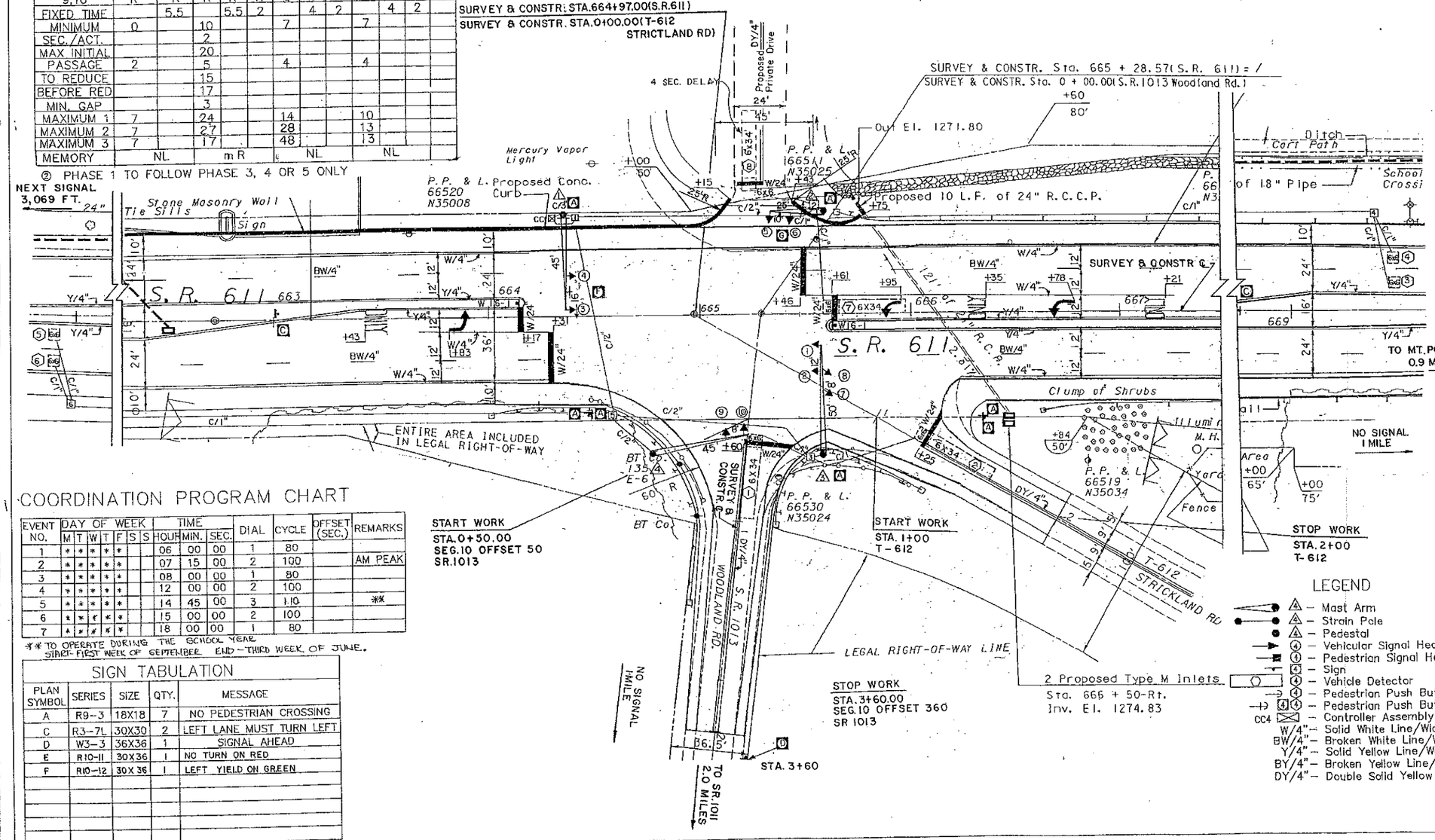
① EMERGENCY FLASH

② PHASE 1 TO FOLLOW PHASE 3, 4 OR 5 ONLY

SIGNAL INDICATIONS



NOTE: SIGNALS # 3,4,7 & 8 TO HAVE TUNNEL VISORS AND LOUVERS



COORDINATION PROGRAM CHART

EVENT NO.	DAY OF WEEK M	T	W	T	F	S	S	TIME HOUR	MIN.	SEC.	DIAL	CYCLE	OFFSET (SEC.)	REMARKS
1	*	*	*	*	*			06	00	00	1	80		
2	*	*	*	*	*			07	15	00	2	100		AM PEAK
3	*	*	*	*	*			08	00	00	1	80		
4	*	*	*	*	*			12	00	00	2	100		
5	*	*	*	*	*			14	45	00	3	110		**
6	*	*	*	*	*			15	00	00	2	100		
7	*	*	*	*	*			18	00	00	1	80		

** TO OPERATE DURING THE SCHOOL YEAR START- FIRST WEEK OF SEPTEMBER END - THIRD WEEK OF JUNE.

SIGN TABULATION

PLAN SYMBOL	SERIES	SIZE	QTY.	MESSAGE
A	R9-3	18X18	7	NO PEDESTRIAN CROSSING
C	R3-7L	30X30	2	LEFT LANE MUST TURN LEFT
D	W3-3	36X36	1	SIGNAL AHEAD
E	R10-11	30X36	1	NO TURN ON RED
F	R10-12	30X36	1	LEFT YIELD ON GREEN

GENERAL NOTES

Installation, operation and maintenance of this traffic signal to be in accordance with Pennsylvania Department of Transportation Regulations on Official Traffic Control Devices.

No modifications of this installation are permitted unless prior approval is granted, in writing, by the Department.

All maintenance necessary for proper visibility of the signals, including trimming trees, is the responsibility of the Permittee.

All signs and pavement markings indicated on this drawing are considered part of the permit and are to be installed and maintained by the Permittee, unless otherwise indicated, except the longitudinal pavement markings on State highways which will be maintained by the Department.

Install post mounted signals with the signal heads a minimum of 2 feet behind the face of the curb or edge of the shoulder. Support poles for overhead signals will have a minimum horizontal clearance of 2 feet.

The bottom of signal heads and signs erected over the roadway are not to be less than 15 feet nor more than 19 feet above the roadway. The bottom of post mounted signal heads are to be not less than 8 feet nor more than 15 feet above the sidewalk or pavement grade.

The minimum horizontal distance between signal heads measured at right angles to the approach is to be 8 feet.

In addition to this signal permit, the Permittee will obtain a Highway Occupancy Permit prior to any openings being made in or under any portion of a State Highway.

This drawing cannot be used as a construction drawing unless the Permittee complies with the provisions of Act 172, Prevention of Damage to Underground Utilities. Prior to construction consult with utility companies to resolve any problems which may be created due to the location of utilities.

Place pavement markings in accordance with the Department of Transportation Pavement Marking Handbook.

LEGEND

- Mast Arm
- Strain Pole
- Pedestal
- Vehicular Signal Head
- Pedestrian Signal Head
- Sign
- Vehicle Detector
- Pedestrian Push Button
- Pedestrian Push Button/Sign
- CC4 — Controller Assembly
- W/4" — Solid White Line/Width
- BW/4" — Broken White Line/Width
- Y/4" — Solid Yellow Line/Width
- BY/4" — Broken Yellow Line/Width
- DY/4" — Double Solid Yellow Line/Width

County: MONROE

Municipality: PARADISE TOWNSHIP

Intersection: SR 611, SR 1013 (WOODLAND ROAD) AND T-612 (STRICKLAND ROAD) & PRIVATE DRIVE

Reviewed: John H. Dawman Jr. 8-26-91
Municipal Official Date

Reviewed: [illegible] 9-1-91
District Traffic Signals Div. Date

Recommended: David A. Cox 4/2/94
District Traffic Engineer Date

Scale: 25 0 25 50

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
5-0	MONROE	0940		
	PARADISE TOWNSHIP			
PERMIT NO. 45-208-4		SHEET 2 OF 2		
DATE ISSUED		DATE REVISED		

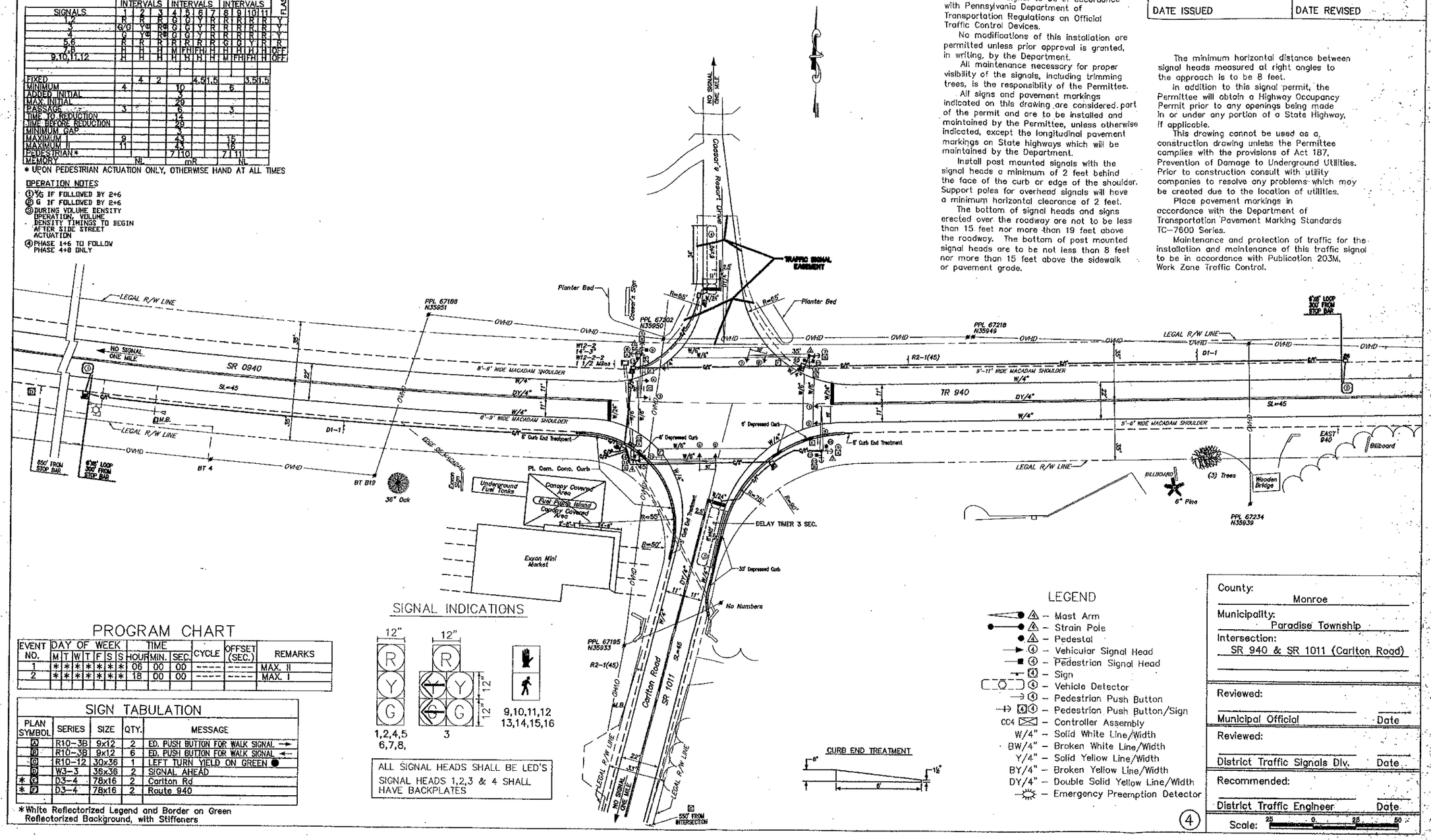
PHASING, TIMING and COLOR SEQUENCE CHART

	PHASE 1+6			PHASE 2+6				PHASE 4+8			EMERGENCY FLASHING OPERATION
	INTERVALS			INTERVALS				INTERVALS			
SIGNALS	1	2	3	4	5	6	7	8	9	10	11
1,2	R	R	R	G	Y	R	R	R	R	R	Y
3	G/G	Ya	R	G	Y	R	R	R	R	R	Y
4	G	Ya	R	G	Y	R	R	R	R	R	Y
5,6	R	R	R	R	R	R	G	G	Y	R	R
7,8	H	H	H	M	FH	FH	H	H	M	A	H
9,10,11,12	H	H	H	H	H	H	H	M	FH	FH	H
FIXED		4	2		4.5	1.5			3.5	1.5	
MINIMUM	4			10				6			
ADDED INITIAL				3							
MAX. INITIAL				29							
PASSAGE	3			6				3			
TIME TO REDUCTION				14							
TIME BEFORE REDUCTION				25							
MINIMUM CAP				4							
MAXIMUM I	9			43				15			
MAXIMUM II	11			43				18			
PEDESTRIAN*				7	10			7	11		
MEMORY	NL			mR				NL			

* UPON PEDESTRIAN ACTUATION ONLY, OTHERWISE HAND AT ALL TIMES

OPERATION NOTES

① ⅘ IF FOLLOWED BY 2+6
② G IF FOLLOWED BY 2+6
③ DURING VOLUME DENSITY OPERATION, VOLUME DENSITY TIMINGS TO BEGIN AFTER SIDE STREET ACTUATION
④ PHASE 1+6 TO FOLLOW PHASE 4+8 ONLY



GENERAL NOTES

Installation, operation and maintenance of this traffic signal to be in accordance with Pennsylvania Department of Transportation Regulations on Official Traffic Control Devices.

No modifications of this installation are permitted unless prior approval is granted, in writing, by the Department.

All maintenance necessary for proper visibility of the signals, including trimming trees, is the responsibility of the Permittee.

All signs and pavement markings indicated on this drawing are considered part of the permit and are to be installed and maintained by the Permittee, unless otherwise indicated, except the longitudinal pavement markings on State highways which will be maintained by the Department.

Install post mounted signals with the signal heads a minimum of 2 feet behind the face of the curb or edge of the shoulder. Support poles for overhead signals will have a minimum horizontal clearance of 2 feet.

The bottom of signal heads and signs erected over the roadway are not to be less than 15 feet nor more than 19 feet above the roadway. The bottom of post mounted signal heads are to be not less than 8 feet nor more than 15 feet above the sidewalk or pavement grade.

The minimum horizontal distance between signal heads measured at right angles to the approach is to be 8 feet.

In addition to this signal permit, the Permittee will obtain a Highway Occupancy Permit prior to any openings being made in or under any portion of a State Highway, if applicable.

This drawing cannot be used as a construction drawing unless the Permittee complies with the provisions of Act 187, Prevention of Damage to Underground Utilities. Prior to construction consult with utility companies to resolve any problems which may be created due to the location of utilities.

Place pavement markings in accordance with the Department of Transportation Pavement Marking Standards TC-7600 Series.

Maintenance and protection of traffic for the installation and maintenance of this traffic signal to be in accordance with Publication 203M, Work Zone Traffic Control.

PROGRAM CHART

EVENT NO.	DAY OF WEEK							TIME			CYCLE	OFFSET (SEC.)	REMARKS
	M	T	W	T	F	S	S	HOUR	MIN.	SEC.			
1	*	*	*	*	*	*	*	06	00	00	----	----	MAX. II
2	*	*	*	*	*	*	*	18	00	00	----	----	MAX. I

SIGN TABULATION

PLAN SYMBOL	SERIES	SIZE	QTY.	MESSAGE
A	R10-3B	9x12	2	ED. PUSH BUTTON FOR WALK SIGNAL →
B	R10-3B	9x12	6	ED. PUSH BUTTON FOR WALK SIGNAL ←
C	R10-12	30x36	1	LEFT TURN YIELD ON GREEN ●
D	W3-3	36x36	2	SIGNAL AHEAD
* E	D3-4	78x16	2	Carlton Rd
* F	D3-4	78x16	2	Route 940

* White Reflectorized Legend and Border on Green Reflectorized Background, with Stiffeners

SIGNAL INDICATIONS

ALL SIGNAL HEADS SHALL BE LED'S
SIGNAL HEADS 1,2,3 & 4 SHALL HAVE BACKPLATES

CURB END TREATMENT

LEGEND

- Mast Arm
- Strain Pole
- Pedestal
- Vehicular Signal Head
- Pedestrian Signal Head
- Sign
- Vehicle Detector
- Pedestrian Push Button
- Pedestrian Push Button/Sign
- CC4 Controller Assembly
- W/4" – Solid White Line/Width
- BW/4" – Broken White Line/Width
- Y/4" – Solid Yellow Line/Width
- BY/4" – Broken Yellow Line/Width
- DY/4" – Double Solid Yellow Line/Width
- Emergency Preemption Detector

County: Monroe

Municipality: Paradise Township

Intersection: SR 940 & SR 1011 (Carlton Road)

Reviewed: _____ Municipal Official Date

Reviewed: _____ District Traffic Signals Div. Date

Recommended: _____ District Traffic Engineer Date

Scale: 25 0 25 50

DISTRICT	COUNTY	ROUTE	SECTION	SHEET
5-0	MONROE	0940		
	PARADISE TOWNSHIP			
PERMIT NO. 45-208-5		SHEET 2 OF 2		
DATE ISSUED		DATE REVISED		

PHASING, TIMING and COLOR SEQUENCE CHART

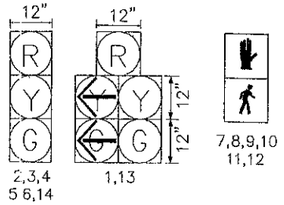
	PHASE 1+6 ①			PHASE 2+6 ②				PHASE 4+8				EMERGENCY FLASHING OPERATION
	INTERVALS			INTERVALS				INTERVALS				
SIGNALS	1	2	3	4	5	6	7	8	9	10	11	
1,13	G/G	Y/G	R/R	G	G	Y	R	R	R	R	R	Y
2	G	Y/G	R/R	G	G	Y	R	R	R	R	R	Y
3,4	R	R	R/R	G	G	Y	R	R	R	R	R	Y
5,6,14	R	R	R/R	R	R	R	R	G	G	Y	R	R
7,8	H	H	H/H	M	FH	FH	H	H	H	FH	H	OFF
9,10,11,12	H	H	H/H	H	H	H	H	M	FH	FH	H	OFF
SECONDS		4.5	1.5			4.5	1.5			4.5	1.5	
MINIMUM	4			10				7				
ADDED INITIAL				3								
MAX. INITIAL				29								
PASSAGE	3			6				3				
TIME TO REDUCTION				14								
TIME BEFORE REDUCTION				29								
MINIMUM GAP				3								
MAXIMUM I	13			43				9				
MAXIMUM II	26			43				16				
PEDESTRIAN*				8	11			7	9			
MEMORY	NL			mR				NL				

* UPON PEDESTRIAN ACTUATION ONLY, OTHERWISE HAND AT ALL TIMES

OPERATION NOTES

① ⅔ IF FOLLOWED BY 2+6
② G IF FOLLOWED BY 2+6
③ DURING VOLUME DENSITY OPERATION, VOLUME DENSITY TIMINGS TO BEGIN AFTER SIDE STREET ACTUATION
④ PHASE 1+6 TO FOLLOW PHASE 4+8 ONLY

SIGNAL INDICATIONS



ALL SIGNAL HEADS SHALL BE LED'S
SIGNAL HEADS 1,2,3 & 4 SHALL HAVE BACKPLATES

SIGN TABULATION

PLAN SYMBOL	SERIES	SIZE	QTY.	MESSAGE
A	R10-3B	9x12	1	ED. PUSH BUTTON FOR WALK SIGNAL →
B	R10-3B	9x12	5	ED. PUSH BUTTON FOR WALK SIGNAL ←
C	R10-12	30x36	2	LEFT TURN YIELD ON GREEN ●
D	W3-3	36x36	1	SIGNAL AHEAD
* E	D3-4	78x16	2	Route 390
* F	D3-4	78x16	1	Route 940

* White Relectorized Legend and Border on Green Reflectorized Background, with Stiffeners

PROGRAM CHART

EVENT NO.	DAY OF WEEK M	T	W	T	F	S	S	TIME HOUR	MIN.	SEC.	CYCLE	OFFSET (SEC.)	REMARKS
1	*	*	*	*	*	*	*	06	00	00	---	---	MAX. II
2	*	*	*	*	*	*	*	18	00	00	---	---	MAX. I

D3-4 78x16
Route 390
2 Required
White Legend and Border on Green Background
Clearview One CD-45 Font
8" Upper Case/6" Lower Case

–	6.2
R	8.4
o	7.8
u	7.3
t	5.8
e	5.1
–	6.0
3	9.3
9	9.4
0	6.6
–	6.1
	78.0

D3-4 78x16
Route 940
1 Required
White Legend and Border on Green Background
Clearview One CD-45 Font
8" Upper Case/6" Lower Case

–	5.7
R	8.4
o	7.8
u	7.3
t	5.8
e	5.1
–	6.0
9	9.3
4	10.3
0	6.6
–	5.7
	78.0

LEGEND

- Mast Arm
- Strain Pole
- Pedestal
- Vehicular Signal Head
- Pedestrian Signal Head
- Sign
- Vehicle Detector
- Pedestrian Push Button
- Pedestrian Push Button/Sign
- CC4 – Controller Assembly
- W/4" – Solid White Line/Width
- BW/4" – Broken White Line/Width
- Y/4" – Solid Yellow Line/Width
- BY/4" – Broken Yellow Line/Width
- DY/4" – Double Solid Yellow Line/Width
- Emergency Preemption Detector

GENERAL NOTES

Installation, operation and maintenance of this traffic signal to be in accordance with Pennsylvania Department of Transportation Regulations on Official Traffic Control Devices.

No modifications of this installation are permitted unless prior approval is granted, in writing, by the Department.

All maintenance necessary for proper visibility of the signals, including trimming trees, is the responsiblity of the Permittee.

All signs and pavement markings indicated on this drawing are considered part of the permit and are to be installed and maintained by the Permittee, unless otherwise indicated, except the longitudinal pavement markings on State highways which will be maintained by the Department.

Install post mounted signals with the signal heads a minimum of 2 feet behind the face of the curb or edge of the shoulder. Support poles for overhead signals will have a minimum horizontal clearance of 2 feet.

The bottom of signal heads and signs erected over the roadway are not to be less than 15 feet nor more than 19 feet above the roadway. The bottom of post mounted signal heads are to be not less than 8 feet nor more than 15 feet above the sidewalk or pavement grade.

The minimum horizontal distance between signal heads measured at right angles to the approach is to be 8 feet.

In addition to this signal permit, the Permittee will obtain a Highway Occupancy Permit prior to any openings being made in or under any portion of a State Highway, if applicable.

This drawing cannot be used as a construction drawing unless the Permittee complies with the provisions of Act 187, Prevention of Damage to Underground Utilities. Prior to construction consult with utility companies to resolve any problems which may be created due to the location of utilities.

Place pavement markings in accordance with the Department of Transportation Pavement Marking Standards TC-7600 Series.

Maintenance and protection of traffic for the installation and maintenance of this traffic signal to be in accordance with Publication 203M, Work Zone Traffic Control.

County: Monroe

Municipality: Paradise Township

Intersection: SR 940 & SR 390

Reviewed: _____ Date _____
Municipal Official

Reviewed: _____ Date _____
District Traffic Signals Div.

Recommended: _____ Date _____
District Traffic Engineer

Scale: 25 0 25 50