



Appendix L: 2050 No-Build Synchro Outputs

Lanes, Volumes, Timings
 1: US 76/378 (Robert E Graham Fwy) WB & Jefferson Rd

AM Peak
 No-Build 2050 AM



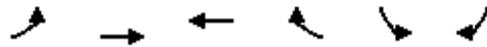
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑			↗
Traffic Volume (vph)	0	0	728	0	0	209
Future Volume (vph)	0	0	728	0	0	209
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.865
Fl _t Protected						
Satd. Flow (prot)	0	0	1810	0	0	1536
Fl _t Permitted						
Satd. Flow (perm)	0	0	1810	0	0	1536
Link Speed (mph)		40	40		35	
Link Distance (ft)		141	270		1395	
Travel Time (s)		2.4	4.6		27.2	
Peak Hour Factor	0.92	0.92	0.87	0.92	0.92	0.86
Heavy Vehicles (%)	2%	2%	5%	2%	2%	7%
Adj. Flow (vph)	0	0	837	0	0	243
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	837	0	0	243
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			40	15	9
Sign Control		Stop	Free		Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	57.9%
	ICU Level of Service B
Analysis Period (min)	15

Lanes, Volumes, Timings
 2: US 76/378 (Broad Street)/US 76 Bus (Broad St)

AM Peak
 No-Build 2050 AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	346	744	663	1	0	0
Future Volume (vph)	346	744	663	1	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frnt						
Flt Protected	0.950					
Satd. Flow (prot)	1671	3471	3471	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1671	3471	3471	0	0	0
Link Speed (mph)		40	40		40	
Link Distance (ft)		397	1287		329	
Travel Time (s)		6.8	21.9		5.6	
Peak Hour Factor	0.97	0.97	0.74	0.74	0.92	0.92
Heavy Vehicles (%)	8%	4%	4%	0%	2%	2%
Adj. Flow (vph)	357	767	896	1	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	357	767	897	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	18		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	44.2%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
 3: US 521 (Camden Hwy) & Jefferson Rd

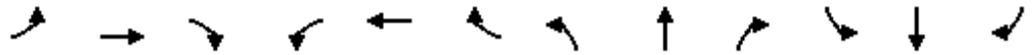
AM Peak
 No-Build 2050 AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗		↖	↗		↖	↗	
Traffic Volume (vph)	0	0	3	58	132	87	55	645	83	187	1276	32
Future Volume (vph)	0	0	3	58	132	87	55	645	83	187	1276	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	75		0	25		0	150		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	100			100			15			0		
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			0.940			0.983			0.996	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	1644	0	1805	1648	0	1805	3266	0	1736	3493	0
Flt Permitted				0.754			0.109			0.323		
Satd. Flow (perm)	0	1644	0	1433	1648	0	207	3266	0	590	3493	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		55			52			38				7
Link Speed (mph)		35			35			40				40
Link Distance (ft)		1395			1118			144				1067
Travel Time (s)		27.2			21.8			2.5				18.2
Peak Hour Factor	0.50	0.50	0.50	0.90	0.90	0.90	0.87	0.87	0.87	0.84	0.84	0.84
Heavy Vehicles (%)	0%	0%	0%	0%	6%	12%	0%	9%	6%	4%	3%	0%
Adj. Flow (vph)	0	0	6	64	147	97	63	741	95	223	1519	38
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	6	0	64	244	0	63	836	0	223	1557	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane								Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	

Lanes, Volumes, Timings
 3: US 521 (Camden Hwy) & Jefferson Rd

AM Peak
 No-Build 2050 AM

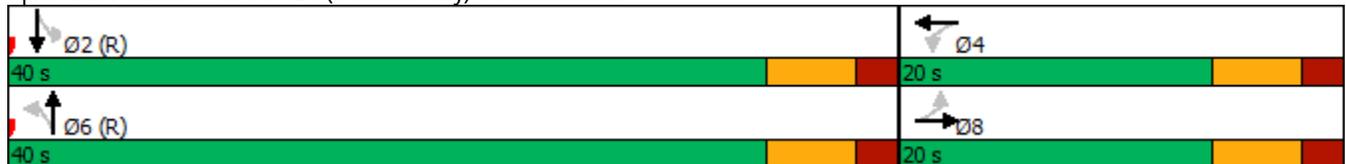


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		6	6		2	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	12.0	12.0		12.0	12.0		18.0	18.0		18.0	18.0	
Total Split (s)	20.0	20.0		20.0	20.0		40.0	40.0		40.0	40.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		66.7%	66.7%		66.7%	66.7%	
Maximum Green (s)	14.0	14.0		14.0	14.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0		6.0	6.0	
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		C-Min	C-Min		C-Min	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effect Green (s)		11.4		11.4	11.4		36.6	36.6		36.6	36.6	
Actuated g/C Ratio		0.19		0.19	0.19		0.61	0.61		0.61	0.61	
v/c Ratio		0.02		0.23	0.69		0.50	0.42		0.62	0.73	
Control Delay		0.0		21.6	27.6		27.4	7.1		19.1	11.5	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		0.0		21.6	27.6		27.4	7.1		19.1	11.5	
LOS		A		C	C		C	A		B	B	
Approach Delay					26.3			8.5			12.4	
Approach LOS					C			A			B	

Intersection Summary

Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 60
 Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 50
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.73
 Intersection Signal Delay: 12.7
 Intersection LOS: B
 Intersection Capacity Utilization 73.5%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 3: US 521 (Camden Hwy) & Jefferson Rd



HCM 6th Signalized Intersection Summary

3: US 521 (Camden Hwy) & Jefferson Rd

AM Peak
No-Build 2050 AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↘		↗	↕		↗	↕	
Traffic Volume (veh/h)	0	0	3	58	132	87	55	645	83	187	1276	32
Future Volume (veh/h)	0	0	3	58	132	87	55	645	83	187	1276	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1811	1722	1900	1767	1811	1841	1856	1900
Adj Flow Rate, veh/h	0	0	6	64	147	97	63	741	95	223	1519	38
Peak Hour Factor	0.50	0.50	0.50	0.90	0.90	0.90	0.87	0.87	0.87	0.84	0.84	0.84
Percent Heavy Veh, %	0	0	0	0	6	12	0	9	6	4	3	0
Cap, veh/h	0	0	289	373	183	121	231	1857	238	440	2181	54
Arrive On Green	0.00	0.00	0.18	0.18	0.18	0.18	0.62	0.62	0.62	0.62	0.62	0.62
Sat Flow, veh/h	0	0	1610	1432	1018	672	336	2992	383	647	3515	88
Grp Volume(v), veh/h	0	0	6	64	0	244	63	415	421	223	761	796
Grp Sat Flow(s),veh/h/ln	0	0	1610	1432	0	1690	336	1678	1698	647	1763	1840
Q Serve(g_s), s	0.0	0.0	0.2	2.3	0.0	8.3	9.3	7.5	7.5	15.9	17.3	17.4
Cycle Q Clear(g_c), s	0.0	0.0	0.2	2.5	0.0	8.3	26.6	7.5	7.5	23.4	17.3	17.4
Prop In Lane	0.00		1.00	1.00		0.40	1.00		0.23	1.00		0.05
Lane Grp Cap(c), veh/h	0	0	289	373	0	304	231	1041	1053	440	1094	1141
V/C Ratio(X)	0.00	0.00	0.02	0.17	0.00	0.80	0.27	0.40	0.40	0.51	0.70	0.70
Avail Cap(c_a), veh/h	0	0	376	450	0	394	231	1041	1053	440	1094	1141
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	20.3	21.3	0.0	23.6	16.5	5.7	5.7	11.7	7.6	7.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.2	0.0	8.9	2.9	1.1	1.1	4.1	3.7	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.1	0.7	0.0	3.8	0.8	2.0	2.0	2.2	5.1	5.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	20.3	21.5	0.0	32.5	19.4	6.9	6.9	15.8	11.3	11.2
LnGrp LOS	A	A	C	C	A	C	B	A	A	B	B	B
Approach Vol, veh/h		6			308			899			1780	
Approach Delay, s/veh		20.3			30.2			7.8			11.8	
Approach LOS		C			C			A			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		43.2		16.8		43.2		16.8				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		34.0		14.0		34.0		14.0				
Max Q Clear Time (g_c+I1), s		25.4		10.3		28.6		2.2				
Green Ext Time (p_c), s		6.6		0.5		2.7		0.0				

Intersection Summary

HCM 6th Ctrl Delay	12.5
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Lanes, Volumes, Timings
 4: US 521 (Camden Hwy) & N Pike W

AM Peak
 No-Build 2050 AM



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	89	148	635	125	207	1131
Future Volume (vph)	89	148	635	125	207	1131
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	25	
Storage Lanes	1	0		0	1	
Taper Length (ft)	100				15	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.916		0.975			
Flt Protected	0.982				0.950	
Satd. Flow (prot)	1594	0	3264	0	1736	3505
Flt Permitted	0.982				0.950	
Satd. Flow (perm)	1594	0	3264	0	1736	3505
Link Speed (mph)	45		40			40
Link Distance (ft)	2128		262			144
Travel Time (s)	32.2		4.5			2.5
Peak Hour Factor	0.85	0.85	0.85	0.85	0.84	0.84
Heavy Vehicles (%)	6%	8%	8%	7%	4%	3%
Adj. Flow (vph)	105	174	747	147	246	1346
Shared Lane Traffic (%)						
Lane Group Flow (vph)	279	0	894	0	246	1346
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	57.0%			ICU Level of Service B		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	120.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕↔		↔	↕↕
Traffic Vol, veh/h	89	148	635	125	207	1131
Future Vol, veh/h	89	148	635	125	207	1131
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	25	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	85	85	85	85	84	84
Heavy Vehicles, %	6	8	8	7	4	3
Mvmt Flow	105	174	747	147	246	1346

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1986	447	0	0	894
Stage 1	821	-	-	-	-
Stage 2	1165	-	-	-	-
Critical Hdwy	6.92	7.06	-	-	4.18
Critical Hdwy Stg 1	5.92	-	-	-	-
Critical Hdwy Stg 2	5.92	-	-	-	-
Follow-up Hdwy	3.56	3.38	-	-	2.24
Pot Cap-1 Maneuver	~ 51	543	-	-	742
Stage 1	383	-	-	-	-
Stage 2	251	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 34	543	-	-	742
Mov Cap-2 Maneuver	~ 34	-	-	-	-
Stage 1	383	-	-	-	-
Stage 2	168	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s\$ 1188		0	1.9
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	82	742
HCM Lane V/C Ratio	-	-	3.4	0.332
HCM Control Delay (s)	-	- \$ 1188	12.2	-
HCM Lane LOS	-	-	F	B
HCM 95th %tile Q(veh)	-	-	28.3	1.5

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

Lanes, Volumes, Timings
5: US 521 (Camden Hwy)

AM Peak
No-Build 2050 AM

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	86	160	605	0	0	1218
Future Volume (vph)	86	160	605	0	0	1218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	0.912					
Flt Protected	0.983					
Satd. Flow (prot)	1552	0	3406	0	0	3505
Flt Permitted	0.983					
Satd. Flow (perm)	1552	0	3406	0	0	3505
Link Speed (mph)	30		40		40	
Link Distance (ft)	1103		245		262	
Travel Time (s)	25.1		4.2		4.5	
Peak Hour Factor	0.81	0.81	0.91	0.92	0.92	0.88
Heavy Vehicles (%)	0%	15%	6%	2%	2%	3%
Adj. Flow (vph)	106	198	665	0	0	1384
Shared Lane Traffic (%)						
Lane Group Flow (vph)	304	0	665	0	0	1384
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free		Free	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	54.9%			ICU Level of Service A		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	4.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y Y		↑↑			↑↑
Traffic Vol, veh/h	86	160	605	0	0	1218
Future Vol, veh/h	86	160	605	0	0	1218
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	91	92	92	88
Heavy Vehicles, %	0	15	6	2	2	3
Mvmt Flow	106	198	665	0	0	1384

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1357	333	0	-	-	-
Stage 1	665	-	-	-	-	-
Stage 2	692	-	-	-	-	-
Critical Hdwy	6.8	7.2	-	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.45	-	-	-	-
Pot Cap-1 Maneuver	143	626	-	0	0	-
Stage 1	478	-	-	0	0	-
Stage 2	463	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	143	626	-	-	-	-
Mov Cap-2 Maneuver	143	-	-	-	-	-
Stage 1	478	-	-	-	-	-
Stage 2	463	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	35.2	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 409	-
HCM Lane V/C Ratio	- 0.743	-
HCM Control Delay (s)	- 35.2	-
HCM Lane LOS	- E	-
HCM 95th %tile Q(veh)	- 6	-

Lanes, Volumes, Timings
6: US 521 (Camden Hwy) & S Pike W

AM Peak
No-Build 2050 AM



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	90	153	452	89	620	690
Future Volume (vph)	90	153	452	89	620	690
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850	0.975			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1626	1553	3325	0	1736	3539
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1626	1553	3325	0	1736	3539
Link Speed (mph)	35		40			40
Link Distance (ft)	825		665			245
Travel Time (s)	16.1		11.3			4.2
Peak Hour Factor	0.81	0.81	0.82	0.82	0.87	0.87
Heavy Vehicles (%)	11%	4%	7%	0%	4%	2%
Adj. Flow (vph)	111	189	551	109	713	793
Shared Lane Traffic (%)						
Lane Group Flow (vph)	111	189	660	0	713	793
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	64.7%			ICU Level of Service C		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	116.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↙	↗	↕		↙	↕
Traffic Vol, veh/h	90	153	452	89	620	690
Future Vol, veh/h	90	153	452	89	620	690
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	150	-	-	200	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	82	82	87	87
Heavy Vehicles, %	11	4	7	0	4	2
Mvmt Flow	111	189	551	109	713	793

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	2429	330	0	0	660	0
Stage 1	606	-	-	-	-	-
Stage 2	1823	-	-	-	-	-
Critical Hdwy	7.02	6.98	-	-	4.18	-
Critical Hdwy Stg 1	6.02	-	-	-	-	-
Critical Hdwy Stg 2	6.02	-	-	-	-	-
Follow-up Hdwy	3.61	3.34	-	-	2.24	-
Pot Cap-1 Maneuver	~ 23	660	-	-	911	-
Stage 1	483	-	-	-	-	-
Stage 2	~ 103	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 5	660	-	-	911	-
Mov Cap-2 Maneuver	~ 20	-	-	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	~ 22	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	909.8	0	10.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	- 20	660	911
HCM Lane V/C Ratio	-	- 5.556	0.286	0.782
HCM Control Delay (s)	-	- \$ 2435	12.6	21.5
HCM Lane LOS	-	- F	B	C
HCM 95th %tile Q(veh)	-	- 14.3	1.2	8.1

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

Lanes, Volumes, Timings

AM Peak

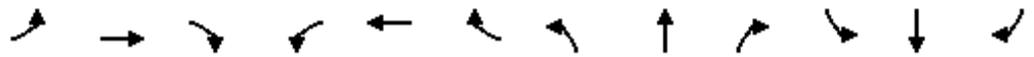
7: Hastings Dr/US 521 (Camden Hwy) & US 76 Bus (Broad Street)/US 76 Bus/US 521 (Broad Street)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	142	608	8	44	565	426	0	0	0	582	33	176
Future Volume (vph)	142	608	8	44	565	426	0	0	0	582	33	176
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	200		0	0		0	0		0
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.998				0.850						0.931
Flt Protected	0.950			0.950						0.950	0.978	
Satd. Flow (prot)	1703	3499	0	1805	3471	1538	0	0	0	1681	1609	0
Flt Permitted	0.950			0.950						0.950	0.978	
Satd. Flow (perm)	1703	3499	0	1805	3471	1538	0	0	0	1681	1609	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		1				437						33
Link Speed (mph)		40			40			25				40
Link Distance (ft)		1287			283			301				665
Travel Time (s)		21.9			4.8			8.2				11.3
Peak Hour Factor	0.83	0.83	0.83	0.92	0.92	0.92	0.92	0.92	0.92	0.86	0.86	0.86
Heavy Vehicles (%)	6%	3%	0%	0%	4%	5%	2%	2%	2%	2%	4%	2%
Adj. Flow (vph)	171	733	10	48	614	463	0	0	0	677	38	205
Shared Lane Traffic (%)										30%		
Lane Group Flow (vph)	171	743	0	48	614	463	0	0	0	474	446	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		40			12			12			40	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		40	15		9	15		9
Number of Detectors	1	2		1	2	1				1	2	
Detector Template	Left	Thru		Left	Thru	Right				Left	Thru	
Leading Detector (ft)	20	100		20	100	20				20	100	
Trailing Detector (ft)	0	0		0	0	0				0	0	
Detector 1 Position(ft)	0	0		0	0	0				0	0	
Detector 1 Size(ft)	20	6		20	6	20				20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type	Prot	NA		Prot	NA	Free				Perm	NA	
Protected Phases	5	2		1	6						4	

Lanes, Volumes, Timings

AM Peak

7: Hastings Dr/US 521 (Camden Hwy) & US 76 Bus (Broad Street)/US 76 Bus/US 521 (Broad Street)

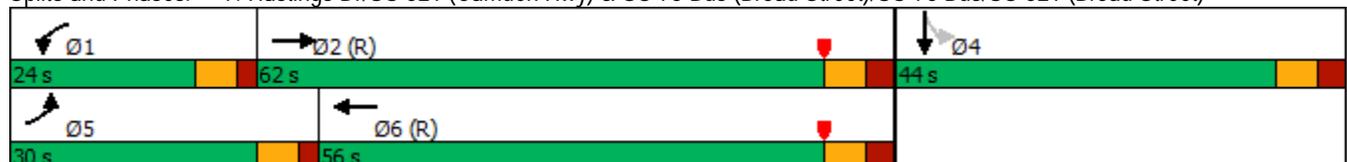


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	Free						4					
Detector Phase	5	2		1	6					4	4	
Switch Phase												
Minimum Initial (s)	8.0	15.0		8.0	15.0					15.0	15.0	
Minimum Split (s)	24.0	25.0		15.0	25.0					25.0	25.0	
Total Split (s)	30.0	62.0		24.0	56.0					44.0	44.0	
Total Split (%)	23.1%	47.7%		18.5%	43.1%					33.8%	33.8%	
Maximum Green (s)	24.0	55.1		18.0	49.1					37.1	37.1	
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	
All-Red Time (s)	2.0	2.9		2.0	2.9					2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)	6.0	6.9		6.0	6.9					6.9	6.9	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	4.0		3.0	4.0					3.0	3.0	
Minimum Gap (s)	3.0	4.0		3.0	4.0					3.0	3.0	
Time Before Reduce (s)	0.0	20.0		0.0	20.0					0.0	0.0	
Time To Reduce (s)	0.0	10.0		0.0	10.0					0.0	0.0	
Recall Mode	None	C-Min		None	C-Min					None	None	
Act Effct Green (s)	18.1	57.9		9.4	46.4	130.0				45.7	45.7	
Actuated g/C Ratio	0.14	0.45		0.07	0.36	1.00				0.35	0.35	
v/c Ratio	0.72	0.48		0.37	0.50	0.30				0.80	0.76	
Control Delay	70.2	28.2		64.9	35.8	0.5				49.4	43.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0				0.0	0.0	
Total Delay	70.2	28.2		64.9	35.8	0.5				49.4	43.6	
LOS	E	C		E	D	A				D	D	
Approach Delay	36.1			22.5						46.6		
Approach LOS	D			C						D		

Intersection Summary

Area Type: Other
 Cycle Length: 130
 Actuated Cycle Length: 130
 Offset: 37 (28%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 80
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 34.2
 Intersection LOS: C
 Intersection Capacity Utilization 62.6%
 ICU Level of Service B
 Analysis Period (min) 15

Splits and Phases: 7: Hastings Dr/US 521 (Camden Hwy) & US 76 Bus (Broad Street)/US 76 Bus/US 521 (Broad Street)



HCM 6th Signalized Intersection Summary

AM Peak

7: Hastings Dr/US 521 (Camden Hwy) & US 76 Bus (Broad Street)/US 76 Bus/US 521 (Broad Street)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	142	608	8	44	565	426	0	0	0	582	33	176
Future Volume (veh/h)	142	608	8	44	565	426	0	0	0	582	33	176
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1811	1856	1900	1900	1841	1826				1870	1841	1870
Adj Flow Rate, veh/h	171	733	10	48	614	0				460	342	0
Peak Hour Factor	0.83	0.83	0.83	0.92	0.92	0.92				0.86	0.86	0.86
Percent Heavy Veh, %	6	3	0	0	4	5				2	4	2
Cap, veh/h	198	1860	25	92	1602					489	505	
Arrive On Green	0.11	0.52	0.52	0.05	0.46	0.00				0.27	0.27	0.00
Sat Flow, veh/h	1725	3561	49	1810	3497	1547				1781	1841	0
Grp Volume(v), veh/h	171	363	380	48	614	0				460	342	0
Grp Sat Flow(s),veh/h/ln	1725	1763	1847	1810	1749	1547				1781	1841	0
Q Serve(g_s), s	12.7	16.1	16.1	3.4	15.0	0.0				32.8	21.5	0.0
Cycle Q Clear(g_c), s	12.7	16.1	16.1	3.4	15.0	0.0				32.8	21.5	0.0
Prop In Lane	1.00		0.03	1.00		1.00				1.00		0.00
Lane Grp Cap(c), veh/h	198	921	965	92	1602					489	505	
V/C Ratio(X)	0.86	0.39	0.39	0.52	0.38					0.94	0.68	
Avail Cap(c_a), veh/h	318	921	965	251	1602					508	525	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	0.00
Uniform Delay (d), s/veh	56.5	18.7	18.7	60.2	23.2	0.0				46.1	42.0	0.0
Incr Delay (d2), s/veh	12.9	1.3	1.2	4.6	0.7	0.0				25.4	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	6.7	7.0	1.6	6.2	0.0				17.6	10.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.4	19.9	19.9	64.7	23.8	0.0				71.5	45.3	0.0
LnGrp LOS	E	B	B	E	C					E	D	
Approach Vol, veh/h		914			662						802	
Approach Delay, s/veh		29.2			26.8						60.3	
Approach LOS		C			C						E	
Timer - Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	12.6	74.8		42.6	20.9	66.5						
Change Period (Y+Rc), s	6.0	6.9		6.9	6.0	6.9						
Max Green Setting (Gmax), s	18.0	55.1		37.1	24.0	49.1						
Max Q Clear Time (g_c+I1), s	5.4	18.1		34.8	14.7	17.0						
Green Ext Time (p_c), s	0.1	7.2		0.9	0.3	6.2						

Intersection Summary

HCM 6th Ctrl Delay	39.0
HCM 6th LOS	D

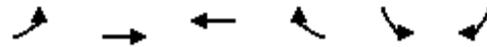
Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
8: S Pike W

AM Peak
No-Build 2050 AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕			
Traffic Volume (vph)	290	409	246	20	0	0
Future Volume (vph)	290	409	246	20	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t			0.990			
Fl _t Protected		0.980				
Satd. Flow (prot)	0	1799	1798	0	0	0
Fl _t Permitted		0.980				
Satd. Flow (perm)	0	1799	1798	0	0	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		825	1032		170	
Travel Time (s)		16.1	20.1		3.9	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.92	0.92
Heavy Vehicles (%)	7%	1%	5%	0%	2%	2%
Adj. Flow (vph)	349	493	296	24	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	842	320	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	58.4%
Analysis Period (min)	15
	ICU Level of Service B

Lanes, Volumes, Timings
 9: US 76/378 (Robert E Graham Fwy) WB

AM Peak
 No-Build 2050 AM



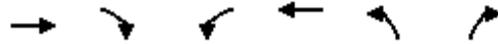
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations			↑	↗		
Traffic Volume (vph)	0	0	728	246	0	0
Future Volume (vph)	0	0	728	246	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr't				0.850		
Flt Protected						
Satd. Flow (prot)	0	0	1792	1404	0	0
Flt Permitted						
Satd. Flow (perm)	0	0	1792	1404	0	0
Link Speed (mph)		60	60		30	
Link Distance (ft)		859	853		1103	
Travel Time (s)		9.8	9.7		25.1	
Peak Hour Factor	0.92	0.92	0.90	0.90	0.92	0.92
Heavy Vehicles (%)	2%	2%	6%	15%	2%	2%
Adj. Flow (vph)	0	0	809	273	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	809	273	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			40	15	9
Sign Control		Stop	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	41.6%
Analysis Period (min)	15
	ICU Level of Service A

Lanes, Volumes, Timings
10: Market St & S Pike W

AM Peak
No-Build 2050 AM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	358	49	50	225	48	61
Future Volume (vph)	358	49	50	225	48	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.984			0.850		
Flt Protected				0.991	0.950	
Satd. Flow (prot)	1847	0	0	1793	1671	1615
Flt Permitted				0.991	0.950	
Satd. Flow (perm)	1847	0	0	1793	1671	1615
Link Speed (mph)	35			45	30	
Link Distance (ft)	1032			932	1040	
Travel Time (s)	20.1			14.1	23.6	
Peak Hour Factor	0.69	0.69	0.80	0.80	0.83	0.83
Heavy Vehicles (%)	1%	3%	5%	5%	8%	0%
Adj. Flow (vph)	519	71	63	281	58	73
Shared Lane Traffic (%)						
Lane Group Flow (vph)	590	0	0	344	58	73
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	R NA	L NA	Left	Left	Right
Median Width(ft)	0		0		12	
Link Offset(ft)	0		0		0	
Crosswalk Width(ft)	16		16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15		15	
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	49.8%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	2.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	358	49	50	225	48	61
Future Vol, veh/h	358	49	50	225	48	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	69	69	80	80	83	83
Heavy Vehicles, %	1	3	5	5	8	0
Mvmt Flow	519	71	63	281	58	73

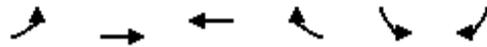
Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	590	0	962
Stage 1	-	-	-	-	555
Stage 2	-	-	-	-	407
Critical Hdwy	-	-	4.15	-	6.48
Critical Hdwy Stg 1	-	-	-	-	5.48
Critical Hdwy Stg 2	-	-	-	-	5.48
Follow-up Hdwy	-	-	2.245	-	3.572
Pot Cap-1 Maneuver	-	-	971	-	277
Stage 1	-	-	-	-	563
Stage 2	-	-	-	-	659
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	971	-	256
Mov Cap-2 Maneuver	-	-	-	-	256
Stage 1	-	-	-	-	563
Stage 2	-	-	-	-	608

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	17.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	256	535	-	-	971	-
HCM Lane V/C Ratio	0.226	0.137	-	-	0.064	-
HCM Control Delay (s)	23.1	12.8	-	-	9	0
HCM Lane LOS	C	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	0.5	-	-	0.2	-

Lanes, Volumes, Timings
11: N Pike W & Electric Dr

AM Peak
No-Build 2050 AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	64	233	210	34	10	46
Future Volume (vph)	64	233	210	34	10	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.981		0.889	
Flt Protected		0.989			0.991	
Satd. Flow (prot)	0	1809	1745	0	1358	0
Flt Permitted		0.989			0.991	
Satd. Flow (perm)	0	1809	1745	0	1358	0
Link Speed (mph)		45	45		25	
Link Distance (ft)		2128	2903		760	
Travel Time (s)		32.2	44.0		20.7	
Peak Hour Factor	0.76	0.76	0.90	0.90	0.78	0.78
Heavy Vehicles (%)	7%	3%	6%	12%	38%	20%
Adj. Flow (vph)	84	307	233	38	13	59
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	391	271	0	72	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	42.3%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	64	233	210	34	10	46
Future Vol, veh/h	64	233	210	34	10	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	76	76	90	90	78	78
Heavy Vehicles, %	7	3	6	12	38	20
Mvmt Flow	84	307	233	38	13	59

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	271	0	0	727	252
Stage 1	-	-	-	252	-
Stage 2	-	-	-	475	-
Critical Hdwy	4.17	-	-	6.78	6.4
Critical Hdwy Stg 1	-	-	-	5.78	-
Critical Hdwy Stg 2	-	-	-	5.78	-
Follow-up Hdwy	2.263	-	-	3.842	3.48
Pot Cap-1 Maneuver	1264	-	-	343	745
Stage 1	-	-	-	713	-
Stage 2	-	-	-	557	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1264	-	-	316	745
Mov Cap-2 Maneuver	-	-	-	316	-
Stage 1	-	-	-	656	-
Stage 2	-	-	-	557	-

Approach	EB	WB	SB
HCM Control Delay, s	1.7	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1264	-	-	-	600
HCM Lane V/C Ratio	0.067	-	-	-	0.12
HCM Control Delay (s)	8.1	0	-	-	11.8
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.4

Lanes, Volumes, Timings
12: E Wesmark Blvd & S Pike W

AM Peak
No-Build 2050 AM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	296	79	116	235	41	82
Future Volume (vph)	296	79	116	235	41	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.972			0.850		
Flt Protected				0.984	0.950	
Satd. Flow (prot)	1818	0	0	1797	1805	1524
Flt Permitted				0.984	0.950	
Satd. Flow (perm)	1818	0	0	1797	1805	1524
Link Speed (mph)	45			45	35	
Link Distance (ft)	932			1492	867	
Travel Time (s)	14.1			22.6	16.9	
Peak Hour Factor	0.73	0.73	0.82	0.82	0.82	0.82
Heavy Vehicles (%)	2%	0%	2%	5%	0%	6%
Adj. Flow (vph)	405	108	141	287	50	100
Shared Lane Traffic (%)						
Lane Group Flow (vph)	513	0	0	428	50	100
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	R NA	L NA	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	52.5%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	3.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	296	79	116	235	41	82
Future Vol, veh/h	296	79	116	235	41	82
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	73	73	82	82	82	82
Heavy Vehicles, %	2	0	2	5	0	6
Mvmt Flow	405	108	141	287	50	100

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	513	0	1028 459
Stage 1	-	-	-	-	459 -
Stage 2	-	-	-	-	569 -
Critical Hdwy	-	-	4.12	-	6.4 6.26
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.218	-	3.5 3.354
Pot Cap-1 Maneuver	-	-	1052	-	262 594
Stage 1	-	-	-	-	641 -
Stage 2	-	-	-	-	570 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1052	-	220 594
Mov Cap-2 Maneuver	-	-	-	-	220 -
Stage 1	-	-	-	-	641 -
Stage 2	-	-	-	-	479 -

Approach	EB	WB	NB
HCM Control Delay, s	0	3	16.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	220	594	-	-	1052	-
HCM Lane V/C Ratio	0.227	0.168	-	-	0.134	-
HCM Control Delay (s)	26.1	12.3	-	-	9	0
HCM Lane LOS	D	B	-	-	A	A
HCM 95th %tile Q(veh)	0.8	0.6	-	-	0.5	-

Lanes, Volumes, Timings
13: Bultman Dr & S Pike W

AM Peak
No-Build 2050 AM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	334	59	71	292	44	80
Future Volume (vph)	334	59	71	292	44	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.980			0.913		
Flt Protected				0.990	0.983	
Satd. Flow (prot)	1838	0	0	1822	1596	0
Flt Permitted				0.990	0.983	
Satd. Flow (perm)	1838	0	0	1822	1596	0
Link Speed (mph)	45			45	35	
Link Distance (ft)	1492			1290	1099	
Travel Time (s)	22.6			19.5	21.4	
Peak Hour Factor	0.86	0.86	0.75	0.75	0.86	0.86
Heavy Vehicles (%)	1%	3%	0%	4%	3%	9%
Adj. Flow (vph)	388	69	95	389	51	93
Shared Lane Traffic (%)						
Lane Group Flow (vph)	457	0	0	484	144	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	57.8%
Analysis Period (min)	15
	ICU Level of Service B

Intersection						
Int Delay, s/veh	3.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	334	59	71	292	44	80
Future Vol, veh/h	334	59	71	292	44	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	75	75	86	86
Heavy Vehicles, %	1	3	0	4	3	9
Mvmt Flow	388	69	95	389	51	93

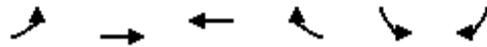
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	457	0	1002
Stage 1	-	-	-	-	423
Stage 2	-	-	-	-	579
Critical Hdwy	-	-	4.1	-	6.43
Critical Hdwy Stg 1	-	-	-	-	5.43
Critical Hdwy Stg 2	-	-	-	-	5.43
Follow-up Hdwy	-	-	2.2	-	3.527
Pot Cap-1 Maneuver	-	-	1114	-	268
Stage 1	-	-	-	-	659
Stage 2	-	-	-	-	558
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1114	-	239
Mov Cap-2 Maneuver	-	-	-	-	239
Stage 1	-	-	-	-	659
Stage 2	-	-	-	-	497

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	19.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	395	-	-	1114	-
HCM Lane V/C Ratio	0.365	-	-	0.085	-
HCM Control Delay (s)	19.3	-	-	8.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.6	-	-	0.3	-

Lanes, Volumes, Timings
 14: N Pike W & Farmers Telephone Rd

AM Peak
 No-Build 2050 AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Volume (vph)	89	142	186	41	16	73
Future Volume (vph)	89	142	186	41	16	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.975		0.889	
Flt Protected		0.981			0.991	
Satd. Flow (prot)	0	1739	1757	0	1581	0
Flt Permitted		0.981			0.991	
Satd. Flow (perm)	0	1739	1757	0	1581	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		2903	2450		704	
Travel Time (s)		44.0	37.1		16.0	
Peak Hour Factor	0.73	0.73	0.90	0.90	0.79	0.79
Heavy Vehicles (%)	9%	6%	6%	3%	33%	0%
Adj. Flow (vph)	122	195	207	46	20	92
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	317	253	0	112	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	40.1%
Analysis Period (min)	15
	ICU Level of Service A

Intersection

Int Delay, s/veh 3.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	89	142	186	41	16	73
Future Vol, veh/h	89	142	186	41	16	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	73	73	90	90	79	79
Heavy Vehicles, %	9	6	6	3	33	0
Mvmt Flow	122	195	207	46	20	92

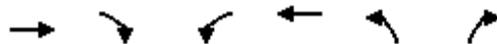
Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	253	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.19	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.281	-	-
Pot Cap-1 Maneuver	1272	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1272	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	3.1	0	11.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1272	-	-	-	649
HCM Lane V/C Ratio	0.096	-	-	-	0.174
HCM Control Delay (s)	8.1	0	-	-	11.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.6

Lanes, Volumes, Timings
15: Hilliard Dr & S Pike W

AM Peak
No-Build 2050 AM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	375	17	43	354	18	80
Future Volume (vph)	375	17	43	354	18	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.994			0.890		
Flt Protected				0.995	0.991	
Satd. Flow (prot)	1837	0	0	1841	1610	0
Flt Permitted				0.995	0.991	
Satd. Flow (perm)	1837	0	0	1841	1610	0
Link Speed (mph)	45			45	25	
Link Distance (ft)	716			1499	658	
Travel Time (s)	10.8			22.7	17.9	
Peak Hour Factor	0.90	0.90	0.72	0.72	0.72	0.72
Heavy Vehicles (%)	2%	20%	0%	3%	0%	5%
Adj. Flow (vph)	417	19	60	492	25	111
Shared Lane Traffic (%)						
Lane Group Flow (vph)	436	0	0	552	136	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	57.7%
ICU Level of Service	B
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	2.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	375	17	43	354	18	80
Future Vol, veh/h	375	17	43	354	18	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	72	72	72	72
Heavy Vehicles, %	2	20	0	3	0	5
Mvmt Flow	417	19	60	492	25	111

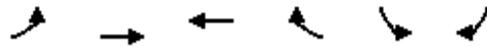
Major/Minor	Major1	Major2	Minor1	Minor2	Minor3
Conflicting Flow All	0	0	436	0	1039
Stage 1	-	-	-	-	427
Stage 2	-	-	-	-	612
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	1134	-	258
Stage 1	-	-	-	-	662
Stage 2	-	-	-	-	545
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1134	-	239
Mov Cap-2 Maneuver	-	-	-	-	239
Stage 1	-	-	-	-	662
Stage 2	-	-	-	-	505

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	15.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	480	-	-	1134	-
HCM Lane V/C Ratio	0.284	-	-	0.053	-
HCM Control Delay (s)	15.4	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.2	-	-	0.2	-

Lanes, Volumes, Timings
 16: N Pike W & Clara Louise Kellogg Drive

AM Peak
 No-Build 2050 AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	13	141	230	34	42	9
Future Volume (vph)	13	141	230	34	42	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.982		0.976	
Flt Protected		0.996			0.960	
Satd. Flow (prot)	0	1733	1788	0	1780	0
Flt Permitted		0.996			0.960	
Satd. Flow (perm)	0	1733	1788	0	1780	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		2450	1573		403	
Travel Time (s)		37.1	23.8		9.2	
Peak Hour Factor	0.75	0.75	0.88	0.88	0.60	0.60
Heavy Vehicles (%)	0%	10%	5%	0%	0%	0%
Adj. Flow (vph)	17	188	261	39	70	15
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	205	300	0	85	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

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

Intersection						
Int Delay, s/veh	2.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Vol, veh/h	13	141	230	34	42	9
Future Vol, veh/h	13	141	230	34	42	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	88	88	60	60
Heavy Vehicles, %	0	10	5	0	0	0
Mvmt Flow	17	188	261	39	70	15

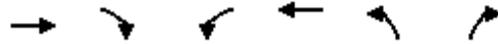
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	300	0	-	0	503 281
Stage 1	-	-	-	-	281 -
Stage 2	-	-	-	-	222 -
Critical Hdwy	4.1	-	-	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	2.2	-	-	-	3.5 3.3
Pot Cap-1 Maneuver	1273	-	-	-	532 763
Stage 1	-	-	-	-	771 -
Stage 2	-	-	-	-	820 -
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	1273	-	-	-	524 763
Mov Cap-2 Maneuver	-	-	-	-	524 -
Stage 1	-	-	-	-	759 -
Stage 2	-	-	-	-	820 -

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1273	-	-	-	555
HCM Lane V/C Ratio	0.014	-	-	-	0.153
HCM Control Delay (s)	7.9	0	-	-	12.7
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.5

Lanes, Volumes, Timings
17: Wall St & S Pike W

AM Peak
No-Build 2050 AM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	358	49	30	363	52	7
Future Volume (vph)	358	49	30	363	52	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.984			0.983		
Flt Protected				0.996	0.958	
Satd. Flow (prot)	1815	0	0	1818	1746	0
Flt Permitted				0.996	0.958	
Satd. Flow (perm)	1815	0	0	1818	1746	0
Link Speed (mph)	45			45	30	
Link Distance (ft)	1499			1239	1096	
Travel Time (s)	22.7			18.8	24.9	
Peak Hour Factor	0.94	0.94	0.82	0.82	0.56	0.56
Heavy Vehicles (%)	3%	3%	5%	4%	0%	20%
Adj. Flow (vph)	381	52	37	443	93	13
Shared Lane Traffic (%)						
Lane Group Flow (vph)	433	0	0	480	106	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	53.9%
Analysis Period (min)	15
	ICU Level of Service A

Intersection

Int Delay, s/veh 2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	358	49	30	363	52	7
Future Vol, veh/h	358	49	30	363	52	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	82	82	56	56
Heavy Vehicles, %	3	3	5	4	0	20
Mvmt Flow	381	52	37	443	93	13

Major/Minor

	Major1	Major2	Minor1		
Conflicting Flow All	0	0	433	0	924
Stage 1	-	-	-	-	407
Stage 2	-	-	-	-	517
Critical Hdwy	-	-	4.15	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.245	-	3.5
Pot Cap-1 Maneuver	-	-	1111	-	302
Stage 1	-	-	-	-	676
Stage 2	-	-	-	-	603
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1111	-	289
Mov Cap-2 Maneuver	-	-	-	-	289
Stage 1	-	-	-	-	676
Stage 2	-	-	-	-	576

Approach

	EB	WB	NB
HCM Control Delay, s	0	0.6	22.6
HCM LOS			C

Minor Lane/Major Mvmt

	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	308	-	-	1111	-
HCM Lane V/C Ratio	0.342	-	-	0.033	-
HCM Control Delay (s)	22.6	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.5	-	-	0.1	-

Lanes, Volumes, Timings
18: Miller Rd/S Pike W

AM Peak
No-Build 2050 AM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	318	63	76	279	297	316
Future Volume (vph)	318	63	76	279	297	316
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	150			0
Storage Lanes	1	0	1			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.978				0.930	
Flt Protected	0.960		0.950			
Satd. Flow (prot)	1680	0	1671	1881	1750	0
Flt Permitted	0.960		0.211			
Satd. Flow (perm)	1680	0	371	1881	1750	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	13				106	
Link Speed (mph)	45			30	30	
Link Distance (ft)	1239			449	761	
Travel Time (s)	18.8			10.2	17.3	
Peak Hour Factor	0.96	0.96	0.88	0.88	0.86	0.86
Heavy Vehicles (%)	7%	2%	8%	1%	2%	0%
Adj. Flow (vph)	331	66	86	317	345	367
Shared Lane Traffic (%)						
Lane Group Flow (vph)	397	0	86	317	712	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane					Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2	2	
Detector Template			Left	Thru	Thru	
Leading Detector (ft)	20		20	100	100	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	20		20	6	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	8.0		0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	

Lanes, Volumes, Timings
18: Miller Rd/S Pike W

AM Peak
No-Build 2050 AM

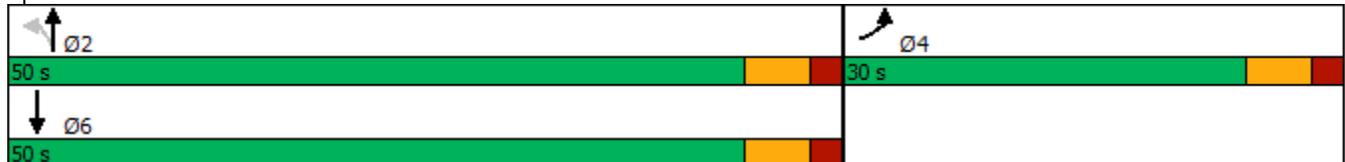


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases			2			
Detector Phase	4		2	2	6	
Switch Phase						
Minimum Initial (s)	6.0		20.0	20.0	20.0	
Minimum Split (s)	24.0		26.0	26.0	26.0	
Total Split (s)	30.0		50.0	50.0	50.0	
Total Split (%)	37.5%		62.5%	62.5%	62.5%	
Maximum Green (s)	24.0		44.0	44.0	44.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		Min	Min	Min	
Walk Time (s)	7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effect Green (s)	18.6		30.1	30.1	30.1	
Actuated g/C Ratio	0.30		0.49	0.49	0.49	
v/c Ratio	0.76		0.47	0.34	0.78	
Control Delay	31.7		21.3	11.0	18.1	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	31.7		21.3	11.0	18.1	
LOS	C		C	B	B	
Approach Delay	31.7			13.2	18.1	
Approach LOS	C			B	B	

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 61.4
 Natural Cycle: 60
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.78
 Intersection Signal Delay: 20.4
 Intersection LOS: C
 Intersection Capacity Utilization 88.1%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 18: Miller Rd/S Pike W



HCM 6th Signalized Intersection Summary
18: Miller Rd/S Pike W

AM Peak
No-Build 2050 AM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	318	63	76	279	297	316
Future Volume (veh/h)	318	63	76	279	297	316
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1796	1870	1781	1885	1870	1900
Adj Flow Rate, veh/h	331	0	86	317	345	0
Peak Hour Factor	0.96	0.96	0.88	0.88	0.86	0.86
Percent Heavy Veh, %	7	2	8	1	2	0
Cap, veh/h	416		519	891	884	
Arrive On Green	0.24	0.00	0.47	0.47	0.47	0.00
Sat Flow, veh/h	1706	0	986	1885	1870	0
Grp Volume(v), veh/h	332	0	86	317	345	0
Grp Sat Flow(s),veh/h/ln	1711	0	986	1885	1870	0
Q Serve(g_s), s	7.7	0.0	2.6	4.5	5.0	0.0
Cycle Q Clear(g_c), s	7.7	0.0	7.7	4.5	5.0	0.0
Prop In Lane	1.00	0.00	1.00			0.00
Lane Grp Cap(c), veh/h	417		519	891	884	
V/C Ratio(X)	0.80		0.17	0.36	0.39	
Avail Cap(c_a), veh/h	970		1078	1960	1945	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.0	0.0	9.7	7.1	7.2	0.0
Incr Delay (d2), s/veh	3.5	0.0	0.1	0.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	0.5	1.3	1.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	18.5	0.0	9.8	7.3	7.5	0.0
LnGrp LOS	B		A	A	A	
Approach Vol, veh/h	332			403	345	
Approach Delay, s/veh	18.5			7.9	7.5	
Approach LOS	B			A	A	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		26.0		16.3		26.0
Change Period (Y+Rc), s		6.0		6.0		6.0
Max Green Setting (Gmax), s		44.0		24.0		44.0
Max Q Clear Time (g_c+l1), s		9.7		9.7		7.0
Green Ext Time (p_c), s		2.5		0.8		2.3

Intersection Summary

HCM 6th Ctrl Delay	11.0
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
19: Carolina Ave & S Pike W

AM Peak
No-Build 2050 AM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	571	39	34	571	37	45
Future Volume (vph)	571	39	34	571	37	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	200		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			100		100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.991				0.926	
Flt Protected			0.950		0.978	
Satd. Flow (prot)	1807	0	1805	1863	1721	0
Flt Permitted			0.950		0.978	
Satd. Flow (perm)	1807	0	1805	1863	1721	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	761			1754	440	
Travel Time (s)	17.3			39.9	10.0	
Peak Hour Factor	0.91	0.91	0.86	0.86	0.73	0.73
Heavy Vehicles (%)	4%	7%	0%	2%	0%	0%
Adj. Flow (vph)	627	43	40	664	51	62
Shared Lane Traffic (%)						
Lane Group Flow (vph)	670	0	40	664	113	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes					
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	43.9%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶		↷	↶	↷	
Traffic Vol, veh/h	571	39	34	571	37	45
Future Vol, veh/h	571	39	34	571	37	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	86	86	73	73
Heavy Vehicles, %	4	7	0	2	0	0
Mvmt Flow	627	43	40	664	51	62

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	670	0	1393
Stage 1	-	-	-	-	649
Stage 2	-	-	-	-	744
Critical Hdwy	-	-	4.1	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.2	-	3.5
Pot Cap-1 Maneuver	-	-	930	-	158
Stage 1	-	-	-	-	524
Stage 2	-	-	-	-	473
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	930	-	151
Mov Cap-2 Maneuver	-	-	-	-	290
Stage 1	-	-	-	-	524
Stage 2	-	-	-	-	453

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	19
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	368	-	-	930	-
HCM Lane V/C Ratio	0.305	-	-	0.043	-
HCM Control Delay (s)	19	-	-	9	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	1.3	-	-	0.1	-

Lanes, Volumes, Timings
20: Bordeaux Ave & N Pike W

AM Peak
No-Build 2050 AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	266	40	268	236	11	54	0	166	28	12	0
Future Volume (vph)	1	266	40	268	236	11	54	0	166	28	12	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
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
Fr _t		0.983			0.997			0.898				
Fl _t Protected					0.975			0.988			0.966	
Satd. Flow (prot)	0	1719	0	0	1744	0	0	1677	0	0	1835	0
Fl _t Permitted					0.975			0.988			0.966	
Satd. Flow (perm)	0	1719	0	0	1744	0	0	1677	0	0	1835	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2426			896			149			335	
Travel Time (s)		55.1			20.4			3.4			7.6	
Peak Hour Factor	0.92	0.92	0.92	0.91	0.91	0.91	0.82	0.82	0.82	0.75	0.75	0.75
Heavy Vehicles (%)	0%	10%	0%	6%	6%	0%	2%	0%	0%	0%	0%	0%
Adj. Flow (vph)	1	289	43	295	259	12	66	0	202	37	16	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	333	0	0	566	0	0	268	0	0	53	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	67.3%
Analysis Period (min)	15
	ICU Level of Service C

Intersection												
Int Delay, s/veh	17.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	266	40	268	236	11	54	0	166	28	12	0
Future Vol, veh/h	1	266	40	268	236	11	54	0	166	28	12	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	91	91	91	82	82	82	75	75	75
Heavy Vehicles, %	0	10	0	6	6	0	2	0	0	0	0	0
Mvmt Flow	1	289	43	295	259	12	66	0	202	37	16	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	271	0	0	332	0	0	1176	1174	311	1269	1189	265
Stage 1	-	-	-	-	-	-	313	313	-	855	855	-
Stage 2	-	-	-	-	-	-	863	861	-	414	334	-
Critical Hdwy	4.1	-	-	4.16	-	-	7.12	6.5	6.2	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.254	-	-	3.518	4	3.3	3.5	4	3.3
Pot Cap-1 Maneuver	1304	-	-	1205	-	-	168	193	734	147	190	779
Stage 1	-	-	-	-	-	-	698	661	-	356	378	-
Stage 2	-	-	-	-	-	-	349	375	-	620	647	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1304	-	-	1205	-	-	119	137	734	83	135	779
Mov Cap-2 Maneuver	-	-	-	-	-	-	119	137	-	83	135	-
Stage 1	-	-	-	-	-	-	697	660	-	356	269	-
Stage 2	-	-	-	-	-	-	233	267	-	449	646	-

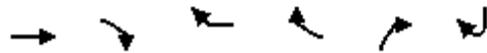
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			4.7			52.5			84.7		
HCM LOS							F			F		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	324	1304	-	-	1205	-	-	94
HCM Lane V/C Ratio	0.828	0.001	-	-	0.244	-	-	0.567
HCM Control Delay (s)	52.5	7.8	0	-	9	0	-	84.7
HCM Lane LOS	F	A	A	-	A	A	-	F
HCM 95th %tile Q(veh)	7.1	0	-	-	1	-	-	2.6

Lanes, Volumes, Timings

AM Peak

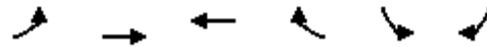
21: Bordeaux Ave & US 76/378 (Robert E Graham Fwy) EB & US 76/378 (Robert E Graham Fwy) WB



Lane Group	EBT	EBR	WBR	WBR2	NBR	SBR2
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑
Traffic Volume (vph)	379	280	827	220	101	320
Future Volume (vph)	379	280	827	220	101	320
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		275	300		0	
Storage Lanes		1	1		1	
Taper Length (ft)						
Lane Util. Factor	0.95	1.00	0.88	1.00	1.00	1.00
Frt		0.850	0.850	0.850	0.865	0.865
Flt Protected						
Satd. Flow (prot)	3610	1553	2842	1615	1508	1644
Flt Permitted						
Satd. Flow (perm)	3610	1553	2842	1615	1508	1644
Link Speed (mph)	60					
Link Distance (ft)	2871					
Travel Time (s)	32.6					
Peak Hour Factor	0.91	0.91	0.90	0.90	0.74	0.90
Heavy Vehicles (%)	0%	4%	0%	0%	9%	0%
Adj. Flow (vph)	416	308	919	244	136	356
Shared Lane Traffic (%)						
Lane Group Flow (vph)	416	308	919	244	136	356
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Right	Right	Right	Right
Median Width(ft)	0					
Link Offset(ft)	0					
Crosswalk Width(ft)	16					
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		25	60	25	25	25
Sign Control	Free					
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	55.4%			ICU Level of Service B		
Analysis Period (min)	15					

Lanes, Volumes, Timings
22: S Pike W & Bordeaux Ave

AM Peak
No-Build 2050 AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	85	508	600	21	259	21
Future Volume (vph)	85	508	600	21	259	21
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	100
Storage Lanes	1			0	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.995			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1719	1827	1839	0	1736	1615
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1719	1827	1839	0	1736	1615
Link Speed (mph)		30	30		30	
Link Distance (ft)		1754	1073		396	
Travel Time (s)		39.9	24.4		9.0	
Peak Hour Factor	0.93	0.93	0.85	0.85	0.88	0.88
Heavy Vehicles (%)	5%	4%	2%	25%	4%	0%
Adj. Flow (vph)	91	546	706	25	294	24
Shared Lane Traffic (%)						
Lane Group Flow (vph)	91	546	731	0	294	24
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	61.9%			ICU Level of Service B		
Analysis Period (min)	15					

Intersection

Int Delay, s/veh 116.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↙	↑	↘		↙	↘
Traffic Vol, veh/h	85	508	600	21	259	21
Future Vol, veh/h	85	508	600	21	259	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	93	93	85	85	88	88
Heavy Vehicles, %	5	4	2	25	4	0
Mvmt Flow	91	546	706	25	294	24

Major/Minor

	Major1	Major2	Minor2
Conflicting Flow All	731	0	0 1447 719
Stage 1	-	-	- 719 -
Stage 2	-	-	- 728 -
Critical Hdwy	4.15	-	- 6.44 6.2
Critical Hdwy Stg 1	-	-	- 5.44 -
Critical Hdwy Stg 2	-	-	- 5.44 -
Follow-up Hdwy	2.245	-	- 3.536 3.3
Pot Cap-1 Maneuver	860	-	- ~ 143 432
Stage 1	-	-	- 479 -
Stage 2	-	-	- 474 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	860	-	- ~ 128 432
Mov Cap-2 Maneuver	-	-	- ~ 128 -
Stage 1	-	-	- 428 -
Stage 2	-	-	- 474 -

Approach

	EB	WB	SB
HCM Control Delay, s	1.4	0	\$ 615.2
HCM LOS			F

Minor Lane/Major Mvmt

	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	860	-	-	-	128	432
HCM Lane V/C Ratio	0.106	-	-	-	2.299	0.055
HCM Control Delay (s)	9.7	-	-	-	\$ 664	13.8
HCM Lane LOS	A	-	-	-	F	B
HCM 95th %tile Q(veh)	0.4	-	-	-	25.2	0.2

Notes

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

Lanes, Volumes, Timings
 23: US 15 (N Main St) & N Pike W/Strange St

AM Peak
 No-Build 2050 AM

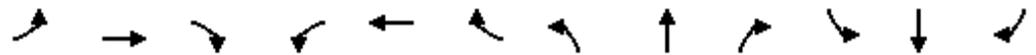


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↖	↕		↖	↕	↗
Traffic Volume (vph)	105	26	339	12	27	21	419	464	25	14	476	74
Future Volume (vph)	105	26	339	12	27	21	419	464	25	14	476	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	100		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	100			100			20			100		
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			0.850		0.953			0.992			0.980	
Flt Protected		0.961			0.990		0.950			0.950		
Satd. Flow (prot)	0	1769	1524	0	1589	0	1736	3340	0	1656	3267	0
Flt Permitted		0.767			0.912		0.222			0.441		
Satd. Flow (perm)	0	1412	1524	0	1464	0	406	3340	0	769	3267	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			368		21			6			20	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		896			1043			293			718	
Travel Time (s)		20.4			23.7			8.0			19.6	
Peak Hour Factor	0.92	0.92	0.92	0.82	0.82	0.82	0.87	0.87	0.87	0.95	0.95	0.95
Heavy Vehicles (%)	4%	0%	6%	0%	24%	6%	4%	7%	11%	9%	6%	23%
Adj. Flow (vph)	114	28	368	15	33	26	482	533	29	15	501	78
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	142	368	0	74	0	482	562	0	15	579	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8!			8!		5	2!			6	

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	4

Lanes, Volumes, Timings
 23: US 15 (N Main St) & N Pike W/Strange St

AM Peak
 No-Build 2050 AM

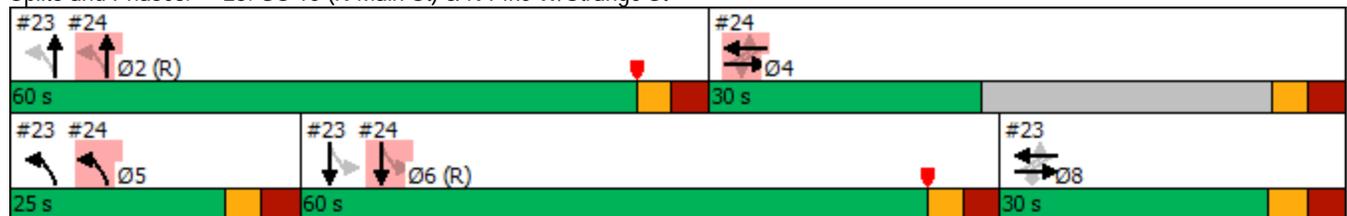


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8!		8	8!			2!			6		
Detector Phase	8	8	8	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		6.0	12.0		12.0	12.0	
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0		15.0	34.0		32.0	32.0	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		25.0	60.0		60.0	60.0	
Total Split (%)	26.1%	26.1%	26.1%	26.1%	26.1%		21.7%	52.2%		52.2%	52.2%	
Maximum Green (s)	23.2	23.2	23.2	23.2	23.2		18.5	53.9		53.9	53.9	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.1		3.1	3.1	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.8	6.8		6.8		6.5	6.1		6.1	6.1	
Lead/Lag							Lead	Lead		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.5		2.5	2.5	
Recall Mode	None	None	None	None	None		None	C-Min		C-Min	C-Min	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	23.0	23.0	23.0	23.0	23.0			20.0		18.0	18.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0		0	0	
Act Effct Green (s)		17.4	17.4		17.4		62.5	62.9		45.2	45.2	
Actuated g/C Ratio		0.15	0.15		0.15		0.54	0.55		0.39	0.39	
v/c Ratio		0.67	0.68		0.31		0.80	0.31		0.05	0.45	
Control Delay		60.2	11.0		33.6		29.1	5.1		20.2	25.5	
Queue Delay		0.0	0.0		0.0		2.2	0.3		0.0	0.0	
Total Delay		60.2	11.0		33.6		31.3	5.4		20.2	25.5	
LOS		E	B		C		C	A		C	C	
Approach Delay		24.7			33.6			17.4			25.3	
Approach LOS		C			C			B			C	

Intersection Summary

Area Type: Other
 Cycle Length: 115
 Actuated Cycle Length: 115
 Offset: 2.5 (2%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 21.7
 Intersection LOS: C
 Intersection Capacity Utilization 68.4%
 ICU Level of Service C
 Analysis Period (min) 15
 ! Phase conflict between lane groups.

Splits and Phases: 23: US 15 (N Main St) & N Pike W/Strange St



Lane Group	Ø4
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	6.0
Minimum Split (s)	20.0
Total Split (s)	30.0
Total Split (%)	26%
Maximum Green (s)	23.5
Yellow Time (s)	3.0
All-Red Time (s)	3.5
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	30.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

HCM 6th Edition methodology does not support clustered intersections.

HCM Signalized Intersection Capacity Analysis

23: US 15 (N Main St) & N Pike W/Strange St

AM Peak
No-Build 2050 AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↖	↕		↖	↕	↗
Traffic Volume (vph)	105	26	339	12	27	21	419	464	25	14	476	74
Future Volume (vph)	105	26	339	12	27	21	419	464	25	14	476	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.8		6.8		6.5	6.1		6.1	6.1	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.95		1.00	0.99		1.00	0.98	
Flt Protected		0.96	1.00		0.99		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1770	1524		1588		1736	3341		1656	3266	
Flt Permitted		0.77	1.00		0.91		0.22	1.00		0.44	1.00	
Satd. Flow (perm)		1412	1524		1464		405	3341		769	3266	
Peak-hour factor, PHF	0.92	0.92	0.92	0.82	0.82	0.82	0.87	0.87	0.87	0.95	0.95	0.95
Adj. Flow (vph)	114	28	368	15	33	26	482	533	29	15	501	78
RTOR Reduction (vph)	0	0	312	0	18	0	0	3	0	0	12	0
Lane Group Flow (vph)	0	142	56	0	56	0	482	559	0	15	567	0
Heavy Vehicles (%)	4%	0%	6%	0%	24%	6%	4%	7%	11%	9%	6%	23%
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8!			8!		5	2!			6	
Permitted Phases	8!		8	8!			2!			6		
Actuated Green, G (s)		17.4	17.4		17.4		62.9	62.9		45.2	45.2	
Effective Green, g (s)		17.4	17.4		17.4		62.9	62.9		45.2	45.2	
Actuated g/C Ratio		0.15	0.15		0.15		0.55	0.55		0.39	0.39	
Clearance Time (s)		6.8	6.8		6.8		6.5	6.1		6.1	6.1	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	2.5		2.5	2.5	
Lane Grp Cap (vph)		213	230		221		603	1827		302	1283	
v/s Ratio Prot							c0.23	0.17			c0.17	
v/s Ratio Perm		c0.10	0.04		0.04		c0.21			0.02		
v/c Ratio		0.67	0.24		0.25		0.80	0.31		0.05	0.44	
Uniform Delay, d1		46.1	43.0		43.1		21.6	14.2		21.6	25.6	
Progression Factor		1.00	1.00		1.00		0.82	0.32		1.00	1.00	
Incremental Delay, d2		7.7	0.5		0.6		6.2	0.4		0.3	1.1	
Delay (s)		53.7	43.5		43.7		23.9	4.9		21.9	26.7	
Level of Service		D	D		D		C	A		C	C	
Approach Delay (s)		46.4			43.7			13.6			26.6	
Approach LOS		D			D			B			C	

Intersection Summary

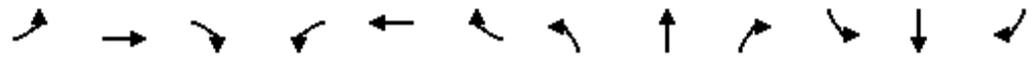
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.4
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

Lanes, Volumes, Timings
 24: US 15 (N Main St) & S Pike W/S Pike E

AM Peak
 No-Build 2050 AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	3	3	119	3	74	2	835	95	55	775	4
Future Volume (vph)	1	3	3	119	3	74	2	835	95	55	775	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	175		0	125		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			100			100			20		
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		0.925			0.857			0.985			0.999	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1805	1758	0	1787	1628	0	1805	3374	0	1612	3403	0
Flt Permitted	0.698			0.748			0.134			0.254		
Satd. Flow (perm)	1326	1758	0	1407	1628	0	255	3374	0	431	3403	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		7			62			14				1
Link Speed (mph)		30			30			25				25
Link Distance (ft)		800			766			650				293
Travel Time (s)		18.2			17.4			17.7				8.0
Peak Hour Factor	0.42	0.42	0.42	0.85	0.85	0.85	0.83	0.83	0.83	0.98	0.98	0.98
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	6%	0%	12%	6%	0%
Adj. Flow (vph)	2	7	7	140	4	87	2	1006	114	56	791	4
Shared Lane Traffic (%)												
Lane Group Flow (vph)	2	14	0	140	91	0	2	1120	0	56	795	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4!			4!		5!	2			6!	

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8

Lanes, Volumes, Timings
 24: US 15 (N Main St) & S Pike W/S Pike E

AM Peak
 No-Build 2050 AM



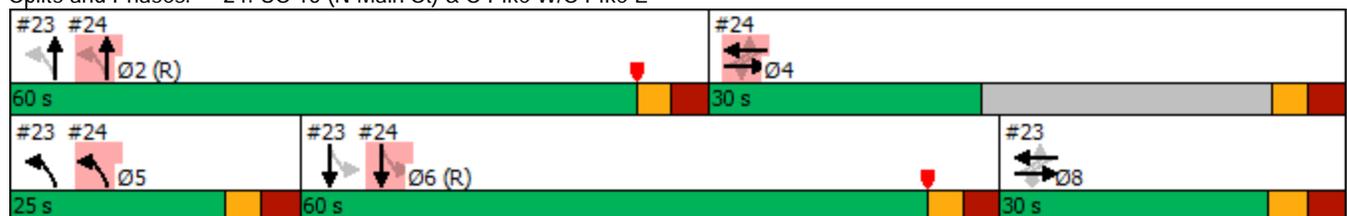
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4!			4!			2			6!		
Detector Phase	4	4		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	12.0		12.0	12.0	
Minimum Split (s)	20.0	20.0		20.0	20.0		15.0	34.0		32.0	32.0	
Total Split (s)	30.0	30.0		30.0	30.0		25.0	60.0		60.0	60.0	
Total Split (%)	26.1%	26.1%		26.1%	26.1%		21.7%	52.2%		52.2%	52.2%	
Maximum Green (s)	23.5	23.5		23.5	23.5		18.5	53.9		53.9	53.9	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.5	3.5		3.5	3.5		3.5	3.1		3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.1		6.1	6.1	
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes										
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	2.5		2.5	2.5	
Recall Mode	None	None		None	None		None	C-Min		C-Min	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	30.0	30.0		30.0	30.0			20.0		18.0	18.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effect Green (s)	39.5	39.5		39.5	39.5		62.5	62.9		45.2	45.2	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.54	0.55		0.39	0.39	
v/c Ratio	0.00	0.02		0.29	0.15		0.00	0.60		0.33	0.59	
Control Delay	21.0	15.5		28.1	9.7		15.0	20.1		19.4	17.2	
Queue Delay	0.0	0.0		0.0	0.1		0.0	0.3		0.0	0.2	
Total Delay	21.0	15.5		28.1	9.8		15.0	20.4		19.4	17.4	
LOS	C	B		C	A		B	C		B	B	
Approach Delay		16.2			20.9			20.4			17.5	
Approach LOS		B			C			C			B	

Intersection Summary

Area Type: Other
 Cycle Length: 115
 Actuated Cycle Length: 115
 Offset: 2.5 (2%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 75
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.80
 Intersection Signal Delay: 19.3
 Intersection LOS: B
 Intersection Capacity Utilization 65.0%
 ICU Level of Service C
 Analysis Period (min) 15

! Phase conflict between lane groups.

Splits and Phases: 24: US 15 (N Main St) & S Pike W/S Pike E



Lane Group	Ø8
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	6.0
Minimum Split (s)	20.0
Total Split (s)	30.0
Total Split (%)	26%
Maximum Green (s)	23.2
Yellow Time (s)	3.3
All-Red Time (s)	3.5
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	23.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

HCM 6th Edition methodology does not support clustered intersections.

HCM Signalized Intersection Capacity Analysis
 24: US 15 (N Main St) & S Pike W/S Pike E

AM Peak
 No-Build 2050 AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	
Traffic Volume (vph)	1	3	3	119	3	74	2	835	95	55	775	4
Future Volume (vph)	1	3	3	119	3	74	2	835	95	55	775	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.5	6.5		6.5	6.5		6.5	6.1		6.1	6.1	
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt	1.00	0.93		1.00	0.86		1.00	0.98		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1805	1758		1787	1628		1805	3373		1612	3404	
Flt Permitted	0.70	1.00		0.75	1.00		0.13	1.00		0.25	1.00	
Satd. Flow (perm)	1326	1758		1408	1628		254	3373		431	3404	
Peak-hour factor, PHF	0.42	0.42	0.42	0.85	0.85	0.85	0.83	0.83	0.83	0.98	0.98	0.98
Adj. Flow (vph)	2	7	7	140	4	87	2	1006	114	56	791	4
RTOR Reduction (vph)	0	5	0	0	41	0	0	6	0	0	1	0
Lane Group Flow (vph)	2	9	0	140	50	0	2	1114	0	56	794	0
Heavy Vehicles (%)	0%	0%	0%	1%	0%	0%	0%	6%	0%	12%	6%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4!			4!		5!	2			6!	
Permitted Phases	4!			4!			2			6!		
Actuated Green, G (s)	39.5	39.5		39.5	39.5		62.9	62.9		45.2	45.2	
Effective Green, g (s)	39.5	39.5		39.5	39.5		62.9	62.9		45.2	45.2	
Actuated g/C Ratio	0.34	0.34		0.34	0.34		0.55	0.55		0.39	0.39	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.5	6.1		6.1	6.1	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	2.5		2.5	2.5	
Lane Grp Cap (vph)	455	603		483	559		583	1844		169	1337	
v/s Ratio Prot		0.01			0.03		0.00	c0.33			c0.23	
v/s Ratio Perm	0.00			c0.10			0.00			0.13		
v/c Ratio	0.00	0.02		0.29	0.09		0.00	0.60		0.33	0.59	
Uniform Delay, d1	24.8	24.9		27.5	25.6		13.8	17.6		24.4	27.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		0.61	0.56	
Incremental Delay, d2	0.0	0.0		0.3	0.1		0.0	1.5		4.7	1.8	
Delay (s)	24.8	24.9		27.9	25.6		13.8	19.1		19.5	17.4	
Level of Service	C	C		C	C		B	B		B	B	
Approach Delay (s)		24.9			27.0			19.1			17.5	
Approach LOS		C			C			B			B	

Intersection Summary

HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.4
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

Lanes, Volumes, Timings

AM Peak

25: N Main St/US 15 (N Main St) & S Pike W/US 15 (N Lafayette Dr)

No-Build 2050 AM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	230	329	200	7	233	426	52	250	4	298	252	343
Future Volume (vph)	230	329	200	7	233	426	52	250	4	298	252	343
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		125	125		0	250		100	250		225
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	0.97	1.00	1.00
Frt		0.943				0.850		0.998				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1787	3266	0	1805	1845	1482	1805	3434	0	3155	1863	1568
Flt Permitted	0.318			0.443			0.950			0.950		
Satd. Flow (perm)	598	3266	0	842	1845	1482	1805	3434	0	3155	1863	1568
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		96				467		2				373
Link Speed (mph)		30			25			25				25
Link Distance (ft)		1073			898			498				650
Travel Time (s)		24.4			24.5			13.6				17.7
Peak Hour Factor	0.95	0.95	0.95	0.82	0.82	0.82	0.91	0.91	0.91	0.92	0.92	0.92
Heavy Vehicles (%)	1%	5%	3%	0%	3%	9%	0%	5%	0%	11%	2%	3%
Adj. Flow (vph)	242	346	211	9	284	520	57	275	4	324	274	373
Shared Lane Traffic (%)												
Lane Group Flow (vph)	242	557	0	9	284	520	57	279	0	324	274	373
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	

Lanes, Volumes, Timings
 25: N Main St/US 15 (N Main St) & S Pike W/US 15 (N Lafayette Dr)

AM Peak
 No-Build 2050 AM

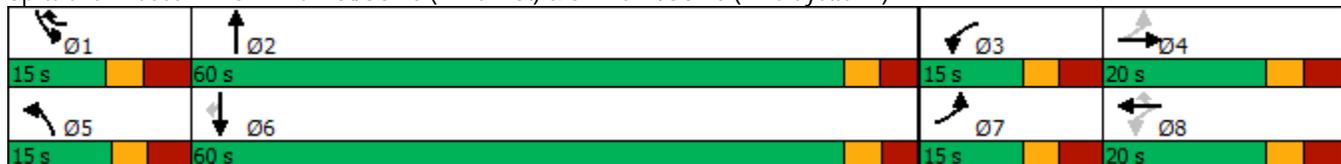


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8						6
Detector Phase	7	4		3	8	1	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	6.0	6.0	12.0		6.0	12.0	12.0
Minimum Split (s)	15.0	15.0		15.0	15.0	15.0	15.0	40.0		15.0	40.0	40.0
Total Split (s)	15.0	20.0		15.0	20.0	15.0	15.0	60.0		15.0	60.0	60.0
Total Split (%)	13.6%	18.2%		13.6%	18.2%	13.6%	13.6%	54.5%		13.6%	54.5%	54.5%
Maximum Green (s)	8.5	13.5		8.5	13.5	8.1	8.5	53.7		8.1	53.8	53.8
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	3.5	3.5		3.5	3.5	3.9	3.5	3.3		3.9	3.2	3.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.9	6.5	6.3		6.9	6.2	6.2
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	2.5		3.0	2.5	2.5
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		25.0			29.0			26.0			26.0	26.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effct Green (s)	27.8	26.3		19.6	13.6	28.2	7.4	16.4		8.1	23.1	23.1
Actuated g/C Ratio	0.38	0.36		0.27	0.19	0.39	0.10	0.22		0.11	0.32	0.32
v/c Ratio	0.66	0.45		0.03	0.83	0.61	0.31	0.36		0.92	0.47	0.50
Control Delay	28.6	18.3		16.4	52.3	6.5	36.2	24.6		67.6	25.1	5.2
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	28.6	18.3		16.4	52.3	6.5	36.2	24.6		67.6	25.1	5.2
LOS	C	B		B	D	A	D	C		E	C	A
Approach Delay		21.4			22.6			26.6			31.7	
Approach LOS		C			C			C			C	

Intersection Summary

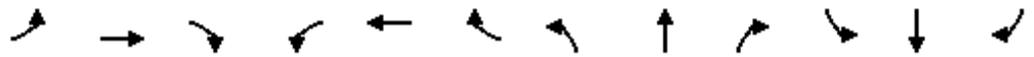
Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 72.9
 Natural Cycle: 85
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.92
 Intersection Signal Delay: 25.7
 Intersection LOS: C
 Intersection Capacity Utilization 65.5%
 ICU Level of Service C
 Analysis Period (min) 15

Splits and Phases: 25: N Main St/US 15 (N Main St) & S Pike W/US 15 (N Lafayette Dr)



HCM 6th Signalized Intersection Summary
 25: N Main St/US 15 (N Main St) & S Pike W/US 15 (N Lafayette Dr)

AM Peak
 No-Build 2050 AM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗	↖	↗		↗	↗	↗
Traffic Volume (veh/h)	230	329	200	7	233	426	52	250	4	298	252	343
Future Volume (veh/h)	230	329	200	7	233	426	52	250	4	298	252	343
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1885	1826	1856	1900	1856	1767	1900	1826	1900	1737	1870	1856
Adj Flow Rate, veh/h	242	346	211	9	284	520	57	275	4	324	274	373
Peak Hour Factor	0.95	0.95	0.95	0.82	0.82	0.82	0.91	0.91	0.91	0.92	0.92	0.92
Percent Heavy Veh, %	1	5	3	0	3	9	0	5	0	11	2	3
Cap, veh/h	336	604	361	249	345	445	102	786	11	358	533	448
Arrive On Green	0.12	0.29	0.29	0.01	0.19	0.19	0.06	0.22	0.22	0.11	0.29	0.29
Sat Flow, veh/h	1795	2087	1249	1810	1856	1497	1810	3500	51	3209	1870	1572
Grp Volume(v), veh/h	242	286	271	9	284	520	57	136	143	324	274	373
Grp Sat Flow(s),veh/h/ln	1795	1735	1601	1810	1856	1497	1810	1735	1817	1605	1870	1572
Q Serve(g_s), s	7.6	10.2	10.5	0.3	10.7	13.5	2.2	4.8	4.8	7.2	8.9	16.1
Cycle Q Clear(g_c), s	7.6	10.2	10.5	0.3	10.7	13.5	2.2	4.8	4.8	7.2	8.9	16.1
Prop In Lane	1.00		0.78	1.00		1.00	1.00		0.03	1.00		1.00
Lane Grp Cap(c), veh/h	336	502	463	249	345	445	102	389	408	358	533	448
V/C Ratio(X)	0.72	0.57	0.58	0.04	0.82	1.17	0.56	0.35	0.35	0.90	0.51	0.83
Avail Cap(c_a), veh/h	336	502	463	436	345	445	212	1283	1344	358	1386	1165
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.3	22.0	22.1	23.4	28.4	25.5	33.4	23.7	23.7	31.9	21.7	24.3
Incr Delay (d2), s/veh	7.3	1.5	1.9	0.1	14.8	97.1	4.7	0.4	0.4	25.5	0.6	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	4.1	4.0	0.1	6.0	19.3	1.1	2.0	2.1	4.0	3.9	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.6	23.5	23.9	23.5	43.2	122.6	38.1	24.1	24.1	57.3	22.3	27.4
LnGrp LOS	C	C	C	C	D	F	D	C	C	E	C	C
Approach Vol, veh/h		799			813			336			971	
Approach Delay, s/veh		24.9			93.8			26.5			35.9	
Approach LOS		C			F			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	22.6	7.5	27.5	10.6	27.0	15.0	20.0				
Change Period (Y+Rc), s	6.9	* 6.3	6.5	6.5	6.5	* 6.3	6.5	6.5				
Max Green Setting (Gmax), s	8.1	* 54	8.5	13.5	8.5	* 54	8.5	13.5				
Max Q Clear Time (g_c+I1), s	9.2	6.8	2.3	12.5	4.2	18.1	9.6	15.5				
Green Ext Time (p_c), s	0.0	1.5	0.0	0.4	0.0	2.6	0.0	0.0				

Intersection Summary

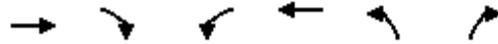
HCM 6th Ctrl Delay	47.9
HCM 6th LOS	D

Notes

- User approved pedestrian interval to be less than phase max green.
- * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
 26: Brokehollow Place Dwy & S Pike W

AM Peak
 No-Build 2050 AM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	398	14	5	341	15	18
Future Volume (vph)	398	14	5	341	15	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.995			0.926		
Flt Protected				0.999	0.978	
Satd. Flow (prot)	1855	0	0	1844	1546	0
Flt Permitted				0.999	0.978	
Satd. Flow (perm)	1855	0	0	1844	1546	0
Link Speed (mph)	45			45	15	
Link Distance (ft)	1290			716	767	
Travel Time (s)	19.5			10.8	34.9	
Peak Hour Factor	0.87	0.87	0.74	0.74	0.63	0.63
Heavy Vehicles (%)	2%	0%	0%	3%	25%	0%
Adj. Flow (vph)	457	16	7	461	24	29
Shared Lane Traffic (%)						
Lane Group Flow (vph)	473	0	0	468	53	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	31.9%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	398	14	5	341	15	18
Future Vol, veh/h	398	14	5	341	15	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	74	74	63	63
Heavy Vehicles, %	2	0	0	3	25	0
Mvmt Flow	457	16	7	461	24	29

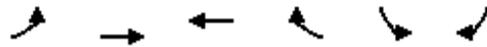
Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	473	0	940
Stage 1	-	-	-	-	465
Stage 2	-	-	-	-	475
Critical Hdwy	-	-	4.1	-	6.65
Critical Hdwy Stg 1	-	-	-	-	5.65
Critical Hdwy Stg 2	-	-	-	-	5.65
Follow-up Hdwy	-	-	2.2	-	3.725
Pot Cap-1 Maneuver	-	-	1099	-	266
Stage 1	-	-	-	-	587
Stage 2	-	-	-	-	580
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1099	-	264
Mov Cap-2 Maneuver	-	-	-	-	264
Stage 1	-	-	-	-	587
Stage 2	-	-	-	-	575

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	15.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	381	-	-	1099	-
HCM Lane V/C Ratio	0.137	-	-	0.006	-
HCM Control Delay (s)	15.9	-	-	8.3	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0	-

Lanes, Volumes, Timings
30: N Pike W

AM Peak
No-Build 2050 AM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	183	275	15	60	0
Future Volume (vph)	0	183	275	15	60	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t		0.993				
Fl _t Protected					0.950	
Satd. Flow (prot)	0	1863	1850	0	1770	0
Fl _t Permitted					0.950	
Satd. Flow (perm)	0	1863	1850	0	1770	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		1573	2426		390	
Travel Time (s)		23.8	36.8		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	199	299	16	65	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	199	315	0	65	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

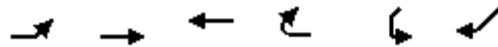
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	25.4%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	0	183	275	15	60	0
Future Vol, veh/h	0	183	275	15	60	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	199	299	16	65	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	315	0	0	506	307
Stage 1	-	-	-	307	-
Stage 2	-	-	-	199	-
Critical Hdwy	4.12	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	1245	-	-	526	733
Stage 1	-	-	-	746	-
Stage 2	-	-	-	835	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1245	-	-	526	733
Mov Cap-2 Maneuver	-	-	-	526	-
Stage 1	-	-	-	746	-
Stage 2	-	-	-	835	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1245	-	-	-	526
HCM Lane V/C Ratio	-	-	-	-	0.124
HCM Control Delay (s)	0	-	-	-	12.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0	-	-	-	0.4



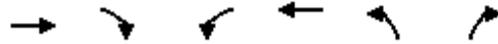
Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑				↑
Traffic Volume (vph)	0	347	0	0	0	728
Future Volume (vph)	0	347	0	0	0	728
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	1863	0	0	0	1611
Flt Permitted						
Satd. Flow (perm)	0	1863	0	0	0	1611
Link Speed (mph)		40	60		60	
Link Distance (ft)		1214	698		859	
Travel Time (s)		20.7	7.9		9.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	377	0	0	0	791
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	377	0	0	0	791
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	40			40	15	40
Sign Control		Free	Stop		Free	

Intersection Summary

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

Lanes, Volumes, Timings
 39: US 76/378 (Robert E Graham Fwy) EB

AM Peak
 No-Build 2050 AM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑					↗
Traffic Volume (vph)	347	0	0	0	0	310
Future Volume (vph)	347	0	0	0	0	310
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr t						0.865
Flt Protected						
Satd. Flow (prot)	1863	0	0	0	0	1611
Flt Permitted						
Satd. Flow (perm)	1863	0	0	0	0	1611
Link Speed (mph)	60			60	35	
Link Distance (ft)	698			1021	170	
Travel Time (s)	7.9			11.6	3.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	377	0	0	0	0	337
Shared Lane Traffic (%)						
Lane Group Flow (vph)	377	0	0	0	0	337
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	L NA	Right	Left	Left	Left	R NA
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		60	15		15	60
Sign Control	Free			Stop	Free	

Intersection Summary

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

Lanes, Volumes, Timings
 42: US 76 Bus/US 521 (Broad Street/US 76 Bus/US 521 (Broad Street))

AM Peak
 No-Build 2050 AM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑↑	↑↑	
Traffic Volume (vph)	0	97	0	1035	1190	0
Future Volume (vph)	0	97	0	1035	1190	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Fr _t	0.865					
Fl _t Protected						
Satd. Flow (prot)	0	1596	0	5085	3539	0
Fl _t Permitted						
Satd. Flow (perm)	0	1596	0	5085	3539	0
Link Speed (mph)	30			35	35	
Link Distance (ft)	357			329	283	
Travel Time (s)	8.1			6.4	5.5	
Peak Hour Factor	0.92	0.88	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	3%	2%	2%	2%	2%
Adj. Flow (vph)	0	110	0	1125	1293	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	110	0	1125	1293	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	R NA	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	45.6%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑↑	↑↑	
Traffic Vol, veh/h	0	97	0	1035	1190	0
Future Vol, veh/h	0	97	0	1035	1190	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	88	92	92	92	92
Heavy Vehicles, %	2	3	2	2	2	2
Mvmt Flow	0	110	0	1125	1293	0

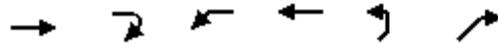
Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	647	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.96	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.33	-
Pot Cap-1 Maneuver	0	411	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	-	411	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.9	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT EBLn1	SBT
Capacity (veh/h)	- 411	-
HCM Lane V/C Ratio	- 0.268	-
HCM Control Delay (s)	- 16.9	-
HCM Lane LOS	- C	-
HCM 95th %tile Q(veh)	- 1.1	-

Lanes, Volumes, Timings
 51: US 76/378 (Robert E Graham Fwy) WB

AM Peak
 No-Build 2050 AM



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations				↑		↗
Traffic Volume (vph)	0	0	0	728	0	347
Future Volume (vph)	0	0	0	728	0	347
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1863	0	1611
Flt Permitted						
Satd. Flow (perm)	0	0	0	1863	0	1611
Link Speed (mph)	40			40	40	
Link Distance (ft)	270			1214	329	
Travel Time (s)	4.6			20.7	5.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	791	0	377
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	791	0	377
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	40
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	57.9% ICU Level of Service B
Analysis Period (min)	15

Summary of All Intervals

Start Time	6:50
End Time	8:00
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	8675
Vehs Exited	8246
Starting Vehs	400
Ending Vehs	829
Travel Distance (mi)	10203
Travel Time (hr)	608.9
Total Delay (hr)	346.1
Total Stops	12362
Fuel Used (gal)	422.3

Interval #0 Information Seeding

Start Time	6:50
End Time	7:00
Total Time (min)	10
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	7:00
End Time	8:00
Total Time (min)	60
Volumes adjusted by Growth Factors.	
Vehs Entered	8675
Vehs Exited	8246
Starting Vehs	400
Ending Vehs	829
Travel Distance (mi)	10203
Travel Time (hr)	608.9
Total Delay (hr)	346.1
Total Stops	12362
Fuel Used (gal)	422.3

Arterial Level of Service: EB US 76/378 (Robert E Graham Fwy) WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
US 76/378 (Robert E	37	-	-	0.2	-
Total		-	-	0.2	-

Arterial Level of Service: WB US 76/378 (Robert E Graham Fwy) WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	111	0.4	3.4	0.1	54
	70	1.4	30.1	0.5	56
	32	0.7	14.5	0.2	57
	31	4.7	67.4	1.1	56
	9	1.0	9.3	0.2	63
US 76/378 (Robert E	37	1.4	12.2	0.2	48
	51	1.8	22.3	0.2	37
Jefferson Rd	1	1.7	5.7	0.1	33
Total		13.0	164.9	2.4	53

Arterial Level of Service: EB US 76 Bus (Broad St)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hastings Dr	7	15.4	36.6	0.2	24
Total		15.4	36.6	0.2	24

Arterial Level of Service: WB US 76 Bus (Broad St)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	2	3.7	23.7	0.2	37
Total		3.7	23.7	0.2	37

Arterial Level of Service: NB US 521 (Camden Hwy)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
S Pike W	6	1.8	6.8	0.1	68
	5	1.2	5.5	0.0	30
N Pike W	4	1.9	6.1	0.0	29
Jefferson Rd	3	5.6	8.3	0.0	12
Total		10.5	26.7	0.2	34

Arterial Level of Service: SB US 521 (Camden Hwy)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Jefferson Rd	3	33.7	52.7	0.2	14
N Pike W	4	4.2	6.8	0.0	15
	5	7.6	11.8	0.0	15
S Pike W	6	0.9	4.8	0.0	35
US 76 Bus (Broad Str	7	54.8	66.5	0.1	7
Total		101.2	142.5	0.5	12

Arterial Level of Service: EB N Pike W

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Electric Dr	11	1.7	36.3	0.4	40
Farmers Telephone Rd	14	2.5	43.1	0.5	46
Clara Louise Kellogg	16	1.8	38.8	0.5	43
	30	1.4	24.0	0.3	45
Bordeaux Ave	20	2.5	49.6	0.5	33
US 15 (N Main St)	23	40.4	59.1	0.2	10
Total		50.3	250.9	2.3	34

Arterial Level of Service: WB N Pike W

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Bordeaux Ave	20	4.0	23.1	0.2	26
	30	2.5	38.6	0.5	43
Clara Louise Kellogg	16	1.4	24.4	0.3	44
Farmers Telephone Rd	14	2.2	37.5	0.5	45
Electric Dr	11	117.9	156.9	0.5	13
US 521 (Camden Hwy)	4	967.2	992.7	0.4	1
Total		1095.2	1273.2	2.3	7

Arterial Level of Service: EB S Pike W

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	8	2.5	20.8	0.2	27
Market St	10	2.4	21.5	0.2	33
E Wesmark Blvd	12	2.5	16.5	0.2	39
Bultman Dr	13	2.3	24.2	0.3	42
Brookehollow Place D	26	1.6	20.9	0.2	42
Hilliard Dr	15	1.3	12.0	0.1	41
Wall St	17	2.1	23.3	0.3	44
Miller Rd	18	22.8	44.9	0.2	19
Carolina Ave	19	1.8	20.9	0.1	25
Total		39.2	204.9	1.9	33

Arterial Level of Service: WB S Pike W

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
S Pike W	18	6.2	20.9	0.1	25
Wall St	17	10.3	40.1	0.2	21
Hilliard Dr	15	2.2	24.3	0.3	42
Brookehollow Place D	26	1.2	11.8	0.1	41
Bultman Dr	13	41.3	60.4	0.2	15
E Wesmark Blvd	12	276.4	300.2	0.3	3
Market St	10	453.0	465.8	0.2	1
	8	808.1	824.9	0.2	1
US 521 (Camden Hwy)	6	1604.2	1666.8	0.2	0
Total		3202.9	3415.3	1.9	2

Arterial Level of Service: EB US 76 Bus (Broad Street)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hastings Dr	7	15.4	36.6	0.2	24
Total		15.4	36.6	0.2	24

Arterial Level of Service: WB US 76 Bus (Broad Street)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	2	3.7	23.7	0.2	37
Total		3.7	23.7	0.2	37

Arterial Level of Service: WB US 76 Bus/US 521 (Broad Street)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
US 521 (Camden Hwy)	7	19.6	24.5	0.1	8
Total		19.6	24.5	0.1	8

Arterial Level of Service: SB US 76 Bus/US 521 (Broad Street)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	42	1.9	7.7	0.1	25
Total		1.9	7.7	0.1	25

Arterial Level of Service: EB US 76/378 (Robert E Graham Fwy) EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	39	0.6	10.0	0.1	47
	33	0.5	12.4	0.2	56
	34	2.5	64.8	1.1	59
	71	0.7	12.9	0.2	57
Bordeaux Ave	21	2.4	34.6	0.5	57
Total		6.7	134.7	2.1	57

Arterial Level of Service: NB US 15 (N Main St)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
S Pike E	24	24.7	41.5	0.1	11
Strange St	23	5.8	14.0	0.1	14
Total		30.5	55.5	0.2	12

Arterial Level of Service: SB US 15 (N Main St)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
N Pike W	23	22.5	41.8	0.1	12
S Pike W	24	5.8	13.8	0.1	15
S Pike W	25	19.9	36.8	0.1	12
Total		48.1	92.4	0.3	12

Intersection: 1: US 76/378 (Robert E Graham Fwy) WB & Jefferson Rd

Movement	WB	SB
Directions Served	T	R
Maximum Queue (ft)	93	93
Average Queue (ft)	13	50
95th Queue (ft)	51	90
Link Distance (ft)	189	1275
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: US 76/378 (Broad Street)/US 76 Bus (Broad St)

Movement	EB	EB	EB
Directions Served	L	T	T
Maximum Queue (ft)	391	398	303
Average Queue (ft)	120	13	10
95th Queue (ft)	223	131	100
Link Distance (ft)	381	381	381
Upstream Blk Time (%)	0	1	
Queuing Penalty (veh)	0	0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 3: US 521 (Camden Hwy) & Jefferson Rd

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	25	174	196	39	103	122	150	1060	1045
Average Queue (ft)	3	36	84	19	47	64	115	399	285
95th Queue (ft)	16	91	148	40	80	110	184	892	820
Link Distance (ft)			1070		88	88		1030	1030
Upstream Blk Time (%)					0	1		4	0
Queuing Penalty (veh)					1	6		0	0
Storage Bay Dist (ft)		75		25			150		
Storage Blk Time (%)		1	13	23	10		0	27	
Queuing Penalty (veh)		2	8	73	6		3	51	

Intersection: 4: US 521 (Camden Hwy) & N Pike W

Movement	WB	NB	SB	SB	SB
Directions Served	LR	TR	L	T	T
Maximum Queue (ft)	2077	70	48	139	88
Average Queue (ft)	1642	15	37	81	17
95th Queue (ft)	2509	51	46	156	68
Link Distance (ft)	2064	197		88	88
Upstream Blk Time (%)	35			12	0
Queuing Penalty (veh)	90			81	1
Storage Bay Dist (ft)			25		
Storage Blk Time (%)			28	10	
Queuing Penalty (veh)			159	21	

Intersection: 5: US 521 (Camden Hwy)

Movement	WB	SB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	951	210	197
Average Queue (ft)	365	85	27
95th Queue (ft)	891	226	127
Link Distance (ft)	988	197	197
Upstream Blk Time (%)		7	0
Queuing Penalty (veh)		42	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: US 521 (Camden Hwy) & S Pike W

Movement	WB	WB	NB	NB	SB	SB	SB
Directions Served	L	R	T	TR	L	T	T
Maximum Queue (ft)	754	250	22	88	179	254	179
Average Queue (ft)	708	55	2	18	165	173	16
95th Queue (ft)	887	218	13	54	216	305	98
Link Distance (ft)	736		542	542		179	179
Upstream Blk Time (%)	81				24	25	0
Queuing Penalty (veh)	200				0	162	0
Storage Bay Dist (ft)		150			200		
Storage Blk Time (%)	99				24	25	
Queuing Penalty (veh)	151				83	154	

Intersection: 7: Hastings Dr/US 521 (Camden Hwy) & US 76 Bus (Broad Street)/US 76 Bus/US 521 (Broad Street)

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	L	T	TR	L	T	T	L	LTR
Maximum Queue (ft)	183	216	162	67	244	242	351	367
Average Queue (ft)	91	79	57	30	152	109	174	211
95th Queue (ft)	179	176	136	66	241	202	297	332
Link Distance (ft)		1128	1128		227	227	542	542
Upstream Blk Time (%)					1	0		
Queuing Penalty (veh)					4	1		
Storage Bay Dist (ft)	150			200				
Storage Blk Time (%)	5	1			3			
Queuing Penalty (veh)	15	2			1			

Intersection: 8: S Pike W

Movement	EB	WB
Directions Served	LT	TR
Maximum Queue (ft)	158	895
Average Queue (ft)	41	725
95th Queue (ft)	101	1227
Link Distance (ft)	736	881
Upstream Blk Time (%)		64
Queuing Penalty (veh)		173
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: US 76/378 (Robert E Graham Fwy) WB

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 10: Market St & S Pike W

Movement	WB	NB	NB
Directions Served	LT	L	R
Maximum Queue (ft)	862	556	10
Average Queue (ft)	568	206	0
95th Queue (ft)	1172	523	3
Link Distance (ft)	845	967	967
Upstream Blk Time (%)	47		
Queuing Penalty (veh)	129		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11: N Pike W & Electric Dr

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	116	873	584
Average Queue (ft)	11	260	181
95th Queue (ft)	52	770	513
Link Distance (ft)	2064	2830	703
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 12: E Wesmark Blvd & S Pike W

Movement	WB	NB	NB
Directions Served	LT	L	R
Maximum Queue (ft)	1437	377	56
Average Queue (ft)	637	134	13
95th Queue (ft)	1673	358	32
Link Distance (ft)	1428	820	820
Upstream Blk Time (%)	20		
Queuing Penalty (veh)	68		
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Bultman Dr & S Pike W

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	20	958	440
Average Queue (ft)	1	143	116
95th Queue (ft)	7	540	323
Link Distance (ft)	1428	1224	1069
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 14: N Pike W & Farmers Telephone Rd

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	72	114
Average Queue (ft)	18	31
95th Queue (ft)	52	64
Link Distance (ft)	2830	666
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 15: Hilliard Dr & S Pike W

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	77	98
Average Queue (ft)	18	39
95th Queue (ft)	60	69
Link Distance (ft)	1432	627
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 16: N Pike W & Clara Louise Kellogg Drive

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	53	31
Average Queue (ft)	4	23
95th Queue (ft)	24	44
Link Distance (ft)	2384	374
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: Wall St & S Pike W

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	51	80
Average Queue (ft)	11	21
95th Queue (ft)	37	46
Link Distance (ft)	1184	1052
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 18: Miller Rd & S Pike W

Movement	EB	NB	NB	SB
Directions Served	LR	L	T	TR
Maximum Queue (ft)	224	75	116	268
Average Queue (ft)	120	36	62	109
95th Queue (ft)	193	69	115	222
Link Distance (ft)	1184		420	703
Upstream Blk Time (%)				
Queuing Penalty (veh)				
Storage Bay Dist (ft)		150		
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 19: Carolina Ave & S Pike W

Movement	WB	NB
Directions Served	L	LR
Maximum Queue (ft)	56	92
Average Queue (ft)	17	40
95th Queue (ft)	46	71
Link Distance (ft)		405
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)	200	
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 20: Bordeaux Ave & N Pike W

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	20	263	119	54
Average Queue (ft)	1	64	66	27
95th Queue (ft)	7	170	112	52
Link Distance (ft)	2363	820	79	305
Upstream Blk Time (%)			8	
Queuing Penalty (veh)			17	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 21: Bordeaux Ave & US 76/378 (Robert E Graham Fwy) EB/US 76/378 (Robert E Graham Fwy)

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 22: S Pike W & Bordeaux Ave

Movement	EB	SB	SB
Directions Served	L	L	R
Maximum Queue (ft)	93	327	173
Average Queue (ft)	30	192	44
95th Queue (ft)	70	337	151
Link Distance (ft)		311	
Upstream Blk Time (%)		2	
Queuing Penalty (veh)		6	
Storage Bay Dist (ft)	150		100
Storage Blk Time (%)		58	
Queuing Penalty (veh)		12	

Intersection: 23: US 15 (N Main St) & N Pike W/Strange St

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	TR	L	T	TR
Maximum Queue (ft)	263	200	97	120	234	229	85	250	322
Average Queue (ft)	94	90	38	116	153	72	18	112	174
95th Queue (ft)	172	159	75	125	303	195	56	219	297
Link Distance (ft)	820		991		218	218		682	682
Upstream Blk Time (%)					7	0			
Queuing Penalty (veh)					30	1			
Storage Bay Dist (ft)		100		100			75		
Storage Blk Time (%)	13	6		49			2	13	
Queuing Penalty (veh)	44	8		113			4	2	

Intersection: 24: US 15 (N Main St) & S Pike W/S Pike E

Movement	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	TR	L	TR	T	TR	L	T	TR
Maximum Queue (ft)	31	218	248	336	305	75	226	225
Average Queue (ft)	5	84	39	224	171	28	93	123
95th Queue (ft)	24	167	111	339	276	58	200	220
Link Distance (ft)	754		719	561	561		218	218
Upstream Blk Time (%)							0	1
Queuing Penalty (veh)							1	3
Storage Bay Dist (ft)		175				100		
Storage Blk Time (%)		3		27			9	
Queuing Penalty (veh)		2		1			5	

Intersection: 25: N Main St/US 15 (N Main St) & S Pike W/US 15 (N Lafayette Dr)

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	R	L	T	TR	L	L	T
Maximum Queue (ft)	166	181	216	28	245	224	114	198	168	274	224	242
Average Queue (ft)	96	73	89	8	149	96	39	85	44	120	144	116
95th Queue (ft)	142	141	165	27	236	174	82	142	119	207	211	216
Link Distance (ft)		972			842	842		448			561	561
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	250		125	125			250		100	250		
Storage Blk Time (%)		1	3		18			6	1	1		1
Queuing Penalty (veh)		6	12		1			11	2	1		2

Intersection: 25: N Main St/US 15 (N Main St) & S Pike W/US 15 (N Lafayette Dr)

Movement	SB
Directions Served	R
Maximum Queue (ft)	284
Average Queue (ft)	115
95th Queue (ft)	221
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	225
Storage Blk Time (%)	1
Queuing Penalty (veh)	2

Intersection: 26: Brookeshollow Place Dwy & S Pike W

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	22	73	71
Average Queue (ft)	1	7	23
95th Queue (ft)	7	35	52
Link Distance (ft)	1224	661	727
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 30: N Pike W

Movement	SB
Directions Served	LR
Maximum Queue (ft)	53
Average Queue (ft)	29
95th Queue (ft)	43
Link Distance (ft)	361
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 37: US 76/378 (Robert E Graham Fwy) WB & US 76/378 (Robert E Graham Fwy) EB

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Intersection: 39: US 76/378 (Robert E Graham Fwy) EB

Movement	NB
Directions Served	R
Maximum Queue (ft)	40
Average Queue (ft)	1
95th Queue (ft)	13
Link Distance (ft)	52
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 42: US 76 Bus/US 521 (Broad Street/US 76 Bus/US 521 (Broad Street))

Movement	EB	NB
Directions Served	R	T
Maximum Queue (ft)	143	53
Average Queue (ft)	46	4
95th Queue (ft)	88	24
Link Distance (ft)	310	300
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 51: US 76/378 (Robert E Graham Fwy) WB

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 1971

Lanes, Volumes, Timings
 1: US 76/378 (Robert E Graham Fwy) WB & Jefferson Rd

PM Peak
 No-Build 2050 PM



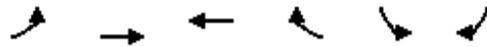
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations			↑			↗
Traffic Volume (vph)	0	0	717	0	0	318
Future Volume (vph)	0	0	717	0	0	318
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.865
Fl _t Protected						
Satd. Flow (prot)	0	0	1810	0	0	1580
Fl _t Permitted						
Satd. Flow (perm)	0	0	1810	0	0	1580
Link Speed (mph)		40	40		35	
Link Distance (ft)		141	270		1395	
Travel Time (s)		2.4	4.6		27.2	
Peak Hour Factor	0.92	0.92	0.89	0.92	0.92	0.84
Heavy Vehicles (%)	2%	2%	5%	2%	2%	4%
Adj. Flow (vph)	0	0	806	0	0	379
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	806	0	0	379
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			40	15	9
Sign Control		Stop	Free		Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	64.1%
Analysis Period (min)	15
	ICU Level of Service C

Lanes, Volumes, Timings
 2: US 76/378 (Broad Street)/US 76 Bus (Broad St)

PM Peak
 No-Build 2050 PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	752	1418	1350	16	0	0
Future Volume (vph)	752	1418	1350	16	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	0.95	0.95	0.95	1.00	1.00
Frt			0.998			
Flt Protected	0.950					
Satd. Flow (prot)	1736	3574	3568	0	0	0
Flt Permitted	0.950					
Satd. Flow (perm)	1736	3574	3568	0	0	0
Link Speed (mph)		40	40		40	
Link Distance (ft)		397	1287		329	
Travel Time (s)		6.8	21.9		5.6	
Peak Hour Factor	0.93	0.93	0.91	0.91	0.92	0.92
Heavy Vehicles (%)	4%	1%	1%	0%	2%	2%
Adj. Flow (vph)	809	1525	1484	18	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	809	1525	1502	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	18		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	86.2%
Analysis Period (min)	15
	ICU Level of Service E

Lanes, Volumes, Timings
 3: US 521 (Camden Hwy) & Jefferson Rd

PM Peak
 No-Build 2050 PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↖	↗		↖	↕↗		↖	↕↗	
Traffic Volume (vph)	0	1	7	133	174	146	108	1184	87	169	915	35
Future Volume (vph)	0	1	7	133	174	146	108	1184	87	169	915	35
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	75		0	25		0	150		0
Storage Lanes	0		0	1		0	1		0	1		0
Taper Length (ft)	100			100			15			0		
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		0.882			0.931			0.990			0.995	
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	0	1676	0	1805	1675	0	1805	3463	0	1736	3459	0
Flt Permitted				0.747			0.225			0.146		
Satd. Flow (perm)	0	1676	0	1419	1675	0	428	3463	0	267	3459	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		14			59			21			10	
Link Speed (mph)		35			35			40			40	
Link Distance (ft)		1395			1118			144			1067	
Travel Time (s)		27.2			21.8			2.5			18.2	
Peak Hour Factor	0.50	0.50	0.50	0.86	0.86	0.86	0.96	0.96	0.96	0.89	0.89	0.89
Heavy Vehicles (%)	0%	0%	0%	0%	7%	4%	0%	3%	6%	4%	4%	0%
Adj. Flow (vph)	0	2	14	155	202	170	113	1233	91	190	1028	39
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	16	0	155	372	0	113	1324	0	190	1067	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane								Yes				
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type		NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		8			4			6			2	

Lanes, Volumes, Timings
 3: US 521 (Camden Hwy) & Jefferson Rd

PM Peak
 No-Build 2050 PM

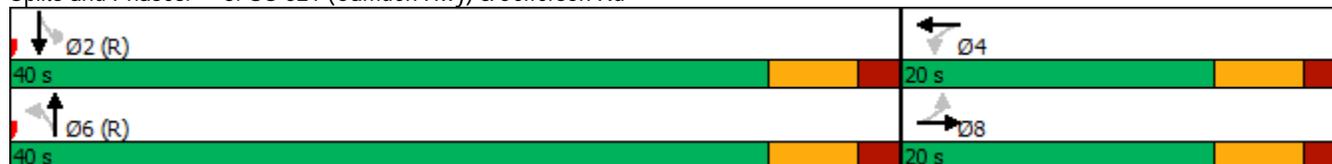


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8			4			6			2		
Detector Phase	8	8		4	4		6	6		2	2	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		12.0	12.0		12.0	12.0	
Minimum Split (s)	12.0	12.0		12.0	12.0		18.0	18.0		18.0	18.0	
Total Split (s)	20.0	20.0		20.0	20.0		40.0	40.0		40.0	40.0	
Total Split (%)	33.3%	33.3%		33.3%	33.3%		66.7%	66.7%		66.7%	66.7%	
Maximum Green (s)	14.0	14.0		14.0	14.0		34.0	34.0		34.0	34.0	
Yellow Time (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.0		6.0	6.0		6.0	6.0		6.0	6.0	
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		C-Min	C-Min		C-Min	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0	
Act Effct Green (s)		13.5		13.5	13.5		34.5	34.5		34.5	34.5	
Actuated g/C Ratio		0.22		0.22	0.22		0.58	0.58		0.58	0.58	
v/c Ratio		0.04		0.49	0.88		0.46	0.66		1.24	0.54	
Control Delay		10.9		25.9	43.8		15.4	10.8		173.7	9.1	
Queue Delay		0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay		10.9		25.9	43.8		15.4	10.8		173.7	9.1	
LOS		B		C	D		B	B		F	A	
Approach Delay		10.9			38.5			11.1			34.0	
Approach LOS		B			D			B			C	

Intersection Summary

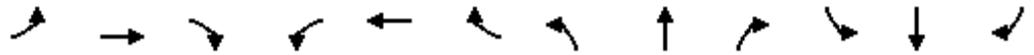
Area Type: Other
 Cycle Length: 60
 Actuated Cycle Length: 60
 Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.24
 Intersection Signal Delay: 24.5
 Intersection LOS: C
 Intersection Capacity Utilization 78.6%
 ICU Level of Service D
 Analysis Period (min) 15

Splits and Phases: 3: US 521 (Camden Hwy) & Jefferson Rd



HCM 6th Signalized Intersection Summary
 3: US 521 (Camden Hwy) & Jefferson Rd

PM Peak
 No-Build 2050 PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↗	↘		↗	↕		↗	↕	
Traffic Volume (veh/h)	0	1	7	133	174	146	108	1184	87	169	915	35
Future Volume (veh/h)	0	1	7	133	174	146	108	1184	87	169	915	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1900	1900	1796	1841	1900	1856	1811	1841	1841	1900
Adj Flow Rate, veh/h	0	2	14	155	202	170	112	1233	91	190	1028	39
Peak Hour Factor	0.50	0.50	0.50	0.86	0.86	0.86	0.96	0.96	0.96	0.89	0.89	0.89
Percent Heavy Veh, %	0	0	0	0	7	4	0	3	6	4	4	0
Cap, veh/h	0	48	335	440	210	177	325	1886	139	247	1947	74
Arrive On Green	0.00	0.23	0.23	0.23	0.23	0.23	0.57	0.57	0.57	0.57	0.57	0.57
Sat Flow, veh/h	0	205	1436	1419	901	758	537	3329	245	408	3436	130
Grp Volume(v), veh/h	0	0	16	155	0	372	112	652	672	190	523	544
Grp Sat Flow(s),veh/h/ln	0	0	1641	1419	0	1660	537	1763	1811	408	1749	1817
Q Serve(g_s), s	0.0	0.0	0.5	5.7	0.0	13.3	9.8	15.3	15.3	18.7	11.1	11.1
Cycle Q Clear(g_c), s	0.0	0.0	0.5	6.1	0.0	13.3	20.9	15.3	15.3	34.0	11.1	11.1
Prop In Lane	0.00		0.87	1.00		0.46	1.00		0.14	1.00		0.07
Lane Grp Cap(c), veh/h	0	0	383	440	0	387	325	999	1026	247	991	1030
V/C Ratio(X)	0.00	0.00	0.04	0.35	0.00	0.96	0.34	0.65	0.65	0.77	0.53	0.53
Avail Cap(c_a), veh/h	0	0	383	440	0	387	325	999	1026	247	991	1030
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	17.8	20.2	0.0	22.7	14.5	8.9	9.0	23.8	8.0	8.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.5	0.0	35.4	2.9	3.3	3.3	20.4	2.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.2	1.8	0.0	8.4	1.2	4.9	5.1	3.9	3.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	17.9	20.7	0.0	58.2	17.4	12.3	12.2	44.2	10.1	10.0
LnGrp LOS	A	A	B	C	A	E	B	B	B	D	B	A
Approach Vol, veh/h		16			527			1436			1257	
Approach Delay, s/veh		17.9			47.1			12.6			15.2	
Approach LOS		B			D			B			B	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		40.0		20.0		40.0		20.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		34.0		14.0		34.0		14.0				
Max Q Clear Time (g_c+I1), s		36.0		15.3		22.9		2.5				
Green Ext Time (p_c), s		0.0		0.0		6.9		0.0				

Intersection Summary

HCM 6th Ctrl Delay	19.3
HCM 6th LOS	B

Notes

User approved pedestrian interval to be less than phase max green.

Lanes, Volumes, Timings
 4: US 521 (Camden Hwy) & N Pike W

PM Peak
 No-Build 2050 PM



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	196	256	1122	113	156	899
Future Volume (vph)	196	256	1122	113	156	899
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0		0	25	
Storage Lanes	1	0		0	1	
Taper Length (ft)	100				15	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt	0.923		0.986			
Flt Protected	0.979				0.950	
Satd. Flow (prot)	1685	0	3450	0	1583	3505
Flt Permitted	0.979				0.950	
Satd. Flow (perm)	1685	0	3450	0	1583	3505
Link Speed (mph)	45		40			40
Link Distance (ft)	2128		262			144
Travel Time (s)	32.2		4.5			2.5
Peak Hour Factor	0.84	0.84	0.92	0.92	0.91	0.91
Heavy Vehicles (%)	3%	1%	3%	5%	14%	3%
Adj. Flow (vph)	233	305	1220	123	171	988
Shared Lane Traffic (%)						
Lane Group Flow (vph)	538	0	1343	0	171	988
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	79.8%			ICU Level of Service D		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	697.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	Y		↑↓		Y	↑↑
Traffic Vol, veh/h	196	256	1122	113	156	899
Future Vol, veh/h	196	256	1122	113	156	899
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	25	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	92	92	91	91
Heavy Vehicles, %	3	1	3	5	14	3
Mvmt Flow	233	305	1220	123	171	988

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2118	672	0	0	1343
Stage 1	1282	-	-	-	-
Stage 2	836	-	-	-	-
Critical Hdwy	6.86	6.92	-	-	4.38
Critical Hdwy Stg 1	5.86	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-
Follow-up Hdwy	3.53	3.31	-	-	2.34
Pot Cap-1 Maneuver	~ 43	401	-	-	450
Stage 1	~ 222	-	-	-	-
Stage 2	383	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 27	401	-	-	450
Mov Cap-2 Maneuver	~ 27	-	-	-	-
Stage 1	~ 222	-	-	-	-
Stage 2	237	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, \$	3935.7	0	2.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	-	57	450
HCM Lane V/C Ratio	-	-	9.44	0.381
HCM Control Delay (s)	-	\$ 3935.7	17.8	-
HCM Lane LOS	-	-	F	C
HCM 95th %tile Q(veh)	-	-	63.3	1.8

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

Lanes, Volumes, Timings
5: US 521 (Camden Hwy)

PM Peak
No-Build 2050 PM

						
Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	73	239	971	0	0	1122
Future Volume (vph)	73	239	971	0	0	1122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	0.95
Frt	0.896					
Flt Protected	0.988					
Satd. Flow (prot)	1596	0	3574	0	0	3505
Flt Permitted	0.988					
Satd. Flow (perm)	1596	0	3574	0	0	3505
Link Speed (mph)	30		40			40
Link Distance (ft)	1103		245			262
Travel Time (s)	25.1		4.2			4.5
Peak Hour Factor	0.92	0.92	0.88	0.92	0.92	0.91
Heavy Vehicles (%)	0%	7%	1%	2%	2%	3%
Adj. Flow (vph)	79	260	1103	0	0	1233
Shared Lane Traffic (%)						
Lane Group Flow (vph)	339	0	1103	0	0	1233
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	56.5%
Analysis Period (min)	15
	ICU Level of Service B

Intersection						
Int Delay, s/veh	16.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	YF		↑↑			↑↑
Traffic Vol, veh/h	73	239	971	0	0	1122
Future Vol, veh/h	73	239	971	0	0	1122
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	88	92	92	91
Heavy Vehicles, %	0	7	1	2	2	3
Mvmt Flow	79	260	1103	0	0	1233

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1720	552	0	-	-	-
Stage 1	1103	-	-	-	-	-
Stage 2	617	-	-	-	-	-
Critical Hdwy	6.8	7.04	-	-	-	-
Critical Hdwy Stg 1	5.8	-	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-	-
Follow-up Hdwy	3.5	3.37	-	-	-	-
Pot Cap-1 Maneuver	82	465	-	0	0	-
Stage 1	284	-	-	0	0	-
Stage 2	506	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	82	465	-	-	-	-
Mov Cap-2 Maneuver	82	-	-	-	-	-
Stage 1	284	-	-	-	-	-
Stage 2	506	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	131.2	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBTWBLn1	SBT
Capacity (veh/h)	- 299	-
HCM Lane V/C Ratio	- 1.134	-
HCM Control Delay (s)	- 131.2	-
HCM Lane LOS	- F	-
HCM 95th %tile Q(veh)	- 14.1	-

Lanes, Volumes, Timings
6: US 521 (Camden Hwy) & S Pike W

PM Peak
No-Build 2050 PM



Lane Group	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	139	320	671	228	571	604
Future Volume (vph)	139	320	671	228	571	604
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	150		0	200	
Storage Lanes	1	1		0	1	
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	0.95	0.95	1.00	0.95
Frt		0.850	0.962			
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1805	1599	3372	0	1703	3574
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1805	1599	3372	0	1703	3574
Link Speed (mph)	35		40			40
Link Distance (ft)	825		665			245
Travel Time (s)	16.1		11.3			4.2
Peak Hour Factor	0.88	0.88	0.91	0.91	0.94	0.94
Heavy Vehicles (%)	0%	1%	3%	3%	6%	1%
Adj. Flow (vph)	158	364	737	251	607	643
Shared Lane Traffic (%)						
Lane Group Flow (vph)	158	364	988	0	607	643
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Right	Left	Left
Median Width(ft)	12		12			12
Link Offset(ft)	0		0			0
Crosswalk Width(ft)	16		16			16
Two way Left Turn Lane			Yes			
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9		9	15	
Sign Control	Stop		Free			Free
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	75.2%			ICU Level of Service D		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	307.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕↔		↘	↕↕
Traffic Vol, veh/h	139	320	671	228	571	604
Future Vol, veh/h	139	320	671	228	571	604
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	150	-	-	200	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	88	88	91	91	94	94
Heavy Vehicles, %	0	1	3	3	6	1
Mvmt Flow	158	364	737	251	607	643

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2399	494	0	0	988
Stage 1	863	-	-	-	-
Stage 2	1536	-	-	-	-
Critical Hdwy	6.8	6.92	-	-	4.22
Critical Hdwy Stg 1	5.8	-	-	-	-
Critical Hdwy Stg 2	5.8	-	-	-	-
Follow-up Hdwy	3.5	3.31	-	-	2.26
Pot Cap-1 Maneuver	~ 29	524	-	-	671
Stage 1	378	-	-	-	-
Stage 2	167	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 3	524	-	-	671
Mov Cap-2 Maneuver	~ 14	-	-	-	-
Stage 1	378	-	-	-	-
Stage 2	~ 16	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, \$	1579.5	0	19.6
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	14	524	671	-
HCM Lane V/C Ratio	-	-	11.282	0.694	0.905	-
HCM Control Delay (s)	-	-	\$ 5156	26	40.4	-
HCM Lane LOS	-	-	F	D	E	-
HCM 95th %tile Q(veh)	-	-	20.8	5.4	11.6	-

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

Lanes, Volumes, Timings

PM Peak

7: Hastings Dr/US 521 (Camden Hwy) & US 76 Bus (Broad Street)/US 76 Bus/US 521 (Broad Street)

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	272	1066	39	82	1136	610	0	0	0	462	56	235
Future Volume (vph)	272	1066	39	82	1136	610	0	0	0	462	56	235
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150		0	200		0	0		0	0		0
Storage Lanes	1		0	1		1	0		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	0.95	1.00	0.95	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Frt		0.995				0.850						0.903
Flt Protected	0.950			0.950						0.950	0.990	
Satd. Flow (prot)	1805	3554	0	1805	3574	1599	0	0	0	1698	1610	0
Flt Permitted	0.950			0.950						0.950	0.990	
Satd. Flow (perm)	1805	3554	0	1805	3574	1599	0	0	0	1698	1610	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		4				269						55
Link Speed (mph)		40			40			25				40
Link Distance (ft)		1287			283			301				665
Travel Time (s)		21.9			4.8			8.2				11.3
Peak Hour Factor	0.92	0.92	0.92	0.98	0.98	0.98	0.92	0.92	0.92	0.89	0.89	0.89
Heavy Vehicles (%)	0%	1%	3%	0%	1%	1%	2%	2%	2%	1%	0%	0%
Adj. Flow (vph)	296	1159	42	84	1159	622	0	0	0	519	63	264
Shared Lane Traffic (%)										16%		
Lane Group Flow (vph)	296	1201	0	84	1159	622	0	0	0	436	410	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		40			12			12			40	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												Yes
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	15		40	60		60	60		60
Number of Detectors	1	2		1	2	1				1	2	
Detector Template	Left	Thru		Left	Thru	Right				Left	Thru	
Leading Detector (ft)	20	100		20	100	20				20	100	
Trailing Detector (ft)	0	0		0	0	0				0	0	
Detector 1 Position(ft)	0	0		0	0	0				0	0	
Detector 1 Size(ft)	20	6		20	6	20				20	6	
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex				Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0				0.0	0.0	
Detector 2 Position(ft)		94			94						94	
Detector 2 Size(ft)		6			6						6	
Detector 2 Type		Cl+Ex			Cl+Ex						Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0						0.0	
Turn Type	Prot	NA		Prot	NA	Free				Perm	NA	
Protected Phases	5	2		1	6						4	

Lanes, Volumes, Timings

PM Peak

7: Hastings Dr/US 521 (Camden Hwy) & US 76 Bus (Broad Street)/US 76 Bus/US 521 (Broad Street)

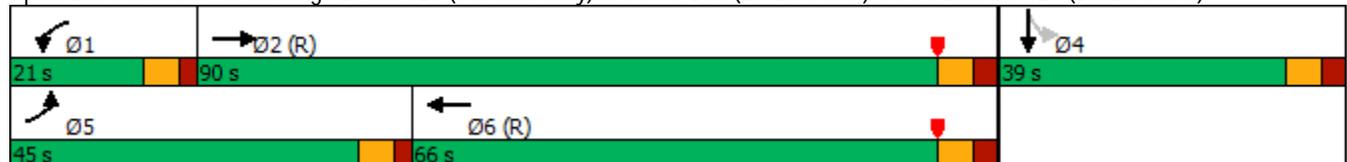


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	Free						4		4			
Detector Phase	5	2		1	6					4	4	
Switch Phase												
Minimum Initial (s)	8.0	15.0		8.0	15.0					15.0	15.0	
Minimum Split (s)	24.0	25.0		15.0	25.0					25.0	25.0	
Total Split (s)	45.0	90.0		21.0	66.0					39.0	39.0	
Total Split (%)	30.0%	60.0%		14.0%	44.0%					26.0%	26.0%	
Maximum Green (s)	39.0	83.1		15.0	59.1					32.1	32.1	
Yellow Time (s)	4.0	4.0		4.0	4.0					4.0	4.0	
All-Red Time (s)	2.0	2.9		2.0	2.9					2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0					0.0	0.0	
Total Lost Time (s)	6.0	6.9		6.0	6.9					6.9	6.9	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	4.0		3.0	4.0					3.0	3.0	
Minimum Gap (s)	3.0	4.0		3.0	4.0					3.0	3.0	
Time Before Reduce (s)	0.0	20.0		0.0	20.0					0.0	0.0	
Time To Reduce (s)	0.0	10.0		0.0	10.0					0.0	0.0	
Recall Mode	None	C-Min		Min	C-Min					None	None	
Act Effct Green (s)	29.8	79.8		12.0	61.9	150.0				38.5	38.5	
Actuated g/C Ratio	0.20	0.53		0.08	0.41	1.00				0.26	0.26	
v/c Ratio	0.83	0.64		0.58	0.79	0.39				1.00	0.91	
Control Delay	76.0	26.3		82.3	43.0	0.7				98.3	70.9	
Queue Delay	0.0	0.0		0.0	0.0	0.0				0.0	0.0	
Total Delay	76.0	26.3		82.3	43.0	0.7				98.3	70.9	
LOS	E	C		F	D	A				F	E	
Approach Delay	36.1			30.7						85.0		
Approach LOS	D			C						F		

Intersection Summary

Area Type: Other
 Cycle Length: 150
 Actuated Cycle Length: 150
 Offset: 50.3 (34%), Referenced to phase 2:EBT and 6:WBT, Start of Yellow
 Natural Cycle: 90
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.00
 Intersection Signal Delay: 43.5
 Intersection LOS: D
 Intersection Capacity Utilization 84.4%
 ICU Level of Service E
 Analysis Period (min) 15

Splits and Phases: 7: Hastings Dr/US 521 (Camden Hwy) & US 76 Bus (Broad Street)/US 76 Bus/US 521 (Broad Street)



HCM 6th Signalized Intersection Summary

PM Peak

7: Hastings Dr/US 521 (Camden Hwy) & US 76 Bus (Broad Street)/US 76 Bus/US 521 (Broad Street)

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	272	1066	39	82	1136	610	0	0	0	462	56	235
Future Volume (veh/h)	272	1066	39	82	1136	610	0	0	0	462	56	235
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	1900	1885	1856	1900	1885	1885				1885	1900	1900
Adj Flow Rate, veh/h	296	1159	42	84	1159	0				423	197	0
Peak Hour Factor	0.92	0.92	0.92	0.98	0.98	0.98				0.89	0.89	0.89
Percent Heavy Veh, %	0	1	3	0	1	1				1	0	0
Cap, veh/h	323	2095	76	108	1703					384	407	
Arrive On Green	0.18	0.59	0.59	0.06	0.48	0.00				0.21	0.21	0.00
Sat Flow, veh/h	1810	3525	128	1810	3582	1598				1795	1900	0
Grp Volume(v), veh/h	296	589	612	84	1159	0				423	197	0
Grp Sat Flow(s),veh/h/ln	1810	1791	1862	1810	1791	1598				1795	1900	0
Q Serve(g_s), s	24.1	29.8	29.8	6.9	37.6	0.0				32.1	13.6	0.0
Cycle Q Clear(g_c), s	24.1	29.8	29.8	6.9	37.6	0.0				32.1	13.6	0.0
Prop In Lane	1.00		0.07	1.00		1.00				1.00		0.00
Lane Grp Cap(c), veh/h	323	1065	1107	108	1703					384	407	
V/C Ratio(X)	0.92	0.55	0.55	0.78	0.68					1.10	0.48	
Avail Cap(c_a), veh/h	470	1065	1107	181	1703					384	407	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00				1.00	1.00	0.00
Uniform Delay (d), s/veh	60.5	18.4	18.4	69.6	30.5	0.0				58.9	51.7	0.0
Incr Delay (d2), s/veh	17.4	2.1	2.0	11.4	2.2	0.0				76.0	0.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.5	12.5	13.0	3.5	16.4	0.0				22.5	6.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.9	20.4	20.4	80.9	32.7	0.0				134.9	52.6	0.0
LnGrp LOS	E	C	C	F	C					F	D	
Approach Vol, veh/h		1497			1243						620	
Approach Delay, s/veh		31.8			36.0						108.8	
Approach LOS		C			D						F	
Timer - Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	14.9	96.1		39.0	32.8	78.2						
Change Period (Y+Rc), s	6.0	6.9		6.9	6.0	6.9						
Max Green Setting (Gmax), s	15.0	83.1		32.1	39.0	59.1						
Max Q Clear Time (g_c+I1), s	8.9	31.8		34.1	26.1	39.6						
Green Ext Time (p_c), s	0.1	15.6		0.0	0.7	10.4						

Intersection Summary

HCM 6th Ctrl Delay	47.5
HCM 6th LOS	D

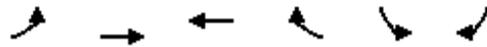
Notes

User approved volume balancing among the lanes for turning movement.

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
8: S Pike W

PM Peak
No-Build 2050 PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷			
Traffic Volume (vph)	232	558	462	48	0	0
Future Volume (vph)	232	558	462	48	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.987			
Flt Protected		0.986				
Satd. Flow (prot)	0	1808	1858	0	0	0
Flt Permitted		0.986				
Satd. Flow (perm)	0	1808	1858	0	0	0
Link Speed (mph)		35	35		30	
Link Distance (ft)		825	1032		170	
Travel Time (s)		16.1	20.1		3.9	
Peak Hour Factor	0.88	0.88	0.87	0.87	0.92	0.92
Heavy Vehicles (%)	10%	1%	1%	0%	2%	2%
Adj. Flow (vph)	264	634	531	55	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	898	586	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	76.1%
Analysis Period (min)	15
	ICU Level of Service D

Lanes, Volumes, Timings
 9: US 76/378 (Robert E Graham Fwy) WB

PM Peak
 No-Build 2050 PM



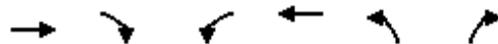
Lane Group	EBL	EBT	WBT	WBR	SEL	SER
Lane Configurations			↑	↗		
Traffic Volume (vph)	0	0	717	313	0	0
Future Volume (vph)	0	0	717	313	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr't				0.850		
Flt Protected						
Satd. Flow (prot)	0	0	1845	1509	0	0
Flt Permitted						
Satd. Flow (perm)	0	0	1845	1509	0	0
Link Speed (mph)		60	60		30	
Link Distance (ft)		859	853		1103	
Travel Time (s)		9.8	9.7		25.1	
Peak Hour Factor	0.92	0.92	0.90	0.90	0.92	0.92
Heavy Vehicles (%)	2%	2%	3%	7%	2%	2%
Adj. Flow (vph)	0	0	797	348	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	797	348	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			40	15	9
Sign Control		Stop	Free		Stop	

Intersection Summary

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

Lanes, Volumes, Timings
10: Market St & S Pike W

PM Peak
No-Build 2050 PM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	548	30	38	459	53	47
Future Volume (vph)	548	30	38	459	53	47
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.993			0.850		
Flt Protected				0.996	0.950	
Satd. Flow (prot)	1828	0	0	1875	1805	1568
Flt Permitted				0.996	0.950	
Satd. Flow (perm)	1828	0	0	1875	1805	1568
Link Speed (mph)	35			45	30	
Link Distance (ft)	1032			932	1040	
Travel Time (s)	20.1			14.1	23.6	
Peak Hour Factor	0.92	0.92	0.84	0.84	0.81	0.81
Heavy Vehicles (%)	3%	7%	0%	1%	0%	3%
Adj. Flow (vph)	596	33	45	546	65	58
Shared Lane Traffic (%)						
Lane Group Flow (vph)	629	0	0	591	65	58
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	R NA	L NA	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	65.6%
Analysis Period (min)	15
	ICU Level of Service C

Intersection						
Int Delay, s/veh	2.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	548	30	38	459	53	47
Future Vol, veh/h	548	30	38	459	53	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	84	84	81	81
Heavy Vehicles, %	3	7	0	1	0	3
Mvmt Flow	596	33	45	546	65	58

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	629	0	1249 613
Stage 1	-	-	-	-	613 -
Stage 2	-	-	-	-	636 -
Critical Hdwy	-	-	4.1	-	6.4 6.23
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.327
Pot Cap-1 Maneuver	-	-	963	-	193 491
Stage 1	-	-	-	-	544 -
Stage 2	-	-	-	-	531 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	963	-	180 491
Mov Cap-2 Maneuver	-	-	-	-	180 -
Stage 1	-	-	-	-	544 -
Stage 2	-	-	-	-	495 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	25.3
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	180	491	-	-	963	-
HCM Lane V/C Ratio	0.364	0.118	-	-	0.047	-
HCM Control Delay (s)	36	13.3	-	-	8.9	0
HCM Lane LOS	E	B	-	-	A	A
HCM 95th %tile Q(veh)	1.5	0.4	-	-	0.1	-

Lanes, Volumes, Timings
11: N Pike W & Electric Dr

PM Peak
No-Build 2050 PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↔		↙	↘
Traffic Volume (vph)	67	238	320	10	30	128
Future Volume (vph)	67	238	320	10	30	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.996		0.890	
Flt Protected		0.989			0.991	
Satd. Flow (prot)	0	1859	1892	0	1462	0
Flt Permitted		0.989			0.991	
Satd. Flow (perm)	0	1859	1892	0	1462	0
Link Speed (mph)		45	45		25	
Link Distance (ft)		2128	2903		760	
Travel Time (s)		32.2	44.0		20.7	
Peak Hour Factor	0.75	0.75	0.84	0.84	0.78	0.78
Heavy Vehicles (%)	5%	0%	0%	0%	0%	18%
Adj. Flow (vph)	89	317	381	12	38	164
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	406	393	0	202	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	53.2%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	4.1					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	67	238	320	10	30	128
Future Vol, veh/h	67	238	320	10	30	128
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	75	75	84	84	78	78
Heavy Vehicles, %	5	0	0	0	0	18
Mvmt Flow	89	317	381	12	38	164

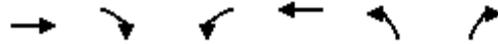
Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	393	0	0	882	387
Stage 1	-	-	-	387	-
Stage 2	-	-	-	495	-
Critical Hdwy	4.15	-	-	6.4	6.38
Critical Hdwy Stg 1	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	5.4	-
Follow-up Hdwy	2.245	-	-	3.5	3.462
Pot Cap-1 Maneuver	1149	-	-	319	627
Stage 1	-	-	-	691	-
Stage 2	-	-	-	617	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1149	-	-	289	627
Mov Cap-2 Maneuver	-	-	-	289	-
Stage 1	-	-	-	626	-
Stage 2	-	-	-	617	-

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	16.5
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1149	-	-	-	513
HCM Lane V/C Ratio	0.078	-	-	-	0.395
HCM Control Delay (s)	8.4	0	-	-	16.5
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1.9

Lanes, Volumes, Timings
12: E Wesmark Blvd & S Pike W

PM Peak
No-Build 2050 PM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	451	143	212	371	123	201
Future Volume (vph)	451	143	212	371	123	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.968			0.850		
Flt Protected				0.982	0.950	
Satd. Flow (prot)	1785	0	0	1852	1787	1615
Flt Permitted				0.982	0.950	
Satd. Flow (perm)	1785	0	0	1852	1787	1615
Link Speed (mph)	45			45	35	
Link Distance (ft)	932			1492	867	
Travel Time (s)	14.1			22.6	16.9	
Peak Hour Factor	0.91	0.91	0.93	0.93	0.84	0.84
Heavy Vehicles (%)	4%	0%	2%	0%	1%	0%
Adj. Flow (vph)	496	157	228	399	146	239
Shared Lane Traffic (%)						
Lane Group Flow (vph)	653	0	0	627	146	239
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	R NA	L NA	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	80.5%
Analysis Period (min)	15
	ICU Level of Service D

Intersection						
Int Delay, s/veh	31.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↔	↔	↔
Traffic Vol, veh/h	451	143	212	371	123	201
Future Vol, veh/h	451	143	212	371	123	201
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	93	93	84	84
Heavy Vehicles, %	4	0	2	0	1	0
Mvmt Flow	496	157	228	399	146	239

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	653	0	1430
Stage 1	-	-	-	-	575
Stage 2	-	-	-	-	855
Critical Hdwy	-	-	4.12	-	6.41
Critical Hdwy Stg 1	-	-	-	-	5.41
Critical Hdwy Stg 2	-	-	-	-	5.41
Follow-up Hdwy	-	-	2.218	-	3.509
Pot Cap-1 Maneuver	-	-	934	-	149
Stage 1	-	-	-	-	565
Stage 2	-	-	-	-	418
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	934	-	~ 102
Mov Cap-2 Maneuver	-	-	-	-	~ 102
Stage 1	-	-	-	-	565
Stage 2	-	-	-	-	287

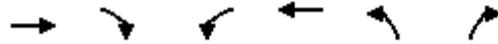
Approach	EB	WB	NB
HCM Control Delay, s	0	3.7	131.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	102	521	-	-	934	-
HCM Lane V/C Ratio	1.436	0.459	-	-	0.244	-
HCM Control Delay (s)	\$ 318.3	17.6	-	-	10.1	0
HCM Lane LOS	F	C	-	-	B	A
HCM 95th %tile Q(veh)	10.7	2.4	-	-	1	-

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

Lanes, Volumes, Timings
13: Bultman Dr & S Pike W

PM Peak
No-Build 2050 PM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	539	121	115	481	82	113
Future Volume (vph)	539	121	115	481	82	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.975			0.922		
Flt Protected				0.990	0.979	
Satd. Flow (prot)	1802	0	0	1859	1687	0
Flt Permitted				0.990	0.979	
Satd. Flow (perm)	1802	0	0	1859	1687	0
Link Speed (mph)	45			45	35	
Link Distance (ft)	1492			1290	1099	
Travel Time (s)	22.6			19.5	21.4	
Peak Hour Factor	0.92	0.92	0.90	0.90	0.88	0.88
Heavy Vehicles (%)	3%	2%	2%	1%	4%	0%
Adj. Flow (vph)	586	132	128	534	93	128
Shared Lane Traffic (%)						
Lane Group Flow (vph)	718	0	0	662	221	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	88.9%
Analysis Period (min)	15
	ICU Level of Service E

Intersection

Int Delay, s/veh 20

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	539	121	115	481	82	113
Future Vol, veh/h	539	121	115	481	82	113
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	90	90	88	88
Heavy Vehicles, %	3	2	2	1	4	0
Mvmt Flow	586	132	128	534	93	128

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	718
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	883
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	883
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.9	138.9
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	203	-	-	883	-
HCM Lane V/C Ratio	1.092	-	-	0.145	-
HCM Control Delay (s)	138.9	-	-	9.8	0
HCM Lane LOS	F	-	-	A	A
HCM 95th %tile Q(veh)	10.4	-	-	0.5	-

Lanes, Volumes, Timings
 14: N Pike W & Farmers Telephone Rd

PM Peak
 No-Build 2050 PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	↷
Traffic Volume (vph)	78	218	208	8	30	103
Future Volume (vph)	78	218	208	8	30	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.995		0.895	
Flt Protected		0.987			0.989	
Satd. Flow (prot)	0	1809	1888	0	1682	0
Flt Permitted		0.987			0.989	
Satd. Flow (perm)	0	1809	1888	0	1682	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		2903	2450		704	
Travel Time (s)		44.0	37.1		16.0	
Peak Hour Factor	0.66	0.66	0.84	0.84	0.43	0.43
Heavy Vehicles (%)	0%	5%	0%	3%	0%	0%
Adj. Flow (vph)	118	330	248	10	70	240
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	448	258	0	310	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	45.2%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	6.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	78	218	208	8	30	103
Future Vol, veh/h	78	218	208	8	30	103
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	66	66	84	84	43	43
Heavy Vehicles, %	0	5	0	3	0	0
Mvmt Flow	118	330	248	10	70	240
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	258	0	-	0	819	253
Stage 1	-	-	-	-	253	-
Stage 2	-	-	-	-	566	-
Critical Hdwy	4.1	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	2.2	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	1318	-	-	-	348	791
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	572	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1318	-	-	-	310	791
Mov Cap-2 Maneuver	-	-	-	-	310	-
Stage 1	-	-	-	-	707	-
Stage 2	-	-	-	-	572	-
Approach	EB	WB	SB			
HCM Control Delay, s	2.1	0	17.8			
HCM LOS			C			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1318	-	-	-	586	
HCM Lane V/C Ratio	0.09	-	-	-	0.528	
HCM Control Delay (s)	8	0	-	-	17.8	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0.3	-	-	-	3.1	

Lanes, Volumes, Timings
15: Hilliard Dr & S Pike W

PM Peak
No-Build 2050 PM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	508	101	88	529	32	85
Future Volume (vph)	508	101	88	529	32	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.978			0.902		
Flt Protected				0.993	0.986	
Satd. Flow (prot)	1828	0	0	1865	1654	0
Flt Permitted				0.993	0.986	
Satd. Flow (perm)	1828	0	0	1865	1654	0
Link Speed (mph)	45			45	25	
Link Distance (ft)	716			1499	658	
Travel Time (s)	10.8			22.7	17.9	
Peak Hour Factor	0.92	0.92	0.84	0.84	0.85	0.85
Heavy Vehicles (%)	2%	0%	2%	1%	0%	3%
Adj. Flow (vph)	552	110	105	630	38	100
Shared Lane Traffic (%)						
Lane Group Flow (vph)	662	0	0	735	138	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	82.6%
Analysis Period (min)	15
	ICU Level of Service E

Intersection						
Int Delay, s/veh	3.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	508	101	88	529	32	85
Future Vol, veh/h	508	101	88	529	32	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	84	84	85	85
Heavy Vehicles, %	2	0	2	1	0	3
Mvmt Flow	552	110	105	630	38	100

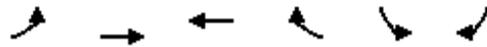
Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	662	0	1447 607
Stage 1	-	-	-	-	607 -
Stage 2	-	-	-	-	840 -
Critical Hdwy	-	-	4.12	-	6.4 6.23
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.218	-	3.5 3.327
Pot Cap-1 Maneuver	-	-	927	-	146 495
Stage 1	-	-	-	-	548 -
Stage 2	-	-	-	-	427 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	927	-	121 495
Mov Cap-2 Maneuver	-	-	-	-	121 -
Stage 1	-	-	-	-	548 -
Stage 2	-	-	-	-	353 -

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	31.8
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	268	-	-	927	-
HCM Lane V/C Ratio	0.514	-	-	0.113	-
HCM Control Delay (s)	31.8	-	-	9.4	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	2.7	-	-	0.4	-

Lanes, Volumes, Timings
 16: N Pike W & Clara Louise Kellogg Drive

PM Peak
 No-Build 2050 PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	33	226	201	62	69	8
Future Volume (vph)	33	226	201	62	69	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.968		0.985	
Flt Protected		0.994			0.957	
Satd. Flow (prot)	0	1825	1786	0	1791	0
Flt Permitted		0.994			0.957	
Satd. Flow (perm)	0	1825	1786	0	1791	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		2450	1573		403	
Travel Time (s)		37.1	23.8		9.2	
Peak Hour Factor	0.65	0.65	0.88	0.88	0.84	0.84
Heavy Vehicles (%)	0%	4%	3%	3%	0%	0%
Adj. Flow (vph)	51	348	228	70	82	10
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	399	298	0	92	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	42.4%
Analysis Period (min)	15
	ICU Level of Service A

Intersection

Int Delay, s/veh 2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↕	↕		↕	
Traffic Vol, veh/h	33	226	201	62	69	8
Future Vol, veh/h	33	226	201	62	69	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	65	65	88	88	84	84
Heavy Vehicles, %	0	4	3	3	0	0
Mvmt Flow	51	348	228	70	82	10

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	298	0	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	4.1	-	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	2.2	-	-
Pot Cap-1 Maneuver	1275	-	-
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1275	-	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	16.6
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1275	-	-	-	402
HCM Lane V/C Ratio	0.04	-	-	-	0.228
HCM Control Delay (s)	7.9	0	-	-	16.6
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9

Lanes, Volumes, Timings
17: Wall St & S Pike W

PM Peak
No-Build 2050 PM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	552	60	34	506	66	44
Future Volume (vph)	552	60	34	506	66	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.987			0.946		
Flt Protected				0.997	0.971	
Satd. Flow (prot)	1809	0	0	1866	1714	0
Flt Permitted				0.997	0.971	
Satd. Flow (perm)	1809	0	0	1866	1714	0
Link Speed (mph)	45			45	30	
Link Distance (ft)	1499			1239	1096	
Travel Time (s)	22.7			18.8	24.9	
Peak Hour Factor	0.92	0.92	0.80	0.80	0.77	0.77
Heavy Vehicles (%)	3%	10%	9%	1%	3%	0%
Adj. Flow (vph)	600	65	43	633	86	57
Shared Lane Traffic (%)						
Lane Group Flow (vph)	665	0	0	676	143	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	9		15	15		9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	67.6%
Analysis Period (min)	15
	ICU Level of Service C

Intersection						
Int Delay, s/veh	5.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	552	60	34	506	66	44
Future Vol, veh/h	552	60	34	506	66	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	80	80	77	77
Heavy Vehicles, %	3	10	9	1	3	0
Mvmt Flow	600	65	43	633	86	57

Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	665	0	1352	633
Stage 1	-	-	-	-	633	-
Stage 2	-	-	-	-	719	-
Critical Hdwy	-	-	4.19	-	6.43	6.2
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.281	-	3.527	3.3
Pot Cap-1 Maneuver	-	-	892	-	165	483
Stage 1	-	-	-	-	527	-
Stage 2	-	-	-	-	481	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	892	-	153	483
Mov Cap-2 Maneuver	-	-	-	-	153	-
Stage 1	-	-	-	-	527	-
Stage 2	-	-	-	-	445	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	51.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	211	-	-	892	-
HCM Lane V/C Ratio	0.677	-	-	0.048	-
HCM Control Delay (s)	51.8	-	-	9.2	0
HCM Lane LOS	F	-	-	A	A
HCM 95th %tile Q(veh)	4.2	-	-	0.1	-

Lanes, Volumes, Timings
18: Miller Rd/S Pike W

PM Peak
No-Build 2050 PM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	511	101	79	393	450	465
Future Volume (vph)	511	101	79	393	450	465
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0	0	150			0
Storage Lanes	1	0	1			0
Taper Length (ft)	100		100			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.978				0.931	
Flt Protected	0.960		0.950			
Satd. Flow (prot)	1740	0	1736	1863	1752	0
Flt Permitted	0.960		0.091			
Satd. Flow (perm)	1740	0	166	1863	1752	0
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)	13				103	
Link Speed (mph)	45			30	30	
Link Distance (ft)	1239			449	761	
Travel Time (s)	18.8			10.2	17.3	
Peak Hour Factor	0.88	0.88	0.91	0.91	0.83	0.83
Heavy Vehicles (%)	3%	0%	4%	2%	2%	0%
Adj. Flow (vph)	581	115	87	432	542	560
Shared Lane Traffic (%)						
Lane Group Flow (vph)	696	0	87	432	1102	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane					Yes	
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2	2	
Detector Template			Left	Thru	Thru	
Leading Detector (ft)	20		20	100	100	
Trailing Detector (ft)	0		0	0	0	
Detector 1 Position(ft)	0		0	0	0	
Detector 1 Size(ft)	20		20	6	6	
Detector 1 Type	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	
Detector 1 Delay (s)	8.0		0.0	0.0	0.0	
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				Cl+Ex	Cl+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	Prot		Perm	NA	NA	
Protected Phases	4			2	6	

Lanes, Volumes, Timings
18: Miller Rd/S Pike W

PM Peak
No-Build 2050 PM

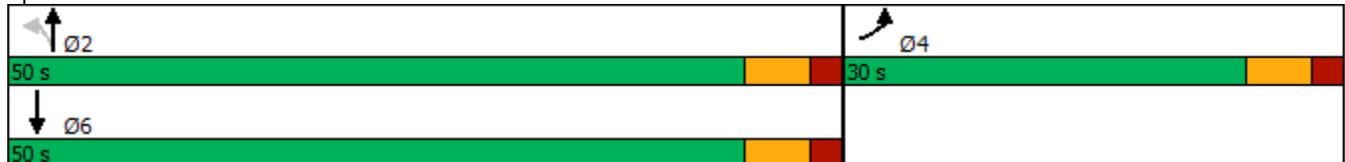


Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases			2			
Detector Phase	4		2	2	6	
Switch Phase						
Minimum Initial (s)	6.0		20.0	20.0	20.0	
Minimum Split (s)	12.0		26.0	26.0	26.0	
Total Split (s)	30.0		50.0	50.0	50.0	
Total Split (%)	37.5%		62.5%	62.5%	62.5%	
Maximum Green (s)	24.0		44.0	44.0	44.0	
Yellow Time (s)	4.0		4.0	4.0	4.0	
All-Red Time (s)	2.0		2.0	2.0	2.0	
Lost Time Adjust (s)	0.0		0.0	0.0	0.0	
Total Lost Time (s)	6.0		6.0	6.0	6.0	
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Recall Mode	None		Min	Min	Min	
Walk Time (s)	7.0		7.0	7.0	7.0	
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	
Pedestrian Calls (#/hr)	0		0	0	0	
Act Effect Green (s)	24.0		44.0	44.0	44.0	
Actuated g/C Ratio	0.30		0.55	0.55	0.55	
v/c Ratio	1.31		0.96	0.42	1.09	
Control Delay	179.9		109.9	12.1	76.0	
Queue Delay	0.0		0.0	0.0	0.0	
Total Delay	179.9		109.9	12.1	76.0	
LOS	F		F	B	E	
Approach Delay	179.9			28.5	76.0	
Approach LOS	F			C	E	

Intersection Summary

Area Type: Other
 Cycle Length: 80
 Actuated Cycle Length: 80
 Natural Cycle: 90
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.31
 Intersection Signal Delay: 96.6
 Intersection LOS: F
 Intersection Capacity Utilization 110.1%
 ICU Level of Service H
 Analysis Period (min) 15

Splits and Phases: 18: Miller Rd/S Pike W



HCM 6th Signalized Intersection Summary
18: Miller Rd/S Pike W

PM Peak
No-Build 2050 PM



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	511	101	79	393	450	465
Future Volume (veh/h)	511	101	79	393	450	465
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1856	1900	1841	1870	1870	1900
Adj Flow Rate, veh/h	581	0	87	432	542	0
Peak Hour Factor	0.88	0.88	0.91	0.91	0.83	0.83
Percent Heavy Veh, %	3	0	4	2	2	0
Cap, veh/h	642		287	791	791	
Arrive On Green	0.36	0.00	0.42	0.42	0.42	0.00
Sat Flow, veh/h	1764	0	850	1870	1870	0
Grp Volume(v), veh/h	582	0	87	432	542	0
Grp Sat Flow(s),veh/h/ln	1767	0	850	1870	1870	0
Q Serve(g_s), s	17.6	0.0	5.2	9.8	13.2	0.0
Cycle Q Clear(g_c), s	17.6	0.0	18.5	9.8	13.2	0.0
Prop In Lane	1.00	0.00	1.00			0.00
Lane Grp Cap(c), veh/h	643		287	791	791	
V/C Ratio(X)	0.91		0.30	0.55	0.68	
Avail Cap(c_a), veh/h	754		593	1463	1463	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.0	0.0	20.7	12.2	13.2	0.0
Incr Delay (d2), s/veh	13.2	0.0	0.6	0.6	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	0.0	1.0	3.6	4.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.2	0.0	21.3	12.8	14.2	0.0
LnGrp LOS	C		C	B	B	
Approach Vol, veh/h	582			519	542	
Approach Delay, s/veh	30.2			14.2	14.2	
Approach LOS	C			B	B	
Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		29.8		26.5		29.8
Change Period (Y+Rc), s		6.0		6.0		6.0
Max Green Setting (Gmax), s		44.0		24.0		44.0
Max Q Clear Time (g_c+I1), s		20.5		19.6		15.2
Green Ext Time (p_c), s		3.3		0.9		3.9

Intersection Summary

HCM 6th Ctrl Delay	19.9
HCM 6th LOS	B

Notes

Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lanes, Volumes, Timings
19: Carolina Ave & S Pike W

PM Peak
No-Build 2050 PM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	840	61	67	820	95	45
Future Volume (vph)	840	61	67	820	95	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	200		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			100		100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.991				0.957	
Flt Protected			0.950		0.967	
Satd. Flow (prot)	1848	0	1736	1863	1758	0
Flt Permitted			0.950		0.967	
Satd. Flow (perm)	1848	0	1736	1863	1758	0
Link Speed (mph)	30			30	30	
Link Distance (ft)	761			1754	440	
Travel Time (s)	17.3			39.9	10.0	
Peak Hour Factor	0.90	0.90	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	2%	0%	4%	2%	0%	0%
Adj. Flow (vph)	933	68	81	988	114	54
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1001	0	81	988	168	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane	Yes					
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	69.6%			ICU Level of Service C		
Analysis Period (min)	15					

Intersection						
Int Delay, s/veh	6.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻		↻	↻	↻	
Traffic Vol, veh/h	840	61	67	820	95	45
Future Vol, veh/h	840	61	67	820	95	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	200	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	83	83	83	83
Heavy Vehicles, %	2	0	4	2	0	0
Mvmt Flow	933	68	81	988	114	54

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	1001	0	2117
Stage 1	-	-	-	-	967
Stage 2	-	-	-	-	1150
Critical Hdwy	-	-	4.14	-	6.4
Critical Hdwy Stg 1	-	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	-	5.4
Follow-up Hdwy	-	-	2.236	-	3.5
Pot Cap-1 Maneuver	-	-	684	-	~ 56
Stage 1	-	-	-	-	372
Stage 2	-	-	-	-	304
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	684	-	~ 49
Mov Cap-2 Maneuver	-	-	-	-	164
Stage 1	-	-	-	-	372
Stage 2	-	-	-	-	268

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	85.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	193	-	-	684	-
HCM Lane V/C Ratio	0.874	-	-	0.118	-
HCM Control Delay (s)	85.5	-	-	11	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	6.6	-	-	0.4	-

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

Lanes, Volumes, Timings
20: Bordeaux Ave & N Pike W

PM Peak
No-Build 2050 PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	316	34	441	346	48	10	0	97	4	20	0
Future Volume (vph)	20	316	34	441	346	48	10	0	97	4	20	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.987			0.992			0.878				
Flt Protected		0.997			0.974			0.995			0.992	
Satd. Flow (prot)	0	1808	0	0	1778	0	0	1602	0	0	1885	0
Flt Permitted		0.997			0.974			0.995			0.992	
Satd. Flow (perm)	0	1808	0	0	1778	0	0	1602	0	0	1885	0
Link Speed (mph)		30			30			30			30	
Link Distance (ft)		2426			896			149			335	
Travel Time (s)		55.1			20.4			3.4			7.6	
Peak Hour Factor	0.73	0.73	0.73	0.82	0.82	0.82	0.71	0.71	0.71	0.25	0.25	0.25
Heavy Vehicles (%)	0%	4%	0%	3%	4%	0%	0%	0%	4%	0%	0%	0%
Adj. Flow (vph)	27	433	47	538	422	59	14	0	137	16	80	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	507	0	0	1019	0	0	151	0	0	96	0
Enter Blocked Intersection	No	No	No	No	No	No						
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		9	15		60	15		9	60		60
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	83.0%
Analysis Period (min)	15
	ICU Level of Service E

Intersection												
Int Delay, s/veh	151.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	316	34	441	346	48	10	0	97	4	20	0
Future Vol, veh/h	20	316	34	441	346	48	10	0	97	4	20	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	73	73	73	82	82	82	71	71	71	25	25	25
Heavy Vehicles, %	0	4	0	3	4	0	0	0	4	0	0	0
Mvmt Flow	27	433	47	538	422	59	14	0	137	16	80	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	481	0	0	480	0	0	2079	2068	457	2107	2062	452
Stage 1	-	-	-	-	-	-	511	511	-	1528	1528	-
Stage 2	-	-	-	-	-	-	1568	1557	-	579	534	-
Critical Hdwy	4.1	-	-	4.13	-	-	7.1	6.5	6.24	7.1	6.5	6.2
Critical Hdwy Stg 1	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.1	5.5	-	6.1	5.5	-
Follow-up Hdwy	2.2	-	-	2.227	-	-	3.5	4	3.336	3.5	4	3.3
Pot Cap-1 Maneuver	1092	-	-	1077	-	-	40	55	599	38	~ 55	612
Stage 1	-	-	-	-	-	-	549	540	-	148	181	-
Stage 2	-	-	-	-	-	-	141	175	-	504	528	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1092	-	-	1077	-	-	-	17	599	~ 13	~ 17	612
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	17	-	~ 13	~ 17	-
Stage 1	-	-	-	-	-	-	530	522	-	143	~ 56	-
Stage 2	-	-	-	-	-	-	-	55	-	376	510	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	6.1		\$ 2723.6
HCM LOS			-	F

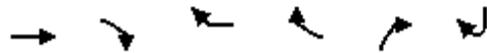
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1092	-	-	1077	-	-	16
HCM Lane V/C Ratio	-	0.025	-	-	0.499	-	-	6
HCM Control Delay (s)	-	8.4	0	-	11.6	0	-	\$ 2723.6
HCM Lane LOS	-	A	A	-	B	A	-	F
HCM 95th %tile Q(veh)	-	0.1	-	-	2.9	-	-	12.8

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

Lanes, Volumes, Timings

PM Peak

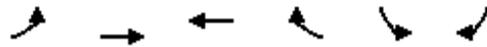
21: Bordeaux Ave & US 76/378 (Robert E Graham Fwy) EB & US 76/378 (Robert E Graham Fwy) WB



Lane Group	EBT	EBR	WBR	WBR2	NBR	SBR2
Lane Configurations	↑↑	↑	↑↑	↑	↑	↑
Traffic Volume (vph)	676	379	810	107	263	495
Future Volume (vph)	676	379	810	107	263	495
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		275	300		0	
Storage Lanes		1	1		1	
Taper Length (ft)						
Lane Util. Factor	0.95	1.00	0.88	1.00	1.00	1.00
Frt		0.850	0.850	0.850	0.865	0.865
Flt Protected						
Satd. Flow (prot)	3610	1538	2842	1615	1550	1644
Flt Permitted						
Satd. Flow (perm)	3610	1538	2842	1615	1550	1644
Link Speed (mph)	60					
Link Distance (ft)	2871					
Travel Time (s)	32.6					
Peak Hour Factor	0.92	0.92	0.90	0.90	0.71	0.90
Heavy Vehicles (%)	0%	5%	0%	0%	6%	0%
Adj. Flow (vph)	735	412	900	119	370	550
Shared Lane Traffic (%)						
Lane Group Flow (vph)	735	412	900	119	370	550
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Right	Right	Right	Right
Median Width(ft)	0					
Link Offset(ft)	0					
Crosswalk Width(ft)	16					
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	60	25	25	25
Sign Control	Free					
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	65.7%			ICU Level of Service C		
Analysis Period (min)	15					

Lanes, Volumes, Timings
22: S Pike W & Bordeaux Ave

PM Peak
No-Build 2050 PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	225	656	836	42	312	64
Future Volume (vph)	225	656	836	42	312	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150			0	0	100
Storage Lanes	1			0	1	1
Taper Length (ft)	100				100	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.994			0.850
Flt Protected	0.950				0.950	
Satd. Flow (prot)	1703	1881	1851	0	1719	1615
Flt Permitted	0.950				0.950	
Satd. Flow (perm)	1703	1881	1851	0	1719	1615
Link Speed (mph)		30	30		30	
Link Distance (ft)		1754	1073		396	
Travel Time (s)		39.9	24.4		9.0	
Peak Hour Factor	0.91	0.91	0.78	0.78	0.87	0.87
Heavy Vehicles (%)	6%	1%	2%	3%	5%	0%
Adj. Flow (vph)	247	721	1072	54	359	74
Shared Lane Traffic (%)						
Lane Group Flow (vph)	247	721	1126	0	359	74
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		12	12		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Sign Control		Free	Free		Stop	
Intersection Summary						
Area Type:	Other					
Control Type:	Unsignalized					
Intersection Capacity Utilization	86.3%			ICU Level of Service E		
Analysis Period (min)	15					

Intersection

Int Delay, s/veh 937.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↙	↑	↘		↙	↘
Traffic Vol, veh/h	225	656	836	42	312	64
Future Vol, veh/h	225	656	836	42	312	64
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	150	-	-	-	0	100
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	91	91	78	78	87	87
Heavy Vehicles, %	6	1	2	3	5	0
Mvmt Flow	247	721	1072	54	359	74

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1126	0	0 2314 1099
Stage 1	-	-	- 1099 -
Stage 2	-	-	- 1215 -
Critical Hdwy	4.16	-	- 6.45 6.2
Critical Hdwy Stg 1	-	-	- 5.45 -
Critical Hdwy Stg 2	-	-	- 5.45 -
Follow-up Hdwy	2.254	-	- 3.545 3.3
Pot Cap-1 Maneuver	606	-	- ~ 41 261
Stage 1	-	-	- ~ 315 -
Stage 2	-	-	- ~ 277 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	606	-	- ~ 24 261
Mov Cap-2 Maneuver	-	-	- ~ 24 -
Stage 1	-	-	- ~ 186 -
Stage 2	-	-	- ~ 277 -

Approach	EB	WB	SB
HCM Control Delay, s	3.8	0	\$ 5469.1
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	606	-	-	-	24	261
HCM Lane V/C Ratio	0.408	-	-	-	-14.943	0.282
HCM Control Delay (s)	15	-	-	-	-\$ 6586	24.1
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	2	-	-	-	44.8	1.1

Notes

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

Lanes, Volumes, Timings
 23: US 15 (N Main St) & N Pike W/Strange St

PM Peak
 No-Build 2050 PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↖	↕↔		↖	↕↔	
Traffic Volume (vph)	82	37	304	26	33	12	650	500	25	10	567	150
Future Volume (vph)	82	37	304	26	33	12	650	500	25	10	567	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		100	0		0	100		0	75		0
Storage Lanes	0		1	0		0	1		0	1		0
Taper Length (ft)	100			100			20			100		
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			0.850		0.977			0.993			0.969	
Flt Protected		0.967			0.982		0.950			0.950		
Satd. Flow (prot)	0	1698	1568	0	1727	0	1752	3391	0	1597	3345	0
Flt Permitted		0.709			0.736		0.126			0.412		
Satd. Flow (perm)	0	1245	1568	0	1295	0	232	3391	0	693	3345	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)			380		8			6			39	
Link Speed (mph)		30			30			25			25	
Link Distance (ft)		896			1043			293			718	
Travel Time (s)		20.4			23.7			8.0			19.6	
Peak Hour Factor	0.80	0.80	0.80	0.61	0.61	0.61	0.83	0.83	0.83	0.89	0.89	0.89
Heavy Vehicles (%)	7%	11%	3%	5%	8%	0%	3%	6%	0%	13%	5%	3%
Adj. Flow (vph)	103	46	380	43	54	20	783	602	30	11	637	169
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	149	380	0	117	0	783	632	0	11	806	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2	1	1	2		1	2		1	2	
Detector Template	Left	Thru	Right	Left	Thru		Left	Thru		Left	Thru	
Leading Detector (ft)	20	100	20	20	100		20	100		20	100	
Trailing Detector (ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Position(ft)	0	0	0	0	0		0	0		0	0	
Detector 1 Size(ft)	20	6	20	20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8!			8!		5	2!			6	

Lane Group	Ø4
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	4

Lanes, Volumes, Timings
 23: US 15 (N Main St) & N Pike W/Strange St

PM Peak
 No-Build 2050 PM

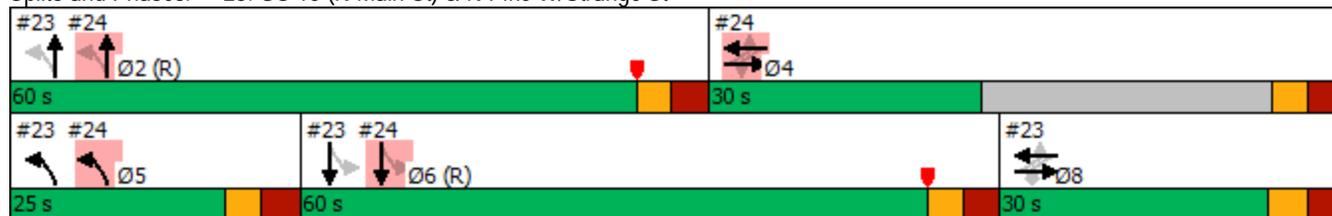


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	8!		8	8!			2!			6		
Detector Phase	8	8	8	8	8		5	2		6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	6.0	6.0		6.0	12.0		12.0	12.0	
Minimum Split (s)	36.8	36.8	36.8	36.8	36.8		19.5	33.1		31.1	31.1	
Total Split (s)	30.0	30.0	30.0	30.0	30.0		25.0	60.0		60.0	60.0	
Total Split (%)	26.1%	26.1%	26.1%	26.1%	26.1%		21.7%	52.2%		52.2%	52.2%	
Maximum Green (s)	23.2	23.2	23.2	23.2	23.2		18.5	53.9		53.9	53.9	
Yellow Time (s)	3.3	3.3	3.3	3.3	3.3		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.1		3.1	3.1	
Lost Time Adjust (s)		0.0	0.0		0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)		6.8	6.8		6.8		6.5	6.1		6.1	6.1	
Lead/Lag							Lead	Lead		Lag	Lag	
Lead-Lag Optimize?							Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	2.5		2.5	2.5	
Recall Mode	None	None	None	None	None		None	C-Min		C-Min	C-Min	
Walk Time (s)	7.0	7.0	7.0	7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	23.0	23.0	23.0	23.0	23.0			20.0		18.0	18.0	
Pedestrian Calls (#/hr)	0	0	0	0	0			0		0	0	
Act Effct Green (s)		18.8	18.8		18.8		58.4	58.8		49.7	49.7	
Actuated g/C Ratio		0.16	0.16		0.16		0.51	0.51		0.43	0.43	
v/c Ratio		0.73	0.66		0.54		1.65	0.36		0.04	0.55	
Control Delay		65.6	10.1		49.1		324.7	7.9		17.2	24.1	
Queue Delay		0.0	0.1		0.0		0.0	0.5		0.0	0.1	
Total Delay		65.6	10.2		49.1		324.7	8.4		17.2	24.1	
LOS		E	B		D		F	A		B	C	
Approach Delay		25.8			49.1			183.4			24.0	
Approach LOS		C			D			F			C	

Intersection Summary

Area Type: Other
 Cycle Length: 115
 Actuated Cycle Length: 115
 Offset: 53.9 (47%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.65
 Intersection Signal Delay: 103.8
 Intersection LOS: F
 Intersection Capacity Utilization 83.9%
 ICU Level of Service E
 Analysis Period (min) 15
 ! Phase conflict between lane groups.

Splits and Phases: 23: US 15 (N Main St) & N Pike W/Strange St



Lane Group	Ø4
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	6.0
Minimum Split (s)	43.5
Total Split (s)	30.0
Total Split (%)	26%
Maximum Green (s)	23.5
Yellow Time (s)	3.0
All-Red Time (s)	3.5
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	Lag
Lead-Lag Optimize?	Yes
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	30.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

HCM 6th Edition methodology does not support clustered intersections.

HCM Signalized Intersection Capacity Analysis

23: US 15 (N Main St) & N Pike W/Strange St

PM Peak
No-Build 2050 PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕		↖	↕		↖	↕	
Traffic Volume (vph)	82	37	304	26	33	12	650	500	25	10	567	150
Future Volume (vph)	82	37	304	26	33	12	650	500	25	10	567	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.8	6.8		6.8		6.5	6.1		6.1	6.1	
Lane Util. Factor		1.00	1.00		1.00		1.00	0.95		1.00	0.95	
Frt		1.00	0.85		0.98		1.00	0.99		1.00	0.97	
Flt Protected		0.97	1.00		0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1697	1568		1727		1752	3391		1597	3343	
Flt Permitted		0.71	1.00		0.74		0.13	1.00		0.41	1.00	
Satd. Flow (perm)		1245	1568		1294		232	3391		693	3343	
Peak-hour factor, PHF	0.80	0.80	0.80	0.61	0.61	0.61	0.83	0.83	0.83	0.89	0.89	0.89
Adj. Flow (vph)	102	46	380	43	54	20	783	602	30	11	637	169
RTOR Reduction (vph)	0	0	318	0	7	0	0	3	0	0	22	0
Lane Group Flow (vph)	0	149	62	0	110	0	783	629	0	11	784	0
Heavy Vehicles (%)	7%	11%	3%	5%	8%	0%	3%	6%	0%	13%	5%	3%
Turn Type	Perm	NA	Perm	Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		8!			8!		5	2!			6	
Permitted Phases	8!		8	8!			2!			6		
Actuated Green, G (s)		18.9	18.9		18.9		58.8	58.8		49.7	49.7	
Effective Green, g (s)		18.9	18.9		18.9		58.8	58.8		49.7	49.7	
Actuated g/C Ratio		0.16	0.16		0.16		0.51	0.51		0.43	0.43	
Clearance Time (s)		6.8	6.8		6.8		6.5	6.1		6.1	6.1	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	2.5		2.5	2.5	
Lane Grp Cap (vph)		204	257		212		475	1733		299	1444	
v/s Ratio Prot							c0.39	0.19			c0.23	
v/s Ratio Perm		c0.12	0.04		0.09		c0.46			0.02		
v/c Ratio		0.73	0.24		0.52		1.65	0.36		0.04	0.54	
Uniform Delay, d1		45.6	41.8		43.9		33.8	16.9		18.8	24.2	
Progression Factor		1.00	1.00		1.00		1.07	0.43		1.00	1.00	
Incremental Delay, d2		12.6	0.5		2.3		297.8	0.4		0.2	1.5	
Delay (s)		58.2	42.3		46.2		334.0	7.6		19.1	25.7	
Level of Service		E	D		D		F	A		B	C	
Approach Delay (s)		46.8			46.2		188.2			25.6		
Approach LOS		D			D		F			C		

Intersection Summary

HCM 2000 Control Delay	110.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.22		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.4
Intersection Capacity Utilization	83.9%	ICU Level of Service	E
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

Lanes, Volumes, Timings
 24: US 15 (N Main St) & S Pike W/S Pike E

PM Peak
 No-Build 2050 PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↶	↷		↶	↷		↶	↷		↶	↷	
Traffic Volume (vph)	0	4	1	145	7	102	3	1073	98	52	846	0
Future Volume (vph)	0	4	1	145	7	102	3	1073	98	52	846	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	175		0	175		0	125		0	100		0
Storage Lanes	1		0	1		0	1		0	1		0
Taper Length (ft)	100			100			100			20		
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		0.970			0.860			0.987				
Flt Protected				0.950			0.950			0.950		
Satd. Flow (prot)	1900	1843	0	1805	1632	0	1805	3399	0	1805	3471	0
Flt Permitted				0.751			0.126			0.190		
Satd. Flow (perm)	1900	1843	0	1427	1632	0	239	3399	0	361	3471	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		2			26			11				
Link Speed (mph)		30			30			25				25
Link Distance (ft)		800			766			650				293
Travel Time (s)		18.2			17.4			17.7				8.0
Peak Hour Factor	0.50	0.50	0.50	0.87	0.87	0.87	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	5%	3%	0%	4%	0%
Adj. Flow (vph)	0	8	2	167	8	117	4	1293	118	63	1019	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	10	0	167	125	0	4	1411	0	63	1019	0
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			12				12
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2		1	2		1	2	
Detector Template	Left	Thru										
Leading Detector (ft)	20	100		20	100		20	100		20	100	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Detector 1 Position(ft)	0	0		0	0		0	0		0	0	
Detector 1 Size(ft)	20	6		20	6		20	6		20	6	
Detector 1 Type	Cl+Ex	Cl+Ex										
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex			Cl+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4!			4!		5!	2			6!	

Lane Group	Ø8
Lane Configurations	
Traffic Volume (vph)	
Future Volume (vph)	
Ideal Flow (vphpl)	
Storage Length (ft)	
Storage Lanes	
Taper Length (ft)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Right Turn on Red	
Satd. Flow (RTOR)	
Link Speed (mph)	
Link Distance (ft)	
Travel Time (s)	
Peak Hour Factor	
Heavy Vehicles (%)	
Adj. Flow (vph)	
Shared Lane Traffic (%)	
Lane Group Flow (vph)	
Enter Blocked Intersection	
Lane Alignment	
Median Width(ft)	
Link Offset(ft)	
Crosswalk Width(ft)	
Two way Left Turn Lane	
Headway Factor	
Turning Speed (mph)	
Number of Detectors	
Detector Template	
Leading Detector (ft)	
Trailing Detector (ft)	
Detector 1 Position(ft)	
Detector 1 Size(ft)	
Detector 1 Type	
Detector 1 Channel	
Detector 1 Extend (s)	
Detector 1 Queue (s)	
Detector 1 Delay (s)	
Detector 2 Position(ft)	
Detector 2 Size(ft)	
Detector 2 Type	
Detector 2 Channel	
Detector 2 Extend (s)	
Turn Type	
Protected Phases	8

Lanes, Volumes, Timings
 24: US 15 (N Main St) & S Pike W/S Pike E

PM Peak
 No-Build 2050 PM



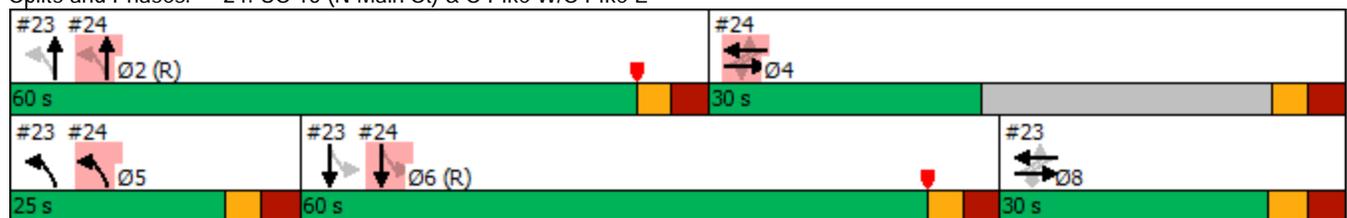
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4!			4!			2			6!		
Detector Phase	4	4		4	4		5	2		6	6	
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0		6.0	12.0		12.0	12.0	
Minimum Split (s)	43.5	43.5		43.5	43.5		19.5	33.1		31.1	31.1	
Total Split (s)	30.0	30.0		30.0	30.0		25.0	60.0		60.0	60.0	
Total Split (%)	26.1%	26.1%		26.1%	26.1%		21.7%	52.2%		52.2%	52.2%	
Maximum Green (s)	23.5	23.5		23.5	23.5		18.5	53.9		53.9	53.9	
Yellow Time (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
All-Red Time (s)	3.5	3.5		3.5	3.5		3.5	3.1		3.1	3.1	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.5	6.1		6.1	6.1	
Lead/Lag	Lag	Lag		Lag	Lag		Lead	Lead		Lag	Lag	
Lead-Lag Optimize?	Yes	Yes										
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	2.5		2.5	2.5	
Recall Mode	None	None		None	None		None	C-Min		C-Min	C-Min	
Walk Time (s)	7.0	7.0		7.0	7.0			7.0		7.0	7.0	
Flash Dont Walk (s)	30.0	30.0		30.0	30.0			20.0		18.0	18.0	
Pedestrian Calls (#/hr)	0	0		0	0			0		0	0	
Act Effect Green (s)		43.6		43.6	43.6		58.4	58.8		49.7	49.7	
Actuated g/C Ratio		0.38		0.38	0.38		0.51	0.51		0.43	0.43	
v/c Ratio		0.01		0.31	0.20		0.01	0.81		0.40	0.68	
Control Delay		17.6		26.0	18.6		16.3	28.8		20.4	17.2	
Queue Delay		0.0		0.0	0.7		0.0	44.6		0.0	0.4	
Total Delay		17.6		26.0	19.3		16.3	73.5		20.4	17.6	
LOS		B		C	B		B	E		C	B	
Approach Delay		17.6			23.1			73.3			17.8	
Approach LOS		B			C			E			B	

Intersection Summary

Area Type: Other
 Cycle Length: 115
 Actuated Cycle Length: 115
 Offset: 53.9 (47%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow
 Natural Cycle: 150
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.65
 Intersection Signal Delay: 46.4
 Intersection LOS: D
 Intersection Capacity Utilization 68.4%
 ICU Level of Service C
 Analysis Period (min) 15

! Phase conflict between lane groups.

Splits and Phases: 24: US 15 (N Main St) & S Pike W/S Pike E



Lane Group	Ø8
Permitted Phases	
Detector Phase	
Switch Phase	
Minimum Initial (s)	6.0
Minimum Split (s)	36.8
Total Split (s)	30.0
Total Split (%)	26%
Maximum Green (s)	23.2
Yellow Time (s)	3.3
All-Red Time (s)	3.5
Lost Time Adjust (s)	
Total Lost Time (s)	
Lead/Lag	
Lead-Lag Optimize?	
Vehicle Extension (s)	3.0
Recall Mode	None
Walk Time (s)	7.0
Flash Dont Walk (s)	23.0
Pedestrian Calls (#/hr)	0
Act Effct Green (s)	
Actuated g/C Ratio	
v/c Ratio	
Control Delay	
Queue Delay	
Total Delay	
LOS	
Approach Delay	
Approach LOS	
Intersection Summary	

HCM 6th Edition methodology does not support clustered intersections.

HCM Signalized Intersection Capacity Analysis

24: US 15 (N Main St) & S Pike W/S Pike E

PM Peak
No-Build 2050 PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↕		↖	↗	
Traffic Volume (vph)	0	4	1	145	7	102	3	1073	98	52	846	0
Future Volume (vph)	0	4	1	145	7	102	3	1073	98	52	846	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5		6.5	6.5		6.5	6.1		6.1	6.1	
Lane Util. Factor		1.00		1.00	1.00		1.00	0.95		1.00	0.95	
Frt		0.97		1.00	0.86		1.00	0.99		1.00	1.00	
Flt Protected		1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1843		1805	1631		1805	3400		1805	3471	
Flt Permitted		1.00		0.75	1.00		0.13	1.00		0.19	1.00	
Satd. Flow (perm)		1843		1427	1631		239	3400		361	3471	
Peak-hour factor, PHF	0.50	0.50	0.50	0.87	0.87	0.87	0.83	0.83	0.83	0.83	0.83	0.83
Adj. Flow (vph)	0	8	2	167	8	117	4	1293	118	63	1019	0
RTOR Reduction (vph)	0	1	0	0	16	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	9	0	167	109	0	4	1406	0	63	1019	0
Heavy Vehicles (%)	0%	0%	0%	0%	2%	0%	0%	5%	3%	0%	4%	0%
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	
Protected Phases		4!		4!	4!		5!	2		6!	6!	
Permitted Phases	4!			4!			2			6!		
Actuated Green, G (s)		43.6		43.6	43.6		58.8	58.8		49.7	49.7	
Effective Green, g (s)		43.6		43.6	43.6		58.8	58.8		49.7	49.7	
Actuated g/C Ratio		0.38		0.38	0.38		0.51	0.51		0.43	0.43	
Clearance Time (s)		6.5		6.5	6.5		6.5	6.1		6.1	6.1	
Vehicle Extension (s)		3.0		3.0	3.0		3.0	2.5		2.5	2.5	
Lane Grp Cap (vph)		698		541	618		489	1738		156	1500	
v/s Ratio Prot		0.00			0.07		0.00	c0.41			c0.29	
v/s Ratio Perm				c0.12			0.00			0.17		
v/c Ratio		0.01		0.31	0.18		0.01	0.81		0.40	0.68	
Uniform Delay, d1		22.3		25.1	23.8		17.1	23.4		22.5	26.2	
Progression Factor		1.00		1.00	1.00		1.00	1.00		0.62	0.58	
Incremental Delay, d2		0.0		0.3	0.1		0.0	4.2		6.5	2.1	
Delay (s)		22.3		25.4	23.9		17.1	27.6		20.5	17.4	
Level of Service		C		C	C		B	C		C	B	
Approach Delay (s)		22.3			24.8			27.6			17.6	
Approach LOS		C			C			C			B	

Intersection Summary

HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	19.4
Intersection Capacity Utilization	68.4%	ICU Level of Service	C
Analysis Period (min)	15		

! Phase conflict between lane groups.

c Critical Lane Group

Lanes, Volumes, Timings

PM Peak

25: N Main St/US 15 (N Main St) & S Pike W/US 15 (N Lafayette Dr)

No-Build 2050 PM



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	370	425	167	28	315	474	161	345	8	294	321	398
Future Volume (vph)	370	425	167	28	315	474	161	345	8	294	321	398
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	250		125	125		0	250		100	250		225
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.95	0.95	1.00	1.00	1.00	1.00	0.95	0.95	0.97	1.00	1.00
Frt		0.958				0.850		0.997				0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1752	3400	0	1805	1863	1509	1770	3564	0	3273	1881	1583
Flt Permitted	0.177			0.396			0.950			0.950		
Satd. Flow (perm)	327	3400	0	752	1863	1509	1770	3564	0	3273	1881	1583
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		43				245		3				321
Link Speed (mph)		30			40			25				25
Link Distance (ft)		1073			898			498				650
Travel Time (s)		24.4			15.3			13.6				17.7
Peak Hour Factor	0.96	0.96	0.96	0.87	0.87	0.87	0.68	0.68	0.68	0.84	0.84	0.84
Heavy Vehicles (%)	3%	2%	1%	0%	2%	7%	2%	1%	0%	7%	1%	2%
Adj. Flow (vph)	385	443	174	32	362	545	237	507	12	350	382	474
Shared Lane Traffic (%)												
Lane Group Flow (vph)	385	617	0	32	362	545	237	519	0	350	382	474
Enter Blocked Intersection	No											
Lane Alignment	Left	Left	Right									
Median Width(ft)		12			12			24				24
Link Offset(ft)		0			0			0				0
Crosswalk Width(ft)		16			16			16				16
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	1
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	Right
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	20
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	0
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	20
Detector 1 Type	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex	Cl+Ex		Cl+Ex	Cl+Ex	Cl+Ex
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Detector 2 Position(ft)		94			94			94				94
Detector 2 Size(ft)		6			6			6				6
Detector 2 Type		Cl+Ex			Cl+Ex			Cl+Ex				Cl+Ex
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0				0.0
Turn Type	pm+pt	NA		pm+pt	NA	pm+ov	Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8	1	5	2		1	6	

Lanes, Volumes, Timings
 25: N Main St/US 15 (N Main St) & S Pike W/US 15 (N Lafayette Dr)

PM Peak
 No-Build 2050 PM

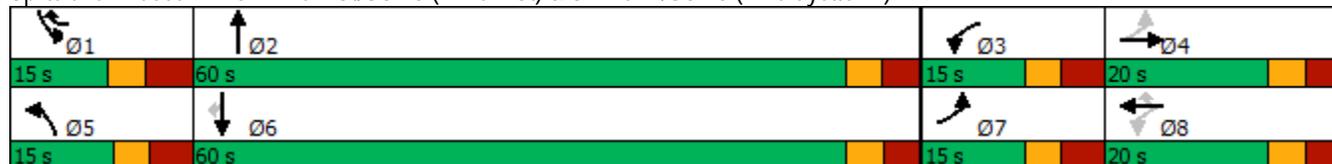


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Permitted Phases	4			8		8						6
Detector Phase	7	4		3	8	1	5	2		1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0		6.0	6.0	6.0	6.0	12.0		6.0	12.0	12.0
Minimum Split (s)	15.0	15.0		15.0	15.0	15.0	15.0	40.0		15.0	40.0	40.0
Total Split (s)	15.0	20.0		15.0	20.0	15.0	15.0	60.0		15.0	60.0	60.0
Total Split (%)	13.6%	18.2%		13.6%	18.2%	13.6%	13.6%	54.5%		13.6%	54.5%	54.5%
Maximum Green (s)	8.5	13.5		8.5	13.5	8.1	8.5	53.7		8.1	53.8	53.8
Yellow Time (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	3.0
All-Red Time (s)	3.5	3.5		3.5	3.5	3.9	3.5	3.3		3.9	3.2	3.2
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5		6.5	6.5	6.9	6.5	6.3		6.9	6.2	6.2
Lead/Lag	Lead	Lag		Lead	Lag	Lead	Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	2.5		3.0	2.5	2.5
Recall Mode	None	None		None	None	None	None	Min		None	Min	Min
Walk Time (s)		7.0			7.0			7.0			7.0	7.0
Flash Dont Walk (s)		25.0			29.0			26.0			26.0	26.0
Pedestrian Calls (#/hr)		0			0			0			0	0
Act Effct Green (s)	26.7	23.5		20.3	13.6	28.3	8.6	22.9		8.2	23.0	23.0
Actuated g/C Ratio	0.34	0.30		0.26	0.17	0.36	0.11	0.29		0.10	0.29	0.29
v/c Ratio	1.47	0.60		0.11	1.14	0.79	1.25	0.50		1.04	0.70	0.69
Control Delay	253.7	29.8		20.6	128.3	23.3	182.3	24.7		100.0	32.3	13.4
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	253.7	29.8		20.6	128.3	23.3	182.3	24.7		100.0	32.3	13.4
LOS	F	C		C	F	C	F	C		F	C	B
Approach Delay		115.8			63.7			74.1			44.5	
Approach LOS		F			E			E			D	

Intersection Summary

Area Type: Other
 Cycle Length: 110
 Actuated Cycle Length: 79.6
 Natural Cycle: 115
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.47
 Intersection Signal Delay: 73.2
 Intersection Capacity Utilization 84.3%
 Analysis Period (min) 15
 Intersection LOS: E
 ICU Level of Service E

Splits and Phases: 25: N Main St/US 15 (N Main St) & S Pike W/US 15 (N Lafayette Dr)



HCM 6th Signalized Intersection Summary
 25: N Main St/US 15 (N Main St) & S Pike W/US 15 (N Lafayette Dr)

PM Peak
 No-Build 2050 PM



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗	↖	↗		↗	↗	↗
Traffic Volume (veh/h)	370	425	167	28	315	474	161	345	8	294	321	398
Future Volume (veh/h)	370	425	167	28	315	474	161	345	8	294	321	398
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1885	1900	1870	1796	1870	1885	1900	1796	1885	1870
Adj Flow Rate, veh/h	385	443	174	32	362	545	237	507	12	350	382	474
Peak Hour Factor	0.96	0.96	0.96	0.87	0.87	0.87	0.68	0.68	0.68	0.84	0.84	0.84
Percent Heavy Veh, %	3	2	1	0	2	7	2	1	0	7	1	2
Cap, veh/h	259	547	213	191	294	383	176	1232	29	313	650	546
Arrive On Green	0.10	0.22	0.22	0.04	0.16	0.16	0.10	0.34	0.34	0.09	0.34	0.34
Sat Flow, veh/h	1767	2499	973	1810	1870	1522	1781	3576	85	3319	1885	1585
Grp Volume(v), veh/h	385	314	303	32	362	545	237	254	265	350	382	474
Grp Sat Flow(s),veh/h/ln	1767	1777	1695	1810	1870	1522	1781	1791	1870	1659	1885	1585
Q Serve(g_s), s	8.5	14.4	14.6	1.2	13.5	13.5	8.5	9.3	9.3	8.1	14.3	24.0
Cycle Q Clear(g_c), s	8.5	14.4	14.6	1.2	13.5	13.5	8.5	9.3	9.3	8.1	14.3	24.0
Prop In Lane	1.00		0.57	1.00		1.00	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	259	389	371	191	294	383	176	617	644	313	650	546
V/C Ratio(X)	1.49	0.81	0.82	0.17	1.23	1.42	1.34	0.41	0.41	1.12	0.59	0.87
Avail Cap(c_a), veh/h	259	389	371	303	294	383	176	1120	1169	313	1181	993
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.4	31.8	31.9	28.9	36.2	32.2	38.7	21.5	21.5	38.9	23.1	26.3
Incr Delay (d2), s/veh	239.2	11.9	13.3	0.4	130.3	205.4	188.0	0.3	0.3	86.7	0.6	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.4	7.3	7.2	0.5	16.5	29.3	12.9	3.9	4.1	7.0	6.3	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	269.7	43.7	45.3	29.3	166.5	237.6	226.7	21.8	21.8	125.6	23.8	29.6
LnGrp LOS	F	D	D	C	F	F	F	C	C	F	C	C
Approach Vol, veh/h		1002			939			756			1206	
Approach Delay, s/veh		131.0			203.1			86.0			55.6	
Approach LOS		F			F			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	35.9	9.7	25.3	15.0	35.9	15.0	20.0				
Change Period (Y+Rc), s	6.9	* 6.3	6.5	6.5	6.5	* 6.3	6.5	6.5				
Max Green Setting (Gmax), s	8.1	* 54	8.5	13.5	8.5	* 54	8.5	13.5				
Max Q Clear Time (g_c+I1), s	10.1	11.3	3.2	16.6	10.5	26.0	10.5	15.5				
Green Ext Time (p_c), s	0.0	2.9	0.0	0.0	0.0	3.6	0.0	0.0				

Intersection Summary

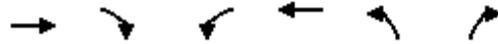
HCM 6th Ctrl Delay	116.3
HCM 6th LOS	F

Notes

- User approved pedestrian interval to be less than phase max green.
- * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings
 26: Brokehollow Place Dwy & S Pike W

PM Peak
 No-Build 2050 PM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	617	34	7	578	24	8
Future Volume (vph)	617	34	7	578	24	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.993			0.967		
Flt Protected				0.999	0.964	
Satd. Flow (prot)	1852	0	0	1880	1771	0
Flt Permitted				0.999	0.964	
Satd. Flow (perm)	1852	0	0	1880	1771	0
Link Speed (mph)	45			45	30	
Link Distance (ft)	1290			716	767	
Travel Time (s)	19.5			10.8	17.4	
Peak Hour Factor	0.90	0.90	0.88	0.88	0.56	0.56
Heavy Vehicles (%)	2%	0%	0%	1%	0%	0%
Adj. Flow (vph)	686	38	8	657	43	14
Shared Lane Traffic (%)						
Lane Group Flow (vph)	724	0	0	665	57	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60		60	60		60
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	46.0%
Analysis Period (min)	15
	ICU Level of Service A

Intersection						
Int Delay, s/veh	1.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	617	34	7	578	24	8
Future Vol, veh/h	617	34	7	578	24	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	88	88	56	56
Heavy Vehicles, %	2	0	0	1	0	0
Mvmt Flow	686	38	8	657	43	14

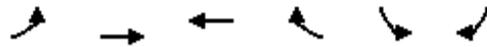
Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	724	0	1378 705
Stage 1	-	-	-	-	705 -
Stage 2	-	-	-	-	673 -
Critical Hdwy	-	-	4.1	-	6.4 6.2
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.4 -
Follow-up Hdwy	-	-	2.2	-	3.5 3.3
Pot Cap-1 Maneuver	-	-	888	-	161 440
Stage 1	-	-	-	-	494 -
Stage 2	-	-	-	-	511 -
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	888	-	159 440
Mov Cap-2 Maneuver	-	-	-	-	159 -
Stage 1	-	-	-	-	494 -
Stage 2	-	-	-	-	504 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	32.1
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	189	-	-	888	-
HCM Lane V/C Ratio	0.302	-	-	0.009	-
HCM Control Delay (s)	32.1	-	-	9.1	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	1.2	-	-	0	-

Lanes, Volumes, Timings
30: N Pike W

PM Peak
No-Build 2050 PM



Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	0	295	306	50	60	0
Future Volume (vph)	0	295	306	50	60	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.981				
Flt Protected					0.950	
Satd. Flow (prot)	0	1863	1827	0	1770	0
Flt Permitted					0.950	
Satd. Flow (perm)	0	1863	1827	0	1770	0
Link Speed (mph)		45	45		30	
Link Distance (ft)		1573	2426		390	
Travel Time (s)		23.8	36.8		8.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	321	333	54	65	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	321	387	0	65	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		12	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60			60	60	60
Sign Control		Free	Free		Stop	

Intersection Summary

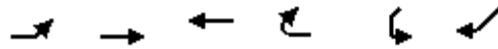
Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	29.1% ICU Level of Service A
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↶	
Traffic Vol, veh/h	0	295	306	50	60	0
Future Vol, veh/h	0	295	306	50	60	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	321	333	54	65	0

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	387	0	0	681	360
Stage 1	-	-	-	360	-
Stage 2	-	-	-	321	-
Critical Hdwy	4.12	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	5.42	-
Follow-up Hdwy	2.218	-	-	3.518	3.318
Pot Cap-1 Maneuver	1171	-	-	416	684
Stage 1	-	-	-	706	-
Stage 2	-	-	-	735	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1171	-	-	416	684
Mov Cap-2 Maneuver	-	-	-	416	-
Stage 1	-	-	-	706	-
Stage 2	-	-	-	735	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.3
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1171	-	-	-	416
HCM Lane V/C Ratio	-	-	-	-	0.157
HCM Control Delay (s)	0	-	-	-	15.3
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.6



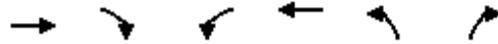
Lane Group	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations		↑				↑
Traffic Volume (vph)	0	768	0	0	0	717
Future Volume (vph)	0	768	0	0	0	717
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.865
Fl _t Protected						
Satd. Flow (prot)	0	1863	0	0	0	1611
Fl _t Permitted						
Satd. Flow (perm)	0	1863	0	0	0	1611
Link Speed (mph)		40	60		60	
Link Distance (ft)		1214	698		859	
Travel Time (s)		20.7	7.9		9.8	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	835	0	0	0	779
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	835	0	0	0	779
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		0	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	40			9	15	40
Sign Control		Free	Stop		Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	64.4%
Analysis Period (min)	15
	ICU Level of Service C

Lanes, Volumes, Timings
 39: US 76/378 (Robert E Graham Fwy) EB

PM Peak
 No-Build 2050 PM



Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑					↗
Traffic Volume (vph)	768	0	0	0	0	280
Future Volume (vph)	768	0	0	0	0	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Fr _t						0.865
Flt Protected						
Satd. Flow (prot)	1863	0	0	0	0	1611
Flt Permitted						
Satd. Flow (perm)	1863	0	0	0	0	1611
Link Speed (mph)	60			60	35	
Link Distance (ft)	698			1021	170	
Travel Time (s)	7.9			11.6	3.3	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	835	0	0	0	0	304
Shared Lane Traffic (%)						
Lane Group Flow (vph)	835	0	0	0	0	304
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	L NA	Right	Left	Left	Left	R NA
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Stop	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	64.4%
Analysis Period (min)	15
	ICU Level of Service C

Lanes, Volumes, Timings
 42: US 76 Bus/US 521 (Broad Street/US 76 Bus/US 521 (Broad Street))

PM Peak
 No-Build 2050 PM



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑↑	↑↑	
Traffic Volume (vph)	0	166	0	1828	1528	0
Future Volume (vph)	0	166	0	1828	1528	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	0.91	0.95	1.00
Fr _t	0.865					
Fl _t Protected						
Satd. Flow (prot)	0	1644	0	5085	3539	0
Fl _t Permitted						
Satd. Flow (perm)	0	1644	0	5085	3539	0
Link Speed (mph)	30			40	35	
Link Distance (ft)	357			329	283	
Travel Time (s)	8.1			5.6	5.5	
Peak Hour Factor	0.92	0.79	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	2%	0%	2%	2%	2%	2%
Adj. Flow (vph)	0	210	0	1987	1661	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	210	0	1987	1661	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	R NA	Left	Left	Left	Right
Median Width(ft)	0			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	60	60	60			60
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	59.2%
ICU Level of Service	B
Analysis Period (min)	15

Intersection						
Int Delay, s/veh	2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations		↗		↑↑↑	↑↑	
Traffic Vol, veh/h	0	166	0	1828	1528	0
Future Vol, veh/h	0	166	0	1828	1528	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	79	92	92	92	92
Heavy Vehicles, %	2	0	2	2	2	2
Mvmt Flow	0	210	0	1987	1661	0

Major/Minor	Minor2	Major1	Major2
Conflicting Flow All	-	831	0
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	6.9	-
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	3.3	-
Pot Cap-1 Maneuver	0	317	0
Stage 1	0	-	0
Stage 2	0	-	0
Platoon blocked, %			-
Mov Cap-1 Maneuver	-	317	-
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	36.1	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBT EBLn1	SBT
Capacity (veh/h)	- 317	-
HCM Lane V/C Ratio	- 0.663	-
HCM Control Delay (s)	- 36.1	-
HCM Lane LOS	- E	-
HCM 95th %tile Q(veh)	- 4.4	-

Lanes, Volumes, Timings
 51: US 76/378 (Robert E Graham Fwy) WB

PM Peak
 No-Build 2050 PM



Lane Group	EBT	EBR	WBL	WBT	NEL	NER
Lane Configurations				↑		↗
Traffic Volume (vph)	0	0	0	717	0	768
Future Volume (vph)	0	0	0	717	0	768
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt						0.865
Flt Protected						
Satd. Flow (prot)	0	0	0	1863	0	1611
Flt Permitted						
Satd. Flow (perm)	0	0	0	1863	0	1611
Link Speed (mph)	40			40	40	
Link Distance (ft)	270			1214	329	
Travel Time (s)	4.6			20.7	5.6	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	779	0	835
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	779	0	835
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	0			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type:	Other
Control Type:	Unsignalized
Intersection Capacity Utilization	64.1% ICU Level of Service C
Analysis Period (min)	15

Summary of All Intervals

Start Time	4:50
End Time	6:00
Total Time (min)	70
Time Recorded (min)	60
# of Intervals	2
# of Recorded Intervals	1
Vehs Entered	9419
Vehs Exited	6968
Starting Vehs	548
Ending Vehs	2999
Travel Distance (mi)	8607
Travel Time (hr)	2723.4
Total Delay (hr)	2497.0
Total Stops	15625
Fuel Used (gal)	860.6

Interval #0 Information Seeding

Start Time	4:50
End Time	5:00
Total Time (min)	10
Volumes adjusted by Growth Factors.	
No data recorded this interval.	

Interval #1 Information Recording

Start Time	5:00
End Time	6:00
Total Time (min)	60
Volumes adjusted by Growth Factors.	
Vehs Entered	9419
Vehs Exited	6968
Starting Vehs	548
Ending Vehs	2999
Travel Distance (mi)	8607
Travel Time (hr)	2723.4
Total Delay (hr)	2497.0
Total Stops	15625
Fuel Used (gal)	860.6

Arterial Level of Service: EB US 76/378 (Robert E Graham Fwy) WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
US 76/378 (Robert E	37	1.3	27.2	0.2	30
Total		1.3	27.2	0.2	30

Arterial Level of Service: WB US 76/378 (Robert E Graham Fwy) WB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	111	5.2	8.1	0.1	23
	70	117.8	143.5	0.5	12
	32	134.3	147.1	0.2	6
	31	1317.5	1359.0	1.1	3
	9	289.0	468.4	0.2	2
US 76/378 (Robert E	37	1.0	11.7	0.2	50
	51	1.6	21.8	0.2	38
Jefferson Rd	1	3.0	6.5	0.1	29
Total		1869.3	2166.2	2.4	4

Arterial Level of Service: NB US 521 (Camden Hwy)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
S Pike W	6	2.5	8.1	0.1	61
	5	1.0	5.3	0.0	31
N Pike W	4	1.7	5.8	0.0	31
Jefferson Rd	3	5.9	8.6	0.0	11
Total		11.0	27.8	0.2	33

Arterial Level of Service: SB US 521 (Camden Hwy)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Jefferson Rd	3	89.2	140.8	0.2	7
N Pike W	4	9.2	11.9	0.0	8
	5	25.3	30.6	0.0	6
S Pike W	6	0.3	5.9	0.0	41
US 76 Bus (Broad Str	7	75.6	85.9	0.1	5
Total		199.5	275.1	0.5	7

Arterial Level of Service: EB N Pike W

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Electric Dr	11	1.5	36.2	0.4	40
Farmers Telephone Rd	14	2.5	43.2	0.5	46
Clara Louise Kellogg	16	2.3	38.3	0.5	44
	30	1.8	25.0	0.3	43
Bordeaux Ave	20	3.5	56.4	0.5	29
US 15 (N Main St)	23	65.5	84.3	0.2	7
Total		77.1	283.4	2.3	30

Arterial Level of Service: WB N Pike W

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	20	5.7	22.1	0.2	28
	30	2.4	39.7	0.5	42
Clara Louise Kellogg	16	1.4	23.5	0.3	46
Farmers Telephone Rd	14	1.7	37.3	0.5	45
Electric Dr	11	522.5	594.0	0.5	4
US 521 (Camden Hwy)	4	1412.9	1522.0	0.4	1
Total		1946.5	2238.7	2.3	4

Arterial Level of Service: EB S Pike W

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	8	2.2	21.2	0.2	27
Market St	10	1.8	20.5	0.2	34
E Wesmark Blvd	12	2.8	18.0	0.2	35
Bultman Dr	13	2.1	24.7	0.3	41
Brookehollow Place D	26	1.1	20.4	0.2	43
Hilliard Dr	15	1.0	11.8	0.1	41
Wall St	17	61.1	82.5	0.3	12
Miller Rd	18	255.1	290.3	0.2	3
Carolina Ave	19	88.6	105.9	0.1	5
Total		415.9	595.2	1.9	11

Arterial Level of Service: WB S Pike W

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	18	98.2	114.9	0.1	5
Wall St	17	248.3	276.4	0.2	3
Hilliard Dr	15	334.0	392.2	0.3	3
Brookehollow Place D	26	244.1	315.0	0.1	2
Bultman Dr	13	549.9	567.0	0.2	2
E Wesmark Blvd	12	792.9	933.5	0.3	1
Market St	10	1172.3	1262.1	0.2	1
	8	2332.2	2344.3	0.2	0
US 521 (Camden Hwy)	6	3574.5	3576.0	0.2	0
Total		9346.5	9781.6	1.9	1

Arterial Level of Service: EB US 76 Bus (Broad Street)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
Hastings Dr	7	4.3	25.6	0.2	34
Total		4.3	25.6	0.2	34

Arterial Level of Service: WB US 76 Bus (Broad Street)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	2	5.6	26.8	0.2	33
Total		5.6	26.8	0.2	33

Arterial Level of Service: WB US 76 Bus/US 521 (Broad Street)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
US 521 (Camden Hwy)	7	15.1	20.0	0.1	10
Total		15.1	20.0	0.1	10

Arterial Level of Service: SB US 76 Bus/US 521 (Broad Street)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	42	0.7	6.5	0.1	30
Total		0.7	6.5	0.1	30

Arterial Level of Service: EB US 76/378 (Robert E Graham Fwy) EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	39	0.8	10.3	0.1	46
	33	0.8	12.7	0.2	55
	34	9.9	72.5	1.1	52
	71	74.4	85.7	0.2	9
Bordeaux Ave	21	103.3	133.2	0.5	15
	28	0.4	7.5	0.1	56
Total		189.6	321.9	2.2	25

Arterial Level of Service: WB US 76/378 (Robert E Graham Fwy) EB

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
	28	1.8	3.6	0.0	33
Bordeaux Ave	21	4.2	11.2	0.1	37
Total		6.0	14.8	0.1	36

Arterial Level of Service: NB US 15 (N Main St)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
S Pike E	24	114.3	137.3	0.1	3
Strange St	23	6.0	14.3	0.1	14
Total		120.3	151.6	0.2	4

Arterial Level of Service: SB US 15 (N Main St)

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (mi)	Arterial Speed
N Pike W	23	31.9	50.7	0.1	10
S Pike W	24	16.2	24.0	0.1	8
S Pike W	25	20.8	37.9	0.1	12
Total		68.9	112.7	0.3	10

Intersection: 1: US 76/378 (Robert E Graham Fwy) WB & Jefferson Rd

Movement	WB	SB
Directions Served	T	R
Maximum Queue (ft)	111	109
Average Queue (ft)	22	15
95th Queue (ft)	75	69
Link Distance (ft)	189	1275
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 2: US 76/378 (Broad Street)/US 76 Bus (Broad St)

Movement	EB	EB	EB	WB
Directions Served	L	T	T	TR
Maximum Queue (ft)	433	433	396	75
Average Queue (ft)	401	399	51	8
95th Queue (ft)	417	415	266	42
Link Distance (ft)	381	381	381	1128
Upstream Blk Time (%)	88	74	0	
Queuing Penalty (veh)	0	0	0	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 3: US 521 (Camden Hwy) & Jefferson Rd

Movement	EB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LTR	L	TR	L	T	TR	L	T	TR
Maximum Queue (ft)	29	174	367	39	104	105	150	1082	1053
Average Queue (ft)	3	97	165	24	52	64	121	764	665
95th Queue (ft)	16	176	297	44	88	99	207	1233	1222
Link Distance (ft)			1070		88	88		1030	1030
Upstream Blk Time (%)					1	1		36	13
Queuing Penalty (veh)					5	9		0	0
Storage Bay Dist (ft)		75		25			150		
Storage Blk Time (%)		26	43	24	12		1	67	
Queuing Penalty (veh)		85	57	143	12		4	113	

Intersection: 4: US 521 (Camden Hwy) & N Pike W

Movement	WB	NB	NB	SB	SB	SB
Directions Served	LR	T	TR	L	T	T
Maximum Queue (ft)	2076	54	41	66	170	87
Average Queue (ft)	1911	3	8	43	112	6
95th Queue (ft)	2448	21	29	64	145	41
Link Distance (ft)	2064	197	197		88	88
Upstream Blk Time (%)	61				40	0
Queuing Penalty (veh)	276				212	0
Storage Bay Dist (ft)				25		
Storage Blk Time (%)				16	51	
Queuing Penalty (veh)				71	80	

Intersection: 5: US 521 (Camden Hwy)

Movement	WB	SB	SB
Directions Served	LR	T	T
Maximum Queue (ft)	988	213	197
Average Queue (ft)	931	202	13
95th Queue (ft)	1216	228	94
Link Distance (ft)	988	197	197
Upstream Blk Time (%)	86	45	0
Queuing Penalty (veh)	270	244	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 6: US 521 (Camden Hwy) & S Pike W

Movement	WB	NB	SB	SB
Directions Served	L	TR	L	T
Maximum Queue (ft)	750	84	179	252
Average Queue (ft)	732	16	177	227
95th Queue (ft)	774	48	180	248
Link Distance (ft)	736	542		179
Upstream Blk Time (%)	95		65	72
Queuing Penalty (veh)	439		0	432
Storage Bay Dist (ft)			200	
Storage Blk Time (%)	100		65	72
Queuing Penalty (veh)	320		196	412

Intersection: 7: Hastings Dr/US 521 (Camden Hwy) & US 76 Bus (Broad Street)/US 76 Bus/US 521 (Broad Street)

Movement	EB	EB	EB	WB	WB	WB	SB	SB
Directions Served	L	T	TR	L	T	T	L	LTR
Maximum Queue (ft)	167	73	107	227	245	236	318	368
Average Queue (ft)	90	6	7	92	219	175	150	185
95th Queue (ft)	161	32	40	198	267	259	248	299
Link Distance (ft)		1128	1128		227	227	542	542
Upstream Blk Time (%)				0	7	2		
Queuing Penalty (veh)				0	40	10		
Storage Bay Dist (ft)	150			200				
Storage Blk Time (%)	4				12			
Queuing Penalty (veh)	19				10			

Intersection: 8: S Pike W

Movement	EB	WB
Directions Served	LT	TR
Maximum Queue (ft)	174	895
Average Queue (ft)	32	817
95th Queue (ft)	98	1164
Link Distance (ft)	736	881
Upstream Blk Time (%)		88
Queuing Penalty (veh)		448
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 9: US 76/378 (Robert E Graham Fwy) WB

Movement	WB	WB	B31	B31	B32	B32	B70	B70	B111	B111
Directions Served	T	R	T	T	T	T	T	T	T	T
Maximum Queue (ft)	869	863	5573	5564	1217	1212	2506	2506	283	286
Average Queue (ft)	684	712	3140	3131	365	363	412	413	18	19
95th Queue (ft)	1249	1199	6914	6908	1249	1242	1749	1747	132	135
Link Distance (ft)	797	797	5501	5501	1146	1146	2434	2434	217	217
Upstream Blk Time (%)	78	78	33	33	25	25	6	6	4	3
Queuing Penalty (veh)	508	506	214	215	161	163	38	39	16	15
Storage Bay Dist (ft)										
Storage Blk Time (%)										
Queuing Penalty (veh)										

Intersection: 10: Market St & S Pike W

Movement	WB	NB	NB
Directions Served	LT	L	R
Maximum Queue (ft)	855	970	970
Average Queue (ft)	733	529	257
95th Queue (ft)	1162	1134	953
Link Distance (ft)	845	967	967
Upstream Blk Time (%)	81	29	22
Queuing Penalty (veh)	402	0	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 11: N Pike W & Electric Dr

Movement	EB	WB	SB
Directions Served	LT	TR	LR
Maximum Queue (ft)	27	2662	718
Average Queue (ft)	4	1262	491
95th Queue (ft)	20	2839	987
Link Distance (ft)	2064	2830	703
Upstream Blk Time (%)			58
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 12: E Wesmark Blvd & S Pike W

Movement	WB	NB	NB
Directions Served	LT	L	R
Maximum Queue (ft)	1428	830	790
Average Queue (ft)	1106	529	333
95th Queue (ft)	1999	1055	929
Link Distance (ft)	1428	820	820
Upstream Blk Time (%)	69	40	
Queuing Penalty (veh)	388	0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 13: Bultman Dr & S Pike W

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	1236	1084
Average Queue (ft)	822	649
95th Queue (ft)	1700	1391
Link Distance (ft)	1224	1069
Upstream Blk Time (%)	59	48
Queuing Penalty (veh)	356	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 14: N Pike W & Farmers Telephone Rd

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	53	66
Average Queue (ft)	8	29
95th Queue (ft)	31	47
Link Distance (ft)	2830	666
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 15: Hilliard Dr & S Pike W

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	1448	642
Average Queue (ft)	719	265
95th Queue (ft)	1834	691
Link Distance (ft)	1432	627
Upstream Blk Time (%)	41	24
Queuing Penalty (veh)	234	0
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 16: N Pike W & Clara Louise Kellogg Drive

Movement	EB	SB
Directions Served	LT	LR
Maximum Queue (ft)	93	54
Average Queue (ft)	6	30
95th Queue (ft)	36	50
Link Distance (ft)	2384	374
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 17: Wall St & S Pike W

Movement	EB	WB	NB
Directions Served	TR	LT	LR
Maximum Queue (ft)	986	1242	1059
Average Queue (ft)	149	458	270
95th Queue (ft)	633	1379	875
Link Distance (ft)	1432	1184	1052
Upstream Blk Time (%)		29	7
Queuing Penalty (veh)		158	0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 18: Miller Rd/S Pike W

Movement	EB	NB	NB	SB
Directions Served	LR	L	T	TR
Maximum Queue (ft)	1184	250	473	703
Average Queue (ft)	660	101	256	302
95th Queue (ft)	1338	255	532	727
Link Distance (ft)	1184		420	703
Upstream Blk Time (%)	23		43	26
Queuing Penalty (veh)	135		0	234
Storage Bay Dist (ft)		150		
Storage Blk Time (%)		11	35	
Queuing Penalty (veh)		43	27	

Intersection: 19: Carolina Ave & S Pike W

Movement	EB	WB	WB	NB
Directions Served	TR	L	T	LR
Maximum Queue (ft)	719	73	1701	420
Average Queue (ft)	324	16	349	187
95th Queue (ft)	872	48	1411	434
Link Distance (ft)	703		1689	405
Upstream Blk Time (%)	24		14	20
Queuing Penalty (veh)	218		125	0
Storage Bay Dist (ft)		200		
Storage Blk Time (%)			24	
Queuing Penalty (veh)			16	

Intersection: 20: Bordeaux Ave & N Pike W

Movement	EB	WB	NB	SB
Directions Served	LTR	LTR	LTR	LTR
Maximum Queue (ft)	227	415	82	31
Average Queue (ft)	20	92	39	11
95th Queue (ft)	97	223	87	35
Link Distance (ft)	2363	820	79	305
Upstream Blk Time (%)			1	
Queuing Penalty (veh)			1	
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 21: Bordeaux Ave & US 76/378 (Robert E Graham Fwy) EB & US 76/378 (Robert E Graham Fwy) WB

Movement	EB	EB	EB	B71	B71	B34	B34	WB	WB
Directions Served	T	T	R	T	T	T	T	R	R
Maximum Queue (ft)	2883	2883	375	1091	1091	397	412	337	321
Average Queue (ft)	1393	1608	367	167	158	20	21	11	11
95th Queue (ft)	3274	3234	404	709	709	148	155	111	106
Link Distance (ft)	2812	2812		1019	1019	5507	5507	558	558
Upstream Blk Time (%)	20	22		6	6				
Queuing Penalty (veh)	106	117		31	34				
Storage Bay Dist (ft)			275						
Storage Blk Time (%)		1	95						0
Queuing Penalty (veh)		3	322						0

Intersection: 22: S Pike W & Bordeaux Ave

Movement	EB	EB	WB	SB	SB
Directions Served	L	T	TR	L	R
Maximum Queue (ft)	250	1699	978	435	173
Average Queue (ft)	125	1020	121	407	46
95th Queue (ft)	298	2292	623	420	172
Link Distance (ft)		1689	972	311	
Upstream Blk Time (%)		30	9	100	
Queuing Penalty (veh)		268	75	379	
Storage Bay Dist (ft)	150				100
Storage Blk Time (%)		60		100	
Queuing Penalty (veh)		134		64	

Intersection: 23: US 15 (N Main St) & N Pike W/Strange St

Movement	EB	EB	WB	NB	NB	NB	SB	SB	SB
Directions Served	LT	R	LTR	L	T	TR	L	T	TR
Maximum Queue (ft)	713	200	223	120	240	79	28	619	695
Average Queue (ft)	180	124	74	119	224	18	4	182	270
95th Queue (ft)	482	223	162	120	235	52	19	399	495
Link Distance (ft)	820		991		218	218		682	682
Upstream Blk Time (%)					64				0
Queuing Penalty (veh)					377				0
Storage Bay Dist (ft)		100		100			75		
Storage Blk Time (%)	12	32		80	0			11	
Queuing Penalty (veh)	37	38		199	1			1	

Intersection: 24: US 15 (N Main St) & S Pike W/S Pike E

Movement	EB	WB	WB	NB	NB	SB	SB	SB
Directions Served	TR	L	TR	T	TR	L	T	TR
Maximum Queue (ft)	31	275	734	598	568	120	224	247
Average Queue (ft)	3	60	568	577	345	38	134	172
95th Queue (ft)	16	199	953	592	655	96	239	261
Link Distance (ft)	754		719	561	561		218	218
Upstream Blk Time (%)			63	48	0		1	11
Queuing Penalty (veh)			0	284	2		3	51
Storage Bay Dist (ft)		175				100		
Storage Blk Time (%)		0	87	83		1	22	
Queuing Penalty (veh)		0	125	2		3	12	

Intersection: 25: N Main St/US 15 (N Main St) & S Pike W/US 15 (N Lafayette Dr)

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB	SB
Directions Served	L	T	TR	L	T	R	L	T	TR	L	L	T
Maximum Queue (ft)	350	986	225	225	894	894	350	463	200	350	592	591
Average Queue (ft)	341	885	83	28	807	828	335	441	115	253	363	225
95th Queue (ft)	380	1229	205	138	1075	1031	397	546	270	424	653	537
Link Distance (ft)		972			842	842		448			561	561
Upstream Blk Time (%)		47			73	84		70			11	4
Queuing Penalty (veh)		453			0	0		0			57	21
Storage Bay Dist (ft)	250		125	125			250		100	250		
Storage Blk Time (%)	92	7	10		88		78	65	5	47	54	1
Queuing Penalty (veh)	543	49	56		25		274	222	18	68	79	2

Intersection: 25: N Main St/US 15 (N Main St) & S Pike W/US 15 (N Lafayette Dr)

Movement	SB
Directions Served	R
Maximum Queue (ft)	325
Average Queue (ft)	132
95th Queue (ft)	275
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	225
Storage Blk Time (%)	7
Queuing Penalty (veh)	21

Intersection: 26: Brookeshollow Place Dwy & S Pike W

Movement	WB	NB
Directions Served	LT	LR
Maximum Queue (ft)	676	468
Average Queue (ft)	384	161
95th Queue (ft)	912	416
Link Distance (ft)	661	727
Upstream Blk Time (%)	53	
Queuing Penalty (veh)	298	
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 30: N Pike W

Movement	SB
Directions Served	LR
Maximum Queue (ft)	67
Average Queue (ft)	32
95th Queue (ft)	53
Link Distance (ft)	361
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 37: US 76/378 (Robert E Graham Fwy) WB & US 76/378 (Robert E Graham Fwy) EB

Movement	
Directions Served	
Maximum Queue (ft)	
Average Queue (ft)	
95th Queue (ft)	
Link Distance (ft)	
Upstream Blk Time (%)	
Queuing Penalty (veh)	
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 39: US 76/378 (Robert E Graham Fwy) EB

Movement	NB
Directions Served	R
Maximum Queue (ft)	32
Average Queue (ft)	1
95th Queue (ft)	10
Link Distance (ft)	52
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	
Queuing Penalty (veh)	

Intersection: 42: US 76 Bus/US 521 (Broad Street/US 76 Bus/US 521 (Broad Street))

Movement	EB	NB	NB
Directions Served	R	T	T
Maximum Queue (ft)	114	316	160
Average Queue (ft)	51	64	9
95th Queue (ft)	86	176	61
Link Distance (ft)	310	300	300
Upstream Blk Time (%)		0	
Queuing Penalty (veh)		0	
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 51: US 76/378 (Robert E Graham Fwy) WB

Movement
Directions Served
Maximum Queue (ft)
Average Queue (ft)
95th Queue (ft)
Link Distance (ft)
Upstream Blk Time (%)
Queuing Penalty (veh)
Storage Bay Dist (ft)
Storage Blk Time (%)
Queuing Penalty (veh)

Network Summary

Network wide Queuing Penalty: 12976