Appendix III/IV.L
Transportation

III/IV.L-9: Synchro Output Reports -
2033 With Action Conditions

Intersection	
Int Delay, s/veh	8.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	85	46	30	73	105	59
Future Vol, veh/h	85	46	30	73	105	59
Conflicting Peds, #/hr	2	0	106	0	0	106
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	90	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	42	42	79	79	72	72
Heavy Vehicles, %	0	11	4	0	1	0
Mvmt Flow	202	110	38	92	146	82

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	463	293	334	0	-	0
Stage 1	293	-	-	-	-	-
Stage 2	170	-	-	-	-	-
Critical Hdwy	6.4	6.31	4.14	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.399	2.236	-	-	-
Pot Cap-1 Maneuver	561	725	1214	-	-	-
Stage 1	762	-	-	-	-	-
Stage 2	865	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	435	650	1089	-	-	-
Mov Cap-2 Maneuver	435	-	-	-	-	-
Stage 1	660	-	-	-	-	-
Stage 2	776	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.3	2.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1089	-	435	650	-	-
HCM Lane V/C Ratio	0.035	-	0.465	0.168	-	-
HCM Control Delay (s)	8.4	-	20.3	11.7	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	2.4	0.6	-	-

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	41	31	38	63	90	62
Future Vol, veh/h	41	31	38	63	90	62
Conflicting Peds, #/hr	0	0	103	0	0	103
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	-	-	175
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	67	66	66	78	78
Heavy Vehicles, %	0	0	0	2	9	0
Mvmt Flow	61	46	58	95	115	79

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	429	218	218	0	-	0
Stage 1	218	-	-	-	-	-
Stage 2	211	-	-	-	-	-
Critical Hdwy	6.4	6.2	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.3	2.2	-	-	-
Pot Cap-1 Maneuver	587	827	1364	-	-	0
Stage 1	823	-	-	-	-	0
Stage 2	829	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	466	756	1247	-	-	-
Mov Cap-2 Maneuver	466	-	-	-	-	-
Stage 1	715	-	-	-	-	-
Stage 2	758	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13	3	0
HCM LOS	B		

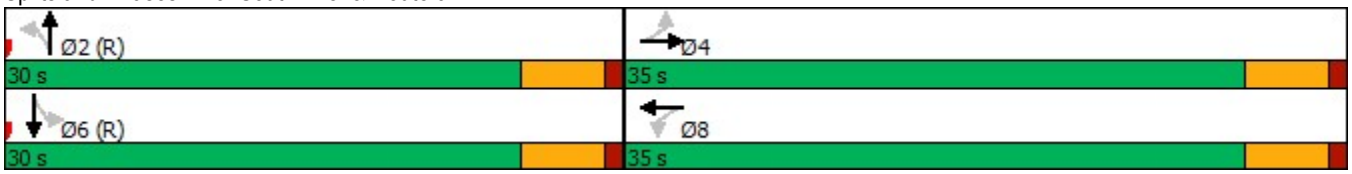
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	1247	-	558	-
HCM Lane V/C Ratio	0.046	-	0.193	-
HCM Control Delay (s)	8	0	13	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0.1	-	0.7	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	287	18	34	330	54	17	14	29	35	9	4
Future Volume (vph)	17	287	18	34	330	54	17	14	29	35	9	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	14	12	12	13	12	12	14	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			0.99			0.99			1.00	
Frt		0.993			0.982			0.935			0.988	
Flt Protected		0.997			0.996			0.986			0.965	
Satd. Flow (prot)	0	1930	0	0	1939	0	0	1719	0	0	1929	0
Flt Permitted		0.967			0.944			0.931			0.808	
Satd. Flow (perm)	0	1872	0	0	1838	0	0	1622	0	0	1613	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		6			15			41			5	
Link Speed (mph)		30			30			25			30	
Link Distance (ft)		635			504			277			487	
Travel Time (s)		14.4			11.5			7.6			11.1	
Confl. Peds. (#/hr)	8		2	2		8	1		1	1		1
Confl. Bikes (#/hr)						26						
Peak Hour Factor	0.74	0.74	0.74	0.92	0.92	0.92	0.71	0.71	0.71	0.86	0.86	0.86
Heavy Vehicles (%)	0%	3%	21%	0%	2%	0%	15%	0%	0%	0%	0%	0%
Adj. Flow (vph)	23	388	24	37	359	59	24	20	41	41	10	5
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	435	0	0	455	0	0	85	0	0	56	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.92	1.00	1.00	0.92	1.00	1.00	0.96	1.00	1.00	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.2%	46.2%		46.2%	46.2%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		30.0			30.0			25.0			25.0	
Actuated g/C Ratio		0.46			0.46			0.38			0.38	
v/c Ratio		0.50			0.53			0.13			0.09	
Control Delay		14.6			14.9			8.5			12.4	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		14.6			14.9			8.5			12.4	
LOS		B			B			A			B	
Approach Delay		14.6			14.9			8.5			12.4	
Approach LOS		B			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 65			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 45			
Control Type: Pretimed			
Maximum v/c Ratio: 0.53			
Intersection Signal Delay: 14.1		Intersection LOS: B	
Intersection Capacity Utilization 49.1%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: South Ave. & Route 9D



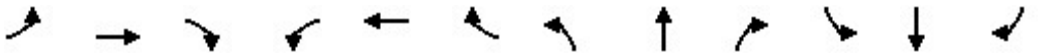
Intersection	
Int Delay, s/veh	6.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕				
Traffic Vol, veh/h	9	314	84	12	577	15	61	1	40	0	0	0
Future Vol, veh/h	9	314	84	12	577	15	61	1	40	0	0	0
Conflicting Peds, #/hr	0	0	61	61	0	0	45	0	11	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	96	96	96	62	62	62	92	92	92
Heavy Vehicles, %	0	8	6	9	5	0	6	0	0	2	2	2
Mvmt Flow	12	419	112	13	601	16	98	2	65	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	617	0	0	592	0	0	1240	1203	547
Stage 1	-	-	-	-	-	-	560	560	-
Stage 2	-	-	-	-	-	-	680	643	-
Critical Hdwy	4.1	-	-	4.19	-	-	6.46	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	5.46	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.46	5.5	-
Follow-up Hdwy	2.2	-	-	2.281	-	-	3.554	4	3.3
Pot Cap-1 Maneuver	973	-	-	950	-	-	190	186	541
Stage 1	-	-	-	-	-	-	564	514	-
Stage 2	-	-	-	-	-	-	496	472	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	973	-	-	902	-	-	167	0	509
Mov Cap-2 Maneuver	-	-	-	-	-	-	167	0	-
Stage 1	-	-	-	-	-	-	526	0	-
Stage 2	-	-	-	-	-	-	467	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.2	0.2	53.3
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	228	973	-	-	902	-	-
HCM Lane V/C Ratio	0.722	0.012	-	-	0.014	-	-
HCM Control Delay (s)	53.3	8.7	0	-	9	0	-
HCM Lane LOS	F	A	A	-	A	A	-
HCM 95th %tile Q(veh)	4.8	0	-	-	0	-	-

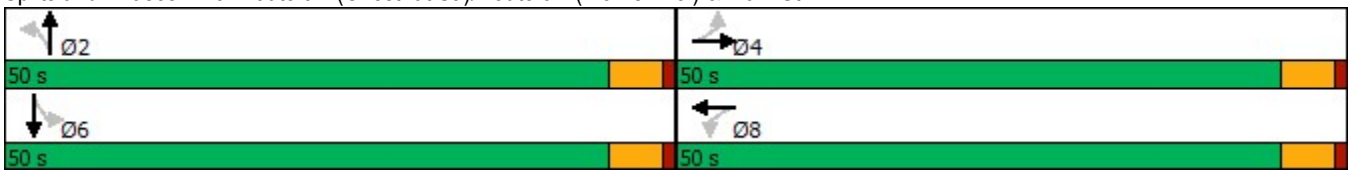


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	124	122	87	178	251	162	379	116	115	246	45
Future Volume (vph)	46	124	122	87	178	251	162	379	116	115	246	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12	12	11	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.76			0.69			0.91			0.94	
Frt		0.943			0.934			0.976			0.985	
Flt Protected		0.992			0.992			0.988			0.986	
Satd. Flow (prot)	0	1079	0	0	946	0	0	1431	0	0	1602	0
Flt Permitted		0.849			0.866			0.732			0.627	
Satd. Flow (perm)	0	902	0	0	792	0	0	1017	0	0	1019	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		47						14			8	
Link Speed (mph)		25			30			30			30	
Link Distance (ft)		299			289			346			546	
Travel Time (s)		8.2			6.6			7.9			12.4	
Confl. Peds. (#/hr)	338		222	222		338	188		96	96		188
Confl. Bikes (#/hr)			1						2			1
Peak Hour Factor	0.85	0.85	0.85	0.90	0.90	0.90	0.93	0.93	0.93	0.86	0.86	0.86
Heavy Vehicles (%)	3%	12%	17%	1%	4%	16%	1%	5%	0%	2%	7%	3%
Parking (#/hr)	5	5	5	5	5	5	5	5	5			
Adj. Flow (vph)	54	146	144	97	198	279	174	408	125	134	286	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	344	0	0	574	0	0	707	0	0	472	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.19	1.00	1.00	1.29	1.00	1.00	1.24	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	55		20	55		20	55		20	55	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	25		20	25		20	25		20	25	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		30			30			30			30	
Detector 2 Size(ft)		25			25			25			25	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		24.0	24.0		24.0	24.0	
Total Split (s)	50.0	50.0		50.0	50.0		50.0	50.0		50.0	50.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	45.0	45.0		45.0	45.0		45.0	45.0		45.0	45.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	Min	Min		Min	Min		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		13.0	13.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	10	10		10	10		10	10		10	10	
Act Effct Green (s)		45.0			45.0			45.0			45.0	
Actuated g/C Ratio		0.45			0.45			0.45			0.45	
v/c Ratio		0.80			1.61			1.52			1.02	
Control Delay		36.2			313.0			270.0			76.3	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		36.2			313.0			270.0			76.3	
LOS		D			F			F			E	
Approach Delay		36.3			313.0			270.0			76.3	
Approach LOS		D			F			F			E	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 100			
Natural Cycle: 80			
Control Type: Semi Act-Uncoord			
Maximum v/c Ratio: 1.61			
Intersection Signal Delay: 199.8		Intersection LOS: F	
Intersection Capacity Utilization 99.8%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 5: Route 9D (Chestnut St.)/Route 9D (Morris Ave.) & Main St.



Intersection	
Int Delay, s/veh	20.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	12	144	276	78	114	94
Future Vol, veh/h	12	144	276	78	114	94
Conflicting Peds, #/hr	220	0	0	220	39	89
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	77	77	89	89	83	83
Heavy Vehicles, %	0	14	2	0	4	1
Mvmt Flow	16	187	310	88	137	113

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	618	0	-	0	832	663
Stage 1	-	-	-	-	574	-
Stage 2	-	-	-	-	258	-
Critical Hdwy	4.1	-	-	-	6.44	6.21
Critical Hdwy Stg 1	-	-	-	-	5.44	-
Critical Hdwy Stg 2	-	-	-	-	5.44	-
Follow-up Hdwy	2.2	-	-	-	3.536	3.309
Pot Cap-1 Maneuver	972	-	-	-	336	463
Stage 1	-	-	-	-	559	-
Stage 2	-	-	-	-	780	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	824	-	-	-	236	370
Mov Cap-2 Maneuver	-	-	-	-	236	-
Stage 1	-	-	-	-	463	-
Stage 2	-	-	-	-	661	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	68.4
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	824	-	-	-	282
HCM Lane V/C Ratio	0.019	-	-	-	0.889
HCM Control Delay (s)	9.5	0	-	-	68.4
HCM Lane LOS	A	A	-	-	F
HCM 95th %tile Q(veh)	0.1	-	-	-	7.9

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	110	32	21	117	126	56
Future Vol, veh/h	110	32	21	117	126	56
Conflicting Peds, #/hr	0	0	58	0	0	58
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	90	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	71	83	83	73	73
Heavy Vehicles, %	0	4	0	0	0	0
Mvmt Flow	155	45	25	141	173	77

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	461	270	308	0	-	0
Stage 1	270	-	-	-	-	-
Stage 2	191	-	-	-	-	-
Critical Hdwy	6.4	6.24	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.336	2.2	-	-	-
Pot Cap-1 Maneuver	562	764	1264	-	-	-
Stage 1	780	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	490	721	1193	-	-	-
Mov Cap-2 Maneuver	490	-	-	-	-	-
Stage 1	721	-	-	-	-	-
Stage 2	799	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.5	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1193	-	490	721	-	-
HCM Lane V/C Ratio	0.021	-	0.316	0.063	-	-
HCM Control Delay (s)	8.1	-	15.7	10.3	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	1.3	0.2	-	-

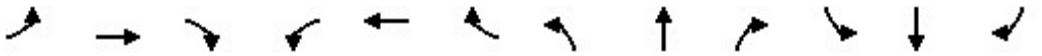
Intersection	
Int Delay, s/veh	8.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	97	67	63	44	51	103
Future Vol, veh/h	97	67	63	44	51	103
Conflicting Peds, #/hr	0	0	44	0	0	44
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	Free
Storage Length	0	-	-	-	-	175
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	69	69	79	79	85	85
Heavy Vehicles, %	0	2	0	0	3	0
Mvmt Flow	141	97	80	56	60	121

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	320	104	104	0	-	0
Stage 1	104	-	-	-	-	-
Stage 2	216	-	-	-	-	-
Critical Hdwy	6.4	6.22	4.1	-	-	-
Critical Hdwy Stg 1	5.4	-	-	-	-	-
Critical Hdwy Stg 2	5.4	-	-	-	-	-
Follow-up Hdwy	3.5	3.318	2.2	-	-	-
Pot Cap-1 Maneuver	678	951	1500	-	-	0
Stage 1	925	-	-	-	-	0
Stage 2	825	-	-	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	593	916	1445	-	-	-
Mov Cap-2 Maneuver	593	-	-	-	-	-
Stage 1	840	-	-	-	-	-
Stage 2	794	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.9	4.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT
Capacity (veh/h)	1445	-	693	-
HCM Lane V/C Ratio	0.055	-	0.343	-
HCM Control Delay (s)	7.6	0	12.9	-
HCM Lane LOS	A	A	B	-
HCM 95th %tile Q(veh)	0.2	-	1.5	-

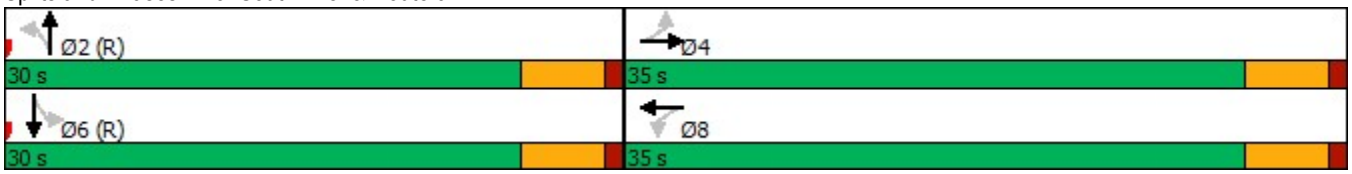


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	7	308	33	14	314	39	15	14	18	44	9	11
Future Volume (vph)	7	308	33	14	314	39	15	14	18	44	9	11
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	14	12	12	14	12	12	13	12	12	14	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		1.00			1.00			0.99			1.00	
Frt		0.987			0.986			0.948			0.976	
Flt Protected		0.999			0.998			0.984			0.967	
Satd. Flow (prot)	0	1993	0	0	1989	0	0	1742	0	0	1913	0
Flt Permitted		0.991			0.981			0.921			0.809	
Satd. Flow (perm)	0	1977	0	0	1955	0	0	1630	0	0	1596	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		11			12			25			14	
Link Speed (mph)		30			30			25			30	
Link Distance (ft)		635			504			277			487	
Travel Time (s)		14.4			11.5			7.6			11.1	
Confl. Peds. (#/hr)	3		6	6		3			3	3		
Confl. Bikes (#/hr)						2						
Peak Hour Factor	0.88	0.88	0.88	0.81	0.81	0.81	0.73	0.73	0.73	0.80	0.80	0.80
Heavy Vehicles (%)	0%	0%	0%	0%	0%	0%	13%	0%	0%	0%	0%	0%
Adj. Flow (vph)	8	350	38	17	388	48	21	19	25	55	11	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	396	0	0	453	0	0	65	0	0	80	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	0.92	1.00	1.00	0.92	1.00	1.00	0.96	1.00	1.00	0.92	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Minimum Split (s)	21.0	21.0		21.0	21.0		21.0	21.0		21.0	21.0	
Total Split (s)	35.0	35.0		35.0	35.0		30.0	30.0		30.0	30.0	
Total Split (%)	53.8%	53.8%		53.8%	53.8%		46.2%	46.2%		46.2%	46.2%	
Maximum Green (s)	30.0	30.0		30.0	30.0		25.0	25.0		25.0	25.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Act Effct Green (s)		30.0			30.0			25.0			25.0	
Actuated g/C Ratio		0.46			0.46			0.38			0.38	
v/c Ratio		0.43			0.50			0.10			0.13	
Control Delay		13.3			14.3			9.5			11.8	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		13.3			14.3			9.5			11.8	
LOS		B			B			A			B	
Approach Delay		13.3			14.3			9.5			11.8	
Approach LOS		B			B			A			B	

Intersection Summary			
Area Type:	Other		
Cycle Length: 65			
Actuated Cycle Length: 65			
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green			
Natural Cycle: 45			
Control Type: Pretimed			
Maximum v/c Ratio: 0.50			
Intersection Signal Delay: 13.4		Intersection LOS: B	
Intersection Capacity Utilization 42.9%		ICU Level of Service A	
Analysis Period (min) 15			

Splits and Phases: 3: South Ave. & Route 9D



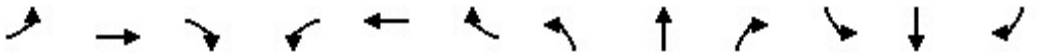
Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕				
Traffic Vol, veh/h	8	297	109	17	451	15	47	1	32	0	0	0
Future Vol, veh/h	8	297	109	17	451	15	47	1	32	0	0	0
Conflicting Peds, #/hr	0	0	19	19	0	0	24	0	11	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	93	93	93	55	55	55	92	92	92
Heavy Vehicles, %	0	5	1	0	3	0	4	0	0	2	2	2
Mvmt Flow	10	381	140	18	485	16	85	2	58	0	0	0

Major/Minor	Major1			Major2			Minor1		
Conflicting Flow All	501	0	0	540	0	0	1043	1027	481
Stage 1	-	-	-	-	-	-	490	490	-
Stage 2	-	-	-	-	-	-	553	537	-
Critical Hdwy	4.1	-	-	4.1	-	-	6.44	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	5.44	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	5.44	5.5	-
Follow-up Hdwy	2.2	-	-	2.2	-	-	3.536	4	3.3
Pot Cap-1 Maneuver	1074	-	-	1039	-	-	252	236	589
Stage 1	-	-	-	-	-	-	612	552	-
Stage 2	-	-	-	-	-	-	572	526	-
Platoon blocked, %		-	-		-	-			
Mov Cap-1 Maneuver	1074	-	-	1023	-	-	234	0	574
Mov Cap-2 Maneuver	-	-	-	-	-	-	234	0	-
Stage 1	-	-	-	-	-	-	594	0	-
Stage 2	-	-	-	-	-	-	547	0	-

Approach	EB	WB	NB
HCM Control Delay, s	0.2	0.3	26.7
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR
Capacity (veh/h)	308	1074	-	-	1023	-	-
HCM Lane V/C Ratio	0.472	0.01	-	-	0.018	-	-
HCM Control Delay (s)	26.7	8.4	0	-	8.6	0	-
HCM Lane LOS	D	A	A	-	A	A	-
HCM 95th %tile Q(veh)	2.4	0	-	-	0.1	-	-

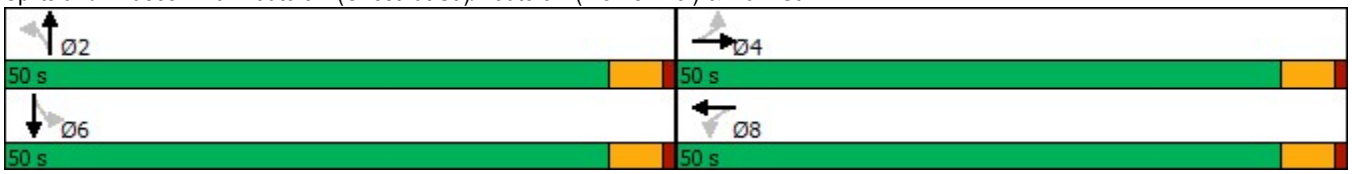


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	36	86	66	75	173	127	203	391	73	106	262	65
Future Volume (vph)	36	86	66	75	173	127	203	391	73	106	262	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	10	12	12	11	12	12	11	12
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor		0.86			0.83			0.96			0.96	
Frt		0.953			0.954			0.985			0.980	
Flt Protected		0.991			0.990			0.985			0.988	
Satd. Flow (prot)	0	1245	0	0	1268	0	0	1508	0	0	1666	0
Flt Permitted		0.880			0.893			0.674			0.705	
Satd. Flow (perm)	0	1074	0	0	1099	0	0	1009	0	0	1189	0
Right Turn on Red			Yes			No			Yes			Yes
Satd. Flow (RTOR)		35						8			11	
Link Speed (mph)		25			30			30			30	
Link Distance (ft)		299			289			346			546	
Travel Time (s)		8.2			6.6			7.9			12.4	
Confl. Peds. (#/hr)	154		123	123		154	90		58	58		90
Confl. Bikes (#/hr)									2			1
Peak Hour Factor	0.86	0.86	0.86	0.89	0.89	0.89	0.99	0.99	0.99	0.85	0.85	0.85
Heavy Vehicles (%)	7%	0%	30%	0%	0%	0%	1%	2%	0%	0%	4%	2%
Parking (#/hr)	5	5	5	5	5	5	5	5	5			
Adj. Flow (vph)	42	100	77	84	194	143	205	395	74	125	308	76
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	219	0	0	421	0	0	674	0	0	509	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.19	1.00	1.00	1.29	1.00	1.00	1.24	1.00	1.00	1.04	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left			Left			Left			Left		
Leading Detector (ft)	20	55		20	55		20	55		20	55	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	25		20	25		20	25		20	25	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		30			30			30			30	
Detector 2 Size(ft)		25			25			25			25	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Detector Phase	4	4		8	8		2	2		6	6	
Switch Phase												
Minimum Initial (s)	10.0	10.0		10.0	10.0		10.0	10.0		10.0	10.0	
Minimum Split (s)	25.0	25.0		25.0	25.0		24.0	24.0		24.0	24.0	
Total Split (s)	50.0	50.0		50.0	50.0		50.0	50.0		50.0	50.0	
Total Split (%)	50.0%	50.0%		50.0%	50.0%		50.0%	50.0%		50.0%	50.0%	
Maximum Green (s)	45.0	45.0		45.0	45.0		45.0	45.0		45.0	45.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0			0.0			0.0	
Total Lost Time (s)		5.0			5.0			5.0			5.0	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	None		None	None		None	None		None	None	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	13.0	13.0		13.0	13.0		12.0	12.0		12.0	12.0	
Pedestrian Calls (#/hr)	10	10		10	10		10	10		10	10	
Act Effct Green (s)		39.5			39.5			45.3			45.3	
Actuated g/C Ratio		0.42			0.42			0.48			0.48	
v/c Ratio		0.47			0.92			1.39			0.89	
Control Delay		19.9			53.6			212.1			43.8	
Queue Delay		0.0			0.0			0.0			0.0	
Total Delay		19.9			53.6			212.1			43.8	
LOS		B			D			F			D	
Approach Delay		19.9			53.6			212.1			43.8	
Approach LOS		B			D			F			D	

Intersection Summary			
Area Type:	Other		
Cycle Length: 100			
Actuated Cycle Length: 94.8			
Natural Cycle: 70			
Control Type: Actuated-Uncoordinated			
Maximum v/c Ratio: 1.39			
Intersection Signal Delay: 105.4		Intersection LOS: F	
Intersection Capacity Utilization 92.4%		ICU Level of Service F	
Analysis Period (min) 15			

Splits and Phases: 5: Route 9D (Chestnut St.)/Route 9D (Morris Ave.) & Main St.



Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	125	331	100	0	0
Future Vol, veh/h	9	125	331	100	0	0
Conflicting Peds, #/hr	691	0	0	691	42	43
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	96	96	92	92	25	25
Heavy Vehicles, %	13	1	0	0	0	0
Mvmt Flow	9	130	360	109	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1160	0	-	0	1296	1149
Stage 1	-	-	-	-	1106	-
Stage 2	-	-	-	-	190	-
Critical Hdwy	4.23	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.317	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	564	-	-	-	181	244
Stage 1	-	-	-	-	320	-
Stage 2	-	-	-	-	847	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	293	-	-	-	47	124
Mov Cap-2 Maneuver	-	-	-	-	47	-
Stage 1	-	-	-	-	161	-
Stage 2	-	-	-	-	440	-

Approach	EB	WB	SB
HCM Control Delay, s	1.2	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	293	-	-	-	-
HCM Lane V/C Ratio	0.032	-	-	-	-
HCM Control Delay (s)	17.7	0	-	-	0
HCM Lane LOS	C	A	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-