

Intersection					
Intersection Delay, s/veh	587.2				
Intersection LOS	F				
Approach	EB	NB	SB	NW	
Entry Lanes	1	2	1	1	
Conflicting Circle Lanes	1	1	1	1	
Adj Approach Flow, veh/h	1195	673	838	2066	
Demand Flow Rate, veh/h	1230	693	863	2127	
Vehicles Circulating, veh/h	907	1882	1178	486	
Vehicles Exiting, veh/h	1134	255	1435	2089	
Ped Vol Crossing Leg, #/h	0	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	1.000	
Approach Delay, s/veh	585.3	316.4	516.3	705.3	
Approach LOS	F	F	F	F	
Lane	Left	Left	Right	Left	Left
Designated Moves	R	LT	R	LTR	LR
Assumed Moves	R	LT	R	LTR	LR
RT Channelized					
Lane Util	1.000	0.684	0.316	1.000	1.000
Follow-Up Headway, s	2.609	2.535	2.535	2.609	2.609
Critical Headway, s	4.976	4.544	4.544	4.976	4.976
Entry Flow, veh/h	1230	474	219	863	2127
Cap Entry Lane, veh/h	547	256	256	415	841
Entry HV Adj Factor	0.972	0.970	0.973	0.971	0.971
Flow Entry, veh/h	1195	460	213	838	2066
Cap Entry, veh/h	532	249	249	403	816
V/C Ratio	2.248	1.851	0.855	2.079	2.530
Control Delay, s/veh	585.3	431.6	67.5	516.3	705.3
LOS	F	F	F	F	F
95th %tile Queue, veh	88	32	7	60	161

Intersection					
Intersection Delay, s/veh	587.2				
Intersection LOS	F				
Approach	EB	NB	SB	NW	
Entry Lanes	1	2	1	1	
Conflicting Circle Lanes	1	1	1	1	
Adj Approach Flow, veh/h	1195	673	838	2066	
Demand Flow Rate, veh/h	1230	693	863	2127	
Vehicles Circulating, veh/h	907	1882	1178	486	
Vehicles Exiting, veh/h	1134	255	1435	2089	
Ped Vol Crossing Leg, #/h	0	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	1.000	
Approach Delay, s/veh	585.3	316.4	516.3	705.3	
Approach LOS	F	F	F	F	
Lane	Left	Left	Right	Left	Left
Designated Moves	R	LT	R	LTR	LR
Assumed Moves	R	LT	R	LTR	LR
RT Channelized					
Lane Util	1.000	0.684	0.316	1.000	1.000
Follow-Up Headway, s	2.609	2.535	2.535	2.609	2.609
Critical Headway, s	4.976	4.544	4.544	4.976	4.976
Entry Flow, veh/h	1230	474	219	863	2127
Cap Entry Lane, veh/h	547	256	256	415	841
Entry HV Adj Factor	0.972	0.970	0.973	0.971	0.971
Flow Entry, veh/h	1195	460	213	838	2066
Cap Entry, veh/h	532	249	249	403	816
V/C Ratio	2.248	1.851	0.855	2.079	2.530
Control Delay, s/veh	585.3	431.6	67.5	516.3	705.3
LOS	F	F	F	F	F
95th %tile Queue, veh	88	32	7	60	161

Intersection									
Intersection Delay, s/veh32.8									
Intersection LOS D									
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	1090		989		343		891		
Demand Flow Rate, veh/h	1122		1019		353		918		
Vehicles Circulating, veh/h	954		282		1858		381		
Vehicles Exiting, veh/h	345		1844		218		272		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	50.6		9.6		104.0		9.5		
Approach LOS	F		A		F		A		
Lane	Left	Right	Left	Right	Bypass	Left	Bypass	Left	Right
Designated Moves	LT	TR	LT	TR	R	LT	R	L	LTR
Assumed Moves	LT	TR	LT	TR		LT		L	LTR
RT Channelized					Yield		Yield		
Lane Util	0.470	0.530	0.469	0.531		1.000		0.531	0.469
Follow-Up Headway, s	2.667	2.535	2.667	2.535		2.667		2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328		4.645		4.645	4.328
Entry Flow, veh/h	527	595	174	197	648	268	85	487	431
Cap Entry Lane, veh/h	561	631	1041	1117	1046	244	296	951	1027
Entry HV Adj Factor	0.972	0.971	0.972	0.968	0.971	0.972	0.971	0.969	0.971
Flow Entry, veh/h	512	578	169	191	629	260	83	472	419
Cap Entry, veh/h	546	613	1012	1082	1015	238	288	921	998
V/C Ratio	0.939	0.943	0.167	0.176	0.620	1.097	0.289	0.512	0.420
Control Delay, s/veh	52.1	49.3	5.1	4.9	12.2	131.1	19.0	10.5	8.3
LOS	F	E	A	A	B	F	C	B	A
95th %tile Queue, veh	12	13	1	1	4	11	1	3	2

Intersection									
Intersection Delay, s/veh96.1									
Intersection LOS F									
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	1195		2066		673		838		
Demand Flow Rate, veh/h	1230		2127		693		863		
Vehicles Circulating, veh/h	907		486		1882		1178		
Vehicles Exiting, veh/h	1134		1870		255		459		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	60.2		50.7		351.5		53.9		
Approach LOS	F		F		F		F		
Lane	Left	Right	Left	Right	Bypass	Left	Bypass	Left	Right
Designated Moves	LT	TR	LT	TR	R	LT	R	L	LTR
Assumed Moves	LT	TR	LT	TR		LT		L	LTR
RT Channelized					Yield		Yield		
Lane Util	0.470	0.530	0.470	0.530		1.000		0.530	0.470
Follow-Up Headway, s	2.667	2.535	2.667	2.535		2.667		2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328		4.645		4.645	4.328
Entry Flow, veh/h	578	652	541	610	976	474	219	457	406
Cap Entry Lane, veh/h	586	657	863	939	864	239	290	457	522
Entry HV Adj Factor	0.971	0.971	0.971	0.971	0.971	0.970	0.971	0.972	0.970
Flow Entry, veh/h	561	633	525	592	948	460	213	444	394
Cap Entry, veh/h	569	638	838	912	839	232	281	444	506
V/C Ratio	0.986	0.993	0.627	0.649	1.130	1.983	0.757	1.001	0.778
Control Delay, s/veh	61.2	59.2	14.4	14.2	93.7	492.3	47.6	73.7	31.7
LOS	F	F	B	B	F	F	E	F	D
95th %tile Queue, veh	14	15	5	5	27	34	6	13	7

Intersection					
Intersection Delay, s/veh 5.7					
Intersection LOS A					
Approach	EB	NB		SB	
Entry Lanes	1	2		2	
Conflicting Circle Lanes	2	2		2	
Adj Approach Flow, veh/h	328	655		458	
Demand Flow Rate, veh/h	338	675		471	
Vehicles Circulating, veh/h	425	110		173	
Vehicles Exiting, veh/h	219	653		612	
Ped Vol Crossing Leg, #/h	0	0		0	
Ped Cap Adj	1.000	1.000		1.000	
Approach Delay, s/veh	7.4	5.4		4.9	
Approach LOS	A	A		A	
Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	TR	LT	TR
Assumed Moves	LR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.469	0.531
Follow-Up Headway, s	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	338	317	358	221	250
Cap Entry Lane, veh/h	989	1220	1293	1151	1226
Entry HV Adj Factor	0.970	0.972	0.970	0.973	0.970
Flow Entry, veh/h	328	308	347	215	243
Cap Entry, veh/h	960	1185	1255	1120	1189
V/C Ratio	0.342	0.260	0.277	0.192	0.204
Control Delay, s/veh	7.4	5.4	5.3	4.9	4.8
LOS	A	A	A	A	A
95th %tile Queue, veh	2	1	1	1	1

Intersection					
Intersection Delay, s/veh 5.7					
Intersection LOS A					
Approach	EB	NB		SB	
Entry Lanes	1	2		2	
Conflicting Circle Lanes	2	2		2	
Adj Approach Flow, veh/h	328	655		458	
Demand Flow Rate, veh/h	338	675		471	
Vehicles Circulating, veh/h	425	110		173	
Vehicles Exiting, veh/h	219	653		612	
Ped Vol Crossing Leg, #/h	0	0		0	
Ped Cap Adj	1.000	1.000		1.000	
Approach Delay, s/veh	7.4	5.4		4.9	
Approach LOS	A	A		A	
Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	TR	LT	TR
Assumed Moves	LR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.469	0.531
Follow-Up Headway, s	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	338	317	358	221	250
Cap Entry Lane, veh/h	989	1220	1293	1151	1226
Entry HV Adj Factor	0.970	0.972	0.970	0.973	0.970
Flow Entry, veh/h	328	308	347	215	243
Cap Entry, veh/h	960	1185	1255	1120	1189
V/C Ratio	0.342	0.260	0.277	0.192	0.204
Control Delay, s/veh	7.4	5.4	5.3	4.9	4.8
LOS	A	A	A	A	A
95th %tile Queue, veh	2	1	1	1	1

Intersection					
Intersection Delay, s/veh 8.3					
Intersection LOS A					
Approach	EB	NB		SB	
Entry Lanes	1	2		2	
Conflicting Circle Lanes	2	2		2	
Adj Approach Flow, veh/h	380	1204		687	
Demand Flow Rate, veh/h	391	1241		708	
Vehicles Circulating, veh/h	652	116		261	
Vehicles Exiting, veh/h	317	927		1096	
Ped Vol Crossing Leg, #/h	0	0		0	
Ped Cap Adj	1.000	1.000		1.000	
Approach Delay, s/veh	11.0	8.3		6.6	
Approach LOS	B	A		A	
Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	TR	LT	TR
Assumed Moves	LR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	391	583	658	333	375
Cap Entry Lane, veh/h	816	1213	1287	1062	1138
Entry HV Adj Factor	0.972	0.971	0.970	0.970	0.971
Flow Entry, veh/h	380	566	638	323	364
Cap Entry, veh/h	793	1178	1248	1030	1105
V/C Ratio	0.479	0.481	0.511	0.314	0.330
Control Delay, s/veh	11.0	8.3	8.4	6.7	6.5
LOS	B	A	A	A	A
95th %tile Queue, veh	3	3	3	1	1

HCM 6th Roundabout
159: Union Chapel Rd & Town & Country Blvd

Future PM Peak

Intersection					
Intersection Delay, s/veh 8.3					
Intersection LOS A					
Approach	EB	NB		SB	
Entry Lanes	1	2		2	
Conflicting Circle Lanes	2	2		2	
Adj Approach Flow, veh/h	380	1204		687	
Demand Flow Rate, veh/h	391	1241		708	
Vehicles Circulating, veh/h	652	116		261	
Vehicles Exiting, veh/h	317	927		1096	
Ped Vol Crossing Leg, #/h	0	0		0	
Ped Cap Adj	1.000	1.000		1.000	
Approach Delay, s/veh	11.0	8.3		6.6	
Approach LOS	B	A		A	
Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	TR	LT	TR
Assumed Moves	LR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	391	583	658	333	375
Cap Entry Lane, veh/h	816	1213	1287	1062	1138
Entry HV Adj Factor	0.972	0.971	0.970	0.970	0.971
Flow Entry, veh/h	380	566	638	323	364
Cap Entry, veh/h	793	1178	1248	1030	1105
V/C Ratio	0.479	0.481	0.511	0.314	0.330
Control Delay, s/veh	11.0	8.3	8.4	6.7	6.5
LOS	B	A	A	A	A
95th %tile Queue, veh	3	3	3	1	1

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	176	579	126	79	450	1	83	111	24	0	70	69
Future Vol, veh/h	176	579	126	79	450	1	83	111	24	0	70	69
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	191	629	137	86	489	1	90	121	26	0	76	75
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	490	0	0	766	0	0	1817	1742	698	1815	1810	490
Stage 1	-	-	-	-	-	-	1080	1080	-	662	662	-
Stage 2	-	-	-	-	-	-	737	662	-	1153	1148	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1068	-	-	843	-	-	~ 60	~ 86	439	60	78	576
Stage 1	-	-	-	-	-	-	263	293	-	449	458	-
Stage 2	-	-	-	-	-	-	409	458	-	239	272	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1068	-	-	843	-	-	-	~ 50	439	-	~ 46	576
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 50	-	-	~ 46	-
Stage 1	-	-	-	-	-	-	179	199	-	305	394	-
Stage 2	-	-	-	-	-	-	247	394	-	60	185	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.8			1.5								
HCM LOS							-			-		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	1068	-	-	843	-	-	-				
HCM Lane V/C Ratio	-	0.179	-	-	0.102	-	-	-				
HCM Control Delay (s)	-	9.1	0	-	9.8	0	-	-				
HCM Lane LOS	-	A	A	-	A	A	-	-				
HCM 95th %tile Q(veh)	-	0.7	-	-	0.3	-	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	176	579	126	79	450	1	83	111	24	0	70	69
Future Vol, veh/h	176	579	126	79	450	1	83	111	24	0	70	69
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	191	629	137	86	489	1	90	121	26	0	76	75
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	490	0	0	766	0	0	1817	1742	698	1815	1810	490
Stage 1	-	-	-	-	-	-	1080	1080	-	662	662	-
Stage 2	-	-	-	-	-	-	737	662	-	1153	1148	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1068	-	-	843	-	-	~ 60	~ 86	439	60	78	576
Stage 1	-	-	-	-	-	-	263	293	-	449	458	-
Stage 2	-	-	-	-	-	-	409	458	-	239	272	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1068	-	-	843	-	-	-	~ 50	439	-	~ 46	576
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 50	-	-	~ 46	-
Stage 1	-	-	-	-	-	-	179	199	-	305	394	-
Stage 2	-	-	-	-	-	-	247	394	-	60	185	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.8			1.5								
HCM LOS							-			-		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	1068	-	-	843	-	-	-				
HCM Lane V/C Ratio	-	0.179	-	-	0.102	-	-	-				
HCM Control Delay (s)	-	9.1	0	-	9.8	0	-	-				
HCM Lane LOS	-	A	A	-	A	A	-	-				
HCM 95th %tile Q(veh)	-	0.7	-	-	0.3	-	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	189	1265	531	88	1432	26	388	144	24	8	79	79
Future Vol, veh/h	189	1265	531	88	1432	26	388	144	24	8	79	79
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	205	1375	577	96	1557	28	422	157	26	9	86	86
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1585	0	0	1952	0	0	3923	3851	1664	3928	4125	1571
Stage 1	-	-	-	-	-	-	2074	2074	-	1763	1763	-
Stage 2	-	-	-	-	-	-	1849	1777	-	2165	2362	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	412	-	-	297	-	-	~ 2	~ 4	119	~ 2	~ 2	135
Stage 1	-	-	-	-	-	-	~ 70	~ 95	-	107	137	-
Stage 2	-	-	-	-	-	-	~ 95	~ 134	-	62	~ 68	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	412	-	-	297	-	-	-	0	119	-	0	135
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-	-	0	-
Stage 1	-	-	-	-	-	-	~ 70	~ 95	-	107	0	-
Stage 2	-	-	-	-	-	-	-	0	-	-	~ 68	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.1			1.3								
HCM LOS							-			-		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	412	-	-	297	-	-	-				
HCM Lane V/C Ratio	-	0.499	-	-	0.322	-	-	-				
HCM Control Delay (s)	-	22.1	0	-	22.8	0	-	-				
HCM Lane LOS	-	C	A	-	C	A	-	-				
HCM 95th %tile Q(veh)	-	2.7	-	-	1.4	-	-	-				
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Intersection												
Int Delay, s/veh	1.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	189	1265	531	88	1432	26	388	144	24	8	79	79
Future Vol, veh/h	189	1265	531	88	1432	26	388	144	24	8	79	79
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	205	1375	577	96	1557	28	422	157	26	9	86	86
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1585	0	0	1952	0	0	3923	3851	1664	3928	4125	1571
Stage 1	-	-	-	-	-	-	2074	2074	-	1763	1763	-
Stage 2	-	-	-	-	-	-	1849	1777	-	2165	2362	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	412	-	-	297	-	-	~ 2	~ 4	119	~ 2	~ 2	135
Stage 1	-	-	-	-	-	-	~ 70	~ 95	-	107	137	-
Stage 2	-	-	-	-	-	-	~ 95	~ 134	-	62	~ 68	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	412	-	-	297	-	-	-	0	119	-	0	135
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-	-	0	-
Stage 1	-	-	-	-	-	-	~ 70	~ 95	-	107	0	-
Stage 2	-	-	-	-	-	-	-	0	-	-	~ 68	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.1			1.3								
HCM LOS							-			-		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	412	-	-	297	-	-	-				
HCM Lane V/C Ratio	-	0.499	-	-	0.322	-	-	-				
HCM Control Delay (s)	-	22.1	0	-	22.8	0	-	-				
HCM Lane LOS	-	C	A	-	C	A	-	-				
HCM 95th %tile Q(veh)	-	2.7	-	-	1.4	-	-	-				
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	572	494	5	8	7
Future Vol, veh/h	3	572	494	5	8	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	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	3	622	537	5	9	8
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	542	0	-	0	1168	540
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	628	-
Critical Hdwy	4.13	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.227	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	1022	-	-	-	213	540
Stage 1	-	-	-	-	582	-
Stage 2	-	-	-	-	530	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1022	-	-	-	212	540
Mov Cap-2 Maneuver	-	-	-	-	212	-
Stage 1	-	-	-	-	580	-
Stage 2	-	-	-	-	530	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		17.9		
HCM LOS				C		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1022	-	-	-	296	
HCM Lane V/C Ratio	0.003	-	-	-	0.055	
HCM Control Delay (s)	8.5	0	-	-	17.9	
HCM Lane LOS	A	A	-	-	C	
HCM 95th %tile Q(veh)	0	-	-	-	0.2	

Intersection

Int Delay, s/veh 0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	3	572	494	5	8	7
Future Vol, veh/h	3	572	494	5	8	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	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	3	622	537	5	9	8

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	542	0	0 1168 540
Stage 1	-	-	- 540 -
Stage 2	-	-	- 628 -
Critical Hdwy	4.13	-	- 6.43 6.23
Critical Hdwy Stg 1	-	-	- 5.43 -
Critical Hdwy Stg 2	-	-	- 5.43 -
Follow-up Hdwy	2.227	-	- 3.527 3.327
Pot Cap-1 Maneuver	1022	-	- 213 540
Stage 1	-	-	- 582 -
Stage 2	-	-	- 530 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	1022	-	- 212 540
Mov Cap-2 Maneuver	-	-	- 212 -
Stage 1	-	-	- 580 -
Stage 2	-	-	- 530 -

Approach	EB	WB	SB
HCM Control Delay, s	0	0	17.9
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1022	-	-	-	296
HCM Lane V/C Ratio	0.003	-	-	-	0.055
HCM Control Delay (s)	8.5	0	-	-	17.9
HCM Lane LOS	A	A	-	-	C
HCM 95th %tile Q(veh)	0	-	-	-	0.2

Intersection						
Int Delay, s/veh	4.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	1564	1496	5	9	9
Future Vol, veh/h	5	1564	1496	5	9	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	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	1700	1626	5	10	10
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1631	0	-	0	3339	1629
Stage 1	-	-	-	-	1629	-
Stage 2	-	-	-	-	1710	-
Critical Hdwy	4.13	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.227	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	395	-	-	-	~ 9	125
Stage 1	-	-	-	-	175	-
Stage 2	-	-	-	-	160	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	395	-	-	-	~ 7	125
Mov Cap-2 Maneuver	-	-	-	-	~ 7	-
Stage 1	-	-	-	-	135	-
Stage 2	-	-	-	-	160	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		\$ 843.3		
HCM LOS				F		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	395	-	-	-	13	
HCM Lane V/C Ratio	0.014	-	-	-	1.505	
HCM Control Delay (s)	14.2	0	-	-	\$ 843.3	
HCM Lane LOS	B	A	-	-	F	
HCM 95th %tile Q(veh)	0	-	-	-	3.1	
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Intersection						
Int Delay, s/veh	4.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	5	1564	1496	5	9	9
Future Vol, veh/h	5	1564	1496	5	9	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	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	1700	1626	5	10	10
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1631	0	-	0	3339	1629
Stage 1	-	-	-	-	1629	-
Stage 2	-	-	-	-	1710	-
Critical Hdwy	4.13	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.227	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	395	-	-	-	~ 9	125
Stage 1	-	-	-	-	175	-
Stage 2	-	-	-	-	160	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	395	-	-	-	~ 7	125
Mov Cap-2 Maneuver	-	-	-	-	~ 7	-
Stage 1	-	-	-	-	135	-
Stage 2	-	-	-	-	160	-
Approach	EB	WB		SB		
HCM Control Delay, s	0	0		\$ 843.3		
HCM LOS				F		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	395	-	-	-	13	
HCM Lane V/C Ratio	0.014	-	-	-	1.505	
HCM Control Delay (s)	14.2	0	-	-	\$ 843.3	
HCM Lane LOS	B	A	-	-	F	
HCM 95th %tile Q(veh)	0	-	-	-	3.1	
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Intersection

Int Delay, s/veh 9.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	443	148	35	362	152	62
Future Vol, veh/h	443	148	35	362	152	62
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, %	3	3	3	3	3	3
Mvmt Flow	482	161	38	393	165	67

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	643
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.13
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.227
Pot Cap-1 Maneuver	-	-	937
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	937
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	53.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	289	-	-	937	-
HCM Lane V/C Ratio	0.805	-	-	0.041	-
HCM Control Delay (s)	53.8	-	-	9	0
HCM Lane LOS	F	-	-	A	A
HCM 95th %tile Q(veh)	6.5	-	-	0.1	-

Intersection

Int Delay, s/veh 9.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	443	148	35	362	152	62
Future Vol, veh/h	443	148	35	362	152	62
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, %	3	3	3	3	3	3
Mvmt Flow	482	161	38	393	165	67

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	643
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.13
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.227
Pot Cap-1 Maneuver	-	-	937
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	937
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	53.8
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	289	-	-	937	-
HCM Lane V/C Ratio	0.805	-	-	0.041	-
HCM Control Delay (s)	53.8	-	-	9	0
HCM Lane LOS	F	-	-	A	A
HCM 95th %tile Q(veh)	6.5	-	-	0.1	-

Intersection						
Int Delay, s/veh	2235					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	915	669	45	1035	481	62
Future Vol, veh/h	915	669	45	1035	481	62
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, %	3	3	3	3	3	3
Mvmt Flow	995	727	49	1125	523	67
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1722	0	2582	1359
Stage 1	-	-	-	-	1359	-
Stage 2	-	-	-	-	1223	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	364	-	~ 28	181
Stage 1	-	-	-	-	~ 238	-
Stage 2	-	-	-	-	~ 277	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	364	-	~ 18	181
Mov Cap-2 Maneuver	-	-	-	-	~ 18	-
Stage 1	-	-	-	-	~ 238	-
Stage 2	-	-	-	-	~ 178	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.7		\$ 13198.6	
HCM LOS	F					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	20	-	-	364	-	
HCM Lane V/C Ratio	29.511	-	-	0.134	-	
HCM Control Delay (s)	\$ 13198.6	-	-	16.4	0	
HCM Lane LOS	F	-	-	C	A	
HCM 95th %tile Q(veh)	74.3	-	-	0.5	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	2235					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	915	669	45	1035	481	62
Future Vol, veh/h	915	669	45	1035	481	62
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, %	3	3	3	3	3	3
Mvmt Flow	995	727	49	1125	523	67
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1722	0	2582	1359
Stage 1	-	-	-	-	1359	-
Stage 2	-	-	-	-	1223	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	364	-	~ 28	181
Stage 1	-	-	-	-	~ 238	-
Stage 2	-	-	-	-	~ 277	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	364	-	~ 18	181
Mov Cap-2 Maneuver	-	-	-	-	~ 18	-
Stage 1	-	-	-	-	~ 238	-
Stage 2	-	-	-	-	~ 178	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.7		\$ 13198.6	
HCM LOS	F					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	20	-	-	364	-	
HCM Lane V/C Ratio	29.511	-	-	0.134	-	
HCM Control Delay (s)	\$ 13198.6	-	-	16.4	0	
HCM Lane LOS	F	-	-	C	A	
HCM 95th %tile Q(veh)	74.3	-	-	0.5	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection					
Intersection Delay, s/veh	11.8				
Intersection LOS	B				
Approach	EB		WB		NB
Entry Lanes	2		2		1
Conflicting Circle Lanes	2		2		2
Adj Approach Flow, veh/h	1626		858		394
Demand Flow Rate, veh/h	1675		883		406
Vehicles Circulating, veh/h	47		362		1057
Vehicles Exiting, veh/h	1198		1101		665
Ped Vol Crossing Leg, #/h	0		0		0
Ped Cap Adj	1.000		1.000		1.000
Approach Delay, s/veh	10.6		8.7		23.6
Approach LOS	B		A		C
Lane	Left	Right	Left	Right	Left
Designated Moves	LT	TR	LT	TR	LR
Assumed Moves	LT	TR	LT	TR	LR
RT Channelized					
Lane Util	0.470	0.530	0.470	0.530	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.328
Entry Flow, veh/h	787	888	415	468	406
Cap Entry Lane, veh/h	1293	1364	968	1044	578
Entry HV Adj Factor	0.971	0.971	0.971	0.971	0.970
Flow Entry, veh/h	764	862	403	455	394
Cap Entry, veh/h	1255	1324	940	1014	561
V/C Ratio	0.609	0.651	0.429	0.448	0.702
Control Delay, s/veh	10.3	10.9	8.8	8.6	23.6
LOS	B	B	A	A	C
95th %tile Queue, veh	4	5	2	2	6

Intersection					
Intersection Delay, s/veh	23.5				
Intersection LOS	C				
Approach	EB		WB		NB
Entry Lanes	2		2		1
Conflicting Circle Lanes	2		2		2
Adj Approach Flow, veh/h	1722		1174		590
Demand Flow Rate, veh/h	1774		1209		608
Vehicles Circulating, veh/h	50		539		1025
Vehicles Exiting, veh/h	1698		1094		799
Ped Vol Crossing Leg, #/h	0		0		0
Ped Cap Adj	1.000		1.000		1.000
Approach Delay, s/veh	11.6		17.3		70.4
Approach LOS	B		C		F
Lane	Left	Right	Left	Right	Left
Designated Moves	LT	TR	LT	TR	LR
Assumed Moves	LT	TR	LT	TR	LR
RT Channelized					
Lane Util	0.470	0.530	0.470	0.530	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.328
Entry Flow, veh/h	834	940	568	641	608
Cap Entry Lane, veh/h	1289	1361	822	898	594
Entry HV Adj Factor	0.971	0.971	0.972	0.971	0.970
Flow Entry, veh/h	809	913	552	622	590
Cap Entry, veh/h	1251	1322	799	872	577
V/C Ratio	0.647	0.691	0.691	0.714	1.023
Control Delay, s/veh	11.2	12.0	17.4	17.3	70.4
LOS	B	B	C	C	F
95th %tile Queue, veh	5	6	6	6	16

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	32	471	0	0	380	0	0	24	15	0	5	16
Future Vol, veh/h	32	471	0	0	380	0	0	24	15	0	5	16
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	35	512	0	0	413	0	0	26	16	0	5	17

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	413	0	0	512	0	0	1006	995	512	1016	995	413
Stage 1	-	-	-	-	-	-	582	582	-	413	413	-
Stage 2	-	-	-	-	-	-	424	413	-	603	582	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1141	-	-	1048	-	-	219	244	560	215	244	637
Stage 1	-	-	-	-	-	-	497	497	-	614	592	-
Stage 2	-	-	-	-	-	-	606	592	-	484	497	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1141	-	-	1048	-	-	202	234	560	185	234	637
Mov Cap-2 Maneuver	-	-	-	-	-	-	202	234	-	185	234	-
Stage 1	-	-	-	-	-	-	476	476	-	588	592	-
Stage 2	-	-	-	-	-	-	584	592	-	425	476	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	18.9	13.4
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	302	1141	-	-	1048	-	-	452
HCM Lane V/C Ratio	0.14	0.03	-	-	-	-	-	0.051
HCM Control Delay (s)	18.9	8.3	0	-	0	-	-	13.4
HCM Lane LOS	C	A	A	-	A	-	-	B
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	0.2

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	32	471	0	0	380	0	0	24	15	0	5	16
Future Vol, veh/h	32	471	0	0	380	0	0	24	15	0	5	16
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	35	512	0	0	413	0	0	26	16	0	5	17
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	413	0	0	512	0	0	1006	995	512	1016	995	413
Stage 1	-	-	-	-	-	-	582	582	-	413	413	-
Stage 2	-	-	-	-	-	-	424	413	-	603	582	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1141	-	-	1048	-	-	219	244	560	215	244	637
Stage 1	-	-	-	-	-	-	497	497	-	614	592	-
Stage 2	-	-	-	-	-	-	606	592	-	484	497	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1141	-	-	1048	-	-	202	234	560	185	234	637
Mov Cap-2 Maneuver	-	-	-	-	-	-	202	234	-	185	234	-
Stage 1	-	-	-	-	-	-	476	476	-	588	592	-
Stage 2	-	-	-	-	-	-	584	592	-	425	476	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0			18.9			13.4		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	302	1141	-	-	1048	-	-	452				
HCM Lane V/C Ratio	0.14	0.03	-	-	-	-	-	0.051				
HCM Control Delay (s)	18.9	8.3	0	-	0	-	-	13.4				
HCM Lane LOS	C	A	A	-	A	-	-	B				
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	0.2				

Intersection												
Int Delay, s/veh	11.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	36	939	0	0	1059	2	0	32	58	0	5	20
Future Vol, veh/h	36	939	0	0	1059	2	0	32	58	0	5	20
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	39	1021	0	0	1151	2	0	35	63	0	5	22
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1153	0	0	1021	0	0	2265	2252	1021	2300	2251	1152
Stage 1	-	-	-	-	-	-	1099	1099	-	1152	1152	-
Stage 2	-	-	-	-	-	-	1166	1153	-	1148	1099	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	602	-	-	676	-	-	29	41	286	27	41	239
Stage 1	-	-	-	-	-	-	257	287	-	239	271	-
Stage 2	-	-	-	-	-	-	235	271	-	241	287	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	602	-	-	676	-	-	21	35	286	1	35	239
Mov Cap-2 Maneuver	-	-	-	-	-	-	21	35	-	1	35	-
Stage 1	-	-	-	-	-	-	218	244	-	203	271	-
Stage 2	-	-	-	-	-	-	209	271	-	137	244	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0			258.5			48.1		
HCM LOS							F			E		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	81	602	-	-	676	-	-	110				
HCM Lane V/C Ratio	1.208	0.065	-	-	-	-	-	0.247				
HCM Control Delay (s)	258.5	11.4	0	-	0	-	-	48.1				
HCM Lane LOS	F	B	A	-	A	-	-	E				
HCM 95th %tile Q(veh)	7.2	0.2	-	-	0	-	-	0.9				

Intersection												
Int Delay, s/veh	11.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	36	939	0	0	1059	2	0	32	58	0	5	20
Future Vol, veh/h	36	939	0	0	1059	2	0	32	58	0	5	20
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	39	1021	0	0	1151	2	0	35	63	0	5	22
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1153	0	0	1021	0	0	2265	2252	1021	2300	2251	1152
Stage 1	-	-	-	-	-	-	1099	1099	-	1152	1152	-
Stage 2	-	-	-	-	-	-	1166	1153	-	1148	1099	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	602	-	-	676	-	-	29	41	286	27	41	239
Stage 1	-	-	-	-	-	-	257	287	-	239	271	-
Stage 2	-	-	-	-	-	-	235	271	-	241	287	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	602	-	-	676	-	-	21	35	286	1	35	239
Mov Cap-2 Maneuver	-	-	-	-	-	-	21	35	-	1	35	-
Stage 1	-	-	-	-	-	-	218	244	-	203	271	-
Stage 2	-	-	-	-	-	-	209	271	-	137	244	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0			258.5			48.1		
HCM LOS							F			E		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	81	602	-	-	676	-	-	110				
HCM Lane V/C Ratio	1.208	0.065	-	-	-	-	-	0.247				
HCM Control Delay (s)	258.5	11.4	0	-	0	-	-	48.1				
HCM Lane LOS	F	B	A	-	A	-	-	E				
HCM 95th %tile Q(veh)	7.2	0.2	-	-	0	-	-	0.9				

Intersection				
Intersection Delay, s/veh 13.8				
Intersection LOS B				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	1063	818	22	41
Demand Flow Rate, veh/h	1094	842	23	42
Vehicles Circulating, veh/h	14	21	1097	841
Vehicles Exiting, veh/h	869	1099	11	22
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	16.8	10.3	9.1	7.2
Approach LOS	C	B	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	1094	842	23	42
Cap Entry Lane, veh/h	1360	1351	451	585
Entry HV Adj Factor	0.971	0.971	0.950	0.969
Flow Entry, veh/h	1063	818	22	41
Cap Entry, veh/h	1321	1311	428	567
V/C Ratio	0.804	0.623	0.051	0.072
Control Delay, s/veh	16.8	10.3	9.1	7.2
LOS	C	B	A	A
95th %tile Queue, veh	10	5	0	0

Intersection				
Intersection Delay, s/veh 22.8				
Intersection LOS C				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	1060	1153	98	27
Demand Flow Rate, veh/h	1092	1188	101	28
Vehicles Circulating, veh/h	5	76	1092	1186
Vehicles Exiting, veh/h	1209	1117	5	78
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	16.2	30.1	11.6	10.1
Approach LOS	C	D	B	B
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	1092	1188	101	28
Cap Entry Lane, veh/h	1373	1277	453	412
Entry HV Adj Factor	0.971	0.971	0.970	0.959
Flow Entry, veh/h	1060	1153	98	27
Cap Entry, veh/h	1333	1240	439	395
V/C Ratio	0.795	0.930	0.223	0.068
Control Delay, s/veh	16.2	30.1	11.6	10.1
LOS	C	D	B	B
95th %tile Queue, veh	9	16	1	0

Intersection												
Int Delay, s/veh	9.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	474	1	1	374	12	0	156	5	12	65	8
Future Vol, veh/h	14	474	1	1	374	12	0	156	5	12	65	8
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	15	515	1	1	407	13	0	170	5	13	71	9
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	420	0	0	516	0	0	1002	968	516	1049	962	414
Stage 1	-	-	-	-	-	-	546	546	-	416	416	-
Stage 2	-	-	-	-	-	-	456	422	-	633	546	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1134	-	-	1045	-	-	220	253	557	205	255	636
Stage 1	-	-	-	-	-	-	520	516	-	612	590	-
Stage 2	-	-	-	-	-	-	582	587	-	466	516	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1134	-	-	1045	-	-	167	248	557	90	250	636
Mov Cap-2 Maneuver	-	-	-	-	-	-	167	248	-	90	250	-
Stage 1	-	-	-	-	-	-	510	506	-	600	589	-
Stage 2	-	-	-	-	-	-	505	586	-	301	506	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0			46.4			35.2		
HCM LOS							E			E		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	252	1134	-	-	1045	-	-	209				
HCM Lane V/C Ratio	0.694	0.013	-	-	0.001	-	-	0.442				
HCM Control Delay (s)	46.4	8.2	0	-	8.4	0	-	35.2				
HCM Lane LOS	E	A	A	-	A	A	-	E				
HCM 95th %tile Q(veh)	4.6	0	-	-	0	-	-	2.1				

Intersection												
Int Delay, s/veh	9.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	474	1	1	374	12	0	156	5	12	65	8
Future Vol, veh/h	14	474	1	1	374	12	0	156	5	12	65	8
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	15	515	1	1	407	13	0	170	5	13	71	9
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	420	0	0	516	0	0	1002	968	516	1049	962	414
Stage 1	-	-	-	-	-	-	546	546	-	416	416	-
Stage 2	-	-	-	-	-	-	456	422	-	633	546	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1134	-	-	1045	-	-	220	253	557	205	255	636
Stage 1	-	-	-	-	-	-	520	516	-	612	590	-
Stage 2	-	-	-	-	-	-	582	587	-	466	516	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1134	-	-	1045	-	-	167	248	557	90	250	636
Mov Cap-2 Maneuver	-	-	-	-	-	-	167	248	-	90	250	-
Stage 1	-	-	-	-	-	-	510	506	-	600	589	-
Stage 2	-	-	-	-	-	-	505	586	-	301	506	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0			46.4			35.2		
HCM LOS							E			E		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	252	1134	-	-	1045	-	-	209				
HCM Lane V/C Ratio	0.694	0.013	-	-	0.001	-	-	0.442				
HCM Control Delay (s)	46.4	8.2	0	-	8.4	0	-	35.2				
HCM Lane LOS	E	A	A	-	A	A	-	E				
HCM 95th %tile Q(veh)	4.6	0	-	-	0	-	-	2.1				

Intersection												
Int Delay, s/veh	2565.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	29	590	370	1	474	12	492	186	35	12	69	20
Future Vol, veh/h	29	590	370	1	474	12	492	186	35	12	69	20
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	32	641	402	1	515	13	535	202	38	13	75	22
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	528	0	0	1043	0	0	1478	1436	842	1550	1631	522
Stage 1	-	-	-	-	-	-	906	906	-	524	524	-
Stage 2	-	-	-	-	-	-	572	530	-	1026	1107	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1034	-	-	663	-	-	~ 103	~ 133	363	92	101	553
Stage 1	-	-	-	-	-	-	~ 329	354	-	535	528	-
Stage 2	-	-	-	-	-	-	~ 503	525	-	282	285	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1034	-	-	663	-	-	~ 31	~ 122	363	-	93	553
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 31	~ 122	-	-	93	-
Stage 1	-	-	-	-	-	-	~ 302	325	-	491	527	-
Stage 2	-	-	-	-	-	-	~ 414	524	-	88	262	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0			\$ 8240.6					
HCM LOS							F			-		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	41	1034	-	-	663	-	-	-				
HCM Lane V/C Ratio	18.902	0.03	-	-	0.002	-	-	-				
HCM Control Delay (s)	\$ 8240.6	8.6	0	-	10.4	0	-	-				
HCM Lane LOS	F	A	A	-	B	A	-	-				
HCM 95th %tile Q(veh)	94.8	0.1	-	-	0	-	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

Intersection												
Int Delay, s/veh	2565.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	29	590	370	1	474	12	492	186	35	12	69	20
Future Vol, veh/h	29	590	370	1	474	12	492	186	35	12	69	20
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	32	641	402	1	515	13	535	202	38	13	75	22
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	528	0	0	1043	0	0	1478	1436	842	1550	1631	522
Stage 1	-	-	-	-	-	-	906	906	-	524	524	-
Stage 2	-	-	-	-	-	-	572	530	-	1026	1107	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1034	-	-	663	-	-	~ 103	~ 133	363	92	101	553
Stage 1	-	-	-	-	-	-	~ 329	354	-	535	528	-
Stage 2	-	-	-	-	-	-	~ 503	525	-	282	285	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1034	-	-	663	-	-	~ 31	~ 122	363	-	93	553
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 31	~ 122	-	-	93	-
Stage 1	-	-	-	-	-	-	~ 302	325	-	491	527	-
Stage 2	-	-	-	-	-	-	~ 414	524	-	88	262	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0			\$ 8240.6					
HCM LOS							F			-		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	41	1034	-	-	663	-	-	-				
HCM Lane V/C Ratio	18.902	0.03	-	-	0.002	-	-	-				
HCM Control Delay (s)	\$ 8240.6	8.6	0	-	10.4	0	-	-				
HCM Lane LOS	F	A	A	-	B	A	-	-				
HCM 95th %tile Q(veh)	94.8	0.1	-	-	0	-	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

Intersection					
Intersection Delay, s/veh 17.7					
Intersection LOS C					
Approach	EB	WB	NB	SB	
Entry Lanes	1	1	2	1	
Conflicting Circle Lanes	1	1	1	1	
Adj Approach Flow, veh/h	1025	533	292	156	
Demand Flow Rate, veh/h	1056	549	301	160	
Vehicles Circulating, veh/h	152	294	285	760	
Vehicles Exiting, veh/h	768	292	923	83	
Ped Vol Crossing Leg, #/h	0	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	1.000	
Approach Delay, s/veh	26.5	10.4	5.0	9.0	
Approach LOS	D	B	A	A	
Lane	Left	Left	Left Right	Left	
Designated Moves	LTR	LTR	L TR	LTR	
Assumed Moves	LTR	LTR	L TR	LTR	
RT Channelized					
Lane Util	1.000	1.000	0.764 0.236	1.000	
Follow-Up Headway, s	2.609	2.609	2.535 2.535	2.609	
Critical Headway, s	4.976	4.976	4.544 4.544	4.976	
Entry Flow, veh/h	1056	549	230 71	160	
Cap Entry Lane, veh/h	1182	1022	1096 1096	636	
Entry HV Adj Factor	0.971	0.970	0.970 0.977	0.976	
Flow Entry, veh/h	1025	533	223 69	156	
Cap Entry, veh/h	1147	992	1062 1071	620	
V/C Ratio	0.894	0.537	0.210 0.065	0.252	
Control Delay, s/veh	26.5	10.4	5.3 3.9	9.0	
LOS	D	B	A A	A	
95th %tile Queue, veh	13	3	1 0	1	

Intersection					
Intersection Delay, s/veh24.8					
Intersection LOS C					
Approach	EB	WB	NB	SB	
Entry Lanes	1	1	2	1	
Conflicting Circle Lanes	1	1	1	1	
Adj Approach Flow, veh/h	1075	529	775	110	
Demand Flow Rate, veh/h	1107	544	798	113	
Vehicles Circulating, veh/h	91	792	706	1082	
Vehicles Exiting, veh/h	1104	712	492	254	
Ped Vol Crossing Leg, #/h	0	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	1.000	
Approach Delay, s/veh	23.9	39.8	17.5	12.0	
Approach LOS	C	E	C	B	
Lane	Left	Left	Left Right	Left	
Designated Moves	LTR	LTR	L TR	LTR	
Assumed Moves	LTR	LTR	L TR	LTR	
RT Channelized					
Lane Util	1.000	1.000	0.690 0.310	1.000	
Follow-Up Headway, s	2.609	2.609	2.535 2.535	2.609	
Critical Headway, s	4.976	4.976	4.544 4.544	4.976	
Entry Flow, veh/h	1107	544	551 247	113	
Cap Entry Lane, veh/h	1258	615	747 747	458	
Entry HV Adj Factor	0.971	0.972	0.971 0.971	0.971	
Flow Entry, veh/h	1075	529	535 240	110	
Cap Entry, veh/h	1221	598	725 726	445	
V/C Ratio	0.880	0.884	0.738 0.331	0.247	
Control Delay, s/veh	23.9	39.8	21.3 9.0	12.0	
LOS	C	E	C A	B	
95th %tile Queue, veh	13	10	7 1	1	

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	36	43	6	2	0	61	215	17	0	181	6
Future Vol, veh/h	6	36	43	6	2	0	61	215	17	0	181	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	7	39	47	7	2	0	66	234	18	0	197	7
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	577	585	201	619	579	243	204	0	0	252	0	0
Stage 1	201	201	-	375	375	-	-	-	-	-	-	-
Stage 2	376	384	-	244	204	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	426	422	837	400	425	793	1362	-	-	1307	-	-
Stage 1	799	733	-	644	615	-	-	-	-	-	-	-
Stage 2	643	610	-	757	731	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	406	398	837	334	401	793	1362	-	-	1307	-	-
Mov Cap-2 Maneuver	406	398	-	334	401	-	-	-	-	-	-	-
Stage 1	754	733	-	608	581	-	-	-	-	-	-	-
Stage 2	605	576	-	677	731	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	13		15.6		1.6		0					
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1362	-	-	543	349	1307	-	-				
HCM Lane V/C Ratio	0.049	-	-	0.17	0.025	-	-	-				
HCM Control Delay (s)	7.8	0	-	13	15.6	0	-	-				
HCM Lane LOS	A	A	-	B	C	A	-	-				
HCM 95th %tile Q(veh)	0.2	-	-	0.6	0.1	0	-	-				

Intersection												
Int Delay, s/veh	3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	36	43	6	2	0	61	215	17	0	181	6
Future Vol, veh/h	6	36	43	6	2	0	61	215	17	0	181	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	7	39	47	7	2	0	66	234	18	0	197	7
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	577	585	201	619	579	243	204	0	0	252	0	0
Stage 1	201	201	-	375	375	-	-	-	-	-	-	-
Stage 2	376	384	-	244	204	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	426	422	837	400	425	793	1362	-	-	1307	-	-
Stage 1	799	733	-	644	615	-	-	-	-	-	-	-
Stage 2	643	610	-	757	731	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	406	398	837	334	401	793	1362	-	-	1307	-	-
Mov Cap-2 Maneuver	406	398	-	334	401	-	-	-	-	-	-	-
Stage 1	754	733	-	608	581	-	-	-	-	-	-	-
Stage 2	605	576	-	677	731	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	13		15.6		1.6		0					
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1362	-	-	543	349	1307	-	-				
HCM Lane V/C Ratio	0.049	-	-	0.17	0.025	-	-	-				
HCM Control Delay (s)	7.8	0	-	13	15.6	0	-	-				
HCM Lane LOS	A	A	-	B	C	A	-	-				
HCM 95th %tile Q(veh)	0.2	-	-	0.6	0.1	0	-	-				

Intersection												
Int Delay, s/veh	263.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	170	43	6	6	0	170	546	28	101	633	6
Future Vol, veh/h	6	170	43	6	6	0	170	546	28	101	633	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	7	185	47	7	7	0	185	593	30	110	688	7
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1894	1905	692	2006	1893	608	695	0	0	623	0	0
Stage 1	912	912	-	978	978	-	-	-	-	-	-	-
Stage 2	982	993	-	1028	915	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	53	~ 68	442	44	69	494	896	-	-	953	-	-
Stage 1	327	351	-	300	327	-	-	-	-	-	-	-
Stage 2	299	322	-	281	350	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	30	~ 38	442	-	38	494	896	-	-	953	-	-
Mov Cap-2 Maneuver	30	~ 38	-	-	38	-	-	-	-	-	-	-
Stage 1	223	285	-	205	223	-	-	-	-	-	-	-
Stage 2	198	220	-	72	284	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, \$	2054.4				2.3		1.3					
HCM LOS	F		-									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	896	-	-	46	-	953	-	-				
HCM Lane V/C Ratio	0.206	-	-	5.175	-	0.115	-	-				
HCM Control Delay (s)	10.1	0	\$	2054.4	-	9.3	0	-				
HCM Lane LOS	B	A	-	F	-	A	A	-				
HCM 95th %tile Q(veh)	0.8	-	-	27.3	-	0.4	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

Intersection												
Int Delay, s/veh	263.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	170	43	6	6	0	170	546	28	101	633	6
Future Vol, veh/h	6	170	43	6	6	0	170	546	28	101	633	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	7	185	47	7	7	0	185	593	30	110	688	7
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1894	1905	692	2006	1893	608	695	0	0	623	0	0
Stage 1	912	912	-	978	978	-	-	-	-	-	-	-
Stage 2	982	993	-	1028	915	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	53	~ 68	442	44	69	494	896	-	-	953	-	-
Stage 1	327	351	-	300	327	-	-	-	-	-	-	-
Stage 2	299	322	-	281	350	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	30	~ 38	442	-	38	494	896	-	-	953	-	-
Mov Cap-2 Maneuver	30	~ 38	-	-	38	-	-	-	-	-	-	-
Stage 1	223	285	-	205	223	-	-	-	-	-	-	-
Stage 2	198	220	-	72	284	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, \$	2054.4				2.3		1.3					
HCM LOS	F		-									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	896	-	-	46	-	953	-	-				
HCM Lane V/C Ratio	0.206	-	-	5.175	-	0.115	-	-				
HCM Control Delay (s)	10.1	0	\$	2054.4	-	9.3	0	-				
HCM Lane LOS	B	A	-	F	-	A	A	-				
HCM 95th %tile Q(veh)	0.8	-	-	27.3	-	0.4	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

Intersection					
Intersection Delay, s/veh 7.5					
Intersection LOS A					
Approach	EB	WB	NB	SB	
Entry Lanes	1	1	2	1	
Conflicting Circle Lanes	1	1	1	1	
Adj Approach Flow, veh/h	95	17	436	687	
Demand Flow Rate, veh/h	98	17	449	708	
Vehicles Circulating, veh/h	715	460	83	59	
Vehicles Exiting, veh/h	52	72	730	418	
Ped Vol Crossing Leg, #/h	0	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	1.000	
Approach Delay, s/veh	7.3	4.4	5.4	8.9	
Approach LOS	A	A	A	A	
Lane	Left	Left	Left	Right	Left
Designated Moves	LTR	LTR	L	TR	LTR
Assumed Moves	LTR	LTR	L	TR	LTR
RT Channelized					
Lane Util	1.000	1.000	0.094	0.906	1.000
Follow-Up Headway, s	2.609	2.609	2.535	2.535	2.609
Critical Headway, s	4.976	4.976	4.544	4.544	4.976
Entry Flow, veh/h	98	17	42	407	708
Cap Entry Lane, veh/h	665	863	1317	1317	1299
Entry HV Adj Factor	0.967	0.991	0.976	0.971	0.971
Flow Entry, veh/h	95	17	41	395	687
Cap Entry, veh/h	643	856	1285	1279	1261
V/C Ratio	0.147	0.020	0.032	0.309	0.545
Control Delay, s/veh	7.3	4.4	3.1	5.6	8.9
LOS	A	A	A	A	A
95th %tile Queue, veh	1	0	0	1	3

Intersection					
Intersection Delay, s/veh 12.8					
Intersection LOS B					
Approach	EB	WB	NB	SB	
Entry Lanes	1	1	2	1	
Conflicting Circle Lanes	1	1	1	1	
Adj Approach Flow, veh/h	239	14	808	805	
Demand Flow Rate, veh/h	246	14	833	829	
Vehicles Circulating, veh/h	829	809	311	205	
Vehicles Exiting, veh/h	205	335	764	618	
Ped Vol Crossing Leg, #/h	0	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	1.000	
Approach Delay, s/veh	12.7	6.3	10.1	15.8	
Approach LOS	B	A	B	C	
Lane	Left	Left	Left	Right	Left
Designated Moves	LTR	LTR	L TR	LTR	
Assumed Moves	LTR	LTR	L TR	LTR	
RT Channelized					
Lane Util	1.000	1.000	0.229	0.771	1.000
Follow-Up Headway, s	2.609	2.609	2.535	2.535	2.609
Critical Headway, s	4.976	4.976	4.544	4.544	4.976
Entry Flow, veh/h	246	14	191	642	829
Cap Entry Lane, veh/h	592	605	1070	1070	1120
Entry HV Adj Factor	0.973	0.985	0.969	0.971	0.971
Flow Entry, veh/h	239	14	185	623	805
Cap Entry, veh/h	577	596	1036	1039	1088
V/C Ratio	0.415	0.023	0.178	0.600	0.740
Control Delay, s/veh	12.7	6.3	5.1	11.5	15.8
LOS	B	A	A	B	C
95th %tile Queue, veh	2	0	1	4	7

Intersection												
Int Delay, s/veh	8.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	42	83	96	3	52	0	81	180	1	0	230	75
Future Vol, veh/h	42	83	96	3	52	0	81	180	1	0	230	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	46	90	104	3	57	0	88	196	1	0	250	82

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	692	664	291	761	705	197	332	0	0	197	0	0
Stage 1	291	291	-	373	373	-	-	-	-	-	-	-
Stage 2	401	373	-	388	332	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	357	380	746	321	360	842	1222	-	-	1370	-	-
Stage 1	715	670	-	646	617	-	-	-	-	-	-	-
Stage 2	624	617	-	634	643	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	292	349	746	208	331	842	1222	-	-	1370	-	-
Mov Cap-2 Maneuver	292	349	-	208	331	-	-	-	-	-	-	-
Stage 1	657	670	-	594	567	-	-	-	-	-	-	-
Stage 2	516	567	-	472	643	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	23.2		18.8		2.5		0	
HCM LOS	C		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1222	-	-	433 321	1370	-	-
HCM Lane V/C Ratio	0.072	-	-	0.555 0.186	-	-	-
HCM Control Delay (s)	8.2	0	-	23.2 18.8	0	-	-
HCM Lane LOS	A	A	-	C C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	3.3 0.7	0	-	-

Intersection												
Int Delay, s/veh	8.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	42	83	96	3	52	0	81	180	1	0	230	75
Future Vol, veh/h	42	83	96	3	52	0	81	180	1	0	230	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	46	90	104	3	57	0	88	196	1	0	250	82
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	692	664	291	761	705	197	332	0	0	197	0	0
Stage 1	291	291	-	373	373	-	-	-	-	-	-	-
Stage 2	401	373	-	388	332	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	357	380	746	321	360	842	1222	-	-	1370	-	-
Stage 1	715	670	-	646	617	-	-	-	-	-	-	-
Stage 2	624	617	-	634	643	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	292	349	746	208	331	842	1222	-	-	1370	-	-
Mov Cap-2 Maneuver	292	349	-	208	331	-	-	-	-	-	-	-
Stage 1	657	670	-	594	567	-	-	-	-	-	-	-
Stage 2	516	567	-	472	643	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	23.2		18.8			2.5			0			
HCM LOS	C		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1222	-	-	433	321	1370	-	-				
HCM Lane V/C Ratio	0.072	-	-	0.555	0.186	-	-	-				
HCM Control Delay (s)	8.2	0	-	23.2	18.8	0	-	-				
HCM Lane LOS	A	A	-	C	C	A	-	-				
HCM 95th %tile Q(veh)	0.2	-	-	3.3	0.7	0	-	-				

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	54	392	96	3	201	0	105	506	88	105	581	86
Future Vol, veh/h	54	392	96	3	201	0	105	506	88	105	581	86
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	59	426	104	3	218	0	114	550	96	114	632	93
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1842	1781	679	1998	1779	598	725	0	0	646	0	0
Stage 1	907	907	-	826	826	-	-	-	-	-	-	-
Stage 2	935	874	-	1172	953	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	~ 57	~ 82	450	44	~ 82	500	873	-	-	935	-	-
Stage 1	329	~ 353	-	365	385	-	-	-	-	-	-	-
Stage 2	317	~ 366	-	233	336	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 51	450	-	~ 51	500	873	-	-	935	-	-
Mov Cap-2 Maneuver	-	~ 51	-	-	~ 51	-	-	-	-	-	-	-
Stage 1	261	~ 280	-	289	305	-	-	-	-	-	-	-
Stage 2	71	~ 290	-	-	266	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s							1.5		1.3			
HCM LOS	-		-									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	873	-	-	-	-	935	-	-				
HCM Lane V/C Ratio	0.131	-	-	-	-	0.122	-	-				
HCM Control Delay (s)	9.7	0	-	-	-	9.4	0	-				
HCM Lane LOS	A	A	-	-	-	A	A	-				
HCM 95th %tile Q(veh)	0.4	-	-	-	-	0.4	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	54	392	96	3	201	0	105	506	88	105	581	86
Future Vol, veh/h	54	392	96	3	201	0	105	506	88	105	581	86
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	59	426	104	3	218	0	114	550	96	114	632	93
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1842	1781	679	1998	1779	598	725	0	0	646	0	0
Stage 1	907	907	-	826	826	-	-	-	-	-	-	-
Stage 2	935	874	-	1172	953	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	~ 57	~ 82	450	44	~ 82	500	873	-	-	935	-	-
Stage 1	329	~ 353	-	365	385	-	-	-	-	-	-	-
Stage 2	317	~ 366	-	233	336	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 51	450	-	~ 51	500	873	-	-	935	-	-
Mov Cap-2 Maneuver	-	~ 51	-	-	~ 51	-	-	-	-	-	-	-
Stage 1	261	~ 280	-	289	305	-	-	-	-	-	-	-
Stage 2	71	~ 290	-	-	266	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s							1.5		1.3			
HCM LOS	-		-									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	873	-	-	-	-	935	-	-				
HCM Lane V/C Ratio	0.131	-	-	-	-	0.122	-	-				
HCM Control Delay (s)	9.7	0	-	-	-	9.4	0	-				
HCM Lane LOS	A	A	-	-	-	A	A	-				
HCM 95th %tile Q(veh)	0.4	-	-	-	-	0.4	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection						
Intersection Delay, s/veh 5.7						
Intersection LOS A						
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	2	2	2		2	
Adj Approach Flow, veh/h	196	224	349		621	
Demand Flow Rate, veh/h	203	231	360		640	
Vehicles Circulating, veh/h	508	356	181		264	
Vehicles Exiting, veh/h	396	185	530		323	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	6.3	5.6	4.5		6.2	
Approach LOS	A	A	A		A	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.469	0.531	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	203	231	169	191	301	339
Cap Entry Lane, veh/h	922	1049	1143	1218	1059	1135
Entry HV Adj Factor	0.967	0.971	0.971	0.969	0.970	0.971
Flow Entry, veh/h	196	224	164	185	292	329
Cap Entry, veh/h	892	1019	1110	1180	1027	1102
V/C Ratio	0.220	0.220	0.148	0.157	0.284	0.299
Control Delay, s/veh	6.3	5.6	4.5	4.4	6.3	6.1
LOS	A	A	A	A	A	A
95th %tile Queue, veh	1	1	1	1	1	1

Intersection						
Intersection Delay, s/veh 14.1						
Intersection LOS B						
Approach	EB	WB	NB	SB		
Entry Lanes	1	1	2	2		
Conflicting Circle Lanes	2	2	2	2		
Adj Approach Flow, veh/h	589	221	760	839		
Demand Flow Rate, veh/h	607	228	783	864		
Vehicles Circulating, veh/h	771	744	617	345		
Vehicles Exiting, veh/h	438	655	761	628		
Ped Vol Crossing Leg, #/h	0	0	0	0		
Ped Cap Adj	1.000	1.000	1.000	1.000		
Approach Delay, s/veh	28.1	8.5	11.4	8.4		
Approach LOS	D	A	B	A		
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	607	228	368	415	406	458
Cap Entry Lane, veh/h	737	754	765	840	983	1059
Entry HV Adj Factor	0.971	0.971	0.971	0.971	0.971	0.971
Flow Entry, veh/h	589	221	357	403	394	445
Cap Entry, veh/h	716	733	743	816	955	1028
V/C Ratio	0.823	0.302	0.481	0.494	0.413	0.432
Control Delay, s/veh	28.1	8.5	11.7	11.1	8.5	8.3
LOS	D	A	B	B	A	A
95th %tile Queue, veh	9	1	3	3	2	2

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕		↕	↕	
Traffic Vol, veh/h	20	192	128	25	152	6	109	4	21	8	4	19
Future Vol, veh/h	20	192	128	25	152	6	109	4	21	8	4	19
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	-	-	-	-	-	115	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	22	209	139	27	165	7	118	4	23	9	4	21
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	172	0	0	348	0	0	558	549	279	555	611	165
Stage 1	-	-	-	-	-	-	323	323	-	219	219	-
Stage 2	-	-	-	-	-	-	235	226	-	336	392	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1399	-	-	1205	-	-	439	442	757	441	407	877
Stage 1	-	-	-	-	-	-	687	649	-	781	720	-
Stage 2	-	-	-	-	-	-	766	715	-	676	605	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1399	-	-	1205	-	-	410	423	757	410	389	877
Mov Cap-2 Maneuver	-	-	-	-	-	-	410	423	-	410	389	-
Stage 1	-	-	-	-	-	-	673	636	-	765	702	-
Stage 2	-	-	-	-	-	-	725	697	-	638	593	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			1.1			17.1			11.2		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	442	1399	-	-	1205	-	-	410	720			
HCM Lane V/C Ratio	0.33	0.016	-	-	0.023	-	-	0.021	0.035			
HCM Control Delay (s)	17.1	7.6	0	-	8.1	0	-	14	10.2			
HCM Lane LOS	C	A	A	-	A	A	-	B	B			
HCM 95th %tile Q(veh)	1.4	0	-	-	0.1	-	-	0.1	0.1			

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕		↕	↕	
Traffic Vol, veh/h	20	192	128	25	152	6	109	4	21	8	4	19
Future Vol, veh/h	20	192	128	25	152	6	109	4	21	8	4	19
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	-	-	-	-	-	115	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	22	209	139	27	165	7	118	4	23	9	4	21
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	172	0	0	348	0	0	558	549	279	555	611	165
Stage 1	-	-	-	-	-	-	323	323	-	219	219	-
Stage 2	-	-	-	-	-	-	235	226	-	336	392	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1399	-	-	1205	-	-	439	442	757	441	407	877
Stage 1	-	-	-	-	-	-	687	649	-	781	720	-
Stage 2	-	-	-	-	-	-	766	715	-	676	605	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1399	-	-	1205	-	-	410	423	757	410	389	877
Mov Cap-2 Maneuver	-	-	-	-	-	-	410	423	-	410	389	-
Stage 1	-	-	-	-	-	-	673	636	-	765	702	-
Stage 2	-	-	-	-	-	-	725	697	-	638	593	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			1.1			17.1			11.2		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	442	1399	-	-	1205	-	-	410	720			
HCM Lane V/C Ratio	0.33	0.016	-	-	0.023	-	-	0.021	0.035			
HCM Control Delay (s)	17.1	7.6	0	-	8.1	0	-	14	10.2			
HCM Lane LOS	C	A	A	-	A	A	-	B	B			
HCM 95th %tile Q(veh)	1.4	0	-	-	0.1	-	-	0.1	0.1			

Intersection												
Int Delay, s/veh	8.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	513	142	25	336	6	110	4	21	8	4	19
Future Vol, veh/h	20	513	142	25	336	6	110	4	21	8	4	19
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	-	-	-	-	-	115	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	22	558	154	27	365	7	120	4	23	9	4	21
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	372	0	0	712	0	0	1114	1105	635	1112	1175	365
Stage 1	-	-	-	-	-	-	679	679	-	419	419	-
Stage 2	-	-	-	-	-	-	435	426	-	693	756	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1181	-	-	883	-	-	185	210	477	185	191	678
Stage 1	-	-	-	-	-	-	440	450	-	610	588	-
Stage 2	-	-	-	-	-	-	598	584	-	432	415	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1181	-	-	883	-	-	167	195	477	164	178	678
Mov Cap-2 Maneuver	-	-	-	-	-	-	167	195	-	164	178	-
Stage 1	-	-	-	-	-	-	426	436	-	590	565	-
Stage 2	-	-	-	-	-	-	553	561	-	394	402	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.6			71.4			17.2		
HCM LOS							F			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	187	1181	-	-	883	-	-	164	455			
HCM Lane V/C Ratio	0.785	0.018	-	-	0.031	-	-	0.053	0.055			
HCM Control Delay (s)	71.4	8.1	0	-	9.2	0	-	28.2	13.4			
HCM Lane LOS	F	A	A	-	A	A	-	D	B			
HCM 95th %tile Q(veh)	5.3	0.1	-	-	0.1	-	-	0.2	0.2			

Intersection												
Int Delay, s/veh	8.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	513	142	25	336	6	110	4	21	8	4	19
Future Vol, veh/h	20	513	142	25	336	6	110	4	21	8	4	19
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	-	-	-	-	-	115	-	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	22	558	154	27	365	7	120	4	23	9	4	21
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	372	0	0	712	0	0	1114	1105	635	1112	1175	365
Stage 1	-	-	-	-	-	-	679	679	-	419	419	-
Stage 2	-	-	-	-	-	-	435	426	-	693	756	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1181	-	-	883	-	-	185	210	477	185	191	678
Stage 1	-	-	-	-	-	-	440	450	-	610	588	-
Stage 2	-	-	-	-	-	-	598	584	-	432	415	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1181	-	-	883	-	-	167	195	477	164	178	678
Mov Cap-2 Maneuver	-	-	-	-	-	-	167	195	-	164	178	-
Stage 1	-	-	-	-	-	-	426	436	-	590	565	-
Stage 2	-	-	-	-	-	-	553	561	-	394	402	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.6			71.4			17.2		
HCM LOS							F			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2			
Capacity (veh/h)	187	1181	-	-	883	-	-	164	455			
HCM Lane V/C Ratio	0.785	0.018	-	-	0.031	-	-	0.053	0.055			
HCM Control Delay (s)	71.4	8.1	0	-	9.2	0	-	28.2	13.4			
HCM Lane LOS	F	A	A	-	A	A	-	D	B			
HCM 95th %tile Q(veh)	5.3	0.1	-	-	0.1	-	-	0.2	0.2			

Intersection				
Intersection Delay, s/veh	5.2			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	178	410	101	0
Demand Flow Rate, veh/h	183	422	104	0
Vehicles Circulating, veh/h	13	86	152	496
Vehicles Exiting, veh/h	483	170	44	12
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	3.8	6.1	3.9	0.0
Approach LOS	A	A	A	-
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	183	422	104	0
Cap Entry Lane, veh/h	1362	1264	1182	832
Entry HV Adj Factor	0.971	0.973	0.971	1.000
Flow Entry, veh/h	178	410	101	0
Cap Entry, veh/h	1321	1229	1148	832
V/C Ratio	0.134	0.334	0.088	0.000
Control Delay, s/veh	3.8	6.1	3.9	4.3
LOS	A	A	A	A
95th %tile Queue, veh	0	1	0	0

Intersection				
Intersection Delay, s/veh	8.2			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	734	399	147	34
Demand Flow Rate, veh/h	757	411	152	35
Vehicles Circulating, veh/h	41	151	607	528
Vehicles Exiting, veh/h	522	608	191	34
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.3	6.5	7.3	5.0
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	757	411	152	35
Cap Entry Lane, veh/h	1323	1183	743	805
Entry HV Adj Factor	0.970	0.971	0.966	0.968
Flow Entry, veh/h	734	399	147	34
Cap Entry, veh/h	1284	1149	718	780
V/C Ratio	0.572	0.347	0.205	0.043
Control Delay, s/veh	9.3	6.5	7.3	5.0
LOS	A	A	A	A
95th %tile Queue, veh	4	2	1	0

Intersection						
Intersection Delay, s/veh	6.7					
Intersection LOS	A					
Approach	EB	WB	NB	SB		
Entry Lanes	1	1	2	2		
Conflicting Circle Lanes	2	2	2	2		
Adj Approach Flow, veh/h	203	339	529	644		
Demand Flow Rate, veh/h	209	349	544	664		
Vehicles Circulating, veh/h	674	505	389	168		
Vehicles Exiting, veh/h	158	428	494	686		
Ped Vol Crossing Leg, #/h	0	0	0	0		
Ped Cap Adj	1.000	1.000	1.000	1.000		
Approach Delay, s/veh	7.6	8.3	6.6	5.7		
Approach LOS	A	A	A	A		
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.471	0.529	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	209	349	256	288	312	352
Cap Entry Lane, veh/h	801	924	944	1020	1157	1231
Entry HV Adj Factor	0.971	0.972	0.971	0.973	0.970	0.970
Flow Entry, veh/h	203	339	249	280	303	341
Cap Entry, veh/h	777	898	916	993	1122	1194
V/C Ratio	0.261	0.378	0.271	0.282	0.270	0.286
Control Delay, s/veh	7.6	8.3	6.7	6.5	5.7	5.6
LOS	A	A	A	A	A	A
95th %tile Queue, veh	1	2	1	1	1	1

Intersection						
Intersection Delay, s/veh	6.7					
Intersection LOS	A					
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	2	2	2		2	
Adj Approach Flow, veh/h	203	339	529		644	
Demand Flow Rate, veh/h	209	349	544		664	
Vehicles Circulating, veh/h	674	505	389		168	
Vehicles Exiting, veh/h	158	428	494		686	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	7.6	8.3	6.6		5.7	
Approach LOS	A	A	A		A	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.471	0.529	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	209	349	256	288	312	352
Cap Entry Lane, veh/h	801	924	944	1020	1157	1231
Entry HV Adj Factor	0.971	0.972	0.971	0.973	0.970	0.970
Flow Entry, veh/h	203	339	249	280	303	341
Cap Entry, veh/h	777	898	916	993	1122	1194
V/C Ratio	0.261	0.378	0.271	0.282	0.270	0.286
Control Delay, s/veh	7.6	8.3	6.7	6.5	5.7	5.6
LOS	A	A	A	A	A	A
95th %tile Queue, veh	1	2	1	1	1	1

Intersection						
Intersection Delay, s/veh	50.7					
Intersection LOS	F					
Approach	EB	WB	NB	SB		
Entry Lanes	1	1	2	2		
Conflicting Circle Lanes	2	2	2	2		
Adj Approach Flow, veh/h	680	595	1090	910		
Demand Flow Rate, veh/h	701	613	1122	938		
Vehicles Circulating, veh/h	982	1062	832	422		
Vehicles Exiting, veh/h	378	892	851	1253		
Ped Vol Crossing Leg, #/h	0	0	0	0		
Ped Cap Adj	1.000	1.000	1.000	1.000		
Approach Delay, s/veh	105.5	83.4	32.7	10.0		
Approach LOS	F	F	D	B		
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	701	613	527	595	441	497
Cap Entry Lane, veh/h	616	576	628	700	916	992
Entry HV Adj Factor	0.971	0.971	0.972	0.971	0.970	0.971
Flow Entry, veh/h	680	595	512	578	428	483
Cap Entry, veh/h	598	559	610	680	888	963
V/C Ratio	1.138	1.065	0.839	0.850	0.482	0.501
Control Delay, s/veh	105.5	83.4	33.4	32.0	10.2	9.9
LOS	F	F	D	D	B	A
95th %tile Queue, veh	22	17	9	10	3	3

Intersection						
Intersection Delay, s/veh	50.7					
Intersection LOS	F					
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	2	2	2		2	
Adj Approach Flow, veh/h	680	595	1090		910	
Demand Flow Rate, veh/h	701	613	1122		938	
Vehicles Circulating, veh/h	982	1062	832		422	
Vehicles Exiting, veh/h	378	892	851		1253	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	105.5	83.4	32.7		10.0	
Approach LOS	F	F	D		B	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	701	613	527	595	441	497
Cap Entry Lane, veh/h	616	576	628	700	916	992
Entry HV Adj Factor	0.971	0.971	0.972	0.971	0.970	0.971
Flow Entry, veh/h	680	595	512	578	428	483
Cap Entry, veh/h	598	559	610	680	888	963
V/C Ratio	1.138	1.065	0.839	0.850	0.482	0.501
Control Delay, s/veh	105.5	83.4	33.4	32.0	10.2	9.9
LOS	F	F	D	D	B	A
95th %tile Queue, veh	22	17	9	10	3	3

Intersection						
Int Delay, s/veh	4.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	46	105	170	97	130	142
Future Vol, veh/h	46	105	170	97	130	142
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	50	114	185	105	141	154
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	674	238	0	0	290	0
Stage 1	238	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	418	798	-	-	1266	-
Stage 1	799	-	-	-	-	-
Stage 2	650	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	367	798	-	-	1266	-
Mov Cap-2 Maneuver	367	-	-	-	-	-
Stage 1	799	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	13.5	0		3.9		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	588	1266	-	
HCM Lane V/C Ratio	-	-	0.279	0.112	-	
HCM Control Delay (s)	-	-	13.5	8.2	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	1.1	0.4	-	

Intersection						
Int Delay, s/veh	4.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	46	105	170	97	130	142
Future Vol, veh/h	46	105	170	97	130	142
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	50	114	185	105	141	154
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	674	238	0	0	290	0
Stage 1	238	-	-	-	-	-
Stage 2	436	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	418	798	-	-	1266	-
Stage 1	799	-	-	-	-	-
Stage 2	650	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	367	798	-	-	1266	-
Mov Cap-2 Maneuver	367	-	-	-	-	-
Stage 1	799	-	-	-	-	-
Stage 2	571	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	13.5	0		3.9		
HCM LOS	B					
Minor Lane/Major Mvmt		NBT	NBRWBLn1	SBL	SBT	
Capacity (veh/h)		-	- 588	1266	-	
HCM Lane V/C Ratio		-	- 0.279	0.112	-	
HCM Control Delay (s)		-	- 13.5	8.2	0	
HCM Lane LOS		-	- B	A	A	
HCM 95th %tile Q(veh)		-	- 1.1	0.4	-	

Intersection						
Int Delay, s/veh	20.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	177	105	184	515	130	156
Future Vol, veh/h	177	105	184	515	130	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	192	114	200	560	141	170
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	932	480	0	0	760	0
Stage 1	480	-	-	-	-	-
Stage 2	452	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	295	584	-	-	847	-
Stage 1	620	-	-	-	-	-
Stage 2	639	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	241	584	-	-	847	-
Mov Cap-2 Maneuver	241	-	-	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	521	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	88	0		4.6		
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-		308	847	
HCM Lane V/C Ratio	-	-		0.995	0.167	
HCM Control Delay (s)	-	-		88	10.1	
HCM Lane LOS	-	-		F	B	
HCM 95th %tile Q(veh)	-	-		10.6	0.6	

Intersection						
Int Delay, s/veh	20.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	177	105	184	515	130	156
Future Vol, veh/h	177	105	184	515	130	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	192	114	200	560	141	170
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	932	480	0	0	760	0
Stage 1	480	-	-	-	-	-
Stage 2	452	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	295	584	-	-	847	-
Stage 1	620	-	-	-	-	-
Stage 2	639	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	241	584	-	-	847	-
Mov Cap-2 Maneuver	241	-	-	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	521	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	88	0	4.6			
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	308	847	-	
HCM Lane V/C Ratio	-	-	0.995	0.167	-	
HCM Control Delay (s)	-	-	88	10.1	0	
HCM Lane LOS	-	-	F	B	A	
HCM 95th %tile Q(veh)	-	-	10.6	0.6	-	

Intersection			
Intersection Delay, s/veh 6.2			
Intersection LOS A			
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	504	191	125
Demand Flow Rate, veh/h	519	197	129
Vehicles Circulating, veh/h	103	38	411
Vehicles Exiting, veh/h	132	502	211
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	7.2	4.0	5.5
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	519	197	129
Cap Entry Lane, veh/h	1242	1327	907
Entry HV Adj Factor	0.971	0.970	0.972
Flow Entry, veh/h	504	191	125
Cap Entry, veh/h	1206	1287	882
V/C Ratio	0.418	0.148	0.142
Control Delay, s/veh	7.2	4.0	5.5
LOS	A	A	A
95th %tile Queue, veh	2	1	0

Intersection			
Intersection Delay, s/veh 9.4			
Intersection LOS A			
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	306	760	311
Demand Flow Rate, veh/h	315	783	320
Vehicles Circulating, veh/h	206	145	198
Vehicles Exiting, veh/h	722	373	323
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.0	12.2	6.0
Approach LOS	A	B	A
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	315	783	320
Cap Entry Lane, veh/h	1118	1190	1128
Entry HV Adj Factor	0.971	0.971	0.972
Flow Entry, veh/h	306	760	311
Cap Entry, veh/h	1086	1155	1095
V/C Ratio	0.282	0.658	0.284
Control Delay, s/veh	6.0	12.2	6.0
LOS	A	B	A
95th %tile Queue, veh	1	5	1

Intersection						
Int Delay, s/veh	30.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	68	110	464	101	173	719
Future Vol, veh/h	68	110	464	101	173	719
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	74	120	504	110	188	782
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1717	559	0	0	614	0
Stage 1	559	-	-	-	-	-
Stage 2	1158	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	98	527	-	-	961	-
Stage 1	570	-	-	-	-	-
Stage 2	298	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 64	527	-	-	961	-
Mov Cap-2 Maneuver	~ 64	-	-	-	-	-
Stage 1	570	-	-	-	-	-
Stage 2	195	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	269.6	0		1.9		
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	140	961	-	
HCM Lane V/C Ratio	-	-	1.382	0.196	-	
HCM Control Delay (s)	-	-	269.6	9.7	0	
HCM Lane LOS	-	-	F	A	A	
HCM 95th %tile Q(veh)	-	-	12.5	0.7	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	30.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	68	110	464	101	173	719
Future Vol, veh/h	68	110	464	101	173	719
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	74	120	504	110	188	782
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1717	559	0	0	614	0
Stage 1	559	-	-	-	-	-
Stage 2	1158	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	98	527	-	-	961	-
Stage 1	570	-	-	-	-	-
Stage 2	298	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 64	527	-	-	961	-
Mov Cap-2 Maneuver	~ 64	-	-	-	-	-
Stage 1	570	-	-	-	-	-
Stage 2	195	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	269.6	0		1.9		
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	140	961	-	
HCM Lane V/C Ratio	-	-	1.382	0.196	-	
HCM Control Delay (s)	-	-	269.6	9.7	0	
HCM Lane LOS	-	-	F	A	A	
HCM 95th %tile Q(veh)	-	-	12.5	0.7	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

HCM 6th Signalized Intersection Summary
172: Greenfield Ave & 16th St

Existing AM Peak
Mitigated - Final

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	35	60	434	65	63	349
Future Volume (veh/h)	35	60	434	65	63	349
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	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	38	65	472	71	68	379
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	121	206	587	88	423	1038
Arrive On Green	0.20	0.20	0.37	0.37	0.09	0.56
Sat Flow, veh/h	600	1026	1576	237	1767	1856
Grp Volume(v), veh/h	104	0	0	543	68	379
Grp Sat Flow(s),veh/h/ln	1641	0	0	1813	1767	1856
Q Serve(g_s), s	2.3	0.0	0.0	11.2	0.8	4.7
Cycle Q Clear(g_c), s	2.3	0.0	0.0	11.2	0.8	4.7
Prop In Lane	0.37	0.62		0.13	1.00	
Lane Grp Cap(c), veh/h	330	0	0	675	423	1038
V/C Ratio(X)	0.31	0.00	0.00	0.80	0.16	0.36
Avail Cap(c_a), veh/h	471	0	0	954	557	1464
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.2	0.0	0.0	11.8	7.5	5.1
Incr Delay (d2), s/veh	0.5	0.0	0.0	3.4	0.2	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	0.0	4.0	0.2	1.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	14.8	0.0	0.0	15.2	7.6	5.3
LnGrp LOS	B			B	A	A
Approach Vol, veh/h	104		543			447
Approach Delay, s/veh	14.8		15.2			5.7
Approach LOS	B		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	7.8	20.6			28.4	13.4
Change Period (Y+Rc), s	4.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	7.0	22.0			33.0	12.0
Max Q Clear Time (g_c+I1), s	2.8	13.2			6.7	4.3
Green Ext Time (p_c), s	0.0	2.4			2.4	0.1
Intersection Summary						
HCM 6th Ctrl Delay, s/veh			11.2			
HCM 6th LOS			B			

HCM 6th Signalized Intersection Summary
172: Greenfield Ave & 16th St

Existing PM Peak
Mitigated - Final

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	68	110	464	101	173	719
Future Volume (veh/h)	68	110	464	101	173	719
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	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	74	120	504	110	188	782
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3
Cap, veh/h	133	215	590	129	425	1111
Arrive On Green	0.21	0.21	0.40	0.40	0.12	0.60
Sat Flow, veh/h	623	1011	1476	322	1767	1856
Grp Volume(v), veh/h	195	0	0	614	188	782
Grp Sat Flow(s),veh/h/ln	1642	0	0	1798	1767	1856
Q Serve(g_s), s	5.6	0.0	0.0	16.5	2.8	15.5
Cycle Q Clear(g_c), s	5.6	0.0	0.0	16.5	2.8	15.5
Prop In Lane	0.38	0.62		0.18	1.00	
Lane Grp Cap(c), veh/h	350	0	0	719	425	1111
V/C Ratio(X)	0.56	0.00	0.00	0.85	0.44	0.70
Avail Cap(c_a), veh/h	371	0	0	914	439	1327
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.7	0.0	0.0	14.5	9.9	7.4
Incr Delay (d2), s/veh	1.6	0.0	0.0	6.5	0.7	1.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	0.0	6.9	0.8	4.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	20.3	0.0	0.0	21.0	10.7	8.8
LnGrp LOS	C			C	B	A
Approach Vol, veh/h	195		614			970
Approach Delay, s/veh	20.3		21.0			9.1
Approach LOS	C		C			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	10.6	26.2			36.8	16.3
Change Period (Y+Rc), s	4.0	5.0			5.0	5.0
Max Green Setting (Gmax), s	7.0	27.0			38.0	12.0
Max Q Clear Time (g_c+l1), s	4.8	18.5			17.5	7.6
Green Ext Time (p_c), s	0.1	2.7			5.8	0.2
Intersection Summary						
HCM 6th Ctrl Delay, s/veh			14.5			
HCM 6th LOS			B			

Intersection						
Int Delay, s/veh	39.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	68	110	1773	101	173	1626
Future Vol, veh/h	68	110	1773	101	173	1626
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	74	120	1927	110	188	1767
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4125	1982	0	0	2037	0
Stage 1	1982	-	-	-	-	-
Stage 2	2143	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	~ 3	~ 76	-	-	275	-
Stage 1	116	-	-	-	-	-
Stage 2	96	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	~ 76	-	-	275	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	116	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s\$	818.8		0		4.1	
HCM LOS	F					
Minor Lane/Major Mvmt	NBT		NBRWBLn1		SBL	SBT
Capacity (veh/h)	-		-		76	275
HCM Lane V/C Ratio	-		-		2.546	0.684
HCM Control Delay (s)	-		-		\$ 818.8	42.3
HCM Lane LOS	-		-		F	E
HCM 95th %tile Q(veh)	-		-		18.6	4.6
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	39.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	68	110	1773	101	173	1626
Future Vol, veh/h	68	110	1773	101	173	1626
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	74	120	1927	110	188	1767
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	4125	1982	0	0	2037	0
Stage 1	1982	-	-	-	-	-
Stage 2	2143	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	~ 3	~ 76	-	-	275	-
Stage 1	116	-	-	-	-	-
Stage 2	96	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	0	~ 76	-	-	275	-
Mov Cap-2 Maneuver	0	-	-	-	-	-
Stage 1	116	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s\$	818.8		0		4.1	
HCM LOS	F					
Minor Lane/Major Mvmt		NBT	NBRWBLn1	SBL	SBT	
Capacity (veh/h)		-	- 76	275	-	
HCM Lane V/C Ratio		-	- 2.546	0.684	-	
HCM Control Delay (s)		-	-\$ 818.8	42.3	0	
HCM Lane LOS		-	- F	E	A	
HCM 95th %tile Q(veh)		-	- 18.6	4.6	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection					
Intersection Delay, s/veh 10.5					
Intersection LOS B					
Approach	WB	NB		SB	
Entry Lanes	1	2		2	
Conflicting Circle Lanes	2	2		2	
Adj Approach Flow, veh/h	103	983		1835	
Demand Flow Rate, veh/h	106	1012		1890	
Vehicles Circulating, veh/h	939	70		39	
Vehicles Exiting, veh/h	143	1859		1006	
Ped Vol Crossing Leg, #/h	0	0		0	
Ped Cap Adj	1.000	1.000		1.000	
Approach Delay, s/veh	7.8	6.6		12.7	
Approach LOS	A	A		B	
Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	TR	LT	TR
Assumed Moves	LR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	106	476	536	888	1002
Cap Entry Lane, veh/h	639	1266	1338	1302	1374
Entry HV Adj Factor	0.972	0.970	0.972	0.971	0.971
Flow Entry, veh/h	103	462	521	862	973
Cap Entry, veh/h	621	1228	1300	1265	1333
V/C Ratio	0.166	0.376	0.401	0.682	0.729
Control Delay, s/veh	7.8	6.6	6.6	12.1	13.2
LOS	A	A	A	B	B
95th %tile Queue, veh	1	2	2	6	7

Intersection					
Intersection Delay, s/veh 23.4					
Intersection LOS C					
Approach	WB	NB		SB	
Entry Lanes	1	2		2	
Conflicting Circle Lanes	2	2		2	
Adj Approach Flow, veh/h	194	2037		1955	
Demand Flow Rate, veh/h	200	2098		2014	
Vehicles Circulating, veh/h	1985	194		76	
Vehicles Exiting, veh/h	307	1896		2109	
Ped Vol Crossing Leg, #/h	0	0		0	
Ped Cap Adj	1.000	1.000		1.000	
Approach Delay, s/veh	52.1	27.7		16.0	
Approach LOS	F	D		C	
Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	TR	LT	TR
Assumed Moves	LR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	200	986	1112	947	1067
Cap Entry Lane, veh/h	263	1129	1204	1259	1331
Entry HV Adj Factor	0.970	0.971	0.971	0.970	0.971
Flow Entry, veh/h	194	957	1080	919	1036
Cap Entry, veh/h	255	1097	1169	1221	1293
V/C Ratio	0.761	0.873	0.923	0.752	0.801
Control Delay, s/veh	52.1	25.0	30.2	15.0	16.9
LOS	F	C	D	C	C
95th %tile Queue, veh	6	12	15	8	9

Intersection						
Int Delay, s/veh	17.1					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑	↗	↖	↑	↖	↗
Traffic Vol, veh/h	732	92	148	509	91	221
Future Vol, veh/h	732	92	148	509	91	221
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	100	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	796	100	161	553	99	240
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	896	0	1671	796
Stage 1	-	-	-	-	796	-
Stage 2	-	-	-	-	875	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	753	-	105	385
Stage 1	-	-	-	-	442	-
Stage 2	-	-	-	-	406	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	753	-	~ 83	385
Mov Cap-2 Maneuver	-	-	-	-	~ 83	-
Stage 1	-	-	-	-	442	-
Stage 2	-	-	-	-	319	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		2.5		93.2	
HCM LOS	F					
Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	SET	SER
Capacity (veh/h)	83	385	753	-	-	-
HCM Lane V/C Ratio	1.192	0.624	0.214	-	-	-
HCM Control Delay (s)	250	28.7	11.1	-	-	-
HCM Lane LOS	F	D	B	-	-	-
HCM 95th %tile Q(veh)	7.2	4.1	0.8	-	-	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	17.1					
Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑	↗	↖	↑	↖	↗
Traffic Vol, veh/h	732	92	148	509	91	221
Future Vol, veh/h	732	92	148	509	91	221
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	100	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	796	100	161	553	99	240
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	896	0	1671	796
Stage 1	-	-	-	-	796	-
Stage 2	-	-	-	-	875	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	753	-	105	385
Stage 1	-	-	-	-	442	-
Stage 2	-	-	-	-	406	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	753	-	~ 83	385
Mov Cap-2 Maneuver	-	-	-	-	~ 83	-
Stage 1	-	-	-	-	442	-
Stage 2	-	-	-	-	319	-
Approach	SE		NW		NE	
HCM Control Delay, s	0		2.5		93.2	
HCM LOS	F					
Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	SET	SER
Capacity (veh/h)	83	385	753	-	-	-
HCM Lane V/C Ratio	1.192	0.624	0.214	-	-	-
HCM Control Delay (s)	250	28.7	11.1	-	-	-
HCM Lane LOS	F	D	B	-	-	-
HCM 95th %tile Q(veh)	7.2	4.1	0.8	-	-	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

HCM 6th TWSC
173: Herriman Blvd & Greenfield Ave

Future AM Peak

Intersection

Int Delay, s/veh 1199.2

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑	↑	↑	↑	↑	↑
Traffic Vol, veh/h	1639	92	148	1818	91	221
Future Vol, veh/h	1639	92	148	1818	91	221
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	100	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1782	100	161	1976	99	240

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1882
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.13
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.227
Pot Cap-1 Maneuver	-	-	316
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	316
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SE	NW	NE
HCM Control Delay, s	0	2.1	\$ 15395.8
HCM LOS			F

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	SET	SER
Capacity (veh/h)	1	101	316	-	-	-
HCM Lane V/C Ratio	98.913	2.378	0.509	-	-	-
HCM Control Delay (s)	\$ 51043.7	\$ 717.3	27.6	-	-	-
HCM Lane LOS	F	F	D	-	-	-
HCM 95th %tile Q(veh)	14.8	21.6	2.7	-	-	-

Notes

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

Intersection

Int Delay, s/veh 1199.2

Movement	SET	SER	NWL	NWT	NEL	NER
Lane Configurations	↑	↗	↖	↑	↖	↗
Traffic Vol, veh/h	1639	92	148	1818	91	221
Future Vol, veh/h	1639	92	148	1818	91	221
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	100	100	-	150	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1782	100	161	1976	99	240

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	1882
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.13
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.227
Pot Cap-1 Maneuver	-	-	316
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	316
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	SE	NW	NE
HCM Control Delay, s	0	2.1	\$ 15395.8
HCM LOS			F

Minor Lane/Major Mvmt	NELn1	NELn2	NWL	NWT	SET	SER
Capacity (veh/h)	1	101	316	-	-	-
HCM Lane V/C Ratio	98.913	2.378	0.509	-	-	-
HCM Control Delay (s)	\$ 51043.7	\$ 717.3	27.6	-	-	-
HCM Lane LOS	F	F	D	-	-	-
HCM 95th %tile Q(veh)	14.8	21.6	2.7	-	-	-

Notes

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

Intersection					
Intersection Delay, s/veh30.9					
Intersection LOS D					
Approach	SE		NW		NE
Entry Lanes	2		2		1
Conflicting Circle Lanes	2		2		2
Adj Approach Flow, veh/h	1800		842		374
Demand Flow Rate, veh/h	1854		867		385
Vehicles Circulating, veh/h	79		77		1794
Vehicles Exiting, veh/h	865		2102		139
Ped Vol Crossing Leg, #/h	0		0		0
Ped Cap Adj	1.000		1.000		1.000
Approach Delay, s/veh	13.4		6.0		171.3
Approach LOS	B		A		F
Lane	Left	Right	Left	Right	Left
Designated Moves	LT	TR	LT	TR	LR
Assumed Moves	LT	TR	LT	TR	LR
RT Channelized					
Lane Util	0.470	0.530	0.469	0.531	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.328
Entry Flow, veh/h	871	983	407	460	385
Cap Entry Lane, veh/h	1255	1328	1258	1330	309
Entry HV Adj Factor	0.971	0.970	0.972	0.970	0.971
Flow Entry, veh/h	846	954	396	446	374
Cap Entry, veh/h	1219	1289	1223	1290	300
V/C Ratio	0.694	0.740	0.324	0.346	1.246
Control Delay, s/veh	12.8	14.0	6.0	6.0	171.3
LOS	B	B	A	A	F
95th %tile Queue, veh	6	7	1	2	17

Intersection					
Intersection Delay, s/veh30.7					
Intersection LOS D					
Approach	SE		NW		NE
Entry Lanes	2		2		1
Conflicting Circle Lanes	2		2		2
Adj Approach Flow, veh/h	1882		2137		339
Demand Flow Rate, veh/h	1938		2201		349
Vehicles Circulating, veh/h	166		102		1835
Vehicles Exiting, veh/h	2137		2082		269
Ped Vol Crossing Leg, #/h	0		0		0
Ped Cap Adj	1.000		1.000		1.000
Approach Delay, s/veh	18.9		23.0		144.9
Approach LOS	C		C		F
Lane	Left	Right	Left	Right	Left
Designated Moves	LT	TR	LT	TR	LR
Assumed Moves	LT	TR	LT	TR	LR
RT Channelized					
Lane Util	0.470	0.530	0.470	0.530	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.328
Entry Flow, veh/h	911	1027	1034	1167	349
Cap Entry Lane, veh/h	1159	1233	1229	1302	298
Entry HV Adj Factor	0.971	0.971	0.971	0.970	0.971
Flow Entry, veh/h	884	997	1004	1132	339
Cap Entry, veh/h	1125	1197	1194	1264	290
V/C Ratio	0.786	0.833	0.841	0.896	1.170
Control Delay, s/veh	17.7	20.0	20.7	25.1	144.9
LOS	C	C	C	D	F
95th %tile Queue, veh	9	11	11	14	15

Intersection	
Intersection Delay, s/veh	22.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	40	264	49	34	225	6	50	254	48	6	147	37
Future Vol, veh/h	40	264	49	34	225	6	50	254	48	6	147	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	43	287	53	37	245	7	54	276	52	7	160	40
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	25.9	19.3	26.2	15.6
HCM LOS	D	C	D	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	11%	13%	3%
Vol Thru, %	72%	75%	85%	77%
Vol Right, %	14%	14%	2%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	352	353	265	190
LT Vol	50	40	34	6
Through Vol	254	264	225	147
RT Vol	48	49	6	37
Lane Flow Rate	383	384	288	207
Geometry Grp	1	1	1	1
Degree of Util (X)	0.728	0.725	0.57	0.42
Departure Headway (Hd)	6.848	6.8	7.121	7.326
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	528	529	504	489
Service Time	4.904	4.856	5.183	5.397
HCM Lane V/C Ratio	0.725	0.726	0.571	0.423
HCM Control Delay	26.2	25.9	19.3	15.6
HCM Lane LOS	D	D	C	C
HCM 95th-tile Q	6	5.9	3.5	2.1

Intersection	
Intersection Delay, s/veh	22.8
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	40	264	49	34	225	6	50	254	48	6	147	37
Future Vol, veh/h	40	264	49	34	225	6	50	254	48	6	147	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	43	287	53	37	245	7	54	276	52	7	160	40
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	25.9	19.3	26.2	15.6
HCM LOS	D	C	D	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	14%	11%	13%	3%
Vol Thru, %	72%	75%	85%	77%
Vol Right, %	14%	14%	2%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	352	353	265	190
LT Vol	50	40	34	6
Through Vol	254	264	225	147
RT Vol	48	49	6	37
Lane Flow Rate	383	384	288	207
Geometry Grp	1	1	1	1
Degree of Util (X)	0.728	0.725	0.57	0.42
Departure Headway (Hd)	6.848	6.8	7.121	7.326
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	528	529	504	489
Service Time	4.904	4.856	5.183	5.397
HCM Lane V/C Ratio	0.725	0.726	0.571	0.423
HCM Control Delay	26.2	25.9	19.3	15.6
HCM Lane LOS	D	D	C	C
HCM 95th-tile Q	6	5.9	3.5	2.1

Intersection	
Intersection Delay, s/veh	60.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	45	328	49	38	242	10	107	271	54	18	153	40
Future Vol, veh/h	45	328	49	38	242	10	107	271	54	18	153	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	49	357	53	41	263	11	116	295	59	20	166	43
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	73.3	33.1	84.8	23.3
HCM LOS	F	D	F	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	11%	13%	9%
Vol Thru, %	63%	78%	83%	73%
Vol Right, %	12%	12%	3%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	432	422	290	211
LT Vol	107	45	38	18
Through Vol	271	328	242	153
RT Vol	54	49	10	40
Lane Flow Rate	470	459	315	229
Geometry Grp	1	1	1	1
Degree of Util (X)	1.048	1.005	0.741	0.562
Departure Headway (Hd)	8.031	8.207	8.817	9.178
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	451	445	413	397
Service Time	6.131	6.207	6.817	7.178
HCM Lane V/C Ratio	1.042	1.031	0.763	0.577
HCM Control Delay	84.8	73.3	33.1	23.3
HCM Lane LOS	F	F	D	C
HCM 95th-tile Q	14.6	13	5.9	3.3

Intersection	
Intersection Delay, s/veh	60.6
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	45	328	49	38	242	10	107	271	54	18	153	40
Future Vol, veh/h	45	328	49	38	242	10	107	271	54	18	153	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	49	357	53	41	263	11	116	295	59	20	166	43
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	73.3	33.1	84.8	23.3
HCM LOS	F	D	F	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	11%	13%	9%
Vol Thru, %	63%	78%	83%	73%
Vol Right, %	12%	12%	3%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	432	422	290	211
LT Vol	107	45	38	18
Through Vol	271	328	242	153
RT Vol	54	49	10	40
Lane Flow Rate	470	459	315	229
Geometry Grp	1	1	1	1
Degree of Util (X)	1.048	1.005	0.741	0.562
Departure Headway (Hd)	8.031	8.207	8.817	9.178
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	451	445	413	397
Service Time	6.131	6.207	6.817	7.178
HCM Lane V/C Ratio	1.042	1.031	0.763	0.577
HCM Control Delay	84.8	73.3	33.1	23.3
HCM Lane LOS	F	F	D	C
HCM 95th-tile Q	14.6	13	5.9	3.3

Intersection				
Intersection Delay, s/veh	5.8			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	181	328	133	285
Demand Flow Rate, veh/h	187	338	137	293
Vehicles Circulating, veh/h	269	131	135	378
Vehicles Exiting, veh/h	402	141	321	91
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.2	5.7	4.1	7.3
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	187	338	137	293
Cap Entry Lane, veh/h	1049	1207	1202	938
Entry HV Adj Factor	0.970	0.971	0.970	0.972
Flow Entry, veh/h	181	328	133	285
Cap Entry, veh/h	1017	1172	1166	913
V/C Ratio	0.178	0.280	0.114	0.312
Control Delay, s/veh	5.2	5.7	4.1	7.3
LOS	A	A	A	A
95th %tile Queue, veh	1	1	0	1

Intersection				
Intersection Delay, s/veh	9.4			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	459	315	470	229
Demand Flow Rate, veh/h	473	324	484	236
Vehicles Circulating, veh/h	234	473	439	432
Vehicles Exiting, veh/h	434	450	268	365
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.2	8.9	11.9	7.0
Approach LOS	A	A	B	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	473	324	484	236
Cap Entry Lane, veh/h	1087	852	882	888
Entry HV Adj Factor	0.971	0.973	0.971	0.970
Flow Entry, veh/h	459	315	470	229
Cap Entry, veh/h	1055	828	857	862
V/C Ratio	0.435	0.380	0.549	0.266
Control Delay, s/veh	8.2	8.9	11.9	7.0
LOS	A	A	B	A
95th %tile Queue, veh	2	2	3	1

Intersection						
Intersection Delay, s/veh 11.6						
Intersection LOS B						
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	2	2	2		2	
Adj Approach Flow, veh/h	360	156	1315		847	
Demand Flow Rate, veh/h	371	161	1355		872	
Vehicles Circulating, veh/h	808	1430	320		262	
Vehicles Exiting, veh/h	326	245	859		1329	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	13.2	16.1	13.1		7.6	
Approach LOS	B	C	B		A	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	371	161	637	718	410	462
Cap Entry Lane, veh/h	715	421	1006	1082	1061	1137
Entry HV Adj Factor	0.972	0.971	0.970	0.971	0.971	0.971
Flow Entry, veh/h	360	156	618	697	398	449
Cap Entry, veh/h	694	409	976	1050	1029	1104
V/C Ratio	0.519	0.382	0.633	0.664	0.387	0.406
Control Delay, s/veh	13.2	16.1	13.0	13.2	7.6	7.5
LOS	B	C	B	B	A	A
95th %tile Queue, veh	3	2	5	5	2	2

Intersection						
Intersection Delay, s/veh 11.6						
Intersection LOS B						
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	2	2	2		2	
Adj Approach Flow, veh/h	360	156	1315		847	
Demand Flow Rate, veh/h	371	161	1355		872	
Vehicles Circulating, veh/h	808	1430	320		262	
Vehicles Exiting, veh/h	326	245	859		1329	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	13.2	16.1	13.1		7.6	
Approach LOS	B	C	B		A	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	371	161	637	718	410	462
Cap Entry Lane, veh/h	715	421	1006	1082	1061	1137
Entry HV Adj Factor	0.972	0.971	0.970	0.971	0.971	0.971
Flow Entry, veh/h	360	156	618	697	398	449
Cap Entry, veh/h	694	409	976	1050	1029	1104
V/C Ratio	0.519	0.382	0.633	0.664	0.387	0.406
Control Delay, s/veh	13.2	16.1	13.0	13.2	7.6	7.5
LOS	B	C	B	B	A	A
95th %tile Queue, veh	3	2	5	5	2	2

Intersection						
Intersection Delay, s/veh50.7						
Intersection LOS F						
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	2	2	2		2	
Adj Approach Flow, veh/h	536	164	2111		1080	
Demand Flow Rate, veh/h	553	170	2174		1113	
Vehicles Circulating, veh/h	1040	2172	349		464	
Vehicles Exiting, veh/h	537	351	1244		1878	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	51.5	59.0	69.1		13.1	
Approach LOS	F	F	F		B	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	553	170	1022	1152	523	590
Cap Entry Lane, veh/h	587	224	979	1056	881	957
Entry HV Adj Factor	0.970	0.966	0.971	0.971	0.971	0.970
Flow Entry, veh/h	536	164	992	1119	508	572
Cap Entry, veh/h	569	217	950	1025	855	929
V/C Ratio	0.943	0.759	1.044	1.091	0.594	0.616
Control Delay, s/veh	51.5	59.0	61.9	75.4	13.1	13.0
LOS	F	F	F	F	B	B
95th %tile Queue, veh	12	5	22	27	4	4

Intersection						
Intersection Delay, s/veh50.7						
Intersection LOS F						
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	2	2	2		2	
Adj Approach Flow, veh/h	536	164	2111		1080	
Demand Flow Rate, veh/h	553	170	2174		1113	
Vehicles Circulating, veh/h	1040	2172	349		464	
Vehicles Exiting, veh/h	537	351	1244		1878	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	51.5	59.0	69.1		13.1	
Approach LOS	F	F	F		B	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	553	170	1022	1152	523	590
Cap Entry Lane, veh/h	587	224	979	1056	881	957
Entry HV Adj Factor	0.970	0.966	0.971	0.971	0.971	0.970
Flow Entry, veh/h	536	164	992	1119	508	572
Cap Entry, veh/h	569	217	950	1025	855	929
V/C Ratio	0.943	0.759	1.044	1.091	0.594	0.616
Control Delay, s/veh	51.5	59.0	61.9	75.4	13.1	13.0
LOS	F	F	F	F	B	B
95th %tile Queue, veh	12	5	22	27	4	4

Intersection

Intersection Delay, s/veh 9.4

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰			↰	↱		↰	
Traffic Vol, veh/h	15	188	18	8	122	6	22	14	8	7	9	26
Future Vol, veh/h	15	188	18	8	122	6	22	14	8	7	9	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	16	204	20	9	133	7	24	15	9	8	10	28
Number of Lanes	0	1	1	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	2	2	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	1	1	2
HCM Control Delay	9.7	9.4	8.8	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	61%	0%	7%	0%	6%	17%
Vol Thru, %	39%	0%	93%	0%	90%	21%
Vol Right, %	0%	100%	0%	100%	4%	62%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	36	8	203	18	136	42
LT Vol	22	0	15	0	8	7
Through Vol	14	0	188	0	122	9
RT Vol	0	8	0	18	6	26
Lane Flow Rate	39	9	221	20	148	46
Geometry Grp	5	5	5	5	4b	4b
Degree of Util (X)	0.064	0.012	0.305	0.023	0.208	0.067
Departure Headway (Hd)	5.875	4.861	4.971	4.231	5.07	5.249
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	610	735	724	846	708	682
Service Time	3.612	2.598	2.696	1.956	3.099	3.287
HCM Lane V/C Ratio	0.064	0.012	0.305	0.024	0.209	0.067
HCM Control Delay	9	7.7	9.9	7.1	9.4	8.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.2	0	1.3	0.1	0.8	0.2

Intersection

Intersection Delay, s/veh 9.4

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰			↰	↱		↰	
Traffic Vol, veh/h	15	188	18	8	122	6	22	14	8	7	9	26
Future Vol, veh/h	15	188	18	8	122	6	22	14	8	7	9	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	16	204	20	9	133	7	24	15	9	8	10	28
Number of Lanes	0	1	1	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	2	2	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	1	1	2
HCM Control Delay	9.7	9.4	8.8	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	61%	0%	7%	0%	6%	17%
Vol Thru, %	39%	0%	93%	0%	90%	21%
Vol Right, %	0%	100%	0%	100%	4%	62%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	36	8	203	18	136	42
LT Vol	22	0	15	0	8	7
Through Vol	14	0	188	0	122	9
RT Vol	0	8	0	18	6	26
Lane Flow Rate	39	9	221	20	148	46
Geometry Grp	5	5	5	5	4b	4b
Degree of Util (X)	0.064	0.012	0.305	0.023	0.208	0.067
Departure Headway (Hd)	5.875	4.861	4.971	4.231	5.07	5.249
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	610	735	724	846	708	682
Service Time	3.612	2.598	2.696	1.956	3.099	3.287
HCM Lane V/C Ratio	0.064	0.012	0.305	0.024	0.209	0.067
HCM Control Delay	9	7.7	9.9	7.1	9.4	8.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.2	0	1.3	0.1	0.8	0.2

Intersection

Intersection Delay, s/veh 10.6

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰			↰	↱		↰	
Traffic Vol, veh/h	27	188	18	8	122	114	22	14	8	59	9	33
Future Vol, veh/h	27	188	18	8	122	114	22	14	8	59	9	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	29	204	20	9	133	124	24	15	9	64	10	36
Number of Lanes	0	1	1	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	2	2	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	1	1	2
HCM Control Delay	10.6	11.1	9.3	10.2
HCM LOS	B	B	A	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	61%	0%	13%	0%	3%	58%
Vol Thru, %	39%	0%	87%	0%	50%	9%
Vol Right, %	0%	100%	0%	100%	47%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	36	8	215	18	244	101
LT Vol	22	0	27	0	8	59
Through Vol	14	0	188	0	122	9
RT Vol	0	8	0	18	114	33
Lane Flow Rate	39	9	234	20	265	110
Geometry Grp	5	5	5	5	4b	4b
Degree of Util (X)	0.069	0.013	0.345	0.025	0.373	0.178
Departure Headway (Hd)	6.31	5.292	5.322	4.554	5.058	5.841
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	563	669	673	780	708	609
Service Time	4.104	3.085	3.084	2.316	3.12	3.925
HCM Lane V/C Ratio	0.069	0.013	0.348	0.026	0.374	0.181
HCM Control Delay	9.6	8.2	10.9	7.4	11.1	10.2
HCM Lane LOS	A	A	B	A	B	B
HCM 95th-tile Q	0.2	0	1.5	0.1	1.7	0.6

Intersection

Intersection Delay, s/veh 10.6

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰			↰	↱		↰	
Traffic Vol, veh/h	27	188	18	8	122	114	22	14	8	59	9	33
Future Vol, veh/h	27	188	18	8	122	114	22	14	8	59	9	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	29	204	20	9	133	124	24	15	9	64	10	36
Number of Lanes	0	1	1	0	1	0	0	1	1	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	2	1	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	2	2	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	1	1	2
HCM Control Delay	10.6	11.1	9.3	10.2
HCM LOS	B	B	A	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	SBLn1
Vol Left, %	61%	0%	13%	0%	3%	58%
Vol Thru, %	39%	0%	87%	0%	50%	9%
Vol Right, %	0%	100%	0%	100%	47%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	36	8	215	18	244	101
LT Vol	22	0	27	0	8	59
Through Vol	14	0	188	0	122	9
RT Vol	0	8	0	18	114	33
Lane Flow Rate	39	9	234	20	265	110
Geometry Grp	5	5	5	5	4b	4b
Degree of Util (X)	0.069	0.013	0.345	0.025	0.373	0.178
Departure Headway (Hd)	6.31	5.292	5.322	4.554	5.058	5.841
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	563	669	673	780	708	609
Service Time	4.104	3.085	3.084	2.316	3.12	3.925
HCM Lane V/C Ratio	0.069	0.013	0.348	0.026	0.374	0.181
HCM Control Delay	9.6	8.2	10.9	7.4	11.1	10.2
HCM Lane LOS	A	A	B	A	B	B
HCM 95th-tile Q	0.2	0	1.5	0.1	1.7	0.6

Intersection

Intersection Delay, s/veh 10.2

Intersection LOS B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	75	180	188	64	78	53
Future Vol, veh/h	75	180	188	64	78	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	82	196	204	70	85	58
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	10.1	10.9	8.9
HCM LOS	B	B	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	75%	29%	0%
Vol Thru, %	25%	0%	60%
Vol Right, %	0%	71%	40%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	252	255	131
LT Vol	188	75	0
Through Vol	64	0	78
RT Vol	0	180	53
Lane Flow Rate	274	277	142
Geometry Grp	1	1	1
Degree of Util (X)	0.375	0.353	0.186
Departure Headway (Hd)	4.923	4.582	4.706
Convergence, Y/N	Yes	Yes	Yes
Cap	726	782	756
Service Time	2.981	2.632	2.771
HCM Lane V/C Ratio	0.377	0.354	0.188
HCM Control Delay	10.9	10.1	8.9
HCM Lane LOS	B	B	A
HCM 95th-tile Q	1.7	1.6	0.7

Intersection

Intersection Delay, s/veh 10.2

Intersection LOS B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	75	180	188	64	78	53
Future Vol, veh/h	75	180	188	64	78	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	82	196	204	70	85	58
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach Right NB			EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	10.1	10.9	8.9
HCM LOS	B	B	A

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	75%	29%	0%
Vol Thru, %	25%	0%	60%
Vol Right, %	0%	71%	40%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	252	255	131
LT Vol	188	75	0
Through Vol	64	0	78
RT Vol	0	180	53
Lane Flow Rate	274	277	142
Geometry Grp	1	1	1
Degree of Util (X)	0.375	0.353	0.186
Departure Headway (Hd)	4.923	4.582	4.706
Convergence, Y/N	Yes	Yes	Yes
Cap	726	782	756
Service Time	2.981	2.632	2.771
HCM Lane V/C Ratio	0.377	0.354	0.188
HCM Control Delay	10.9	10.1	8.9
HCM Lane LOS	B	B	A
HCM 95th-tile Q	1.7	1.6	0.7

Intersection

Intersection Delay, s/veh51.4

Intersection LOS F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	78	344	546	65	79	55
Future Vol, veh/h	78	344	546	65	79	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	85	374	593	71	86	60
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach RightNB			EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	22.1	80.4	11.4
HCM LOS	C	F	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	89%	18%	0%
Vol Thru, %	11%	0%	59%
Vol Right, %	0%	82%	41%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	611	422	134
LT Vol	546	78	0
Through Vol	65	0	79
RT Vol	0	344	55
Lane Flow Rate	664	459	146
Geometry Grp	1	1	1
Degree of Util (X)	1.072	0.712	0.249
Departure Headway (Hd)	5.811	5.888	6.322
Convergence, Y/N	Yes	Yes	Yes
Cap	631	619	571
Service Time	3.821	3.888	4.322
HCM Lane V/C Ratio	1.052	0.742	0.256
HCM Control Delay	80.4	22.1	11.4
HCM Lane LOS	F	C	B
HCM 95th-tile Q	18.8	5.9	1

Intersection

Intersection Delay, s/veh51.4

Intersection LOS F

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	78	344	546	65	79	55
Future Vol, veh/h	78	344	546	65	79	55
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	85	374	593	71	86	60
Number of Lanes	1	0	0	1	1	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	1	1
Conflicting Approach Left SB		EB	
Conflicting Lanes Left	1	1	0
Conflicting Approach RightNB			EB
Conflicting Lanes Right	1	0	1
HCM Control Delay	22.1	80.4	11.4
HCM LOS	C	F	B

Lane	NBLn1	EBLn1	SBLn1
Vol Left, %	89%	18%	0%
Vol Thru, %	11%	0%	59%
Vol Right, %	0%	82%	41%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	611	422	134
LT Vol	546	78	0
Through Vol	65	0	79
RT Vol	0	344	55
Lane Flow Rate	664	459	146
Geometry Grp	1	1	1
Degree of Util (X)	1.072	0.712	0.249
Departure Headway (Hd)	5.811	5.888	6.322
Convergence, Y/N	Yes	Yes	Yes
Cap	631	619	571
Service Time	3.821	3.888	4.322
HCM Lane V/C Ratio	1.052	0.742	0.256
HCM Control Delay	80.4	22.1	11.4
HCM Lane LOS	F	C	B
HCM 95th-tile Q	18.8	5.9	1

Intersection			
Intersection Delay, s/veh	5.0		
Intersection LOS	A		
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	380	94	129
Demand Flow Rate, veh/h	392	97	133
Vehicles Circulating, veh/h	99	18	61
Vehicles Exiting, veh/h	95	473	54
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	5.9	3.3	3.7
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	392	97	133
Cap Entry Lane, veh/h	1247	1355	1297
Entry HV Adj Factor	0.969	0.969	0.971
Flow Entry, veh/h	380	94	129
Cap Entry, veh/h	1209	1312	1259
V/C Ratio	0.314	0.072	0.103
Control Delay, s/veh	5.9	3.3	3.7
LOS	A	A	A
95th %tile Queue, veh	1	0	0

Intersection			
Intersection Delay, s/veh 8.0			
Intersection LOS A			
Approach	EB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	459	664	146
Demand Flow Rate, veh/h	473	684	151
Vehicles Circulating, veh/h	89	88	611
Vehicles Exiting, veh/h	673	474	161
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	6.6	9.1	7.3
Approach LOS	A	A	A
Lane	Left	Left	Left
Designated Moves	LR	LT	TR
Assumed Moves	LR	LT	TR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	473	684	151
Cap Entry Lane, veh/h	1260	1261	740
Entry HV Adj Factor	0.970	0.971	0.970
Flow Entry, veh/h	459	664	146
Cap Entry, veh/h	1223	1224	717
V/C Ratio	0.375	0.542	0.204
Control Delay, s/veh	6.6	9.1	7.3
LOS	A	A	A
95th %tile Queue, veh	2	3	1

HCM 6th Signalized Intersection Summary

178: SR 37 & Greenfield Ave

Existing AM Peak
12/11/2023



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	201	1357	143	339	918	116	199	518	222	119	340	523
Future Volume (veh/h)	201	1357	143	339	918	116	199	518	222	119	340	523
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			
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	218	1475	0	368	998	0	216	563	241	129	370	568
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	218	937		184	870		357	731	814	271	677	738
Arrive On Green	0.12	0.27	0.00	0.10	0.25	0.00	0.09	0.39	0.39	0.06	0.36	0.36
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	218	1475	0	368	998	0	216	563	241	129	370	568
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	13.0	28.0	0.0	11.0	26.0	0.0	7.8	27.8	9.2	4.7	16.7	31.6
Cycle Q Clear(g_c), s	13.0	28.0	0.0	11.0	26.0	0.0	7.8	27.8	9.2	4.7	16.7	31.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	937		184	870		357	731	814	271	677	738
V/C Ratio(X)	1.00	1.57		1.99	1.15		0.60	0.77	0.30	0.48	0.55	0.77
Avail Cap(c_a), veh/h	218	937		184	870		409	1356	1343	424	1409	1358
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	38.7	0.0	47.2	39.7	0.0	19.3	27.8	14.5	22.1	26.6	23.3
Incr Delay (d2), s/veh	60.9	263.6	0.0	466.4	79.6	0.0	2.0	1.7	0.2	1.3	0.7	1.7
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	0.1	45.5	0.0	28.5	20.0	0.0	3.2	12.2	3.1	2.0	7.2	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	107.1	302.3	0.0	513.6	119.3	0.0	21.2	29.5	14.7	23.4	27.3	25.0
LnGrp LOS	F	F		F	F		C	C	B	C	C	C
Approach Vol, veh/h	1693				1366				1020			
Approach Delay, s/veh	277.2				225.5				24.3			
Approach LOS	F				F				C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.0	33.0	10.8	46.5	17.0	31.0	13.9	43.4				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	28.0	28.0	16.0	77.0	13.0	26.0	13.0	80.0				
Max Q Clear Time (g_c+Tb), s	30.0	30.0	6.7	29.8	15.0	28.0	9.8	33.6				
Green Ext Time (p_c), s	0.0	0.0	0.2	5.0	0.0	0.0	0.2	4.8				

Intersection Summary

HCM 6th Ctrl Delay 161.2
HCM 6th LOS F

Notes

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

HCM 6th Signalized Intersection Summary

178: SR 37 & Greenfield Ave

Existing PM Peak
12/11/2023



Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	201	1357	143	339	918	116	199	518	222	119	340	523
Future Volume (veh/h)	201	1357	143	339	918	116	199	518	222	119	340	523
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			
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	218	1475	0	368	998	0	216	563	241	129	370	568
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	218	937		184	870		357	731	814	271	677	738
Arrive On Green	0.12	0.27	0.00	0.10	0.25	0.00	0.09	0.39	0.39	0.06	0.36	0.36
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	218	1475	0	368	998	0	216	563	241	129	370	568
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	13.0	28.0	0.0	11.0	26.0	0.0	7.8	27.8	9.2	4.7	16.7	31.6
Cycle Q Clear(g_c), s	13.0	28.0	0.0	11.0	26.0	0.0	7.8	27.8	9.2	4.7	16.7	31.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	218	937		184	870		357	731	814	271	677	738
V/C Ratio(X)	1.00	1.57		1.99	1.15		0.60	0.77	0.30	0.48	0.55	0.77
Avail Cap(c_a), veh/h	218	937		184	870		409	1356	1343	424	1409	1358
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.2	38.7	0.0	47.2	39.7	0.0	19.3	27.8	14.5	22.1	26.6	23.3
Incr Delay (d2), s/veh	60.9	263.6	0.0	466.4	79.6	0.0	2.0	1.7	0.2	1.3	0.7	1.7
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	0.1	45.5	0.0	28.5	20.0	0.0	3.2	12.2	3.1	2.0	7.2	11.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	107.1	302.3	0.0	513.6	119.3	0.0	21.2	29.5	14.7	23.4	27.3	25.0
LnGrp LOS	F	F		F	F		C	C	B	C	C	C
Approach Vol, veh/h	1693				1366				1020			
Approach Delay, s/veh	277.2				225.5				24.3			
Approach LOS	F				F				C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	33.0	10.8	46.5	17.0	31.0	13.9	43.4				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	1.0	28.0	16.0	77.0	13.0	26.0	13.0	80.0				
Max Q Clear Time (g_c+1/3), s	1.0	30.0	6.7	29.8	15.0	28.0	9.8	33.6				
Green Ext Time (p_c), s	0.0	0.0	0.2	5.0	0.0	0.0	0.2	4.8				

Intersection Summary

HCM 6th Ctrl Delay 161.2
HCM 6th LOS F

Notes

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

HCM 6th Signalized Intersection Summary 178: SR 37 & Greenfield Ave

Future AM Peak

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	217	1767	335	689	1042	116	199	1401	246	235	1632	1406
Future Volume (veh/h)	217	1767	335	689	1042	116	199	1401	246	235	1632	1406
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	236	1921	0	749	1133	0	216	1523	267	255	1774	1528
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	212	893		318	1105		142	717	797	154	730	902
Arrive On Green	0.12	0.25	0.00	0.18	0.31	0.00	0.05	0.39	0.39	0.06	0.39	0.39
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	236	1921	0	749	1133	0	216	1523	267	255	1774	1528
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	18.0	38.0	0.0	27.0	47.0	0.0	8.0	58.0	15.1	9.0	59.0	59.0
Cycle Q Clear(g_c), s	18.0	38.0	0.0	27.0	47.0	0.0	8.0	58.0	15.1	9.0	59.0	59.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	893		318	1105		142	717	797	154	730	902
V/C Ratio(X)	1.11	2.15		2.35	1.03		1.52	2.12	0.34	1.66	2.43	1.69
Avail Cap(c_a), veh/h	212	893		318	1105		142	717	797	154	730	902
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.0	56.0	0.0	61.5	51.5	0.0	41.3	46.0	22.0	43.2	45.5	32.0
Incr Delay (d2), s/veh	95.4	521.6	0.0	619.3	33.8	0.0	265.8	509.9	0.2	322.0	648.0	317.5
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	18.5	80.9	0.0	66.4	25.0	0.0	13.6	127.9	5.6	17.1	157.7	110.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	161.4	577.6	0.0	680.8	85.3	0.0	307.1	555.9	22.2	365.2	693.5	349.5
LnGrp LOS	F	F		F	F		F	F	C	F	F	F
Approach Vol, veh/h	2157			1882			2006			3557		
Approach Delay, s/veh	532.1			322.3			458.1			522.2		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.0	43.0	13.0	63.0	22.0	52.0	12.0	64.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	27.0	38.0	9.0	58.0	18.0	47.0	8.0	59.0				
Max Q Clear Time (g_c+29.0), s	29.0	40.0	11.0	60.0	20.0	49.0	10.0	61.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	471.8											
HCM 6th LOS	F											

Notes

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

HCM 6th Signalized Intersection Summary 178: SR 37 & Greenfield Ave

Future PM Peak

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	217	1767	335	689	1042	116	199	1401	246	235	1632	1406
Future Volume (veh/h)	217	1767	335	689	1042	116	199	1401	246	235	1632	1406
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	236	1921	0	749	1133	0	216	1523	267	255	1774	1528
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	212	893		318	1105		142	717	797	154	730	902
Arrive On Green	0.12	0.25	0.00	0.18	0.31	0.00	0.05	0.39	0.39	0.06	0.39	0.39
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	236	1921	0	749	1133	0	216	1523	267	255	1774	1528
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	18.0	38.0	0.0	27.0	47.0	0.0	8.0	58.0	15.1	9.0	59.0	59.0
Cycle Q Clear(g_c), s	18.0	38.0	0.0	27.0	47.0	0.0	8.0	58.0	15.1	9.0	59.0	59.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	893		318	1105		142	717	797	154	730	902
V/C Ratio(X)	1.11	2.15		2.35	1.03		1.52	2.12	0.34	1.66	2.43	1.69
Avail Cap(c_a), veh/h	212	893		318	1105		142	717	797	154	730	902
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	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.0	56.0	0.0	61.5	51.5	0.0	41.3	46.0	22.0	43.2	45.5	32.0
Incr Delay (d2), s/veh	95.4	521.6	0.0	619.3	33.8	0.0	265.8	509.9	0.2	322.0	648.0	317.5
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	18.5	80.9	0.0	66.4	25.0	0.0	13.6	127.9	5.6	17.1	157.7	110.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	161.4	577.6	0.0	680.8	85.3	0.0	307.1	555.9	22.2	365.2	693.5	349.5
LnGrp LOS	F	F		F	F		F	F	C	F	F	F
Approach Vol, veh/h	2157			1882			2006			3557		
Approach Delay, s/veh	532.1			322.3			458.1			522.2		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.0	43.0	13.0	63.0	22.0	52.0	12.0	64.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	27.0	38.0	9.0	58.0	18.0	47.0	8.0	59.0				
Max Q Clear Time (g_c+29.0), s	29.0	40.0	11.0	60.0	20.0	49.0	10.0	61.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	471.8											
HCM 6th LOS	F											

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	16	411	77	8	359	0	39	37	9	0	25	8
Future Vol, veh/h	16	411	77	8	359	0	39	37	9	0	25	8
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	17	447	84	9	390	0	42	40	10	0	27	9
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	390	0	0	531	0	0	949	931	489	956	973	390
Stage 1	-	-	-	-	-	-	523	523	-	408	408	-
Stage 2	-	-	-	-	-	-	426	408	-	548	565	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1163	-	-	1031	-	-	239	266	577	237	251	656
Stage 1	-	-	-	-	-	-	535	529	-	618	595	-
Stage 2	-	-	-	-	-	-	604	595	-	519	506	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1163	-	-	1031	-	-	211	257	577	200	243	656
Mov Cap-2 Maneuver	-	-	-	-	-	-	211	257	-	200	243	-
Stage 1	-	-	-	-	-	-	524	518	-	605	588	-
Stage 2	-	-	-	-	-	-	562	588	-	461	495	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.2			28			19.3		
HCM LOS							D			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	247	1163	-	-	1031	-	-	287				
HCM Lane V/C Ratio	0.374	0.015	-	-	0.008	-	-	0.125				
HCM Control Delay (s)	28	8.1	0	-	8.5	0	-	19.3				
HCM Lane LOS	D	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	1.7	0	-	-	0	-	-	0.4				

Intersection												
Int Delay, s/veh	3.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	411	77	8	359	0	39	37	9	0	25	8
Future Vol, veh/h	16	411	77	8	359	0	39	37	9	0	25	8
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	17	447	84	9	390	0	42	40	10	0	27	9
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	390	0	0	531	0	0	949	931	489	956	973	390
Stage 1	-	-	-	-	-	-	523	523	-	408	408	-
Stage 2	-	-	-	-	-	-	426	408	-	548	565	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1163	-	-	1031	-	-	239	266	577	237	251	656
Stage 1	-	-	-	-	-	-	535	529	-	618	595	-
Stage 2	-	-	-	-	-	-	604	595	-	519	506	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1163	-	-	1031	-	-	211	257	577	200	243	656
Mov Cap-2 Maneuver	-	-	-	-	-	-	211	257	-	200	243	-
Stage 1	-	-	-	-	-	-	524	518	-	605	588	-
Stage 2	-	-	-	-	-	-	562	588	-	461	495	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.2			28			19.3		
HCM LOS							D			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	247	1163	-	-	1031	-	-	287				
HCM Lane V/C Ratio	0.374	0.015	-	-	0.008	-	-	0.125				
HCM Control Delay (s)	28	8.1	0	-	8.5	0	-	19.3				
HCM Lane LOS	D	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	1.7	0	-	-	0	-	-	0.4				

Intersection												
Int Delay, s/veh	7.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	489	82	41	417	0	41	43	43	0	27	12
Future Vol, veh/h	23	489	82	41	417	0	41	43	43	0	27	12
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	25	532	89	45	453	0	45	47	47	0	29	13
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	453	0	0	621	0	0	1191	1170	577	1217	1214	453
Stage 1	-	-	-	-	-	-	627	627	-	543	543	-
Stage 2	-	-	-	-	-	-	564	543	-	674	671	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1102	-	-	955	-	-	163	192	514	157	181	605
Stage 1	-	-	-	-	-	-	470	475	-	522	518	-
Stage 2	-	-	-	-	-	-	509	518	-	443	453	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1102	-	-	955	-	-	128	174	514	105	164	605
Mov Cap-2 Maneuver	-	-	-	-	-	-	128	174	-	105	164	-
Stage 1	-	-	-	-	-	-	454	458	-	504	485	-
Stage 2	-	-	-	-	-	-	438	485	-	349	437	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.8			58.7			26.3		
HCM LOS							F			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	195	1102	-	-	955	-	-	211				
HCM Lane V/C Ratio	0.708	0.023	-	-	0.047	-	-	0.201				
HCM Control Delay (s)	58.7	8.3	0	-	9	0	-	26.3				
HCM Lane LOS	F	A	A	-	A	A	-	D				
HCM 95th %tile Q(veh)	4.5	0.1	-	-	0.1	-	-	0.7				

Intersection												
Int Delay, s/veh	7.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	23	489	82	41	417	0	41	43	43	0	27	12
Future Vol, veh/h	23	489	82	41	417	0	41	43	43	0	27	12
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	25	532	89	45	453	0	45	47	47	0	29	13
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	453	0	0	621	0	0	1191	1170	577	1217	1214	453
Stage 1	-	-	-	-	-	-	627	627	-	543	543	-
Stage 2	-	-	-	-	-	-	564	543	-	674	671	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1102	-	-	955	-	-	163	192	514	157	181	605
Stage 1	-	-	-	-	-	-	470	475	-	522	518	-
Stage 2	-	-	-	-	-	-	509	518	-	443	453	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1102	-	-	955	-	-	128	174	514	105	164	605
Mov Cap-2 Maneuver	-	-	-	-	-	-	128	174	-	105	164	-
Stage 1	-	-	-	-	-	-	454	458	-	504	485	-
Stage 2	-	-	-	-	-	-	438	485	-	349	437	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.3			0.8			58.7			26.3		
HCM LOS							F			D		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	195	1102	-	-	955	-	-	211				
HCM Lane V/C Ratio	0.708	0.023	-	-	0.047	-	-	0.201				
HCM Control Delay (s)	58.7	8.3	0	-	9	0	-	26.3				
HCM Lane LOS	F	A	A	-	A	A	-	D				
HCM 95th %tile Q(veh)	4.5	0.1	-	-	0.1	-	-	0.7				

Intersection				
Intersection Delay, s/veh 6.4				
Intersection LOS A				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	311	502	127	33
Demand Flow Rate, veh/h	320	518	131	34
Vehicles Circulating, veh/h	109	131	294	622
Vehicles Exiting, veh/h	547	294	135	27
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.3	7.5	4.8	5.5
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	320	518	131	34
Cap Entry Lane, veh/h	1235	1207	1022	732
Entry HV Adj Factor	0.971	0.970	0.973	0.981
Flow Entry, veh/h	311	502	127	33
Cap Entry, veh/h	1199	1171	995	718
V/C Ratio	0.259	0.429	0.128	0.046
Control Delay, s/veh	5.3	7.5	4.8	5.5
LOS	A	A	A	A
95th %tile Queue, veh	1	2	0	0

Intersection				
Intersection Delay, s/veh 7.8				
Intersection LOS A				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	646	498	139	42
Demand Flow Rate, veh/h	666	513	142	43
Vehicles Circulating, veh/h	76	120	574	559
Vehicles Exiting, veh/h	526	596	168	74
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.6	7.3	6.8	5.3
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	666	513	142	43
Cap Entry Lane, veh/h	1277	1221	768	780
Entry HV Adj Factor	0.970	0.972	0.976	0.980
Flow Entry, veh/h	646	498	139	42
Cap Entry, veh/h	1239	1186	750	764
V/C Ratio	0.522	0.420	0.185	0.055
Control Delay, s/veh	8.6	7.3	6.8	5.3
LOS	A	A	A	A
95th %tile Queue, veh	3	2	1	0

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	385	1	1	337	19	1	16	0	0	25	8
Future Vol, veh/h	5	385	1	1	337	19	1	16	0	0	25	8
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	5	418	1	1	366	21	1	17	0	0	27	9

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	387	0	0	419	0	0	826	818	419	816	808	377
Stage 1	-	-	-	-	-	-	429	429	-	379	379	-
Stage 2	-	-	-	-	-	-	397	389	-	437	429	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1166	-	-	1135	-	-	290	309	632	295	314	667
Stage 1	-	-	-	-	-	-	602	582	-	641	613	-
Stage 2	-	-	-	-	-	-	627	607	-	596	582	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1166	-	-	1135	-	-	266	307	632	281	312	667
Mov Cap-2 Maneuver	-	-	-	-	-	-	266	307	-	281	312	-
Stage 1	-	-	-	-	-	-	598	579	-	637	612	-
Stage 2	-	-	-	-	-	-	591	606	-	575	579	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0	17.6	16.2
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	304	1166	-	-	1135	-	-	358
HCM Lane V/C Ratio	0.061	0.005	-	-	0.001	-	-	0.1
HCM Control Delay (s)	17.6	8.1	0	-	8.2	0	-	16.2
HCM Lane LOS	C	A	A	-	A	A	-	C
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.3

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	385	1	1	337	19	1	16	0	0	25	8
Future Vol, veh/h	5	385	1	1	337	19	1	16	0	0	25	8
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	5	418	1	1	366	21	1	17	0	0	27	9
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	387	0	0	419	0	0	826	818	419	816	808	377
Stage 1	-	-	-	-	-	-	429	429	-	379	379	-
Stage 2	-	-	-	-	-	-	397	389	-	437	429	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1166	-	-	1135	-	-	290	309	632	295	314	667
Stage 1	-	-	-	-	-	-	602	582	-	641	613	-
Stage 2	-	-	-	-	-	-	627	607	-	596	582	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1166	-	-	1135	-	-	266	307	632	281	312	667
Mov Cap-2 Maneuver	-	-	-	-	-	-	266	307	-	281	312	-
Stage 1	-	-	-	-	-	-	598	579	-	637	612	-
Stage 2	-	-	-	-	-	-	591	606	-	575	579	-
Approach	EB		WB				NB		SB			
HCM Control Delay, s	0.1		0				17.6		16.2			
HCM LOS							C		C			
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	304	1166	-	-	1135	-	-	358				
HCM Lane V/C Ratio	0.061	0.005	-	-	0.001	-	-	0.1				
HCM Control Delay (s)	17.6	8.1	0	-	8.2	0	-	16.2				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.3				

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	481	8	1	407	19	16	17	0	7	5	11
Future Vol, veh/h	14	481	8	1	407	19	16	17	0	7	5	11
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	15	523	9	1	442	21	17	18	0	8	5	12
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	463	0	0	532	0	0	1021	1023	528	1022	1017	453
Stage 1	-	-	-	-	-	-	558	558	-	455	455	-
Stage 2	-	-	-	-	-	-	463	465	-	567	562	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1093	-	-	1030	-	-	214	235	548	213	237	605
Stage 1	-	-	-	-	-	-	512	510	-	583	567	-
Stage 2	-	-	-	-	-	-	577	561	-	507	508	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1093	-	-	1030	-	-	203	230	548	197	232	605
Mov Cap-2 Maneuver	-	-	-	-	-	-	203	230	-	197	232	-
Stage 1	-	-	-	-	-	-	502	500	-	571	566	-
Stage 2	-	-	-	-	-	-	560	560	-	478	498	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0			25			17.8		
HCM LOS							D			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	216	1093	-	-	1030	-	-	306				
HCM Lane V/C Ratio	0.166	0.014	-	-	0.001	-	-	0.082				
HCM Control Delay (s)	25	8.3	0	-	8.5	0	-	17.8				
HCM Lane LOS	D	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0.3				

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	14	481	8	1	407	19	16	17	0	7	5	11
Future Vol, veh/h	14	481	8	1	407	19	16	17	0	7	5	11
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	15	523	9	1	442	21	17	18	0	8	5	12
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	463	0	0	532	0	0	1021	1023	528	1022	1017	453
Stage 1	-	-	-	-	-	-	558	558	-	455	455	-
Stage 2	-	-	-	-	-	-	463	465	-	567	562	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1093	-	-	1030	-	-	214	235	548	213	237	605
Stage 1	-	-	-	-	-	-	512	510	-	583	567	-
Stage 2	-	-	-	-	-	-	577	561	-	507	508	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1093	-	-	1030	-	-	203	230	548	197	232	605
Mov Cap-2 Maneuver	-	-	-	-	-	-	203	230	-	197	232	-
Stage 1	-	-	-	-	-	-	502	500	-	571	566	-
Stage 2	-	-	-	-	-	-	560	560	-	478	498	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0			25			17.8		
HCM LOS							D			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	216	1093	-	-	1030	-	-	306				
HCM Lane V/C Ratio	0.166	0.014	-	-	0.001	-	-	0.082				
HCM Control Delay (s)	25	8.3	0	-	8.5	0	-	17.8				
HCM Lane LOS	D	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.6	0	-	-	0	-	-	0.3				

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	0	0	39	9	0
Future Vol, veh/h	5	0	0	39	9	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	0	0	42	10	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	52	10	10	0	-	0
Stage 1	10	-	-	-	-	-
Stage 2	42	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	954	1068	1603	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	978	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	954	1068	1603	-	-	-
Mov Cap-2 Maneuver	954	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	978	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.8	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1603	-	954	-	-	
HCM Lane V/C Ratio	-	-	0.006	-	-	
HCM Control Delay (s)	0	-	8.8	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	0.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	0	0	39	9	0
Future Vol, veh/h	5	0	0	39	9	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	0	0	42	10	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	52	10	10	0	-	0
Stage 1	10	-	-	-	-	-
Stage 2	42	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	954	1068	1603	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	978	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	954	1068	1603	-	-	-
Mov Cap-2 Maneuver	954	-	-	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	978	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.8	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1603	-	954	-	-	
HCM Lane V/C Ratio	-	-	0.006	-	-	
HCM Control Delay (s)	0	-	8.8	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	0	0	55	16	0
Future Vol, veh/h	5	0	0	55	16	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	0	0	60	17	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	77	17	17	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	60	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	924	1059	1594	-	-	-
Stage 1	1003	-	-	-	-	-
Stage 2	960	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	924	1059	1594	-	-	-
Mov Cap-2 Maneuver	924	-	-	-	-	-
Stage 1	1003	-	-	-	-	-
Stage 2	960	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.9	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1594	-	924	-	-	
HCM Lane V/C Ratio	-	-	0.006	-	-	
HCM Control Delay (s)	0	-	8.9	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	0	0	55	16	0
Future Vol, veh/h	5	0	0	55	16	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	5	0	0	60	17	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	77	17	17	0	-	0
Stage 1	17	-	-	-	-	-
Stage 2	60	-	-	-	-	-
Critical Hdwy	6.43	6.23	4.13	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	2.227	-	-	-
Pot Cap-1 Maneuver	924	1059	1594	-	-	-
Stage 1	1003	-	-	-	-	-
Stage 2	960	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	924	1059	1594	-	-	-
Mov Cap-2 Maneuver	924	-	-	-	-	-
Stage 1	1003	-	-	-	-	-
Stage 2	960	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.9	0		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1594	-	924	-	-	
HCM Lane V/C Ratio	-	-	0.006	-	-	
HCM Control Delay (s)	0	-	8.9	-	-	
HCM Lane LOS	A	-	A	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	6	17	0	10	1	22	271	0	7	209	0
Future Vol, veh/h	0	6	17	0	10	1	22	271	0	7	209	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	7	18	0	11	1	24	295	0	8	227	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	592	586	227	599	586	295	227	0	0	295	0	0
Stage 1	243	243	-	343	343	-	-	-	-	-	-	-
Stage 2	349	343	-	256	243	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	416	421	810	412	421	742	1335	-	-	1261	-	-
Stage 1	758	703	-	670	636	-	-	-	-	-	-	-
Stage 2	665	636	-	746	703	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	399	409	810	389	409	742	1335	-	-	1261	-	-
Mov Cap-2 Maneuver	399	409	-	389	409	-	-	-	-	-	-	-
Stage 1	742	698	-	656	623	-	-	-	-	-	-	-
Stage 2	639	623	-	717	698	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.8		13.7		0.6		0.3	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1335	-	-	645	426	1261	-
HCM Lane V/C Ratio	0.018	-	-	0.039	0.028	0.006	-
HCM Control Delay (s)	7.7	0	-	10.8	13.7	7.9	0
HCM Lane LOS	A	A	-	B	B	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.1	0	-

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	6	17	0	10	1	22	271	0	7	209	0
Future Vol, veh/h	0	6	17	0	10	1	22	271	0	7	209	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	7	18	0	11	1	24	295	0	8	227	0
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	592	586	227	599	586	295	227	0	0	295	0	0
Stage 1	243	243	-	343	343	-	-	-	-	-	-	-
Stage 2	349	343	-	256	243	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	416	421	810	412	421	742	1335	-	-	1261	-	-
Stage 1	758	703	-	670	636	-	-	-	-	-	-	-
Stage 2	665	636	-	746	703	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	399	409	810	389	409	742	1335	-	-	1261	-	-
Mov Cap-2 Maneuver	399	409	-	389	409	-	-	-	-	-	-	-
Stage 1	742	698	-	656	623	-	-	-	-	-	-	-
Stage 2	639	623	-	717	698	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	10.8		13.7			0.6			0.3			
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1335	-	-	645	426	1261	-	-				
HCM Lane V/C Ratio	0.018	-	-	0.039	0.028	0.006	-	-				
HCM Control Delay (s)	7.7	0	-	10.8	13.7	7.9	0	-				
HCM Lane LOS	A	A	-	B	B	A	A	-				
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.1	0	-	-				

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	270	207	18	0	155	195	63	1033	2	72	854	243
Future Vol, veh/h	270	207	18	0	155	195	63	1033	2	72	854	243
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	293	225	20	0	168	212	68	1123	2	78	928	264
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2666	2477	1060	2599	2608	1124	1192	0	0	1125	0	0
Stage 1	1216	1216	-	1260	1260	-	-	-	-	-	-	-
Stage 2	1450	1261	-	1339	1348	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	~ 15	~ 30	271	16	~ 24	249	582	-	-	617	-	-
Stage 1	~ 220	253	-	208	241	-	-	-	-	-	-	-
Stage 2	~ 162	240	-	187	218	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 12	271	-	~ 10	249	582	-	-	617	-	-
Mov Cap-2 Maneuver	-	~ 12	-	-	~ 10	-	-	-	-	-	-	-
Stage 1	~ 151	~ 149	-	143	~ 166	-	-	-	-	-	-	-
Stage 2	-	~ 165	-	-	~ 129	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s							0.7		0.7			
HCM LOS	-		-									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	582	-	-	-	-	617	-	-				
HCM Lane V/C Ratio	0.118	-	-	-	-	0.127	-	-				
HCM Control Delay (s)	12	0	-	-	-	11.7	0	-				
HCM Lane LOS	B	A	-	-	-	B	A	-				
HCM 95th %tile Q(veh)	0.4	-	-	-	-	0.4	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	270	207	18	0	155	195	63	1033	2	72	854	243
Future Vol, veh/h	270	207	18	0	155	195	63	1033	2	72	854	243
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	293	225	20	0	168	212	68	1123	2	78	928	264
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2666	2477	1060	2599	2608	1124	1192	0	0	1125	0	0
Stage 1	1216	1216	-	1260	1260	-	-	-	-	-	-	-
Stage 2	1450	1261	-	1339	1348	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	~ 15	~ 30	271	16	~ 24	249	582	-	-	617	-	-
Stage 1	~ 220	253	-	208	241	-	-	-	-	-	-	-
Stage 2	~ 162	240	-	187	218	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 12	271	-	~ 10	249	582	-	-	617	-	-
Mov Cap-2 Maneuver	-	~ 12	-	-	~ 10	-	-	-	-	-	-	-
Stage 1	~ 151	~ 149	-	143	~ 166	-	-	-	-	-	-	-
Stage 2	-	~ 165	-	-	~ 129	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s							0.7		0.7			
HCM LOS	-		-									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	582	-	-	-	-	617	-	-				
HCM Lane V/C Ratio	0.118	-	-	-	-	0.127	-	-				
HCM Control Delay (s)	12	0	-	-	-	11.7	0	-				
HCM Lane LOS	B	A	-	-	-	B	A	-				
HCM 95th %tile Q(veh)	0.4	-	-	-	-	0.4	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection						
Intersection Delay, s/veh 10.3						
Intersection LOS B						
Approach	EB	WB	NB	SB		
Entry Lanes	1	1	2	2		
Conflicting Circle Lanes	2	2	2	2		
Adj Approach Flow, veh/h	180	72	540	1659		
Demand Flow Rate, veh/h	186	74	556	1709		
Vehicles Circulating, veh/h	1373	630	301	60		
Vehicles Exiting, veh/h	396	227	1258	644		
Ped Vol Crossing Leg, #/h	0	0	0	0		
Ped Cap Adj	1.000	1.000	1.000	1.000		
Approach Delay, s/veh	16.5	5.4	6.0	11.2		
Approach LOS	C	A	A	B		
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.469	0.531	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	186	74	261	295	803	906
Cap Entry Lane, veh/h	442	831	1023	1099	1277	1349
Entry HV Adj Factor	0.970	0.968	0.973	0.970	0.971	0.971
Flow Entry, veh/h	180	72	254	286	780	879
Cap Entry, veh/h	429	804	995	1067	1240	1310
V/C Ratio	0.421	0.089	0.255	0.268	0.629	0.671
Control Delay, s/veh	16.5	5.4	6.1	5.9	10.8	11.5
LOS	C	A	A	A	B	B
95th %tile Queue, veh	2	0	1	1	5	6

Intersection						
Intersection Delay, s/veh 29.2						
Intersection LOS D						
Approach	EB	WB	NB	SB		
Entry Lanes	1	1	2	2		
Conflicting Circle Lanes	2	2	2	2		
Adj Approach Flow, veh/h	538	380	1193	1270		
Demand Flow Rate, veh/h	555	391	1229	1308		
Vehicles Circulating, veh/h	1036	1529	614	243		
Vehicles Exiting, veh/h	515	314	977	1677		
Ped Vol Crossing Leg, #/h	0	0	0	0		
Ped Cap Adj	1.000	1.000	1.000	1.000		
Approach Delay, s/veh	51.5	82.8	21.6	10.8		
Approach LOS	F	F	C	B		
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	555	391	578	651	615	693
Cap Entry Lane, veh/h	589	387	767	843	1079	1155
Entry HV Adj Factor	0.970	0.972	0.970	0.972	0.971	0.971
Flow Entry, veh/h	538	380	561	632	597	673
Cap Entry, veh/h	571	376	745	819	1048	1122
V/C Ratio	0.943	1.010	0.753	0.773	0.570	0.600
Control Delay, s/veh	51.5	82.8	21.8	21.5	10.7	10.9
LOS	F	F	C	C	B	B
95th %tile Queue, veh	12	12	7	8	4	4

Intersection						
Intersection Delay, s/veh	4.8					
Intersection LOS	A					
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	2	2	2		2	
Adj Approach Flow, veh/h	146	39	584		429	
Demand Flow Rate, veh/h	151	40	601		442	
Vehicles Circulating, veh/h	421	637	66		156	
Vehicles Exiting, veh/h	177	30	506		521	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	5.2	5.0	4.8		4.7	
Approach LOS	A	A	A		A	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.469	0.531	0.471	0.529
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	151	40	282	319	208	234
Cap Entry Lane, veh/h	993	826	1270	1343	1169	1244
Entry HV Adj Factor	0.970	0.965	0.973	0.970	0.970	0.972
Flow Entry, veh/h	146	39	274	309	202	227
Cap Entry, veh/h	963	797	1236	1302	1134	1209
V/C Ratio	0.152	0.048	0.222	0.238	0.178	0.188
Control Delay, s/veh	5.2	5.0	4.9	4.8	4.8	4.6
LOS	A	A	A	A	A	A
95th %tile Queue, veh	1	0	1	1	1	1

Intersection						
Intersection Delay, s/veh	4.8					
Intersection LOS	A					
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	2	2	2		2	
Adj Approach Flow, veh/h	146	39	584		429	
Demand Flow Rate, veh/h	151	40	601		442	
Vehicles Circulating, veh/h	421	637	66		156	
Vehicles Exiting, veh/h	177	30	506		521	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	5.2	5.0	4.8		4.7	
Approach LOS	A	A	A		A	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.469	0.531	0.471	0.529
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	151	40	282	319	208	234
Cap Entry Lane, veh/h	993	826	1270	1343	1169	1244
Entry HV Adj Factor	0.970	0.965	0.973	0.970	0.970	0.972
Flow Entry, veh/h	146	39	274	309	202	227
Cap Entry, veh/h	963	797	1236	1302	1134	1209
V/C Ratio	0.152	0.048	0.222	0.238	0.178	0.188
Control Delay, s/veh	5.2	5.0	4.9	4.8	4.8	4.6
LOS	A	A	A	A	A	A
95th %tile Queue, veh	1	0	1	1	1	1

Intersection						
Intersection Delay, s/veh	64.0					
Intersection LOS	F					
Approach	EB	WB	NB	SB		
Entry Lanes	1	1	2	2		
Conflicting Circle Lanes	2	2	2	2		
Adj Approach Flow, veh/h	510	626	1623	984		
Demand Flow Rate, veh/h	525	644	1671	1014		
Vehicles Circulating, veh/h	1254	1257	485	708		
Vehicles Exiting, veh/h	468	899	1294	1193		
Ped Vol Crossing Leg, #/h	0	0	0	0		
Ped Cap Adj	1.000	1.000	1.000	1.000		
Approach Delay, s/veh	91.9	183.2	36.9	18.5		
Approach LOS	F	F	E	C		
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	525	644	785	886	477	537
Cap Entry Lane, veh/h	489	488	864	940	704	778
Entry HV Adj Factor	0.971	0.972	0.972	0.971	0.970	0.972
Flow Entry, veh/h	510	626	763	860	463	522
Cap Entry, veh/h	475	474	839	913	683	756
V/C Ratio	1.074	1.320	0.909	0.942	0.678	0.690
Control Delay, s/veh	91.9	183.2	34.9	38.6	19.0	18.1
LOS	F	F	D	E	C	C
95th %tile Queue, veh	16	28	13	15	5	6

Intersection						
Intersection Delay, s/veh	64.0					
Intersection LOS	F					
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	2	2	2		2	
Adj Approach Flow, veh/h	510	626	1623		984	
Demand Flow Rate, veh/h	525	644	1671		1014	
Vehicles Circulating, veh/h	1254	1257	485		708	
Vehicles Exiting, veh/h	468	899	1294		1193	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	91.9	183.2	36.9		18.5	
Approach LOS	F	F	E		C	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	525	644	785	886	477	537
Cap Entry Lane, veh/h	489	488	864	940	704	778
Entry HV Adj Factor	0.971	0.972	0.972	0.971	0.970	0.972
Flow Entry, veh/h	510	626	763	860	463	522
Cap Entry, veh/h	475	474	839	913	683	756
V/C Ratio	1.074	1.320	0.909	0.942	0.678	0.690
Control Delay, s/veh	91.9	183.2	34.9	38.6	19.0	18.1
LOS	F	F	D	E	C	C
95th %tile Queue, veh	16	28	13	15	5	6

Intersection

Intersection Delay, s/veh 9.1

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	61	49	3	11	28	62	5	117	25	85	74	27
Future Vol, veh/h	61	49	3	11	28	62	5	117	25	85	74	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	66	53	3	12	30	67	5	127	27	92	80	29
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	8.4	8.9	9.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	54%	11%	46%
Vol Thru, %	80%	43%	28%	40%
Vol Right, %	17%	3%	61%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	147	113	101	186
LT Vol	5	61	11	85
Through Vol	117	49	28	74
RT Vol	25	3	62	27
Lane Flow Rate	160	123	110	202
Geometry Grp	1	1	1	1
Degree of Util (X)	0.207	0.172	0.141	0.265
Departure Headway (Hd)	4.664	5.03	4.62	4.71
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	765	710	772	760
Service Time	2.715	3.086	2.676	2.758
HCM Lane V/C Ratio	0.209	0.173	0.142	0.266
HCM Control Delay	8.9	9.1	8.4	9.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	0.6	0.5	1.1

Intersection

Intersection Delay, s/veh 9.1

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	61	49	3	11	28	62	5	117	25	85	74	27
Future Vol, veh/h	61	49	3	11	28	62	5	117	25	85	74	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	66	53	3	12	30	67	5	127	27	92	80	29
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	8.4	8.9	9.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	54%	11%	46%
Vol Thru, %	80%	43%	28%	40%
Vol Right, %	17%	3%	61%	15%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	147	113	101	186
LT Vol	5	61	11	85
Through Vol	117	49	28	74
RT Vol	25	3	62	27
Lane Flow Rate	160	123	110	202
Geometry Grp	1	1	1	1
Degree of Util (X)	0.207	0.172	0.141	0.265
Departure Headway (Hd)	4.664	5.03	4.62	4.71
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	765	710	772	760
Service Time	2.715	3.086	2.676	2.758
HCM Lane V/C Ratio	0.209	0.173	0.142	0.266
HCM Control Delay	8.9	9.1	8.4	9.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.8	0.6	0.5	1.1

Intersection

Intersection Delay, s/veh 24

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	61	384	3	11	289	62	5	118	25	85	88	27
Future Vol, veh/h	61	384	3	11	289	62	5	118	25	85	88	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	66	417	3	12	314	67	5	128	27	92	96	29
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	33	21.7	13.7	15.5
HCM LOS	D	C	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	14%	3%	42%
Vol Thru, %	80%	86%	80%	44%
Vol Right, %	17%	1%	17%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	148	448	362	200
LT Vol	5	61	11	85
Through Vol	118	384	289	88
RT Vol	25	3	62	27
Lane Flow Rate	161	487	393	217
Geometry Grp	1	1	1	1
Degree of Util (X)	0.322	0.834	0.681	0.429
Departure Headway (Hd)	7.213	6.166	6.235	7.105
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	495	584	578	504
Service Time	5.306	4.233	4.308	5.19
HCM Lane V/C Ratio	0.325	0.834	0.68	0.431
HCM Control Delay	13.7	33	21.7	15.5
HCM Lane LOS	B	D	C	C
HCM 95th-tile Q	1.4	8.7	5.2	2.1

Intersection

Intersection Delay, s/veh 24

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	61	384	3	11	289	62	5	118	25	85	88	27
Future Vol, veh/h	61	384	3	11	289	62	5	118	25	85	88	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	66	417	3	12	314	67	5	128	27	92	96	29
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	33	21.7	13.7	15.5
HCM LOS	D	C	B	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	3%	14%	3%	42%
Vol Thru, %	80%	86%	80%	44%
Vol Right, %	17%	1%	17%	14%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	148	448	362	200
LT Vol	5	61	11	85
Through Vol	118	384	289	88
RT Vol	25	3	62	27
Lane Flow Rate	161	487	393	217
Geometry Grp	1	1	1	1
Degree of Util (X)	0.322	0.834	0.681	0.429
Departure Headway (Hd)	7.213	6.166	6.235	7.105
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	495	584	578	504
Service Time	5.306	4.233	4.308	5.19
HCM Lane V/C Ratio	0.325	0.834	0.68	0.431
HCM Control Delay	13.7	33	21.7	15.5
HCM Lane LOS	B	D	C	C
HCM 95th-tile Q	1.4	8.7	5.2	2.1

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔		↔			↔	
Traffic Vol, veh/h	153	651	0	0	482	1	2	0	0	3	0	88
Future Vol, veh/h	153	651	0	0	482	1	2	0	0	3	0	88
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	-	-	165	-	-	160	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	166	708	0	0	524	1	2	0	0	3	0	96

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	525	0	0	708	0	0	1613	1565	708	1564	1564	524
Stage 1	-	-	-	-	-	-	1040	1040	-	524	524	-
Stage 2	-	-	-	-	-	-	573	525	-	1040	1040	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1037	-	-	886	-	-	83	111	433	90	111	551
Stage 1	-	-	-	-	-	-	277	306	-	535	528	-
Stage 2	-	-	-	-	-	-	503	528	-	277	306	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1037	-	-	886	-	-	55	82	433	72	82	551
Mov Cap-2 Maneuver	-	-	-	-	-	-	55	82	-	72	82	-
Stage 1	-	-	-	-	-	-	204	225	-	394	528	-
Stage 2	-	-	-	-	-	-	416	528	-	204	225	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	0	73.1	15.2
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	55	1037	-	-	886	-	-	452
HCM Lane V/C Ratio	0.04	0.16	-	-	-	-	-	0.219
HCM Control Delay (s)	73.1	9.1	0	-	0	-	-	15.2
HCM Lane LOS	F	A	A	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0.6	-	-	0	-	-	0.8

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗		↕			↕	
Traffic Vol, veh/h	153	651	0	0	482	1	2	0	0	3	0	88
Future Vol, veh/h	153	651	0	0	482	1	2	0	0	3	0	88
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	-	-	165	-	-	160	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	166	708	0	0	524	1	2	0	0	3	0	96
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	525	0	0	708	0	0	1613	1565	708	1564	1564	524
Stage 1	-	-	-	-	-	-	1040	1040	-	524	524	-
Stage 2	-	-	-	-	-	-	573	525	-	1040	1040	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1037	-	-	886	-	-	83	111	433	90	111	551
Stage 1	-	-	-	-	-	-	277	306	-	535	528	-
Stage 2	-	-	-	-	-	-	503	528	-	277	306	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1037	-	-	886	-	-	55	82	433	72	82	551
Mov Cap-2 Maneuver	-	-	-	-	-	-	55	82	-	72	82	-
Stage 1	-	-	-	-	-	-	204	225	-	394	528	-
Stage 2	-	-	-	-	-	-	416	528	-	204	225	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.7			0			73.1			15.2		
HCM LOS							F			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	55	1037	-	-	886	-	-	452				
HCM Lane V/C Ratio	0.04	0.16	-	-	-	-	-	0.219				
HCM Control Delay (s)	73.1	9.1	0	-	0	-	-	15.2				
HCM Lane LOS	F	A	A	-	A	-	-	C				
HCM 95th %tile Q(veh)	0.1	0.6	-	-	0	-	-	0.8				

Intersection												
Int Delay, s/veh	74											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗		↕			↕	
Traffic Vol, veh/h	482	1571	0	0	2122	1	2	0	0	3	0	347
Future Vol, veh/h	482	1571	0	0	2122	1	2	0	0	3	0	347
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	-	-	165	-	-	160	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	524	1708	0	0	2307	1	2	0	0	3	0	377
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2308	0	0	1708	0	0	5252	5064	1708	5063	5063	2307
Stage 1	-	-	-	-	-	-	2756	2756	-	2307	2307	-
Stage 2	-	-	-	-	-	-	2496	2308	-	2756	2756	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	~ 215	-	-	369	-	-	0	1	112	0	1	~ 48
Stage 1	-	-	-	-	-	-	27	42	-	51	72	-
Stage 2	-	-	-	-	-	-	39	72	-	27	42	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	~ 215	-	-	369	-	-	-	0	112	-	0	~ 48
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-	-	0	-
Stage 1	-	-	-	-	-	-	27	0	-	51	72	-
Stage 2	-	-	-	-	-	-	-	72	-	-	0	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	163.3			0								
HCM LOS							-			-		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	~ 215	-	-	369	-	-	-				
HCM Lane V/C Ratio	-	2.437	-	-	-	-	-	-				
HCM Control Delay (s)	-	\$ 695.6	0	-	0	-	-	-				
HCM Lane LOS	-	F	A	-	A	-	-	-				
HCM 95th %tile Q(veh)	-	43.2	-	-	0	-	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

Intersection												
Int Delay, s/veh	74											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕	↗		↕			↕	
Traffic Vol, veh/h	482	1571	0	0	2122	1	2	0	0	3	0	347
Future Vol, veh/h	482	1571	0	0	2122	1	2	0	0	3	0	347
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	-	-	165	-	-	160	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	524	1708	0	0	2307	1	2	0	0	3	0	377
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2308	0	0	1708	0	0	5252	5064	1708	5063	5063	2307
Stage 1	-	-	-	-	-	-	2756	2756	-	2307	2307	-
Stage 2	-	-	-	-	-	-	2496	2308	-	2756	2756	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	~ 215	-	-	369	-	-	0	1	112	0	1	~ 48
Stage 1	-	-	-	-	-	-	27	42	-	51	72	-
Stage 2	-	-	-	-	-	-	39	72	-	27	42	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	~ 215	-	-	369	-	-	-	0	112	-	0	~ 48
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-	-	0	-
Stage 1	-	-	-	-	-	-	27	0	-	51	72	-
Stage 2	-	-	-	-	-	-	-	72	-	-	0	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	163.3			0								
HCM LOS							-			-		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	~ 215	-	-	369	-	-	-				
HCM Lane V/C Ratio	-	2.437	-	-	-	-	-	-				
HCM Control Delay (s)	-	\$ 695.6	0	-	0	-	-	-				
HCM Lane LOS	-	F	A	-	A	-	-	-				
HCM 95th %tile Q(veh)	-	43.2	-	-	0	-	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

Intersection								
Intersection Delay, s/veh 13.4								
Intersection LOS B								
Approach	EB		WB		NB		SB	
Entry Lanes	2		2		1		2	
Conflicting Circle Lanes	2		2		2		2	
Adj Approach Flow, veh/h	1562		1129		0		449	
Demand Flow Rate, veh/h	1609		1163		0		462	
Vehicles Circulating, veh/h	4		132		1613		1163	
Vehicles Exiting, veh/h	1621		1481		0		132	
Ped Vol Crossing Leg, #/h	0		0		0		0	
Ped Cap Adj	1.000		1.000		1.000		1.000	
Approach Delay, s/veh	9.3		8.0		0.0		41.4	
Approach LOS	A		A		-		E	
Lane	Left	Right	Left	Right	Left	Left	Right	
Designated Moves	LT	TR	LT	TR	LTR	LT	R	
Assumed Moves	LT	TR	LT	TR	LTR	LT	R	
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	1.000	0.009	0.991	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.645	4.328	
Entry Flow, veh/h	756	853	547	616	0	4	458	
Cap Entry Lane, veh/h	1345	1415	1195	1269	360	463	528	
Entry HV Adj Factor	0.971	0.971	0.970	0.971	1.000	1.000	0.972	
Flow Entry, veh/h	734	828	531	598	0	4	445	
Cap Entry, veh/h	1306	1374	1160	1233	360	463	513	
V/C Ratio	0.562	0.603	0.458	0.485	0.000	0.009	0.867	
Control Delay, s/veh	9.0	9.5	8.0	8.1	10.0	7.9	41.7	
LOS	A	A	A	A	A	A	E	
95th %tile Queue, veh	4	4	2	3	0	0	9	

Intersection								
Intersection Delay, s/veh 42.2								
Intersection LOS F								
Approach	EB		WB		NB		SB	
Entry Lanes	2		2		1		2	
Conflicting Circle Lanes	2		2		2		2	
Adj Approach Flow, veh/h	2232		2308		2		380	
Demand Flow Rate, veh/h	2299		2377		2		391	
Vehicles Circulating, veh/h	3		542		2302		2378	
Vehicles Exiting, veh/h	2766		1762		0		541	
Ped Vol Crossing Leg, #/h	0		0		0		0	
Ped Cap Adj	1.000		1.000		1.000		1.000	
Approach Delay, s/veh	18.6		197.3		18.2		534.6	
Approach LOS	C		F		C		F	
Lane	Left	Right	Left	Right	Left	Left	Right	
Designated Moves	LT	TR	LT	TR	LTR	LT	R	
Assumed Moves	LT	TR	LT	TR	LTR	LT	R	
RT Channelized								
Lane Util	0.470	0.530	0.470	0.530	1.000	0.008	0.992	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.645	4.328	
Entry Flow, veh/h	1081	1218	1117	1260	2	3	388	
Cap Entry Lane, veh/h	1346	1417	820	896	201	151	188	
Entry HV Adj Factor	0.970	0.971	0.971	0.971	1.000	1.000	0.972	
Flow Entry, veh/h	1049	1183	1085	1223	2	3	377	
Cap Entry, veh/h	1306	1376	796	870	201	151	183	
V/C Ratio	0.803	0.860	1.362	1.407	0.010	0.020	2.063	
Control Delay, s/veh	16.9	20.2	188.1	205.4	18.2	24.3	538.6	
LOS	C	C	F	F	C	C	F	
95th %tile Queue, veh	9	12	45	53	0	0	29	

Intersection					
Intersection Delay, s/veh	60.6				
Intersection LOS	F				
Approach	EB	WB	NB	SB	
Entry Lanes	1	1	1	1	
Conflicting Circle Lanes	1	1	1	1	
Adj Approach Flow, veh/h	977	643	476	511	
Demand Flow Rate, veh/h	1006	662	490	527	
Vehicles Circulating, veh/h	435	576	1050	568	
Vehicles Exiting, veh/h	527	964	391	670	
Ped Vol Crossing Leg, #/h	0	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	1.000	
Approach Delay, s/veh	95.3	31.5	82.0	10.7	
Approach LOS	F	D	F	B	
Lane	Left	Left	Left	Left	Bypass
Designated Moves	LTR	LTR	LTR	LT	R
Assumed Moves	LTR	LTR	LTR	LT	R
RT Channelized					Yield
Lane Util	1.000	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	2.609	
Critical Headway, s	4.976	4.976	4.976	4.976	133
Entry Flow, veh/h	1006	662	490	394	806
Cap Entry Lane, veh/h	885	767	473	773	0.971
Entry HV Adj Factor	0.971	0.972	0.971	0.970	129
Flow Entry, veh/h	977	643	476	382	783
Cap Entry, veh/h	860	745	459	750	0.165
V/C Ratio	1.136	0.863	1.036	0.510	6.3
Control Delay, s/veh	95.3	31.5	82.0	12.2	A
LOS	F	D	F	B	1
95th %tile Queue, veh	28	10	14	3	

Intersection					
Intersection Delay, s/veh	60.6				
Intersection LOS	F				
Approach	EB	WB	NB	SB	
Entry Lanes	1	1	1	1	
Conflicting Circle Lanes	1	1	1	1	
Adj Approach Flow, veh/h	977	643	476	511	
Demand Flow Rate, veh/h	1006	662	490	527	
Vehicles Circulating, veh/h	435	576	1050	568	
Vehicles Exiting, veh/h	527	964	391	670	
Ped Vol Crossing Leg, #/h	0	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	1.000	
Approach Delay, s/veh	95.3	31.5	82.0	10.7	
Approach LOS	F	D	F	B	
Lane	Left	Left	Left	Left	Bypass
Designated Moves	LTR	LTR	LTR	LT	R
Assumed Moves	LTR	LTR	LTR	LT	R
RT Channelized					Yield
Lane Util	1.000	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	2.609	
Critical Headway, s	4.976	4.976	4.976	4.976	133
Entry Flow, veh/h	1006	662	490	394	806
Cap Entry Lane, veh/h	885	767	473	773	0.971
Entry HV Adj Factor	0.971	0.972	0.971	0.970	129
Flow Entry, veh/h	977	643	476	382	783
Cap Entry, veh/h	860	745	459	750	0.165
V/C Ratio	1.136	0.863	1.036	0.510	6.3
Control Delay, s/veh	95.3	31.5	82.0	12.2	A
LOS	F	D	F	B	1
95th %tile Queue, veh	28	10	14	3	

Intersection					
Intersection Delay, s/veh	2469.2				
Intersection LOS	F				
Approach	EB	WB	NB	SB	
Entry Lanes	1	1	1	1	
Conflicting Circle Lanes	1	1	1	1	
Adj Approach Flow, veh/h	2262	2703	1150	916	
Demand Flow Rate, veh/h	2330	2783	1184	944	
Vehicles Circulating, veh/h	857	1198	2372	2596	
Vehicles Exiting, veh/h	2517	2358	815	1385	
Ped Vol Crossing Leg, #/h	0	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	1.000	
Approach Delay, s/veh	1391.0	2654.5	3957.1	2717.5	
Approach LOS	F	F	F	F	
Lane	Left	Left	Left	Left	Bypass
Designated Moves	LTR	LTR	LTR	LT	R
Assumed Moves	LTR	LTR	LTR	LT	R
RT Channelized					Yield
Lane Util	1.000	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	2.609	
Critical Headway, s	4.976	4.976	4.976	4.976	166
Entry Flow, veh/h	2330	2783	1184	778	106
Cap Entry Lane, veh/h	576	407	123	98	0.971
Entry HV Adj Factor	0.971	0.971	0.971	0.970	161
Flow Entry, veh/h	2262	2703	1150	755	103
Cap Entry, veh/h	559	395	119	95	1.566
V/C Ratio	4.047	6.844	9.641	7.961	369.4
Control Delay, s/veh	1391.0	2654.5	3957.1	3218.3	F
LOS	F	F	F	F	12
95th %tile Queue, veh	217	292	132	86	

Intersection					
Intersection Delay, s/veh	2469.2				
Intersection LOS	F				
Approach	EB	WB	NB	SB	
Entry Lanes	1	1	1	1	
Conflicting Circle Lanes	1	1	1	1	
Adj Approach Flow, veh/h	2262	2703	1150	916	
Demand Flow Rate, veh/h	2330	2783	1184	944	
Vehicles Circulating, veh/h	857	1198	2372	2596	
Vehicles Exiting, veh/h	2517	2358	815	1385	
Ped Vol Crossing Leg, #/h	0	0	0	0	
Ped Cap Adj	1.000	1.000	1.000	1.000	
Approach Delay, s/veh	1391.0	2654.5	3957.1	2717.5	
Approach LOS	F	F	F	F	
Lane	Left	Left	Left	Left	Bypass
Designated Moves	LTR	LTR	LTR	LT	R
Assumed Moves	LTR	LTR	LTR	LT	R
RT Channelized					Yield
Lane Util	1.000	1.000	1.000	1.000	
Follow-Up Headway, s	2.609	2.609	2.609	2.609	
Critical Headway, s	4.976	4.976	4.976	4.976	166
Entry Flow, veh/h	2330	2783	1184	778	106
Cap Entry Lane, veh/h	576	407	123	98	0.971
Entry HV Adj Factor	0.971	0.971	0.971	0.970	161
Flow Entry, veh/h	2262	2703	1150	755	103
Cap Entry, veh/h	559	395	119	95	1.566
V/C Ratio	4.047	6.844	9.641	7.961	369.4
Control Delay, s/veh	1391.0	2654.5	3957.1	3218.3	F
LOS	F	F	F	F	12
95th %tile Queue, veh	217	292	132	86	

Intersection									
Intersection Delay, s/veh 12.4									
Intersection LOS F									
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	1577		1600		366		904		
Demand Flow Rate, veh/h	1624		1648		377		931		
Vehicles Circulating, veh/h	928		398		1639		1520		
Vehicles Exiting, veh/h	1523		1618		913		526		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	181.4		24.9		28.9		180.5		
Approach LOS	F		C		D		F		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR	
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR	
RT Channelized									
Lane Util	0.470	0.530	0.470	0.530	0.469	0.531	0.470	0.530	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	763	861	775	873	177	200	438	493	
Cap Entry Lane, veh/h	575	645	936	1012	299	353	333	390	
Entry HV Adj Factor	0.971	0.971	0.970	0.971	0.973	0.971	0.971	0.972	
Flow Entry, veh/h	741	836	752	848	172	194	425	479	
Cap Entry, veh/h	558	626	908	983	291	342	324	379	
V/C Ratio	1.327	1.334	0.828	0.862	0.592	0.567	1.313	1.264	
Control Delay, s/veh	181.4	181.5	23.9	25.8	31.8	26.3	194.1	168.3	
LOS	F	F	C	D	D	D	F	F	
95th %tile Queue, veh	32	35	10	11	4	3	20	21	

Intersection									
Intersection Delay, s/veh 799.5									
Intersection LOS F									
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	2262		2703		1150		916		
Demand Flow Rate, veh/h	2330		2783		1184		944		
Vehicles Circulating, veh/h	857		1198		2372		2596		
Vehicles Exiting, veh/h	2683		2358		815		1385		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	380.4		877.2		1171.1		1139.1		
Approach LOS	F		F		F		F		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	LT	TR	LT	TR	LT	TR	LT	TR	
Assumed Moves	LT	TR	LT	TR	LT	TR	LT	TR	
RT Channelized									
Lane Util	0.470	0.530	0.470	0.530	0.470	0.530	0.470	0.530	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	1095	1235	1308	1475	556	628	444	500	
Cap Entry Lane, veh/h	614	685	448	513	152	189	124	156	
Entry HV Adj Factor	0.971	0.971	0.971	0.971	0.972	0.970	0.970	0.971	
Flow Entry, veh/h	1063	1199	1270	1432	540	609	431	485	
Cap Entry, veh/h	596	665	435	498	148	183	120	152	
V/C Ratio	1.784	1.802	2.917	2.876	3.651	3.322	3.582	3.200	
Control Delay, s/veh	377.3	383.1	888.3	867.3	1254.8	1096.9	1237.2	1052.0	
LOS	F	F	F	F	F	F	F	F	
95th %tile Queue, veh	65	73	109	121	53	57	43	46	

Intersection			
Intersection Delay, s/veh 11.6			
Intersection LOS B			
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	796	624	337
Demand Flow Rate, veh/h	820	643	347
Vehicles Circulating, veh/h	131	99	728
Vehicles Exiting, veh/h	611	976	223
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	12.7	8.7	14.4
Approach LOS	B	A	B
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	820	643	347
Cap Entry Lane, veh/h	1207	1247	657
Entry HV Adj Factor	0.970	0.971	0.971
Flow Entry, veh/h	796	624	337
Cap Entry, veh/h	1172	1211	638
V/C Ratio	0.679	0.516	0.528
Control Delay, s/veh	12.7	8.7	14.4
LOS	B	A	B
95th %tile Queue, veh	6	3	3

Intersection			
Intersection Delay, s/veh 11.6			
Intersection LOS B			
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	796	624	337
Demand Flow Rate, veh/h	820	643	347
Vehicles Circulating, veh/h	131	99	728
Vehicles Exiting, veh/h	611	976	223
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	12.7	8.7	14.4
Approach LOS	B	A	B
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	820	643	347
Cap Entry Lane, veh/h	1207	1247	657
Entry HV Adj Factor	0.970	0.971	0.971
Flow Entry, veh/h	796	624	337
Cap Entry, veh/h	1172	1211	638
V/C Ratio	0.679	0.516	0.528
Control Delay, s/veh	12.7	8.7	14.4
LOS	B	A	B
95th %tile Queue, veh	6	3	3

Intersection			
Intersection Delay, s/veh	595.3		
Intersection LOS	F		
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	2248	2650	475
Demand Flow Rate, veh/h	2315	2729	489
Vehicles Circulating, veh/h	179	188	2069
Vehicles Exiting, veh/h	2738	2370	425
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	470.7	641.9	925.1
Approach LOS	F	F	F
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	2315	2729	489
Cap Entry Lane, veh/h	1150	1139	167
Entry HV Adj Factor	0.971	0.971	0.971
Flow Entry, veh/h	2248	2650	475
Cap Entry, veh/h	1116	1106	162
V/C Ratio	2.014	2.396	2.923
Control Delay, s/veh	470.7	641.9	925.1
LOS	F	F	F
95th %tile Queue, veh	147	198	43

Intersection			
Intersection Delay, s/veh 595.3			
Intersection LOS F			
Approach	EB	WB	NB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	2248	2650	475
Demand Flow Rate, veh/h	2315	2729	489
Vehicles Circulating, veh/h	179	188	2069
Vehicles Exiting, veh/h	2738	2370	425
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	470.7	641.9	925.1
Approach LOS	F	F	F
Lane	Left	Left	Left
Designated Moves	TR	LT	LR
Assumed Moves	TR	LT	LR
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	2315	2729	489
Cap Entry Lane, veh/h	1150	1139	167
Entry HV Adj Factor	0.971	0.971	0.971
Flow Entry, veh/h	2248	2650	475
Cap Entry, veh/h	1116	1106	162
V/C Ratio	2.014	2.396	2.923
Control Delay, s/veh	470.7	641.9	925.1
LOS	F	F	F
95th %tile Queue, veh	147	198	43

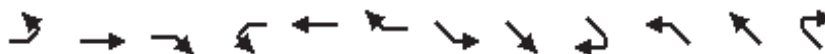
Intersection						
Intersection Delay, s/veh 14.1						
Intersection LOS B						
Approach	EB		WB		NB	
Entry Lanes	2		2		2	
Conflicting Circle Lanes	2		2		2	
Adj Approach Flow, veh/h	1623		1535		229	
Demand Flow Rate, veh/h	1671		1581		236	
Vehicles Circulating, veh/h	243		128		1527	
Vehicles Exiting, veh/h	1466		1635		387	
Ped Vol Crossing Leg, #/h	0		0		0	
Ped Cap Adj	1.000		1.000		1.000	
Approach Delay, s/veh	16.2		11.4		17.5	
Approach LOS	C		B		C	
Lane	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	L	TR
Assumed Moves	LT	TR	LT	TR	L	TR
RT Channelized						
Lane Util	0.470	0.530	0.470	0.530	0.542	0.458
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	785	886	743	838	128	108
Cap Entry Lane, veh/h	1079	1155	1200	1274	331	388
Entry HV Adj Factor	0.971	0.971	0.971	0.971	0.969	0.972
Flow Entry, veh/h	763	860	721	814	124	105
Cap Entry, veh/h	1049	1121	1165	1237	321	377
V/C Ratio	0.727	0.767	0.619	0.658	0.386	0.279
Control Delay, s/veh	15.6	16.7	11.1	11.6	20.0	14.6
LOS	C	C	B	B	C	B
95th %tile Queue, veh	7	8	5	5	2	1

Intersection						
Intersection Delay, s/veh 79.8						
Intersection LOS F						
Approach	EB		WB		NB	
Entry Lanes	2		2		2	
Conflicting Circle Lanes	2		2		2	
Adj Approach Flow, veh/h	2248		2650		475	
Demand Flow Rate, veh/h	2315		2729		489	
Vehicles Circulating, veh/h	179		188		2069	
Vehicles Exiting, veh/h	2738		2370		425	
Ped Vol Crossing Leg, #/h	0		0		0	
Ped Cap Adj	1.000		1.000		1.000	
Approach Delay, s/veh	41.4		100.3		146.6	
Approach LOS	E		F		F	
Lane	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	L	TR
Assumed Moves	LT	TR	LT	TR	L	TR
RT Channelized						
Lane Util	0.470	0.530	0.470	0.530	0.384	0.616
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	1088	1227	1283	1446	188	301
Cap Entry Lane, veh/h	1145	1220	1135	1210	201	245
Entry HV Adj Factor	0.971	0.971	0.971	0.971	0.973	0.970
Flow Entry, veh/h	1056	1191	1245	1404	183	292
Cap Entry, veh/h	1112	1184	1102	1175	196	237
V/C Ratio	0.950	1.006	1.130	1.195	0.934	1.231
Control Delay, s/veh	35.7	46.5	87.7	111.6	97.4	177.4
LOS	E	F	F	F	F	F
95th %tile Queue, veh	17	22	32	41	8	14

HCM 6th Signalized Intersection Summary

188: Greenfield Ave & Cumberland Rd

Existing AM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	420	176	135	52	105	45	67	653	280	79	509	52
Future Volume (veh/h)	420	176	135	52	105	45	67	653	280	79	509	52
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	457	191	147	57	114	49	73	710	304	86	553	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	524	504	427	456	269	116	350	824	368	318	779	80
Arrive On Green	0.13	0.27	0.27	0.07	0.22	0.22	0.09	0.23	0.23	0.09	0.24	0.24
Sat Flow, veh/h	1767	1856	1572	1767	1231	529	1767	3526	1572	1767	3227	332
Grp Volume(v), veh/h	457	191	147	57	0	163	73	710	304	86	301	309
Grp Sat Flow(s),veh/h/ln	1767	1856	1572	1767	0	1760	1767	1763	1572	1767	1763	1796
Q Serve(g_s), s	7.0	4.6	4.1	1.3	0.0	4.4	1.6	10.6	10.1	1.9	8.6	8.7
Cycle Q Clear(g_c), s	7.0	4.6	4.1	1.3	0.0	4.4	1.6	10.6	10.1	1.9	8.6	8.7
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	524	504	427	456	0	384	350	824	368	318	425	433
V/C Ratio(X)	0.87	0.38	0.34	0.12	0.00	0.42	0.21	0.86	0.83	0.27	0.71	0.71
Avail Cap(c_a), veh/h	524	1249	1059	551	0	1185	424	834	372	636	674	686
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.0	16.3	16.1	14.2	0.0	18.5	14.0	20.2	20.0	14.3	19.1	19.1
Incr Delay (d2), s/veh	14.9	0.5	0.5	0.1	0.0	0.7	0.3	9.1	14.1	0.5	2.2	2.2
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	8.9	1.7	1.4	0.5	0.0	1.7	0.6	4.8	4.7	0.7	3.3	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.9	16.7	16.6	14.4	0.0	19.3	14.3	29.3	34.1	14.8	21.3	21.3
LnGrp LOS	C	B	B	B	A	B	B	C	C	B	C	C
Approach Vol, veh/h	795			220			1087			696		
Approach Delay, s/veh	26.0			18.0			29.6			20.5		
Approach LOS	C			B			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	18.3	8.1	19.9	9.1	17.8	11.0	17.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	21.0	7.0	37.0	15.0	13.0	7.0	37.0				
Max Q Clear Time (g_c+I), s	13.6	10.7	3.3	6.6	3.9	12.6	9.0	6.4				
Green Ext Time (p_c), s	0.0	2.5	0.0	1.5	0.1	0.2	0.0	0.9				

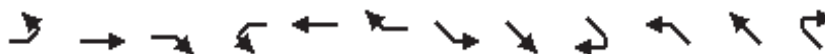
Intersection Summary

HCM 6th Ctrl Delay 25.4
HCM 6th LOS C

HCM 6th Signalized Intersection Summary

188: Greenfield Ave & Cumberland Rd

Existing PM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	420	176	135	52	105	45	67	653	280	79	509	52
Future Volume (veh/h)	420	176	135	52	105	45	67	653	280	79	509	52
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	457	191	147	57	114	49	73	710	304	86	553	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	524	504	427	456	269	116	350	824	368	318	779	80
Arrive On Green	0.13	0.27	0.27	0.07	0.22	0.22	0.09	0.23	0.23	0.09	0.24	0.24
Sat Flow, veh/h	1767	1856	1572	1767	1231	529	1767	3526	1572	1767	3227	332
Grp Volume(v), veh/h	457	191	147	57	0	163	73	710	304	86	301	309
Grp Sat Flow(s),veh/h/ln	1767	1856	1572	1767	0	1760	1767	1763	1572	1767	1763	1796
Q Serve(g_s), s	7.0	4.6	4.1	1.3	0.0	4.4	1.6	10.6	10.1	1.9	8.6	8.7
Cycle Q Clear(g_c), s	7.0	4.6	4.1	1.3	0.0	4.4	1.6	10.6	10.1	1.9	8.6	8.7
Prop In Lane	1.00		1.00	1.00		0.30	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	524	504	427	456	0	384	350	824	368	318	425	433
V/C Ratio(X)	0.87	0.38	0.34	0.12	0.00	0.42	0.21	0.86	0.83	0.27	0.71	0.71
Avail Cap(c_a), veh/h	524	1249	1059	551	0	1185	424	834	372	636	674	686
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(l)	1.00	1.00	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	18.0	16.3	16.1	14.2	0.0	18.5	14.0	20.2	20.0	14.3	19.1	19.1
Incr Delay (d2), s/veh	14.9	0.5	0.5	0.1	0.0	0.7	0.3	9.1	14.1	0.5	2.2	2.2
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	8.9	1.7	1.4	0.5	0.0	1.7	0.6	4.8	4.7	0.7	3.3	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.9	16.7	16.6	14.4	0.0	19.3	14.3	29.3	34.1	14.8	21.3	21.3
LnGrp LOS	C	B	B	B	A	B	B	C	C	B	C	C
Approach Vol, veh/h	795			220			1087			696		
Approach Delay, s/veh	26.0			18.0			29.6			20.5		
Approach LOS	C			B			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	18.3	8.1	19.9	9.1	17.8	11.0	17.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	21.0	7.0	37.0	15.0	13.0	7.0	37.0				
Max Q Clear Time (g_c+1/3), s	10.7	10.7	3.3	6.6	3.9	12.6	9.0	6.4				
Green Ext Time (p_c), s	0.0	2.5	0.0	1.5	0.1	0.2	0.0	0.9				

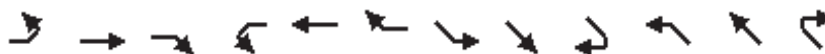
Intersection Summary

HCM 6th Ctrl Delay 25.4
HCM 6th LOS C

HCM 6th Signalized Intersection Summary

188: Greenfield Ave & Cumberland Rd

Future AM Peak

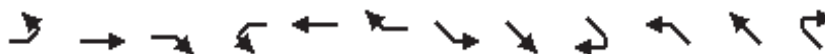


Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	973	533	433	52	215	80	142	1690	593	275	2214	52
Future Volume (veh/h)	973	533	433	52	215	80	142	1690	593	275	2214	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1058	579	471	57	234	87	154	1837	645	299	2407	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	565	726	783	183	146	54	130	1199	535	188	1408	33
Arrive On Green	0.32	0.39	0.39	0.04	0.11	0.11	0.05	0.34	0.34	0.11	0.40	0.40
Sat Flow, veh/h	1767	1856	1572	1767	1290	480	1767	3526	1572	1767	3520	83
Grp Volume(v), veh/h	1058	579	471	57	0	321	154	1837	645	299	1200	1264
Grp Sat Flow(s),veh/h/ln	1767	1856	1572	1767	0	1769	1767	1763	1572	1767	1763	1841
Q Serve(g_s), s	48.0	41.4	32.2	4.2	0.0	17.0	7.0	51.0	51.0	16.0	60.0	60.0
Cycle Q Clear(g_c), s	48.0	41.4	32.2	4.2	0.0	17.0	7.0	51.0	51.0	16.0	60.0	60.0
Prop In Lane	1.00		1.00	1.00		0.27	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	565	726	783	183	0	201	130	1199	535	188	705	736
V/C Ratio(X)	1.87	0.80	0.60	0.31	0.00	1.60	1.18	1.53	1.21	1.59	1.70	1.72
Avail Cap(c_a), veh/h	565	726	783	191	0	201	130	1199	535	188	705	736
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(l)	1.00	1.00	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	51.0	40.4	27.0	55.3	0.0	66.5	40.6	49.5	49.5	67.0	45.0	45.0
Incr Delay (d2), s/veh	398.6	6.3	1.3	1.0	0.0	292.5	135.3	243.9	109.6	287.5	322.2	328.1
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	88.4	19.8	12.3	1.9	0.0	23.9	8.0	62.5	36.0	22.2	88.6	93.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	449.6	46.7	28.3	56.2	0.0	359.0	175.9	293.4	159.1	354.5	367.2	373.1
LnGrp LOS	F	D	C	E	A	F	F	F	F	F	F	F
Approach Vol, veh/h	2108			378			2636			2763		
Approach Delay, s/veh	244.8			313.4			253.6			368.5		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	65.0	10.3	63.7	20.0	56.0	52.0	22.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	60.0	7.0	58.0	16.0	51.0	48.0	17.0					
Max Q Clear Time (g_c+I19, s)	62.0	6.2	43.4	18.0	53.0	50.0	19.0					
Green Ext Time (p_c), s	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	294.4											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary

188: Greenfield Ave & Cumberland Rd

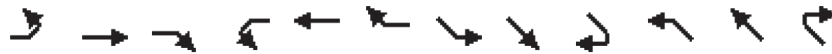
Future PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations	↰	↑	↱	↰	↱		↰	↱↱	↱	↰	↱↱	
Traffic Volume (veh/h)	973	533	433	52	215	80	142	1690	593	275	2214	52
Future Volume (veh/h)	973	533	433	52	215	80	142	1690	593	275	2214	52
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1058	579	471	57	234	87	154	1837	645	299	2407	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	565	726	783	183	146	54	130	1199	535	188	1408	33
Arrive On Green	0.32	0.39	0.39	0.04	0.11	0.11	0.05	0.34	0.34	0.11	0.40	0.40
Sat Flow, veh/h	1767	1856	1572	1767	1290	480	1767	3526	1572	1767	3520	83
Grp Volume(v), veh/h	1058	579	471	57	0	321	154	1837	645	299	1200	1264
Grp Sat Flow(s),veh/h/ln	1767	1856	1572	1767	0	1769	1767	1763	1572	1767	1763	1841
Q Serve(g_s), s	48.0	41.4	32.2	4.2	0.0	17.0	7.0	51.0	51.0	16.0	60.0	60.0
Cycle Q Clear(g_c), s	48.0	41.4	32.2	4.2	0.0	17.0	7.0	51.0	51.0	16.0	60.0	60.0
Prop In Lane	1.00		1.00	1.00		0.27	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	565	726	783	183	0	201	130	1199	535	188	705	736
V/C Ratio(X)	1.87	0.80	0.60	0.31	0.00	1.60	1.18	1.53	1.21	1.59	1.70	1.72
Avail Cap(c_a), veh/h	565	726	783	191	0	201	130	1199	535	188	705	736
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(l)	1.00	1.00	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	51.0	40.4	27.0	55.3	0.0	66.5	40.6	49.5	49.5	67.0	45.0	45.0
Incr Delay (d2), s/veh	398.6	6.3	1.3	1.0	0.0	292.5	135.3	243.9	109.6	287.5	322.2	328.1
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	88.4	19.8	12.3	1.9	0.0	23.9	8.0	62.5	36.0	22.2	88.6	93.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	449.6	46.7	28.3	56.2	0.0	359.0	175.9	293.4	159.1	354.5	367.2	373.1
LnGrp LOS	F	D	C	E	A	F	F	F	F	F	F	F
Approach Vol, veh/h	2108			378			2636			2763		
Approach Delay, s/veh	244.8			313.4			253.6			368.5		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	65.0	10.3	63.7	20.0	56.0	52.0	22.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	60.0	60.0	7.0	58.0	16.0	51.0	48.0	17.0				
Max Q Clear Time (g_c+I19), s	62.0	62.0	6.2	43.4	18.0	53.0	50.0	19.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	4.7	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	294.4											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary 188: Greenfield Ave & Cumberland Rd

Future AM Peak
Mitigated - Final

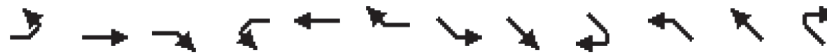


Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations	🚗🚗	🚗	🚗	🚗	🚗		🚗	🚗🚗	🚗🚗	🚗🚗	🚗🚗	
Traffic Volume (veh/h)	304	134	124	13	369	110	31	1414	890	405	985	17
Future Volume (veh/h)	304	134	124	13	369	110	31	1414	890	405	985	17
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	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			
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	330	146	135	14	401	120	34	1537	967	440	1071	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	320	605	701	360	347	104	298	1457	1402	411	2555	43
Arrive On Green	0.09	0.33	0.33	0.02	0.25	0.25	0.04	0.41	0.41	0.12	0.50	0.50
Sat Flow, veh/h	3428	1856	1572	1767	1371	410	1767	3526	2768	3428	5131	86
Grp Volume(v), veh/h	330	146	135	14	0	521	34	1537	967	440	705	384
Grp Sat Flow(s),veh/h/ln	1714	1856	1572	1767	0	1782	1767	1763	1384	1714	1689	1840
Q Serve(g_s), s	14.0	8.6	7.8	0.9	0.0	38.0	1.6	62.0	39.7	18.0	19.9	19.9
Cycle Q Clear(g_c), s	14.0	8.6	7.8	0.9	0.0	38.0	1.6	62.0	39.7	18.0	19.9	19.9
Prop In Lane	1.00		1.00	1.00		0.23	1.00		1.00	1.00		0.05
Lane Grp Cap(c), veh/h	320	605	701	360	0	451	298	1457	1402	411	1682	916
V/C Ratio(X)	1.03	0.24	0.19	0.04	0.00	1.15	0.11	1.05	0.69	1.07	0.42	0.42
Avail Cap(c_a), veh/h	320	605	701	406	0	451	318	1457	1402	411	1682	916
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.0	37.0	25.2	39.9	0.0	56.0	23.4	44.0	28.1	66.0	23.9	23.9
Incr Delay (d2), s/veh	58.6	0.2	0.1	0.0	0.0	92.0	0.2	39.5	1.4	64.1	0.2	0.3
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	8.7	4.0	3.0	0.4	0.0	28.5	0.7	34.2	13.2	11.5	7.9	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	126.6	37.2	25.3	39.9	0.0	148.0	23.6	83.5	29.5	130.1	24.1	24.2
LnGrp LOS	F	D	C	D		F	C	F	C	F	C	C
Approach Vol, veh/h	611				535		2538				1529	
Approach Delay, s/veh	82.9				145.1		62.1				54.6	
Approach LOS	F				F		E				D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	79.7		7.1	53.9	22.0	67.0	18.0	43.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	73.0		7.0	45.0	18.0	62.0	14.0	38.0				
Max Q Clear Time (g_c+I13), s	21.9		2.9	10.6	20.0	64.0	16.0	40.0				
Green Ext Time (p_c), s	0.0	8.5	0.0	1.2	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			70.9									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary

188: Greenfield Ave & Cumberland Rd

Future PM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	973	533	433	52	215	80	142	1690	593	275	2214	52
Future Volume (veh/h)	973	533	433	52	215	80	142	1690	593	275	2214	52
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	1058	579	471	57	234	87	154	1837	645	299	2407	57
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	846	639	657	148	181	67	130	1481	1845	251	2274	54
Arrive On Green	0.25	0.34	0.34	0.04	0.14	0.14	0.05	0.42	0.42	0.07	0.45	0.45
Sat Flow, veh/h	3428	1856	1572	1767	1290	480	1767	3526	2768	3428	5091	120
Grp Volume(v), veh/h	1058	579	471	57	0	321	154	1837	645	299	1594	870
Grp Sat Flow(s),veh/h/ln	1714	1856	1572	1767	0	1769	1767	1763	1384	1714	1689	1834
Q Serve(g_s), s	37.0	44.6	37.4	4.1	0.0	21.0	7.0	63.0	15.2	11.0	67.0	67.0
Cycle Q Clear(g_c), s	37.0	44.6	37.4	4.1	0.0	21.0	7.0	63.0	15.2	11.0	67.0	67.0
Prop In Lane	1.00		1.00	1.00		0.27	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	846	639	657	148	0	248	130	1481	1845	251	1508	819
V/C Ratio(X)	1.25	0.91	0.72	0.39	0.00	1.30	1.18	1.24	0.35	1.19	1.06	1.06
Avail Cap(c_a), veh/h	846	639	657	156	0	248	130	1481	1845	251	1508	819
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.5	46.9	36.3	52.5	0.0	64.5	40.8	43.5	10.9	69.5	41.5	41.5
Incr Delay (d2), s/veh	122.8	16.6	3.8	1.6	0.0	159.7	135.3	114.2	0.1	117.7	39.7	49.4
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	80.2	23.1	14.9	1.9	0.0	20.4	7.6	50.1	4.6	8.9	35.2	40.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	179.3	63.5	40.1	54.2	0.0	224.2	176.1	157.7	11.0	187.2	81.2	90.9
LnGrp LOS	F	E	D	D		F	F	F	B	F	F	F
Approach Vol, veh/h	2108			378			2636			2763		
Approach Delay, s/veh	116.4			198.6			122.9			95.7		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	72.0	10.3	56.7	15.0	68.0	41.0	26.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	67.0	7.0	51.0	11.0	63.0	37.0	21.0				
Max Q Clear Time (g_c+I19), s	69.0	6.1	46.6	13.0	65.0	39.0	23.0					
Green Ext Time (p_c), s	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh	115.3											
HCM 6th LOS	F											

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	40	0	107	0	0	0	249	285	0	0	160	35
Future Vol, veh/h	40	0	107	0	0	0	249	285	0	0	160	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	43	0	116	0	0	0	271	310	0	0	174	38

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1045	1045	193	1103	1064	310	212	0	0	310	0	0
Stage 1	193	193	-	852	852	-	-	-	-	-	-	-
Stage 2	852	852	-	251	212	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	206	228	846	188	222	728	1352	-	-	1245	-	-
Stage 1	806	739	-	353	375	-	-	-	-	-	-	-
Stage 2	353	375	-	751	725	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	167	173	846	132	168	728	1352	-	-	1245	-	-
Mov Cap-2 Maneuver	167	173	-	132	168	-	-	-	-	-	-	-
Stage 1	611	739	-	268	284	-	-	-	-	-	-	-
Stage 2	268	284	-	648	725	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.7	0	3.9	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1352	-	-	402	-	-	-
HCM Lane V/C Ratio	0.2	-	-	0.397	-	-	-
HCM Control Delay (s)	8.3	0	-	19.7	0	0	-
HCM Lane LOS	A	A	-	C	A	A	-
HCM 95th %tile Q(veh)	0.7	-	-	1.9	-	0	-

Intersection												
Int Delay, s/veh	5.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	40	0	107	0	0	0	249	285	0	0	160	35
Future Vol, veh/h	40	0	107	0	0	0	249	285	0	0	160	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	43	0	116	0	0	0	271	310	0	0	174	38

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1045	1045	193	1103	1064	310	212	0	0	310	0	0
Stage 1	193	193	-	852	852	-	-	-	-	-	-	-
Stage 2	852	852	-	251	212	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	206	228	846	188	222	728	1352	-	-	1245	-	-
Stage 1	806	739	-	353	375	-	-	-	-	-	-	-
Stage 2	353	375	-	751	725	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	167	173	846	132	168	728	1352	-	-	1245	-	-
Mov Cap-2 Maneuver	167	173	-	132	168	-	-	-	-	-	-	-
Stage 1	611	739	-	268	284	-	-	-	-	-	-	-
Stage 2	268	284	-	648	725	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.7	0	3.9	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1352	-	-	402	-	1245	-
HCM Lane V/C Ratio	0.2	-	-	0.397	-	-	-
HCM Control Delay (s)	8.3	0	-	19.7	0	0	-
HCM Lane LOS	A	A	-	C	A	A	-
HCM 95th %tile Q(veh)	0.7	-	-	1.9	-	0	-

Intersection												
Int Delay, s/veh	97											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	0	271	0	0	0	608	303	0	0	161	35
Future Vol, veh/h	40	0	271	0	0	0	608	303	0	0	161	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	43	0	295	0	0	0	661	329	0	0	175	38
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1845	1845	194	1993	1864	329	213	0	0	329	0	0
Stage 1	194	194	-	1651	1651	-	-	-	-	-	-	-
Stage 2	1651	1651	-	342	213	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	57	74	845	45	72	710	1351	-	-	1225	-	-
Stage 1	805	738	-	124	155	-	-	-	-	-	-	-
Stage 2	124	155	-	671	724	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 30	30	845	15	29	710	1351	-	-	1225	-	-
Mov Cap-2 Maneuver	~ 30	30	-	15	29	-	-	-	-	-	-	-
Stage 1	323	738	-	50	62	-	-	-	-	-	-	-
Stage 2	50	62	-	437	724	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s\$	422.2		0		6.8		0					
HCM LOS	F		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1351	-	-	188	-	1225	-	-				
HCM Lane V/C Ratio	0.489	-	-	1.798	-	-	-	-				
HCM Control Delay (s)	10.2	0	-	\$ 422.2	0	0	-	-				
HCM Lane LOS	B	A	-	F	A	A	-	-				
HCM 95th %tile Q(veh)	2.8	-	-	24	-	0	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

Intersection												
Int Delay, s/veh	97											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	0	271	0	0	0	608	303	0	0	161	35
Future Vol, veh/h	40	0	271	0	0	0	608	303	0	0	161	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	43	0	295	0	0	0	661	329	0	0	175	38
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1845	1845	194	1993	1864	329	213	0	0	329	0	0
Stage 1	194	194	-	1651	1651	-	-	-	-	-	-	-
Stage 2	1651	1651	-	342	213	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	57	74	845	45	72	710	1351	-	-	1225	-	-
Stage 1	805	738	-	124	155	-	-	-	-	-	-	-
Stage 2	124	155	-	671	724	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	~ 30	30	845	15	29	710	1351	-	-	1225	-	-
Mov Cap-2 Maneuver	~ 30	30	-	15	29	-	-	-	-	-	-	-
Stage 1	323	738	-	50	62	-	-	-	-	-	-	-
Stage 2	50	62	-	437	724	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s\$	422.2		0		6.8		0					
HCM LOS	F		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1351	-	-	188	-	1225	-	-				
HCM Lane V/C Ratio	0.489	-	-	1.798	-	-	-	-				
HCM Control Delay (s)	10.2	0	-	\$ 422.2	0	0	-	-				
HCM Lane LOS	B	A	-	F	A	A	-	-				
HCM 95th %tile Q(veh)	2.8	-	-	24	-	0	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

Intersection				
Intersection Delay, s/veh 6.7				
Intersection LOS A				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	467	0	198	287
Demand Flow Rate, veh/h	481	0	204	295
Vehicles Circulating, veh/h	280	258	54	74
Vehicles Exiting, veh/h	89	0	707	184
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	8.9	0.0	4.1	4.9
Approach LOS	A	-	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	481	0	204	295
Cap Entry Lane, veh/h	1037	1061	1306	1280
Entry HV Adj Factor	0.971	1.000	0.972	0.972
Flow Entry, veh/h	467	0	198	287
Cap Entry, veh/h	1007	1061	1269	1244
V/C Ratio	0.464	0.000	0.156	0.231
Control Delay, s/veh	8.9	3.4	4.1	4.9
LOS	A	A	A	A
95th %tile Queue, veh	3	0	1	1

Intersection				
Intersection Delay, s/veh 12.6				
Intersection LOS B				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	338	0	990	213
Demand Flow Rate, veh/h	348	0	1020	219
Vehicles Circulating, veh/h	180	1064	44	681
Vehicles Exiting, veh/h	720	0	484	383
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.1	0.0	15.5	9.5
Approach LOS	A	-	C	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	348	0	1020	219
Cap Entry Lane, veh/h	1148	466	1319	689
Entry HV Adj Factor	0.971	1.000	0.971	0.971
Flow Entry, veh/h	338	0	990	213
Cap Entry, veh/h	1115	466	1281	669
V/C Ratio	0.303	0.000	0.773	0.318
Control Delay, s/veh	6.1	7.7	15.5	9.5
LOS	A	A	C	A
95th %tile Queue, veh	1	0	8	1

Intersection						
Int Delay, s/veh	7.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	264	68	18	120	43
Future Vol, veh/h	10	264	68	18	120	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	287	74	20	130	47
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	391	84	0	0	94	0
Stage 1	84	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	611	972	-	-	1494	-
Stage 1	937	-	-	-	-	-
Stage 2	744	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	557	972	-	-	1494	-
Mov Cap-2 Maneuver	557	-	-	-	-	-
Stage 1	937	-	-	-	-	-
Stage 2	678	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	10.5	0	5.6			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	946	1494	-	
HCM Lane V/C Ratio	-	-	0.315	0.087	-	
HCM Control Delay (s)	-	-	10.5	7.6	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	1.4	0.3	-	

Intersection						
Int Delay, s/veh	7.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	264	68	18	120	43
Future Vol, veh/h	10	264	68	18	120	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	287	74	20	130	47
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	391	84	0	0	94	0
Stage 1	84	-	-	-	-	-
Stage 2	307	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	611	972	-	-	1494	-
Stage 1	937	-	-	-	-	-
Stage 2	744	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	557	972	-	-	1494	-
Mov Cap-2 Maneuver	557	-	-	-	-	-
Stage 1	937	-	-	-	-	-
Stage 2	678	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	10.5	0		5.6		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 946		1494	-	
HCM Lane V/C Ratio	-	- 0.315		0.087	-	
HCM Control Delay (s)	-	- 10.5		7.6	0	
HCM Lane LOS	-	- B		A	A	
HCM 95th %tile Q(veh)	-	- 1.4		0.3	-	

Intersection						
Int Delay, s/veh	13.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	623	68	18	284	44
Future Vol, veh/h	10	623	68	18	284	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	677	74	20	309	48
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	750	84	0	0	94	0
Stage 1	84	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	378	972	-	-	1494	-
Stage 1	937	-	-	-	-	-
Stage 2	509	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	298	972	-	-	1494	-
Mov Cap-2 Maneuver	298	-	-	-	-	-
Stage 1	937	-	-	-	-	-
Stage 2	401	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	18.6	0	7			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	938	1494	-	
HCM Lane V/C Ratio	-	-	0.734	0.207	-	
HCM Control Delay (s)	-	-	18.6	8	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	6.8	0.8	-	

Intersection						
Int Delay, s/veh	13.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	623	68	18	284	44
Future Vol, veh/h	10	623	68	18	284	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	677	74	20	309	48
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	750	84	0	0	94	0
Stage 1	84	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	378	972	-	-	1494	-
Stage 1	937	-	-	-	-	-
Stage 2	509	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	298	972	-	-	1494	-
Mov Cap-2 Maneuver	298	-	-	-	-	-
Stage 1	937	-	-	-	-	-
Stage 2	401	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	18.6	0	7			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	938	1494	-	
HCM Lane V/C Ratio	-	-	0.734	0.207	-	
HCM Control Delay (s)	-	-	18.6	8	0	
HCM Lane LOS	-	-	C	A	A	
HCM 95th %tile Q(veh)	-	-	6.8	0.8	-	

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	26	73	52	1431	895	9
Future Vol, veh/h	26	73	52	1431	895	9
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	125	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	28	79	57	1555	973	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1870	492	983	0	-	0
Stage 1	978	-	-	-	-	-
Stage 2	892	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	63	520	692	-	-	-
Stage 1	323	-	-	-	-	-
Stage 2	358	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	58	520	692	-	-	-
Mov Cap-2 Maneuver	58	-	-	-	-	-
Stage 1	297	-	-	-	-	-
Stage 2	358	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	40.1	0.4		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	692	-	58	520	-	-
HCM Lane V/C Ratio	0.082	-	0.487	0.153	-	-
HCM Control Delay (s)	10.7	-	115.8	13.2	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.3	-	1.9	0.5	-	-

Intersection						
Int Delay, s/veh	1.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	26	73	52	1431	895	9
Future Vol, veh/h	26	73	52	1431	895	9
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	125	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	28	79	57	1555	973	10
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1870	492	983	0	-	0
Stage 1	978	-	-	-	-	-
Stage 2	892	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	63	520	692	-	-	-
Stage 1	323	-	-	-	-	-
Stage 2	358	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	58	520	692	-	-	-
Mov Cap-2 Maneuver	58	-	-	-	-	-
Stage 1	297	-	-	-	-	-
Stage 2	358	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	40.1	0.4		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	692	-	58	520	-	-
HCM Lane V/C Ratio	0.082	-	0.487	0.153	-	-
HCM Control Delay (s)	10.7	-	115.8	13.2	-	-
HCM Lane LOS	B	-	F	B	-	-
HCM 95th %tile Q(veh)	0.3	-	1.9	0.5	-	-

Intersection						
Int Delay, s/veh	104					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	267	325	2200	1191	20
Future Vol, veh/h	35	267	325	2200	1191	20
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	125	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	38	290	353	2391	1295	22
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3208	659	1317	0	-	0
Stage 1	1306	-	-	-	-	-
Stage 2	1902	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	~ 7	404	516	-	-	-
Stage 1	216	-	-	-	-	-
Stage 2	102	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 2	404	516	-	-	-
Mov Cap-2 Maneuver	~ 2	-	-	-	-	-
Stage 1	68	-	-	-	-	-
Stage 2	102	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	1362.9	3.3		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	516	-	2	404	-	-
HCM Lane V/C Ratio	0.685	-	19.022	0.718	-	-
HCM Control Delay (s)	25.8	\$	11503.5	33.6	-	-
HCM Lane LOS	D	-	F	D	-	-
HCM 95th %tile Q(veh)	5.2	-	6.7	5.5	-	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Intersection						
Int Delay, s/veh	104					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	267	325	2200	1191	20
Future Vol, veh/h	35	267	325	2200	1191	20
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	125	250	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	38	290	353	2391	1295	22
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	3208	659	1317	0	-	0
Stage 1	1306	-	-	-	-	-
Stage 2	1902	-	-	-	-	-
Critical Hdwy	6.86	6.96	4.16	-	-	-
Critical Hdwy Stg 1	5.86	-	-	-	-	-
Critical Hdwy Stg 2	5.86	-	-	-	-	-
Follow-up Hdwy	3.53	3.33	2.23	-	-	-
Pot Cap-1 Maneuver	~ 7	404	516	-	-	-
Stage 1	216	-	-	-	-	-
Stage 2	102	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 2	404	516	-	-	-
Mov Cap-2 Maneuver	~ 2	-	-	-	-	-
Stage 1	68	-	-	-	-	-
Stage 2	102	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	1362.9	3.3		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	516	-	2	404	-	-
HCM Lane V/C Ratio	0.685	-	19.022	0.718	-	-
HCM Control Delay (s)	25.8	\$	11503.5	33.6	-	-
HCM Lane LOS	D	-	F	D	-	-
HCM 95th %tile Q(veh)	5.2	-	6.7	5.5	-	-
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

Intersection					
Intersection Delay, s/veh22.6					
Intersection LOS C					
Approach	EB	NB		SB	
Entry Lanes	1	2		2	
Conflicting Circle Lanes	2	2		2	
Adj Approach Flow, veh/h	326	784		1748	
Demand Flow Rate, veh/h	335	807		1800	
Vehicles Circulating, veh/h	1762	15		152	
Vehicles Exiting, veh/h	190	2082		670	
Ped Vol Crossing Leg, #/h	0	0		0	
Ped Cap Adj	1.000	1.000		1.000	
Approach Delay, s/veh	104.4	5.3		15.1	
Approach LOS	F	A		C	
Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	TR	LT	TR
Assumed Moves	LR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	335	379	428	846	954
Cap Entry Lane, veh/h	318	1331	1402	1174	1248
Entry HV Adj Factor	0.973	0.972	0.971	0.971	0.971
Flow Entry, veh/h	326	368	415	821	926
Cap Entry, veh/h	309	1294	1361	1140	1212
V/C Ratio	1.055	0.285	0.305	0.721	0.764
Control Delay, s/veh	104.4	5.3	5.3	14.4	15.7
LOS	F	A	A	B	C
95th %tile Queue, veh	12	1	1	7	8

Intersection					
Intersection Delay, s/veh44.2					
Intersection LOS E					
Approach	EB	NB		SB	
Entry Lanes	1	2		2	
Conflicting Circle Lanes	2	2		2	
Adj Approach Flow, veh/h	328	2744		1317	
Demand Flow Rate, veh/h	338	2827		1357	
Vehicles Circulating, veh/h	1334	39		364	
Vehicles Exiting, veh/h	387	1633		2502	
Ped Vol Crossing Leg, #/h	0	0		0	
Ped Cap Adj	1.000	1.000		1.000	
Approach Delay, s/veh	31.6	60.0		14.4	
Approach LOS	D	F		B	
Lane	Left	Left	Right	Left	Right
Designated Moves	LR	LT	TR	LT	TR
Assumed Moves	LR	LT	TR	LT	TR
RT Channelized					
Lane Util	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	338	1329	1498	638	719
Cap Entry Lane, veh/h	457	1302	1374	966	1042
Entry HV Adj Factor	0.970	0.971	0.971	0.970	0.971
Flow Entry, veh/h	328	1290	1454	619	698
Cap Entry, veh/h	443	1264	1334	937	1012
V/C Ratio	0.740	1.021	1.090	0.661	0.690
Control Delay, s/veh	31.6	48.9	69.7	14.3	14.5
LOS	D	F	F	B	B
95th %tile Queue, veh	6	24	32	5	6

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱	↱		↱			↱			↱	↱
Traffic Vol, veh/h	6	5	17	31	9	18	15	311	91	11	255	10
Future Vol, veh/h	6	5	17	31	9	18	15	311	91	11	255	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	106
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	7	5	18	34	10	20	16	338	99	12	277	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	736	770	277	738	732	388	288	0	0	437	0	0
Stage 1	301	301	-	420	420	-	-	-	-	-	-	-
Stage 2	435	469	-	318	312	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	333	330	759	332	347	658	1268	-	-	1117	-	-
Stage 1	706	663	-	609	588	-	-	-	-	-	-	-
Stage 2	598	559	-	691	656	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	309	320	759	312	337	658	1268	-	-	1117	-	-
Mov Cap-2 Maneuver	309	320	-	312	337	-	-	-	-	-	-	-
Stage 1	694	654	-	599	578	-	-	-	-	-	-	-
Stage 2	561	549	-	660	647	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.7		16.4		0.3		0.3	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1268	-	-	314	759	378	1117	-	-
HCM Lane V/C Ratio	0.013	-	-	0.038	0.024	0.167	0.011	-	-
HCM Control Delay (s)	7.9	0	-	16.9	9.9	16.4	8.3	0	-
HCM Lane LOS	A	A	-	C	A	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0.6	0	-	-

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↱	↱		↱			↱			↱	↱
Traffic Vol, veh/h	6	5	17	31	9	18	15	311	91	11	255	10
Future Vol, veh/h	6	5	17	31	9	18	15	311	91	11	255	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	106
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	7	5	18	34	10	20	16	338	99	12	277	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	736	770	277	738	732	388	288	0	0	437	0	0
Stage 1	301	301	-	420	420	-	-	-	-	-	-	-
Stage 2	435	469	-	318	312	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	333	330	759	332	347	658	1268	-	-	1117	-	-
Stage 1	706	663	-	609	588	-	-	-	-	-	-	-
Stage 2	598	559	-	691	656	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	309	320	759	312	337	658	1268	-	-	1117	-	-
Mov Cap-2 Maneuver	309	320	-	312	337	-	-	-	-	-	-	-
Stage 1	694	654	-	599	578	-	-	-	-	-	-	-
Stage 2	561	549	-	660	647	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.7		16.4		0.3		0.3	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1268	-	-	314	759	378	1117	-	-
HCM Lane V/C Ratio	0.013	-	-	0.038	0.024	0.167	0.011	-	-
HCM Control Delay (s)	7.9	0	-	16.9	9.9	16.4	8.3	0	-
HCM Lane LOS	A	A	-	C	A	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0.6	0	-	-

HCM 6th TWSC
192: Gray Rd & Golf Club Blvd/156th St

Future AM Peak

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↰	↱		↰	↱		↰	↱		↰	↱
Traffic Vol, veh/h	6	9	18	46	11	18	21	391	107	11	265	10
Future Vol, veh/h	6	9	18	46	11	18	21	391	107	11	265	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	106
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	7	10	20	50	12	20	23	425	116	12	288	11

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	857	899	288	862	852	483	299	0	0	541	0	0
Stage 1	312	312	-	529	529	-	-	-	-	-	-	-
Stage 2	545	587	-	333	323	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	276	278	749	274	296	582	1256	-	-	1023	-	-
Stage 1	696	656	-	531	526	-	-	-	-	-	-	-
Stage 2	521	495	-	679	649	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	250	267	749	251	284	582	1256	-	-	1023	-	-
Mov Cap-2 Maneuver	250	267	-	251	284	-	-	-	-	-	-	-
Stage 1	677	647	-	517	512	-	-	-	-	-	-	-
Stage 2	478	482	-	642	640	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	14.4		21.6		0.3		0.3	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1256	-	-	260	749	297	1023	-	-
HCM Lane V/C Ratio	0.018	-	-	0.063	0.026	0.274	0.012	-	-
HCM Control Delay (s)	7.9	0	-	19.8	9.9	21.6	8.6	0	-
HCM Lane LOS	A	A	-	C	A	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.1	1.1	0	-	-

HCM 6th TWSC
192: Gray Rd & Golf Club Blvd/156th St

Future PM Peak

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕	↗		↕			↕			↕	↗
Traffic Vol, veh/h	6	9	18	46	11	18	21	391	107	11	265	10
Future Vol, veh/h	6	9	18	46	11	18	21	391	107	11	265	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	-	-	-	-	-	-	106
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	7	10	20	50	12	20	23	425	116	12	288	11
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	857	899	288	862	852	483	299	0	0	541	0	0
Stage 1	312	312	-	529	529	-	-	-	-	-	-	-
Stage 2	545	587	-	333	323	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	276	278	749	274	296	582	1256	-	-	1023	-	-
Stage 1	696	656	-	531	526	-	-	-	-	-	-	-
Stage 2	521	495	-	679	649	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	250	267	749	251	284	582	1256	-	-	1023	-	-
Mov Cap-2 Maneuver	250	267	-	251	284	-	-	-	-	-	-	-
Stage 1	677	647	-	517	512	-	-	-	-	-	-	-
Stage 2	478	482	-	642	640	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	14.4		21.6		0.3		0.3					
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR			
Capacity (veh/h)	1256	-	-	260	749	297	1023	-	-			
HCM Lane V/C Ratio	0.018	-	-	0.063	0.026	0.274	0.012	-	-			
HCM Control Delay (s)	7.9	0	-	19.8	9.9	21.6	8.6	0	-			
HCM Lane LOS	A	A	-	C	A	C	A	A	-			
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.1	1.1	0	-	-			

HCM 6th Signalized Intersection Summary
193: Hazel Dell Rd & Noble Crossing Pkwy/Midland Ln

Existing AM Peak
12/11/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	9	63	26	2	108	71	1264	52	75	831	31
Future Volume (veh/h)	71	9	63	26	2	108	71	1264	52	75	831	31
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	77	10	68	28	2	117	77	1374	57	82	903	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	361	41	282	386	4	258	373	1499	734	262	1506	793
Arrive On Green	0.08	0.20	0.20	0.04	0.17	0.17	0.08	0.43	0.43	0.08	0.43	0.43
Sat Flow, veh/h	1767	206	1398	1767	26	1550	1767	3526	1572	1767	3526	1572
Grp Volume(v), veh/h	77	0	78	28	0	119	77	1374	57	82	903	34
Grp Sat Flow(s),veh/h/ln	1767	0	1604	1767	0	1577	1767	1763	1572	1767	1763	1572
Q Serve(g_s), s	2.4	0.0	2.9	0.9	0.0	4.8	1.6	26.2	1.4	1.7	14.1	0.8
Cycle Q Clear(g_c), s	2.4	0.0	2.9	0.9	0.0	4.8	1.6	26.2	1.4	1.7	14.1	0.8
Prop In Lane	1.00		0.87	1.00		0.98	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	361	0	323	386	0	262	373	1499	734	262	1506	793
V/C Ratio(X)	0.21	0.00	0.24	0.07	0.00	0.45	0.21	0.92	0.08	0.31	0.60	0.04
Avail Cap(c_a), veh/h	399	0	323	485	0	266	411	1534	750	296	1534	805
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(l)	1.00	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	21.1	0.0	23.9	22.7	0.0	26.8	10.8	19.3	10.5	15.1	15.7	9.0
Incr Delay (d2), s/veh	0.3	0.0	0.4	0.1	0.0	1.2	0.3	8.9	0.0	0.7	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	1.1	0.4	0.0	1.8	0.5	10.7	0.5	0.6	4.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.4	0.0	24.3	22.8	0.0	28.0	11.1	28.2	10.5	15.8	16.3	9.0
LnGrp LOS	C	A	C	C	A	C	B	C	B	B	B	A
Approach Vol, veh/h		155			147			1508			1019	
Approach Delay, s/veh		22.9			27.0			26.7			16.1	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	35.3	7.0	19.4	9.5	35.4	9.5	16.9				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	31.0	7.0	12.0	7.0	31.0	7.0	12.0				
Max Q Clear Time (g_c+l1), s	3.7	28.2	2.9	4.9	3.6	16.1	4.4	6.8				
Green Ext Time (p_c), s	0.0	2.1	0.0	0.2	0.0	5.2	0.0	0.2				
Intersection Summary												
HCM 6th Ctrl Delay			22.7									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
193: Hazel Dell Rd & Noble Crossing Pkwy/Midland Ln

Existing PM Peak

12/11/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	9	63	26	2	108	71	1264	52	75	831	31
Future Volume (veh/h)	71	9	63	26	2	108	71	1264	52	75	831	31
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	77	10	68	28	2	117	77	1374	57	82	903	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	361	41	282	386	4	258	373	1499	734	262	1506	793
Arrive On Green	0.08	0.20	0.20	0.04	0.17	0.17	0.08	0.43	0.43	0.08	0.43	0.43
Sat Flow, veh/h	1767	206	1398	1767	26	1550	1767	3526	1572	1767	3526	1572
Grp Volume(v), veh/h	77	0	78	28	0	119	77	1374	57	82	903	34
Grp Sat Flow(s),veh/h/ln	1767	0	1604	1767	0	1577	1767	1763	1572	1767	1763	1572
Q Serve(g_s), s	2.4	0.0	2.9	0.9	0.0	4.8	1.6	26.2	1.4	1.7	14.1	0.8
Cycle Q Clear(g_c), s	2.4	0.0	2.9	0.9	0.0	4.8	1.6	26.2	1.4	1.7	14.1	0.8
Prop In Lane	1.00		0.87	1.00		0.98	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	361	0	323	386	0	262	373	1499	734	262	1506	793
V/C Ratio(X)	0.21	0.00	0.24	0.07	0.00	0.45	0.21	0.92	0.08	0.31	0.60	0.04
Avail Cap(c_a), veh/h	399	0	323	485	0	266	411	1534	750	296	1534	805
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	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	21.1	0.0	23.9	22.7	0.0	26.8	10.8	19.3	10.5	15.1	15.7	9.0
Incr Delay (d2), s/veh	0.3	0.0	0.4	0.1	0.0	1.2	0.3	8.9	0.0	0.7	0.6	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	1.1	0.4	0.0	1.8	0.5	10.7	0.5	0.6	4.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.4	0.0	24.3	22.8	0.0	28.0	11.1	28.2	10.5	15.8	16.3	9.0
LnGrp LOS	C	A	C	C	A	C	B	C	B	B	B	A
Approach Vol, veh/h		155			147			1508			1019	
Approach Delay, s/veh		22.9			27.0			26.7			16.1	
Approach LOS		C			C			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	35.3	7.0	19.4	9.5	35.4	9.5	16.9				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	31.0	7.0	12.0	7.0	31.0	7.0	12.0				
Max Q Clear Time (g_c+l1), s	3.7	28.2	2.9	4.9	3.6	16.1	4.4	6.8				
Green Ext Time (p_c), s	0.0	2.1	0.0	0.2	0.0	5.2	0.0	0.2				
Intersection Summary												
HCM 6th Ctrl Delay			22.7									
HCM 6th LOS			C									

Existing PM Peak 12:41 pm 08/21/2023

Synchro 11 Report
Page 137

HCM 6th Signalized Intersection Summary 193: Hazel Dell Rd & Noble Crossing Pkwy/Midland Ln

Future AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	9	63	26	2	108	71	2306	52	75	1321	31
Future Volume (veh/h)	71	9	63	26	2	108	71	2306	52	75	1321	31
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	77	10	68	28	2	117	77	2507	57	82	1436	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	137	19	132	168	2	124	309	2495	1164	128	2496	1187
Arrive On Green	0.05	0.09	0.09	0.03	0.08	0.08	0.04	0.71	0.71	0.05	0.71	0.71
Sat Flow, veh/h	1767	206	1398	1767	26	1550	1767	3526	1572	1767	3526	1572
Grp Volume(v), veh/h	77	0	78	28	0	119	77	2507	57	82	1436	34
Grp Sat Flow(s),veh/h/ln	1767	0	1604	1767	0	1577	1767	1763	1572	1767	1763	1572
Q Serve(g_s), s	5.9	0.0	6.9	2.1	0.0	11.2	1.7	106.0	1.5	2.7	30.0	0.8
Cycle Q Clear(g_c), s	5.9	0.0	6.9	2.1	0.0	11.2	1.7	106.0	1.5	2.7	30.0	0.8
Prop In Lane	1.00		0.87	1.00		0.98	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	137	0	152	168	0	126	309	2495	1164	128	2496	1187
V/C Ratio(X)	0.56	0.00	0.51	0.17	0.00	0.94	0.25	1.00	0.05	0.64	0.58	0.03
Avail Cap(c_a), veh/h	137	0	152	194	0	126	312	2495	1164	131	2496	1187
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(l)	1.00	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	60.0	0.0	64.5	60.0	0.0	68.5	8.6	21.9	5.3	47.1	10.8	4.6
Incr Delay (d2), s/veh	5.1	0.0	2.9	0.5	0.0	62.2	0.4	19.2	0.0	9.8	0.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	3.0	1.0	0.0	6.7	0.6	43.4	0.5	2.5	10.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.1	0.0	67.4	60.5	0.0	130.8	9.0	41.0	5.3	56.9	11.1	4.6
LnGrp LOS	E	A	E	E	A	F	A	F	A	E	B	A
Approach Vol, veh/h	155			147			2641			1552		
Approach Delay, s/veh	66.3			117.4			39.3			13.4		
Approach LOS	E			F			D			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.8	111.0	8.8	19.2	10.7	111.1	11.0	17.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	106.0	7.0	12.0	7.0	106.0	7.0	12.0				
Max Q Clear Time (g_c+l1), s	4.7	108.0	4.1	8.9	3.7	32.0	7.9	13.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	15.4	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	33.9											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary
193: Hazel Dell Rd & Noble Crossing Pkwy/Midland Ln

Future PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	9	63	26	2	108	71	2306	52	75	1321	31
Future Volume (veh/h)	71	9	63	26	2	108	71	2306	52	75	1321	31
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	77	10	68	28	2	117	77	2507	57	82	1436	34
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	137	19	132	168	2	124	309	2495	1164	128	2496	1187
Arrive On Green	0.05	0.09	0.09	0.03	0.08	0.08	0.04	0.71	0.71	0.05	0.71	0.71
Sat Flow, veh/h	1767	206	1398	1767	26	1550	1767	3526	1572	1767	3526	1572
Grp Volume(v), veh/h	77	0	78	28	0	119	77	2507	57	82	1436	34
Grp Sat Flow(s),veh/h/ln	1767	0	1604	1767	0	1577	1767	1763	1572	1767	1763	1572
Q Serve(g_s), s	5.9	0.0	6.9	2.1	0.0	11.2	1.7	106.0	1.5	2.7	30.0	0.8
Cycle Q Clear(g_c), s	5.9	0.0	6.9	2.1	0.0	11.2	1.7	106.0	1.5	2.7	30.0	0.8
Prop In Lane	1.00		0.87	1.00		0.98	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	137	0	152	168	0	126	309	2495	1164	128	2496	1187
V/C Ratio(X)	0.56	0.00	0.51	0.17	0.00	0.94	0.25	1.00	0.05	0.64	0.58	0.03
Avail Cap(c_a), veh/h	137	0	152	194	0	126	312	2495	1164	131	2496	1187
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(l)	1.00	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	60.0	0.0	64.5	60.0	0.0	68.5	8.6	21.9	5.3	47.1	10.8	4.6
Incr Delay (d2), s/veh	5.1	0.0	2.9	0.5	0.0	62.2	0.4	19.2	0.0	9.8	0.3	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	3.0	1.0	0.0	6.7	0.6	43.4	0.5	2.5	10.5	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.1	0.0	67.4	60.5	0.0	130.8	9.0	41.0	5.3	56.9	11.1	4.6
LnGrp LOS	E	A	E	E	A	F	A	F	A	E	B	A
Approach Vol, veh/h	155					147		2641		1552		
Approach Delay, s/veh	66.3					117.4		39.3		13.4		
Approach LOS	E					F		D		B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.8	111.0	8.8	19.2	10.7	111.1	11.0	17.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	106.0	7.0	12.0	7.0	106.0	7.0	12.0				
Max Q Clear Time (g_c+I1), s	4.7	108.0	4.1	8.9	3.7	32.0	7.9	13.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.1	0.0	15.4	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	33.9											
HCM 6th LOS	C											

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔		↔	↔		↔	
Traffic Vol, veh/h	62	593	11	9	470	101	2	0	3	54	0	39
Future Vol, veh/h	62	593	11	9	470	101	2	0	3	54	0	39
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	-	-	Yield	-	-	None
Storage Length	-	-	-	-	-	270	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	67	645	12	10	511	110	2	0	3	59	0	42

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	621	0	0	657	0	0	1392	1426	651	1316	1322	511
Stage 1	-	-	-	-	-	-	785	785	-	531	531	-
Stage 2	-	-	-	-	-	-	607	641	-	785	791	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	955	-	-	926	-	-	119	135	467	134	156	561
Stage 1	-	-	-	-	-	-	384	402	-	530	524	-
Stage 2	-	-	-	-	-	-	482	468	-	384	400	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	955	-	-	926	-	-	99	118	467	120	136	561
Mov Cap-2 Maneuver	-	-	-	-	-	-	99	118	-	120	136	-
Stage 1	-	-	-	-	-	-	341	357	-	471	515	-
Stage 2	-	-	-	-	-	-	438	460	-	339	356	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0.1	24.6	48.4
HCM LOS			C	E

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	99	467	955	-	-	926	-	-	179
HCM Lane V/C Ratio	0.022	0.007	0.071	-	-	0.011	-	-	0.565
HCM Control Delay (s)	42.2	12.8	9.1	0	-	8.9	0	-	48.4
HCM Lane LOS	E	B	A	A	-	A	A	-	E
HCM 95th %tile Q(veh)	0.1	0	0.2	-	-	0	-	-	3

Intersection												
Int Delay, s/veh	3.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕	↕		↕	
Traffic Vol, veh/h	62	593	11	9	470	101	2	0	3	54	0	39
Future Vol, veh/h	62	593	11	9	470	101	2	0	3	54	0	39
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	-	-	Yield	-	-	None
Storage Length	-	-	-	-	-	270	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	67	645	12	10	511	110	2	0	3	59	0	42

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	621	0	0	657	0	0	1392	1426	651	1316	1322	511
Stage 1	-	-	-	-	-	-	785	785	-	531	531	-
Stage 2	-	-	-	-	-	-	607	641	-	785	791	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	955	-	-	926	-	-	119	135	467	134	156	561
Stage 1	-	-	-	-	-	-	384	402	-	530	524	-
Stage 2	-	-	-	-	-	-	482	468	-	384	400	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	955	-	-	926	-	-	99	118	467	120	136	561
Mov Cap-2 Maneuver	-	-	-	-	-	-	99	118	-	120	136	-
Stage 1	-	-	-	-	-	-	341	357	-	471	515	-
Stage 2	-	-	-	-	-	-	438	460	-	339	356	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			0.1			24.6			48.4		
HCM LOS							C			E		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	99	467	955	-	-	926	-	-	179
HCM Lane V/C Ratio	0.022	0.007	0.071	-	-	0.011	-	-	0.565
HCM Control Delay (s)	42.2	12.8	9.1	0	-	8.9	0	-	48.4
HCM Lane LOS	E	B	A	A	-	A	A	-	E
HCM 95th %tile Q(veh)	0.1	0	0.2	-	-	0	-	-	3

HCM 6th TWSC
194: Greenfield Ave & Summer Rd

Future AM Peak

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔		↔	↔		↔	
Traffic Vol, veh/h	62	1472	11	9	2152	102	2	0	3	68	0	39
Future Vol, veh/h	62	1472	11	9	2152	102	2	0	3	68	0	39
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	-	-	Yield	-	-	None
Storage Length	-	-	-	-	-	270	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	67	1600	12	10	2339	111	2	0	3	74	0	42
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2450	0	0	1612	0	0	4176	4210	1606	4099	4105	2339
Stage 1	-	-	-	-	-	-	1740	1740	-	2359	2359	-
Stage 2	-	-	-	-	-	-	2436	2470	-	1740	1746	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	189	-	-	402	-	-	~ 1	2	129	~ 1	2	46
Stage 1	-	-	-	-	-	-	110	140	-	~ 47	68	-
Stage 2	-	-	-	-	-	-	42	59	-	110	139	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	189	-	-	402	-	-	-	0	129	-	0	46
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-	-	0	-
Stage 1	-	-	-	-	-	-	110	0	-	~ 47	68	-
Stage 2	-	-	-	-	-	-	3	59	-	-	0	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0.1								
HCM LOS							-			-		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	-	129	189	-	-	402	-	-	-			
HCM Lane V/C Ratio	-	0.025	0.357	-	-	0.024	-	-	-			
HCM Control Delay (s)	-	33.6	34.2	0	-	14.2	0	-	-			
HCM Lane LOS	-	D	D	A	-	B	A	-	-			
HCM 95th %tile Q(veh)	-	0.1	1.5	-	-	0.1	-	-	-			
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔	↔		↔	↔		↔	
Traffic Vol, veh/h	62	1472	11	9	2152	102	2	0	3	68	0	39
Future Vol, veh/h	62	1472	11	9	2152	102	2	0	3	68	0	39
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	-	-	Yield	-	-	None
Storage Length	-	-	-	-	-	270	-	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	67	1600	12	10	2339	111	2	0	3	74	0	42
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	2450	0	0	1612	0	0	4176	4210	1606	4099	4105	2339
Stage 1	-	-	-	-	-	-	1740	1740	-	2359	2359	-
Stage 2	-	-	-	-	-	-	2436	2470	-	1740	1746	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	189	-	-	402	-	-	~ 1	2	129	~ 1	2	46
Stage 1	-	-	-	-	-	-	110	140	-	~ 47	68	-
Stage 2	-	-	-	-	-	-	42	59	-	110	139	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	189	-	-	402	-	-	-	0	129	-	0	46
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	0	-	-	0	-
Stage 1	-	-	-	-	-	-	110	0	-	~ 47	68	-
Stage 2	-	-	-	-	-	-	3	59	-	-	0	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	1.4			0.1								
HCM LOS							-			-		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	-	129	189	-	-	402	-	-	-			
HCM Lane V/C Ratio	-	0.025	0.357	-	-	0.024	-	-	-			
HCM Control Delay (s)	-	33.6	34.2	0	-	14.2	0	-	-			
HCM Lane LOS	-	D	D	A	-	B	A	-	-			
HCM 95th %tile Q(veh)	-	0.1	1.5	-	-	0.1	-	-	-			
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Intersection						
Intersection Delay, s/veh 9.3						
Intersection LOS A						
Approach	EB		WB		NB	SB
Entry Lanes	2		2		1	1
Conflicting Circle Lanes	2		2		2	2
Adj Approach Flow, veh/h	1536		1016		17	158
Demand Flow Rate, veh/h	1582		1046		17	163
Vehicles Circulating, veh/h	111		35		1685	1047
Vehicles Exiting, veh/h	1099		1667		8	34
Ped Vol Crossing Leg, #/h	0		0		0	0
Ped Cap Adj	1.000		1.000		1.000	1.000
Approach Delay, s/veh	11.0		6.5		11.4	10.2
Approach LOS	B		A		B	B
Lane	Left	Right	Left	Right	Left	Left
Designated Moves	LT	TR	LT	TR	LTR	LTR
Assumed Moves	LT	TR	LT	TR	LTR	LTR
RT Channelized						
Lane Util	0.470	0.530	0.470	0.530	1.000	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.328
Entry Flow, veh/h	744	838	492	554	17	163
Cap Entry Lane, veh/h	1219	1292	1307	1378	339	583
Entry HV Adj Factor	0.970	0.971	0.971	0.972	1.000	0.969
Flow Entry, veh/h	722	814	478	539	17	158
Cap Entry, veh/h	1182	1255	1269	1340	339	565
V/C Ratio	0.610	0.648	0.376	0.402	0.050	0.280
Control Delay, s/veh	10.7	11.2	6.4	6.5	11.4	10.2
LOS	B	B	A	A	B	B
95th %tile Queue, veh	4	5	2	2	0	1

Intersection						
Intersection Delay, s/veh28.5						
Intersection LOS D						
Approach	EB		WB		NB	SB
Entry Lanes	2		2		1	1
Conflicting Circle Lanes	2		2		2	2
Adj Approach Flow, veh/h	1679		2460		5	116
Demand Flow Rate, veh/h	1729		2533		5	119
Vehicles Circulating, veh/h	86		71		1793	2421
Vehicles Exiting, veh/h	2454		1727		22	183
Ped Vol Crossing Leg, #/h	0		0		0	0
Ped Cap Adj	1.000		1.000		1.000	1.000
Approach Delay, s/veh	12.0		38.4		11.9	55.8
Approach LOS	B		E		B	F
Lane	Left	Right	Left	Right	Left	Left
Designated Moves	LT	TR	LT	TR	LTR	LTR
Assumed Moves	LT	TR	LT	TR	LTR	LTR
RT Channelized						
Lane Util	0.470	0.530	0.470	0.530	1.000	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.328	4.328
Entry Flow, veh/h	813	916	1191	1342	5	119
Cap Entry Lane, veh/h	1247	1320	1264	1337	309	181
Entry HV Adj Factor	0.971	0.971	0.971	0.971	1.000	0.975
Flow Entry, veh/h	789	890	1156	1304	5	116
Cap Entry, veh/h	1211	1282	1227	1299	309	177
V/C Ratio	0.652	0.694	0.942	1.004	0.016	0.656
Control Delay, s/veh	11.6	12.4	32.2	44.0	11.9	55.8
LOS	B	B	D	F	B	F
95th %tile Queue, veh	5	6	17	22	0	4

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	12	0	0	21	8	0	0	0	2	0	5
Future Vol, veh/h	8	12	0	0	21	8	0	0	0	2	0	5
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	9	13	0	0	23	9	0	0	0	2	0	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	32	0	0	13	0	0	61	63	13	59	59	28
Stage 1	-	-	-	-	-	-	31	31	-	28	28	-
Stage 2	-	-	-	-	-	-	30	32	-	31	31	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1574	-	-	1599	-	-	932	826	1064	935	830	1044
Stage 1	-	-	-	-	-	-	983	867	-	987	870	-
Stage 2	-	-	-	-	-	-	984	866	-	983	867	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1574	-	-	1599	-	-	923	821	1064	930	825	1044
Mov Cap-2 Maneuver	-	-	-	-	-	-	923	821	-	930	825	-
Stage 1	-	-	-	-	-	-	977	862	-	981	870	-
Stage 2	-	-	-	-	-	-	979	866	-	977	862	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.9			0			0			8.6		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	1574	-	-	1599	-	-	1009				
HCM Lane V/C Ratio	-	0.006	-	-	-	-	-	0.008				
HCM Control Delay (s)	0	7.3	0	-	0	-	-	8.6				
HCM Lane LOS	A	A	A	-	A	-	-	A				
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0				

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	12	0	0	21	8	0	0	0	2	0	5
Future Vol, veh/h	8	12	0	0	21	8	0	0	0	2	0	5
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	9	13	0	0	23	9	0	0	0	2	0	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	32	0	0	13	0	0	61	63	13	59	59	28
Stage 1	-	-	-	-	-	-	31	31	-	28	28	-
Stage 2	-	-	-	-	-	-	30	32	-	31	31	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1574	-	-	1599	-	-	932	826	1064	935	830	1044
Stage 1	-	-	-	-	-	-	983	867	-	987	870	-
Stage 2	-	-	-	-	-	-	984	866	-	983	867	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1574	-	-	1599	-	-	923	821	1064	930	825	1044
Mov Cap-2 Maneuver	-	-	-	-	-	-	923	821	-	930	825	-
Stage 1	-	-	-	-	-	-	977	862	-	981	870	-
Stage 2	-	-	-	-	-	-	979	866	-	977	862	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.9			0			0			8.6		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	-	1574	-	-	1599	-	-	1009				
HCM Lane V/C Ratio	-	0.006	-	-	-	-	-	0.008				
HCM Control Delay (s)	0	7.3	0	-	0	-	-	8.6				
HCM Lane LOS	A	A	A	-	A	-	-	A				
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	0				

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	12	0	3	22	10	0	14	1	4	7	5
Future Vol, veh/h	8	12	0	3	22	10	0	14	1	4	7	5
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	9	13	0	3	24	11	0	15	1	4	8	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	35	0	0	13	0	0	73	72	13	75	67	30
Stage 1	-	-	-	-	-	-	31	31	-	36	36	-
Stage 2	-	-	-	-	-	-	42	41	-	39	31	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1570	-	-	1599	-	-	915	817	1064	913	822	1042
Stage 1	-	-	-	-	-	-	983	867	-	977	863	-
Stage 2	-	-	-	-	-	-	970	859	-	973	867	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1570	-	-	1599	-	-	899	810	1064	894	815	1042
Mov Cap-2 Maneuver	-	-	-	-	-	-	899	810	-	894	815	-
Stage 1	-	-	-	-	-	-	977	862	-	971	861	-
Stage 2	-	-	-	-	-	-	955	857	-	949	862	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.9			0.6			9.5			9.1		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	823	1570	-	-	1599	-	-	896				
HCM Lane V/C Ratio	0.02	0.006	-	-	0.002	-	-	0.019				
HCM Control Delay (s)	9.5	7.3	0	-	7.3	0	-	9.1				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	8	12	0	3	22	10	0	14	1	4	7	5
Future Vol, veh/h	8	12	0	3	22	10	0	14	1	4	7	5
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	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	9	13	0	3	24	11	0	15	1	4	8	5
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	35	0	0	13	0	0	73	72	13	75	67	30
Stage 1	-	-	-	-	-	-	31	31	-	36	36	-
Stage 2	-	-	-	-	-	-	42	41	-	39	31	-
Critical Hdwy	4.13	-	-	4.13	-	-	7.13	6.53	6.23	7.13	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.13	5.53	-
Follow-up Hdwy	2.227	-	-	2.227	-	-	3.527	4.027	3.327	3.527	4.027	3.327
Pot Cap-1 Maneuver	1570	-	-	1599	-	-	915	817	1064	913	822	1042
Stage 1	-	-	-	-	-	-	983	867	-	977	863	-
Stage 2	-	-	-	-	-	-	970	859	-	973	867	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1570	-	-	1599	-	-	899	810	1064	894	815	1042
Mov Cap-2 Maneuver	-	-	-	-	-	-	899	810	-	894	815	-
Stage 1	-	-	-	-	-	-	977	862	-	971	861	-
Stage 2	-	-	-	-	-	-	955	857	-	949	862	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.9			0.6			9.5			9.1		
HCM LOS							A			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	823	1570	-	-	1599	-	-	896				
HCM Lane V/C Ratio	0.02	0.006	-	-	0.002	-	-	0.019				
HCM Control Delay (s)	9.5	7.3	0	-	7.3	0	-	9.1				
HCM Lane LOS	A	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	18	26	1	9	0	9	81	0	0	111	2
Future Vol, veh/h	6	18	26	1	9	0	9	81	0	0	111	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	7	20	28	1	10	0	10	88	0	0	121	2
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	235	230	122	254	231	88	123	0	0	88	0	0
Stage 1	122	122	-	108	108	-	-	-	-	-	-	-
Stage 2	113	108	-	146	123	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	717	668	926	697	667	968	1458	-	-	1501	-	-
Stage 1	880	793	-	895	804	-	-	-	-	-	-	-
Stage 2	890	804	-	854	792	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	705	663	926	657	662	968	1458	-	-	1501	-	-
Mov Cap-2 Maneuver	705	663	-	657	662	-	-	-	-	-	-	-
Stage 1	874	793	-	889	798	-	-	-	-	-	-	-
Stage 2	873	798	-	808	792	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	9.9		10.5		0.7		0					
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1458	-	-	784	661	1501	-	-				
HCM Lane V/C Ratio	0.007	-	-	0.069	0.016	-	-	-				
HCM Control Delay (s)	7.5	0	-	9.9	10.5	0	-	-				
HCM Lane LOS	A	A	-	A	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-				

Intersection												
Int Delay, s/veh	2.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	18	26	1	9	0	9	81	0	0	111	2
Future Vol, veh/h	6	18	26	1	9	0	9	81	0	0	111	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	7	20	28	1	10	0	10	88	0	0	121	2
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	235	230	122	254	231	88	123	0	0	88	0	0
Stage 1	122	122	-	108	108	-	-	-	-	-	-	-
Stage 2	113	108	-	146	123	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	717	668	926	697	667	968	1458	-	-	1501	-	-
Stage 1	880	793	-	895	804	-	-	-	-	-	-	-
Stage 2	890	804	-	854	792	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	705	663	926	657	662	968	1458	-	-	1501	-	-
Mov Cap-2 Maneuver	705	663	-	657	662	-	-	-	-	-	-	-
Stage 1	874	793	-	889	798	-	-	-	-	-	-	-
Stage 2	873	798	-	808	792	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	9.9		10.5		0.7		0					
HCM LOS	A		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1458	-	-	784	661	1501	-	-				
HCM Lane V/C Ratio	0.007	-	-	0.069	0.016	-	-	-				
HCM Control Delay (s)	7.5	0	-	9.9	10.5	0	-	-				
HCM Lane LOS	A	A	-	A	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-				

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	18	26	1	10	0	9	123	0	0	121	13
Future Vol, veh/h	6	18	26	1	10	0	9	123	0	0	121	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	7	20	28	1	11	0	10	134	0	0	132	14
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	299	293	139	317	300	134	146	0	0	134	0	0
Stage 1	139	139	-	154	154	-	-	-	-	-	-	-
Stage 2	160	154	-	163	146	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	651	616	907	634	611	912	1430	-	-	1444	-	-
Stage 1	862	780	-	846	768	-	-	-	-	-	-	-
Stage 2	840	768	-	837	774	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	638	611	907	595	606	912	1430	-	-	1444	-	-
Mov Cap-2 Maneuver	638	611	-	595	606	-	-	-	-	-	-	-
Stage 1	855	780	-	839	762	-	-	-	-	-	-	-
Stage 2	821	762	-	791	774	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	10.3		11.1			0.5			0			
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1430	-	-	740	605	1444	-	-				
HCM Lane V/C Ratio	0.007	-	-	0.073	0.02	-	-	-				
HCM Control Delay (s)	7.5	0	-	10.3	11.1	0	-	-				
HCM Lane LOS	A	A	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-				

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	6	18	26	1	10	0	9	123	0	0	121	13
Future Vol, veh/h	6	18	26	1	10	0	9	123	0	0	121	13
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	7	20	28	1	11	0	10	134	0	0	132	14
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	299	293	139	317	300	134	146	0	0	134	0	0
Stage 1	139	139	-	154	154	-	-	-	-	-	-	-
Stage 2	160	154	-	163	146	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	651	616	907	634	611	912	1430	-	-	1444	-	-
Stage 1	862	780	-	846	768	-	-	-	-	-	-	-
Stage 2	840	768	-	837	774	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	638	611	907	595	606	912	1430	-	-	1444	-	-
Mov Cap-2 Maneuver	638	611	-	595	606	-	-	-	-	-	-	-
Stage 1	855	780	-	839	762	-	-	-	-	-	-	-
Stage 2	821	762	-	791	774	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.3		11.1		0.5		0					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1430	-	-	740	605	1444	-	-				
HCM Lane V/C Ratio	0.007	-	-	0.073	0.02	-	-	-				
HCM Control Delay (s)	7.5	0	-	10.3	11.1	0	-	-				
HCM Lane LOS	A	A	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	0.1	0	-	-				

Intersection												
Int Delay, s/veh	5.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	97	38	0	2	23	0	0	92	21	0	45	22
Future Vol, veh/h	97	38	0	2	23	0	0	92	21	0	45	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	105	41	0	2	25	0	0	100	23	0	49	24

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	185	184	61	194	185	112	73	0	0	123	0	0
Stage 1	61	61	-	112	112	-	-	-	-	-	-	-
Stage 2	124	123	-	82	73	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	774	708	1001	763	708	938	1520	-	-	1458	-	-
Stage 1	948	842	-	891	801	-	-	-	-	-	-	-
Stage 2	878	792	-	924	832	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	753	708	1001	729	708	938	1520	-	-	1458	-	-
Mov Cap-2 Maneuver	753	708	-	729	708	-	-	-	-	-	-	-
Stage 1	948	842	-	891	801	-	-	-	-	-	-	-
Stage 2	851	792	-	879	832	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.1		10.3		0		0	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1520	-	-	740 710	1458	-	-
HCM Lane V/C Ratio	-	-	-	0.198 0.038	-	-	-
HCM Control Delay (s)	0	-	-	11.1 10.3	0	-	-
HCM Lane LOS	A	-	-	B B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.7 0.1	0	-	-

Intersection												
Int Delay, s/veh	5.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	97	38	0	2	23	0	0	92	21	0	45	22
Future Vol, veh/h	97	38	0	2	23	0	0	92	21	0	45	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	105	41	0	2	25	0	0	100	23	0	49	24

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	185	184	61	194	185	112	73	0	0	123	0	0
Stage 1	61	61	-	112	112	-	-	-	-	-	-	-
Stage 2	124	123	-	82	73	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	774	708	1001	763	708	938	1520	-	-	1458	-	-
Stage 1	948	842	-	891	801	-	-	-	-	-	-	-
Stage 2	878	792	-	924	832	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	753	708	1001	729	708	938	1520	-	-	1458	-	-
Mov Cap-2 Maneuver	753	708	-	729	708	-	-	-	-	-	-	-
Stage 1	948	842	-	891	801	-	-	-	-	-	-	-
Stage 2	851	792	-	879	832	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.1		10.3		0		0	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1520	-	-	740 710	1458	-	-
HCM Lane V/C Ratio	-	-	-	0.198 0.038	-	-	-
HCM Control Delay (s)	0	-	-	11.1 10.3	0	-	-
HCM Lane LOS	A	-	-	B B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.7 0.1	0	-	-

HCM 6th TWSC
197: Prairie Baptist Rd & 146th St

Future AM Peak

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	161	38	117	8	84	0	268	1453	21	0	690	120
Future Vol, veh/h	161	38	117	8	84	0	268	1453	21	0	690	120
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	175	41	127	9	91	0	291	1579	23	0	750	130
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	3033	2999	815	3072	3053	1591	880	0	0	1602	0	0
Stage 1	815	815	-	2173	2173	-	-	-	-	-	-	-
Stage 2	2218	2184	-	899	880	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	~ 8	~ 13	376	~ 7	~ 12	132	764	-	-	405	-	-
Stage 1	370	390	-	61	~ 85	-	-	-	-	-	-	-
Stage 2	~ 57	84	-	332	364	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	0	376	-	0	132	764	-	-	405	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	370	390	-	61	0	-	-	-	-	-	-	-
Stage 2	-	0	-	196	364	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s							1.9		0			
HCM LOS	-		-									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	764	-	-	-	-	405	-	-				
HCM Lane V/C Ratio	0.381	-	-	-	-	-	-	-				
HCM Control Delay (s)	12.6	0	-	-	-	0	-	-				
HCM Lane LOS	B	A	-	-	-	A	-	-				
HCM 95th %tile Q(veh)	1.8	-	-	-	-	0	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

HCM 6th TWSC
197: Prairie Baptist Rd & 146th St

Future PM Peak

Intersection												
Int Delay, s/veh	1.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	161	38	117	8	84	0	268	1453	21	0	690	120
Future Vol, veh/h	161	38	117	8	84	0	268	1453	21	0	690	120
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	175	41	127	9	91	0	291	1579	23	0	750	130
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	3033	2999	815	3072	3053	1591	880	0	0	1602	0	0
Stage 1	815	815	-	2173	2173	-	-	-	-	-	-	-
Stage 2	2218	2184	-	899	880	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	~ 8	~ 13	376	~ 7	~ 12	132	764	-	-	405	-	-
Stage 1	370	390	-	61	~ 85	-	-	-	-	-	-	-
Stage 2	~ 57	84	-	332	364	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	0	376	-	0	132	764	-	-	405	-	-
Mov Cap-2 Maneuver	-	0	-	-	0	-	-	-	-	-	-	-
Stage 1	370	390	-	61	0	-	-	-	-	-	-	-
Stage 2	-	0	-	196	364	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s							1.9		0			
HCM LOS	-		-									
Minor Lane/Major Mvmt	NBL		NBT	NBR	EBLn1WBLn1		SBL	SBT	SBR			
Capacity (veh/h)	764		-	-	-	-	405	-	-			
HCM Lane V/C Ratio	0.381		-	-	-	-	-	-	-			
HCM Control Delay (s)	12.6		0	-	-	-	0	-	-			
HCM Lane LOS	B		A	-	-	-	A	-	-			
HCM 95th %tile Q(veh)	1.8		-	-	-	-	0	-	-			
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection							
Intersection Delay, s/veh 14.6							
Intersection LOS B							
Approach	EB		WB		NB		SB
Entry Lanes	2		1		2		2
Conflicting Circle Lanes	2		2		2		2
Adj Approach Flow, veh/h	319		84		297		1744
Demand Flow Rate, veh/h	329		87		305		1797
Vehicles Circulating, veh/h	1561		372		69		131
Vehicles Exiting, veh/h	367		2		1821		328
Ped Vol Crossing Leg, #/h	0		0		0		0
Ped Cap Adj	1.000		1.000		1.000		1.000
Approach Delay, s/veh	29.1		4.3		3.8		14.3
Approach LOS	D		A		A		B
Lane	Left	Right	Left	Left	Right	Left	Right
Designated Moves	LT	R	LTR	LT	TR	LT	TR
Assumed Moves	LT	R	LTR	LT	TR	LT	TR
RT Channelized							
Lane Util	0.210	0.790	1.000	0.469	0.531	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	69	260	87	143	162	845	952
Cap Entry Lane, veh/h	321	377	1035	1267	1339	1197	1270
Entry HV Adj Factor	0.970	0.969	0.970	0.975	0.970	0.970	0.971
Flow Entry, veh/h	67	252	84	139	157	820	924
Cap Entry, veh/h	312	365	1004	1235	1300	1161	1234
V/C Ratio	0.215	0.690	0.084	0.113	0.121	0.706	0.749
Control Delay, s/veh	15.8	32.6	4.3	3.9	3.8	13.7	14.8
LOS	C	D	A	A	A	B	B
95th %tile Queue, veh	1	5	0	0	0	6	8

Intersection							
Intersection Delay, s/veh 18.2							
Intersection LOS C							
Approach	EB		WB		NB		SB
Entry Lanes	2		1		2		2
Conflicting Circle Lanes	2		2		2		2
Adj Approach Flow, veh/h	343		100		1893		880
Demand Flow Rate, veh/h	353		103		1950		906
Vehicles Circulating, veh/h	781		2106		222		403
Vehicles Exiting, veh/h	528		66		912		1806
Ped Vol Crossing Leg, #/h	0		0		0		0
Ped Cap Adj	1.000		1.000		1.000		1.000
Approach Delay, s/veh	9.0		29.3		23.4		9.5
Approach LOS	A		D		C		A
Lane	Left	Right	Left	Left	Right	Left	Right
Designated Moves	LT	R	LTR	LT	TR	LT	TR
Assumed Moves	LT	R	LTR	LT	TR	LT	TR
RT Channelized							
Lane Util	0.629	0.371	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	222	131	103	917	1033	426	480
Cap Entry Lane, veh/h	658	731	237	1101	1176	932	1008
Entry HV Adj Factor	0.972	0.969	0.973	0.970	0.971	0.970	0.971
Flow Entry, veh/h	216	127	100	890	1003	413	466
Cap Entry, veh/h	640	709	231	1068	1142	904	979
V/C Ratio	0.337	0.179	0.435	0.833	0.878	0.457	0.476
Control Delay, s/veh	10.2	7.1	29.3	21.7	24.9	9.6	9.4
LOS	B	A	D	C	C	A	A
95th %tile Queue, veh	1	1	2	10	13	2	3

HCM 6th Signalized Intersection Summary
198: Promise Rd & 146th St

Existing AM Peak
12/11/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	1256	116	30	900	113	57	217	24	92	159	90
Future Volume (veh/h)	252	1256	116	30	900	113	57	217	24	92	159	90
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	274	1365	126	33	978	123	62	236	26	100	173	98
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	298	1469	655	135	1143	510	334	313	266	304	342	290
Arrive On Green	0.17	0.42	0.42	0.08	0.32	0.32	0.07	0.17	0.17	0.08	0.18	0.18
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	274	1365	126	33	978	123	62	236	26	100	173	98
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	10.8	26.2	2.4	1.2	18.4	2.8	2.0	8.6	0.8	3.2	6.0	2.5
Cycle Q Clear(g_c), s	10.8	26.2	2.4	1.2	18.4	2.8	2.0	8.6	0.8	3.2	6.0	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	298	1469	655	135	1143	510	334	313	266	304	342	290
V/C Ratio(X)	0.92	0.93	0.19	0.24	0.86	0.24	0.19	0.75	0.10	0.33	0.51	0.34
Avail Cap(c_a), veh/h	298	1489	664	174	1240	553	386	339	288	328	342	290
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(l)	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	29.0	19.7	5.8	30.9	22.5	8.3	21.5	28.1	14.3	21.5	26.1	10.3
Incr Delay (d2), s/veh	31.7	10.5	0.1	0.9	5.7	0.2	0.3	8.5	0.2	0.6	1.2	0.7
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	6.8	11.0	1.1	0.5	7.5	1.3	0.8	4.2	0.3	1.3	2.5	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	30.3	5.9	31.8	28.2	8.6	21.8	36.6	14.4	22.2	27.3	10.9
LnGrp LOS	E	C	A	C	C	A	C	D	B	C	C	B
Approach Vol, veh/h	1765			1134			324			371		
Approach Delay, s/veh	33.3			26.2			32.0			21.6		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	17.0	9.4	34.6	8.9	18.1	16.0	28.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	13.0	7.0	30.0	7.0	13.0	12.0	25.0				
Max Q Clear Time (g_c+l1), s	5.2	10.6	3.2	28.2	4.0	8.0	12.8	20.4				
Green Ext Time (p_c), s	0.0	0.3	0.0	1.4	0.0	0.5	0.0	2.6				

Intersection Summary

HCM 6th Ctrl Delay	29.7
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
198: Promise Rd & 146th St

Existing PM Peak
12/11/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	252	1256	116	30	900	113	57	217	24	92	159	90
Future Volume (veh/h)	252	1256	116	30	900	113	57	217	24	92	159	90
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	274	1365	126	33	978	123	62	236	26	100	173	98
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	298	1469	655	135	1143	510	334	313	266	304	342	290
Arrive On Green	0.17	0.42	0.42	0.08	0.32	0.32	0.07	0.17	0.17	0.08	0.18	0.18
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	274	1365	126	33	978	123	62	236	26	100	173	98
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	10.8	26.2	2.4	1.2	18.4	2.8	2.0	8.6	0.8	3.2	6.0	2.5
Cycle Q Clear(g_c), s	10.8	26.2	2.4	1.2	18.4	2.8	2.0	8.6	0.8	3.2	6.0	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	298	1469	655	135	1143	510	334	313	266	304	342	290
V/C Ratio(X)	0.92	0.93	0.19	0.24	0.86	0.24	0.19	0.75	0.10	0.33	0.51	0.34
Avail Cap(c_a), veh/h	298	1489	664	174	1240	553	386	339	288	328	342	290
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(l)	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	29.0	19.7	5.8	30.9	22.5	8.3	21.5	28.1	14.3	21.5	26.1	10.3
Incr Delay (d2), s/veh	31.7	10.5	0.1	0.9	5.7	0.2	0.3	8.5	0.2	0.6	1.2	0.7
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	6.8	11.0	1.1	0.5	7.5	1.3	0.8	4.2	0.3	1.3	2.5	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	30.3	5.9	31.8	28.2	8.6	21.8	36.6	14.4	22.2	27.3	10.9
LnGrp LOS	E	C	A	C	C	A	C	D	B	C	C	B
Approach Vol, veh/h		1765			1134			324			371	
Approach Delay, s/veh		33.3			26.2			32.0			21.6	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	17.0	9.4	34.6	8.9	18.1	16.0	28.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	13.0	7.0	30.0	7.0	13.0	12.0	25.0				
Max Q Clear Time (g_c+l1), s	5.2	10.6	3.2	28.2	4.0	8.0	12.8	20.4				
Green Ext Time (p_c), s	0.0	0.3	0.0	1.4	0.0	0.5	0.0	2.6				
Intersection Summary												
HCM 6th Ctrl Delay			29.7									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

198: Promise Rd & 146th St

Future AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	2884	287	139	3073	417	173	321	252	282	212	90
Future Volume (veh/h)	252	2884	287	139	3073	417	173	321	252	282	212	90
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	274	3135	312	151	3340	453	188	349	274	307	230	98
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	177	2068	1038	106	1927	996	221	272	325	201	297	409
Arrive On Green	0.10	0.59	0.59	0.06	0.55	0.55	0.07	0.15	0.15	0.09	0.16	0.16
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	274	3135	312	151	3340	453	188	349	274	307	230	98
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	15.0	88.0	7.2	9.0	82.0	10.9	11.0	22.0	14.2	13.0	17.8	1.0
Cycle Q Clear(g_c), s	15.0	88.0	7.2	9.0	82.0	10.9	11.0	22.0	14.2	13.0	17.8	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	177	2068	1038	106	1927	996	221	272	325	201	297	409
V/C Ratio(X)	1.55	1.52	0.30	1.42	1.73	0.45	0.85	1.28	0.84	1.53	0.77	0.24
Avail Cap(c_a), veh/h	177	2068	1038	106	1927	996	221	272	325	201	297	409
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(l)	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	67.5	31.0	4.2	70.5	34.0	5.1	55.3	64.0	43.0	53.3	60.4	27.7
Incr Delay (d2), s/veh	273.7	234.6	0.2	236.8	332.0	0.3	26.0	152.2	17.9	260.4	12.1	0.3
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	20.1	101.6	2.6	11.0	121.4	3.7	3.4	21.7	6.6	15.9	9.3	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	341.2	265.6	4.4	307.3	366.0	5.4	81.4	216.2	60.9	313.7	72.5	28.0
LnGrp LOS	F	F	A	F	F	A	F	F	E	F	E	C
Approach Vol, veh/h	3721					3944		811		635		
Approach Delay, s/veh	249.3					322.4		132.5		182.2		
Approach LOS	F					F		F		F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	27.0	13.0	93.0	15.0	29.0	19.0	87.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	13.0	22.0	9.0	88.0	11.0	24.0	15.0	82.0				
Max Q Clear Time (g_c+l1), s	15.0	24.0	11.0	90.0	13.0	19.8	17.0	84.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	265.8											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary 198: Promise Rd & 146th St

Future PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	2884	287	139	3073	417	173	321	252	282	212	90
Future Volume (veh/h)	252	2884	287	139	3073	417	173	321	252	282	212	90
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	274	3135	312	151	3340	453	188	349	274	307	230	98
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	177	2068	1038	106	1927	996	221	272	325	201	297	409
Arrive On Green	0.10	0.59	0.59	0.06	0.55	0.55	0.07	0.15	0.15	0.09	0.16	0.16
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	274	3135	312	151	3340	453	188	349	274	307	230	98
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	15.0	88.0	7.2	9.0	82.0	10.9	11.0	22.0	14.2	13.0	17.8	1.0
Cycle Q Clear(g_c), s	15.0	88.0	7.2	9.0	82.0	10.9	11.0	22.0	14.2	13.0	17.8	1.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	177	2068	1038	106	1927	996	221	272	325	201	297	409
V/C Ratio(X)	1.55	1.52	0.30	1.42	1.73	0.45	0.85	1.28	0.84	1.53	0.77	0.24
Avail Cap(c_a), veh/h	177	2068	1038	106	1927	996	221	272	325	201	297	409
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(l)	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	67.5	31.0	4.2	70.5	34.0	5.1	55.3	64.0	43.0	53.3	60.4	27.7
Incr Delay (d2), s/veh	273.7	234.6	0.2	236.8	332.0	0.3	26.0	152.2	17.9	260.4	12.1	0.3
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	20.1	101.6	2.6	11.0	121.4	3.7	3.4	21.7	6.6	15.9	9.3	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	341.2	265.6	4.4	307.3	366.0	5.4	81.4	216.2	60.9	313.7	72.5	28.0
LnGrp LOS	F	F	A	F	F	A	F	F	E	F	E	C
Approach Vol, veh/h		3721			3944			811			635	
Approach Delay, s/veh		249.3			322.4			132.5			182.2	
Approach LOS		F			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	27.0	13.0	93.0	15.0	29.0	19.0	87.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	13.0	22.0	9.0	88.0	11.0	24.0	15.0	82.0				
Max Q Clear Time (g_c+l1), s	15.0	24.0	11.0	90.0	13.0	19.8	17.0	84.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			265.8									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary

198: Promise Rd & 146th St

Future AM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	2270	80	248	2155	162	213	102	104	298	236	174
Future Volume (veh/h)	70	2270	80	248	2155	162	213	102	104	298	236	174
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			
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	76	2467	87	270	2342	176	232	111	113	324	257	189
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	221	2369	952	251	2413	1023	243	222	304	308	290	348
Arrive On Green	0.06	0.47	0.47	0.07	0.48	0.48	0.14	0.12	0.12	0.17	0.16	0.16
Sat Flow, veh/h	3428	5066	1572	3428	5066	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	76	2467	87	270	2342	176	232	111	113	324	257	189
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	2.3	51.0	1.3	8.0	49.1	2.3	14.2	6.1	1.8	19.0	14.8	3.3
Cycle Q Clear(g_c), s	2.3	51.0	1.3	8.0	49.1	2.3	14.2	6.1	1.8	19.0	14.8	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	221	2369	952	251	2413	1023	243	222	304	308	290	348
V/C Ratio(X)	0.34	1.04	0.09	1.07	0.97	0.17	0.95	0.50	0.37	1.05	0.89	0.54
Avail Cap(c_a), veh/h	221	2369	952	251	2415	1024	243	238	317	308	306	361
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	48.8	29.0	3.1	50.5	27.8	2.3	46.7	44.9	18.1	45.0	45.0	19.9
Incr Delay (d2), s/veh	0.9	30.4	0.0	77.7	12.2	0.1	45.1	1.7	0.8	65.7	24.3	1.5
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	25.3	0.5	6.0	20.6	0.7	9.1	2.8	1.5	13.7	8.6	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	49.7	59.4	3.1	128.2	40.0	2.4	91.8	46.7	18.9	110.8	69.3	21.4
LnGrp LOS	D	F	A	F	D	A	F	D	B	F	E	C
Approach Vol, veh/h	2630				2788				456		770	
Approach Delay, s/veh	57.3				46.2				62.7		75.0	
Approach LOS	E				D				E		E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.0	18.1	12.0	56.0	19.0	22.1	11.0	57.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	19.0	14.0	8.0	51.0	15.0	18.0	7.0	52.0				
Max Q Clear Time (g_c+Y), s	21.0	8.1	10.0	53.0	16.2	16.8	4.3	51.1				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.0	0.0	0.3	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			55.0									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary 198: Promise Rd & 146th St

Future PM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	2884	287	139	3073	417	173	321	252	282	212	90
Future Volume (veh/h)	252	2884	287	139	3073	417	173	321	252	282	212	90
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	274	3135	312	151	3340	453	188	349	274	307	230	98
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	229	2668	1015	160	2567	1006	210	322	346	236	349	401
Arrive On Green	0.07	0.53	0.53	0.05	0.51	0.51	0.12	0.17	0.17	0.13	0.19	0.19
Sat Flow, veh/h	3428	5066	1572	3428	5066	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	274	3135	312	151	3340	453	188	349	274	307	230	98
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	10.0	79.0	8.2	6.6	76.0	12.5	15.7	26.0	15.8	20.0	17.2	1.4
Cycle Q Clear(g_c), s	10.0	79.0	8.2	6.6	76.0	12.5	15.7	26.0	15.8	20.0	17.2	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	229	2668	1015	160	2567	1006	210	322	346	236	349	401
V/C Ratio(X)	1.20	1.18	0.31	0.94	1.30	0.45	0.90	1.09	0.79	1.30	0.66	0.24
Avail Cap(c_a), veh/h	229	2668	1015	160	2567	1006	224	322	346	236	349	401
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	70.0	35.5	5.1	71.3	37.0	5.4	65.2	62.0	40.7	65.0	56.4	25.0
Incr Delay (d2), s/veh	123.8	83.1	0.2	54.6	138.6	0.3	32.8	74.8	11.9	163.7	4.5	0.3
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	8.3	50.9	3.0	4.1	62.4	3.3	8.9	18.7	6.8	19.6	8.4	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	193.8	118.6	5.3	125.9	175.6	5.7	98.0	136.8	52.5	228.7	61.0	25.3
LnGrp LOS	F	F	A	F	F	A	F	F	D	F	E	C
Approach Vol, veh/h	3721		3944			811			635			
Approach Delay, s/veh	114.6		154.2			99.3			136.5			
Approach LOS	F		F			F			F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	34.0	31.0	11.0	84.0	21.8	33.2	14.0	81.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	20.0	26.0	7.0	79.0	19.0	27.0	10.0	76.0				
Max Q Clear Time (g_c+Q), s	22.0	28.0	8.6	81.0	17.7	19.2	12.0	78.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	0.9	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh		131.9										
HCM 6th LOS		F										

HCM 6th Signalized Intersection Summary

199: Cumberland Rd & 146th St

Existing AM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	1221	130	176	790	64	150	299	164	142	327	128
Future Volume (veh/h)	168	1221	130	176	790	64	150	299	164	142	327	128
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			
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	183	1327	141	191	859	70	163	325	178	154	355	139
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	218	1371	612	196	1328	593	177	430	231	187	371	314
Arrive On Green	0.12	0.39	0.39	0.11	0.38	0.38	0.10	0.19	0.19	0.11	0.20	0.20
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	2216	1188	1767	1856	1572
Grp Volume(v), veh/h	183	1327	141	191	859	70	163	257	246	154	355	139
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1763	1642	1767	1856	1572
Q Serve(g_s), s	9.1	33.2	5.4	9.7	18.1	2.6	8.2	12.4	12.8	7.7	17.0	7.0
Cycle Q Clear(g_c), s	9.1	33.2	5.4	9.7	18.1	2.6	8.2	12.4	12.8	7.7	17.0	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	218	1371	612	196	1328	593	177	342	319	187	371	314
V/C Ratio(X)	0.84	0.97	0.23	0.97	0.65	0.12	0.92	0.75	0.77	0.82	0.96	0.44
Avail Cap(c_a), veh/h	255	1371	612	196	1328	593	177	342	319	216	371	314
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(l)	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	38.6	26.9	18.5	39.9	23.1	18.3	40.2	34.2	34.4	39.4	35.6	31.6
Incr Delay (d2), s/veh	19.2	17.2	0.2	56.1	1.1	0.1	45.9	8.9	11.1	19.8	35.4	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	15.7	1.8	7.1	7.0	0.9	5.7	5.9	5.8	4.2	10.9	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.7	44.1	18.7	96.0	24.2	18.4	86.1	43.2	45.4	59.2	71.0	32.6
LnGrp LOS	E	D	B	F	C	B	F	D	D	E	E	C
Approach Vol, veh/h	1651				1120				666		648	
Approach Delay, s/veh	43.5				36.1				54.5		60.0	
Approach LOS	D				D				D		E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	3.5	22.5	14.0	40.0	13.0	23.0	15.1	38.9				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	16.0	10.0	35.0	9.0	18.0	13.0	32.0					
Max Q Clear Time (g_c+1/9), s	14.8	14.8	11.7	35.2	10.2	19.0	11.1	20.1				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.0	0.0	0.0	0.1	4.5				

Intersection Summary

HCM 6th Ctrl Delay 45.9
HCM 6th LOS D

HCM 6th Signalized Intersection Summary

199: Cumberland Rd & 146th St

Existing PM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	168	1221	130	176	790	64	150	299	164	142	327	128
Future Volume (veh/h)	168	1221	130	176	790	64	150	299	164	142	327	128
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			
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	183	1327	141	191	859	70	163	325	178	154	355	139
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	218	1371	612	196	1328	593	177	430	231	187	371	314
Arrive On Green	0.12	0.39	0.39	0.11	0.38	0.38	0.10	0.19	0.19	0.11	0.20	0.20
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	2216	1188	1767	1856	1572
Grp Volume(v), veh/h	183	1327	141	191	859	70	163	257	246	154	355	139
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1763	1642	1767	1856	1572
Q Serve(g_s), s	9.1	33.2	5.4	9.7	18.1	2.6	8.2	12.4	12.8	7.7	17.0	7.0
Cycle Q Clear(g_c), s	9.1	33.2	5.4	9.7	18.1	2.6	8.2	12.4	12.8	7.7	17.0	7.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.72	1.00		1.00
Lane Grp Cap(c), veh/h	218	1371	612	196	1328	593	177	342	319	187	371	314
V/C Ratio(X)	0.84	0.97	0.23	0.97	0.65	0.12	0.92	0.75	0.77	0.82	0.96	0.44
Avail Cap(c_a), veh/h	255	1371	612	196	1328	593	177	342	319	216	371	314
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(l)	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	38.6	26.9	18.5	39.9	23.1	18.3	40.2	34.2	34.4	39.4	35.6	31.6
Incr Delay (d2), s/veh	19.2	17.2	0.2	56.1	1.1	0.1	45.9	8.9	11.1	19.8	35.4	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	15.7	1.8	7.1	7.0	0.9	5.7	5.9	5.8	4.2	10.9	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.7	44.1	18.7	96.0	24.2	18.4	86.1	43.2	45.4	59.2	71.0	32.6
LnGrp LOS	E	D	B	F	C	B	F	D	D	E	E	C
Approach Vol, veh/h	1651				1120				666		648	
Approach Delay, s/veh	43.5				36.1				54.5		60.0	
Approach LOS	D				D				D		E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.5	22.5	14.0	40.0	13.0	23.0	15.1	38.9				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	16.0	16.0	10.0	35.0	9.0	18.0	13.0	32.0				
Max Q Clear Time (g_c+1/9), s	14.8	14.8	11.7	35.2	10.2	19.0	11.1	20.1				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.0	0.0	0.0	0.1	4.5				

Intersection Summary

HCM 6th Ctrl Delay 45.9
HCM 6th LOS D

HCM 6th Signalized Intersection Summary 199: Cumberland Rd & 146th St

Future AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	2599	161	281	2952	174	189	311	233	306	346	329
Future Volume (veh/h)	216	2599	161	281	2952	174	189	311	233	306	346	329
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	235	2825	175	305	3209	189	205	338	253	333	376	358
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	153	1810	933	200	1904	1038	141	259	190	212	322	409
Arrive On Green	0.09	0.51	0.51	0.11	0.54	0.54	0.08	0.13	0.13	0.12	0.17	0.17
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1939	1423	1767	1856	1572
Grp Volume(v), veh/h	235	2825	175	305	3209	189	205	307	284	333	376	358
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1763	1599	1767	1856	1572
Q Serve(g_s), s	13.0	77.0	7.6	17.0	81.0	7.0	12.0	20.0	20.0	18.0	26.0	26.0
Cycle Q Clear(g_c), s	13.0	77.0	7.6	17.0	81.0	7.0	12.0	20.0	20.0	18.0	26.0	26.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.89	1.00		1.00
Lane Grp Cap(c), veh/h	153	1810	933	200	1904	1038	141	235	213	212	322	409
V/C Ratio(X)	1.53	1.56	0.19	1.52	1.69	0.18	1.45	1.30	1.33	1.57	1.17	0.88
Avail Cap(c_a), veh/h	153	1810	933	200	1904	1038	141	235	213	212	322	409
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(l)	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	68.5	36.5	14.0	66.5	34.5	9.9	69.0	65.0	65.0	66.0	62.0	53.2
Incr Delay (d2), s/veh	270.5	255.2	0.1	259.1	310.8	0.1	237.5	164.5	178.4	278.2	104.3	18.7
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	7.3	95.2	2.7	21.9	114.4	2.3	14.7	19.6	18.6	24.4	21.4	14.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	339.0	291.7	14.1	325.6	345.3	9.9	306.5	229.5	243.4	344.2	166.3	71.9
LnGrp LOS	F	F	B	F	F	A	F	F	F	F	F	E
Approach Vol, veh/h	3235			3703			796			1067		
Approach Delay, s/veh	280.1			326.6			254.3			190.1		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	25.0	21.0	82.0	16.0	31.0	17.0	86.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	18.0	20.0	17.0	77.0	12.0	26.0	13.0	81.0				
Max Q Clear Time (g_c+20.0), s	20.0	22.0	19.0	79.0	14.0	28.0	15.0	83.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	286.4											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary 199: Cumberland Rd & 146th St

Future PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	2599	161	281	2952	174	189	311	233	306	346	329
Future Volume (veh/h)	216	2599	161	281	2952	174	189	311	233	306	346	329
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	235	2825	175	305	3209	189	205	338	253	333	376	358
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	153	1810	933	200	1904	1038	141	259	190	212	322	409
Arrive On Green	0.09	0.51	0.51	0.11	0.54	0.54	0.08	0.13	0.13	0.12	0.17	0.17
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1939	1423	1767	1856	1572
Grp Volume(v), veh/h	235	2825	175	305	3209	189	205	307	284	333	376	358
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1763	1599	1767	1856	1572
Q Serve(g_s), s	13.0	77.0	7.6	17.0	81.0	7.0	12.0	20.0	20.0	18.0	26.0	26.0
Cycle Q Clear(g_c), s	13.0	77.0	7.6	17.0	81.0	7.0	12.0	20.0	20.0	18.0	26.0	26.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.89	1.00		1.00
Lane Grp Cap(c), veh/h	153	1810	933	200	1904	1038	141	235	213	212	322	409
V/C Ratio(X)	1.53	1.56	0.19	1.52	1.69	0.18	1.45	1.30	1.33	1.57	1.17	0.88
Avail Cap(c_a), veh/h	153	1810	933	200	1904	1038	141	235	213	212	322	409
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(l)	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	68.5	36.5	14.0	66.5	34.5	9.9	69.0	65.0	65.0	66.0	62.0	53.2
Incr Delay (d2), s/veh	270.5	255.2	0.1	259.1	310.8	0.1	237.5	164.5	178.4	278.2	104.3	18.7
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	7.3	95.2	2.7	21.9	114.4	2.3	14.7	19.6	18.6	24.4	21.4	14.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	339.0	291.7	14.1	325.6	345.3	9.9	306.5	229.5	243.4	344.2	166.3	71.9
LnGrp LOS	F	F	B	F	F	A	F	F	F	F	F	E
Approach Vol, veh/h	3235			3703			796			1067		
Approach Delay, s/veh	280.1			326.6			254.3			190.1		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	25.0	21.0	82.0	16.0	31.0	17.0	86.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	18.0	20.0	17.0	77.0	12.0	26.0	13.0	81.0				
Max Q Clear Time (g_c+20.0), s	20.0	22.0	19.0	79.0	14.0	28.0	15.0	83.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	286.4
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary

199: Cumberland Rd & 146th St

Future AM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	243	2201	114	187	1794	323	138	209	147	63	276	149
Future Volume (veh/h)	243	2201	114	187	1794	323	138	209	147	63	276	149
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	264	2392	124	203	1950	351	150	227	160	68	300	162
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	273	2349	858	209	2164	759	145	400	270	98	321	515
Arrive On Green	0.15	0.46	0.46	0.12	0.43	0.43	0.08	0.20	0.20	0.06	0.17	0.17
Sat Flow, veh/h	1767	5066	1572	1767	5066	1572	1767	2014	1360	1767	1856	1572
Grp Volume(v), veh/h	264	2392	124	203	1950	351	150	197	190	68	300	162
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1767	1689	1572	1767	1763	1611	1767	1856	1572
Q Serve(g_s), s	16.3	51.0	4.3	12.6	39.4	16.3	9.0	11.1	11.8	4.2	17.6	8.5
Cycle Q Clear(g_c), s	16.3	51.0	4.3	12.6	39.4	16.3	9.0	11.1	11.8	4.2	17.6	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.84	1.00		1.00
Lane Grp Cap(c), veh/h	273	2349	858	209	2164	759	145	351	320	98	321	515
V/C Ratio(X)	0.97	1.02	0.14	0.97	0.90	0.46	1.04	0.56	0.59	0.69	0.94	0.31
Avail Cap(c_a), veh/h	273	2349	858	209	2164	759	145	351	320	161	321	515
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	46.2	29.5	12.3	48.3	29.3	18.9	50.5	39.8	40.0	51.0	44.9	27.7
Incr Delay (d2), s/veh	45.2	23.4	0.1	54.1	5.7	0.4	85.1	2.1	2.9	8.3	33.9	0.3
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	10.3	23.8	1.4	8.5	15.9	5.6	7.3	4.9	4.8	2.0	10.9	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	91.4	52.9	12.4	102.4	35.0	19.4	135.6	41.8	42.9	59.4	78.8	28.1
LnGrp LOS	F	F	B	F	D	B	F	D	D	E	E	C
Approach Vol, veh/h	2780			2504			537			530		
Approach Delay, s/veh	54.7			38.3			68.4			60.8		
Approach LOS	D			D			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.9	26.9	17.0	56.0	13.0	24.0	21.0	52.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	18.0	18.0	13.0	51.0	9.0	19.0	17.0	47.0				
Max Q Clear Time (g_c+I10), s	13.8	13.8	14.6	53.0	11.0	19.6	18.3	41.4				
Green Ext Time (p_c), s	0.0	0.8	0.0	0.0	0.0	0.0	0.0	4.9				

Intersection Summary

HCM 6th Ctrl Delay, s/veh	49.9
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary

199: Cumberland Rd & 146th St

Future PM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	2599	161	281	2952	174	189	311	233	306	346	329
Future Volume (veh/h)	216	2599	161	281	2952	174	189	311	233	306	346	329
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	235	2825	175	305	3209	189	205	338	253	333	376	358
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	188	2330	870	236	2465	996	165	271	199	259	359	472
Arrive On Green	0.11	0.46	0.46	0.13	0.49	0.49	0.09	0.14	0.14	0.15	0.19	0.19
Sat Flow, veh/h	1767	5066	1572	1767	5066	1572	1767	1939	1423	1767	1856	1572
Grp Volume(v), veh/h	235	2825	175	305	3209	189	205	307	284	333	376	358
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1767	1689	1572	1767	1763	1599	1767	1856	1572
Q Serve(g_s), s	16.0	69.0	8.4	20.0	73.0	7.5	14.0	21.0	21.0	22.0	29.0	29.0
Cycle Q Clear(g_c), s	16.0	69.0	8.4	20.0	73.0	7.5	14.0	21.0	21.0	22.0	29.0	29.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.89	1.00		1.00
Lane Grp Cap(c), veh/h	188	2330	870	236	2465	996	165	247	224	259	359	472
V/C Ratio(X)	1.25	1.21	0.20	1.29	1.30	0.19	1.24	1.24	1.27	1.28	1.05	0.76
Avail Cap(c_a), veh/h	188	2330	870	236	2465	996	165	247	224	259	359	472
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	67.0	40.5	16.8	65.0	38.5	11.5	68.0	64.5	64.5	64.0	60.5	47.6
Incr Delay (d2), s/veh	147.4	99.8	0.1	160.3	138.8	0.1	150.0	138.6	151.7	154.2	60.7	7.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	44.8	48.8	3.0	19.3	60.2	2.5	13.1	18.8	17.9	20.9	19.5	12.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	214.4	140.3	16.9	225.3	177.3	11.6	218.0	203.1	216.2	218.2	121.2	54.6
LnGrp LOS	F	F	B	F	F	B	F	F	F	F	F	D
Approach Vol, veh/h	3235					3703		796		1067		
Approach Delay, s/veh	139.0					172.8		211.6		129.1		
Approach LOS	F					F		F		F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.0	26.0	24.0	74.0	18.0	34.0	20.0	78.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	22.0	21.0	20.0	69.0	14.0	29.0	16.0	73.0				
Max Q Clear Time (g_c+24.0), s	24.0	23.0	22.0	71.0	16.0	31.0	18.0	75.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			158.6									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary
201: Herriman Blvd & 146th St

Existing AM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	83	1549	20	18	1365	126	27	101	73	263	56	185	
Future Volume (veh/h)	83	1549	20	18	1365	126	27	101	73	263	56	185	
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	
Adj Flow Rate, veh/h	90	1684	22	20	1484	137	29	110	79	286	61	201	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3	
Cap, veh/h	295	2116	657	211	1707	158	331	325	233	401	123	404	
Arrive On Green	0.09	0.42	0.42	0.03	0.36	0.36	0.32	0.32	0.32	0.32	0.32	0.32	
Sat Flow, veh/h	1767	5066	1572	1767	4719	435	1109	1004	721	1185	380	1251	
Grp Volume(v), veh/h	90	1684	22	20	1062	559	29	0	189	286	0	262	
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1767	1689	1777	1109	0	1726	1185	0	1630	
Q Serve(g_s), s	1.7	17.9	0.5	0.4	18.1	18.1	1.3	0.0	5.2	14.8	0.0	8.0	
Cycle Q Clear(g_c), s	1.7	17.9	0.5	0.4	18.1	18.1	9.4	0.0	5.2	20.0	0.0	8.0	
Prop In Lane	1.00		1.00	1.00		0.25	1.00		0.42	1.00		0.77	
Lane Grp Cap(c), veh/h	295	2116	657	211	1221	643	331	0	558	401	0	527	
V/C Ratio(X)	0.31	0.80	0.03	0.09	0.87	0.87	0.09	0.00	0.34	0.71	0.00	0.50	
Avail Cap(c_a), veh/h	366	2116	657	381	1255	660	331	0	558	401	0	527	
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	13.1	15.7	10.6	13.3	18.4	18.4	20.7	0.0	15.9	23.6	0.0	16.9	
Incr Delay (d2), s/veh	0.6	2.2	0.0	0.2	6.7	11.8	0.5	0.0	1.6	10.4	0.0	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	0.6	5.9	0.1	0.1	6.9	8.2	0.4	0.0	2.1	4.8	0.0	3.1	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	13.7	17.9	10.7	13.5	25.1	30.2	21.2	0.0	17.6	34.0	0.0	20.2	
LnGrp LOS	B	B	B	B	C	C	C	A	B	C	A	C	
Approach Vol, veh/h													
		1796				1641				218		548	
Approach Delay, s/veh													
		17.6				26.7				18.1		27.4	
Approach LOS													
		B				C				B		C	
Timer - Assigned Phs													
		2		3		4		6		7		8	
Phs Duration (G+Y+Rc), s													
		25.0		6.0		30.9		25.0		9.5		27.4	
Change Period (Y+Rc), s													
		5.0		4.0		5.0		5.0		4.0		5.0	
Max Green Setting (Gmax), s													
		20.0		8.0		23.0		20.0		8.0		23.0	
Max Q Clear Time (g_c+l1), s													
		11.4		2.4		19.9		22.0		3.7		20.1	
Green Ext Time (p_c), s													
		0.7		0.0		2.5		0.0		0.1		2.3	
Intersection Summary													
HCM 6th Ctrl Delay													
			22.5										
HCM 6th LOS													
			C										

HCM 6th Signalized Intersection Summary
201: Herriman Blvd & 146th St

Existing PM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	83	1549	20	18	1365	126	27	101	73	263	56	185	
Future Volume (veh/h)	83	1549	20	18	1365	126	27	101	73	263	56	185	
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	
Adj Flow Rate, veh/h	90	1684	22	20	1484	137	29	110	79	286	61	201	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3	
Cap, veh/h	295	2116	657	211	1707	158	331	325	233	401	123	404	
Arrive On Green	0.09	0.42	0.42	0.03	0.36	0.36	0.32	0.32	0.32	0.32	0.32	0.32	
Sat Flow, veh/h	1767	5066	1572	1767	4719	435	1109	1004	721	1185	380	1251	
Grp Volume(v), veh/h	90	1684	22	20	1062	559	29	0	189	286	0	262	
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1767	1689	1777	1109	0	1726	1185	0	1630	
Q Serve(g_s), s	1.7	17.9	0.5	0.4	18.1	18.1	1.3	0.0	5.2	14.8	0.0	8.0	
Cycle Q Clear(g_c), s	1.7	17.9	0.5	0.4	18.1	18.1	9.4	0.0	5.2	20.0	0.0	8.0	
Prop In Lane	1.00		1.00	1.00		0.25	1.00		0.42	1.00		0.77	
Lane Grp Cap(c), veh/h	295	2116	657	211	1221	643	331	0	558	401	0	527	
V/C Ratio(X)	0.31	0.80	0.03	0.09	0.87	0.87	0.09	0.00	0.34	0.71	0.00	0.50	
Avail Cap(c_a), veh/h	366	2116	657	381	1255	660	331	0	558	401	0	527	
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	0.00	1.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	13.1	15.7	10.6	13.3	18.4	18.4	20.7	0.0	15.9	23.6	0.0	16.9	
Incr Delay (d2), s/veh	0.6	2.2	0.0	0.2	6.7	11.8	0.5	0.0	1.6	10.4	0.0	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	0.6	5.9	0.1	0.1	6.9	8.2	0.4	0.0	2.1	4.8	0.0	3.1	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	13.7	17.9	10.7	13.5	25.1	30.2	21.2	0.0	17.6	34.0	0.0	20.2	
LnGrp LOS	B	B	B	B	C	C	C	A	B	C	A	C	
Approach Vol, veh/h													
		1796				1641				218		548	
Approach Delay, s/veh													
		17.6				26.7				18.1		27.4	
Approach LOS													
		B				C				B		C	
Timer - Assigned Phs													
		2		3		4		6		7		8	
Phs Duration (G+Y+Rc), s													
		25.0		6.0		30.9		25.0		9.5		27.4	
Change Period (Y+Rc), s													
		5.0		4.0		5.0		5.0		4.0		5.0	
Max Green Setting (Gmax), s													
		20.0		8.0		23.0		20.0		8.0		23.0	
Max Q Clear Time (g_c+l1), s													
		11.4		2.4		19.9		22.0		3.7		20.1	
Green Ext Time (p_c), s													
		0.7		0.0		2.5		0.0		0.1		2.3	
Intersection Summary													
HCM 6th Ctrl Delay													
			22.5										
HCM 6th LOS													
			C										

HCM 6th Signalized Intersection Summary

201: Herriman Blvd & 146th St

Future AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	2956	20	41	3536	126	35	101	104	263	56	185
Future Volume (veh/h)	83	2956	20	41	3536	126	35	101	104	263	56	185
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	90	3213	22	45	3843	137	38	110	113	286	61	201
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	129	3129	971	119	3072	108	164	96	98	226	94	311
Arrive On Green	0.05	0.62	0.62	0.04	0.61	0.61	0.11	0.11	0.11	0.10	0.25	0.25
Sat Flow, veh/h	1767	5066	1572	1767	5024	177	1109	839	862	1767	380	1251
Grp Volume(v), veh/h	90	3213	22	45	2569	1411	38	0	223	286	0	262
Grp Sat Flow(s), veh/h/ln	1767	1689	1572	1767	1689	1824	1109	0	1700	1767	0	1630
Q Serve(g_s), s	3.3	91.9	0.8	1.4	91.0	91.0	4.7	0.0	17.0	15.0	0.0	21.4
Cycle Q Clear(g_c), s	3.3	91.9	0.8	1.4	91.0	91.0	6.1	0.0	17.0	15.0	0.0	21.4
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.51	1.00		0.77
Lane Grp Cap(c), veh/h	129	3129	971	119	2065	1115	164	0	194	226	0	405
V/C Ratio(X)	0.70	1.03	0.02	0.38	1.24	1.27	0.23	0.00	1.15	1.26	0.00	0.65
Avail Cap(c_a), veh/h	143	3129	971	143	2065	1115	164	0	194	226	0	405
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.0	28.5	11.0	37.1	28.9	28.9	61.8	0.0	65.9	53.6	0.0	50.1
Incr Delay (d2), s/veh	12.1	23.5	0.0	2.0	114.1	126.8	3.3	0.0	110.1	148.6	0.0	7.7
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	2.4	40.2	0.3	1.0	66.0	75.2	1.5	0.0	13.3	10.6	0.0	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.1	51.9	11.0	39.1	143.0	155.7	65.0	0.0	176.0	202.2	0.0	57.8
LnGrp LOS	D	F	B	D	F	F	E	A	F	F	A	E
Approach Vol, veh/h	3325			4025			261			548		
Approach Delay, s/veh	51.7			146.3			159.9			133.2		
Approach LOS	D			F			F			F		
Timer - Assigned Phs	1	2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s	20.0	22.0	9.9	96.9		42.0	10.8	96.0				
Change Period (Y+Rc), s	5.0	5.0	4.0	5.0		5.0	4.0	5.0				
Max Green Setting (Gmax), s	15.0	17.0	8.0	91.0		37.0	8.0	91.0				
Max Q Clear Time (g_c+1/17), s	17.0	19.0	3.4	93.9		23.4	5.3	93.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0		1.2	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	107.3											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary

201: Herriman Blvd & 146th St

Future PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	2956	20	41	3536	126	35	101	104	263	56	185
Future Volume (veh/h)	83	2956	20	41	3536	126	35	101	104	263	56	185
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	90	3213	22	45	3843	137	38	110	113	286	61	201
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	129	3129	971	119	3072	108	164	96	98	226	94	311
Arrive On Green	0.05	0.62	0.62	0.04	0.61	0.61	0.11	0.11	0.11	0.10	0.25	0.25
Sat Flow, veh/h	1767	5066	1572	1767	5024	177	1109	839	862	1767	380	1251
Grp Volume(v), veh/h	90	3213	22	45	2569	1411	38	0	223	286	0	262
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1767	1689	1824	1109	0	1700	1767	0	1630
Q Serve(g_s), s	3.3	91.9	0.8	1.4	91.0	91.0	4.7	0.0	17.0	15.0	0.0	21.4
Cycle Q Clear(g_c), s	3.3	91.9	0.8	1.4	91.0	91.0	6.1	0.0	17.0	15.0	0.0	21.4
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.51	1.00		0.77
Lane Grp Cap(c), veh/h	129	3129	971	119	2065	1115	164	0	194	226	0	405
V/C Ratio(X)	0.70	1.03	0.02	0.38	1.24	1.27	0.23	0.00	1.15	1.26	0.00	0.65
Avail Cap(c_a), veh/h	143	3129	971	143	2065	1115	164	0	194	226	0	405
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.0	28.5	11.0	37.1	28.9	28.9	61.8	0.0	65.9	53.6	0.0	50.1
Incr Delay (d2), s/veh	12.1	23.5	0.0	2.0	114.1	126.8	3.3	0.0	110.1	148.6	0.0	7.7
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	2.4	40.2	0.3	1.0	66.0	75.2	1.5	0.0	13.3	10.6	0.0	9.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.1	51.9	11.0	39.1	143.0	155.7	65.0	0.0	176.0	202.2	0.0	57.8
LnGrp LOS	D	F	B	D	F	F	E	A	F	F	A	E
Approach Vol, veh/h	3325					4025		261		548		
Approach Delay, s/veh	51.7					146.3		159.9		133.2		
Approach LOS	D					F		F		F		
Timer - Assigned Phs	1	2	3	4	6		7	8				
Phs Duration (G+Y+Rc), s	20.0	22.0	9.9	96.9	42.0		10.8	96.0				
Change Period (Y+Rc), s	5.0	5.0	4.0	5.0	5.0		4.0	5.0				
Max Green Setting (Gmax), s	15.0	17.0	8.0	91.0	37.0		8.0	91.0				
Max Q Clear Time (g_c+117), s	17.0	19.0	3.4	93.9	23.4		5.3	93.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	1.2		0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			107.3									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary

201: Herriman Blvd & 146th St

Future AM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	118	2631	38	79	2223	183	14	69	47	78	37	64
Future Volume (veh/h)	118	2631	38	79	2223	183	14	69	47	78	37	64
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	128	2860	41	86	2416	199	15	75	51	85	40	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	146	2875	892	109	2610	211	254	142	96	203	105	184
Arrive On Green	0.08	0.57	0.57	0.06	0.55	0.55	0.02	0.14	0.14	0.06	0.17	0.17
Sat Flow, veh/h	1767	5066	1572	1767	4776	387	1767	1029	700	3428	605	1059
Grp Volume(v), veh/h	128	2860	41	86	1696	919	15	0	126	85	0	110
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1767	1689	1786	1767	0	1730	1714	0	1665
Q Serve(g_s), s	7.8	61.2	1.3	5.2	49.9	52.4	0.8	0.0	7.4	2.6	0.0	6.4
Cycle Q Clear(g_c), s	7.8	61.2	1.3	5.2	49.9	52.4	0.8	0.0	7.4	2.6	0.0	6.4
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.40	1.00		0.64
Lane Grp Cap(c), veh/h	146	2875	892	109	1846	976	254	0	238	203	0	289
V/C Ratio(X)	0.88	0.99	0.05	0.79	0.92	0.94	0.06	0.00	0.53	0.42	0.00	0.38
Avail Cap(c_a), veh/h	146	2875	892	130	1858	982	326	0	238	220	0	289
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.5	23.4	10.5	50.5	22.5	23.1	38.8	0.0	43.8	49.5	0.0	39.9
Incr Delay (d2), s/veh	41.1	15.6	0.0	23.6	7.9	16.4	0.1	0.0	8.2	1.4	0.0	3.8
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	5.0	25.1	0.4	3.0	19.4	23.7	0.3	0.0	3.7	1.1	0.0	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	90.6	39.0	10.5	74.1	30.4	39.5	38.8	0.0	52.0	50.9	0.0	43.7
LnGrp LOS	F	D	B	E	C	D	D		D	D		D
Approach Vol, veh/h	3029			2701			141			195		
Approach Delay, s/veh	40.8			34.9			50.6			46.8		
Approach LOS	D			C			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	20.0	10.7	66.9	7.6	23.9	13.0	64.6				
Change Period (Y+Rc), s	5.0	5.0	4.0	5.0	5.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	15.0	15.0	8.0	61.0	7.0	15.0	9.0	60.0				
Max Q Clear Time (g_c+I14, s)	9.4	9.4	7.2	63.2	2.8	8.4	9.8	54.4				
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	0.2	0.0	5.2				

Intersection Summary

HCM 6th Ctrl Delay, s/veh	38.6
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary

201: Herriman Blvd & 146th St

Future PM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	2956	20	41	3536	126	35	101	104	263	56	185
Future Volume (veh/h)	83	2956	20	41	3536	126	35	101	104	263	56	185
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	90	3213	22	45	3843	137	38	110	113	286	61	201
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	94	3278	1018	70	3182	112	114	101	103	229	57	187
Arrive On Green	0.05	0.65	0.65	0.04	0.63	0.63	0.04	0.12	0.12	0.07	0.15	0.15
Sat Flow, veh/h	1767	5066	1572	1767	5024	177	1767	839	862	3428	380	1251
Grp Volume(v), veh/h	90	3213	22	45	2569	1411	38	0	223	286	0	262
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1767	1689	1824	1767	0	1700	1714	0	1630
Q Serve(g_s), s	7.6	91.8	0.8	3.8	95.0	95.0	2.8	0.0	18.0	10.0	0.0	22.4
Cycle Q Clear(g_c), s	7.6	91.8	0.8	3.8	95.0	95.0	2.8	0.0	18.0	10.0	0.0	22.4
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.51	1.00		0.77
Lane Grp Cap(c), veh/h	94	3278	1018	70	2139	1155	114	0	204	229	0	244
V/C Ratio(X)	0.95	0.98	0.02	0.64	1.20	1.22	0.33	0.00	1.09	1.25	0.00	1.07
Avail Cap(c_a), veh/h	94	3278	1018	94	2139	1155	130	0	204	229	0	244
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	70.8	25.5	9.5	71.0	27.5	27.5	55.5	0.0	66.0	70.0	0.0	63.8
Incr Delay (d2), s/veh	77.8	11.5	0.0	9.5	95.2	107.8	1.7	0.0	90.0	143.9	0.0	78.8
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	5.4	36.2	0.3	1.9	62.4	71.5	1.3	0.0	12.9	8.9	0.0	14.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	148.6	37.0	9.5	80.5	122.7	135.3	57.3	0.0	156.0	213.9	0.0	142.5
LnGrp LOS	F	D	A	F	F	F	E		F	F		F
Approach Vol, veh/h	3325					4025		261		548		
Approach Delay, s/veh	39.8					126.7		141.6		179.8		
Approach LOS	D					F		F		F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	23.0	9.9	102.1	10.6	27.4	12.0	100.0				
Change Period (Y+Rc), s	5.0	5.0	4.0	5.0	5.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	10.0	18.0	8.0	95.0	7.0	21.0	8.0	95.0				
Max Q Clear Time (g_c+1/2C), s	11.0	20.0	5.8	93.8	4.8	24.4	9.6	97.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.2	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			95.3									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary
202: Allisonville Rd & 146th St

Existing AM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	1339	490	131	1175	46	671	358	134	71	194	176
Future Volume (veh/h)	252	1339	490	131	1175	46	671	358	134	71	194	176
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			
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	274	1455	533	142	1277	50	729	389	146	77	211	191
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	311	1492	665	260	1400	624	733	413	469	198	471	353
Arrive On Green	0.09	0.42	0.42	0.08	0.40	0.40	0.17	0.22	0.22	0.07	0.13	0.13
Sat Flow, veh/h	3428	3526	1572	3428	3526	1572	3428	1856	1572	1767	3526	1572
Grp Volume(v), veh/h	274	1455	533	142	1277	50	729	389	146	77	211	191
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1572	1714	1856	1572	1767	1763	1572
Q Serve(g_s), s	7.1	36.4	26.6	3.6	30.7	1.8	15.0	18.5	4.4	0.0	5.0	2.6
Cycle Q Clear(g_c), s	7.1	36.4	26.6	3.6	30.7	1.8	15.0	18.5	4.4	0.0	5.0	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	311	1492	665	260	1400	624	733	413	469	198	471	353
V/C Ratio(X)	0.88	0.98	0.80	0.55	0.91	0.08	0.99	0.94	0.31	0.39	0.45	0.54
Avail Cap(c_a), veh/h	311	1492	665	267	1453	648	733	413	469	218	471	353
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	40.4	25.4	22.6	40.0	25.6	16.9	36.7	34.3	12.1	39.1	35.8	12.8
Incr Delay (d2), s/veh	24.2	17.7	6.9	2.2	8.8	0.1	31.8	29.8	0.4	1.2	0.7	1.7
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	8.9	17.1	10.0	1.5	13.2	0.6	11.0	11.2	1.8	1.6	2.1	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.6	43.1	29.5	42.2	34.4	16.9	68.4	64.1	12.5	40.3	36.5	14.4
LnGrp LOS	E	D	C	D	C	B	E	E	B	D	D	B
Approach Vol, veh/h	2262				1469				1264			
Approach Delay, s/veh	42.5				34.6				60.6			
Approach LOS	D				C				E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	25.0	10.8	43.0	19.0	17.0	13.1	40.7				
Change Period (Y+Rc), s	5.0	* 5	4.0	5.0	4.0	5.0	5.0	* 5				
Max Green Setting (Gmax), s	20	* 20	7.0	38.0	15.0	12.0	8.0	* 37				
Max Q Clear Time (g_c+I2), s	20.5	20.5	5.6	38.4	17.0	7.0	9.1	32.7				
Green Ext Time (p_c), s	0.1	0.0	0.1	0.0	0.0	0.8	0.0	2.9				

Intersection Summary

HCM 6th Ctrl Delay 43.3
HCM 6th LOS D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

202: Allisonville Rd & 146th St

Existing PM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	1339	490	131	1175	46	671	358	134	71	194	176
Future Volume (veh/h)	252	1339	490	131	1175	46	671	358	134	71	194	176
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			
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	274	1455	533	142	1277	50	729	389	146	77	211	191
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	311	1492	665	260	1400	624	733	413	469	198	471	353
Arrive On Green	0.09	0.42	0.42	0.08	0.40	0.40	0.17	0.22	0.22	0.07	0.13	0.13
Sat Flow, veh/h	3428	3526	1572	3428	3526	1572	3428	1856	1572	1767	3526	1572
Grp Volume(v), veh/h	274	1455	533	142	1277	50	729	389	146	77	211	191
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1572	1714	1856	1572	1767	1763	1572
Q Serve(g_s), s	7.1	36.4	26.6	3.6	30.7	1.8	15.0	18.5	4.4	0.0	5.0	2.6
Cycle Q Clear(g_c), s	7.1	36.4	26.6	3.6	30.7	1.8	15.0	18.5	4.4	0.0	5.0	2.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	311	1492	665	260	1400	624	733	413	469	198	471	353
V/C Ratio(X)	0.88	0.98	0.80	0.55	0.91	0.08	0.99	0.94	0.31	0.39	0.45	0.54
Avail Cap(c_a), veh/h	311	1492	665	267	1453	648	733	413	469	218	471	353
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	40.4	25.4	22.6	40.0	25.6	16.9	36.7	34.3	12.1	39.1	35.8	12.8
Incr Delay (d2), s/veh	24.2	17.7	6.9	2.2	8.8	0.1	31.8	29.8	0.4	1.2	0.7	1.7
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	8.9	17.1	10.0	1.5	13.2	0.6	11.0	11.2	1.8	1.6	2.1	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.6	43.1	29.5	42.2	34.4	16.9	68.4	64.1	12.5	40.3	36.5	14.4
LnGrp LOS	E	D	C	D	C	B	E	E	B	D	D	B
Approach Vol, veh/h	2262				1469				1264			
Approach Delay, s/veh	42.5				34.6				60.6			
Approach LOS	D				C				E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	25.0	10.8	43.0	19.0	17.0	13.1	40.7				
Change Period (Y+Rc), s	5.0	* 5	4.0	5.0	4.0	5.0	5.0	* 5				
Max Green Setting (Gmax), s	20	* 20	7.0	38.0	15.0	12.0	8.0	* 37				
Max Q Clear Time (g_c+I), s	20.5	20.5	5.6	38.4	17.0	7.0	9.1	32.7				
Green Ext Time (p_c), s	0.1	0.0	0.1	0.0	0.0	0.8	0.0	2.9				

Intersection Summary

HCM 6th Ctrl Delay 43.3
HCM 6th LOS D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

202: Allisonville Rd & 146th St

Future AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	2567	504	313	3172	46	713	364	313	71	198	176
Future Volume (veh/h)	252	2567	504	313	3172	46	713	364	313	71	198	176
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			
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	274	2790	548	340	3448	50	775	396	340	77	215	191
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	203	2045	1130	226	2045	982	475	342	394	126	342	246
Arrive On Green	0.06	0.58	0.58	0.07	0.58	0.58	0.14	0.18	0.18	0.04	0.10	0.10
Sat Flow, veh/h	3428	3526	1572	3428	3526	1572	3428	1856	1572	1767	3526	1572
Grp Volume(v), veh/h	274	2790	548	340	3448	50	775	396	340	77	215	191
Grp Sat Flow(s),veh/h/ln	1714	1763	1572	1714	1763	1572	1714	1856	1572	1767	1763	1572
Q Serve(g_s), s	9.0	88.0	22.9	10.0	88.0	0.0	21.0	28.0	25.7	2.3	8.9	7.3
Cycle Q Clear(g_c), s	9.0	88.0	22.9	10.0	88.0	0.0	21.0	28.0	25.7	2.3	8.9	7.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	203	2045	1130	226	2045	982	475	342	394	126	342	246
V/C Ratio(X)	1.35	1.36	0.49	1.50	1.69	0.05	1.63	1.16	0.86	0.61	0.63	0.78
Avail Cap(c_a), veh/h	203	2045	1130	226	2045	982	475	342	394	129	342	246
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	71.4	31.9	9.2	70.9	31.9	11.1	65.4	61.9	36.9	69.7	65.9	40.0
Incr Delay (d2), s/veh	185.3	167.2	0.3	248.8	311.0	0.0	294.4	98.2	17.6	7.9	3.6	14.5
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	81.9	81.9	7.1	12.1	122.8	0.6	28.4	22.3	11.6	3.1	4.1	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	256.6	199.1	9.6	319.7	342.8	11.1	359.8	160.1	54.6	77.6	69.5	54.5
LnGrp LOS	F	F	A	F	F	B	F	F	D	E	E	D
Approach Vol, veh/h	3612				3838				1511		483	
Approach Delay, s/veh	174.7				336.5				238.8		64.9	
Approach LOS	F				F				F		E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	33.0	14.0	93.0	25.0	19.7	14.0	93.0				
Change Period (Y+Rc), s	5.0	* 5	4.0	5.0	4.0	5.0	5.0	* 5				
Max Green Setting (Gmax), s	7.0	* 28	10.0	87.0	21.0	14.0	9.0	* 88				
Max Q Clear Time (g_c+I4,3)	14.3	30.0	12.0	90.0	23.0	10.9	11.0	90.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 245.1

HCM 6th LOS F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

202: Allisonville Rd & 146th St

Future PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	2567	504	313	3172	46	713	364	313	71	198	176
Future Volume (veh/h)	252	2567	504	313	3172	46	713	364	313	71	198	176
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	274	2790	548	340	3448	50	775	396	340	77	215	191
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	203	2045	1130	226	2045	982	475	342	394	126	342	246
Arrive On Green	0.06	0.58	0.58	0.07	0.58	0.58	0.14	0.18	0.18	0.04	0.10	0.10
Sat Flow, veh/h	3428	3526	1572	3428	3526	1572	3428	1856	1572	1767	3526	1572
Grp Volume(v), veh/h	274	2790	548	340	3448	50	775	396	340	77	215	191
Grp Sat Flow(s),veh/h/ln1714	1763	1572	1714	1763	1572	1714	1856	1572	1767	1763	1572	1572
Q Serve(g_s), s	9.0	88.0	22.9	10.0	88.0	0.0	21.0	28.0	25.7	2.3	8.9	7.3
Cycle Q Clear(g_c), s	9.0	88.0	22.9	10.0	88.0	0.0	21.0	28.0	25.7	2.3	8.9	7.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	203	2045	1130	226	2045	982	475	342	394	126	342	246
V/C Ratio(X)	1.35	1.36	0.49	1.50	1.69	0.05	1.63	1.16	0.86	0.61	0.63	0.78
Avail Cap(c_a), veh/h	203	2045	1130	226	2045	982	475	342	394	129	342	246
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	71.4	31.9	9.2	70.9	31.9	11.1	65.4	61.9	36.9	69.7	65.9	40.0
Incr Delay (d2), s/veh	185.3	167.2	0.3	248.8	311.0	0.0	294.4	98.2	17.6	7.9	3.6	14.5
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/ln9.1	81.9	7.1	12.1	122.8	0.6	28.4	22.3	11.6	3.1	4.1	7.9	
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	256.6	199.1	9.6	319.7	342.8	11.1	359.8	160.1	54.6	77.6	69.5	54.5
LnGrp LOS	F	F	A	F	F	B	F	F	D	E	E	D
Approach Vol, veh/h	3612			3838			1511			483		
Approach Delay, s/veh	174.7			336.5			238.8			64.9		
Approach LOS	F			F			F			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s17.0	33.0	14.0	93.0	25.0	19.7	14.0	93.0					
Change Period (Y+Rc), s 5.0	* 5	4.0	5.0	4.0	5.0	5.0	* 5					
Max Green Setting (Gmax), s7.0	* 28	10.0	87.0	21.0	14.0	9.0	* 88					
Max Q Clear Time (g_c+I14.3s)	30.0	12.0	90.0	23.0	10.9	11.0	90.0					
Green Ext Time (p_c), s 0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 245.1

HCM 6th LOS F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
203: River Rd/River Ave & 146th St

Existing AM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	1505	10	174	1449	374	40	67	394	194	43	48
Future Volume (veh/h)	74	1505	10	174	1449	374	40	67	394	194	43	48
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			
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	80	1636	11	189	1575	407	43	73	428	211	47	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	223	1733	854	236	1769	914	362	273	355	321	324	382
Arrive On Green	0.07	0.49	0.49	0.08	0.50	0.50	0.05	0.15	0.15	0.08	0.17	0.17
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	80	1636	11	189	1575	407	43	73	428	211	47	52
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	1.8	38.9	0.3	4.6	35.5	12.9	1.8	3.1	13.0	7.0	1.9	2.3
Cycle Q Clear(g_c), s	1.8	38.9	0.3	4.6	35.5	12.9	1.8	3.1	13.0	7.0	1.9	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	1733	854	236	1769	914	362	273	355	321	324	382
V/C Ratio(X)	0.36	0.94	0.01	0.80	0.89	0.45	0.12	0.27	1.21	0.66	0.15	0.14
Avail Cap(c_a), veh/h	243	1755	864	257	1795	925	411	273	355	321	324	382
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	18.5	21.3	9.3	19.6	19.8	10.5	29.1	33.5	34.2	30.9	30.9	26.2
Incr Delay (d2), s/veh	1.0	10.9	0.0	15.5	5.9	0.3	0.1	0.5	116.6	4.8	0.2	0.2
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	0.7	16.2	0.1	2.6	13.8	3.8	0.7	1.4	18.6	0.4	0.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.4	32.2	9.3	35.1	25.8	10.8	29.2	34.0	150.8	35.7	31.1	26.4
LnGrp LOS	B	C	A	D	C	B	C	C	F	D	C	C
Approach Vol, veh/h	1727				2171		544				310	
Approach Delay, s/veh	31.5				23.8		125.5				33.4	
Approach LOS	C				C		F				C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	18.0	10.9	48.4	8.6	20.4	10.0	49.3				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	13.0	13.0	8.0	44.0	7.0	13.0	7.0	45.0				
Max Q Clear Time (g_c+I), s	19.0	15.0	6.6	40.9	3.8	4.3	3.8	37.5				
Green Ext Time (p_c), s	0.0	0.0	0.1	2.5	0.0	0.2	0.0	5.9				

Intersection Summary

HCM 6th Ctrl Delay 38.9
HCM 6th LOS D

HCM 6th Signalized Intersection Summary 203: River Rd/River Ave & 146th St

Existing PM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	74	1505	10	174	1449	374	40	67	394	194	43	48
Future Volume (veh/h)	74	1505	10	174	1449	374	40	67	394	194	43	48
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			
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	80	1636	11	189	1575	407	43	73	428	211	47	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	223	1733	854	236	1769	914	362	273	355	321	324	382
Arrive On Green	0.07	0.49	0.49	0.08	0.50	0.50	0.05	0.15	0.15	0.08	0.17	0.17
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	80	1636	11	189	1575	407	43	73	428	211	47	52
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	1.8	38.9	0.3	4.6	35.5	12.9	1.8	3.1	13.0	7.0	1.9	2.3
Cycle Q Clear(g_c), s	1.8	38.9	0.3	4.6	35.5	12.9	1.8	3.1	13.0	7.0	1.9	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	223	1733	854	236	1769	914	362	273	355	321	324	382
V/C Ratio(X)	0.36	0.94	0.01	0.80	0.89	0.45	0.12	0.27	1.21	0.66	0.15	0.14
Avail Cap(c_a), veh/h	243	1755	864	257	1795	925	411	273	355	321	324	382
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(l)	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	18.5	21.3	9.3	19.6	19.8	10.5	29.1	33.5	34.2	30.9	30.9	26.2
Incr Delay (d2), s/veh	1.0	10.9	0.0	15.5	5.9	0.3	0.1	0.5	116.6	4.8	0.2	0.2
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	0.7	16.2	0.1	2.6	13.8	3.8	0.7	1.4	18.6	0.4	0.8	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.4	32.2	9.3	35.1	25.8	10.8	29.2	34.0	150.8	35.7	31.1	26.4
LnGrp LOS	B	C	A	D	C	B	C	C	F	D	C	C
Approach Vol, veh/h	1727				2171		544				310	
Approach Delay, s/veh	31.5				23.8		125.5				33.4	
Approach LOS	C				C		F				C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	18.0	10.9	48.4	8.6	20.4	10.0	49.3				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	13.0	8.0	44.0	7.0	13.0	7.0	45.0				
Max Q Clear Time (g_c+1.0), s	19.0	15.0	6.6	40.9	3.8	4.3	3.8	37.5				
Green Ext Time (p_c), s	0.0	0.0	0.1	2.5	0.0	0.2	0.0	5.9				

Intersection Summary

HCM 6th Ctrl Delay 38.9
HCM 6th LOS D

HCM 6th Signalized Intersection Summary 203: River Rd/River Ave & 146th St

Future AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	2507	14	223	3073	740	51	76	472	356	46	48
Future Volume (veh/h)	76	2507	14	223	3073	740	51	76	472	356	46	48
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	83	2725	15	242	3340	804	55	83	513	387	50	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	128	1998	957	189	2120	1176	233	161	262	259	355	372
Arrive On Green	0.05	0.57	0.57	0.08	0.60	0.60	0.04	0.09	0.09	0.15	0.19	0.19
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	83	2725	15	242	3340	804	55	83	513	387	50	52
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	2.9	85.0	0.6	12.0	90.2	39.5	4.2	6.4	13.0	22.0	3.4	3.9
Cycle Q Clear(g_c), s	2.9	85.0	0.6	12.0	90.2	39.5	4.2	6.4	13.0	22.0	3.4	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	1998	957	189	2120	1176	233	161	262	259	355	372
V/C Ratio(X)	0.65	1.36	0.02	1.28	1.58	0.68	0.24	0.52	1.96	1.49	0.14	0.14
Avail Cap(c_a), veh/h	130	1998	957	189	2120	1176	242	161	262	259	355	372
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(l)	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	35.9	32.5	11.6	54.6	29.9	9.7	58.8	65.5	62.5	64.0	50.4	45.2
Incr Delay (d2), s/veh	10.5	167.1	0.0	159.4	261.1	1.6	0.5	2.8	444.4	241.3	0.2	0.2
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	2.0	79.8	0.2	12.3	111.6	11.9	1.9	3.1	42.2	27.1	1.6	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	199.6	11.6	213.9	291.0	11.4	59.3	68.3	506.9	305.3	50.6	45.4
LnGrp LOS	D	F	B	F	F	B	E	E	F	F	D	D
Approach Vol, veh/h	2823					4386		651		489		
Approach Delay, s/veh	194.1					235.5		413.2		251.6		
Approach LOS	F					F		F		F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.0	18.0	16.0	90.0	10.3	33.7	10.8	95.2				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	22.0	13.0	12.0	85.0	7.0	28.0	7.0	90.0				
Max Q Clear Time (g_c+24.0), s	24.0	15.0	14.0	87.0	6.2	5.9	4.9	92.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			236.3									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary 203: River Rd/River Ave & 146th St

Future PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	2507	14	223	3073	740	51	76	472	356	46	48
Future Volume (veh/h)	76	2507	14	223	3073	740	51	76	472	356	46	48
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	83	2725	15	242	3340	804	55	83	513	387	50	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	128	1998	957	189	2120	1176	233	161	262	259	355	372
Arrive On Green	0.05	0.57	0.57	0.08	0.60	0.60	0.04	0.09	0.09	0.15	0.19	0.19
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	83	2725	15	242	3340	804	55	83	513	387	50	52
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	2.9	85.0	0.6	12.0	90.2	39.5	4.2	6.4	13.0	22.0	3.4	3.9
Cycle Q Clear(g_c), s	2.9	85.0	0.6	12.0	90.2	39.5	4.2	6.4	13.0	22.0	3.4	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	1998	957	189	2120	1176	233	161	262	259	355	372
V/C Ratio(X)	0.65	1.36	0.02	1.28	1.58	0.68	0.24	0.52	1.96	1.49	0.14	0.14
Avail Cap(c_a), veh/h	130	1998	957	189	2120	1176	242	161	262	259	355	372
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	35.9	32.5	11.6	54.6	29.9	9.7	58.8	65.5	62.5	64.0	50.4	45.2
Incr Delay (d2), s/veh	10.5	167.1	0.0	159.4	261.1	1.6	0.5	2.8	444.4	241.3	0.2	0.2
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	2.0	79.8	0.2	12.3	111.6	11.9	1.9	3.1	42.2	27.1	1.6	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.4	199.6	11.6	213.9	291.0	11.4	59.3	68.3	506.9	305.3	50.6	45.4
LnGrp LOS	D	F	B	F	F	B	E	E	F	F	D	D
Approach Vol, veh/h	2823			4386			651			489		
Approach Delay, s/veh	194.1			235.5			413.2			251.6		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.0	18.0	16.0	90.0	10.3	33.7	10.8	95.2				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	22.0	13.0	12.0	85.0	7.0	28.0	7.0	90.0				
Max Q Clear Time (g_c+24.0), s	24.0	15.0	14.0	87.0	6.2	5.9	4.9	92.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	236.3											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary

203: River Rd/River Ave & 146th St

Future AM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	2343	10	242	1950	158	28	23	236	507	41	77
Future Volume (veh/h)	25	2343	10	242	1950	158	28	23	236	507	41	77
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	27	2547	11	263	2120	172	30	25	257	551	45	84
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	113	2004	946	202	2199	1181	229	181	510	436	354	350
Arrive On Green	0.03	0.57	0.57	0.09	0.62	0.62	0.03	0.10	0.10	0.13	0.19	0.19
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	2768	3428	1856	1572
Grp Volume(v), veh/h	27	2547	11	263	2120	172	30	25	257	551	45	84
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1384	1714	1856	1572
Q Serve(g_s), s	0.9	85.0	0.4	13.0	84.9	4.6	2.2	1.8	12.5	19.0	3.0	6.6
Cycle Q Clear(g_c), s	0.9	85.0	0.4	13.0	84.9	4.6	2.2	1.8	12.5	19.0	3.0	6.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	113	2004	946	202	2199	1181	229	181	510	436	354	350
V/C Ratio(X)	0.24	1.27	0.01	1.30	0.96	0.15	0.13	0.14	0.50	1.27	0.13	0.24
Avail Cap(c_a), veh/h	140	2004	946	202	2199	1181	253	186	518	436	354	350
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	34.9	32.3	11.9	54.9	26.6	5.2	57.5	61.8	54.9	65.3	50.2	47.7
Incr Delay (d2), s/veh	1.1	126.1	0.0	167.8	11.9	0.1	0.3	0.3	0.8	136.5	0.2	0.4
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	0.6	68.5	0.1	16.7	35.7	1.3	1.0	0.9	4.3	16.5	1.4	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	36.0	158.3	11.9	222.7	38.5	5.3	57.7	62.1	55.6	201.8	50.3	48.1
LnGrp LOS	D	F	B	F	D	A	E	E	E	F	D	D
Approach Vol, veh/h	2585		2555			312			680			
Approach Delay, s/veh	156.4		55.2			56.4			172.8			
Approach LOS	F		E			E			F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	3.0	19.6	17.0	90.0	9.0	33.6	8.7	98.3				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	19.0	15.0	13.0	85.0	7.0	27.0	7.0	91.0				
Max Q Clear Time (g_c+Y1), s	21.0	14.5	15.0	87.0	4.2	8.6	2.9	86.9				
Green Ext Time (p_c), s	0.0	0.1	0.0	0.0	0.0	0.4	0.0	3.8				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh		111.0										
HCM 6th LOS		F										

HCM 6th Signalized Intersection Summary

203: River Rd/River Ave & 146th St

Future PM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	2507	14	223	3073	740	51	76	472	356	46	48
Future Volume (veh/h)	76	2507	14	223	3073	740	51	76	472	356	46	48
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	83	2725	15	242	3340	804	55	83	513	387	50	52
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	128	2233	1062	178	2332	1176	233	161	443	297	244	278
Arrive On Green	0.05	0.63	0.63	0.07	0.66	0.66	0.04	0.09	0.09	0.09	0.13	0.13
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	2768	3428	1856	1572
Grp Volume(v), veh/h	83	2725	15	242	3340	804	55	83	513	387	50	52
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1384	1714	1856	1572
Q Serve(g_s), s	2.8	95.0	0.5	11.0	99.2	39.5	4.2	6.4	13.0	13.0	3.6	4.2
Cycle Q Clear(g_c), s	2.8	95.0	0.5	11.0	99.2	39.5	4.2	6.4	13.0	13.0	3.6	4.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	128	2233	1062	178	2332	1176	233	161	443	297	244	278
V/C Ratio(X)	0.65	1.22	0.01	1.36	1.43	0.68	0.24	0.52	1.16	1.30	0.21	0.19
Avail Cap(c_a), veh/h	130	2233	1062	178	2332	1176	242	161	443	297	244	278
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	41.0	27.5	8.0	56.7	25.4	9.7	58.8	65.5	63.0	68.5	58.2	52.6
Incr Delay (d2), s/veh	10.5	103.5	0.0	195.1	197.0	1.6	0.5	2.8	93.9	158.5	0.4	0.3
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	2.3	67.7	0.2	16.1	100.2	11.9	1.9	3.1	14.1	12.2	1.7	1.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	51.5	131.0	8.0	251.7	222.4	11.4	59.3	68.3	156.9	227.0	58.6	52.9
LnGrp LOS	D	F	A	F	F	B	E	E	F	F	E	D
Approach Vol, veh/h	2823					4386		651		489		
Approach Delay, s/veh	128.0					185.3		137.4		191.3		
Approach LOS	F					F		F		F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	18.0	15.0	100.0	10.3	24.7	10.8	104.2				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	13.0	13.0	11.0	95.0	7.0	19.0	7.0	99.0				
Max Q Clear Time (g_c+1/5), s	15.0	15.0	13.0	97.0	6.2	6.2	4.8	101.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh		162.6										
HCM 6th LOS		F										

HCM 6th Signalized Intersection Summary
204: Cherry Tree Ave/Cherry Tree Rd & 146th St

Existing AM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	1932	28	23	1591	194	39	18	4	118	18	72
Future Volume (veh/h)	82	1932	28	23	1591	194	39	18	4	118	18	72
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	89	2100	30	25	1729	211	42	20	4	128	20	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	271	2324	33	179	2175	970	199	215	43	267	47	185
Arrive On Green	0.07	0.65	0.65	0.04	0.62	0.62	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1767	3558	51	1767	3526	1572	1287	1501	300	1376	331	1292
Grp Volume(v), veh/h	89	1038	1092	25	1729	211	42	0	24	128	0	98
Grp Sat Flow(s), veh/h/ln	1767	1763	1846	1767	1763	1572	1287	0	1801	1376	0	1623
Q Serve(g_s), s	1.3	41.6	42.1	0.4	30.9	5.0	2.6	0.0	1.0	7.5	0.0	4.6
Cycle Q Clear(g_c), s	1.3	41.6	42.1	0.4	30.9	5.0	7.2	0.0	1.0	8.4	0.0	4.6
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.17	1.00		0.80
Lane Grp Cap(c), veh/h	271	1151	1206	179	2175	970	199	0	258	267	0	232
V/C Ratio(X)	0.33	0.90	0.91	0.14	0.79	0.22	0.21	0.00	0.09	0.48	0.00	0.42
Avail Cap(c_a), veh/h	290	1199	1256	262	2398	1069	199	0	258	267	0	232
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.9	12.3	12.3	15.6	12.1	7.1	36.0	0.0	31.2	34.9	0.0	32.8
Incr Delay (d2), s/veh	0.7	9.3	9.4	0.4	1.8	0.1	0.5	0.0	0.2	1.3	0.0	1.2
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	0.8	14.4	15.2	0.2	9.6	1.3	0.8	0.0	0.4	2.5	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.6	21.6	21.7	16.0	13.8	7.2	36.6	0.0	31.3	36.2	0.0	34.0
LnGrp LOS	B	C	C	B	B	A	D	A	C	D	A	C
Approach Vol, veh/h	2219			1965			66			226		
Approach Delay, s/veh	21.4			13.2			34.7			35.2		
Approach LOS	C			B			C			D		
Timer - Assigned Phs	2			3			4			6		
Phs Duration (G+Y+Rc), s	17.0			7.1			59.7			17.0		
Change Period (Y+Rc), s	5.0			4.0			5.0			4.0		
Max Green Setting (Gmax), s	12.0			7.0			57.0			12.0		
Max Q Clear Time (g_c+l1), s	9.2			2.4			44.1			10.4		
Green Ext Time (p_c), s	0.0			0.0			10.6			0.1		

Intersection Summary

HCM 6th Ctrl Delay	18.7
HCM 6th LOS	B

HCM 6th Signalized Intersection Summary
204: Cherry Tree Ave/Cherry Tree Rd & 146th St

Existing PM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	1932	28	23	1591	194	39	18	4	118	18	72
Future Volume (veh/h)	82	1932	28	23	1591	194	39	18	4	118	18	72
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	89	2100	30	25	1729	211	42	20	4	128	20	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	271	2324	33	179	2175	970	199	215	43	267	47	185
Arrive On Green	0.07	0.65	0.65	0.04	0.62	0.62	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1767	3558	51	1767	3526	1572	1287	1501	300	1376	331	1292
Grp Volume(v), veh/h	89	1038	1092	25	1729	211	42	0	24	128	0	98
Grp Sat Flow(s),veh/h/ln	1767	1763	1846	1767	1763	1572	1287	0	1801	1376	0	1623
Q Serve(g_s), s	1.3	41.6	42.1	0.4	30.9	5.0	2.6	0.0	1.0	7.5	0.0	4.6
Cycle Q Clear(g_c), s	1.3	41.6	42.1	0.4	30.9	5.0	7.2	0.0	1.0	8.4	0.0	4.6
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.17	1.00		0.80
Lane Grp Cap(c), veh/h	271	1151	1206	179	2175	970	199	0	258	267	0	232
V/C Ratio(X)	0.33	0.90	0.91	0.14	0.79	0.22	0.21	0.00	0.09	0.48	0.00	0.42
Avail Cap(c_a), veh/h	290	1199	1256	262	2398	1069	199	0	258	267	0	232
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.9	12.3	12.3	15.6	12.1	7.1	36.0	0.0	31.2	34.9	0.0	32.8
Incr Delay (d2), s/veh	0.7	9.3	9.4	0.4	1.8	0.1	0.5	0.0	0.2	1.3	0.0	1.2
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	0.8	14.4	15.2	0.2	9.6	1.3	0.8	0.0	0.4	2.5	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.6	21.6	21.7	16.0	13.8	7.2	36.6	0.0	31.3	36.2	0.0	34.0
LnGrp LOS	B	C	C	B	B	A	D	A	C	D	A	C
Approach Vol, veh/h	2219					1965		66		226		
Approach Delay, s/veh	21.4					13.2		34.7		35.2		
Approach LOS	C					B		C		D		
Timer - Assigned Phs	2		3		4		6		7		8	
Phs Duration (G+Y+Rc), s	17.0		7.1		59.7		17.0		10.1		56.7	
Change Period (Y+Rc), s	5.0		4.0		5.0		5.0		4.0		5.0	
Max Green Setting (Gmax), s	12.0		7.0		57.0		12.0		7.0		57.0	
Max Q Clear Time (g_c+I1), s	9.2		2.4		44.1		10.4		3.3		32.9	
Green Ext Time (p_c), s	0.0		0.0		10.6		0.1		0.1		14.9	
Intersection Summary												
HCM 6th Ctrl Delay			18.7									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
204: Cherry Tree Ave/Cherry Tree Rd & 146th St

Future AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	2922	29	38	3192	213	41	18	14	126	19	72
Future Volume (veh/h)	82	2922	29	38	3192	213	41	18	14	126	19	72
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	89	3176	32	41	3470	232	45	20	15	137	21	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	129	2795	28	116	2730	1217	83	85	64	140	30	111
Arrive On Green	0.05	0.78	0.78	0.04	0.77	0.77	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1767	3576	36	1767	3526	1572	1286	984	738	1363	345	1280
Grp Volume(v), veh/h	89	1563	1645	41	3470	232	45	0	35	137	0	99
Grp Sat Flow(s),veh/h/ln	1767	1763	1849	1767	1763	1572	1286	0	1723	1363	0	1625
Q Serve(g_s), s	3.3	117.1	117.1	0.7	116.0	5.9	4.1	0.0	2.8	10.2	0.0	8.9
Cycle Q Clear(g_c), s	3.3	117.1	117.1	0.7	116.0	5.9	13.0	0.0	2.8	13.0	0.0	8.9
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.43	1.00		0.79
Lane Grp Cap(c), veh/h	129	1378	1445	116	2730	1217	83	0	149	140	0	141
V/C Ratio(X)	0.69	1.13	1.14	0.35	1.27	0.19	0.54	0.00	0.23	0.98	0.00	0.70
Avail Cap(c_a), veh/h	131	1378	1445	131	2730	1217	83	0	149	140	0	141
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.3	16.4	16.4	47.6	16.9	4.5	73.3	0.0	63.8	71.5	0.0	66.5
Incr Delay (d2), s/veh	14.3	70.0	71.2	1.8	125.1	0.1	6.8	0.0	0.8	68.2	0.0	14.5
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	8.1	61.8	65.3	1.2	82.8	1.6	1.9	0.0	1.3	7.9	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.6	86.4	87.6	49.4	142.0	4.6	80.1	0.0	64.6	139.7	0.0	81.0
LnGrp LOS	E	F	F	D	F	A	F	A	E	F	A	F
Approach Vol, veh/h	3297					3743		80		236		
Approach Delay, s/veh	86.5					132.5		73.3		115.1		
Approach LOS	F					F		E		F		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	18.0		9.7	122.1		18.0	10.8	121.0				
Change Period (Y+Rc), s	5.0		4.0	5.0		5.0	4.0	5.0				
Max Green Setting (Gmax), s	13.0		7.0	116.0		13.0	7.0	116.0				
Max Q Clear Time (g_c+l1), s	15.0		2.7	119.1		15.0	5.3	118.0				
Green Ext Time (p_c), s	0.0		0.0	0.0		0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	110.7											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary 204: Cherry Tree Ave/Cherry Tree Rd & 146th St

Future PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	2922	29	38	3192	213	41	18	14	126	19	72
Future Volume (veh/h)	82	2922	29	38	3192	213	41	18	14	126	19	72
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	89	3176	32	41	3470	232	45	20	15	137	21	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	129	2795	28	116	2730	1217	83	85	64	140	30	111
Arrive On Green	0.05	0.78	0.78	0.04	0.77	0.77	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1767	3576	36	1767	3526	1572	1286	984	738	1363	345	1280
Grp Volume(v), veh/h	89	1563	1645	41	3470	232	45	0	35	137	0	99
Grp Sat Flow(s),veh/h/ln	1767	1763	1849	1767	1763	1572	1286	0	1723	1363	0	1625
Q Serve(g_s), s	3.3	117.1	117.1	0.7	116.0	5.9	4.1	0.0	2.8	10.2	0.0	8.9
Cycle Q Clear(g_c), s	3.3	117.1	117.1	0.7	116.0	5.9	13.0	0.0	2.8	13.0	0.0	8.9
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.43	1.00		0.79
Lane Grp Cap(c), veh/h	129	1378	1445	116	2730	1217	83	0	149	140	0	141
V/C Ratio(X)	0.69	1.13	1.14	0.35	1.27	0.19	0.54	0.00	0.23	0.98	0.00	0.70
Avail Cap(c_a), veh/h	131	1378	1445	131	2730	1217	83	0	149	140	0	141
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.3	16.4	16.4	47.6	16.9	4.5	73.3	0.0	63.8	71.5	0.0	66.5
Incr Delay (d2), s/veh	14.3	70.0	71.2	1.8	125.1	0.1	6.8	0.0	0.8	68.2	0.0	14.5
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	8.1	61.8	65.3	1.2	82.8	1.6	1.9	0.0	1.3	7.9	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.6	86.4	87.6	49.4	142.0	4.6	80.1	0.0	64.6	139.7	0.0	81.0
LnGrp LOS	E	F	F	D	F	A	F	A	E	F	A	F
Approach Vol, veh/h	3297					3743		80		236		
Approach Delay, s/veh	86.5					132.5		73.3		115.1		
Approach LOS	F					F		E		F		
Timer - Assigned Phs	2		3		4		6		7		8	
Phs Duration (G+Y+Rc), s	18.0		9.7		122.1		18.0		10.8		121.0	
Change Period (Y+Rc), s	5.0		4.0		5.0		5.0		4.0		5.0	
Max Green Setting (Gmax), s	13.0		7.0		116.0		13.0		7.0		116.0	
Max Q Clear Time (g_c+l1), s	15.0		2.7		119.1		15.0		5.3		118.0	
Green Ext Time (p_c), s	0.0		0.0		0.0		0.0		0.0		0.0	
Intersection Summary												
HCM 6th Ctrl Delay			110.7									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary

204: Cherry Tree Ave/Cherry Tree Rd & 146th St

Future AM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	2384	1	5	2360	50	38	3	21	200	43	100
Future Volume (veh/h)	10	2384	1	5	2360	50	38	3	21	200	43	100
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	11	2591	1	5	2565	54	41	3	23	217	47	109
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	80	2665	1	74	2568	1145	135	29	224	248	78	182
Arrive On Green	0.02	0.74	0.74	0.01	0.73	0.73	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1767	3617	1	1767	3526	1572	1221	185	1416	1374	497	1152
Grp Volume(v), veh/h	11	1263	1329	5	2565	54	41	0	26	217	0	156
Grp Sat Flow(s),veh/h/ln	1767	1763	1855	1767	1763	1572	1221	0	1601	1374	0	1648
Q Serve(g_s), s	0.2	96.7	96.7	0.1	105.5	1.4	4.7	0.0	2.0	21.0	0.0	12.8
Cycle Q Clear(g_c), s	0.2	96.7	96.7	0.1	105.5	1.4	17.5	0.0	2.0	23.0	0.0	12.8
Prop In Lane	1.00		0.00	1.00		1.00	1.00		0.88	1.00		0.70
Lane Grp Cap(c), veh/h	80	1299	1367	74	2568	1145	135	0	253	248	0	261
V/C Ratio(X)	0.14	0.97	0.97	0.07	1.00	0.05	0.30	0.00	0.10	0.88	0.00	0.60
Avail Cap(c_a), veh/h	135	1299	1367	143	2568	1145	135	0	253	248	0	261
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	43.3	17.8	17.8	37.7	19.7	5.6	65.1	0.0	52.4	63.2	0.0	57.0
Incr Delay (d2), s/veh	0.8	18.6	18.0	0.4	17.5	0.0	1.3	0.0	0.2	27.8	0.0	3.7
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	0.3	38.2	40.0	0.1	41.2	0.4	1.5	0.0	0.8	10.0	0.0	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.1	36.4	35.8	38.1	37.1	5.6	66.4	0.0	52.6	91.0	0.0	60.7
LnGrp LOS	D	D	D	D	D	A	E		D	F		E
Approach Vol, veh/h	2603					2624		67		373		
Approach Delay, s/veh	36.1					36.5		61.0		78.3		
Approach LOS	D					D		E		E		
Timer - Assigned Phs	2		3	4		6	7	8				
Phs Duration (G+Y+Rc), s	28.0		5.3	112.2		28.0	6.5	111.0				
Change Period (Y+Rc), s	5.0		4.0	5.0		5.0	4.0	5.0				
Max Green Setting (Gmax), s	23.0		7.0	106.0		23.0	7.0	106.0				
Max Q Clear Time (g_c+I1), s	19.5		2.1	98.7		25.0	2.2	107.5				
Green Ext Time (p_c), s	0.0		0.0	6.9		0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			39.4									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
204: Cherry Tree Ave/Cherry Tree Rd & 146th St

Future PM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	2922	29	38	3192	213	41	18	14	126	19	72
Future Volume (veh/h)	82	2922	29	38	3192	213	41	18	14	126	19	72
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	89	3176	32	41	3470	232	45	20	15	137	21	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	129	2795	28	116	2730	1217	83	85	64	140	30	111
Arrive On Green	0.05	0.78	0.78	0.04	0.77	0.77	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1767	3576	36	1767	3526	1572	1286	984	738	1363	345	1280
Grp Volume(v), veh/h	89	1563	1645	41	3470	232	45	0	35	137	0	99
Grp Sat Flow(s),veh/h/ln	1767	1763	1849	1767	1763	1572	1286	0	1723	1363	0	1625
Q Serve(g_s), s	3.3	117.1	117.1	0.7	116.0	5.9	4.1	0.0	2.8	10.2	0.0	8.9
Cycle Q Clear(g_c), s	3.3	117.1	117.1	0.7	116.0	5.9	13.0	0.0	2.8	13.0	0.0	8.9
Prop In Lane	1.00		0.02	1.00		1.00	1.00		0.43	1.00		0.79
Lane Grp Cap(c), veh/h	129	1378	1445	116	2730	1217	83	0	149	140	0	141
V/C Ratio(X)	0.69	1.13	1.14	0.35	1.27	0.19	0.54	0.00	0.23	0.98	0.00	0.70
Avail Cap(c_a), veh/h	131	1378	1445	131	2730	1217	83	0	149	140	0	141
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.3	16.4	16.4	47.6	16.9	4.5	73.3	0.0	63.8	71.5	0.0	66.5
Incr Delay (d2), s/veh	14.3	70.0	71.2	1.8	125.1	0.1	6.8	0.0	0.8	68.2	0.0	14.5
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	8.1	61.8	65.3	1.2	82.8	1.6	1.9	0.0	1.3	7.9	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	68.6	86.4	87.6	49.4	142.0	4.6	80.1	0.0	64.6	139.7	0.0	81.0
LnGrp LOS	E	F	F	D	F	A	F		E	F		F
Approach Vol, veh/h	3297					3743		80		236		
Approach Delay, s/veh	86.5					132.5		73.3		115.1		
Approach LOS	F					F		E		F		
Timer - Assigned Phs	2		3		4		6		7		8	
Phs Duration (G+Y+Rc), s	18.0		9.7		122.1		18.0		10.8		121.0	
Change Period (Y+Rc), s	5.0		4.0		5.0		5.0		4.0		5.0	
Max Green Setting (Gmax), s	13.0		7.0		116.0		13.0		7.0		116.0	
Max Q Clear Time (g_c+I1), s	15.0		2.7		119.1		15.0		5.3		118.0	
Green Ext Time (p_c), s	0.0		0.0		0.0		0.0		0.0		0.0	
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			110.7									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary
205: Hazel Dell Rd & Newark Dr/Edenshall Ln

Existing AM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕		↕	↕		↕	↕	↕	↕	↕	↕
Traffic Volume (veh/h)	0	0	0	105	0	116	0	1224	86	142	745	0
Future Volume (veh/h)	0	0	0	105	0	116	0	1224	86	142	745	0
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	0	0	114	0	126	0	1330	93	154	810	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	0	329	0	421	0	279	108	2374	1059	285	2374	1059
Arrive On Green	0.00	0.00	0.00	0.18	0.00	0.18	0.00	0.67	0.67	0.67	0.67	0.00
Sat Flow, veh/h	0	1856	0	1767	0	1572	668	3526	1572	374	3526	1572
Grp Volume(v), veh/h	0	0	0	114	0	126	0	1330	93	154	810	0
Grp Sat Flow(s),veh/h/ln	0	1856	0	1767	0	1572	668	1763	1572	374	1763	1572
Q Serve(g_s), s	0.0	0.0	0.0	3.8	0.0	4.8	0.0	13.2	1.4	24.6	6.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.8	0.0	4.8	0.0	13.2	1.4	37.8	6.5	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	329	0	421	0	279	108	2374	1059	285	2374	1059
V/C Ratio(X)	0.00	0.00	0.00	0.27	0.00	0.45	0.00	0.56	0.09	0.54	0.34	0.00
Avail Cap(c_a), veh/h	0	416	0	504	0	352	157	2633	1175	313	2633	1175
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	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	24.2	0.0	24.6	0.0	5.7	3.8	15.7	4.6	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	1.1	0.0	0.2	0.0	1.6	0.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.6	0.0	1.8	0.0	2.7	0.3	1.7	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	24.6	0.0	25.8	0.0	5.9	3.8	17.2	4.7	0.0
LnGrp LOS	A	A	A	C	A	C	A	A	A	B	A	A
Approach Vol, veh/h	0			240			1423			964		
Approach Delay, s/veh	0.0			25.2			5.8			6.7		
Approach LOS				C			A			A		
Timer - Assigned Phs	2			4			6			8		
Phs Duration (G+Y+Rc), s	50.1			16.9			50.1			16.9		
Change Period (Y+Rc), s	5.0			5.0			5.0			5.0		
Max Green Setting (Gmax), s	50.0			15.0			50.0			15.0		
Max Q Clear Time (g_c+l1), s	15.2			0.0			39.8			6.8		
Green Ext Time (p_c), s	12.1			0.0			5.2			0.7		

Intersection Summary

HCM 6th Ctrl Delay	7.9
HCM 6th LOS	A

HCM 6th Signalized Intersection Summary
205: Hazel Dell Rd & Newark Dr/Edenshall Ln

Existing PM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								 				
Traffic Volume (veh/h)	0	0	0	105	0	116	0	1224	86	142	745	0
Future Volume (veh/h)	0	0	0	105	0	116	0	1224	86	142	745	0
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	0	0	114	0	126	0	1330	93	154	810	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	0	329	0	421	0	279	108	2374	1059	285	2374	1059
Arrive On Green	0.00	0.00	0.00	0.18	0.00	0.18	0.00	0.67	0.67	0.67	0.67	0.00
Sat Flow, veh/h	0	1856	0	1767	0	1572	668	3526	1572	374	3526	1572
Grp Volume(v), veh/h	0	0	0	114	0	126	0	1330	93	154	810	0
Grp Sat Flow(s),veh/h/ln	0	1856	0	1767	0	1572	668	1763	1572	374	1763	1572
Q Serve(g_s), s	0.0	0.0	0.0	3.8	0.0	4.8	0.0	13.2	1.4	24.6	6.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	3.8	0.0	4.8	0.0	13.2	1.4	37.8	6.5	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	329	0	421	0	279	108	2374	1059	285	2374	1059
V/C Ratio(X)	0.00	0.00	0.00	0.27	0.00	0.45	0.00	0.56	0.09	0.54	0.34	0.00
Avail Cap(c_a), veh/h	0	416	0	504	0	352	157	2633	1175	313	2633	1175
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	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	24.2	0.0	24.6	0.0	5.7	3.8	15.7	4.6	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.3	0.0	1.1	0.0	0.2	0.0	1.6	0.1	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	1.6	0.0	1.8	0.0	2.7	0.3	1.7	1.3	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	24.6	0.0	25.8	0.0	5.9	3.8	17.2	4.7	0.0
LnGrp LOS	A	A	A	C	A	C	A	A	A	B	A	A
Approach Vol, veh/h												
0												
Approach Delay, s/veh												
0.0												
Approach LOS												
C												
A												
A												
Timer - Assigned Phs												
2												
4												
6												
8												
Phs Duration (G+Y+Rc), s												
50.1												
16.9												
50.1												
16.9												
Change Period (Y+Rc), s												
5.0												
5.0												
5.0												
Max Green Setting (Gmax), s												
50.0												
15.0												
50.0												
15.0												
Max Q Clear Time (g_c+I1), s												
15.2												
0.0												
39.8												
6.8												
Green Ext Time (p_c), s												
12.1												
0.0												
5.2												
0.7												
Intersection Summary												
HCM 6th Ctrl Delay												
7.9												
HCM 6th LOS												
A												

HCM 6th Signalized Intersection Summary
205: Hazel Dell Rd & Newark Dr/Edenshall Ln

Future AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	105	0	116	0	2266	86	142	1235	0
Future Volume (veh/h)	0	0	0	105	0	116	0	2266	86	142	1235	0
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	0	0	114	0	126	0	2463	93	154	1342	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	0	255	0	326	0	216	83	2635	1175	103	2635	1175
Arrive On Green	0.00	0.00	0.00	0.14	0.00	0.14	0.00	0.75	0.75	0.75	0.75	0.00
Sat Flow, veh/h	0	1856	0	1767	0	1572	404	3526	1572	123	3526	1572
Grp Volume(v), veh/h	0	0	0	114	0	126	0	2463	93	154	1342	0
Grp Sat Flow(s),veh/h/ln	0	1856	0	1767	0	1572	404	1763	1572	123	1763	1572
Q Serve(g_s), s	0.0	0.0	0.0	5.2	0.0	6.5	0.0	50.9	1.4	14.1	13.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	5.2	0.0	6.5	0.0	50.9	1.4	65.0	13.5	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	255	0	326	0	216	83	2635	1175	103	2635	1175
V/C Ratio(X)	0.00	0.00	0.00	0.35	0.00	0.58	0.00	0.93	0.08	1.50	0.51	0.00
Avail Cap(c_a), veh/h	0	320	0	388	0	271	83	2635	1175	103	2635	1175
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	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	34.6	0.0	35.2	0.0	9.2	2.9	42.1	4.5	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.6	0.0	2.5	0.0	7.1	0.0	268.5	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	2.3	0.0	2.6	0.0	13.0	0.3	9.8	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	35.2	0.0	37.6	0.0	16.3	3.0	310.6	4.6	0.0
LnGrp LOS	A	A	A	D	A	D	A	B	A	F	A	A
Approach Vol, veh/h												
0												
Approach Delay, s/veh												
0.0												
Approach LOS												
D												
B												
D												
Timer - Assigned Phs												
2												
4												
6												
8												
Phs Duration (G+Y+Rc), s												
70.0												
17.0												
70.0												
17.0												
Change Period (Y+Rc), s												
5.0												
5.0												
5.0												
5.0												
Max Green Setting (Gmax), s												
65.0												
15.0												
65.0												
15.0												
Max Q Clear Time (g_c+I1), s												
52.9												
0.0												
67.0												
8.5												
Green Ext Time (p_c), s												
11.0												
0.0												
0.0												
0.6												
Intersection Summary												
HCM 6th Ctrl Delay												
24.0												
HCM 6th LOS												
C												

HCM 6th Signalized Intersection Summary
205: Hazel Dell Rd & Newark Dr/Edenshall Ln

Future PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	105	0	116	0	2266	86	142	1235	0
Future Volume (veh/h)	0	0	0	105	0	116	0	2266	86	142	1235	0
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	0	0	0	114	0	126	0	2463	93	154	1342	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	0	255	0	326	0	216	83	2635	1175	103	2635	1175
Arrive On Green	0.00	0.00	0.00	0.14	0.00	0.14	0.00	0.75	0.75	0.75	0.75	0.00
Sat Flow, veh/h	0	1856	0	1767	0	1572	404	3526	1572	123	3526	1572
Grp Volume(v), veh/h	0	0	0	114	0	126	0	2463	93	154	1342	0
Grp Sat Flow(s),veh/h/ln	0	1856	0	1767	0	1572	404	1763	1572	123	1763	1572
Q Serve(g_s), s	0.0	0.0	0.0	5.2	0.0	6.5	0.0	50.9	1.4	14.1	13.5	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	5.2	0.0	6.5	0.0	50.9	1.4	65.0	13.5	0.0
Prop In Lane	0.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	0	255	0	326	0	216	83	2635	1175	103	2635	1175
V/C Ratio(X)	0.00	0.00	0.00	0.35	0.00	0.58	0.00	0.93	0.08	1.50	0.51	0.00
Avail Cap(c_a), veh/h	0	320	0	388	0	271	83	2635	1175	103	2635	1175
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	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	34.6	0.0	35.2	0.0	9.2	2.9	42.1	4.5	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.6	0.0	2.5	0.0	7.1	0.0	268.5	0.2	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.0	0.0	2.3	0.0	2.6	0.0	13.0	0.3	9.8	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.0	0.0	35.2	0.0	37.6	0.0	16.3	3.0	310.6	4.6	0.0
LnGrp LOS	A	A	A	D	A	D	A	B	A	F	A	A
Approach Vol, veh/h	0		240			2556			1496			
Approach Delay, s/veh	0.0		36.5			15.8			36.1			
Approach LOS			D			B			D			
Timer - Assigned Phs	2		4			6			8			
Phs Duration (G+Y+Rc), s	70.0		17.0			70.0			17.0			
Change Period (Y+Rc), s	5.0		5.0			5.0			5.0			
Max Green Setting (Gmax), s	65.0		15.0			65.0			15.0			
Max Q Clear Time (g_c+l1), s	52.9		0.0			67.0			8.5			
Green Ext Time (p_c), s	11.0		0.0			0.0			0.6			
Intersection Summary												
HCM 6th Ctrl Delay			24.0									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

206: Hazel Dell Rd & 146th St

Existing AM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	1526	256	137	1019	467	234	647	126	344	403	219
Future Volume (veh/h)	342	1526	256	137	1019	467	234	647	126	344	403	219
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	372	1659	278	149	1108	508	254	703	137	374	438	238
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	374	1557	899	163	1146	747	373	705	406	326	775	621
Arrive On Green	0.17	0.44	0.44	0.06	0.32	0.32	0.13	0.20	0.20	0.15	0.22	0.22
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	3526	1572	1767	3526	1572
Grp Volume(v), veh/h	372	1659	278	149	1108	508	254	703	137	374	438	238
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1763	1572	1767	1763	1572
Q Serve(g_s), s	20.8	53.0	11.0	6.8	37.1	30.1	13.5	23.9	8.5	18.0	13.3	12.9
Cycle Q Clear(g_c), s	20.8	53.0	11.0	6.8	37.1	30.1	13.5	23.9	8.5	18.0	13.3	12.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	374	1557	899	163	1146	747	373	705	406	326	775	621
V/C Ratio(X)	0.99	1.07	0.31	0.91	0.97	0.68	0.68	1.00	0.34	1.15	0.56	0.38
Avail Cap(c_a), veh/h	374	1557	899	163	1146	747	393	705	406	326	775	621
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(l)	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	37.5	33.5	13.4	31.3	39.9	24.4	32.2	48.0	36.2	34.9	41.7	25.9
Incr Delay (d2), s/veh	44.9	42.5	0.2	46.1	19.1	2.5	4.5	33.1	0.5	96.6	1.0	0.4
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	10.7	30.2	3.7	4.8	18.3	11.0	6.0	13.4	3.2	16.2	5.7	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.4	76.0	13.6	77.4	59.0	26.9	36.7	81.1	36.6	131.5	42.6	26.3
LnGrp LOS	F	F	B	E	E	C	D	F	D	F	D	C
Approach Vol, veh/h	2309		1765				1094			1050		
Approach Delay, s/veh	69.5		51.3				65.2			70.6		
Approach LOS	E		D				E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	29.0	11.0	58.0	19.6	31.4	25.0	44.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	18.0	24.0	7.0	53.0	17.0	25.0	21.0	39.0				
Max Q Clear Time (g_c+2.0), s	20.0	25.9	8.8	55.0	15.5	15.3	22.8	39.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	2.4	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 63.8
HCM 6th LOS E

HCM 6th Signalized Intersection Summary

206: Hazel Dell Rd & 146th St

Existing PM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	342	1526	256	137	1019	467	234	647	126	344	403	219
Future Volume (veh/h)	342	1526	256	137	1019	467	234	647	126	344	403	219
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	372	1659	278	149	1108	508	254	703	137	374	438	238
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	374	1557	899	163	1146	747	373	705	406	326	775	621
Arrive On Green	0.17	0.44	0.44	0.06	0.32	0.32	0.13	0.20	0.20	0.15	0.22	0.22
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	3526	1572	1767	3526	1572
Grp Volume(v), veh/h	372	1659	278	149	1108	508	254	703	137	374	438	238
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1763	1572	1767	1763	1572
Q Serve(g_s), s	20.8	53.0	11.0	6.8	37.1	30.1	13.5	23.9	8.5	18.0	13.3	12.9
Cycle Q Clear(g_c), s	20.8	53.0	11.0	6.8	37.1	30.1	13.5	23.9	8.5	18.0	13.3	12.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	374	1557	899	163	1146	747	373	705	406	326	775	621
V/C Ratio(X)	0.99	1.07	0.31	0.91	0.97	0.68	0.68	1.00	0.34	1.15	0.56	0.38
Avail Cap(c_a), veh/h	374	1557	899	163	1146	747	393	705	406	326	775	621
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(l)	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	37.5	33.5	13.4	31.3	39.9	24.4	32.2	48.0	36.2	34.9	41.7	25.9
Incr Delay (d2), s/veh	44.9	42.5	0.2	46.1	19.1	2.5	4.5	33.1	0.5	96.6	1.0	0.4
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	10.7	30.2	3.7	4.8	18.3	11.0	6.0	13.4	3.2	16.2	5.7	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.4	76.0	13.6	77.4	59.0	26.9	36.7	81.1	36.6	131.5	42.6	26.3
LnGrp LOS	F	F	B	E	E	C	D	F	D	F	D	C
Approach Vol, veh/h	2309					1765		1094		1050		
Approach Delay, s/veh	69.5					51.3		65.2		70.6		
Approach LOS	E					D		E		E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	29.0	11.0	58.0	19.6	31.4	25.0	44.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	18.0	24.0	7.0	53.0	17.0	25.0	21.0	39.0				
Max Q Clear Time (g_c+2.0), s	20.0	25.9	8.8	55.0	15.5	15.3	22.8	39.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	2.4	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			63.8									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary

206: Hazel Dell Rd & 146th St

Future AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	404	1914	256	313	1508	1405	234	689	281	792	422	242
Future Volume (veh/h)	404	1914	256	313	1508	1405	234	689	281	792	422	242
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	439	2080	278	340	1639	1527	254	749	305	861	459	263
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	259	1199	744	200	1081	902	400	564	430	471	1034	692
Arrive On Green	0.15	0.34	0.34	0.11	0.31	0.31	0.13	0.16	0.16	0.27	0.29	0.29
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	3526	1572	1767	3526	1572
Grp Volume(v), veh/h	439	2080	278	340	1639	1527	254	749	305	861	459	263
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1763	1572	1767	1763	1572
Q Serve(g_s), s	22.0	51.0	17.0	17.0	46.0	46.0	17.8	24.0	24.0	40.0	15.9	16.9
Cycle Q Clear(g_c), s	22.0	51.0	17.0	17.0	46.0	46.0	17.8	24.0	24.0	40.0	15.9	16.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	1199	744	200	1081	902	400	564	430	471	1034	692
V/C Ratio(X)	1.69	1.74	0.37	1.70	1.52	1.69	0.64	1.33	0.71	1.83	0.44	0.38
Avail Cap(c_a), veh/h	259	1199	744	200	1081	902	435	564	430	471	1034	692
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(l)	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	64.0	49.5	25.3	66.5	52.0	32.0	43.7	63.0	49.1	55.0	43.1	28.3
Incr Delay (d2), s/veh	328.3	334.4	0.3	334.5	237.0	317.0	2.7	159.5	5.4	380.4	0.3	0.3
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	38.3	77.4	6.3	26.1	55.3	109.4	8.0	23.0	10.7	67.1	6.9	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	392.3	383.9	25.6	401.0	289.0	349.0	46.4	222.5	54.5	435.4	43.4	28.6
LnGrp LOS	F	F	C	F	F	F	D	F	D	F	D	C
Approach Vol, veh/h	2797					3506		1308		1583		
Approach Delay, s/veh	349.6					326.0		149.1		254.2		
Approach LOS	F					F		F		F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	44.0	29.0	21.0	56.0	24.0	49.0	26.0	51.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	40.0	24.0	17.0	51.0	23.0	41.0	22.0	46.0				
Max Q Clear Time (g_c+Rc), s	42.0	26.0	19.0	53.0	19.8	18.9	24.0	48.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.2	3.6	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			295.6									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary 206: Hazel Dell Rd & 146th St

Future PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	404	1914	256	313	1508	1405	234	689	281	792	422	242
Future Volume (veh/h)	404	1914	256	313	1508	1405	234	689	281	792	422	242
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	439	2080	278	340	1639	1527	254	749	305	861	459	263
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	259	1199	744	200	1081	902	400	564	430	471	1034	692
Arrive On Green	0.15	0.34	0.34	0.11	0.31	0.31	0.13	0.16	0.16	0.27	0.29	0.29
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	3526	1572	1767	3526	1572
Grp Volume(v), veh/h	439	2080	278	340	1639	1527	254	749	305	861	459	263
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1763	1572	1767	1763	1572
Q Serve(g_s), s	22.0	51.0	17.0	17.0	46.0	46.0	17.8	24.0	24.0	40.0	15.9	16.9
Cycle Q Clear(g_c), s	22.0	51.0	17.0	17.0	46.0	46.0	17.8	24.0	24.0	40.0	15.9	16.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	1199	744	200	1081	902	400	564	430	471	1034	692
V/C Ratio(X)	1.69	1.74	0.37	1.70	1.52	1.69	0.64	1.33	0.71	1.83	0.44	0.38
Avail Cap(c_a), veh/h	259	1199	744	200	1081	902	435	564	430	471	1034	692
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	64.0	49.5	25.3	66.5	52.0	32.0	43.7	63.0	49.1	55.0	43.1	28.3
Incr Delay (d2), s/veh	328.3	334.4	0.3	334.5	237.0	317.0	2.7	159.5	5.4	380.4	0.3	0.3
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	38.3	77.4	6.3	26.1	55.3	109.4	8.0	23.0	10.7	67.1	6.9	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	392.3	383.9	25.6	401.0	289.0	349.0	46.4	222.5	54.5	435.4	43.4	28.6
LnGrp LOS	F	F	C	F	F	F	D	F	D	F	D	C
Approach Vol, veh/h	2797		3506			1308			1583			
Approach Delay, s/veh	349.6		326.0			149.1			254.2			
Approach LOS	F		F			F			F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	44.0	29.0	21.0	56.0	24.0	49.0	26.0	51.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	40.0	24.0	17.0	51.0	23.0	41.0	22.0	46.0				
Max Q Clear Time (g_c+H2), s	40.0	26.0	19.0	53.0	19.8	18.9	24.0	48.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.2	3.6	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	295.6											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary

208: Howe Rd & 146th St

Existing AM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	1567	69	37	1001	36	23	178	39	97	144	79
Future Volume (veh/h)	188	1567	69	37	1001	36	23	178	39	97	144	79
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			
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	204	1703	75	40	1088	39	25	193	42	105	157	86
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	244	1752	781	91	1447	646	286	277	235	286	354	300
Arrive On Green	0.14	0.50	0.50	0.05	0.41	0.41	0.04	0.15	0.15	0.08	0.19	0.19
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	204	1703	75	40	1088	39	25	193	42	105	157	86
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	9.1	37.8	2.0	1.8	21.2	1.2	0.9	7.9	1.9	3.8	6.0	3.8
Cycle Q Clear(g_c), s	9.1	37.8	2.0	1.8	21.2	1.2	0.9	7.9	1.9	3.8	6.0	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	244	1752	781	91	1447	646	286	277	235	286	354	300
V/C Ratio(X)	0.84	0.97	0.10	0.44	0.75	0.06	0.09	0.70	0.18	0.37	0.44	0.29
Avail Cap(c_a), veh/h	312	1753	782	187	1503	670	407	346	293	333	354	300
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(l)	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	33.8	19.7	10.7	37.0	20.2	14.3	27.1	32.5	29.9	25.0	28.8	27.9
Incr Delay (d2), s/veh	14.5	15.4	0.1	3.3	2.1	0.0	0.1	4.4	0.4	0.8	0.9	0.5
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	4.6	16.4	0.6	0.8	8.0	0.4	0.4	3.8	0.7	1.6	2.7	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.3	35.0	10.7	40.4	22.3	14.4	27.2	36.9	30.3	25.8	29.7	28.4
LnGrp LOS	D	D	B	D	C	B	C	D	C	C	C	C
Approach Vol, veh/h	1982				1167				260			
Approach Delay, s/veh	35.5				22.7				34.9			
Approach LOS	D				C				C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	17.0	8.1	45.0	7.0	20.3	15.1	38.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	15.0	15.0	8.5	40.0	8.5	15.0	14.2	34.3				
Max Q Clear Time (g_c+1/4), s	15.8	9.9	3.8	39.8	2.9	8.0	11.1	23.2				
Green Ext Time (p_c), s	0.1	0.5	0.0	0.2	0.0	0.6	0.2	5.3				

Intersection Summary

HCM 6th Ctrl Delay 30.8
HCM 6th LOS C

HCM 6th Signalized Intersection Summary

208: Howe Rd & 146th St

Existing PM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	188	1567	69	37	1001	36	23	178	39	97	144	79
Future Volume (veh/h)	188	1567	69	37	1001	36	23	178	39	97	144	79
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	204	1703	75	40	1088	39	25	193	42	105	157	86
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	244	1752	781	91	1447	646	286	277	235	286	354	300
Arrive On Green	0.14	0.50	0.50	0.05	0.41	0.41	0.04	0.15	0.15	0.08	0.19	0.19
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	204	1703	75	40	1088	39	25	193	42	105	157	86
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	9.1	37.8	2.0	1.8	21.2	1.2	0.9	7.9	1.9	3.8	6.0	3.8
Cycle Q Clear(g_c), s	9.1	37.8	2.0	1.8	21.2	1.2	0.9	7.9	1.9	3.8	6.0	3.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	244	1752	781	91	1447	646	286	277	235	286	354	300
V/C Ratio(X)	0.84	0.97	0.10	0.44	0.75	0.06	0.09	0.70	0.18	0.37	0.44	0.29
Avail Cap(c_a), veh/h	312	1753	782	187	1503	670	407	346	293	333	354	300
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	33.8	19.7	10.7	37.0	20.2	14.3	27.1	32.5	29.9	25.0	28.8	27.9
Incr Delay (d2), s/veh	14.5	15.4	0.1	3.3	2.1	0.0	0.1	4.4	0.4	0.8	0.9	0.5
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	4.6	16.4	0.6	0.8	8.0	0.4	0.4	3.8	0.7	1.6	2.7	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.3	35.0	10.7	40.4	22.3	14.4	27.2	36.9	30.3	25.8	29.7	28.4
LnGrp LOS	D	D	B	D	C	B	C	D	C	C	C	C
Approach Vol, veh/h	1982		1167				260			348		
Approach Delay, s/veh	35.5		22.7				34.9			28.2		
Approach LOS	D		C				C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	17.0	8.1	45.0	7.0	20.3	15.1	38.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	15.0	15.0	8.5	40.0	8.5	15.0	14.2	34.3				
Max Q Clear Time (g_c+I), s	15.8	9.9	3.8	39.8	2.9	8.0	11.1	23.2				
Green Ext Time (p_c), s	0.1	0.5	0.0	0.2	0.0	0.6	0.2	5.3				

Intersection Summary

HCM 6th Ctrl Delay 30.8
HCM 6th LOS C

HCM 6th Signalized Intersection Summary 208: Howe Rd & 146th St

Future AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	283	3240	102	40	3370	36	46	194	40	143	171	134
Future Volume (veh/h)	283	3240	102	40	3370	36	46	194	40	143	171	134
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	308	3522	111	43	3663	39	50	211	43	155	186	146
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	212	2378	1125	69	2092	1022	150	204	234	148	233	387
Arrive On Green	0.12	0.67	0.67	0.04	0.59	0.59	0.04	0.11	0.11	0.06	0.13	0.13
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	308	3522	111	43	3663	39	50	211	43	155	186	146
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	18.0	101.2	3.2	3.6	89.0	1.3	3.7	16.5	3.6	8.5	14.6	11.6
Cycle Q Clear(g_c), s	18.0	101.2	3.2	3.6	89.0	1.3	3.7	16.5	3.6	8.5	14.6	11.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	2378	1125	69	2092	1022	150	204	234	148	233	387
V/C Ratio(X)	1.45	1.48	0.10	0.63	1.75	0.04	0.33	1.03	0.18	1.05	0.80	0.38
Avail Cap(c_a), veh/h	212	2378	1125	100	2092	1022	178	204	234	148	233	387
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	66.0	24.4	6.5	71.0	30.5	9.4	56.2	66.8	55.9	60.7	63.7	47.0
Incr Delay (d2), s/veh	227.9	218.9	0.0	9.0	340.0	0.0	1.3	72.1	0.4	86.8	17.3	0.6
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	21.4	108.8	1.0	1.8	133.2	0.4	1.7	11.9	1.4	5.1	8.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	293.9	243.3	6.6	80.0	370.5	9.4	57.5	138.8	56.2	147.5	81.0	47.6
LnGrp LOS	F	F	A	E	F	A	E	F	E	F	F	D
Approach Vol, veh/h	3941			3745			304			487		
Approach Delay, s/veh	240.6			363.4			113.8			92.2		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.5	21.5	9.8	106.2	10.1	23.9	22.0	94.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	16.5	16.5	8.5	98.5	8.5	16.5	18.0	89.0				
Max Q Clear Time (g_c+10), s	18.5	18.5	5.6	103.2	5.7	16.6	20.0	91.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	281.8											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary 208: Howe Rd & 146th St

Future PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	283	3240	102	40	3370	36	46	194	40	143	171	134
Future Volume (veh/h)	283	3240	102	40	3370	36	46	194	40	143	171	134
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	308	3522	111	43	3663	39	50	211	43	155	186	146
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	212	2378	1125	69	2092	1022	150	204	234	148	233	387
Arrive On Green	0.12	0.67	0.67	0.04	0.59	0.59	0.04	0.11	0.11	0.06	0.13	0.13
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	308	3522	111	43	3663	39	50	211	43	155	186	146
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	18.0	101.2	3.2	3.6	89.0	1.3	3.7	16.5	3.6	8.5	14.6	11.6
Cycle Q Clear(g_c), s	18.0	101.2	3.2	3.6	89.0	1.3	3.7	16.5	3.6	8.5	14.6	11.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	2378	1125	69	2092	1022	150	204	234	148	233	387
V/C Ratio(X)	1.45	1.48	0.10	0.63	1.75	0.04	0.33	1.03	0.18	1.05	0.80	0.38
Avail Cap(c_a), veh/h	212	2378	1125	100	2092	1022	178	204	234	148	233	387
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	66.0	24.4	6.5	71.0	30.5	9.4	56.2	66.8	55.9	60.7	63.7	47.0
Incr Delay (d2), s/veh	227.9	218.9	0.0	9.0	340.0	0.0	1.3	72.1	0.4	86.8	17.3	0.6
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	21.4	108.8	1.0	1.8	133.2	0.4	1.7	11.9	1.4	5.1	8.0	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	293.9	243.3	6.6	80.0	370.5	9.4	57.5	138.8	56.2	147.5	81.0	47.6
LnGrp LOS	F	F	A	E	F	A	E	F	E	F	F	D
Approach Vol, veh/h	3941			3745			304			487		
Approach Delay, s/veh	240.6			363.4			113.8			92.2		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.5	21.5	9.8	106.2	10.1	23.9	22.0	94.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	16.5	16.5	8.5	98.5	8.5	16.5	18.0	89.0				
Max Q Clear Time (g_c+10), s	18.5	18.5	5.6	103.2	5.7	16.6	20.0	91.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	281.8											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary

208: Howe Rd & 146th St

Future AM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	2415	20	38	2489	19	80	96	61	49	124	319
Future Volume (veh/h)	41	2415	20	38	2489	19	80	96	61	49	124	319
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	45	2625	22	41	2705	21	87	104	66	53	135	347
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	176	2653	929	86	2640	907	289	334	360	334	314	347
Arrive On Green	0.05	0.52	0.52	0.05	0.52	0.52	0.07	0.18	0.18	0.06	0.17	0.17
Sat Flow, veh/h	3428	5066	1572	1767	5066	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	45	2625	22	41	2705	21	87	104	66	53	135	347
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1767	1689	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	1.2	48.2	0.5	2.1	49.0	0.5	3.7	4.6	3.2	2.3	6.1	15.9
Cycle Q Clear(g_c), s	1.2	48.2	0.5	2.1	49.0	0.5	3.7	4.6	3.2	2.3	6.1	15.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	176	2653	929	86	2640	907	289	334	360	334	314	347
V/C Ratio(X)	0.26	0.99	0.02	0.47	1.02	0.02	0.30	0.31	0.18	0.16	0.43	1.00
Avail Cap(c_a), veh/h	314	2653	929	160	2640	907	330	334	360	395	314	347
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	42.9	22.1	8.0	43.5	22.5	8.5	29.1	33.5	29.2	29.2	35.0	36.6
Incr Delay (d2), s/veh	0.8	15.0	0.0	4.0	24.1	0.0	0.6	0.5	0.2	0.2	0.9	48.4
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	0.5	19.8	0.2	1.0	22.3	0.2	1.6	2.1	1.2	1.0	2.8	12.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	43.6	37.2	8.0	47.5	46.6	8.5	29.7	34.0	29.4	29.4	35.9	85.1
LnGrp LOS	D	D	A	D	F	A	C	C	C	C	D	F
Approach Vol, veh/h	2692		2767			257			535			
Approach Delay, s/veh	37.0		46.3			31.4			67.1			
Approach LOS	D		D			C			E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	21.9	8.6	54.2	10.3	20.9	8.8	54.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	8.5	15.9	8.5	49.1	8.5	15.9	8.6	49.0				
Max Q Clear Time (g_c+I1), s	14.3	6.6	4.1	50.2	5.7	17.9	3.2	51.0				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay, s/veh	43.5
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary

208: Howe Rd & 146th St

Future PM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	283	3240	102	40	3370	36	46	194	40	143	171	134
Future Volume (veh/h)	283	3240	102	40	3370	36	46	194	40	143	171	134
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	308	3522	111	43	3663	39	50	211	43	155	186	146
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	274	3349	1104	69	3141	1064	165	229	255	160	258	345
Arrive On Green	0.08	0.66	0.66	0.04	0.62	0.62	0.04	0.12	0.12	0.06	0.14	0.14
Sat Flow, veh/h	3428	5066	1572	1767	5066	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	308	3522	111	43	3663	39	50	211	43	155	186	146
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1767	1689	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	12.0	99.2	3.4	3.6	93.0	1.2	3.7	16.9	3.5	8.5	14.4	12.0
Cycle Q Clear(g_c), s	12.0	99.2	3.4	3.6	93.0	1.2	3.7	16.9	3.5	8.5	14.4	12.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	274	3349	1104	69	3141	1064	165	229	255	160	258	345
V/C Ratio(X)	1.12	1.05	0.10	0.63	1.17	0.04	0.30	0.92	0.17	0.97	0.72	0.42
Avail Cap(c_a), veh/h	274	3349	1104	100	3141	1064	193	229	255	160	258	345
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	69.0	25.4	7.2	71.0	28.5	8.0	54.4	65.0	54.1	60.0	61.8	50.4
Incr Delay (d2), s/veh	91.6	31.4	0.0	9.0	78.7	0.0	1.0	38.8	0.3	61.1	9.4	0.8
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	8.7	44.6	1.1	1.8	56.7	0.4	1.7	10.4	1.4	4.5	7.4	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	160.6	56.8	7.2	80.0	107.2	8.1	55.4	103.8	54.4	121.1	71.2	51.2
LnGrp LOS	F	F	A	E	F	A	E	F	D	F	E	D
Approach Vol, veh/h	3941		3745				304		487			
Approach Delay, s/veh	63.5		105.8				88.9		81.1			
Approach LOS	E		F				F		F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.5	23.5	9.8	104.2	10.1	25.9	16.0	98.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	18.5	18.5	8.5	96.5	8.5	18.5	12.0	93.0				
Max Q Clear Time (g_c+10), s	18.9	18.9	5.6	101.2	5.7	16.4	14.0	95.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay, s/veh	84.1
HCM 6th LOS	F

Intersection

Intersection Delay, s/veh54.4

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	94	440	23	9	273	20	22	150	11	30	163	62
Future Vol, veh/h	94	440	23	9	273	20	22	150	11	30	163	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	102	478	25	10	297	22	24	163	12	33	177	67
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	99.4	22.6	17.2	20.4
HCM LOS	F	C	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	17%	3%	12%
Vol Thru, %	82%	79%	90%	64%
Vol Right, %	6%	4%	7%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	183	557	302	255
LT Vol	22	94	9	30
Through Vol	150	440	273	163
RT Vol	11	23	20	62
Lane Flow Rate	199	605	328	277
Geometry Grp	1	1	1	1
Degree of Util (X)	0.428	1.116	0.641	0.566
Departure Headway (Hd)	8.183	6.638	7.371	7.754
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	444	545	492	468
Service Time	6.183	4.703	5.371	5.754
HCM Lane V/C Ratio	0.448	1.11	0.667	0.592
HCM Control Delay	17.2	99.4	22.6	20.4
HCM Lane LOS	C	F	C	C
HCM 95th-tile Q	2.1	19.4	4.5	3.4

Intersection

Intersection Delay, s/veh54.4

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	94	440	23	9	273	20	22	150	11	30	163	62
Future Vol, veh/h	94	440	23	9	273	20	22	150	11	30	163	62
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	102	478	25	10	297	22	24	163	12	33	177	67
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	99.4	22.6	17.2	20.4
HCM LOS	F	C	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	17%	3%	12%
Vol Thru, %	82%	79%	90%	64%
Vol Right, %	6%	4%	7%	24%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	183	557	302	255
LT Vol	22	94	9	30
Through Vol	150	440	273	163
RT Vol	11	23	20	62
Lane Flow Rate	199	605	328	277
Geometry Grp	1	1	1	1
Degree of Util (X)	0.428	1.116	0.641	0.566
Departure Headway (Hd)	8.183	6.638	7.371	7.754
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	444	545	492	468
Service Time	6.183	4.703	5.371	5.754
HCM Lane V/C Ratio	0.448	1.11	0.667	0.592
HCM Control Delay	17.2	99.4	22.6	20.4
HCM Lane LOS	C	F	C	C
HCM 95th-tile Q	2.1	19.4	4.5	3.4

Intersection

Intersection Delay, s/veh 136.6

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	120	473	23	38	347	20	22	164	33	30	182	106
Future Vol, veh/h	120	473	23	38	347	20	22	164	33	30	182	106
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	130	514	25	41	377	22	24	178	36	33	198	115
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	266.4	72.6	27.5	41.7
HCM LOS	F	F	D	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	19%	9%	9%
Vol Thru, %	75%	77%	86%	57%
Vol Right, %	15%	4%	5%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	219	616	405	318
LT Vol	22	120	38	30
Through Vol	164	473	347	182
RT Vol	33	23	20	106
Lane Flow Rate	238	670	440	346
Geometry Grp	1	1	1	1
Degree of Util (X)	0.593	1.518	0.984	0.8
Departure Headway (Hd)	10.434	8.16	9.221	9.625
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	348	449	396	380
Service Time	8.434	6.237	7.221	7.625
HCM Lane V/C Ratio	0.684	1.492	1.111	0.911
HCM Control Delay	27.5	266.4	72.6	41.7
HCM Lane LOS	D	F	F	E
HCM 95th-tile Q	3.6	35.3	11.6	6.9

Intersection

Intersection Delay, s/veh 136.6

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	120	473	23	38	347	20	22	164	33	30	182	106
Future Vol, veh/h	120	473	23	38	347	20	22	164	33	30	182	106
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	130	514	25	41	377	22	24	178	36	33	198	115
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	266.4	72.6	27.5	41.7
HCM LOS	F	F	D	E

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	10%	19%	9%	9%
Vol Thru, %	75%	77%	86%	57%
Vol Right, %	15%	4%	5%	33%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	219	616	405	318
LT Vol	22	120	38	30
Through Vol	164	473	347	182
RT Vol	33	23	20	106
Lane Flow Rate	238	670	440	346
Geometry Grp	1	1	1	1
Degree of Util (X)	0.593	1.518	0.984	0.8
Departure Headway (Hd)	10.434	8.16	9.221	9.625
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	348	449	396	380
Service Time	8.434	6.237	7.221	7.625
HCM Lane V/C Ratio	0.684	1.492	1.111	0.911
HCM Control Delay	27.5	266.4	72.6	41.7
HCM Lane LOS	D	F	F	E
HCM 95th-tile Q	3.6	35.3	11.6	6.9

Intersection				
Intersection Delay, s/veh	6.5			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	255	397	202	266
Demand Flow Rate, veh/h	263	409	208	274
Vehicles Circulating, veh/h	201	228	275	383
Vehicles Exiting, veh/h	456	255	189	254
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.5	7.3	5.4	7.1
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	263	409	208	274
Cap Entry Lane, veh/h	1124	1094	1042	934
Entry HV Adj Factor	0.970	0.971	0.972	0.972
Flow Entry, veh/h	255	397	202	266
Cap Entry, veh/h	1090	1062	1014	908
V/C Ratio	0.234	0.374	0.200	0.293
Control Delay, s/veh	5.5	7.3	5.4	7.1
LOS	A	A	A	A
95th %tile Queue, veh	1	2	1	1

Intersection				
Intersection Delay, s/veh 11.2				
Intersection LOS B				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	669	440	238	346
Demand Flow Rate, veh/h	689	453	245	356
Vehicles Circulating, veh/h	280	342	697	455
Vehicles Exiting, veh/h	531	600	272	340
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	13.7	9.4	10.3	9.3
Approach LOS	B	A	B	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	689	453	245	356
Cap Entry Lane, veh/h	1037	974	678	868
Entry HV Adj Factor	0.970	0.971	0.970	0.972
Flow Entry, veh/h	669	440	238	346
Cap Entry, veh/h	1006	945	658	843
V/C Ratio	0.664	0.465	0.361	0.410
Control Delay, s/veh	13.7	9.4	10.3	9.3
LOS	B	A	B	A
95th %tile Queue, veh	5	3	2	2

Intersection

Intersection Delay, s/veh34.3

Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Traffic Vol, veh/h	85	265	54	11	135	40	64	225	19	54	270	21
Future Vol, veh/h	85	265	54	11	135	40	64	225	19	54	270	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	92	288	59	12	147	43	70	245	21	59	293	23
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	47.4	17.9	28	33.4
HCM LOS	E	C	D	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	21%	6%	16%
Vol Thru, %	73%	66%	73%	78%
Vol Right, %	6%	13%	22%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	308	404	186	345
LT Vol	64	85	11	54
Through Vol	225	265	135	270
RT Vol	19	54	40	21
Lane Flow Rate	335	439	202	375
Geometry Grp	1	1	1	1
Degree of Util (X)	0.715	0.902	0.456	0.787
Departure Headway (Hd)	7.689	7.393	8.127	7.551
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	469	492	441	476
Service Time	5.767	5.393	6.215	5.626
HCM Lane V/C Ratio	0.714	0.892	0.458	0.788
HCM Control Delay	28	47.4	17.9	33.4
HCM Lane LOS	D	E	C	D
HCM 95th-tile Q	5.6	10.2	2.3	7.1

Intersection

Intersection Delay, s/veh34.3

Intersection LOS D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	85	265	54	11	135	40	64	225	19	54	270	21
Future Vol, veh/h	85	265	54	11	135	40	64	225	19	54	270	21
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	92	288	59	12	147	43	70	245	21	59	293	23
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	47.4	17.9	28	33.4
HCM LOS	E	C	D	D

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	21%	21%	6%	16%
Vol Thru, %	73%	66%	73%	78%
Vol Right, %	6%	13%	22%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	308	404	186	345
LT Vol	64	85	11	54
Through Vol	225	265	135	270
RT Vol	19	54	40	21
Lane Flow Rate	335	439	202	375
Geometry Grp	1	1	1	1
Degree of Util (X)	0.715	0.902	0.456	0.787
Departure Headway (Hd)	7.689	7.393	8.127	7.551
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	469	492	441	476
Service Time	5.767	5.393	6.215	5.626
HCM Lane V/C Ratio	0.714	0.892	0.458	0.788
HCM Control Delay	28	47.4	17.9	33.4
HCM Lane LOS	D	E	C	D
HCM 95th-tile Q	5.6	10.2	2.3	7.1

Intersection

Intersection Delay, s/veh 226

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	98	305	54	56	225	170	64	259	45	243	307	28
Future Vol, veh/h	98	305	54	56	225	170	64	259	45	243	307	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	107	332	59	61	245	185	70	282	49	264	334	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	200.7	184.7	115.2	348.8
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	21%	12%	42%
Vol Thru, %	70%	67%	50%	53%
Vol Right, %	12%	12%	38%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	368	457	451	578
LT Vol	64	98	56	243
Through Vol	259	305	225	307
RT Vol	45	54	170	28
Lane Flow Rate	400	497	490	628
Geometry Grp	1	1	1	1
Degree of Util (X)	1.068	1.319	1.278	1.683
Departure Headway (Hd)	13.859	12.869	12.839	11.758
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	264	288	289	314
Service Time	11.859	10.869	10.839	9.758
HCM Lane V/C Ratio	1.515	1.726	1.696	2
HCM Control Delay	115.2	200.7	184.7	348.8
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	11.4	18.6	17.4	32.2

Intersection

Intersection Delay, s/veh 226

Intersection LOS F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	98	305	54	56	225	170	64	259	45	243	307	28
Future Vol, veh/h	98	305	54	56	225	170	64	259	45	243	307	28
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	107	332	59	61	245	185	70	282	49	264	334	30
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	200.7	184.7	115.2	348.8
HCM LOS	F	F	F	F

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	17%	21%	12%	42%
Vol Thru, %	70%	67%	50%	53%
Vol Right, %	12%	12%	38%	5%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	368	457	451	578
LT Vol	64	98	56	243
Through Vol	259	305	225	307
RT Vol	45	54	170	28
Lane Flow Rate	400	497	490	628
Geometry Grp	1	1	1	1
Degree of Util (X)	1.068	1.319	1.278	1.683
Departure Headway (Hd)	13.859	12.869	12.839	11.758
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	264	288	289	314
Service Time	11.859	10.869	10.839	9.758
HCM Lane V/C Ratio	1.515	1.726	1.696	2
HCM Control Delay	115.2	200.7	184.7	348.8
HCM Lane LOS	F	F	F	F
HCM 95th-tile Q	11.4	18.6	17.4	32.2

Intersection				
Intersection Delay, s/veh 7.6				
Intersection LOS A				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	234	501	209	357
Demand Flow Rate, veh/h	242	517	216	367
Vehicles Circulating, veh/h	359	249	298	286
Vehicles Exiting, veh/h	294	265	303	480
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.5	9.1	5.7	7.3
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	242	517	216	367
Cap Entry Lane, veh/h	957	1070	1018	1031
Entry HV Adj Factor	0.968	0.970	0.968	0.972
Flow Entry, veh/h	234	501	209	357
Cap Entry, veh/h	927	1038	986	1002
V/C Ratio	0.253	0.483	0.212	0.356
Control Delay, s/veh	6.5	9.1	5.7	7.3
LOS	A	A	A	A
95th %tile Queue, veh	1	3	1	2

Intersection				
Intersection Delay, s/veh 17.4				
Intersection LOS C				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	498	491	401	628
Demand Flow Rate, veh/h	513	506	412	647
Vehicles Circulating, veh/h	679	472	724	387
Vehicles Exiting, veh/h	355	664	468	591
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	23.0	13.5	17.6	16.1
Approach LOS	C	B	C	C
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	513	506	412	647
Cap Entry Lane, veh/h	690	853	659	930
Entry HV Adj Factor	0.971	0.970	0.972	0.971
Flow Entry, veh/h	498	491	401	628
Cap Entry, veh/h	670	827	641	903
V/C Ratio	0.743	0.593	0.625	0.696
Control Delay, s/veh	23.0	13.5	17.6	16.1
LOS	C	B	C	C
95th %tile Queue, veh	7	4	4	6

Intersection						
Int Delay, s/veh	6.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	623	91	34	634	90	72
Future Vol, veh/h	623	91	34	634	90	72
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	80
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	677	99	37	689	98	78

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	776
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.13
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.227
Pot Cap-1 Maneuver	-	-	836
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	836
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	59.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	126	422	-	-	836	-
HCM Lane V/C Ratio	0.776	0.185	-	-	0.044	-
HCM Control Delay (s)	95.1	15.5	-	-	9.5	0
HCM Lane LOS	F	C	-	-	A	A
HCM 95th %tile Q(veh)	4.5	0.7	-	-	0.1	-

Intersection						
Int Delay, s/veh	6.5					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	623	91	34	634	90	72
Future Vol, veh/h	623	91	34	634	90	72
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	80
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	677	99	37	689	98	78

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	776
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.13
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.227
Pot Cap-1 Maneuver	-	-	836
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	836
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	59.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	126	422	-	-	836	-
HCM Lane V/C Ratio	0.776	0.185	-	-	0.044	-
HCM Control Delay (s)	95.1	15.5	-	-	9.5	0
HCM Lane LOS	F	C	-	-	A	A
HCM 95th %tile Q(veh)	4.5	0.7	-	-	0.1	-

Intersection						
Int Delay, s/veh	385.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1102	147	92	1737	150	98
Future Vol, veh/h	1102	147	92	1737	150	98
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	80
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1198	160	100	1888	163	107
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	1358	0	3366	1278
Stage 1	-	-	-	-	1278	-
Stage 2	-	-	-	-	2088	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	503	-	~ 9	202
Stage 1	-	-	-	-	260	-
Stage 2	-	-	-	-	~ 103	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	503	-	~ 9	202
Mov Cap-2 Maneuver	-	-	-	-	~ 9	-
Stage 1	-	-	-	-	260	-
Stage 2	-	-	-	-	~ 103	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0.7		\$ 5163.1		
HCM LOS	F					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	9	202	-	-	503	-
HCM Lane V/C Ratio	18.116	0.527	-	-	0.199	-
HCM Control Delay (s)	\$ 8509.5	41.1	-	-	13.9	0
HCM Lane LOS	F	E	-	-	B	A
HCM 95th %tile Q(veh)	22	2.7	-	-	0.7	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	385.4					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1102	147	92	1737	150	98
Future Vol, veh/h	1102	147	92	1737	150	98
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	80
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	1198	160	100	1888	163	107
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	1358	0	3366	1278
Stage 1	-	-	-	-	1278	-
Stage 2	-	-	-	-	2088	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	503	-	~ 9	202
Stage 1	-	-	-	-	260	-
Stage 2	-	-	-	-	~ 103	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	503	-	~ 9	202
Mov Cap-2 Maneuver	-	-	-	-	~ 9	-
Stage 1	-	-	-	-	260	-
Stage 2	-	-	-	-	~ 103	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0.7		\$ 5163.1		
HCM LOS	F					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	9	202	-	-	503	-
HCM Lane V/C Ratio	18.116	0.527	-	-	0.199	-
HCM Control Delay (s)	\$ 8509.5	41.1	-	-	13.9	0
HCM Lane LOS	F	E	-	-	B	A
HCM 95th %tile Q(veh)	22	2.7	-	-	0.7	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection					
Intersection Delay, s/veh 12.7					
Intersection LOS B					
Approach	EB		WB		NB
Entry Lanes	2		2		1
Conflicting Circle Lanes	2		2		2
Adj Approach Flow, veh/h	1866		1011		69
Demand Flow Rate, veh/h	1921		1041		71
Vehicles Circulating, veh/h	118		57		1493
Vehicles Exiting, veh/h	980		1507		546
Ped Vol Crossing Leg, #/h	0		0		0
Ped Cap Adj	1.000		1.000		1.000
Approach Delay, s/veh	16.0		6.6		12.2
Approach LOS	C		A		B
Lane	Left	Right	Left	Right	Left
Designated Moves	LT	TR	LT	TR	LR
Assumed Moves	LT	TR	LT	TR	LR
RT Channelized					
Lane Util	0.470	0.530	0.470	0.530	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.328
Entry Flow, veh/h	903	1018	489	552	71
Cap Entry Lane, veh/h	1211	1285	1281	1353	399
Entry HV Adj Factor	0.971	0.971	0.972	0.971	0.972
Flow Entry, veh/h	877	989	475	536	69
Cap Entry, veh/h	1176	1248	1245	1313	388
V/C Ratio	0.746	0.792	0.382	0.408	0.178
Control Delay, s/veh	15.2	16.8	6.6	6.7	12.2
LOS	C	C	A	A	B
95th %tile Queue, veh	7	9	2	2	1

Intersection					
Intersection Delay, s/veh 17.4					
Intersection LOS C					
Approach	EB		WB		NB
Entry Lanes	2		2		1
Conflicting Circle Lanes	2		2		2
Adj Approach Flow, veh/h	1358		1988		270
Demand Flow Rate, veh/h	1399		2048		278
Vehicles Circulating, veh/h	103		168		1234
Vehicles Exiting, veh/h	2113		1344		268
Ped Vol Crossing Leg, #/h	0		0		0
Ped Cap Adj	1.000		1.000		1.000
Approach Delay, s/veh	9.3		22.7		19.3
Approach LOS	A		C		C
Lane	Left	Right	Left	Right	Left
Designated Moves	LT	TR	LT	TR	LR
Assumed Moves	LT	TR	LT	TR	LR
RT Channelized					
Lane Util	0.470	0.530	0.470	0.530	1.000
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.328
Entry Flow, veh/h	658	741	963	1085	278
Cap Entry Lane, veh/h	1228	1301	1157	1231	497
Entry HV Adj Factor	0.970	0.971	0.970	0.971	0.971
Flow Entry, veh/h	638	720	935	1054	270
Cap Entry, veh/h	1191	1264	1122	1196	483
V/C Ratio	0.536	0.570	0.833	0.881	0.559
Control Delay, s/veh	9.1	9.4	20.9	24.4	19.3
LOS	A	A	C	C	C
95th %tile Queue, veh	3	4	10	13	3

HCM 6th Signalized Intersection Summary
212: Marilyn Rd & 146th St/Campus Pkwy

Existing AM Peak

12/11/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	1202	55	94	898	19	46	82	98	18	94	45
Future Volume (veh/h)	95	1202	55	94	898	19	46	82	98	18	94	45
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	103	1307	60	102	976	21	50	89	107	20	102	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	159	1384	617	158	1383	617	386	395	334	370	337	285
Arrive On Green	0.09	0.39	0.39	0.09	0.39	0.39	0.06	0.21	0.21	0.03	0.18	0.18
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	103	1307	60	102	976	21	50	89	107	20	102	49
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	3.7	23.6	1.6	3.7	15.4	0.5	1.4	2.6	3.8	0.6	3.1	1.7
Cycle Q Clear(g_c), s	3.7	23.6	1.6	3.7	15.4	0.5	1.4	2.6	3.8	0.6	3.1	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	159	1384	617	158	1383	617	386	395	334	370	337	285
V/C Ratio(X)	0.65	0.94	0.10	0.64	0.71	0.03	0.13	0.23	0.32	0.05	0.30	0.17
Avail Cap(c_a), veh/h	187	1388	619	187	1388	619	461	395	334	500	337	286
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	29.0	19.4	12.7	29.0	16.9	12.4	19.4	21.5	22.0	20.6	23.4	22.8
Incr Delay (d2), s/veh	5.9	13.2	0.1	5.7	1.6	0.0	0.2	0.3	0.5	0.1	0.5	0.3
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	1.7	10.4	0.5	1.7	5.4	0.2	0.6	1.1	1.3	0.2	1.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	32.5	12.7	34.7	18.5	12.4	19.5	21.8	22.5	20.7	23.9	23.1
LnGrp LOS	C	C	B	C	B	B	B	C	C	C	C	C
Approach Vol, veh/h	1470		1099				246		171			
Approach Delay, s/veh	31.9		19.9				21.6		23.3			
Approach LOS	C		B				C		C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	19.0	9.9	30.9	8.2	17.0	9.9	30.9				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	12.0	7.0	26.0	7.0	12.0	7.0	26.0				
Max Q Clear Time (g_c+I1), s	2.6	5.8	5.7	25.6	3.4	5.1	5.7	17.4				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.3	0.0	0.3	0.0	4.0				
Intersection Summary												
HCM 6th Ctrl Delay			26.1									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
212: Marilyn Rd & 146th St/Campus Pkwy

Existing PM Peak
12/11/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	1202	55	94	898	19	46	82	98	18	94	45
Future Volume (veh/h)	95	1202	55	94	898	19	46	82	98	18	94	45
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	103	1307	60	102	976	21	50	89	107	20	102	49
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	159	1384	617	158	1383	617	386	395	334	370	337	285
Arrive On Green	0.09	0.39	0.39	0.09	0.39	0.39	0.06	0.21	0.21	0.03	0.18	0.18
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	103	1307	60	102	976	21	50	89	107	20	102	49
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	3.7	23.6	1.6	3.7	15.4	0.5	1.4	2.6	3.8	0.6	3.1	1.7
Cycle Q Clear(g_c), s	3.7	23.6	1.6	3.7	15.4	0.5	1.4	2.6	3.8	0.6	3.1	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	159	1384	617	158	1383	617	386	395	334	370	337	285
V/C Ratio(X)	0.65	0.94	0.10	0.64	0.71	0.03	0.13	0.23	0.32	0.05	0.30	0.17
Avail Cap(c_a), veh/h	187	1388	619	187	1388	619	461	395	334	500	337	286
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	29.0	19.4	12.7	29.0	16.9	12.4	19.4	21.5	22.0	20.6	23.4	22.8
Incr Delay (d2), s/veh	5.9	13.2	0.1	5.7	1.6	0.0	0.2	0.3	0.5	0.1	0.5	0.3
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	1.7	10.4	0.5	1.7	5.4	0.2	0.6	1.1	1.3	0.2	1.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.9	32.5	12.7	34.7	18.5	12.4	19.5	21.8	22.5	20.7	23.9	23.1
LnGrp LOS	C	C	B	C	B	B	B	C	C	C	C	C
Approach Vol, veh/h		1470			1099			246			171	
Approach Delay, s/veh		31.9			19.9			21.6			23.3	
Approach LOS		C			B			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	19.0	9.9	30.9	8.2	17.0	9.9	30.9				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	12.0	7.0	26.0	7.0	12.0	7.0	26.0				
Max Q Clear Time (g_c+I1), s	2.6	5.8	5.7	25.6	3.4	5.1	5.7	17.4				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.3	0.0	0.3	0.0	4.0				
Intersection Summary												
HCM 6th Ctrl Delay			26.1									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
212: Marilyn Rd & 146th St/Campus Pkwy

Future AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	3071	80	166	2802	120	60	157	317	119	182	72
Future Volume (veh/h)	124	3071	80	166	2802	120	60	157	317	119	182	72
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	135	3338	87	180	3046	130	65	171	345	129	198	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	106	2209	985	130	2256	1006	161	247	210	170	253	215
Arrive On Green	0.06	0.63	0.63	0.07	0.64	0.64	0.04	0.13	0.13	0.05	0.14	0.14
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	135	3338	87	180	3046	130	65	171	345	129	198	78
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	9.0	94.0	3.3	11.0	96.0	4.9	4.7	13.2	20.0	7.0	15.5	6.8
Cycle Q Clear(g_c), s	9.0	94.0	3.3	11.0	96.0	4.9	4.7	13.2	20.0	7.0	15.5	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	2209	985	130	2256	1006	161	247	210	170	253	215
V/C Ratio(X)	1.27	1.51	0.09	1.39	1.35	0.13	0.40	0.69	1.65	0.76	0.78	0.36
Avail Cap(c_a), veh/h	106	2209	985	130	2256	1006	167	247	210	170	253	215
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	70.5	28.0	11.1	69.5	27.0	10.6	53.6	62.1	65.0	58.9	62.6	58.8
Incr Delay (d2), s/veh	177.7	232.3	0.0	215.3	160.5	0.1	1.6	7.9	310.9	17.6	14.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	106.8	1.1	12.6	86.1	1.6	2.2	6.8	26.0	2.3	8.3	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	248.2	260.3	11.1	284.8	187.5	10.7	55.2	70.0	375.9	76.6	77.2	59.9
LnGrp LOS	F	F	B	F	F	B	E	E	F	E	E	E
Approach Vol, veh/h	3560		3356				581		405			
Approach Delay, s/veh	253.7		185.9				250.0		73.7			
Approach LOS	F		F				F		E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	25.0	15.0	99.0	10.5	25.5	13.0	101.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	20.0	11.0	94.0	7.0	20.0	9.0	96.0				
Max Q Clear Time (g_c+l1), s	9.0	22.0	13.0	96.0	6.7	17.5	11.0	98.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			215.4									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary
212: Marilyn Rd & 146th St/Campus Pkwy

Future PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	3071	80	166	2802	120	60	157	317	119	182	72
Future Volume (veh/h)	124	3071	80	166	2802	120	60	157	317	119	182	72
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	135	3338	87	180	3046	130	65	171	345	129	198	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	106	2209	985	130	2256	1006	161	247	210	170	253	215
Arrive On Green	0.06	0.63	0.63	0.07	0.64	0.64	0.04	0.13	0.13	0.05	0.14	0.14
Sat Flow, veh/h	1767	3526	1572	1767	3526	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	135	3338	87	180	3046	130	65	171	345	129	198	78
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1763	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	9.0	94.0	3.3	11.0	96.0	4.9	4.7	13.2	20.0	7.0	15.5	6.8
Cycle Q Clear(g_c), s	9.0	94.0	3.3	11.0	96.0	4.9	4.7	13.2	20.0	7.0	15.5	6.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	106	2209	985	130	2256	1006	161	247	210	170	253	215
V/C Ratio(X)	1.27	1.51	0.09	1.39	1.35	0.13	0.40	0.69	1.65	0.76	0.78	0.36
Avail Cap(c_a), veh/h	106	2209	985	130	2256	1006	167	247	210	170	253	215
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	70.5	28.0	11.1	69.5	27.0	10.6	53.6	62.1	65.0	58.9	62.6	58.8
Incr Delay (d2), s/veh	177.7	232.3	0.0	215.3	160.5	0.1	1.6	7.9	310.9	17.6	14.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.2	106.8	1.1	12.6	86.1	1.6	2.2	6.8	26.0	2.3	8.3	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	248.2	260.3	11.1	284.8	187.5	10.7	55.2	70.0	375.9	76.6	77.2	59.9
LnGrp LOS	F	F	B	F	F	B	E	E	F	E	E	E
Approach Vol, veh/h	3560		3356				581		405			
Approach Delay, s/veh	253.7		185.9				250.0		73.7			
Approach LOS	F		F				F		E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	25.0	15.0	99.0	10.5	25.5	13.0	101.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	20.0	11.0	94.0	7.0	20.0	9.0	96.0				
Max Q Clear Time (g_c+I1), s	9.0	22.0	13.0	96.0	6.7	17.5	11.0	98.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			215.4									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary

212: Marilyn Rd & 146th St/Campus Pkwy

Future AM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	2007	17	172	2505	13	92	34	185	259	180	112
Future Volume (veh/h)	24	2007	17	172	2505	13	92	34	185	259	180	112
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	26	2182	18	187	2723	14	100	37	201	282	196	122
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	66	2402	858	198	2780	986	249	249	387	351	261	280
Arrive On Green	0.04	0.47	0.47	0.11	0.55	0.55	0.07	0.13	0.13	0.08	0.14	0.14
Sat Flow, veh/h	1767	5066	1572	1767	5066	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	26	2182	18	187	2723	14	100	37	201	282	196	122
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1767	1689	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	1.3	35.6	0.5	9.4	46.9	0.3	4.3	1.6	9.9	7.0	9.1	6.2
Cycle Q Clear(g_c), s	1.3	35.6	0.5	9.4	46.9	0.3	4.3	1.6	9.9	7.0	9.1	6.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	66	2402	858	198	2780	986	249	249	387	351	261	280
V/C Ratio(X)	0.39	0.91	0.02	0.95	0.98	0.01	0.40	0.15	0.52	0.80	0.75	0.44
Avail Cap(c_a), veh/h	138	2437	869	198	2780	986	260	249	387	351	261	280
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	42.0	21.7	9.3	39.4	19.7	6.3	30.3	34.2	29.1	34.6	36.9	32.7
Incr Delay (d2), s/veh	3.8	5.5	0.0	48.6	12.6	0.0	1.0	0.3	1.2	12.6	11.4	1.1
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	0.6	13.3	0.1	6.5	18.3	0.1	1.8	0.7	3.6	3.7	4.8	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	45.8	27.2	9.3	88.0	32.3	6.3	31.3	34.4	30.3	47.3	48.3	33.8
LnGrp LOS	D	C	A	F	C	A	C	C	C	D	D	C
Approach Vol, veh/h	2226		2924			338			600			
Approach Delay, s/veh	27.3		35.8			31.1			44.9			
Approach LOS	C		D			C			D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	17.0	14.0	47.4	10.4	17.6	7.3	54.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	12.0	12.0	10.0	43.0	7.0	12.0	7.0	46.0				
Max Q Clear Time (g_c+I19.0	11.9	11.9	11.4	37.6	6.3	11.1	3.3	48.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	4.8	0.0	0.1	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay, s/veh	33.3
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary 212: Marilyn Rd & 146th St/Campus Pkwy

Future PM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	124	3071	80	166	2802	120	60	157	317	119	182	72
Future Volume (veh/h)	124	3071	80	166	2802	120	60	157	317	119	182	72
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	135	3338	87	180	3046	130	65	171	345	129	198	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	141	3208	1064	165	3276	1090	129	198	314	145	204	298
Arrive On Green	0.08	0.63	0.63	0.09	0.65	0.65	0.04	0.11	0.11	0.05	0.11	0.11
Sat Flow, veh/h	1767	5066	1572	1767	5066	1572	1767	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	135	3338	87	180	3046	130	65	171	345	129	198	78
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1767	1689	1572	1767	1856	1572	1767	1856	1572
Q Serve(g_s), s	11.4	95.0	2.8	14.0	79.9	4.1	4.9	13.6	16.0	7.0	16.0	6.3
Cycle Q Clear(g_c), s	11.4	95.0	2.8	14.0	79.9	4.1	4.9	13.6	16.0	7.0	16.0	6.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	141	3208	1064	165	3276	1090	129	198	314	145	204	298
V/C Ratio(X)	0.95	1.04	0.08	1.09	0.93	0.12	0.50	0.86	1.10	0.89	0.97	0.26
Avail Cap(c_a), veh/h	141	3208	1064	165	3276	1090	134	198	314	145	204	298
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	68.7	27.5	8.3	68.0	23.5	7.7	57.1	65.9	60.0	62.4	66.5	51.8
Incr Delay (d2), s/veh	61.9	27.7	0.0	96.6	5.5	0.0	3.0	30.4	79.3	44.7	54.8	0.5
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	7.5	42.4	0.9	10.6	30.1	1.3	2.3	8.1	18.6	3.3	10.6	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	130.6	55.2	8.3	164.6	29.0	7.7	60.1	96.3	139.3	107.2	121.4	52.3
LnGrp LOS	F	F	A	F	C	A	E	F	F	F	F	D
Approach Vol, veh/h	3560		3356			581			405			
Approach Delay, s/veh	56.9		35.5			117.8			103.5			
Approach LOS	E		D			F			F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	21.0	18.0	100.0	10.5	21.5	16.0	102.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	16.0	14.0	95.0	7.0	16.0	12.0	97.0					
Max Q Clear Time (g_c+I19, s)	18.0	16.0	97.0	6.9	18.0	13.4	81.9					
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.3				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			54.7									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary 213: Boden Rd & Greenfield Ave/146th St

Existing AM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	351	345	34	296	211	478	583	43	160	446	17
Future Volume (veh/h)	13	351	345	34	296	211	478	583	43	160	446	17
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	1856	1856	1930	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	14	382	375	37	322	229	520	634	47	174	485	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	250	463	808	236	514	601	610	1197	614	423	625	23
Arrive On Green	0.02	0.25	0.25	0.05	0.28	0.28	0.26	0.34	0.34	0.11	0.18	0.18
Sat Flow, veh/h	1767	1856	1572	1838	1856	1572	1767	3526	1572	1767	3467	128
Grp Volume(v), veh/h	14	382	375	37	322	229	520	634	47	174	246	257
Grp Sat Flow(s),veh/h/ln	1767	1856	1572	1838	1856	1572	1767	1763	1572	1767	1763	1832
Q Serve(g_s), s	0.4	13.8	10.8	1.0	10.7	7.4	15.5	10.2	1.3	5.5	9.4	9.4
Cycle Q Clear(g_c), s	0.4	13.8	10.8	1.0	10.7	7.4	15.5	10.2	1.3	5.5	9.4	9.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	250	463	808	236	514	601	610	1197	614	423	318	330
V/C Ratio(X)	0.06	0.82	0.46	0.16	0.63	0.38	0.85	0.53	0.08	0.41	0.78	0.78
Avail Cap(c_a), veh/h	383	577	905	324	577	655	793	1545	770	537	424	440
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(l)	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	19.4	25.1	11.0	19.0	22.4	15.8	15.3	18.8	13.5	20.0	27.6	27.6
Incr Delay (d2), s/veh	0.1	7.8	0.4	0.3	1.8	0.4	7.1	0.4	0.1	0.6	6.3	6.2
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	0.2	6.4	3.0	0.4	4.4	2.4	6.2	3.7	0.4	2.1	4.1	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.5	32.8	11.4	19.4	24.1	16.2	22.4	19.2	13.6	20.7	33.9	33.8
LnGrp LOS	B	C	B	B	C	B	C	B	B	C	C	C
Approach Vol, veh/h	771			588			1201			677		
Approach Delay, s/veh	22.2			20.7			20.3			30.5		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	29.0	7.6	22.7	22.7	17.7	5.7	24.6				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	12.0	31.0	7.0	22.0	26.0	17.0	7.0	22.0				
Max Q Clear Time (g_c+I1), s	12.2	12.2	3.0	15.8	17.5	11.4	2.4	12.7				
Green Ext Time (p_c), s	0.2	3.9	0.0	1.9	1.2	1.3	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
213: Boden Rd & Greenfield Ave/146th St

Existing PM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	13	351	345	34	296	211	478	583	43	160	446	17
Future Volume (veh/h)	13	351	345	34	296	211	478	583	43	160	446	17
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	1856	1856	1930	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	14	382	375	37	322	229	520	634	47	174	485	18
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	250	463	808	236	514	601	610	1197	614	423	625	23
Arrive On Green	0.02	0.25	0.25	0.05	0.28	0.28	0.26	0.34	0.34	0.11	0.18	0.18
Sat Flow, veh/h	1767	1856	1572	1838	1856	1572	1767	3526	1572	1767	3467	128
Grp Volume(v), veh/h	14	382	375	37	322	229	520	634	47	174	246	257
Grp Sat Flow(s),veh/h/ln	1767	1856	1572	1838	1856	1572	1767	1763	1572	1767	1763	1832
Q Serve(g_s), s	0.4	13.8	10.8	1.0	10.7	7.4	15.5	10.2	1.3	5.5	9.4	9.4
Cycle Q Clear(g_c), s	0.4	13.8	10.8	1.0	10.7	7.4	15.5	10.2	1.3	5.5	9.4	9.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	250	463	808	236	514	601	610	1197	614	423	318	330
V/C Ratio(X)	0.06	0.82	0.46	0.16	0.63	0.38	0.85	0.53	0.08	0.41	0.78	0.78
Avail Cap(c_a), veh/h	383	577	905	324	577	655	793	1545	770	537	424	440
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(l)	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	19.4	25.1	11.0	19.0	22.4	15.8	15.3	18.8	13.5	20.0	27.6	27.6
Incr Delay (d2), s/veh	0.1	7.8	0.4	0.3	1.8	0.4	7.1	0.4	0.1	0.6	6.3	6.2
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	0.2	6.4	3.0	0.4	4.4	2.4	6.2	3.7	0.4	2.1	4.1	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.5	32.8	11.4	19.4	24.1	16.2	22.4	19.2	13.6	20.7	33.9	33.8
LnGrp LOS	B	C	B	B	C	B	C	B	B	C	C	C
Approach Vol, veh/h	771			588			1201			677		
Approach Delay, s/veh	22.2			20.7			20.3			30.5		
Approach LOS	C			C			C			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.4	29.0	7.6	22.7	22.7	17.7	5.7	24.6				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	12.0	31.0	7.0	22.0	26.0	17.0	7.0	22.0				
Max Q Clear Time (g_c+I1), s	12.2	12.2	3.0	15.8	17.5	11.4	2.4	12.7				
Green Ext Time (p_c), s	0.2	3.9	0.0	1.9	1.2	1.3	0.0	1.7				

Intersection Summary

HCM 6th Ctrl Delay	23.0
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary 213: Boden Rd & Greenfield Ave/146th St

Future AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	578	823	564	1245	211	1064	1777	377	160	1294	25
Future Volume (veh/h)	21	578	823	564	1245	211	1064	1777	377	160	1294	25
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	1856	1856	1930	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	23	628	895	613	1353	229	1157	1932	410	174	1407	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	99	482	860	269	652	626	507	1598	902	130	755	14
Arrive On Green	0.03	0.26	0.26	0.12	0.35	0.35	0.29	0.45	0.45	0.05	0.21	0.21
Sat Flow, veh/h	1767	1856	1572	1838	1856	1572	1767	3526	1572	1767	3538	68
Grp Volume(v), veh/h	23	628	895	613	1353	229	1157	1932	410	174	700	734
Grp Sat Flow(s),veh/h/ln	1767	1856	1572	1838	1856	1572	1767	1763	1572	1767	1763	1843
Q Serve(g_s), s	1.4	39.0	39.0	18.0	52.7	15.4	43.0	68.0	22.6	7.0	32.0	32.0
Cycle Q Clear(g_c), s	1.4	39.0	39.0	18.0	52.7	15.4	43.0	68.0	22.6	7.0	32.0	32.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	99	482	860	269	652	626	507	1598	902	130	376	393
V/C Ratio(X)	0.23	1.30	1.04	2.28	2.08	0.37	2.28	1.21	0.45	1.33	1.86	1.87
Avail Cap(c_a), veh/h	130	482	860	269	652	626	507	1598	902	130	376	393
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(l)	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	43.5	55.5	34.0	48.1	48.7	31.8	53.5	41.0	18.5	52.6	59.0	59.0
Incr Delay (d2), s/veh	1.2	150.3	41.9	588.9	489.5	0.4	584.0	100.1	0.4	193.0	398.3	399.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	37.9	39.1	50.7	112.2	5.8	100.8	50.3	8.0	8.5	55.6	58.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.7	205.8	75.9	637.0	538.1	32.2	637.5	141.1	18.8	245.6	457.3	458.0
LnGrp LOS	D	F	F	F	F	C	F	F	B	F	F	F
Approach Vol, veh/h	1546			2195			3499			1608		
Approach Delay, s/veh	128.2			513.0			290.9			434.7		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	73.0	22.0	44.0	47.0	37.0	8.3	57.7				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	68.0	18.0	39.0	43.0	32.0	7.0	50.0				
Max Q Clear Time (g_c+1.0), s	19.0	70.0	20.0	41.0	45.0	34.0	3.4	54.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	343.7
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary 213: Boden Rd & Greenfield Ave/146th St

Future PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	578	823	564	1245	211	1064	1777	377	160	1294	25
Future Volume (veh/h)	21	578	823	564	1245	211	1064	1777	377	160	1294	25
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	1856	1856	1930	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	23	628	895	613	1353	229	1157	1932	410	174	1407	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	99	482	860	269	652	626	507	1598	902	130	755	14
Arrive On Green	0.03	0.26	0.26	0.12	0.35	0.35	0.29	0.45	0.45	0.05	0.21	0.21
Sat Flow, veh/h	1767	1856	1572	1838	1856	1572	1767	3526	1572	1767	3538	68
Grp Volume(v), veh/h	23	628	895	613	1353	229	1157	1932	410	174	700	734
Grp Sat Flow(s),veh/h/ln	1767	1856	1572	1838	1856	1572	1767	1763	1572	1767	1763	1843
Q Serve(g_s), s	1.4	39.0	39.0	18.0	52.7	15.4	43.0	68.0	22.6	7.0	32.0	32.0
Cycle Q Clear(g_c), s	1.4	39.0	39.0	18.0	52.7	15.4	43.0	68.0	22.6	7.0	32.0	32.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	99	482	860	269	652	626	507	1598	902	130	376	393
V/C Ratio(X)	0.23	1.30	1.04	2.28	2.08	0.37	2.28	1.21	0.45	1.33	1.86	1.87
Avail Cap(c_a), veh/h	130	482	860	269	652	626	507	1598	902	130	376	393
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(l)	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	43.5	55.5	34.0	48.1	48.7	31.8	53.5	41.0	18.5	52.6	59.0	59.0
Incr Delay (d2), s/veh	1.2	150.3	41.9	588.9	489.5	0.4	584.0	100.1	0.4	193.0	398.3	399.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	37.9	39.1	50.7	112.2	5.8	100.8	50.3	8.0	8.5	55.6	58.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.7	205.8	75.9	637.0	538.1	32.2	637.5	141.1	18.8	245.6	457.3	458.0
LnGrp LOS	D	F	F	F	F	C	F	F	B	F	F	F
Approach Vol, veh/h	1546			2195			3499			1608		
Approach Delay, s/veh	128.2			513.0			290.9			434.7		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	73.0	22.0	44.0	47.0	37.0	8.3	57.7				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	68.0	18.0	39.0	43.0	32.0	7.0	50.0				
Max Q Clear Time (g_c+1.0), s	19.0	70.0	20.0	41.0	45.0	34.0	3.4	54.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	343.7
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary

213: Boden Rd & Greenfield Ave/146th St

Future AM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	874	629	280	431	231	478	418	316	180	1270	11
Future Volume (veh/h)	11	874	629	280	431	231	478	418	316	180	1270	11
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	1856	1856	1930	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	12	950	684	304	468	251	520	454	343	196	1380	12
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	253	852	603	244	1137	641	486	1492	823	439	1313	11
Arrive On Green	0.02	0.24	0.24	0.10	0.32	0.32	0.14	0.42	0.42	0.09	0.37	0.37
Sat Flow, veh/h	1767	3526	1572	1838	3526	1572	3428	3526	1572	1767	3582	31
Grp Volume(v), veh/h	12	950	684	304	468	251	520	454	343	196	679	713
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1838	1763	1572	1714	1763	1572	1767	1763	1850
Q Serve(g_s), s	0.6	29.0	29.0	12.0	12.4	13.5	17.0	10.2	16.0	8.2	44.0	44.0
Cycle Q Clear(g_c), s	0.6	29.0	29.0	12.0	12.4	13.5	17.0	10.2	16.0	8.2	44.0	44.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.02
Lane Grp Cap(c), veh/h	253	852	603	244	1137	641	486	1492	823	439	646	678
V/C Ratio(X)	0.05	1.12	1.13	1.25	0.41	0.39	1.07	0.30	0.42	0.45	1.05	1.05
Avail Cap(c_a), veh/h	322	852	603	244	1137	641	486	1492	823	450	646	678
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	33.0	45.5	37.0	33.6	31.8	25.0	51.5	22.9	17.5	20.3	38.0	38.0
Incr Delay (d2), s/veh	0.1	67.5	79.7	140.6	0.2	0.4	61.0	0.1	0.3	0.7	49.4	48.8
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	0.3	20.2	30.0	14.6	5.2	4.9	11.2	4.1	5.5	3.3	26.8	28.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	33.1	113.0	116.7	174.2	32.0	25.4	112.5	23.0	17.8	21.1	87.4	86.8
LnGrp LOS	C	F	F	F	C	C	F	C	B	C	F	F
Approach Vol, veh/h	1646			1023			1317			1588		
Approach Delay, s/veh	114.0			72.6			57.0			78.9		
Approach LOS	F			E			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.2	55.8	16.0	34.0	21.0	49.0	6.3	43.7				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	1.0	50.0	12.0	29.0	17.0	44.0	7.0	34.0				
Max Q Clear Time (g_c+1/10), s	10.2	18.0	14.0	31.0	19.0	46.0	2.6	15.5				
Green Ext Time (p_c), s	0.0	4.2	0.0	0.0	0.0	0.0	0.0	3.5				

Intersection Summary

HCM 6th Ctrl Delay, s/veh	82.9
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary

213: Boden Rd & Greenfield Ave/146th St

Future PM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	578	823	564	1245	211	1064	1777	377	160	1294	25
Future Volume (veh/h)	21	578	823	564	1245	211	1064	1777	377	160	1294	25
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	1856	1856	1930	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	23	628	895	613	1353	229	1157	1932	410	174	1407	27
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	99	494	598	403	1074	552	823	1763	1090	130	1085	21
Arrive On Green	0.03	0.14	0.14	0.19	0.30	0.30	0.24	0.50	0.50	0.05	0.31	0.31
Sat Flow, veh/h	1767	3526	1572	1838	3526	1572	3428	3526	1572	1767	3538	68
Grp Volume(v), veh/h	23	628	895	613	1353	229	1157	1932	410	174	700	734
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1838	1763	1572	1714	1763	1572	1767	1763	1843
Q Serve(g_s), s	1.6	21.0	21.0	29.0	45.7	16.6	36.0	75.0	16.2	7.0	46.0	46.0
Cycle Q Clear(g_c), s	1.6	21.0	21.0	29.0	45.7	16.6	36.0	75.0	16.2	7.0	46.0	46.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.04
Lane Grp Cap(c), veh/h	99	494	598	403	1074	552	823	1763	1090	130	541	565
V/C Ratio(X)	0.23	1.27	1.50	1.52	1.26	0.41	1.41	1.10	0.38	1.33	1.30	1.30
Avail Cap(c_a), veh/h	130	494	598	403	1074	552	823	1763	1090	130	541	565
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	54.0	64.5	46.5	47.1	52.2	36.9	57.0	37.5	9.5	43.7	52.0	52.0
Incr Delay (d2), s/veh	1.2	137.7	232.7	246.3	124.7	0.5	190.1	52.8	0.2	193.0	146.3	146.6
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	0.8	18.7	60.1	40.6	38.2	6.4	36.9	43.3	5.2	10.3	41.7	43.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	55.2	202.2	279.2	293.4	176.8	37.4	247.1	90.3	9.8	236.7	198.3	198.6
LnGrp LOS	E	F	F	F	F	D	F	F	A	F	F	F
Approach Vol, veh/h	1546			2195			3499			1608		
Approach Delay, s/veh	244.6			194.8			132.7			202.6		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	80.0	33.0	26.0	40.0	51.0	8.3	50.7				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	75.0	29.0	21.0	36.0	46.0	7.0	43.0				
Max Q Clear Time (g_c+I19), s	7.0	77.0	31.0	23.0	38.0	48.0	3.6	47.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh	180.4											
HCM 6th LOS	F											

Intersection						
Int Delay, s/veh	13.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	348	167	23	229	314	120
Future Vol, veh/h	348	167	23	229	314	120
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	450	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	378	182	25	249	341	130
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	560	0	677	378
Stage 1	-	-	-	-	378	-
Stage 2	-	-	-	-	299	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1006	-	417	667
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	750	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1006	-	407	667
Mov Cap-2 Maneuver	-	-	-	-	407	-
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	731	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.8		36.4	
HCM LOS	E					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	407	667	-	-	1006	-
HCM Lane V/C Ratio	0.839	0.196	-	-	0.025	-
HCM Control Delay (s)	45.8	11.7	-	-	8.7	-
HCM Lane LOS	E	B	-	-	A	-
HCM 95th %tile Q(veh)	7.9	0.7	-	-	0.1	-

Intersection						
Int Delay, s/veh	13.3					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	348	167	23	229	314	120
Future Vol, veh/h	348	167	23	229	314	120
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	450	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	378	182	25	249	341	130
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	560	0	677	378
Stage 1	-	-	-	-	378	-
Stage 2	-	-	-	-	299	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	1006	-	417	667
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	750	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1006	-	407	667
Mov Cap-2 Maneuver	-	-	-	-	407	-
Stage 1	-	-	-	-	691	-
Stage 2	-	-	-	-	731	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.8		36.4	
HCM LOS	E					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	407	667	-	-	1006	-
HCM Lane V/C Ratio	0.839	0.196	-	-	0.025	-
HCM Control Delay (s)	45.8	11.7	-	-	8.7	-
HCM Lane LOS	E	B	-	-	A	-
HCM 95th %tile Q(veh)	7.9	0.7	-	-	0.1	-

HCM 6th TWSC
214: Bergen Blvd & 146th St

Future AM Peak

Intersection						
Int Delay, s/veh	13073					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Traffic Vol, veh/h	895	181	386	1708	314	372
Future Vol, veh/h	895	181	386	1708	314	372
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	450	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	973	197	420	1857	341	404
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	1170	0	3670	973
Stage 1	-	-	-	-	973	-
Stage 2	-	-	-	-	2697	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	593	-	~ 5	~ 305
Stage 1	-	-	-	-	365	-
Stage 2	-	-	-	-	~ 50	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	593	-	~ 1	~ 305
Mov Cap-2 Maneuver	-	-	-	-	~ 1	-
Stage 1	-	-	-	-	365	-
Stage 2	-	-	-	-	~ 15	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	4.5		\$ 73469.6		
HCM LOS	F					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	1	305	-	-	593	-
HCM Lane V/C Ratio	341.304	1.326	-	-	0.708	-
HCM Control Delay (s)	\$ 160271.2	201.5	-	-	24.4	-
HCM Lane LOS	F	F	-	-	C	-
HCM 95th %tile Q(veh)	45.4	20	-	-	5.7	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	13073					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↗	↘	↑	↘	↗
Traffic Vol, veh/h	895	181	386	1708	314	372
Future Vol, veh/h	895	181	386	1708	314	372
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	450	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	973	197	420	1857	341	404
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	1170	0	3670	973
Stage 1	-	-	-	-	973	-
Stage 2	-	-	-	-	2697	-
Critical Hdwy	-	-	4.13	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	-	-	2.227	-	3.527	3.327
Pot Cap-1 Maneuver	-	-	593	-	~ 5	~ 305
Stage 1	-	-	-	-	365	-
Stage 2	-	-	-	-	~ 50	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	593	-	~ 1	~ 305
Mov Cap-2 Maneuver	-	-	-	-	~ 1	-
Stage 1	-	-	-	-	365	-
Stage 2	-	-	-	-	~ 15	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	4.5		\$ 73469.6		
HCM LOS	F					
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	1	305	-	-	593	-
HCM Lane V/C Ratio	341.304	1.326	-	-	0.708	-
HCM Control Delay (s)	\$ 160271.2	201.5	-	-	24.4	-
HCM Lane LOS	F	F	-	-	C	-
HCM 95th %tile Q(veh)	45.4	20	-	-	5.7	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Intersection Delay, s/veh43.1						
Intersection LOS E						
Approach	EB		WB		NB	
Entry Lanes	2		2		2	
Conflicting Circle Lanes	2		2		2	
Adj Approach Flow, veh/h	1602		1320		635	
Demand Flow Rate, veh/h	1651		1360		654	
Vehicles Circulating, veh/h	337		74		1392	
Vehicles Exiting, veh/h	1097		1972		596	
Ped Vol Crossing Leg, #/h	0		0		0	
Ped Cap Adj	1.000		1.000		1.000	
Approach Delay, s/veh	20.5		8.6		172.0	
Approach LOS	C		A		F	
Lane	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	L	TR
Assumed Moves	LT	TR	LT	TR	L	TR
RT Channelized						
Lane Util	0.470	0.530	0.470	0.530	0.113	0.887
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	776	875	639	721	74	580
Cap Entry Lane, veh/h	990	1066	1261	1334	375	435
Entry HV Adj Factor	0.971	0.971	0.971	0.970	0.973	0.971
Flow Entry, veh/h	753	849	620	700	72	563
Cap Entry, veh/h	961	1035	1224	1294	365	422
V/C Ratio	0.784	0.821	0.507	0.541	0.197	1.334
Control Delay, s/veh	19.7	21.2	8.5	8.7	13.3	192.3
LOS	C	C	A	A	B	F
95th %tile Queue, veh	8	10	3	3	1	26

Intersection						
Intersection Delay, s/veh61.9						
Intersection LOS F						
Approach	EB		WB		NB	
Entry Lanes	2		2		2	
Conflicting Circle Lanes	2		2		2	
Adj Approach Flow, veh/h	1170		2277		745	
Demand Flow Rate, veh/h	1205		2346		767	
Vehicles Circulating, veh/h	433		351		1002	
Vehicles Exiting, veh/h	2264		1418		636	
Ped Vol Crossing Leg, #/h	0		0		0	
Ped Cap Adj	1.000		1.000		1.000	
Approach Delay, s/veh	13.8		99.7		22.0	
Approach LOS	B		F		C	
Lane	Left	Right	Left	Right	Left	Right
Designated Moves	LT	TR	LT	TR	L	TR
Assumed Moves	LT	TR	LT	TR	L	TR
RT Channelized						
Lane Util	0.470	0.530	0.470	0.530	0.458	0.542
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	566	639	1103	1243	351	416
Cap Entry Lane, veh/h	906	983	977	1054	537	606
Entry HV Adj Factor	0.971	0.970	0.970	0.971	0.972	0.971
Flow Entry, veh/h	550	620	1070	1207	341	404
Cap Entry, veh/h	880	954	948	1023	522	588
V/C Ratio	0.624	0.650	1.129	1.180	0.654	0.687
Control Delay, s/veh	13.8	13.8	90.3	108.1	22.3	21.9
LOS	B	B	F	F	C	C
95th %tile Queue, veh	4	5	29	36	5	5

Intersection									
Intersection Delay, s/veh	5.9								
Intersection LOS	A								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	487		51		549		275		
Demand Flow Rate, veh/h	502		52		566		283		
Vehicles Circulating, veh/h	283		591		189		260		
Vehicles Exiting, veh/h	260		164		596		383		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	7.1		4.7		5.5		4.5		
Approach LOS	A		A		A		A		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	L	TR	L	TR	L	TR	LT	TR	
Assumed Moves	L	TR	L	TR	L	TR	LT	TR	
RT Channelized									
Lane Util	0.110	0.890	0.288	0.712	0.367	0.633	0.470	0.530	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	55	447	15	37	208	358	133	150	
Cap Entry Lane, veh/h	1040	1116	784	859	1134	1209	1063	1138	
Entry HV Adj Factor	0.964	0.971	1.000	0.971	0.971	0.971	0.972	0.972	
Flow Entry, veh/h	53	434	15	36	202	347	129	146	
Cap Entry, veh/h	1003	1084	784	834	1102	1174	1033	1107	
V/C Ratio	0.053	0.400	0.019	0.043	0.183	0.296	0.125	0.132	
Control Delay, s/veh	4.1	7.5	4.8	4.7	4.9	5.8	4.6	4.4	
LOS	A	A	A	A	A	A	A	A	
95th %tile Queue, veh	0	2	0	0	1	1	0	0	

Intersection									
Intersection Delay, s/veh	5.9								
Intersection LOS	A								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	487		51		549		275		
Demand Flow Rate, veh/h	502		52		566		283		
Vehicles Circulating, veh/h	283		591		189		260		
Vehicles Exiting, veh/h	260		164		596		383		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	7.1		4.7		5.5		4.5		
Approach LOS	A		A		A		A		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	L	TR	L	TR	L	TR	LT	TR	
Assumed Moves	L	TR	L	TR	L	TR	LT	TR	
RT Channelized									
Lane Util	0.110	0.890	0.288	0.712	0.367	0.633	0.470	0.530	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	55	447	15	37	208	358	133	150	
Cap Entry Lane, veh/h	1040	1116	784	859	1134	1209	1063	1138	
Entry HV Adj Factor	0.964	0.971	1.000	0.971	0.971	0.971	0.972	0.972	
Flow Entry, veh/h	53	434	15	36	202	347	129	146	
Cap Entry, veh/h	1003	1084	784	834	1102	1174	1033	1107	
V/C Ratio	0.053	0.400	0.019	0.043	0.183	0.296	0.125	0.132	
Control Delay, s/veh	4.1	7.5	4.8	4.7	4.9	5.8	4.6	4.4	
LOS	A	A	A	A	A	A	A	A	
95th %tile Queue, veh	0	2	0	0	1	1	0	0	

Intersection									
Intersection Delay, s/veh	956.2								
Intersection LOS	F								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	1356		2418		706		1218		
Demand Flow Rate, veh/h	1397		2490		727		1255		
Vehicles Circulating, veh/h	874		1234		1420		1943		
Vehicles Exiting, veh/h	2324		913		851		1781		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	111.3		1799.6		82.4		728.6		
Approach LOS	F		F		F		F		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	L	TR	L	TR	L	TR	LT	TR	
Assumed Moves	L	TR	L	TR	L	TR	LT	TR	
RT Channelized									
Lane Util	0.384	0.616	0.006	0.994	0.352	0.648	0.470	0.530	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	537	860	15	2475	256	471	590	665	
Cap Entry Lane, veh/h	604	676	434	497	366	425	226	272	
Entry HV Adj Factor	0.970	0.971	1.000	0.971	0.973	0.971	0.970	0.971	
Flow Entry, veh/h	521	835	15	2403	249	457	572	645	
Cap Entry, veh/h	586	656	434	483	356	412	219	264	
V/C Ratio	0.889	1.273	0.035	4.976	0.700	1.109	2.611	2.443	
Control Delay, s/veh	41.1	155.1	8.8	1810.8	34.1	108.7	772.0	690.2	
LOS	E	F	A	F	D	F	F	F	
95th %tile Queue, veh	10	32	0	244	5	16	49	52	

Intersection									
Intersection Delay, s/veh	956.2								
Intersection LOS	F								
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	1356		2418		706		1218		
Demand Flow Rate, veh/h	1397		2490		727		1255		
Vehicles Circulating, veh/h	874		1234		1420		1943		
Vehicles Exiting, veh/h	2324		913		851		1781		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	111.3		1799.6		82.4		728.6		
Approach LOS	F		F		F		F		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	L	TR	L	TR	L	TR	LT	TR	
Assumed Moves	L	TR	L	TR	L	TR	LT	TR	
RT Channelized									
Lane Util	0.384	0.616	0.006	0.994	0.352	0.648	0.470	0.530	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	537	860	15	2475	256	471	590	665	
Cap Entry Lane, veh/h	604	676	434	497	366	425	226	272	
Entry HV Adj Factor	0.970	0.971	1.000	0.971	0.973	0.971	0.970	0.971	
Flow Entry, veh/h	521	835	15	2403	249	457	572	645	
Cap Entry, veh/h	586	656	434	483	356	412	219	264	
V/C Ratio	0.889	1.273	0.035	4.976	0.700	1.109	2.611	2.443	
Control Delay, s/veh	41.1	155.1	8.8	1810.8	34.1	108.7	772.0	690.2	
LOS	E	F	A	F	D	F	F	F	
95th %tile Queue, veh	10	32	0	244	5	16	49	52	

HCM 6th Signalized Intersection Summary

216: Campus Pkwy & Boden Rd

Existing AM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	1033	192	137	812	535	139	407	96	359	399	45
Future Volume (veh/h)	92	1033	192	137	812	535	139	407	96	359	399	45
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1930
Adj Flow Rate, veh/h	100	1123	209	149	883	582	151	442	104	390	434	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	256	1160	216	261	980	656	167	729	170	478	560	
Arrive On Green	0.08	0.27	0.27	0.09	0.28	0.28	0.09	0.26	0.26	0.14	0.30	0.00
Sat Flow, veh/h	1767	4291	798	1767	3526	1572	1767	2837	662	3428	1856	1635
Grp Volume(v), veh/h	100	884	448	149	883	582	151	273	273	390	434	0
Grp Sat Flow(s),veh/h/ln	1767	1689	1712	1767	1763	1572	1767	1763	1736	1714	1856	1635
Q Serve(g_s), s	2.9	19.1	19.1	4.4	17.8	20.6	6.3	10.1	10.2	8.2	15.8	0.0
Cycle Q Clear(g_c), s	2.9	19.1	19.1	4.4	17.8	20.6	6.3	10.1	10.2	8.2	15.8	0.0
Prop In Lane	1.00		0.47	1.00		1.00	1.00		0.38	1.00		1.00
Lane Grp Cap(c), veh/h	256	913	463	261	980	656	167	453	446	478	560	
V/C Ratio(X)	0.39	0.97	0.97	0.57	0.90	0.89	0.90	0.60	0.61	0.82	0.78	
Avail Cap(c_a), veh/h	278	913	463	269	980	656	167	453	446	510	577	
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	0.00
Uniform Delay (d), s/veh	18.9	26.7	26.7	19.2	25.7	19.9	33.2	24.2	24.2	30.9	23.6	0.0
Incr Delay (d2), s/veh	1.0	22.3	33.7	2.7	11.2	13.9	42.9	5.9	6.1	9.5	6.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.7	11.3	1.8	8.2	10.3	4.5	4.6	4.6	3.7	7.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.9	48.9	60.4	21.9	37.0	33.8	76.0	30.0	30.4	40.4	30.0	0.0
LnGrp LOS	B	D	E	C	D	C	E	C	C	D	C	
Approach Vol, veh/h	1432				1614		697				824	
Approach Delay, s/veh	50.5				34.4		40.1				34.9	
Approach LOS	D				C		D				C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.3	24.0	10.7	25.0	11.0	27.3	10.1	25.6				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	19.0	7.0	20.0	7.0	23.0	7.0	20.0					
Max Q Clear Time (g_c+T1), s	12.2	6.4	21.1	8.3	17.8	4.9	22.6					
Green Ext Time (p_c), s	0.1	1.7	0.0	0.0	0.0	1.1	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 40.4
HCM 6th LOS D

Notes

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

HCM 6th Signalized Intersection Summary 216: Campus Pkwy & Boden Rd

Existing PM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰ ↱ ↲ ↳			↰ ↱ ↲ ↳			↰ ↱ ↲ ↳			↰ ↱ ↲ ↳		
Traffic Volume (veh/h)	92	1033	192	137	812	535	139	407	96	359	399	45
Future Volume (veh/h)	92	1033	192	137	812	535	139	407	96	359	399	45
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1930
Adj Flow Rate, veh/h	100	1123	209	149	883	582	151	442	104	390	434	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	256	1160	216	261	980	656	167	729	170	478	560	
Arrive On Green	0.08	0.27	0.27	0.09	0.28	0.28	0.09	0.26	0.26	0.14	0.30	0.00
Sat Flow, veh/h	1767	4291	798	1767	3526	1572	1767	2837	662	3428	1856	1635
Grp Volume(v), veh/h	100	884	448	149	883	582	151	273	273	390	434	0
Grp Sat Flow(s),veh/h/ln	1767	1689	1712	1767	1763	1572	1767	1763	1736	1714	1856	1635
Q Serve(g_s), s	2.9	19.1	19.1	4.4	17.8	20.6	6.3	10.1	10.2	8.2	15.8	0.0
Cycle Q Clear(g_c), s	2.9	19.1	19.1	4.4	17.8	20.6	6.3	10.1	10.2	8.2	15.8	0.0
Prop In Lane	1.00		0.47	1.00		1.00	1.00		0.38	1.00		1.00
Lane Grp Cap(c), veh/h	256	913	463	261	980	656	167	453	446	478	560	
V/C Ratio(X)	0.39	0.97	0.97	0.57	0.90	0.89	0.90	0.60	0.61	0.82	0.78	
Avail Cap(c_a), veh/h	278	913	463	269	980	656	167	453	446	510	577	
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	0.00
Uniform Delay (d), s/veh	18.9	26.7	26.7	19.2	25.7	19.9	33.2	24.2	24.2	30.9	23.6	0.0
Incr Delay (d2), s/veh	1.0	22.3	33.7	2.7	11.2	13.9	42.9	5.9	6.1	9.5	6.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.7	11.3	1.8	8.2	10.3	4.5	4.6	4.6	3.7	7.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.9	48.9	60.4	21.9	37.0	33.8	76.0	30.0	30.4	40.4	30.0	0.0
LnGrp LOS	B	D	E	C	D	C	E	C	C	D	C	
Approach Vol, veh/h	1432				1614				697		824	
Approach Delay, s/veh	50.5				34.4				40.1		34.9	
Approach LOS	D				C				D		C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.3	24.0	10.7	25.0	11.0	27.3	10.1	25.6				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	19.0	7.0	20.0	7.0	23.0	7.0	20.0					
Max Q Clear Time (g_c+M1), s	12.2	6.4	21.1	8.3	17.8	4.9	22.6					
Green Ext Time (p_c), s	0.1	1.7	0.0	0.0	0.0	1.1	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 40.4
HCM 6th LOS D

Notes

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

HCM 6th Signalized Intersection Summary 216: Campus Pkwy & Boden Rd

Future AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰ ↱ ↱ ↱			↰ ↱	↰ ↱	↰ ↱	↰ ↱	↰ ↱		↰ ↱	↰ ↱	↰ ↱
Traffic Volume (veh/h)	647	2505	345	332	2178	1278	301	1229	127	879	1175	606
Future Volume (veh/h)	647	2505	345	332	2178	1278	301	1229	127	879	1175	606
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1930
Adj Flow Rate, veh/h	703	2723	375	361	2367	1389	327	1336	138	955	1277	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	306	1660	219	177	1034	660	165	925	95	434	594	
Arrive On Green	0.17	0.37	0.37	0.10	0.29	0.29	0.09	0.29	0.29	0.13	0.32	0.00
Sat Flow, veh/h	1767	4528	597	1767	3526	1572	1767	3227	332	3428	1856	1635
Grp Volume(v), veh/h	703	1999	1099	361	2367	1389	327	727	747	955	1277	0
Grp Sat Flow(s),veh/h/ln	1767	1689	1748	1767	1763	1572	1767	1763	1796	1714	1856	1635
Q Serve(g_s), s	26.0	55.0	55.0	15.0	44.0	44.0	14.0	43.0	43.0	19.0	48.0	0.0
Cycle Q Clear(g_c), s	26.0	55.0	55.0	15.0	44.0	44.0	14.0	43.0	43.0	19.0	48.0	0.0
Prop In Lane	1.00		0.34	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	306	1238	641	177	1034	660	165	505	515	434	594	
V/C Ratio(X)	2.30	1.61	1.71	2.04	2.29	2.10	1.98	1.44	1.45	2.20	2.15	
Avail Cap(c_a), veh/h	306	1238	641	177	1034	660	165	505	515	434	594	
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	62.0	47.5	47.5	67.5	53.0	43.5	68.0	53.5	53.5	65.5	51.0	0.0
Incr Delay (d2), s/veh	593.0	280.4	327.9	488.4	583.0	501.5	463.2	208.5	213.7	547.1	523.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	61.9	70.5	81.5	30.6	102.7	115.5	27.5	47.9	49.6	41.2	107.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	655.0	327.9	375.4	555.9	636.0	545.0	531.2	262.0	267.2	612.6	574.4	0.0
LnGrp LOS	F	F	F	F	F	F	F	F	F	F	F	
Approach Vol, veh/h	3801				4117				1801		2232	
Approach Delay, s/veh	402.1				598.3				313.0		590.8	
Approach LOS	F				F				F		F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.0	48.0	19.0	60.0	18.0	53.0	30.0	49.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	49.0	43.0	15.0	55.0	14.0	48.0	26.0	44.0				
Max Q Clear Time (g_c+21), s	21.0	45.0	17.0	57.0	16.0	50.0	28.0	46.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	491.5
HCM 6th LOS	F

Notes

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

HCM 6th Signalized Intersection Summary 216: Campus Pkwy & Boden Rd

Future PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰ ↱ ↲ ↳	↰ ↱ ↲ ↳		↰ ↱ ↲ ↳	↰ ↱ ↲ ↳	↰ ↱ ↲ ↳	↰ ↱ ↲ ↳	↰ ↱ ↲ ↳		↰ ↱ ↲ ↳	↰ ↱ ↲ ↳	↰ ↱ ↲ ↳
Traffic Volume (veh/h)	647	2505	345	332	2178	1278	301	1229	127	879	1175	606
Future Volume (veh/h)	647	2505	345	332	2178	1278	301	1229	127	879	1175	606
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1930
Adj Flow Rate, veh/h	703	2723	375	361	2367	1389	327	1336	138	955	1277	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	306	1660	219	177	1034	660	165	925	95	434	594	
Arrive On Green	0.17	0.37	0.37	0.10	0.29	0.29	0.09	0.29	0.29	0.13	0.32	0.00
Sat Flow, veh/h	1767	4528	597	1767	3526	1572	1767	3227	332	3428	1856	1635
Grp Volume(v), veh/h	703	1999	1099	361	2367	1389	327	727	747	955	1277	0
Grp Sat Flow(s),veh/h/ln	1767	1689	1748	1767	1763	1572	1767	1763	1796	1714	1856	1635
Q Serve(g_s), s	26.0	55.0	55.0	15.0	44.0	44.0	14.0	43.0	43.0	19.0	48.0	0.0
Cycle Q Clear(g_c), s	26.0	55.0	55.0	15.0	44.0	44.0	14.0	43.0	43.0	19.0	48.0	0.0
Prop In Lane	1.00		0.34	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	306	1238	641	177	1034	660	165	505	515	434	594	
V/C Ratio(X)	2.30	1.61	1.71	2.04	2.29	2.10	1.98	1.44	1.45	2.20	2.15	
Avail Cap(c_a), veh/h	306	1238	641	177	1034	660	165	505	515	434	594	
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	0.00
Uniform Delay (d), s/veh	62.0	47.5	47.5	67.5	53.0	43.5	68.0	53.5	53.5	65.5	51.0	0.0
Incr Delay (d2), s/veh	593.0	280.4	327.9	488.4	583.0	501.5	463.2	208.5	213.7	547.1	523.4	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	61.9	70.5	81.5	30.6	102.7	115.5	27.5	47.9	49.6	41.2	107.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	655.0	327.9	375.4	555.9	636.0	545.0	531.2	262.0	267.2	612.6	574.4	0.0
LnGrp LOS	F	F	F	F	F	F	F	F	F	F	F	
Approach Vol, veh/h	3801			4117			1801			2232		
Approach Delay, s/veh	402.1			598.3			313.0			590.8		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.0	48.0	19.0	60.0	18.0	53.0	30.0	49.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	43.0	43.0	15.0	55.0	14.0	48.0	26.0	44.0				
Max Q Clear Time (g_c+21), s	45.0	45.0	17.0	57.0	16.0	50.0	28.0	46.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 491.5
HCM 6th LOS F

Notes

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

HCM 6th Signalized Intersection Summary

216: Campus Pkwy & Boden Rd

Future AM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	454	1883	127	120	1722	375	204	524	93	816	766	768
Future Volume (veh/h)	454	1883	127	120	1722	375	204	524	93	816	766	768
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1930
Adj Flow Rate, veh/h	493	2047	138	130	1872	408	222	570	101	887	833	835
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	366	2101	141	160	1316	881	160	639	113	640	656	752
Arrive On Green	0.11	0.43	0.43	0.05	0.37	0.37	0.05	0.21	0.21	0.19	0.35	0.35
Sat Flow, veh/h	3428	4849	325	3428	3526	1572	3428	2994	529	3428	1856	1635
Grp Volume(v), veh/h	493	1422	763	130	1872	408	222	335	336	887	833	835
Grp Sat Flow(s),veh/h/ln	1714	1689	1797	1714	1763	1572	1714	1763	1760	1714	1856	1635
Q Serve(g_s), s	16.0	61.8	62.7	5.6	56.0	23.1	7.0	27.7	27.8	28.0	53.0	53.0
Cycle Q Clear(g_c), s	16.0	61.8	62.7	5.6	56.0	23.1	7.0	27.7	27.8	28.0	53.0	53.0
Prop In Lane	1.00		0.18	1.00		1.00	1.00		0.30	1.00		1.00
Lane Grp Cap(c), veh/h	366	1463	779	160	1316	881	160	376	376	640	656	752
V/C Ratio(X)	1.35	0.97	0.98	0.81	1.42	0.46	1.39	0.89	0.89	1.39	1.27	1.11
Avail Cap(c_a), veh/h	366	1463	779	160	1316	881	160	376	376	640	656	752
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	67.0	41.6	41.8	70.8	47.0	19.6	71.5	57.3	57.4	61.0	48.5	40.5
Incr Delay (d2), s/veh	173.8	17.2	27.1	26.3	194.5	0.4	208.2	25.6	26.3	183.3	133.5	67.3
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	15.7	28.1	32.4	3.0	59.2	8.2	7.7	14.8	15.0	28.2	48.0	40.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	240.8	58.8	69.0	97.1	241.5	20.0	279.7	82.9	83.6	244.3	182.0	107.8
LnGrp LOS	F	E	E	F	F	B	F	F	F	F	F	F
Approach Vol, veh/h	2678				2410		893				2555	
Approach Delay, s/veh	95.2				196.2		132.1				179.4	
Approach LOS	F				F		F				F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.0	37.0	11.0	70.0	11.0	58.0	20.0	61.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	28.0	32.0	7.0	65.0	7.0	53.0	16.0	56.0				
Max Q Clear Time (g_c+Q0), s	30.0	29.8	7.6	64.7	9.0	55.0	18.0	58.0				
Green Ext Time (p_c), s	0.0	0.9	0.0	0.3	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay, s/veh	152.8
HCM 6th LOS	F

HCM 6th Signalized Intersection Summary 216: Campus Pkwy & Boden Rd

Future PM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	647	2505	345	332	2178	1278	301	1229	127	879	1175	606
Future Volume (veh/h)	647	2505	345	332	2178	1278	301	1229	127	879	1175	606
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1930
Adj Flow Rate, veh/h	703	2723	375	361	2367	1389	327	1336	138	955	1277	659
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	389	1751	231	229	1199	765	229	904	93	503	668	774
Arrive On Green	0.11	0.39	0.39	0.07	0.34	0.34	0.07	0.28	0.28	0.15	0.36	0.36
Sat Flow, veh/h	3428	4528	597	3428	3526	1572	3428	3227	332	3428	1856	1635
Grp Volume(v), veh/h	703	1999	1099	361	2367	1389	327	727	747	955	1277	659
Grp Sat Flow(s),veh/h/ln	1714	1689	1748	1714	1763	1572	1714	1763	1796	1714	1856	1635
Q Serve(g_s), s	17.0	58.0	58.0	10.0	51.0	51.0	10.0	42.0	42.0	22.0	54.0	53.3
Cycle Q Clear(g_c), s	17.0	58.0	58.0	10.0	51.0	51.0	10.0	42.0	42.0	22.0	54.0	53.3
Prop In Lane	1.00		0.34	1.00		1.00	1.00		0.18	1.00		1.00
Lane Grp Cap(c), veh/h	389	1306	676	229	1199	765	229	494	503	503	668	774
V/C Ratio(X)	1.81	1.53	1.63	1.58	1.97	1.82	1.43	1.47	1.49	1.90	1.91	0.85
Avail Cap(c_a), veh/h	389	1306	676	229	1199	765	229	494	503	503	668	774
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	66.5	46.0	46.0	70.0	49.5	38.5	70.0	54.0	54.0	64.0	48.0	34.8
Incr Delay (d2), s/veh	374.3	242.9	288.1	280.7	441.6	371.9	217.2	223.6	229.0	412.1	415.8	9.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	27.5	67.5	78.3	13.2	95.3	105.6	11.2	48.9	50.6	38.2	101.2	22.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	440.8	288.9	334.1	350.7	491.1	410.4	287.2	277.6	283.0	476.1	463.8	43.8
LnGrp LOS	F	F	F	F	F	F	F	F	F	F	F	D
Approach Vol, veh/h	3801			4117			1801			2891		
Approach Delay, s/veh	330.1			451.6			281.6			372.2		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.0	47.0	14.0	63.0	14.0	59.0	21.0	56.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	22.0	42.0	10.0	58.0	10.0	54.0	17.0	51.0				
Max Q Clear Time (g_c+24.0), s	24.0	44.0	12.0	60.0	12.0	56.0	19.0	53.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh	372.5											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary

217: Corporate Pkwy & Campus Pkwy

Existing AM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰ ↱ ↲ ↳			↰ ↱ ↲ ↳			↰ ↱ ↳	↲		↰ ↱ ↳	↲	
Traffic Volume (veh/h)	90	1335	49	125	1254	28	38	28	139	17	27	142
Future Volume (veh/h)	90	1335	49	125	1254	28	38	28	139	17	27	142
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	98	1451	53	136	1363	30	41	30	151	18	29	154
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	174	1449	53	196	1537	34	372	65	329	362	55	293
Arrive On Green	0.10	0.29	0.29	0.11	0.30	0.30	0.06	0.24	0.24	0.03	0.22	0.22
Sat Flow, veh/h	1767	5016	183	1767	5100	112	1767	267	1346	1767	255	1356
Grp Volume(v), veh/h	98	977	527	136	903	490	41	0	181	18	0	183
Grp Sat Flow(s),veh/h/ln	1767	1689	1823	1767	1689	1835	1767	0	1613	1767	0	1611
Q Serve(g_s), s	2.9	16.0	16.0	4.1	14.1	14.1	1.0	0.0	5.3	0.4	0.0	5.6
Cycle Q Clear(g_c), s	2.9	16.0	16.0	4.1	14.1	14.1	1.0	0.0	5.3	0.4	0.0	5.6
Prop In Lane	1.00		0.10	1.00		0.06	1.00		0.83	1.00		0.84
Lane Grp Cap(c), veh/h	174	976	527	196	1018	553	372	0	395	362	0	348
V/C Ratio(X)	0.56	1.00	1.00	0.69	0.89	0.89	0.11	0.00	0.46	0.05	0.00	0.53
Avail Cap(c_a), veh/h	223	976	527	223	1018	553	491	0	395	531	0	349
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.8	19.7	19.7	23.7	18.4	18.4	15.2	0.0	17.8	16.0	0.0	19.2
Incr Delay (d2), s/veh	2.8	29.1	39.5	7.7	9.6	16.0	0.1	0.0	0.8	0.1	0.0	1.4
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	1.2	9.0	11.2	1.9	5.8	7.3	0.4	0.0	1.9	0.2	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.7	48.8	59.2	31.4	28.0	34.4	15.3	0.0	18.6	16.1	0.0	20.6
LnGrp LOS	C	F	F	C	C	C	B	A	B	B	A	C
Approach Vol, veh/h	1602				1529		222				201	
Approach Delay, s/veh	50.8				30.4		18.0				20.2	
Approach LOS	D				C		B				C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.7	18.5	10.1	21.0	7.3	17.0	9.4	21.7				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.5	12.0	7.0	16.0	7.0	12.0	7.0	16.0				
Max Q Clear Time (g_c+I2), s	12.4	7.3	6.1	18.0	3.0	7.6	4.9	16.1				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 38.3
HCM 6th LOS D

HCM 6th Signalized Intersection Summary

217: Corporate Pkwy & Campus Pkwy

Existing PM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰ ↱ ↲ ↳			↰ ↱ ↲ ↳			↰ ↱ ↳			↰ ↱ ↳		
Traffic Volume (veh/h)	90	1335	49	125	1254	28	38	28	139	17	27	142
Future Volume (veh/h)	90	1335	49	125	1254	28	38	28	139	17	27	142
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	98	1451	53	136	1363	30	41	30	151	18	29	154
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	174	1449	53	196	1537	34	372	65	329	362	55	293
Arrive On Green	0.10	0.29	0.29	0.11	0.30	0.30	0.06	0.24	0.24	0.03	0.22	0.22
Sat Flow, veh/h	1767	5016	183	1767	5100	112	1767	267	1346	1767	255	1356
Grp Volume(v), veh/h	98	977	527	136	903	490	41	0	181	18	0	183
Grp Sat Flow(s),veh/h/ln	1767	1689	1823	1767	1689	1835	1767	0	1613	1767	0	1611
Q Serve(g_s), s	2.9	16.0	16.0	4.1	14.1	14.1	1.0	0.0	5.3	0.4	0.0	5.6
Cycle Q Clear(g_c), s	2.9	16.0	16.0	4.1	14.1	14.1	1.0	0.0	5.3	0.4	0.0	5.6
Prop In Lane	1.00		0.10	1.00		0.06	1.00		0.83	1.00		0.84
Lane Grp Cap(c), veh/h	174	976	527	196	1018	553	372	0	395	362	0	348
V/C Ratio(X)	0.56	1.00	1.00	0.69	0.89	0.89	0.11	0.00	0.46	0.05	0.00	0.53
Avail Cap(c_a), veh/h	223	976	527	223	1018	553	491	0	395	531	0	349
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.8	19.7	19.7	23.7	18.4	18.4	15.2	0.0	17.8	16.0	0.0	19.2
Incr Delay (d2), s/veh	2.8	29.1	39.5	7.7	9.6	16.0	0.1	0.0	0.8	0.1	0.0	1.4
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	1.2	9.0	11.2	1.9	5.8	7.3	0.4	0.0	1.9	0.2	0.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.7	48.8	59.2	31.4	28.0	34.4	15.3	0.0	18.6	16.1	0.0	20.6
LnGrp LOS	C	F	F	C	C	C	B	A	B	B	A	C
Approach Vol, veh/h	1602		1529			222			201			
Approach Delay, s/veh	50.8		30.4			18.0			20.2			
Approach LOS	D		C			B			C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.7	18.5	10.1	21.0	7.3	17.0	9.4	21.7				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	12.0	7.0	16.0	7.0	12.0	7.0	16.0				
Max Q Clear Time (g_c+I/2), s	7.3	7.3	6.1	18.0	3.0	7.6	4.9	16.1				
Green Ext Time (p_c), s	0.0	0.4	0.0	0.0	0.0	0.4	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			38.3									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary 217: Corporate Pkwy & Campus Pkwy

Future AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰ ↱ ↲ ↳			↰ ↱ ↲ ↳			↰ ↱ ↳		↰ ↱ ↳			
Traffic Volume (veh/h)	90	3051	356	206	3046	28	418	42	239	17	56	273
Future Volume (veh/h)	90	3051	356	206	3046	28	418	42	239	17	56	273
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	98	3316	387	224	3311	30	454	46	260	18	61	297
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	82	2187	246	165	2692	24	306	70	395	221	39	188
Arrive On Green	0.05	0.47	0.47	0.09	0.52	0.52	0.17	0.29	0.29	0.02	0.14	0.14
Sat Flow, veh/h	1767	4620	519	1767	5177	47	1767	242	1367	1767	275	1339
Grp Volume(v), veh/h	98	2390	1313	224	2156	1185	454	0	306	18	0	358
Grp Sat Flow(s),veh/h/ln	1767	1689	1762	1767	1689	1847	1767	0	1609	1767	0	1614
Q Serve(g_s), s	7.0	71.0	71.0	14.0	78.0	78.0	26.0	0.0	25.0	1.3	0.0	21.0
Cycle Q Clear(g_c), s	7.0	71.0	71.0	14.0	78.0	78.0	26.0	0.0	25.0	1.3	0.0	21.0
Prop In Lane	1.00		0.29	1.00		0.03	1.00		0.85	1.00		0.83
Lane Grp Cap(c), veh/h	82	1598	834	165	1756	961	306	0	465	221	0	226
V/C Ratio(X)	1.19	1.50	1.57	1.36	1.23	1.23	1.48	0.00	0.66	0.08	0.00	1.58
Avail Cap(c_a), veh/h	82	1598	834	165	1756	961	306	0	465	260	0	226
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.5	39.5	39.5	68.0	36.0	36.0	62.0	0.0	46.9	52.9	0.0	64.5
Incr Delay (d2), s/veh	158.4	226.1	264.3	195.3	107.8	114.2	233.7	0.0	3.4	0.2	0.0	282.8
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	6.8	78.1	90.3	15.2	56.3	63.3	31.6	0.0	10.5	0.6	0.0	26.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	229.9	265.6	303.8	263.3	143.8	150.2	295.7	0.0	50.3	53.1	0.0	347.3
LnGrp LOS	F	F	F	F	F	F	F	A	D	D	A	F
Approach Vol, veh/h	3801			3565			760			376		
Approach Delay, s/veh	277.9			153.4			196.9			333.2		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	48.3	18.0	76.0	30.0	26.0	11.0	83.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	40.0	14.0	71.0	26.0	21.0	7.0	78.0				
Max Q Clear Time (g_c+I13), s	13.3	27.0	16.0	73.0	28.0	23.0	9.0	80.0				
Green Ext Time (p_c), s	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	220.9											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary 217: Corporate Pkwy & Campus Pkwy

Future PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰ ↱ ↲ ↳			↰ ↱ ↲ ↳			↰ ↱ ↳		↰ ↱ ↳			
Traffic Volume (veh/h)	90	3051	356	206	3046	28	418	42	239	17	56	273
Future Volume (veh/h)	90	3051	356	206	3046	28	418	42	239	17	56	273
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	98	3316	387	224	3311	30	454	46	260	18	61	297
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	82	2187	246	165	2692	24	306	70	395	221	39	188
Arrive On Green	0.05	0.47	0.47	0.09	0.52	0.52	0.17	0.29	0.29	0.02	0.14	0.14
Sat Flow, veh/h	1767	4620	519	1767	5177	47	1767	242	1367	1767	275	1339
Grp Volume(v), veh/h	98	2390	1313	224	2156	1185	454	0	306	18	0	358
Grp Sat Flow(s),veh/h/ln	1767	1689	1762	1767	1689	1847	1767	0	1609	1767	0	1614
Q Serve(g_s), s	7.0	71.0	71.0	14.0	78.0	78.0	26.0	0.0	25.0	1.3	0.0	21.0
Cycle Q Clear(g_c), s	7.0	71.0	71.0	14.0	78.0	78.0	26.0	0.0	25.0	1.3	0.0	21.0
Prop In Lane	1.00		0.29	1.00		0.03	1.00		0.85	1.00		0.83
Lane Grp Cap(c), veh/h	82	1598	834	165	1756	961	306	0	465	221	0	226
V/C Ratio(X)	1.19	1.50	1.57	1.36	1.23	1.23	1.48	0.00	0.66	0.08	0.00	1.58
Avail Cap(c_a), veh/h	82	1598	834	165	1756	961	306	0	465	260	0	226
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	71.5	39.5	39.5	68.0	36.0	36.0	62.0	0.0	46.9	52.9	0.0	64.5
Incr Delay (d2), s/veh	158.4	226.1	264.3	195.3	107.8	114.2	233.7	0.0	3.4	0.2	0.0	282.8
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	6.8	78.1	90.3	15.2	56.3	63.3	31.6	0.0	10.5	0.6	0.0	26.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	229.9	265.6	303.8	263.3	143.8	150.2	295.7	0.0	50.3	53.1	0.0	347.3
LnGrp LOS	F	F	F	F	F	F	F	A	D	D	A	F
Approach Vol, veh/h	3801			3565			760			376		
Approach Delay, s/veh	277.9			153.4			196.9			333.2		
Approach LOS	F			F			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	48.3	18.0	76.0	30.0	26.0	11.0	83.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	40.0	40.0	14.0	71.0	26.0	21.0	7.0	78.0				
Max Q Clear Time (g_c+I3), s	27.0	27.0	16.0	73.0	28.0	23.0	9.0	80.0				
Green Ext Time (p_c), s	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	220.9											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary

217: Corporate Pkwy & Campus Pkwy

Future AM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	2419	157	101	2101	6	70	11	93	1	5	49
Future Volume (veh/h)	174	2419	157	101	2101	6	70	11	93	1	5	49
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	189	2629	171	110	2284	7	76	12	101	1	5	53
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	199	2628	921	138	2524	8	229	368	435	254	247	387
Arrive On Green	0.11	0.52	0.52	0.08	0.48	0.48	0.07	0.20	0.20	0.00	0.13	0.13
Sat Flow, veh/h	1767	5066	1572	1767	5214	16	3428	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	189	2629	171	110	1479	812	76	12	101	1	5	53
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1767	1689	1853	1714	1856	1572	1767	1856	1572
Q Serve(g_s), s	9.4	46.0	4.5	5.4	35.7	35.7	1.9	0.5	4.4	0.0	0.2	2.3
Cycle Q Clear(g_c), s	9.4	46.0	4.5	5.4	35.7	35.7	1.9	0.5	4.4	0.0	0.2	2.3
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	199	2628	921	138	1635	897	229	368	435	254	247	387
V/C Ratio(X)	0.95	1.00	0.19	0.80	0.90	0.91	0.33	0.03	0.23	0.00	0.02	0.14
Avail Cap(c_a), veh/h	199	2628	921	139	1637	898	271	368	435	390	251	390
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	39.1	21.3	8.5	40.2	21.0	21.0	39.5	28.7	24.8	33.2	33.4	26.1
Incr Delay (d2), s/veh	49.1	17.7	0.1	26.4	7.5	12.6	0.8	0.0	0.3	0.0	0.0	0.2
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	6.6	19.4	1.3	3.3	13.8	16.4	0.8	0.2	1.6	0.0	0.1	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	88.1	39.0	8.6	66.6	28.5	33.6	40.3	28.7	25.1	33.2	33.4	26.2
LnGrp LOS	F	F	A	E	C	C	D	C	C	C	C	C
Approach Vol, veh/h	2989		2401			189			59			
Approach Delay, s/veh	40.4		32.0			31.4			27.0			
Approach LOS	D		C			C			C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.2	22.6	10.9	51.0	9.9	16.8	14.0	47.9				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	12.0	7.0	46.0	7.0	12.0	10.0	43.0				
Max Q Clear Time (g_c+I2), s	6.4	6.4	7.4	48.0	3.9	4.3	11.4	37.7				
Green Ext Time (p_c), s	0.0	0.1	0.0	0.0	0.0	0.1	0.0	4.7				

Intersection Summary

HCM 6th Ctrl Delay, s/veh	36.4
HCM 6th LOS	D

HCM 6th Signalized Intersection Summary 217: Corporate Pkwy & Campus Pkwy

Future PM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	3051	356	206	3046	28	418	42	239	17	56	273
Future Volume (veh/h)	90	3051	356	206	3046	28	418	42	239	17	56	273
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	98	3316	387	224	3311	30	454	46	260	18	61	297
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	94	2769	860	188	3106	28	389	375	318	212	210	178
Arrive On Green	0.05	0.55	0.55	0.11	0.60	0.60	0.11	0.20	0.20	0.02	0.11	0.11
Sat Flow, veh/h	1767	5066	1572	1767	5177	47	3428	1856	1572	1767	1856	1572
Grp Volume(v), veh/h	98	3316	387	224	2156	1185	454	46	260	18	61	297
Grp Sat Flow(s),veh/h/ln	1767	1689	1572	1767	1689	1847	1714	1856	1572	1767	1856	1572
Q Serve(g_s), s	8.0	82.0	22.2	16.0	90.0	90.0	17.0	3.0	23.7	1.3	4.5	17.0
Cycle Q Clear(g_c), s	8.0	82.0	22.2	16.0	90.0	90.0	17.0	3.0	23.7	1.3	4.5	17.0
Prop In Lane	1.00		1.00	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	94	2769	860	188	2026	1108	389	375	318	212	210	178
V/C Ratio(X)	1.04	1.20	0.45	1.19	1.06	1.07	1.17	0.12	0.82	0.08	0.29	1.67
Avail Cap(c_a), veh/h	94	2769	860	188	2026	1108	389	375	318	251	210	178
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	71.0	34.0	20.4	67.0	30.0	30.0	66.5	49.0	57.2	56.3	61.0	66.5
Incr Delay (d2), s/veh	103.9	92.6	0.4	125.5	39.6	47.5	100.1	0.1	15.4	0.2	0.8	323.4
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	6.3	55.0	8.0	13.7	44.3	50.9	12.9	1.4	10.6	0.6	2.2	22.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	174.9	126.6	20.8	192.5	69.6	77.5	166.6	49.1	72.6	56.5	61.7	389.9
LnGrp LOS	F	F	C	F	F	F	F	D	E	E	E	F
Approach Vol, veh/h	3801					3565		760		376		
Approach Delay, s/veh	117.1					80.0		127.3		320.7		
Approach LOS	F					E		F		F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	35.3	20.0	87.0	21.0	22.0	12.0	95.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	27.0	16.0	82.0	17.0	17.0	8.0	90.0				
Max Q Clear Time (g_c+I13), s	13.3	25.7	18.0	84.0	19.0	19.0	10.0	92.0				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			111.4									
HCM 6th LOS			F									

Intersection									
Intersection Delay, s/veh 7.5									
Intersection LOS A									
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	426		126		878		580		
Demand Flow Rate, veh/h	439		130		904		597		
Vehicles Circulating, veh/h	646		853		75		406		
Vehicles Exiting, veh/h	357		126		1010		577		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	10.8		7.3		6.1		7.1		
Approach LOS	B		A		A		A		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	L	TR	LT	TR	LT	TR	LT	TR	
Assumed Moves	L	TR	L	TR	LT	TR	LT	TR	
RT Channelized									
Lane Util	0.084	0.916	0.700	0.300	0.470	0.530	0.471	0.529	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	37	402	91	39	425	479	281	316	
Cap Entry Lane, veh/h	745	820	616	688	1260	1332	929	1006	
Entry HV Adj Factor	0.973	0.970	0.967	0.980	0.971	0.971	0.970	0.973	
Flow Entry, veh/h	36	390	88	38	412	465	273	307	
Cap Entry, veh/h	725	795	596	674	1223	1294	901	978	
V/C Ratio	0.050	0.490	0.148	0.057	0.337	0.360	0.302	0.314	
Control Delay, s/veh	5.5	11.3	7.8	5.9	6.1	6.1	7.2	6.9	
LOS	A	B	A	A	A	A	A	A	
95th %tile Queue, veh	0	3	1	0	2	2	1	1	

Intersection									
Intersection Delay, s/veh 7.5									
Intersection LOS A									
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	426		126		878		580		
Demand Flow Rate, veh/h	439		130		904		597		
Vehicles Circulating, veh/h	646		853		75		406		
Vehicles Exiting, veh/h	357		126		1010		577		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	10.8		7.3		6.1		7.1		
Approach LOS	B		A		A		A		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	L	TR	LT	TR	LT	TR	LT	TR	
Assumed Moves	L	TR	L	TR	LT	TR	LT	TR	
RT Channelized									
Lane Util	0.084	0.916	0.700	0.300	0.470	0.530	0.471	0.529	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	37	402	91	39	425	479	281	316	
Cap Entry Lane, veh/h	745	820	616	688	1260	1332	929	1006	
Entry HV Adj Factor	0.973	0.970	0.967	0.980	0.971	0.971	0.970	0.973	
Flow Entry, veh/h	36	390	88	38	412	465	273	307	
Cap Entry, veh/h	725	795	596	674	1223	1294	901	978	
V/C Ratio	0.050	0.490	0.148	0.057	0.337	0.360	0.302	0.314	
Control Delay, s/veh	5.5	11.3	7.8	5.9	6.1	6.1	7.2	6.9	
LOS	A	B	A	A	A	A	A	A	
95th %tile Queue, veh	0	3	1	0	2	2	1	1	

Intersection									
Intersection Delay, s/veh 19.1									
Intersection LOS F									
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	1645		1360		1050		1036		
Demand Flow Rate, veh/h	1694		1401		1081		1067		
Vehicles Circulating, veh/h	784		1000		1220		1663		
Vehicles Exiting, veh/h	1946		1301		1258		738		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	578.7		139.9		117.6		346.5		
Approach LOS	F		F		F		F		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	L	TR	LT	TR	LT	TR	LT	TR	
Assumed Moves	L	TR	LT	TR	LT	TR	LT	TR	
RT Channelized									
Lane Util	0.022	0.978	0.470	0.530	0.470	0.530	0.470	0.530	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	37	1657	658	743	508	573	501	566	
Cap Entry Lane, veh/h	656	729	538	607	439	503	292	345	
Entry HV Adj Factor	0.973	0.971	0.972	0.970	0.971	0.971	0.972	0.970	
Flow Entry, veh/h	36	1609	639	721	494	557	487	549	
Cap Entry, veh/h	639	708	523	589	427	489	284	335	
V/C Ratio	0.056	2.272	1.223	1.224	1.156	1.138	1.714	1.639	
Control Delay, s/veh	6.3	591.5	141.5	138.5	123.5	112.3	366.8	328.5	
LOS	A	F	F	F	F	F	F	F	
95th %tile Queue, veh	0	118	24	27	18	19	31	33	

Intersection									
Intersection Delay, s/veh 19.1									
Intersection LOS F									
Approach	EB		WB		NB		SB		
Entry Lanes	2		2		2		2		
Conflicting Circle Lanes	2		2		2		2		
Adj Approach Flow, veh/h	1645		1360		1050		1036		
Demand Flow Rate, veh/h	1694		1401		1081		1067		
Vehicles Circulating, veh/h	784		1000		1220		1663		
Vehicles Exiting, veh/h	1946		1301		1258		738		
Ped Vol Crossing Leg, #/h	0		0		0		0		
Ped Cap Adj	1.000		1.000		1.000		1.000		
Approach Delay, s/veh	578.7		139.9		117.6		346.5		
Approach LOS	F		F		F		F		
Lane	Left	Right	Left	Right	Left	Right	Left	Right	
Designated Moves	L	TR	LT	TR	LT	TR	LT	TR	
Assumed Moves	L	TR	LT	TR	LT	TR	LT	TR	
RT Channelized									
Lane Util	0.022	0.978	0.470	0.530	0.470	0.530	0.470	0.530	
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	37	1657	658	743	508	573	501	566	
Cap Entry Lane, veh/h	656	729	538	607	439	503	292	345	
Entry HV Adj Factor	0.973	0.971	0.972	0.970	0.971	0.971	0.972	0.970	
Flow Entry, veh/h	36	1609	639	721	494	557	487	549	
Cap Entry, veh/h	639	708	523	589	427	489	284	335	
V/C Ratio	0.056	2.272	1.223	1.224	1.156	1.138	1.714	1.639	
Control Delay, s/veh	6.3	591.5	141.5	138.5	123.5	112.3	366.8	328.5	
LOS	A	F	F	F	F	F	F	F	
95th %tile Queue, veh	0	118	24	27	18	19	31	33	

Intersection										
Intersection Delay, s/veh57.7										
Intersection LOS F										
Approach	EB			WB			NB			SB
Entry Lanes	2			2			2			2
Conflicting Circle Lanes	2			2			2			2
Adj Approach Flow, veh/h	1527			395			950			521
Demand Flow Rate, veh/h	1573			407			979			537
Vehicles Circulating, veh/h	517			858			1431			770
Vehicles Exiting, veh/h	672			1552			494			495
Ped Vol Crossing Leg, #/h	0			0			0			0
Ped Cap Adj	1.000			1.000			1.000			1.000
Approach Delay, s/veh	21.2			9.9			163.4			8.4
Approach LOS	C			A			F			A
Lane	Left	Right	Bypass	Left	Right	Left	Right	Left	Right	Bypass
Designated Moves	LT	TR	R	LT	TR	LT	TR	LT	TR	R
Assumed Moves	LT	TR		LT	TR	LT	TR	LT	TR	
RT Channelized			Yield							Yield
Lane Util	0.470	0.530		0.469	0.531	0.470	0.530	0.470	0.530	
Follow-Up Headway, s	2.667	2.535		2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328		4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	662	746	165	191	216	460	519	197	222	118
Cap Entry Lane, veh/h	839	915	933	613	685	362	421	665	738	802
Entry HV Adj Factor	0.971	0.971	0.971	0.972	0.970	0.971	0.970	0.970	0.970	0.971
Flow Entry, veh/h	643	725	160	186	209	446	503	191	215	115
Cap Entry, veh/h	814	889	906	596	664	351	408	645	716	779
V/C Ratio	0.789	0.815	0.177	0.312	0.315	1.271	1.234	0.296	0.301	0.148
Control Delay, s/veh	22.7	23.3	5.7	10.3	9.5	174.1	153.9	9.4	8.7	6.2
LOS	C	C	A	B	A	F	F	A	A	A
95th %tile Queue, veh	8	9	1	1	1	20	21	1	1	1

Intersection										
Intersection Delay, s/veh91.2										
Intersection LOS F										
Approach	EB			WB			NB			SB
Entry Lanes	2			2			2			2
Conflicting Circle Lanes	2			2			2			2
Adj Approach Flow, veh/h	1645			1360			1050			1036
Demand Flow Rate, veh/h	1694			1401			1081			1067
Vehicles Circulating, veh/h	784			1000			1220			1663
Vehicles Exiting, veh/h	1498			1301			780			738
Ped Vol Crossing Leg, #/h	0			0			0			0
Ped Cap Adj	1.000			1.000			1.000			1.000
Approach Delay, s/veh	30.6			139.9			117.6			96.7
Approach LOS	D			F			F			F
Lane	Left	Right	Bypass	Left	Right	Left	Right	Left	Right	Bypass
Designated Moves	LT	TR	R	LT	TR	LT	TR	LT	TR	R
Assumed Moves	LT	TR		LT	TR	LT	TR	LT	TR	
RT Channelized			Yield							Yield
Lane Util	0.470	0.530		0.470	0.530	0.470	0.530	0.470	0.530	
Follow-Up Headway, s	2.667	2.535		2.667	2.535	2.667	2.535	2.667	2.535	
Critical Headway, s	4.645	4.328		4.645	4.328	4.645	4.328	4.645	4.328	
Entry Flow, veh/h	572	644	478	658	743	508	573	291	328	448
Cap Entry Lane, veh/h	656	729	732	538	607	439	503	292	345	398
Entry HV Adj Factor	0.970	0.972	0.971	0.972	0.970	0.971	0.971	0.971	0.971	0.971
Flow Entry, veh/h	555	626	464	639	721	494	557	283	319	435
Cap Entry, veh/h	637	709	711	523	589	427	489	284	335	386
V/C Ratio	0.872	0.883	0.653	1.223	1.224	1.156	1.138	0.995	0.950	1.127
Control Delay, s/veh	36.4	35.3	17.3	141.5	138.5	123.5	112.3	92.0	72.8	117.4
LOS	E	E	C	F	F	F	F	F	F	F
95th %tile Queue, veh	10	11	5	24	27	18	19	10	10	16

HCM 6th Signalized Intersection Summary
219: Town Center Blvd/Tegler Dr & Bergen Blvd

Existing AM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↗↗	↕↕		↗↗	↕↕	
Traffic Volume (veh/h)	28	155	62	197	143	59	88	161	142	84	184	47
Future Volume (veh/h)	28	155	62	197	143	59	88	161	142	84	184	47
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	30	168	67	214	155	64	96	175	154	91	200	51
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	156	665	248	419	344	145	602	508	420	558	767	191
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.11	0.28	0.28	0.11	0.27	0.27
Sat Flow, veh/h	190	2249	839	875	1166	491	1767	1833	1513	1767	2797	696
Grp Volume(v), veh/h	142	0	123	225	0	208	96	168	161	91	124	127
Grp Sat Flow(s),veh/h/ln	1740	0	1538	932	0	1600	1767	1763	1583	1767	1763	1730
Q Serve(g_s), s	0.0	0.0	2.7	7.9	0.0	4.6	1.5	3.3	3.6	1.5	2.4	2.5
Cycle Q Clear(g_c), s	2.6	0.0	2.7	10.5	0.0	4.6	1.5	3.3	3.6	1.5	2.4	2.5
Prop In Lane	0.21		0.55	0.95		0.31	1.00		0.96	1.00		0.40
Lane Grp Cap(c), veh/h	614	0	454	436	0	473	602	489	439	558	483	475
V/C Ratio(X)	0.23	0.00	0.27	0.51	0.00	0.44	0.16	0.34	0.37	0.16	0.26	0.27
Avail Cap(c_a), veh/h	654	0	492	465	0	512	690	605	543	651	605	593
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	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	11.8	0.0	11.8	15.7	0.0	12.5	8.8	12.6	12.7	9.0	12.4	12.4
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.9	0.0	0.6	0.1	0.4	0.5	0.1	0.3	0.3
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	0.8	0.0	0.7	1.7	0.0	1.3	0.4	1.0	1.0	0.4	0.7	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.9	0.0	12.1	16.7	0.0	13.1	9.0	13.0	13.2	9.1	12.7	12.7
LnGrp LOS	B	A	B	B	A	B	A	B	B	A	B	B
Approach Vol, veh/h	265		433			425			342			
Approach Delay, s/veh	12.0		15.0			12.2			11.7			
Approach LOS	B		B			B			B			
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	7.7	17.1	17.9		8.8	17.0	17.9					
Change Period (Y+Rc), s	4.0	5.0	5.0		4.0	5.0	5.0					
Max Green Setting (Gmax), s	15.0	15.0	14.0		7.0	15.0	14.0					
Max Q Clear Time (g_c+I1/3), s	5.6	5.6	4.7		3.5	4.5	12.5					
Green Ext Time (p_c), s	0.1	1.2	0.9		0.1	0.9	0.4					
Intersection Summary												
HCM 6th Ctrl Delay			12.9									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
219: Town Center Blvd/Tegler Dr & Bergen Blvd

Existing PM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↗↔	↕↔		↗	↕↔	
Traffic Volume (veh/h)	28	155	62	197	143	59	88	161	142	84	184	47
Future Volume (veh/h)	28	155	62	197	143	59	88	161	142	84	184	47
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	30	168	67	214	155	64	96	175	154	91	200	51
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	156	665	248	419	344	145	602	508	420	558	767	191
Arrive On Green	0.30	0.30	0.30	0.30	0.30	0.30	0.11	0.28	0.28	0.11	0.27	0.27
Sat Flow, veh/h	190	2249	839	875	1166	491	1767	1833	1513	1767	2797	696
Grp Volume(v), veh/h	142	0	123	225	0	208	96	168	161	91	124	127
Grp Sat Flow(s),veh/h/ln	1740	0	1538	932	0	1600	1767	1763	1583	1767	1763	1730
Q Serve(g_s), s	0.0	0.0	2.7	7.9	0.0	4.6	1.5	3.3	3.6	1.5	2.4	2.5
Cycle Q Clear(g_c), s	2.6	0.0	2.7	10.5	0.0	4.6	1.5	3.3	3.6	1.5	2.4	2.5
Prop In Lane	0.21		0.55	0.95		0.31	1.00		0.96	1.00		0.40
Lane Grp Cap(c), veh/h	614	0	454	436	0	473	602	489	439	558	483	475
V/C Ratio(X)	0.23	0.00	0.27	0.51	0.00	0.44	0.16	0.34	0.37	0.16	0.26	0.27
Avail Cap(c_a), veh/h	654	0	492	465	0	512	690	605	543	651	605	593
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	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	11.8	0.0	11.8	15.7	0.0	12.5	8.8	12.6	12.7	9.0	12.4	12.4
Incr Delay (d2), s/veh	0.2	0.0	0.3	0.9	0.0	0.6	0.1	0.4	0.5	0.1	0.3	0.3
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	0.8	0.0	0.7	1.7	0.0	1.3	0.4	1.0	1.0	0.4	0.7	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.9	0.0	12.1	16.7	0.0	13.1	9.0	13.0	13.2	9.1	12.7	12.7
LnGrp LOS	B	A	B	B	A	B	A	B	B	A	B	B
Approach Vol, veh/h	265		433			425			342			
Approach Delay, s/veh	12.0		15.0			12.2			11.7			
Approach LOS	B		B			B			B			
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	7.7	17.1	17.9		8.8	17.0	17.9					
Change Period (Y+Rc), s	4.0	5.0	5.0		4.0	5.0	5.0					
Max Green Setting (Gmax), s	15.0	15.0	14.0		7.0	15.0	14.0					
Max Q Clear Time (g_c+I1/3), s	5.6	5.6	4.7		3.5	4.5	12.5					
Green Ext Time (p_c), s	0.1	1.2	0.9		0.1	0.9	0.4					
Intersection Summary												
HCM 6th Ctrl Delay			12.9									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary 219: Town Center Blvd/Tegler Dr & Bergen Blvd

Future AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↗↔	↗↔		↗↔	↗↔	
Traffic Volume (veh/h)	28	413	62	888	869	59	88	413	991	98	547	47
Future Volume (veh/h)	28	413	62	888	869	59	88	413	991	98	547	47
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	30	449	67	965	945	64	96	449	1077	107	595	51
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	95	975	150	0	1252	85	175	460	411	318	874	75
Arrive On Green	0.37	0.37	0.37	0.00	0.37	0.37	0.10	0.26	0.26	0.10	0.27	0.27
Sat Flow, veh/h	55	2610	403	0	3351	227	1767	1763	1572	1767	3286	281
Grp Volume(v), veh/h	277	0	269	0	497	512	96	449	1077	107	319	327
Grp Sat Flow(s),veh/h/ln	1451	0	1616	0	1763	1815	1767	1763	1572	1767	1763	1805
Q Serve(g_s), s	0.7	0.0	6.7	0.0	13.2	13.2	2.8	13.5	14.0	2.2	8.7	8.7
Cycle Q Clear(g_c), s	13.9	0.0	6.7	0.0	13.2	13.2	2.8	13.5	14.0	2.2	8.7	8.7
Prop In Lane	0.11		0.25	0.00		0.13	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	617	0	604	0	659	678	175	460	411	318	469	480
V/C Ratio(X)	0.45	0.00	0.45	0.00	0.75	0.75	0.55	0.98	2.62	0.34	0.68	0.68
Avail Cap(c_a), veh/h	617	0	604	0	921	948	297	460	411	431	469	480
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	0.0	12.6	0.0	14.6	14.6	23.0	19.6	19.8	13.3	17.6	17.6
Incr Delay (d2), s/veh	0.5	0.0	0.5	0.0	2.3	2.2	2.6	35.5	737.3	0.6	4.0	3.9
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	2.0	0.0	1.9	0.0	4.4	4.5	1.1	9.0	88.2	0.7	3.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.0	0.0	13.1	0.0	16.9	16.9	25.6	55.1	757.1	13.9	21.6	21.6
LnGrp LOS	B	A	B	A	B	B	C	E	F	B	C	C
Approach Vol, veh/h	546				1009		1622				753	
Approach Delay, s/veh	13.1				16.9		519.5				20.5	
Approach LOS	B				B		F				C	
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	9.6	19.0	0.0	25.0	9.3	19.3	25.0					
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	5.0					
Max Green Setting (Gmax), s	9.6	14.0	9.0	15.0	9.0	14.0	28.0					
Max Q Clear Time (g_c+I), s	14.2	16.0	0.0	15.9	4.8	10.7	15.2					
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.1	1.1	4.8					
Intersection Summary												
HCM 6th Ctrl Delay	224.5											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary 219: Town Center Blvd/Tegler Dr & Bergen Blvd

Future PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔↔			↔↔		↗	↕↔		↗	↕↔	
Traffic Volume (veh/h)	28	413	62	888	869	59	88	413	991	98	547	47
Future Volume (veh/h)	28	413	62	888	869	59	88	413	991	98	547	47
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	30	449	67	965	945	64	96	449	1077	107	595	51
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	95	975	150	0	1252	85	175	460	411	318	874	75
Arrive On Green	0.37	0.37	0.37	0.00	0.37	0.37	0.10	0.26	0.26	0.10	0.27	0.27
Sat Flow, veh/h	55	2610	403	0	3351	227	1767	1763	1572	1767	3286	281
Grp Volume(v), veh/h	277	0	269	0	497	512	96	449	1077	107	319	327
Grp Sat Flow(s),veh/h/ln	1451	0	1616	0	1763	1815	1767	1763	1572	1767	1763	1805
Q Serve(g_s), s	0.7	0.0	6.7	0.0	13.2	13.2	2.8	13.5	14.0	2.2	8.7	8.7
Cycle Q Clear(g_c), s	13.9	0.0	6.7	0.0	13.2	13.2	2.8	13.5	14.0	2.2	8.7	8.7
Prop In Lane	0.11		0.25	0.00		0.13	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	617	0	604	0	659	678	175	460	411	318	469	480
V/C Ratio(X)	0.45	0.00	0.45	0.00	0.75	0.75	0.55	0.98	2.62	0.34	0.68	0.68
Avail Cap(c_a), veh/h	617	0	604	0	921	948	297	460	411	431	469	480
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(l)	1.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	0.0	12.6	0.0	14.6	14.6	23.0	19.6	19.8	13.3	17.6	17.6
Incr Delay (d2), s/veh	0.5	0.0	0.5	0.0	2.3	2.2	2.6	35.5	737.3	0.6	4.0	3.9
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	2.0	0.0	1.9	0.0	4.4	4.5	1.1	9.0	88.2	0.7	3.4	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.0	0.0	13.1	0.0	16.9	16.9	25.6	55.1	757.1	13.9	21.6	21.6
LnGrp LOS	B	A	B	A	B	B	C	E	F	B	C	C
Approach Vol, veh/h	546		1009			1622			753			
Approach Delay, s/veh	13.1		16.9			519.5			20.5			
Approach LOS	B		B			F			C			
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	9.6	19.0	0.0	25.0	9.3	19.3	25.0					
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	5.0					
Max Green Setting (Gmax), s	9.6	14.0	9.0	15.0	9.0	14.0	28.0					
Max Q Clear Time (g_c+I1), s	14.2	16.0	0.0	15.9	4.8	10.7	15.2					
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.1	1.1	4.8					
Intersection Summary												
HCM 6th Ctrl Delay		224.5										
HCM 6th LOS		F										

HCM 6th Signalized Intersection Summary

219: Town Center Blvd/Tegler Dr & Bergen Blvd

Future AM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	729	412	254	337	75	309	179	359	49	533	33
Future Volume (veh/h)	18	729	412	254	337	75	309	179	359	49	533	33
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	20	792	448	276	366	82	336	195	390	53	579	36
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	50	751	416	305	1402	311	334	1052	1072	318	562	35
Arrive On Green	0.36	0.36	0.36	0.09	0.49	0.49	0.19	0.30	0.30	0.06	0.17	0.17
Sat Flow, veh/h	25	2113	1171	3428	2868	636	1767	3526	2768	1767	3371	209
Grp Volume(v), veh/h	695	0	565	276	223	225	336	195	390	53	302	313
Grp Sat Flow(s),veh/h/ln	1831	0	1478	1714	1763	1741	1767	1763	1384	1767	1763	1818
Q Serve(g_s), s	15.3	0.0	32.0	7.2	6.7	6.8	17.0	3.7	9.0	2.2	15.0	15.0
Cycle Q Clear(g_c), s	32.0	0.0	32.0	7.2	6.7	6.8	17.0	3.7	9.0	2.2	15.0	15.0
Prop In Lane	0.03		0.79	1.00		0.37	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	692	0	525	305	862	851	334	1052	1072	318	294	303
V/C Ratio(X)	1.00	0.00	1.08	0.91	0.26	0.26	1.01	0.19	0.36	0.17	1.03	1.03
Avail Cap(c_a), veh/h	692	0	525	305	862	851	334	1052	1072	355	294	303
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	0.00	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	29.8	0.0	29.0	40.6	13.5	13.5	36.5	23.4	19.7	28.0	37.5	37.5
Incr Delay (d2), s/veh	35.1	0.0	61.2	28.8	0.2	0.2	50.9	0.1	0.2	0.2	60.2	60.2
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	20.7	0.0	19.2	4.1	2.4	2.4	11.6	1.5	2.7	0.9	11.0	11.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	65.0	0.0	90.2	69.4	13.6	13.7	87.4	23.5	19.9	28.2	97.7	97.7
LnGrp LOS	F		F	E	B	B	F	C	B	C	F	F
Approach Vol, veh/h	1260			724			921			668		
Approach Delay, s/veh	76.3			34.9			45.3			92.2		
Approach LOS	E			C			D			F		
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	9.1	31.9	12.0	37.0	21.0	20.0	49.0					
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	5.0					
Max Green Setting (Gmax), s	7.0	25.0	8.0	32.0	17.0	15.0	44.0					
Max Q Clear Time (g_c+I+2), s	14.2	11.0	9.2	34.0	19.0	17.0	8.8					
Green Ext Time (p_c), s	0.0	2.3	0.0	0.0	0.0	0.0	2.5					

Intersection Summary

HCM 6th Ctrl Delay, s/veh	62.9
HCM 6th LOS	E

HCM 6th Signalized Intersection Summary

219: Town Center Blvd/Tegler Dr & Bergen Blvd

Future PM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	413	62	888	869	59	88	413	991	98	547	47
Future Volume (veh/h)	28	413	62	888	869	59	88	413	991	98	547	47
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	30	449	67	965	945	64	96	449	1077	107	595	51
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	64	525	77	1007	1780	121	127	837	1470	254	786	67
Arrive On Green	0.19	0.19	0.19	0.29	0.53	0.53	0.07	0.24	0.24	0.07	0.24	0.24
Sat Flow, veh/h	100	2733	403	3428	3351	227	1767	3526	2768	1767	3286	281
Grp Volume(v), veh/h	277	0	269	965	497	512	96	449	1077	107	319	327
Grp Sat Flow(s),veh/h/ln	1621	0	1616	1714	1763	1815	1767	1763	1384	1767	1763	1805
Q Serve(g_s), s	8.1	0.0	14.2	24.5	16.3	16.3	4.7	9.9	21.0	3.9	14.9	14.9
Cycle Q Clear(g_c), s	14.5	0.0	14.2	24.5	16.3	16.3	4.7	9.9	21.0	3.9	14.9	14.9
Prop In Lane	0.11		0.25	1.00		0.13	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	357	0	311	1007	936	964	127	837	1470	254	421	431
V/C Ratio(X)	0.78	0.00	0.86	0.96	0.53	0.53	0.76	0.54	0.73	0.42	0.76	0.76
Avail Cap(c_a), veh/h	373	0	329	1007	956	984	140	837	1470	264	421	431
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	0.00	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	34.3	0.0	34.6	30.7	13.5	13.5	40.3	29.5	15.9	23.2	31.3	31.3
Incr Delay (d2), s/veh	9.7	0.0	19.9	19.0	0.5	0.5	19.3	0.7	1.9	1.1	7.7	7.6
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	6.4	0.0	7.0	11.9	5.6	5.8	2.6	4.0	7.4	1.6	6.8	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.0	0.0	54.5	49.7	14.1	14.1	59.6	30.2	17.9	24.3	38.9	38.9
LnGrp LOS	D		D	D	B	B	E	C	B	C	D	D
Approach Vol, veh/h	546		1974				1622			753		
Approach Delay, s/veh	49.2		31.5				23.7			36.8		
Approach LOS	D		C				C			D		
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	26.0	30.0	22.0	10.3	26.2	52.0						
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	5.0					
Max Green Setting (Gmax), s	21.0	26.0	18.0	7.0	21.0	48.0						
Max Q Clear Time (g_c+1/5), s	23.0	26.5	16.5	6.7	16.9	18.3						
Green Ext Time (p_c), s	0.0	0.0	0.0	0.5	0.0	1.4	6.7					

Intersection Summary

HCM 6th Ctrl Delay, s/veh	31.7
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary

220: Harrell Pkwy/Bergen Blvd & Campus Pkwy

Existing AM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	1242	66	359	1276	423	89	144	346	335	148	119
Future Volume (veh/h)	109	1242	66	359	1276	423	89	144	346	335	148	119
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	118	1350	72	390	1387	460	97	157	376	364	161	129
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	146	1302	581	382	1930	635	284	201	170	326	346	260
Arrive On Green	0.08	0.37	0.37	0.22	0.51	0.51	0.06	0.11	0.11	0.14	0.18	0.18
Sat Flow, veh/h	1767	3526	1572	1767	3769	1240	1767	1856	1572	1767	1919	1440
Grp Volume(v), veh/h	118	1350	72	390	1242	605	97	157	376	364	147	143
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1689	1632	1767	1856	1572	1767	1763	1596
Q Serve(g_s), s	7.3	41.0	2.6	24.0	31.5	31.9	5.3	9.2	7.9	15.0	8.3	9.0
Cycle Q Clear(g_c), s	7.3	41.0	2.6	24.0	31.5	31.9	5.3	9.2	7.9	15.0	8.3	9.0
Prop In Lane	1.00		1.00	1.00		0.76	1.00		1.00	1.00		0.90
Lane Grp Cap(c), veh/h	146	1302	581	382	1729	836	284	201	170	326	318	288
V/C Ratio(X)	0.81	1.04	0.12	1.02	0.72	0.72	0.34	0.78	2.21	1.12	0.46	0.50
Avail Cap(c_a), veh/h	239	1302	581	382	1729	836	284	201	170	326	318	288
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(l)	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	50.1	35.0	13.8	43.5	20.9	21.0	40.4	48.2	21.3	39.6	40.7	40.9
Incr Delay (d2), s/veh	10.1	35.0	0.1	51.4	1.5	3.1	0.7	18.0	564.0	85.2	1.0	1.3
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	8.5	22.7	1.2	15.5	11.6	11.8	2.3	5.1	31.0	9.2	3.6	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.2	70.0	13.9	94.9	22.4	24.1	41.1	66.2	585.3	124.9	41.7	42.3
LnGrp LOS	E	F	B	F	C	C	D	E	F	F	D	D
Approach Vol, veh/h	1540				2237		630				654	
Approach Delay, s/veh	66.6				35.5		372.2				88.1	
Approach LOS	E				D		F				F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	17.0	29.0	46.0	11.0	25.0	13.2	61.8				
Change Period (Y+Rc), s	4.0	5.0	5.0	* 5	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	15.0	12.0	24.0	* 41	7.0	20.0	15.0	50.0				
Max Q Clear Time (g_c+117), s	11.2	11.2	26.0	43.0	7.3	11.0	9.3	33.9				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.0	0.0	1.0	0.1	10.7				

Intersection Summary

HCM 6th Ctrl Delay	93.7
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

220: Harrell Pkwy/Bergen Blvd & Campus Pkwy

Existing PM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	109	1242	66	359	1276	423	89	144	346	335	148	119
Future Volume (veh/h)	109	1242	66	359	1276	423	89	144	346	335	148	119
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	118	1350	72	390	1387	460	97	157	376	364	161	129
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	146	1302	581	382	1930	635	284	201	170	326	346	260
Arrive On Green	0.08	0.37	0.37	0.22	0.51	0.51	0.06	0.11	0.11	0.14	0.18	0.18
Sat Flow, veh/h	1767	3526	1572	1767	3769	1240	1767	1856	1572	1767	1919	1440
Grp Volume(v), veh/h	118	1350	72	390	1242	605	97	157	376	364	147	143
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1689	1632	1767	1856	1572	1767	1763	1596
Q Serve(g_s), s	7.3	41.0	2.6	24.0	31.5	31.9	5.3	9.2	7.9	15.0	8.3	9.0
Cycle Q Clear(g_c), s	7.3	41.0	2.6	24.0	31.5	31.9	5.3	9.2	7.9	15.0	8.3	9.0
Prop In Lane	1.00		1.00	1.00		0.76	1.00		1.00	1.00		0.90
Lane Grp Cap(c), veh/h	146	1302	581	382	1729	836	284	201	170	326	318	288
V/C Ratio(X)	0.81	1.04	0.12	1.02	0.72	0.72	0.34	0.78	2.21	1.12	0.46	0.50
Avail Cap(c_a), veh/h	239	1302	581	382	1729	836	284	201	170	326	318	288
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	50.1	35.0	13.8	43.5	20.9	21.0	40.4	48.2	21.3	39.6	40.7	40.9
Incr Delay (d2), s/veh	10.1	35.0	0.1	51.4	1.5	3.1	0.7	18.0	564.0	85.2	1.0	1.3
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	8.5	22.7	1.2	15.5	11.6	11.8	2.3	5.1	31.0	9.2	3.6	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.2	70.0	13.9	94.9	22.4	24.1	41.1	66.2	585.3	124.9	41.7	42.3
LnGrp LOS	E	F	B	F	C	C	D	E	F	F	D	D
Approach Vol, veh/h	1540			2237			630			654		
Approach Delay, s/veh	66.6			35.5			372.2			88.1		
Approach LOS	E			D			F			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	17.0	29.0	46.0	11.0	25.0	13.2	61.8				
Change Period (Y+Rc), s	4.0	5.0	5.0	* 5	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	15.0	12.0	24.0	* 41	7.0	20.0	15.0	50.0				
Max Q Clear Time (g_c+117), s	11.2	11.2	26.0	43.0	7.3	11.0	9.3	33.9				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.0	0.0	1.0	0.1	10.7				

Intersection Summary

HCM 6th Ctrl Delay	93.7
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

220: Harrell Pkwy/Bergen Blvd & Campus Pkwy

Future AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	629	2546	66	405	2344	836	89	313	401	789	257	610
Future Volume (veh/h)	629	2546	66	405	2344	836	89	313	401	789	257	610
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			
Adj Sat Flow, veh/h/ln	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	684	2767	72	440	2548	909	97	340	436	858	279	663
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	328	1378	614	222	1284	410	141	246	208	398	537	479
Arrive On Green	0.19	0.39	0.39	0.13	0.34	0.34	0.05	0.13	0.13	0.23	0.30	0.30
Sat Flow, veh/h	1767	3526	1572	1767	3800	1214	1767	1856	1572	1767	1763	1572
Grp Volume(v), veh/h	684	2767	72	440	2231	1226	97	340	436	858	279	663
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1689	1637	1767	1856	1572	1767	1763	1572
Q Serve(g_s), s	28.0	59.0	3.6	19.0	51.0	51.0	7.1	20.0	15.6	34.0	19.7	46.0
Cycle Q Clear(g_c), s	28.0	59.0	3.6	19.0	51.0	51.0	7.1	20.0	15.6	34.0	19.7	46.0
Prop In Lane	1.00		1.00	1.00		0.74	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	328	1378	614	222	1141	553	141	246	208	398	537	479
V/C Ratio(X)	2.09	2.01	0.12	1.98	1.96	2.22	0.69	1.38	2.09	2.16	0.52	1.38
Avail Cap(c_a), veh/h	328	1378	614	222	1141	553	141	246	208	398	537	479
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	61.5	46.0	19.5	66.0	50.0	50.0	54.3	65.5	39.7	58.5	43.4	52.5
Incr Delay (d2), s/veh	499.6	456.5	0.1	456.2	433.4	553.6	13.0	195.8	508.0	528.6	0.9	185.4
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	57.8	112.2	1.7	36.6	89.5	105.2	3.6	22.7	35.3	73.3	8.6	42.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	561.1	502.5	19.6	522.2	483.4	603.6	67.3	261.3	547.7	587.1	44.3	237.9
LnGrp LOS	F	F	B	F	F	F	E	F	F	F	D	F
Approach Vol, veh/h	3523				3897		873				1800	
Approach Delay, s/veh	504.0				525.6		382.8				374.4	
Approach LOS	F				F		F				F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	38.0	25.0	24.0	64.0	12.0	51.0	32.0	56.0				
Change Period (Y+Rc), s	4.0	5.0	5.0	* 5	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	34.0	20.0	19.0	* 59	8.0	46.0	28.0	50.0				
Max Q Clear Time (g_c+Qc), s	36.0	22.0	21.0	61.0	9.1	48.0	30.0	53.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 478.7

HCM 6th LOS F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

220: Harrell Pkwy/Bergen Blvd & Campus Pkwy

Future PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	629	2546	66	405	2344	836	89	313	401	789	257	610
Future Volume (veh/h)	629	2546	66	405	2344	836	89	313	401	789	257	610
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	684	2767	72	440	2548	909	97	340	436	858	279	663
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	328	1378	614	222	1284	410	141	246	208	398	537	479
Arrive On Green	0.19	0.39	0.39	0.13	0.34	0.34	0.05	0.13	0.13	0.23	0.30	0.30
Sat Flow, veh/h	1767	3526	1572	1767	3800	1214	1767	1856	1572	1767	1763	1572
Grp Volume(v), veh/h	684	2767	72	440	2231	1226	97	340	436	858	279	663
Grp Sat Flow(s),veh/h/ln	1767	1763	1572	1767	1689	1637	1767	1856	1572	1767	1763	1572
Q Serve(g_s), s	28.0	59.0	3.6	19.0	51.0	51.0	7.1	20.0	15.6	34.0	19.7	46.0
Cycle Q Clear(g_c), s	28.0	59.0	3.6	19.0	51.0	51.0	7.1	20.0	15.6	34.0	19.7	46.0
Prop In Lane	1.00		1.00	1.00		0.74	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	328	1378	614	222	1141	553	141	246	208	398	537	479
V/C Ratio(X)	2.09	2.01	0.12	1.98	1.96	2.22	0.69	1.38	2.09	2.16	0.52	1.38
Avail Cap(c_a), veh/h	328	1378	614	222	1141	553	141	246	208	398	537	479
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	61.5	46.0	19.5	66.0	50.0	50.0	54.3	65.5	39.7	58.5	43.4	52.5
Incr Delay (d2), s/veh	499.6	456.5	0.1	456.2	433.4	553.6	13.0	195.8	508.0	528.6	0.9	185.4
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	57.8	112.2	1.7	36.6	89.5	105.2	3.6	22.7	35.3	73.3	8.6	42.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	561.1	502.5	19.6	522.2	483.4	603.6	67.3	261.3	547.7	587.1	44.3	237.9
LnGrp LOS	F	F	B	F	F	F	E	F	F	F	D	F
Approach Vol, veh/h	3523		3897			873			1800			
Approach Delay, s/veh	504.0		525.6			382.8			374.4			
Approach LOS	F		F			F			F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	38.0	25.0	24.0	64.0	12.0	51.0	32.0	56.0				
Change Period (Y+Rc), s	4.0	5.0	5.0	* 5	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	34.0	20.0	19.0	* 59	8.0	46.0	28.0	50.0				
Max Q Clear Time (g_c+Yc), s	36.0	22.0	21.0	61.0	9.1	48.0	30.0	53.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 478.7

HCM 6th LOS F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

220: Harrell Pkwy/Bergen Blvd & Campus Pkwy

Future AM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	256	1093	33	438	879	392	32	1119	888	293	852	216
Future Volume (veh/h)	256	1093	33	438	879	392	32	1119	888	293	852	216
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	278	1188	36	476	955	426	35	1216	965	318	926	235
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	295	906	337	363	1040	437	300	958	1723	250	1952	871
Arrive On Green	0.09	0.18	0.18	0.11	0.21	0.21	0.04	0.52	0.52	0.07	0.55	0.55
Sat Flow, veh/h	3428	5066	1572	3428	5066	1572	1767	1856	2768	3428	3526	1572
Grp Volume(v), veh/h	278	1188	36	476	955	426	35	1216	965	318	926	235
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1572	1767	1856	1384	1714	1763	1572
Q Serve(g_s), s	12.2	27.0	2.1	16.0	27.9	31.0	1.4	78.0	9.2	11.0	24.0	11.8
Cycle Q Clear(g_c), s	12.2	27.0	2.1	16.0	27.9	31.0	1.4	78.0	9.2	11.0	24.0	11.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	295	906	337	363	1040	437	300	958	1723	250	1952	871
V/C Ratio(X)	0.94	1.31	0.11	1.31	0.92	0.97	0.12	1.27	0.56	1.27	0.47	0.27
Avail Cap(c_a), veh/h	295	906	337	363	1040	437	319	958	1723	250	1952	871
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	68.6	62.0	28.1	67.5	58.8	54.0	16.7	36.5	6.7	70.0	20.4	17.7
Incr Delay (d2), s/veh	37.1	148.1	0.1	158.1	12.6	36.1	0.2	129.2	0.4	150.4	0.2	0.2
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	6.8	23.8	0.9	14.9	12.9	20.0	0.6	67.5	4.0	10.0	9.6	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	105.7	210.1	28.2	225.6	71.4	90.1	16.8	165.7	7.1	220.4	20.6	17.8
LnGrp LOS	F	F	C	F	E	F	B	F	A	F	C	B
Approach Vol, veh/h	1502		1857			2216			1479			
Approach Delay, s/veh	186.5		115.2			94.3			63.1			
Approach LOS	F		F			F			E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.0	83.0	21.0	32.0	9.4	88.6	17.0	36.0				
Change Period (Y+Rc), s	4.0	5.0	5.0	* 5	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	1.0	78.0	16.0	* 27	7.0	82.0	13.0	30.0				
Max Q Clear Time (g_c+1/3C), s	11.0	80.0	18.0	29.0	3.4	26.0	14.2	33.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	8.4	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay, s/veh	112.9
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

220: Harrell Pkwy/Bergen Blvd & Campus Pkwy

Future PM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	629	2546	66	405	2344	836	89	313	401	789	257	610
Future Volume (veh/h)	629	2546	66	405	2344	836	89	313	401	789	257	610
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	684	2767	72	440	2548	909	97	340	436	858	279	663
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	499	2147	739	318	1912	896	227	307	715	658	1097	489
Arrive On Green	0.15	0.42	0.42	0.09	0.38	0.38	0.05	0.17	0.17	0.19	0.31	0.31
Sat Flow, veh/h	3428	5066	1572	3428	5066	1572	1767	1856	2768	3428	3526	1572
Grp Volume(v), veh/h	684	2767	72	440	2548	909	97	340	436	858	279	663
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1714	1689	1572	1767	1856	1384	1714	1763	1572
Q Serve(g_s), s	22.0	64.0	2.5	14.0	57.0	57.0	6.9	25.0	6.2	29.0	8.9	47.0
Cycle Q Clear(g_c), s	22.0	64.0	2.5	14.0	57.0	57.0	6.9	25.0	6.2	29.0	8.9	47.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	499	2147	739	318	1912	896	227	307	715	658	1097	489
V/C Ratio(X)	1.37	1.29	0.10	1.38	1.33	1.01	0.43	1.11	0.61	1.30	0.25	1.35
Avail Cap(c_a), veh/h	499	2147	739	318	1912	896	227	307	715	658	1097	489
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	64.5	43.5	10.6	68.5	47.0	32.5	49.6	63.0	23.0	61.0	38.9	52.0
Incr Delay (d2), s/veh	178.7	133.6	0.1	191.4	153.3	33.9	1.3	83.1	1.5	147.3	0.1	172.6
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	21.8	52.1	1.0	14.5	50.2	38.6	3.1	18.7	4.2	25.8	3.9	41.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	243.2	177.1	10.7	259.9	200.3	66.4	50.9	146.1	24.5	208.3	39.0	224.6
LnGrp LOS	F	F	B	F	F	F	D	F	C	F	D	F
Approach Vol, veh/h	3523			3897			873			1800		
Approach Delay, s/veh	186.5			175.8			74.8			188.0		
Approach LOS	F			F			E			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.0	30.0	19.0	69.0	11.0	52.0	26.0	62.0				
Change Period (Y+Rc), s	4.0	5.0	5.0	* 5	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	29.0	25.0	14.0	* 64	7.0	47.0	22.0	56.0				
Max Q Clear Time (g_c+Y1), s	41.0	27.0	16.0	66.0	8.9	49.0	24.0	59.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay, s/veh 173.0
HCM 6th LOS F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

221: Town Center Blvd & Campus Pkwy

Existing AM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰ ↱ ↲ ↳			↰ ↱ ↲ ↳			↰ ↱ ↲ ↳	↰ ↱ ↲ ↳	↰ ↱ ↲ ↳	↰ ↱ ↲ ↳	↰ ↱ ↲ ↳	
Traffic Volume (veh/h)	74	1193	195	142	1269	44	96	29	141	34	32	72
Future Volume (veh/h)	74	1193	195	142	1269	44	96	29	141	34	32	72
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	80	1297	212	154	1379	48	104	32	153	37	35	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	176	1400	229	193	1571	55	447	430	364	436	98	218
Arrive On Green	0.10	0.32	0.32	0.11	0.31	0.31	0.09	0.23	0.23	0.05	0.19	0.19
Sat Flow, veh/h	1767	4387	717	1767	5026	175	1767	1856	1572	1767	511	1139
Grp Volume(v), veh/h	80	998	511	154	927	500	104	32	153	37	0	113
Grp Sat Flow(s),veh/h/ln	1767	1689	1726	1767	1689	1824	1767	1856	1572	1767	0	1650
Q Serve(g_s), s	2.7	17.9	17.9	5.3	16.3	16.3	2.8	0.8	5.2	1.0	0.0	3.7
Cycle Q Clear(g_c), s	2.7	17.9	17.9	5.3	16.3	16.3	2.8	0.8	5.2	1.0	0.0	3.7
Prop In Lane	1.00		0.42	1.00		0.10	1.00		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	176	1078	551	193	1055	570	447	430	364	436	0	315
V/C Ratio(X)	0.45	0.93	0.93	0.80	0.88	0.88	0.23	0.07	0.42	0.08	0.00	0.36
Avail Cap(c_a), veh/h	198	1079	551	198	1079	583	480	430	364	540	0	343
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	0.00	1.00
Uniform Delay (d), s/veh	26.6	20.6	20.6	27.2	20.4	20.4	16.8	18.8	20.5	18.3	0.0	22.0
Incr Delay (d2), s/veh	1.8	13.3	21.9	20.0	8.3	14.1	0.3	0.1	0.8	0.1	0.0	0.7
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	1.1	7.9	9.4	3.1	6.6	8.0	1.1	0.4	1.7	0.4	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	33.9	42.5	47.2	28.7	34.5	17.1	18.9	21.3	18.4	0.0	22.7
LnGrp LOS	C	C	D	D	C	C	B	B	C	B	A	C
Approach Vol, veh/h	1589				1581		289				150	
Approach Delay, s/veh	36.4				32.3		19.5				21.6	
Approach LOS	D				C		B				C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.3	19.5	10.8	25.0	9.9	17.0	11.2	24.6				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	5.0	* 5				
Max Green Setting (Gmax), s	7.3	13.0	7.0	20.0	7.0	13.0	7.0	* 20				
Max Q Clear Time (g_c+13), s	7.2	7.2	7.3	19.9	4.8	5.7	4.7	18.3				
Green Ext Time (p_c), s	0.0	0.3	0.0	0.1	0.0	0.3	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay 32.6
HCM 6th LOS C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

221: Town Center Blvd & Campus Pkwy

Existing PM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰ ↱ ↲ ↳			↰ ↱ ↲ ↳			↰	↱	↲ ↳	↰	↱	
Traffic Volume (veh/h)	74	1193	195	142	1269	44	96	29	141	34	32	72
Future Volume (veh/h)	74	1193	195	142	1269	44	96	29	141	34	32	72
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	80	1297	212	154	1379	48	104	32	153	37	35	78
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	176	1400	229	193	1571	55	447	430	364	436	98	218
Arrive On Green	0.10	0.32	0.32	0.11	0.31	0.31	0.09	0.23	0.23	0.05	0.19	0.19
Sat Flow, veh/h	1767	4387	717	1767	5026	175	1767	1856	1572	1767	511	1139
Grp Volume(v), veh/h	80	998	511	154	927	500	104	32	153	37	0	113
Grp Sat Flow(s),veh/h/ln	1767	1689	1726	1767	1689	1824	1767	1856	1572	1767	0	1650
Q Serve(g_s), s	2.7	17.9	17.9	5.3	16.3	16.3	2.8	0.8	5.2	1.0	0.0	3.7
Cycle Q Clear(g_c), s	2.7	17.9	17.9	5.3	16.3	16.3	2.8	0.8	5.2	1.0	0.0	3.7
Prop In Lane	1.00		0.42	1.00		0.10	1.00		1.00	1.00		0.69
Lane Grp Cap(c), veh/h	176	1078	551	193	1055	570	447	430	364	436	0	315
V/C Ratio(X)	0.45	0.93	0.93	0.80	0.88	0.88	0.23	0.07	0.42	0.08	0.00	0.36
Avail Cap(c_a), veh/h	198	1079	551	198	1079	583	480	430	364	540	0	343
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	0.00	1.00
Uniform Delay (d), s/veh	26.6	20.6	20.6	27.2	20.4	20.4	16.8	18.8	20.5	18.3	0.0	22.0
Incr Delay (d2), s/veh	1.8	13.3	21.9	20.0	8.3	14.1	0.3	0.1	0.8	0.1	0.0	0.7
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	1.1	7.9	9.4	3.1	6.6	8.0	1.1	0.4	1.7	0.4	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.4	33.9	42.5	47.2	28.7	34.5	17.1	18.9	21.3	18.4	0.0	22.7
LnGrp LOS	C	C	D	D	C	C	B	B	C	B	A	C
Approach Vol, veh/h	1589				1581		289				150	
Approach Delay, s/veh	36.4				32.3		19.5				21.6	
Approach LOS	D				C		B				C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.3	19.5	10.8	25.0	9.9	17.0	11.2	24.6				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	5.0	* 5				
Max Green Setting (Gmax), s	7.3	13.0	7.0	20.0	7.0	13.0	7.0	* 20				
Max Q Clear Time (g_c+13), s	7.2	7.2	7.3	19.9	4.8	5.7	4.7	18.3				
Green Ext Time (p_c), s	0.0	0.3	0.0	0.1	0.0	0.3	0.0	1.3				

Intersection Summary

HCM 6th Ctrl Delay 32.6
HCM 6th LOS C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

221: Town Center Blvd & Campus Pkwy

Future AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰ ↱ ↱ ↱			↰ ↱ ↱ ↱			↰	↑	↱	↰	↱	
Traffic Volume (veh/h)	318	2766	195	142	2828	44	96	29	141	286	32	386
Future Volume (veh/h)	318	2766	195	142	2828	44	96	29	141	286	32	386
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	346	3007	212	154	3074	48	104	32	153	311	35	420
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	293	2916	201	152	2654	41	130	197	167	307	18	214
Arrive On Green	0.17	0.60	0.60	0.09	0.52	0.52	0.05	0.11	0.11	0.09	0.15	0.15
Sat Flow, veh/h	1767	4839	333	1767	5138	80	1767	1856	1572	1767	122	1469
Grp Volume(v), veh/h	346	2078	1141	154	2015	1107	104	32	153	311	0	455
Grp Sat Flow(s),veh/h/ln	1767	1689	1796	1767	1689	1841	1767	1856	1572	1767	0	1591
Q Serve(g_s), s	25.0	91.0	91.0	13.0	78.0	78.0	7.0	2.4	14.6	13.0	0.0	22.0
Cycle Q Clear(g_c), s	25.0	91.0	91.0	13.0	78.0	78.0	7.0	2.4	14.6	13.0	0.0	22.0
Prop In Lane	1.00		0.19	1.00		0.04	1.00		1.00	1.00		0.92
Lane Grp Cap(c), veh/h	293	2035	1082	152	1744	951	130	197	167	307	0	232
V/C Ratio(X)	1.18	1.02	1.05	1.01	1.16	1.16	0.80	0.16	0.92	1.01	0.00	1.96
Avail Cap(c_a), veh/h	293	2035	1082	152	1744	951	130	197	167	307	0	232
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	0.00	1.00
Uniform Delay (d), s/veh	63.0	30.0	30.0	69.0	36.5	36.5	60.1	61.4	66.9	61.0	0.0	64.5
Incr Delay (d2), s/veh	111.5	25.4	43.1	76.2	76.8	85.4	29.3	0.4	46.6	54.5	0.0	448.5
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	20.1	40.7	48.6	9.0	48.7	55.4	1.7	1.1	7.9	10.3	0.0	37.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	174.5	55.4	73.1	145.2	113.3	121.9	89.4	61.8	113.5	115.5	0.0	513.0
LnGrp LOS	F	F	F	F	F	F	F	E	F	F	A	F
Approach Vol, veh/h	3565				3276				289		766	
Approach Delay, s/veh	72.6				117.7				99.1		351.6	
Approach LOS	E				F				F		F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	21.0	17.0	96.0	11.0	27.0	30.0	83.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	5.0	* 5				
Max Green Setting (G_max), s	13.0	16.0	13.0	90.0	7.0	22.0	25.0	* 78				
Max Q Clear Time (g_c+11.0), s	16.6	16.6	15.0	93.0	9.0	24.0	27.0	80.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 119.3

HCM 6th LOS F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

221: Town Center Blvd & Campus Pkwy

Future PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰ ↑↑ ↱			↰ ↑↑ ↱			↰ ↑	↑	↰ ↱	↰ ↱	↰ ↱	
Traffic Volume (veh/h)	318	2766	195	142	2828	44	96	29	141	286	32	386
Future Volume (veh/h)	318	2766	195	142	2828	44	96	29	141	286	32	386
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	346	3007	212	154	3074	48	104	32	153	311	35	420
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	293	2916	201	152	2654	41	130	197	167	307	18	214
Arrive On Green	0.17	0.60	0.60	0.09	0.52	0.52	0.05	0.11	0.11	0.09	0.15	0.15
Sat Flow, veh/h	1767	4839	333	1767	5138	80	1767	1856	1572	1767	122	1469
Grp Volume(v), veh/h	346	2078	1141	154	2015	1107	104	32	153	311	0	455
Grp Sat Flow(s),veh/h/ln	1767	1689	1796	1767	1689	1841	1767	1856	1572	1767	0	1591
Q Serve(g_s), s	25.0	91.0	91.0	13.0	78.0	78.0	7.0	2.4	14.6	13.0	0.0	22.0
Cycle Q Clear(g_c), s	25.0	91.0	91.0	13.0	78.0	78.0	7.0	2.4	14.6	13.0	0.0	22.0
Prop In Lane	1.00		0.19	1.00		0.04	1.00		1.00	1.00		0.92
Lane Grp Cap(c), veh/h	293	2035	1082	152	1744	951	130	197	167	307	0	232
V/C Ratio(X)	1.18	1.02	1.05	1.01	1.16	1.16	0.80	0.16	0.92	1.01	0.00	1.96
Avail Cap(c_a), veh/h	293	2035	1082	152	1744	951	130	197	167	307	0	232
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(l)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	63.0	30.0	30.0	69.0	36.5	36.5	60.1	61.4	66.9	61.0	0.0	64.5
Incr Delay (d2), s/veh	111.5	25.4	43.1	76.2	76.8	85.4	29.3	0.4	46.6	54.5	0.0	448.5
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	20.1	40.7	48.6	9.0	48.7	55.4	1.7	1.1	7.9	10.3	0.0	37.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	174.5	55.4	73.1	145.2	113.3	121.9	89.4	61.8	113.5	115.5	0.0	513.0
LnGrp LOS	F	F	F	F	F	F	F	E	F	F	A	F
Approach Vol, veh/h	3565				3276		289				766	
Approach Delay, s/veh	72.6				117.7		99.1				351.6	
Approach LOS	E				F		F				F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	21.0	17.0	96.0	11.0	27.0	30.0	83.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	5.0	* 5				
Max Green Setting (Gmax), s	13.0	16.0	13.0	90.0	7.0	22.0	25.0	* 78				
Max Q Clear Time (g_c+11.0), s	16.6	16.6	15.0	93.0	9.0	24.0	27.0	80.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 119.3

HCM 6th LOS F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

221: Town Center Blvd & Campus Pkwy

Future AM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	203	1248	6	48	1036	60	0	1097	2	268	794	37
Future Volume (veh/h)	203	1248	6	48	1036	60	0	1097	2	268	794	37
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	221	1357	7	52	1126	65	0	1192	2	291	863	40
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	195	1182	322	76	1042	60	234	987	904	219	1158	981
Arrive On Green	0.06	0.23	0.23	0.04	0.21	0.21	0.00	0.53	0.53	0.06	0.62	0.62
Sat Flow, veh/h	3428	5066	1572	1767	4899	283	1767	1856	1572	3428	1856	1572
Grp Volume(v), veh/h	221	1357	7	52	776	415	0	1192	2	291	863	40
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1767	1689	1805	1767	1856	1572	1714	1856	1572
Q Serve(g_s), s	8.0	32.9	4.5	4.1	30.0	30.0	0.0	75.0	0.1	9.0	46.1	0.9
Cycle Q Clear(g_c), s	8.0	32.9	4.5	4.1	30.0	30.0	0.0	75.0	0.1	9.0	46.1	0.9
Prop In Lane	1.00		1.00	1.00		0.16	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	195	1182	322	76	719	384	234	987	904	219	1158	981
V/C Ratio(X)	1.14	1.15	0.02	0.68	1.08	1.08	0.00	1.21	0.00	1.33	0.75	0.04
Avail Cap(c_a), veh/h	195	1182	322	88	719	384	321	987	904	219	1158	981
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	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.5	54.0	771.7	66.5	55.5	55.5	0.0	33.0	12.7	66.0	18.6	4.5
Incr Delay (d2), s/veh	105.9	76.7	0.0	16.4	57.2	69.3	0.0	103.1	0.0	176.3	2.7	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	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	22.0	0.2	2.2	18.1	20.7	0.0	60.8	0.0	9.3	19.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	172.4	130.7	771.8	82.9	112.7	124.8	0.0	136.1	12.7	242.3	21.3	4.5
LnGrp LOS	F	F	F	F	F	F		F	B	F	C	A
Approach Vol, veh/h	1585			1243			1194			1194		
Approach Delay, s/veh	139.4			115.5			135.9			74.6		
Approach LOS	F			F			F			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.0	80.0	10.1	37.9	0.0	93.0	13.0	35.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	5.0	* 5				
Max Green Setting (Gmax), s	9.0	75.0	7.0	31.0	7.0	77.0	8.0	* 30				
Max Q Clear Time (g_c+I1), s	11.0	77.0	6.1	34.9	0.0	48.1	10.0	32.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	7.8	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay, s/veh	118.1
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary

221: Town Center Blvd & Campus Pkwy

Future PM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	318	2766	195	142	2828	44	96	29	141	286	32	386
Future Volume (veh/h)	318	2766	195	142	2828	44	96	29	141	286	32	386
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	346	3007	212	154	3074	48	104	32	153	311	35	420
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	317	3026	1018	138	2960	46	225	172	268	357	272	231
Arrive On Green	0.09	0.60	0.60	0.08	0.58	0.58	0.05	0.09	0.09	0.10	0.15	0.15
Sat Flow, veh/h	3428	5066	1572	1767	5138	80	1767	1856	1572	3428	1856	1572
Grp Volume(v), veh/h	346	3007	212	154	2015	1107	104	32	153	311	35	420
Grp Sat Flow(s),veh/h/ln	1714	1689	1572	1767	1689	1841	1767	1856	1572	1714	1856	1572
Q Serve(g_s), s	13.0	82.7	7.7	11.0	81.0	81.0	7.0	2.2	12.6	12.6	2.3	16.7
Cycle Q Clear(g_c), s	13.0	82.7	7.7	11.0	81.0	81.0	7.0	2.2	12.6	12.6	2.3	16.7
Prop In Lane	1.00		1.00	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	317	3026	1018	138	1945	1061	225	172	268	357	272	231
V/C Ratio(X)	1.09	0.99	0.21	1.11	1.04	1.04	0.46	0.19	0.57	0.87	0.13	1.82
Avail Cap(c_a), veh/h	317	3026	1018	138	1945	1061	225	172	268	366	277	235
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	63.8	28.1	10.1	64.8	29.8	29.8	55.0	58.9	53.6	62.1	52.2	39.2
Incr Delay (d2), s/veh	77.3	14.9	0.1	110.4	30.3	39.8	1.5	0.5	2.9	19.7	0.2	386.1
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	0.0	34.2	2.5	9.1	38.1	44.3	3.5	1.1	5.1	6.5	1.1	31.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	141.2	42.9	10.2	175.3	60.2	69.6	56.5	59.4	56.4	81.7	52.4	425.3
LnGrp LOS	F	D	B	F	F	F	E	E	E	F	D	F
Approach Vol, veh/h	3565				3276		289				766	
Approach Delay, s/veh	50.5				68.8		56.8				268.8	
Approach LOS	D				E		E				F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.6	18.0	15.0	89.0	11.0	25.6	18.0	86.0				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	4.0	5.0	5.0	* 5				
Max Green Setting (Gmax), s	15.0	13.0	11.0	83.0	7.0	21.0	13.0	* 81				
Max Q Clear Time (g_c+1/4), s	14.6	14.6	13.0	84.7	9.0	18.7	15.0	83.0				
Green Ext Time (p_c), s	0.1	0.0	0.0	0.0	0.0	0.5	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay, s/veh 79.5
HCM 6th LOS E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Intersection				
Intersection Delay, s/veh	5.3			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	286	29	261	260
Demand Flow Rate, veh/h	294	30	269	268
Vehicles Circulating, veh/h	173	406	161	127
Vehicles Exiting, veh/h	222	24	306	309
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.6	4.3	5.3	5.0
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	294	30	269	268
Cap Entry Lane, veh/h	1157	912	1171	1212
Entry HV Adj Factor	0.972	0.983	0.972	0.971
Flow Entry, veh/h	286	29	261	260
Cap Entry, veh/h	1124	896	1138	1178
V/C Ratio	0.254	0.033	0.230	0.221
Control Delay, s/veh	5.6	4.3	5.3	5.0
LOS	A	A	A	A
95th %tile Queue, veh	1	0	1	1

Intersection				
Intersection Delay, s/veh	5.3			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	286	29	261	260
Demand Flow Rate, veh/h	294	30	269	268
Vehicles Circulating, veh/h	173	406	161	127
Vehicles Exiting, veh/h	222	24	306	309
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.6	4.3	5.3	5.0
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	294	30	269	268
Cap Entry Lane, veh/h	1157	912	1171	1212
Entry HV Adj Factor	0.972	0.983	0.972	0.971
Flow Entry, veh/h	286	29	261	260
Cap Entry, veh/h	1124	896	1138	1178
V/C Ratio	0.254	0.033	0.230	0.221
Control Delay, s/veh	5.6	4.3	5.3	5.0
LOS	A	A	A	A
95th %tile Queue, veh	1	0	1	1

Intersection				
Intersection Delay, s/veh19.3				
Intersection LOS C				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	882	368	481	370
Demand Flow Rate, veh/h	909	379	496	381
Vehicles Circulating, veh/h	287	633	484	610
Vehicles Exiting, veh/h	704	347	712	402
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	27.8	13.2	13.5	12.8
Approach LOS	D	B	B	B
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	909	379	496	381
Cap Entry Lane, veh/h	1030	724	842	741
Entry HV Adj Factor	0.971	0.971	0.970	0.971
Flow Entry, veh/h	882	368	481	370
Cap Entry, veh/h	1000	702	817	719
V/C Ratio	0.883	0.524	0.589	0.514
Control Delay, s/veh	27.8	13.2	13.5	12.8
LOS	D	B	B	B
95th %tile Queue, veh	12	3	4	3

Intersection				
Intersection Delay, s/veh19.3				
Intersection LOS C				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	882	368	481	370
Demand Flow Rate, veh/h	909	379	496	381
Vehicles Circulating, veh/h	287	633	484	610
Vehicles Exiting, veh/h	704	347	712	402
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	27.8	13.2	13.5	12.8
Approach LOS	D	B	B	B
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	909	379	496	381
Cap Entry Lane, veh/h	1030	724	842	741
Entry HV Adj Factor	0.971	0.971	0.970	0.971
Flow Entry, veh/h	882	368	481	370
Cap Entry, veh/h	1000	702	817	719
V/C Ratio	0.883	0.524	0.589	0.514
Control Delay, s/veh	27.8	13.2	13.5	12.8
LOS	D	B	B	B
95th %tile Queue, veh	12	3	4	3

Intersection				
Intersection Delay, s/veh	8.5			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	207	584	636
Demand Flow Rate, veh/h	0	213	601	656
Vehicles Circulating, veh/h	766	485	122	110
Vehicles Exiting, veh/h	0	238	644	588
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	7.2	8.4	9.0
Approach LOS	-	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	0	213	601	656
Cap Entry Lane, veh/h	632	841	1218	1233
Entry HV Adj Factor	1.000	0.972	0.972	0.970
Flow Entry, veh/h	0	207	584	636
Cap Entry, veh/h	632	818	1184	1197
V/C Ratio	0.000	0.253	0.493	0.532
Control Delay, s/veh	5.7	7.2	8.4	9.0
LOS	A	A	A	A
95th %tile Queue, veh	0	1	3	3

Intersection				
Intersection Delay, s/veh	8.5			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	0	207	584	636
Demand Flow Rate, veh/h	0	213	601	656
Vehicles Circulating, veh/h	766	485	122	110
Vehicles Exiting, veh/h	0	238	644	588
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	0.0	7.2	8.4	9.0
Approach LOS	-	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	0	213	601	656
Cap Entry Lane, veh/h	632	841	1218	1233
Entry HV Adj Factor	1.000	0.972	0.972	0.970
Flow Entry, veh/h	0	207	584	636
Cap Entry, veh/h	632	818	1184	1197
V/C Ratio	0.000	0.253	0.493	0.532
Control Delay, s/veh	5.7	7.2	8.4	9.0
LOS	A	A	A	A
95th %tile Queue, veh	0	1	3	3

Intersection				
Intersection Delay, s/veh 17.8				
Intersection LOS F				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	314	797	923	1845
Demand Flow Rate, veh/h	323	821	951	1900
Vehicles Circulating, veh/h	1771	1054	876	165
Vehicles Exiting, veh/h	294	773	1218	1710
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	257.1	364.9	334.8	299.4
Approach LOS	F	F	F	F
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	323	821	951	1900
Cap Entry Lane, veh/h	227	471	565	1166
Entry HV Adj Factor	0.971	0.971	0.971	0.971
Flow Entry, veh/h	314	797	923	1845
Cap Entry, veh/h	220	457	548	1132
V/C Ratio	1.425	1.743	1.684	1.629
Control Delay, s/veh	257.1	364.9	334.8	299.4
LOS	F	F	F	F
95th %tile Queue, veh	18	49	53	96

Intersection				
Intersection Delay, s/veh 17.8				
Intersection LOS F				
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	314	797	923	1845
Demand Flow Rate, veh/h	323	821	951	1900
Vehicles Circulating, veh/h	1771	1054	876	165
Vehicles Exiting, veh/h	294	773	1218	1710
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	257.1	364.9	334.8	299.4
Approach LOS	F	F	F	F
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	323	821	951	1900
Cap Entry Lane, veh/h	227	471	565	1166
Entry HV Adj Factor	0.971	0.971	0.971	0.971
Flow Entry, veh/h	314	797	923	1845
Cap Entry, veh/h	220	457	548	1132
V/C Ratio	1.425	1.743	1.684	1.629
Control Delay, s/veh	257.1	364.9	334.8	299.4
LOS	F	F	F	F
95th %tile Queue, veh	18	49	53	96

Intersection							
Intersection Delay, s/veh 7.0							
Intersection LOS A							
Approach	EB	WB		NB		SB	
Entry Lanes	1	2		2		2	
Conflicting Circle Lanes	2	2		2		2	
Adj Approach Flow, veh/h	64	146		802		1008	
Demand Flow Rate, veh/h	66	150		826		1038	
Vehicles Circulating, veh/h	830	735		333		17	
Vehicles Exiting, veh/h	225	424		563		868	
Ped Vol Crossing Leg, #/h	0	0		0		0	
Ped Cap Adj	1.000	1.000		1.000		1.000	
Approach Delay, s/veh	6.3	6.6		8.0		6.3	
Approach LOS	A	A		A		A	
Lane	Left	Left	Right	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized							
Lane Util	1.000	0.113	0.887	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	66	17	133	388	438	488	550
Cap Entry Lane, veh/h	701	687	760	994	1070	1329	1400
Entry HV Adj Factor	0.966	0.991	0.970	0.972	0.971	0.971	0.971
Flow Entry, veh/h	64	17	129	377	425	474	534
Cap Entry, veh/h	677	681	737	966	1039	1290	1360
V/C Ratio	0.094	0.025	0.175	0.390	0.409	0.367	0.393
Control Delay, s/veh	6.3	5.5	6.8	8.0	7.9	6.2	6.3
LOS	A	A	A	A	A	A	A
95th %tile Queue, veh	0	0	1	2	2	2	2

Intersection							
Intersection Delay, s/veh40.0							
Intersection LOS E							
Approach	EB	WB		NB		SB	
Entry Lanes	1	2		2		2	
Conflicting Circle Lanes	2	2		2		2	
Adj Approach Flow, veh/h	314	797		923		1845	
Demand Flow Rate, veh/h	323	821		951		1900	
Vehicles Circulating, veh/h	1771	1054		876		165	
Vehicles Exiting, veh/h	294	773		1218		1710	
Ped Vol Crossing Leg, #/h	0	0		0		0	
Ped Cap Adj	1.000	1.000		1.000		1.000	
Approach Delay, s/veh	96.3	87.2		24.5		17.8	
Approach LOS	F	F		C		C	
Lane	Left	Left	Right	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	LT	TR
Assumed Moves	LTR	LT	R	LT	TR	LT	TR
RT Channelized							
Lane Util	1.000	0.200	0.800	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	323	164	657	447	504	893	1007
Cap Entry Lane, veh/h	315	512	580	603	674	1160	1234
Entry HV Adj Factor	0.971	0.972	0.971	0.971	0.971	0.971	0.971
Flow Entry, veh/h	314	159	638	434	489	867	978
Cap Entry, veh/h	306	498	563	585	655	1126	1198
V/C Ratio	1.025	0.320	1.133	0.741	0.747	0.770	0.816
Control Delay, s/veh	96.3	12.2	105.9	25.4	23.7	16.8	18.8
LOS	F	B	F	D	C	C	C
95th %tile Queue, veh	11	1	21	6	7	8	10

Intersection				
Intersection Delay, s/veh	4.4			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	132	205	130	168
Demand Flow Rate, veh/h	135	212	134	173
Vehicles Circulating, veh/h	156	118	145	174
Vehicles Exiting, veh/h	191	161	146	156
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.1	4.5	4.1	4.5
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	135	212	134	173
Cap Entry Lane, veh/h	1177	1223	1190	1155
Entry HV Adj Factor	0.975	0.969	0.968	0.969
Flow Entry, veh/h	132	205	130	168
Cap Entry, veh/h	1147	1186	1152	1120
V/C Ratio	0.115	0.173	0.113	0.150
Control Delay, s/veh	4.1	4.5	4.1	4.5
LOS	A	A	A	A
95th %tile Queue, veh	0	1	0	1

Intersection				
Intersection Delay, s/veh	4.4			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	132	205	130	168
Demand Flow Rate, veh/h	135	212	134	173
Vehicles Circulating, veh/h	156	118	145	174
Vehicles Exiting, veh/h	191	161	146	156
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.1	4.5	4.1	4.5
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	135	212	134	173
Cap Entry Lane, veh/h	1177	1223	1190	1155
Entry HV Adj Factor	0.975	0.969	0.968	0.969
Flow Entry, veh/h	132	205	130	168
Cap Entry, veh/h	1147	1186	1152	1120
V/C Ratio	0.115	0.173	0.113	0.150
Control Delay, s/veh	4.1	4.5	4.1	4.5
LOS	A	A	A	A
95th %tile Queue, veh	0	1	0	1

Intersection				
Intersection Delay, s/veh	5.8			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	325	379	130	173
Demand Flow Rate, veh/h	334	391	134	178
Vehicles Circulating, veh/h	156	118	344	353
Vehicles Exiting, veh/h	375	360	146	156
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.8	6.1	5.1	5.7
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	334	391	134	178
Cap Entry Lane, veh/h	1177	1223	972	963
Entry HV Adj Factor	0.973	0.970	0.968	0.970
Flow Entry, veh/h	325	379	130	173
Cap Entry, veh/h	1145	1187	940	934
V/C Ratio	0.284	0.320	0.138	0.185
Control Delay, s/veh	5.8	6.1	5.1	5.7
LOS	A	A	A	A
95th %tile Queue, veh	1	1	0	1

Intersection				
Intersection Delay, s/veh	5.8			
Intersection LOS	A			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	325	379	130	173
Demand Flow Rate, veh/h	334	391	134	178
Vehicles Circulating, veh/h	156	118	344	353
Vehicles Exiting, veh/h	375	360	146	156
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.8	6.1	5.1	5.7
Approach LOS	A	A	A	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	334	391	134	178
Cap Entry Lane, veh/h	1177	1223	972	963
Entry HV Adj Factor	0.973	0.970	0.968	0.970
Flow Entry, veh/h	325	379	130	173
Cap Entry, veh/h	1145	1187	940	934
V/C Ratio	0.284	0.320	0.138	0.185
Control Delay, s/veh	5.8	6.1	5.1	5.7
LOS	A	A	A	A
95th %tile Queue, veh	1	1	0	1

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	84	282	227	16	32	64
Future Vol, veh/h	84	282	227	16	32	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	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	91	307	247	17	35	70
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	264	0	-	0	745	256
Stage 1	-	-	-	-	256	-
Stage 2	-	-	-	-	489	-
Critical Hdwy	4.13	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.227	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	1294	-	-	-	380	780
Stage 1	-	-	-	-	784	-
Stage 2	-	-	-	-	614	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1294	-	-	-	353	780
Mov Cap-2 Maneuver	-	-	-	-	463	-
Stage 1	-	-	-	-	729	-
Stage 2	-	-	-	-	614	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.8	0		11.2		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1294	-	-	-	463	780
HCM Lane V/C Ratio	0.071	-	-	-	0.075	0.089
HCM Control Delay (s)	8	-	-	-	13.4	10.1
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2	0.3

Intersection						
Int Delay, s/veh	2.5					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	84	282	227	16	32	64
Future Vol, veh/h	84	282	227	16	32	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	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	91	307	247	17	35	70

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	264	0	0	745	256
Stage 1	-	-	-	256	-
Stage 2	-	-	-	489	-
Critical Hdwy	4.13	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	5.43	-
Follow-up Hdwy	2.227	-	-	3.527	3.327
Pot Cap-1 Maneuver	1294	-	-	380	780
Stage 1	-	-	-	784	-
Stage 2	-	-	-	614	-
Platoon blocked, %	-	-	-	-	-
Mov Cap-1 Maneuver	1294	-	-	353	780
Mov Cap-2 Maneuver	-	-	-	463	-
Stage 1	-	-	-	729	-
Stage 2	-	-	-	614	-

Approach	EB	WB	SB
HCM Control Delay, s	1.8	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1294	-	-	-	463	780
HCM Lane V/C Ratio	0.071	-	-	-	0.075	0.089
HCM Control Delay (s)	8	-	-	-	13.4	10.1
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2	0.3

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	84	334	264	16	32	64
Future Vol, veh/h	84	334	264	16	32	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	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	91	363	287	17	35	70
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	304	0	-	0	841	296
Stage 1	-	-	-	-	296	-
Stage 2	-	-	-	-	545	-
Critical Hdwy	4.13	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.227	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	1251	-	-	-	334	741
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	579	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1251	-	-	-	310	741
Mov Cap-2 Maneuver	-	-	-	-	428	-
Stage 1	-	-	-	-	697	-
Stage 2	-	-	-	-	579	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.6	0		11.7		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1251	-	-	-	428	741
HCM Lane V/C Ratio	0.073	-	-	-	0.081	0.094
HCM Control Delay (s)	8.1	-	-	-	14.2	10.4
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3	0.3

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	84	334	264	16	32	64
Future Vol, veh/h	84	334	264	16	32	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	100	-	-	-	100	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	91	363	287	17	35	70
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	304	0	-	0	841	296
Stage 1	-	-	-	-	296	-
Stage 2	-	-	-	-	545	-
Critical Hdwy	4.13	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.227	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	1251	-	-	-	334	741
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	579	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1251	-	-	-	310	741
Mov Cap-2 Maneuver	-	-	-	-	428	-
Stage 1	-	-	-	-	697	-
Stage 2	-	-	-	-	579	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.6	0		11.7		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1251	-	-	-	428	741
HCM Lane V/C Ratio	0.073	-	-	-	0.081	0.094
HCM Control Delay (s)	8.1	-	-	-	14.2	10.4
HCM Lane LOS	A	-	-	-	B	B
HCM 95th %tile Q(veh)	0.2	-	-	-	0.3	0.3

Intersection				
Intersection Delay, s/veh	12.2			
Intersection LOS	B			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	203	199	799	535
Demand Flow Rate, veh/h	209	205	823	551
Vehicles Circulating, veh/h	756	611	209	205
Vehicles Exiting, veh/h	0	421	756	611
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	10.3	8.3	15.7	8.9
Approach LOS	B	A	C	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	209	205	823	551
Cap Entry Lane, veh/h	638	740	1115	1120
Entry HV Adj Factor	0.969	0.971	0.971	0.971
Flow Entry, veh/h	203	199	799	535
Cap Entry, veh/h	619	718	1082	1087
V/C Ratio	0.327	0.277	0.738	0.492
Control Delay, s/veh	10.3	8.3	15.7	8.9
LOS	B	A	C	A
95th %tile Queue, veh	1	1	7	3

Intersection				
Intersection Delay, s/veh	12.2			
Intersection LOS	B			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	203	199	799	535
Demand Flow Rate, veh/h	209	205	823	551
Vehicles Circulating, veh/h	756	611	209	205
Vehicles Exiting, veh/h	0	421	756	611
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	10.3	8.3	15.7	8.9
Approach LOS	B	A	C	A
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	209	205	823	551
Cap Entry Lane, veh/h	638	740	1115	1120
Entry HV Adj Factor	0.969	0.971	0.971	0.971
Flow Entry, veh/h	203	199	799	535
Cap Entry, veh/h	619	718	1082	1087
V/C Ratio	0.327	0.277	0.738	0.492
Control Delay, s/veh	10.3	8.3	15.7	8.9
LOS	B	A	C	A
95th %tile Queue, veh	1	1	7	3

Intersection				
Intersection Delay, s/veh	23.4			
Intersection LOS	C			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	277	239	956	717
Demand Flow Rate, veh/h	286	246	985	739
Vehicles Circulating, veh/h	921	770	265	256
Vehicles Exiting, veh/h	74	480	942	760
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	17.1	11.6	34.8	14.5
Approach LOS	C	B	D	B
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	286	246	985	739
Cap Entry Lane, veh/h	539	629	1053	1063
Entry HV Adj Factor	0.968	0.970	0.971	0.970
Flow Entry, veh/h	277	239	956	717
Cap Entry, veh/h	522	611	1023	1031
V/C Ratio	0.530	0.391	0.935	0.695
Control Delay, s/veh	17.1	11.6	34.8	14.5
LOS	C	B	D	B
95th %tile Queue, veh	3	2	15	6

Intersection				
Intersection Delay, s/veh	23.4			
Intersection LOS	C			
Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	277	239	956	717
Demand Flow Rate, veh/h	286	246	985	739
Vehicles Circulating, veh/h	921	770	265	256
Vehicles Exiting, veh/h	74	480	942	760
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	17.1	11.6	34.8	14.5
Approach LOS	C	B	D	B
Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	286	246	985	739
Cap Entry Lane, veh/h	539	629	1053	1063
Entry HV Adj Factor	0.968	0.970	0.971	0.970
Flow Entry, veh/h	277	239	956	717
Cap Entry, veh/h	522	611	1023	1031
V/C Ratio	0.530	0.391	0.935	0.695
Control Delay, s/veh	17.1	11.6	34.8	14.5
LOS	C	B	D	B
95th %tile Queue, veh	3	2	15	6

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	6	5	0	0	0	11	97	0	2	94	0
Future Vol, veh/h	0	6	5	0	0	0	11	97	0	2	94	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	7	5	0	0	0	12	105	0	2	102	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	235	235	102	241	235	105	102	0	0	105	0	0
Stage 1	106	106	-	129	129	-	-	-	-	-	-	-
Stage 2	129	129	-	112	106	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	717	664	950	711	664	947	1484	-	-	1480	-	-
Stage 1	897	806	-	872	787	-	-	-	-	-	-	-
Stage 2	872	787	-	891	806	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	711	657	950	696	657	947	1484	-	-	1480	-	-
Mov Cap-2 Maneuver	711	657	-	696	657	-	-	-	-	-	-	-
Stage 1	889	805	-	864	780	-	-	-	-	-	-	-
Stage 2	864	780	-	878	805	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.8	0	0.8	0.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1484	-	-	764	-	1480	-
HCM Lane V/C Ratio	0.008	-	-	0.016	-	0.001	-
HCM Control Delay (s)	7.4	0	-	9.8	0	7.4	0
HCM Lane LOS	A	A	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-	0	-

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	6	5	0	0	0	11	97	0	2	94	0
Future Vol, veh/h	0	6	5	0	0	0	11	97	0	2	94	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	7	5	0	0	0	12	105	0	2	102	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	235	235	102	241	235	105	102	0	0	105	0	0
Stage 1	106	106	-	129	129	-	-	-	-	-	-	-
Stage 2	129	129	-	112	106	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	717	664	950	711	664	947	1484	-	-	1480	-	-
Stage 1	897	806	-	872	787	-	-	-	-	-	-	-
Stage 2	872	787	-	891	806	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	711	657	950	696	657	947	1484	-	-	1480	-	-
Mov Cap-2 Maneuver	711	657	-	696	657	-	-	-	-	-	-	-
Stage 1	889	805	-	864	780	-	-	-	-	-	-	-
Stage 2	864	780	-	878	805	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.8	0	0.8	0.2
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1484	-	-	764	-	1480	-
HCM Lane V/C Ratio	0.008	-	-	0.016	-	0.001	-
HCM Control Delay (s)	7.4	0	-	9.8	0	7.4	0
HCM Lane LOS	A	A	-	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-	0	-

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	6	7	0	0	0	12	138	0	2	113	21
Future Vol, veh/h	1	6	7	0	0	0	12	138	0	2	113	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	1	7	8	0	0	0	13	150	0	2	123	23
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	315	315	135	322	326	150	146	0	0	150	0	0
Stage 1	139	139	-	176	176	-	-	-	-	-	-	-
Stage 2	176	176	-	146	150	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	636	599	911	629	591	894	1430	-	-	1425	-	-
Stage 1	862	780	-	823	752	-	-	-	-	-	-	-
Stage 2	823	752	-	854	771	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	630	592	911	613	584	894	1430	-	-	1425	-	-
Mov Cap-2 Maneuver	630	592	-	613	584	-	-	-	-	-	-	-
Stage 1	853	778	-	815	744	-	-	-	-	-	-	-
Stage 2	815	744	-	838	769	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.1		0		0.6		0.1					
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1430	-	-	721	-	1425	-	-				
HCM Lane V/C Ratio	0.009	-	-	0.021	-	0.002	-	-				
HCM Control Delay (s)	7.5	0	-	10.1	0	7.5	0	-				
HCM Lane LOS	A	A	-	B	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	-	0	-	-				

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	1	6	7	0	0	0	12	138	0	2	113	21
Future Vol, veh/h	1	6	7	0	0	0	12	138	0	2	113	21
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	1	7	8	0	0	0	13	150	0	2	123	23
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	315	315	135	322	326	150	146	0	0	150	0	0
Stage 1	139	139	-	176	176	-	-	-	-	-	-	-
Stage 2	176	176	-	146	150	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	636	599	911	629	591	894	1430	-	-	1425	-	-
Stage 1	862	780	-	823	752	-	-	-	-	-	-	-
Stage 2	823	752	-	854	771	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	630	592	911	613	584	894	1430	-	-	1425	-	-
Mov Cap-2 Maneuver	630	592	-	613	584	-	-	-	-	-	-	-
Stage 1	853	778	-	815	744	-	-	-	-	-	-	-
Stage 2	815	744	-	838	769	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	10.1		0		0.6		0.1					
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1430	-	-	721	-	1425	-	-				
HCM Lane V/C Ratio	0.009	-	-	0.021	-	0.002	-	-				
HCM Control Delay (s)	7.5	0	-	10.1	0	7.5	0	-				
HCM Lane LOS	A	A	-	B	A	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.1	-	0	-	-				

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	8	0	0	12	0	0	167	6	0	65	1
Future Vol, veh/h	0	8	0	0	12	0	0	167	6	0	65	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	9	0	0	13	0	0	182	7	0	71	1

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	264	261	72	262	258	186	72	0	0	189	0	0
Stage 1	72	72	-	186	186	-	-	-	-	-	-	-
Stage 2	192	189	-	76	72	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	687	642	987	689	645	854	1522	-	-	1379	-	-
Stage 1	935	833	-	813	744	-	-	-	-	-	-	-
Stage 2	807	742	-	931	833	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	677	642	987	682	645	854	1522	-	-	1379	-	-
Mov Cap-2 Maneuver	677	642	-	682	645	-	-	-	-	-	-	-
Stage 1	935	833	-	813	744	-	-	-	-	-	-	-
Stage 2	793	742	-	921	833	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	10.7		10.7		0		0	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1522	-	-	642	645	1379	-
HCM Lane V/C Ratio	-	-	-	0.014	0.02	-	-
HCM Control Delay (s)	0	-	-	10.7	10.7	0	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-

HCM 6th TWSC
229: Prairie Baptist Rd & 156th St

Existing PM Peak
12/11/2023

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	8	0	0	12	0	0	167	6	0	65	1
Future Vol, veh/h	0	8	0	0	12	0	0	167	6	0	65	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	9	0	0	13	0	0	182	7	0	71	1
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	264	261	72	262	258	186	72	0	0	189	0	0
Stage 1	72	72	-	186	186	-	-	-	-	-	-	-
Stage 2	192	189	-	76	72	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	687	642	987	689	645	854	1522	-	-	1379	-	-
Stage 1	935	833	-	813	744	-	-	-	-	-	-	-
Stage 2	807	742	-	931	833	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	677	642	987	682	645	854	1522	-	-	1379	-	-
Mov Cap-2 Maneuver	677	642	-	682	645	-	-	-	-	-	-	-
Stage 1	935	833	-	813	744	-	-	-	-	-	-	-
Stage 2	793	742	-	921	833	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	10.7		10.7			0			0			
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1522	-	-	642	645	1379	-	-				
HCM Lane V/C Ratio	-	-	-	0.014	0.02	-	-	-				
HCM Control Delay (s)	0	-	-	10.7	10.7	0	-	-				
HCM Lane LOS	A	-	-	B	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	-	-				

HCM 6th TWSC
229: Prairie Baptist Rd & 156th St

Future AM Peak

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	8	85	0	32	0	205	1162	6	0	634	122
Future Vol, veh/h	70	8	85	0	32	0	205	1162	6	0	634	122
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	92	0	35	0	223	1263	7	0	689	133
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2486	2472	756	2519	2535	1267	822	0	0	1270	0	0
Stage 1	756	756	-	1713	1713	-	-	-	-	-	-	-
Stage 2	1730	1716	-	806	822	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	~ 20	30	406	19	~ 27	205	803	-	-	544	-	-
Stage 1	399	415	-	114	145	-	-	-	-	-	-	-
Stage 2	111	144	-	374	387	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	~ 2	406	-	~ 1	205	803	-	-	544	-	-
Mov Cap-2 Maneuver	-	~ 2	-	-	~ 1	-	-	-	-	-	-	-
Stage 1	~ 22	415	-	6	~ 8	-	-	-	-	-	-	-
Stage 2	-	~ 8	-	283	387	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s							1.7		0			
HCM LOS	-		-									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	803	-	-	-	-	544	-	-				
HCM Lane V/C Ratio	0.277	-	-	-	-	-	-	-				
HCM Control Delay (s)	11.2	0	-	-	-	0	-	-				
HCM Lane LOS	B	A	-	-	-	A	-	-				
HCM 95th %tile Q(veh)	1.1	-	-	-	-	0	-	-				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined				*: All major volume in platoon				

HCM 6th TWSC
229: Prairie Baptist Rd & 156th St

Future PM Peak

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	8	85	0	32	0	205	1162	6	0	634	122
Future Vol, veh/h	70	8	85	0	32	0	205	1162	6	0	634	122
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	76	9	92	0	35	0	223	1263	7	0	689	133
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2486	2472	756	2519	2535	1267	822	0	0	1270	0	0
Stage 1	756	756	-	1713	1713	-	-	-	-	-	-	-
Stage 2	1730	1716	-	806	822	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	~ 20	30	406	19	~ 27	205	803	-	-	544	-	-
Stage 1	399	415	-	114	145	-	-	-	-	-	-	-
Stage 2	111	144	-	374	387	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	~ 2	406	-	~ 1	205	803	-	-	544	-	-
Mov Cap-2 Maneuver	-	~ 2	-	-	~ 1	-	-	-	-	-	-	-
Stage 1	~ 22	415	-	6	~ 8	-	-	-	-	-	-	-
Stage 2	-	~ 8	-	283	387	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s							1.7		0			
HCM LOS	-		-									
Minor Lane/Major Mvmt	NBL		NBT	NBR	EBLn1WBLn1	SBL		SBT	SBR			
Capacity (veh/h)	803		-	-	-	-	544		-	-		
HCM Lane V/C Ratio	0.277		-	-	-	-	-		-	-		
HCM Control Delay (s)	11.2		0	-	-	-	0		-	-		
HCM Lane LOS	B		A	-	-	-	A		-	-		
HCM 95th %tile Q(veh)	1.1		-	-	-	-	0		-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection						
Intersection Delay, s/veh 9.1						
Intersection LOS A						
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	2	2	2		2	
Adj Approach Flow, veh/h	202	10	308		1383	
Demand Flow Rate, veh/h	208	10	318		1425	
Vehicles Circulating, veh/h	1404	384	67		65	
Vehicles Exiting, veh/h	86	1	1545		329	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	18.8	3.7	3.8		8.9	
Approach LOS	C	A	A		A	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.469	0.531	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	208	10	149	169	670	755
Cap Entry Lane, veh/h	430	1025	1269	1341	1271	1344
Entry HV Adj Factor	0.971	0.974	0.973	0.967	0.970	0.971
Flow Entry, veh/h	202	10	145	163	650	733
Cap Entry, veh/h	418	998	1234	1297	1234	1305
V/C Ratio	0.483	0.010	0.117	0.126	0.527	0.562
Control Delay, s/veh	18.8	3.7	3.9	3.8	8.8	9.0
LOS	C	A	A	A	A	A
95th %tile Queue, veh	3	0	0	0	3	4

Intersection						
Intersection Delay, s/veh 9.1						
Intersection LOS A						
Approach	EB	WB	NB		SB	
Entry Lanes	1	1	2		2	
Conflicting Circle Lanes	2	2	2		2	
Adj Approach Flow, veh/h	177	36	1493		822	
Demand Flow Rate, veh/h	182	37	1538		847	
Vehicles Circulating, veh/h	711	1609	87		267	
Vehicles Exiting, veh/h	403	16	806		1379	
Ped Vol Crossing Leg, #/h	0	0	0		0	
Ped Cap Adj	1.000	1.000	1.000		1.000	
Approach Delay, s/veh	7.4	11.9	10.1		7.4	
Approach LOS	A	B	B		A	
Lane	Left	Left	Left	Right	Left	Right
Designated Moves	LTR	LTR	LT	TR	LT	TR
Assumed Moves	LTR	LTR	LT	TR	LT	TR
RT Channelized						
Lane Util	1.000	1.000	0.470	0.530	0.470	0.530
Follow-Up Headway, s	2.535	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	182	37	723	815	398	449
Cap Entry Lane, veh/h	776	362	1246	1319	1056	1132
Entry HV Adj Factor	0.971	0.972	0.971	0.971	0.971	0.971
Flow Entry, veh/h	177	36	702	791	386	436
Cap Entry, veh/h	753	351	1209	1281	1025	1099
V/C Ratio	0.235	0.102	0.580	0.618	0.377	0.397
Control Delay, s/veh	7.4	11.9	9.9	10.3	7.5	7.4
LOS	A	B	A	B	A	A
95th %tile Queue, veh	1	0	4	5	2	2

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↱	↰	↱	↰	↱
Traffic Vol, veh/h	47	1027	948	37	6	32
Future Vol, veh/h	47	1027	948	37	6	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	455	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	51	1116	1030	40	7	35

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	1070	0	0 2248 1030
Stage 1	-	-	- 1030 -
Stage 2	-	-	- 1218 -
Critical Hdwy	4.13	-	- 6.43 6.23
Critical Hdwy Stg 1	-	-	- 5.43 -
Critical Hdwy Stg 2	-	-	- 5.43 -
Follow-up Hdwy	2.227	-	- 3.527 3.327
Pot Cap-1 Maneuver	648	-	- 46 282
Stage 1	-	-	- 343 -
Stage 2	-	-	- 278 -
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	648	-	- 42 282
Mov Cap-2 Maneuver	-	-	- 42 -
Stage 1	-	-	- 316 -
Stage 2	-	-	- 278 -

Approach	EB	WB	SB
HCM Control Delay, s	0.5	0	33.2
HCM LOS	D		

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	648	-	-	-	42	282
HCM Lane V/C Ratio	0.079	-	-	-	0.155	0.123
HCM Control Delay (s)	11	-	-	-	105.9	19.6
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.3	-	-	-	0.5	0.4

Intersection						
Int Delay, s/veh	0.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	47	1027	948	37	6	32
Future Vol, veh/h	47	1027	948	37	6	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	455	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	51	1116	1030	40	7	35
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1070	0	-	0	2248	1030
Stage 1	-	-	-	-	1030	-
Stage 2	-	-	-	-	1218	-
Critical Hdwy	4.13	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.227	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	648	-	-	-	46	282
Stage 1	-	-	-	-	343	-
Stage 2	-	-	-	-	278	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	648	-	-	-	42	282
Mov Cap-2 Maneuver	-	-	-	-	42	-
Stage 1	-	-	-	-	316	-
Stage 2	-	-	-	-	278	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.5	0		33.2		
HCM LOS	D					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	648	-	-	-	42	282
HCM Lane V/C Ratio	0.079	-	-	-	0.155	0.123
HCM Control Delay (s)	11	-	-	-	105.9	19.6
HCM Lane LOS	B	-	-	-	F	C
HCM 95th %tile Q(veh)	0.3	-	-	-	0.5	0.4

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	47	1736	1601	37	6	32
Future Vol, veh/h	47	1736	1601	37	6	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	455	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	51	1887	1740	40	7	35
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1780	0	-	0	3729	1740
Stage 1	-	-	-	-	1740	-
Stage 2	-	-	-	-	1989	-
Critical Hdwy	4.13	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.227	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	346	-	-	-	~ 5	107
Stage 1	-	-	-	-	154	-
Stage 2	-	-	-	-	115	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	346	-	-	-	~ 4	107
Mov Cap-2 Maneuver	-	-	-	-	~ 4	-
Stage 1	-	-	-	-	131	-
Stage 2	-	-	-	-	115	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.5	0		\$ 341.1		
HCM LOS	F					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	346	-	-	-	4	107
HCM Lane V/C Ratio	0.148	-	-	-	1.63	0.325
HCM Control Delay (s)	17.2	-	-	-	\$ 1871.7	54.1
HCM Lane LOS	C	-	-	-	F	F
HCM 95th %tile Q(veh)	0.5	-	-	-	1.7	1.3
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	47	1736	1601	37	6	32
Future Vol, veh/h	47	1736	1601	37	6	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	455	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	51	1887	1740	40	7	35
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	1780	0	-	0	3729	1740
Stage 1	-	-	-	-	1740	-
Stage 2	-	-	-	-	1989	-
Critical Hdwy	4.13	-	-	-	6.43	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.43	-
Follow-up Hdwy	2.227	-	-	-	3.527	3.327
Pot Cap-1 Maneuver	346	-	-	-	~ 5	107
Stage 1	-	-	-	-	154	-
Stage 2	-	-	-	-	115	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	346	-	-	-	~ 4	107
Mov Cap-2 Maneuver	-	-	-	-	~ 4	-
Stage 1	-	-	-	-	131	-
Stage 2	-	-	-	-	115	-
Approach	EB	WB		SB		
HCM Control Delay, s	0.5	0		\$ 341.1		
HCM LOS	F					
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	346	-	-	-	4	107
HCM Lane V/C Ratio	0.148	-	-	-	1.63	0.325
HCM Control Delay (s)	17.2	-	-	-	\$ 1871.7	54.1
HCM Lane LOS	C	-	-	-	F	F
HCM 95th %tile Q(veh)	0.5	-	-	-	1.7	1.3
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.7					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	9	1248	1094	9	12	47
Future Vol, veh/h	9	1248	1094	9	12	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	100	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	10	1357	1189	10	13	51

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1199	0	0	1893	600
Stage 1	-	-	-	1194	-
Stage 2	-	-	-	699	-
Critical Hdwy	4.16	-	-	6.86	6.96
Critical Hdwy Stg 1	-	-	-	5.86	-
Critical Hdwy Stg 2	-	-	-	5.86	-
Follow-up Hdwy	2.23	-	-	3.53	3.33
Pot Cap-1 Maneuver	572	-	-	61	442
Stage 1	-	-	-	248	-
Stage 2	-	-	-	452	-
Platoon blocked, %		-	-		
Mov Cap-1 Maneuver	572	-	-	60	442
Mov Cap-2 Maneuver	-	-	-	60	-
Stage 1	-	-	-	244	-
Stage 2	-	-	-	452	-

Approach	EB	WB	SB
HCM Control Delay, s/v	0.1	0	27.8
HCM LOS			D

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	572	-	-	-	60	442
HCM Lane V/C Ratio	0.017	-	-	-	0.217	0.116
HCM Control Delay (s/veh)	11.4	-	-	-	80.9	14.2
HCM Lane LOS	B	-	-	-	F	B
HCM 95th %tile Q (veh)	0.1	-	-	-	0.7	0.4

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	47	1736	1601	37	6	32
Future Vol, veh/h	47	1736	1601	37	6	32
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	51	1887	1740	40	7	35

Major/Minor	Major1	Major2	Minor2		
Conflicting Flow All	1780	0	-	0	2806
Stage 1	-	-	-	-	1760
Stage 2	-	-	-	-	1046
Critical Hdwy	4.16	-	-	-	6.86
Critical Hdwy Stg 1	-	-	-	-	5.86
Critical Hdwy Stg 2	-	-	-	-	5.86
Follow-up Hdwy	2.23	-	-	-	3.53
Pot Cap-1 Maneuver	341	-	-	-	14
Stage 1	-	-	-	-	122
Stage 2	-	-	-	-	297
Platoon blocked, %		-	-	-	
Mov Cap-1 Maneuver	341	-	-	-	12
Mov Cap-2 Maneuver	-	-	-	-	12
Stage 1	-	-	-	-	104
Stage 2	-	-	-	-	297

Approach	EB	WB	SB
HCM Control Delay, s/v	0.5	0	94
HCM LOS			F

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	341	-	-	-	12	284
HCM Lane V/C Ratio	0.15	-	-	-	0.543	0.122
HCM Control Delay (s/veh)	17.4	-	-	-	\$ 492	19.4
HCM Lane LOS	C	-	-	-	F	C
HCM 95th %tile Q (veh)	0.5	-	-	-	1.3	0.4

Intersection												
Int Delay, s/veh	8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	5	3	190	0	18	3	68	115	103	163	1
Future Vol, veh/h	0	5	3	190	0	18	3	68	115	103	163	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	160	-	-	50	-	-	35	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	5	3	207	0	20	3	74	125	112	177	1
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	555	607	178	549	545	137	178	0	0	199	0	0
Stage 1	402	402	-	143	143	-	-	-	-	-	-	-
Stage 2	153	205	-	406	402	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	441	410	862	445	444	909	1392	-	-	1367	-	-
Stage 1	623	599	-	857	777	-	-	-	-	-	-	-
Stage 2	847	730	-	620	599	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	404	376	862	410	407	909	1392	-	-	1367	-	-
Mov Cap-2 Maneuver	404	376	-	410	407	-	-	-	-	-	-	-
Stage 1	622	550	-	855	775	-	-	-	-	-	-	-
Stage 2	827	729	-	561	550	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.7		21.2		0.1		3					
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1392	-	-	-	477	410	909	1367	-	-		
HCM Lane V/C Ratio	0.002	-	-	-	0.018	0.504	0.022	0.082	-	-		
HCM Control Delay (s)	7.6	-	-	0	12.7	22.4	9	7.9	-	-		
HCM Lane LOS	A	-	-	A	B	C	A	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	-	0.1	2.7	0.1	0.3	-	-		

Intersection												
Int Delay, s/veh	8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	5	3	190	0	18	3	68	115	103	163	1
Future Vol, veh/h	0	5	3	190	0	18	3	68	115	103	163	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	160	-	-	50	-	-	35	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	5	3	207	0	20	3	74	125	112	177	1
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	555	607	178	549	545	137	178	0	0	199	0	0
Stage 1	402	402	-	143	143	-	-	-	-	-	-	-
Stage 2	153	205	-	406	402	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	441	410	862	445	444	909	1392	-	-	1367	-	-
Stage 1	623	599	-	857	777	-	-	-	-	-	-	-
Stage 2	847	730	-	620	599	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	404	376	862	410	407	909	1392	-	-	1367	-	-
Mov Cap-2 Maneuver	404	376	-	410	407	-	-	-	-	-	-	-
Stage 1	622	550	-	855	775	-	-	-	-	-	-	-
Stage 2	827	729	-	561	550	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.7		21.2		0.1		3					
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1392	-	-	-	477	410	909	1367	-	-		
HCM Lane V/C Ratio	0.002	-	-	-	0.018	0.504	0.022	0.082	-	-		
HCM Control Delay (s)	7.6	-	-	0	12.7	22.4	9	7.9	-	-		
HCM Lane LOS	A	-	-	A	B	C	A	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	-	0.1	2.7	0.1	0.3	-	-		

Intersection												
Int Delay, s/veh	8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	5	3	190	0	18	3	68	115	103	163	1
Future Vol, veh/h	0	5	3	190	0	18	3	68	115	103	163	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	160	-	-	50	-	-	35	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	5	3	207	0	20	3	74	125	112	177	1

Major/Minor	Minor2		Minor1		Major1		Major2	
Conflicting Flow All	555	607	178	549	545	137	178	0
Stage 1	402	402	-	143	143	-	-	-
Stage 2	153	205	-	406	402	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-
Pot Cap-1 Maneuver	441	410	862	445	444	909	1392	-
Stage 1	623	599	-	857	777	-	-	-
Stage 2	847	730	-	620	599	-	-	-
Platoon blocked, %								-
Mov Cap-1 Maneuver	404	376	862	410	407	909	1392	-
Mov Cap-2 Maneuver	404	376	-	410	407	-	-	-
Stage 1	622	550	-	855	775	-	-	-
Stage 2	827	729	-	561	550	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.7	21.2	0.1	3
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1392	-	-	-	477	410	909	1367	-	-
HCM Lane V/C Ratio	0.002	-	-	-	0.018	0.504	0.022	0.082	-	-
HCM Control Delay (s)	7.6	-	-	0	12.7	22.4	9	7.9	-	-
HCM Lane LOS	A	-	-	A	B	C	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	2.7	0.1	0.3	-	-

Intersection												
Int Delay, s/veh	8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	5	3	190	0	18	3	68	115	103	163	1
Future Vol, veh/h	0	5	3	190	0	18	3	68	115	103	163	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	0	-	-	160	-	-	50	-	-	35	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	0	5	3	207	0	20	3	74	125	112	177	1
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	555	607	178	549	545	137	178	0	0	199	0	0
Stage 1	402	402	-	143	143	-	-	-	-	-	-	-
Stage 2	153	205	-	406	402	-	-	-	-	-	-	-
Critical Hdwy	7.13	6.53	6.23	7.13	6.53	6.23	4.13	-	-	4.13	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.527	4.027	3.327	3.527	4.027	3.327	2.227	-	-	2.227	-	-
Pot Cap-1 Maneuver	441	410	862	445	444	909	1392	-	-	1367	-	-
Stage 1	623	599	-	857	777	-	-	-	-	-	-	-
Stage 2	847	730	-	620	599	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	404	376	862	410	407	909	1392	-	-	1367	-	-
Mov Cap-2 Maneuver	404	376	-	410	407	-	-	-	-	-	-	-
Stage 1	622	550	-	855	775	-	-	-	-	-	-	-
Stage 2	827	729	-	561	550	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.7		21.2		0.1		3					
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1392	-	-	-	477	410	909	1367	-	-		
HCM Lane V/C Ratio	0.002	-	-	-	0.018	0.504	0.022	0.082	-	-		
HCM Control Delay (s)	7.6	-	-	0	12.7	22.4	9	7.9	-	-		
HCM Lane LOS	A	-	-	A	B	C	A	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	-	0.1	2.7	0.1	0.3	-	-		

HCM 6th Signalized Intersection Summary
233: Lakeview Dr & Logan St

Existing AM Peak
12/11/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	483	5	34	398	294	19	49	48	296	10	24
Future Volume (veh/h)	22	483	5	34	398	294	19	49	48	296	10	24
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	24	525	5	37	433	320	21	53	52	322	11	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	195	895	9	376	483	357	559	283	278	497	161	381
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	705	1835	17	867	991	733	1360	860	844	1279	490	1157
Grp Volume(v), veh/h	24	0	530	37	0	753	21	0	105	322	0	37
Grp Sat Flow(s),veh/h/ln	705	0	1852	867	0	1724	1360	0	1704	1279	0	1647
Q Serve(g_s), s	1.8	0.0	11.2	1.8	0.0	21.7	0.6	0.0	2.4	13.2	0.0	0.8
Cycle Q Clear(g_c), s	23.5	0.0	11.2	13.0	0.0	21.7	1.4	0.0	2.4	15.6	0.0	0.8
Prop In Lane	1.00		0.01	1.00		0.42	1.00		0.50	1.00		0.70
Lane Grp Cap(c), veh/h	195	0	904	376	0	841	559	0	561	497	0	543
V/C Ratio(X)	0.12	0.00	0.59	0.10	0.00	0.90	0.04	0.00	0.19	0.65	0.00	0.07
Avail Cap(c_a), veh/h	225	0	982	413	0	914	633	0	654	566	0	632
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.4	0.0	10.1	14.7	0.0	12.7	13.1	0.0	13.1	18.7	0.0	12.6
Incr Delay (d2), s/veh	0.3	0.0	0.8	0.1	0.0	10.8	0.0	0.0	0.2	2.1	0.0	0.1
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	0.3	0.0	3.8	0.3	0.0	9.1	0.2	0.0	0.8	3.7	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	0.0	10.8	14.8	0.0	23.5	13.1	0.0	13.3	20.8	0.0	12.6
LnGrp LOS	C	A	B	B	A	C	B	A	B	C	A	B
Approach Vol, veh/h	554		790			126			359			
Approach Delay, s/veh	11.4		23.1			13.2			20.0			
Approach LOS	B		C			B			B			
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	23.0		31.7		23.0		31.7					
Change Period (Y+Rc), s	5.0		5.0		5.0		5.0					
Max Green Setting (Gmax), s	21.0		29.0		21.0		29.0					
Max Q Clear Time (g_c+l1), s	4.4		25.5		17.6		23.7					
Green Ext Time (p_c), s	0.5		1.2		0.5		2.5					
Intersection Summary												
HCM 6th Ctrl Delay	18.3											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary
233: Lakeview Dr & Logan St

Existing PM Peak
12/11/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	483	5	34	398	294	19	49	48	296	10	24
Future Volume (veh/h)	22	483	5	34	398	294	19	49	48	296	10	24
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	24	525	5	37	433	320	21	53	52	322	11	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	195	895	9	376	483	357	559	283	278	497	161	381
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.33	0.33	0.33	0.33	0.33	0.33
Sat Flow, veh/h	705	1835	17	867	991	733	1360	860	844	1279	490	1157
Grp Volume(v), veh/h	24	0	530	37	0	753	21	0	105	322	0	37
Grp Sat Flow(s),veh/h/ln	705	0	1852	867	0	1724	1360	0	1704	1279	0	1647
Q Serve(g_s), s	1.8	0.0	11.2	1.8	0.0	21.7	0.6	0.0	2.4	13.2	0.0	0.8
Cycle Q Clear(g_c), s	23.5	0.0	11.2	13.0	0.0	21.7	1.4	0.0	2.4	15.6	0.0	0.8
Prop In Lane	1.00		0.01	1.00		0.42	1.00		0.50	1.00		0.70
Lane Grp Cap(c), veh/h	195	0	904	376	0	841	559	0	561	497	0	543
V/C Ratio(X)	0.12	0.00	0.59	0.10	0.00	0.90	0.04	0.00	0.19	0.65	0.00	0.07
Avail Cap(c_a), veh/h	225	0	982	413	0	914	633	0	654	566	0	632
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.4	0.0	10.1	14.7	0.0	12.7	13.1	0.0	13.1	18.7	0.0	12.6
Incr Delay (d2), s/veh	0.3	0.0	0.8	0.1	0.0	10.8	0.0	0.0	0.2	2.1	0.0	0.1
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	0.3	0.0	3.8	0.3	0.0	9.1	0.2	0.0	0.8	3.7	0.0	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.7	0.0	10.8	14.8	0.0	23.5	13.1	0.0	13.3	20.8	0.0	12.6
LnGrp LOS	C	A	B	B	A	C	B	A	B	C	A	B
Approach Vol, veh/h	554		790			126			359			
Approach Delay, s/veh	11.4		23.1			13.2			20.0			
Approach LOS	B		C			B			B			
Timer - Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	23.0		31.7		23.0		31.7					
Change Period (Y+Rc), s	5.0		5.0		5.0		5.0					
Max Green Setting (Gmax), s	21.0		29.0		21.0		29.0					
Max Q Clear Time (g_c+l1), s	4.4		25.5		17.6		23.7					
Green Ext Time (p_c), s	0.5		1.2		0.5		2.5					
Intersection Summary												
HCM 6th Ctrl Delay	18.3											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary
233: Lakeview Dr & Logan St

Future AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	483	5	34	398	294	144	49	48	296	10	24
Future Volume (veh/h)	22	483	5	34	398	294	144	49	48	296	10	24
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	24	525	5	37	433	320	157	53	52	322	11	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	134	872	8	315	471	348	194	122	120	361	116	274
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.11	0.14	0.14	0.20	0.24	0.24
Sat Flow, veh/h	705	1835	17	867	991	733	1767	860	844	1767	490	1157
Grp Volume(v), veh/h	24	0	530	37	0	753	157	0	105	322	0	37
Grp Sat Flow(s),veh/h/ln	705	0	1852	867	0	1724	1767	0	1704	1767	0	1647
Q Serve(g_s), s	2.8	0.0	17.7	2.8	0.0	34.3	7.3	0.0	4.8	14.9	0.0	1.5
Cycle Q Clear(g_c), s	37.1	0.0	17.7	20.5	0.0	34.3	7.3	0.0	4.8	14.9	0.0	1.5
Prop In Lane	1.00		0.01	1.00		0.42	1.00		0.50	1.00		0.70
Lane Grp Cap(c), veh/h	134	0	881	315	0	820	194	0	242	361	0	390
V/C Ratio(X)	0.18	0.00	0.60	0.12	0.00	0.92	0.81	0.00	0.43	0.89	0.00	0.09
Avail Cap(c_a), veh/h	149	0	922	335	0	858	314	0	263	419	0	390
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.9	0.0	16.3	23.8	0.0	20.6	36.7	0.0	33.1	32.6	0.0	25.1
Incr Delay (d2), s/veh	0.6	0.0	1.0	0.2	0.0	14.4	7.8	0.0	1.2	18.7	0.0	0.1
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	0.5	0.0	7.2	0.6	0.0	15.8	3.5	0.0	2.0	8.1	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.5	0.0	17.3	23.9	0.0	35.0	44.4	0.0	34.3	51.4	0.0	25.2
LnGrp LOS	D	A	B	C	A	C	D	A	C	D	A	C
Approach Vol, veh/h	554			790			262			359		
Approach Delay, s/veh	18.2			34.5			40.4			48.7		
Approach LOS	B			C			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.3	17.0		45.1	14.3	25.0		45.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	20.0	13.0		42.0	15.0	18.0		42.0				
Max Q Clear Time (g_c+l1), s	16.9	6.8		39.1	9.3	3.5		36.3				
Green Ext Time (p_c), s	0.3	0.2		1.0	0.2	0.1		2.7				
Intersection Summary												
HCM 6th Ctrl Delay				33.3								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
233: Lakeview Dr & Logan St

Future PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	483	5	34	398	294	144	49	48	296	10	24
Future Volume (veh/h)	22	483	5	34	398	294	144	49	48	296	10	24
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	24	525	5	37	433	320	157	53	52	322	11	26
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	134	872	8	315	471	348	194	122	120	361	116	274
Arrive On Green	0.48	0.48	0.48	0.48	0.48	0.48	0.11	0.14	0.14	0.20	0.24	0.24
Sat Flow, veh/h	705	1835	17	867	991	733	1767	860	844	1767	490	1157
Grp Volume(v), veh/h	24	0	530	37	0	753	157	0	105	322	0	37
Grp Sat Flow(s),veh/h/ln	705	0	1852	867	0	1724	1767	0	1704	1767	0	1647
Q Serve(g_s), s	2.8	0.0	17.7	2.8	0.0	34.3	7.3	0.0	4.8	14.9	0.0	1.5
Cycle Q Clear(g_c), s	37.1	0.0	17.7	20.5	0.0	34.3	7.3	0.0	4.8	14.9	0.0	1.5
Prop In Lane	1.00		0.01	1.00		0.42	1.00		0.50	1.00		0.70
Lane Grp Cap(c), veh/h	134	0	881	315	0	820	194	0	242	361	0	390
V/C Ratio(X)	0.18	0.00	0.60	0.12	0.00	0.92	0.81	0.00	0.43	0.89	0.00	0.09
Avail Cap(c_a), veh/h	149	0	922	335	0	858	314	0	263	419	0	390
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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	37.9	0.0	16.3	23.8	0.0	20.6	36.7	0.0	33.1	32.6	0.0	25.1
Incr Delay (d2), s/veh	0.6	0.0	1.0	0.2	0.0	14.4	7.8	0.0	1.2	18.7	0.0	0.1
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	0.5	0.0	7.2	0.6	0.0	15.8	3.5	0.0	2.0	8.1	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.5	0.0	17.3	23.9	0.0	35.0	44.4	0.0	34.3	51.4	0.0	25.2
LnGrp LOS	D	A	B	C	A	C	D	A	C	D	A	C
Approach Vol, veh/h	554			790			262			359		
Approach Delay, s/veh	18.2			34.5			40.4			48.7		
Approach LOS	B			C			D			D		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.3	17.0		45.1	14.3	25.0		45.1				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	20.0	13.0		42.0	15.0	18.0		42.0				
Max Q Clear Time (g_c+l1), s	16.9	6.8		39.1	9.3	3.5		36.3				
Green Ext Time (p_c), s	0.3	0.2		1.0	0.2	0.1		2.7				
Intersection Summary												
HCM 6th Ctrl Delay	33.3											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary
234: Cicero Rd & Logan St

Existing AM Peak
12/11/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	98	371	14	84	193	217	389	486	60	0	481	219
Future Volume (veh/h)	98	371	14	84	193	217	389	486	60	0	481	219
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	1856	1856	1856	1856	1856	1856	1856	1856	0	1856	1856
Adj Flow Rate, veh/h	107	403	15	91	210	236	423	528	65	0	523	238
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	0	3	3
Cap, veh/h	352	434	16	239	463	392	421	847	104	0	536	455
Arrive On Green	0.07	0.24	0.24	0.08	0.25	0.25	0.19	0.52	0.52	0.00	0.29	0.29
Sat Flow, veh/h	1767	1777	66	1767	1856	1572	1767	1620	199	0	1856	1572
Grp Volume(v), veh/h	107	0	418	91	210	236	423	0	593	0	523	238
Grp Sat Flow(s),veh/h/ln	1767	0	1844	1767	1856	1572	1767	0	1820	0	1856	1572
Q Serve(g_s), s	4.0	0.0	19.9	3.3	8.6	11.9	17.0	0.0	20.8	0.0	25.1	11.4
Cycle Q Clear(g_c), s	4.0	0.0	19.9	3.3	8.6	11.9	17.0	0.0	20.8	0.0	25.1	11.4
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.11	0.00		1.00
Lane Grp Cap(c), veh/h	352	0	450	239	463	392	421	0	951	0	536	455
V/C Ratio(X)	0.30	0.00	0.93	0.38	0.45	0.60	1.00	0.00	0.62	0.00	0.98	0.52
Avail Cap(c_a), veh/h	361	0	451	239	463	392	421	0	951	0	536	455
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	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	0.0	33.2	24.2	28.6	29.8	25.4	0.0	15.2	0.0	31.7	26.8
Incr Delay (d2), s/veh	0.5	0.0	25.7	1.0	0.7	2.6	45.1	0.0	1.3	0.0	32.5	1.1
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	1.7	0.0	11.8	1.4	3.9	10.6	12.0	0.0	8.3	0.0	15.7	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	0.0	58.9	25.2	29.3	32.4	70.5	0.0	16.5	0.0	64.1	27.9
LnGrp LOS	C	A	E	C	C	C	F	A	B	A	E	C
Approach Vol, veh/h	525				537		1016				761	
Approach Delay, s/veh	51.7				30.0		39.0				52.8	
Approach LOS	D				C		D				D	
Timer - Assigned Phs	1	2	4		5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	27.0	52.0		10.5	27.4	21.0	31.0				
Change Period (Y+Rc), s	4.0	5.0	5.0		4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	22.0		47.0		7.0	22.0	17.0	26.0				
Max Q Clear Time (g_c+I1), s	21.9		22.8		6.0	13.9	19.0	27.1				
Green Ext Time (p_c), s	0.0	0.0	4.3		0.0	1.3	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			43.3									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
234: Cicero Rd & Logan St

Existing PM Peak
12/11/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	98	371	14	84	193	217	389	486	60	0	481	219
Future Volume (veh/h)	98	371	14	84	193	217	389	486	60	0	481	219
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	1856	1856	1856	1856	1856	1856	1856	1856	0	1856	1856
Adj Flow Rate, veh/h	107	403	15	91	210	236	423	528	65	0	523	238
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	0	3	3
Cap, veh/h	352	434	16	239	463	392	421	847	104	0	536	455
Arrive On Green	0.07	0.24	0.24	0.08	0.25	0.25	0.19	0.52	0.52	0.00	0.29	0.29
Sat Flow, veh/h	1767	1777	66	1767	1856	1572	1767	1620	199	0	1856	1572
Grp Volume(v), veh/h	107	0	418	91	210	236	423	0	593	0	523	238
Grp Sat Flow(s),veh/h/ln	1767	0	1844	1767	1856	1572	1767	0	1820	0	1856	1572
Q Serve(g_s), s	4.0	0.0	19.9	3.3	8.6	11.9	17.0	0.0	20.8	0.0	25.1	11.4
Cycle Q Clear(g_c), s	4.0	0.0	19.9	3.3	8.6	11.9	17.0	0.0	20.8	0.0	25.1	11.4
Prop In Lane	1.00		0.04	1.00		1.00	1.00		0.11	0.00		1.00
Lane Grp Cap(c), veh/h	352	0	450	239	463	392	421	0	951	0	536	455
V/C Ratio(X)	0.30	0.00	0.93	0.38	0.45	0.60	1.00	0.00	0.62	0.00	0.98	0.52
Avail Cap(c_a), veh/h	361	0	451	239	463	392	421	0	951	0	536	455
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(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	22.8	0.0	33.2	24.2	28.6	29.8	25.4	0.0	15.2	0.0	31.7	26.8
Incr Delay (d2), s/veh	0.5	0.0	25.7	1.0	0.7	2.6	45.1	0.0	1.3	0.0	32.5	1.1
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	1.7	0.0	11.8	1.4	3.9	10.6	12.0	0.0	8.3	0.0	15.7	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.3	0.0	58.9	25.2	29.3	32.4	70.5	0.0	16.5	0.0	64.1	27.9
LnGrp LOS	C	A	E	C	C	C	F	A	B	A	E	C
Approach Vol, veh/h	525		537			1016			761			
Approach Delay, s/veh	51.7		30.0			39.0			52.8			
Approach LOS	D		C			D			D			
Timer - Assigned Phs	1	2	4		5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	27.0	52.0		10.5	27.4	21.0	31.0				
Change Period (Y+Rc), s	4.0	5.0	5.0		4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	22.0		47.0		7.0	22.0	17.0	26.0				
Max Q Clear Time (g_c+I1), s	21.9		22.8		6.0	13.9	19.0	27.1				
Green Ext Time (p_c), s	0.0	0.0	4.3		0.0	1.3	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			43.3									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary

234: Cicero Rd & Logan St

Future AM Peak

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	98	397	14	84	213	217	389	486	60	0	625	248
Future Volume (veh/h)	98	397	14	84	213	217	389	486	60	0	625	248
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	1856	1856	1856	1856	1856	1856	1856	1856	0	1856	1856
Adj Flow Rate, veh/h	107	432	15	91	232	236	423	528	65	0	679	270
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	0	3	3
Cap, veh/h	254	407	14	140	411	348	417	1007	124	0	663	562
Arrive On Green	0.06	0.23	0.23	0.05	0.22	0.22	0.24	0.62	0.62	0.00	0.36	0.36
Sat Flow, veh/h	1767	1783	62	1767	1856	1572	1767	1620	199	0	1856	1572
Grp Volume(v), veh/h	107	0	447	91	232	236	423	0	593	0	679	270
Grp Sat Flow(s),veh/h/ln	1767	0	1844	1767	1856	1572	1767	0	1820	0	1856	1572
Q Serve(g_s), s	6.5	0.0	32.0	5.5	15.6	19.2	33.0	0.0	25.6	0.0	50.0	18.7
Cycle Q Clear(g_c), s	6.5	0.0	32.0	5.5	15.6	19.2	33.0	0.0	25.6	0.0	50.0	18.7
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.11	0.00		1.00
Lane Grp Cap(c), veh/h	254	0	422	140	411	348	417	0	1131	0	663	562
V/C Ratio(X)	0.42	0.00	1.06	0.65	0.56	0.68	1.02	0.00	0.52	0.00	1.02	0.48
Avail Cap(c_a), veh/h	254	0	422	140	411	348	417	0	1131	0	663	562
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	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	0.0	54.0	42.6	48.5	49.9	53.5	0.0	14.9	0.0	45.0	34.9
Incr Delay (d2), s/veh	1.1	0.0	60.7	10.2	1.8	5.2	48.1	0.0	0.4	0.0	41.4	0.6
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	2.9	0.0	21.9	2.8	7.5	16.8	20.2	0.0	10.5	0.0	30.4	17.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.9	0.0	114.7	52.8	50.3	55.1	101.6	0.0	15.3	0.0	86.4	35.6
LnGrp LOS	D	A	F	D	D	E	F	A	B	A	F	D
Approach Vol, veh/h	554				559		1016				949	
Approach Delay, s/veh	100.4				52.7		51.2				71.9	
Approach LOS	F				D		D				E	
Timer - Assigned Phs	1	2	4		5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	37.0	92.0		12.0	36.0	37.0	55.0				
Change Period (Y+Rc), s	4.0	5.0	5.0		4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	32.0		87.0		8.0	31.0	33.0	50.0				
Max Q Clear Time (g_c+I1), s	34.0		27.6		8.5	21.2	35.0	52.0				
Green Ext Time (p_c), s	0.0	0.0	4.8		0.0	1.6	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			66.7									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary

234: Cicero Rd & Logan St

Future PM Peak

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	98	397	14	84	213	217	389	486	60	0	625	248
Future Volume (veh/h)	98	397	14	84	213	217	389	486	60	0	625	248
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	1856	1856	1856	1856	1856	1856	1856	1856	0	1856	1856
Adj Flow Rate, veh/h	107	432	15	91	232	236	423	528	65	0	679	270
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	0	3	3
Cap, veh/h	254	407	14	140	411	348	417	1007	124	0	663	562
Arrive On Green	0.06	0.23	0.23	0.05	0.22	0.22	0.24	0.62	0.62	0.00	0.36	0.36
Sat Flow, veh/h	1767	1783	62	1767	1856	1572	1767	1620	199	0	1856	1572
Grp Volume(v), veh/h	107	0	447	91	232	236	423	0	593	0	679	270
Grp Sat Flow(s),veh/h/ln	1767	0	1844	1767	1856	1572	1767	0	1820	0	1856	1572
Q Serve(g_s), s	6.5	0.0	32.0	5.5	15.6	19.2	33.0	0.0	25.6	0.0	50.0	18.7
Cycle Q Clear(g_c), s	6.5	0.0	32.0	5.5	15.6	19.2	33.0	0.0	25.6	0.0	50.0	18.7
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.11	0.00		1.00
Lane Grp Cap(c), veh/h	254	0	422	140	411	348	417	0	1131	0	663	562
V/C Ratio(X)	0.42	0.00	1.06	0.65	0.56	0.68	1.02	0.00	0.52	0.00	1.02	0.48
Avail Cap(c_a), veh/h	254	0	422	140	411	348	417	0	1131	0	663	562
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(l)	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	39.8	0.0	54.0	42.6	48.5	49.9	53.5	0.0	14.9	0.0	45.0	34.9
Incr Delay (d2), s/veh	1.1	0.0	60.7	10.2	1.8	5.2	48.1	0.0	0.4	0.0	41.4	0.6
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	2.9	0.0	21.9	2.8	7.5	16.8	20.2	0.0	10.5	0.0	30.4	17.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.9	0.0	114.7	52.8	50.3	55.1	101.6	0.0	15.3	0.0	86.4	35.6
LnGrp LOS	D	A	F	D	D	E	F	A	B	A	F	D
Approach Vol, veh/h	554		559			1016			949			
Approach Delay, s/veh	100.4		52.7			51.2			71.9			
Approach LOS	F		D			D			E			
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	1.0	37.0		92.0	12.0	36.0	37.0	55.0				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	32.0			87.0	8.0	31.0	33.0	50.0				
Max Q Clear Time (g_c+1/5), s	34.0			27.6	8.5	21.2	35.0	52.0				
Green Ext Time (p_c), s	0.0	0.0		4.8	0.0	1.6	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	66.7											
HCM 6th LOS	E											

HCM 6th Signalized Intersection Summary 234: Cicero Rd & Logan St

Future AM Peak
Mitigated - Final

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	39	106	30	268	505	249	120	626	59	0	223	69
Future Volume (veh/h)	39	106	30	268	505	249	120	626	59	0	223	69
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	1856	1856	1856	1856	1856	1856	1856	1856	0	1856	1856
Adj Flow Rate, veh/h	42	115	33	291	549	271	130	680	64	0	242	75
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	0	3	3
Cap, veh/h	220	342	98	559	622	656	874	732	69	0	569	482
Arrive On Green	0.05	0.25	0.25	0.14	0.34	0.34	0.08	0.44	0.44	0.00	0.31	0.31
Sat Flow, veh/h	1767	1386	398	1767	1856	1572	3428	1670	157	0	1856	1572
Grp Volume(v), veh/h	42	0	148	291	549	271	130	0	744	0	242	75
Grp Sat Flow(s),veh/h/ln	1767	0	1784	1767	1856	1572	1714	0	1827	0	1856	1572
Q Serve(g_s), s	1.4	0.0	5.5	9.3	22.5	9.8	1.9	0.0	31.1	0.0	8.4	2.8
Cycle Q Clear(g_c), s	1.4	0.0	5.5	9.3	22.5	9.8	1.9	0.0	31.1	0.0	8.4	2.8
Prop In Lane	1.00		0.22	1.00		1.00	1.00		0.09	0.00		1.00
Lane Grp Cap(c), veh/h	220	0	440	559	622	656	874	0	801	0	569	482
V/C Ratio(X)	0.19	0.00	0.34	0.52	0.88	0.41	0.15	0.00	0.93	0.00	0.43	0.16
Avail Cap(c_a), veh/h	280	0	575	572	713	734	890	0	861	0	621	527
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	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	21.8	0.0	24.9	17.1	25.3	16.5	15.1	0.0	21.5	0.0	22.3	20.4
Incr Delay (d2), s/veh	0.4	0.0	0.4	0.8	11.4	0.4	0.1	0.0	15.6	0.0	0.5	0.1
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	0.6	0.0	2.3	3.7	11.3	0.1	0.7	0.0	15.6	0.0	3.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	22.2	0.0	25.4	17.9	36.7	17.0	15.2	0.0	37.0	0.0	22.8	20.5
LnGrp LOS	C		C	B	D	B	B		D		C	C
Approach Vol, veh/h		190			1111			874			317	
Approach Delay, s/veh		24.7			27.0			33.8			22.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.4	24.9		40.3	8.3	32.0	10.6	29.7				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	12.0	26.0		38.0	7.0	31.0	7.0	27.0				
Max Q Clear Time (g_c+I1), s	11.3	7.5		33.1	3.4	24.5	3.9	10.4				
Green Ext Time (p_c), s	0.1	0.7		2.2	0.0	2.5	0.1	1.5				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh				28.6								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
234: Cicero Rd & Logan St

Future PM Peak
Mitigated - Final

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	SEL	SET	SER	NWL	NWT	NWR
Lane Configurations												
Traffic Volume (veh/h)	98	397	14	84	213	217	389	486	60	0	625	248
Future Volume (veh/h)	98	397	14	84	213	217	389	486	60	0	625	248
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	1856	1856	1856	1856	1856	1856	1856	1856	0	1856	1856
Adj Flow Rate, veh/h	107	432	15	91	232	236	423	528	65	0	679	270
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	0	3	3
Cap, veh/h	327	416	14	217	443	568	419	864	106	0	680	577
Arrive On Green	0.07	0.23	0.23	0.08	0.24	0.24	0.12	0.53	0.53	0.00	0.37	0.37
Sat Flow, veh/h	1767	1783	62	1767	1856	1572	3428	1620	199	0	1856	1572
Grp Volume(v), veh/h	107	0	447	91	232	236	423	0	593	0	679	270
Grp Sat Flow(s),veh/h/ln	1767	0	1844	1767	1856	1572	1714	0	1820	0	1856	1572
Q Serve(g_s), s	4.0	0.0	21.0	3.4	9.8	10.2	11.0	0.0	20.3	0.0	32.9	11.8
Cycle Q Clear(g_c), s	4.0	0.0	21.0	3.4	9.8	10.2	11.0	0.0	20.3	0.0	32.9	11.8
Prop In Lane	1.00		0.03	1.00		1.00	1.00		0.11	0.00		1.00
Lane Grp Cap(c), veh/h	327	0	430	217	443	568	419	0	970	0	680	577
V/C Ratio(X)	0.33	0.00	1.04	0.42	0.52	0.42	1.01	0.00	0.61	0.00	1.00	0.47
Avail Cap(c_a), veh/h	337	0	430	217	443	568	419	0	970	0	680	577
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	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	23.6	0.0	34.5	25.0	29.8	21.6	39.5	0.0	14.5	0.0	28.5	21.8
Incr Delay (d2), s/veh	0.6	0.0	53.8	1.3	1.1	0.5	46.4	0.0	1.1	0.0	34.0	0.6
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	1.7	0.0	15.6	1.4	4.4	9.7	7.2	0.0	8.0	0.0	20.3	11.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.2	0.0	88.3	26.2	30.9	22.1	85.9	0.0	15.7	0.0	62.4	22.4
LnGrp LOS	C		F	C	C	C	F		B		E	C
Approach Vol, veh/h		554			559			1016			949	
Approach Delay, s/veh		75.9			26.4			44.9			51.0	
Approach LOS		E			C			D			D	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.0	26.0		53.0	10.5	26.5	15.0	38.0				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	7.0	21.0		48.0	7.0	21.0	11.0	33.0				
Max Q Clear Time (g_c+l1), s	5.4	23.0		22.3	6.0	12.2	13.0	34.9				
Green Ext Time (p_c), s	0.0	0.0		4.3	0.0	1.5	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh			49.0									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary

235: 8th St & SR 32

Existing AM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	733	571	3	834	43	301	276	10	39	260	27
Future Volume (veh/h)	10	733	571	3	834	43	301	276	10	39	260	27
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	11	797	621	3	907	47	327	300	11	42	283	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	90	905	1002	128	905	767	376	689	25	289	310	32
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.15	0.39	0.39	0.19	0.19	0.19
Sat Flow, veh/h	584	1856	1572	376	1856	1572	1767	1779	65	1060	1655	170
Grp Volume(v), veh/h	11	797	621	3	907	47	327	0	311	42	0	312
Grp Sat Flow(s),veh/h/ln	584	1856	1572	376	1856	1572	1767	0	1844	1060	0	1825
Q Serve(g_s), s	0.0	30.9	18.9	0.6	39.0	1.3	11.6	0.0	9.9	2.7	0.0	13.4
Cycle Q Clear(g_c), s	39.0	30.9	18.9	31.4	39.0	1.3	11.6	0.0	9.9	2.7	0.0	13.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		0.09
Lane Grp Cap(c), veh/h	90	905	1002	128	905	767	376	0	714	289	0	342
V/C Ratio(X)	0.12	0.88	0.62	0.02	1.00	0.06	0.87	0.00	0.44	0.15	0.00	0.91
Avail Cap(c_a), veh/h	90	905	1002	128	905	767	376	0	714	289	0	342
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.0	18.4	8.7	32.5	20.5	10.8	21.7	0.0	18.1	27.5	0.0	31.9
Incr Delay (d2), s/veh	0.6	10.1	1.2	0.1	30.6	0.0	19.1	0.0	0.4	0.2	0.0	27.6
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	0.2	14.4	5.6	0.1	22.7	0.4	6.5	0.0	4.1	0.7	0.0	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	28.5	9.9	32.6	51.1	10.9	40.8	0.0	18.5	27.7	0.0	59.5
LnGrp LOS	D	C	A	C	F	B	D	A	B	C	A	E
Approach Vol, veh/h		1429				957		638				354
Approach Delay, s/veh		20.5				49.0		29.9				55.7
Approach LOS		C				D		C				E
Timer - Assigned Phs		2		4		5	6	8				
Phs Duration (G+Y+Rc), s		36.0		44.0		16.0	20.0	44.0				
Change Period (Y+Rc), s		5.0		5.0		4.0	5.0	5.0				
Max Green Setting (Gmax), s		31.0		39.0		12.0	15.0	39.0				
Max Q Clear Time (g_c+l1), s		11.9		41.0		13.6	15.4	41.0				
Green Ext Time (p_c), s		1.7		0.0		0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			34.1									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary
235: 8th St & SR 32

Existing PM Peak
12/11/2023



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	733	571	3	834	43	301	276	10	39	260	27
Future Volume (veh/h)	10	733	571	3	834	43	301	276	10	39	260	27
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	11	797	621	3	907	47	327	300	11	42	283	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	90	905	1002	128	905	767	376	689	25	289	310	32
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.15	0.39	0.39	0.19	0.19	0.19
Sat Flow, veh/h	584	1856	1572	376	1856	1572	1767	1779	65	1060	1655	170
Grp Volume(v), veh/h	11	797	621	3	907	47	327	0	311	42	0	312
Grp Sat Flow(s),veh/h/ln	584	1856	1572	376	1856	1572	1767	0	1844	1060	0	1825
Q Serve(g_s), s	0.0	30.9	18.9	0.6	39.0	1.3	11.6	0.0	9.9	2.7	0.0	13.4
Cycle Q Clear(g_c), s	39.0	30.9	18.9	31.4	39.0	1.3	11.6	0.0	9.9	2.7	0.0	13.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.04	1.00		0.09
Lane Grp Cap(c), veh/h	90	905	1002	128	905	767	376	0	714	289	0	342
V/C Ratio(X)	0.12	0.88	0.62	0.02	1.00	0.06	0.87	0.00	0.44	0.15	0.00	0.91
Avail Cap(c_a), veh/h	90	905	1002	128	905	767	376	0	714	289	0	342
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.0	18.4	8.7	32.5	20.5	10.8	21.7	0.0	18.1	27.5	0.0	31.9
Incr Delay (d2), s/veh	0.6	10.1	1.2	0.1	30.6	0.0	19.1	0.0	0.4	0.2	0.0	27.6
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	0.2	14.4	5.6	0.1	22.7	0.4	6.5	0.0	4.1	0.7	0.0	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	28.5	9.9	32.6	51.1	10.9	40.8	0.0	18.5	27.7	0.0	59.5
LnGrp LOS	D	C	A	C	F	B	D	A	B	C	A	E
Approach Vol, veh/h		1429		957		638		354				
Approach Delay, s/veh		20.5		49.0		29.9		55.7				
Approach LOS		C		D		C		E				
Timer - Assigned Phs		2		4		5		6		8		
Phs Duration (G+Y+Rc), s		36.0		44.0		16.0		20.0		44.0		
Change Period (Y+Rc), s		5.0		5.0		4.0		5.0		5.0		
Max Green Setting (Gmax), s		31.0		39.0		12.0		15.0		39.0		
Max Q Clear Time (g_c+l1), s		11.9		41.0		13.6		15.4		41.0		
Green Ext Time (p_c), s		1.7		0.0		0.0		0.0		0.0		
Intersection Summary												
HCM 6th Ctrl Delay			34.1									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

235: 8th St & SR 32

Future AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1328	571	4	1432	43	640	449	10	39	260	27
Future Volume (veh/h)	10	1328	571	4	1432	43	640	449	10	39	260	27
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	11	1443	621	4	1557	47	696	488	11	42	283	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	90	905	1002	90	905	767	376	700	16	234	310	32
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.15	0.39	0.39	0.19	0.19	0.19
Sat Flow, veh/h	314	1856	1572	201	1856	1572	1767	1807	41	892	1655	170
Grp Volume(v), veh/h	11	1443	621	4	1557	47	696	0	499	42	0	312
Grp Sat Flow(s),veh/h/ln	314	1856	1572	201	1856	1572	1767	0	1848	892	0	1825
Q Serve(g_s), s	0.0	39.0	18.9	0.0	39.0	1.3	12.0	0.0	18.1	3.3	0.0	13.4
Cycle Q Clear(g_c), s	39.0	39.0	18.9	39.0	39.0	1.3	12.0	0.0	18.1	5.4	0.0	13.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		0.09
Lane Grp Cap(c), veh/h	90	905	1002	90	905	767	376	0	716	234	0	342
V/C Ratio(X)	0.12	1.60	0.62	0.04	1.72	0.06	1.85	0.00	0.70	0.18	0.00	0.91
Avail Cap(c_a), veh/h	90	905	1002	90	905	767	376	0	716	234	0	342
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.0	20.5	8.7	40.0	20.5	10.8	23.7	0.0	20.6	29.6	0.0	31.9
Incr Delay (d2), s/veh	0.6	273.1	1.2	0.2	329.2	0.0	392.7	0.0	3.0	0.4	0.0	27.6
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	0.2	83.6	5.6	0.1	97.7	0.4	46.4	0.0	7.9	0.7	0.0	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	293.6	9.9	40.2	349.7	10.9	416.4	0.0	23.5	29.9	0.0	59.5
LnGrp LOS	D	F	A	D	F	B	F	A	C	C	A	E
Approach Vol, veh/h	2075					1608		1195		354		
Approach Delay, s/veh	207.3					339.1		252.4		56.0		
Approach LOS	F					F		F		E		
Timer - Assigned Phs	2		4		5	6	8					
Phs Duration (G+Y+Rc), s	36.0		44.0		16.0	20.0	44.0					
Change Period (Y+Rc), s	5.0		5.0		4.0	5.0	5.0					
Max Green Setting (Gmax), s	31.0		39.0		12.0	15.0	39.0					
Max Q Clear Time (g_c+l1), s	20.1		41.0		14.0	15.4	41.0					
Green Ext Time (p_c), s	2.4		0.0		0.0	0.0	0.0					
Intersection Summary												
HCM 6th Ctrl Delay	247.9											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary

235: 8th St & SR 32

Future PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1328	571	4	1432	43	640	449	10	39	260	27
Future Volume (veh/h)	10	1328	571	4	1432	43	640	449	10	39	260	27
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	11	1443	621	4	1557	47	696	488	11	42	283	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	90	905	1002	90	905	767	376	700	16	234	310	32
Arrive On Green	0.49	0.49	0.49	0.49	0.49	0.49	0.15	0.39	0.39	0.19	0.19	0.19
Sat Flow, veh/h	314	1856	1572	201	1856	1572	1767	1807	41	892	1655	170
Grp Volume(v), veh/h	11	1443	621	4	1557	47	696	0	499	42	0	312
Grp Sat Flow(s),veh/h/ln	314	1856	1572	201	1856	1572	1767	0	1848	892	0	1825
Q Serve(g_s), s	0.0	39.0	18.9	0.0	39.0	1.3	12.0	0.0	18.1	3.3	0.0	13.4
Cycle Q Clear(g_c), s	39.0	39.0	18.9	39.0	39.0	1.3	12.0	0.0	18.1	5.4	0.0	13.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		0.09
Lane Grp Cap(c), veh/h	90	905	1002	90	905	767	376	0	716	234	0	342
V/C Ratio(X)	0.12	1.60	0.62	0.04	1.72	0.06	1.85	0.00	0.70	0.18	0.00	0.91
Avail Cap(c_a), veh/h	90	905	1002	90	905	767	376	0	716	234	0	342
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.0	20.5	8.7	40.0	20.5	10.8	23.7	0.0	20.6	29.6	0.0	31.9
Incr Delay (d2), s/veh	0.6	273.1	1.2	0.2	329.2	0.0	392.7	0.0	3.0	0.4	0.0	27.6
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	0.2	83.6	5.6	0.1	97.7	0.4	46.4	0.0	7.9	0.7	0.0	8.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.6	293.6	9.9	40.2	349.7	10.9	416.4	0.0	23.5	29.9	0.0	59.5
LnGrp LOS	D	F	A	D	F	B	F	A	C	C	A	E
Approach Vol, veh/h	2075					1608		1195		354		
Approach Delay, s/veh	207.3					339.1		252.4		56.0		
Approach LOS	F					F		F		E		
Timer - Assigned Phs	2		4		5	6	8					
Phs Duration (G+Y+Rc), s	36.0		44.0		16.0	20.0	44.0					
Change Period (Y+Rc), s	5.0		5.0		4.0	5.0	5.0					
Max Green Setting (Gmax), s	31.0		39.0		12.0	15.0	39.0					
Max Q Clear Time (g_c+l1), s	20.1		41.0		14.0	15.4	41.0					
Green Ext Time (p_c), s	2.4		0.0		0.0	0.0	0.0					
Intersection Summary												
HCM 6th Ctrl Delay	247.9											
HCM 6th LOS	F											

HCM 6th Signalized Intersection Summary

235: 8th St & SR 32

Future AM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	850	437	6	993	24	203	166	3	207	361	30
Future Volume (veh/h)	7	850	437	6	993	24	203	166	3	207	361	30
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	8	924	475	7	1079	26	221	180	3	225	392	33
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	165	1249	749	178	1249	751	418	458	8	550	457	39
Arrive On Green	0.35	0.35	0.35	0.35	0.35	0.35	0.12	0.25	0.25	0.12	0.27	0.27
Sat Flow, veh/h	506	3526	1572	382	3526	1572	3428	1820	30	1767	1688	142
Grp Volume(v), veh/h	8	924	475	7	1079	26	221	0	183	225	0	425
Grp Sat Flow(s),veh/h/ln	506	1763	1572	382	1763	1572	1714	0	1850	1767	0	1830
Q Serve(g_s), s	0.8	12.7	12.6	0.9	15.8	0.5	3.4	0.0	4.6	5.1	0.0	12.2
Cycle Q Clear(g_c), s	16.6	12.7	12.6	13.6	15.8	0.5	3.4	0.0	4.6	5.1	0.0	12.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		0.08
Lane Grp Cap(c), veh/h	165	1249	749	178	1249	751	418	0	466	550	0	496
V/C Ratio(X)	0.05	0.74	0.63	0.04	0.86	0.03	0.53	0.00	0.39	0.41	0.00	0.86
Avail Cap(c_a), veh/h	168	1272	759	180	1272	761	532	0	601	555	0	574
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.4	15.7	10.9	21.6	16.6	7.7	22.8	0.0	17.2	12.6	0.0	19.2
Incr Delay (d2), s/veh	0.1	2.3	1.7	0.1	6.3	0.0	1.0	0.0	0.5	0.5	0.0	11.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	4.8	3.9	0.1	6.6	0.1	1.3	0.0	1.8	1.8	0.0	6.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	24.5	17.9	12.6	21.7	23.0	7.7	23.9	0.0	17.8	13.1	0.0	30.2
LnGrp LOS	C	B	B	C	C	A	C		B	B		C
Approach Vol, veh/h	1407			1112			404			650		
Approach Delay, s/veh	16.2			22.6			21.1			24.3		
Approach LOS	B			C			C			C		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	18.0	19.0		24.6	10.8	20.0		24.6				
Change Period (Y+Rc), s	5.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s	18.0	18.0		20.0	8.6	17.4		20.0				
Max Q Clear Time (g_c+I1), s	6.6	6.6		18.6	5.4	14.2		17.8				
Green Ext Time (p_c), s	0.0	0.7		1.0	0.2	0.8		1.5				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh				20.2								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary 235: 8th St & SR 32

Future PM Peak
Mitigated - Final



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1328	571	4	1432	43	640	449	10	39	260	27
Future Volume (veh/h)	10	1328	571	4	1432	43	640	449	10	39	260	27
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	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856	1856
Adj Flow Rate, veh/h	11	1443	621	4	1557	47	696	488	11	42	283	29
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	3	3	3	3	3	3	3	3	3	3	3	3
Cap, veh/h	88	1606	1055	96	1606	796	739	591	13	239	287	29
Arrive On Green	0.46	0.46	0.46	0.46	0.46	0.46	0.22	0.33	0.33	0.05	0.17	0.17
Sat Flow, veh/h	314	3526	1572	201	3526	1572	3428	1807	41	1767	1655	170
Grp Volume(v), veh/h	11	1443	621	4	1557	47	696	0	499	42	0	312
Grp Sat Flow(s),veh/h/ln	314	1763	1572	201	1763	1572	1714	0	1848	1767	0	1825
Q Serve(g_s), s	2.2	34.0	19.3	1.7	38.8	1.4	18.0	0.0	22.4	1.7	0.0	15.3
Cycle Q Clear(g_c), s	41.0	34.0	19.3	35.6	38.8	1.4	18.0	0.0	22.4	1.7	0.0	15.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.02	1.00		0.09
Lane Grp Cap(c), veh/h	88	1606	1055	96	1606	796	739	0	605	239	0	316
V/C Ratio(X)	0.13	0.90	0.59	0.04	0.97	0.06	0.94	0.00	0.83	0.18	0.00	0.99
Avail Cap(c_a), veh/h	88	1606	1055	96	1606	796	739	0	605	287	0	316
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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.2	22.6	8.0	39.0	23.9	11.3	34.7	0.0	27.9	28.2	0.0	37.1
Incr Delay (d2), s/veh	0.6	7.2	0.9	0.2	15.8	0.0	20.2	0.0	9.1	0.3	0.0	46.7
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	0.3	14.7	5.7	0.1	18.5	0.5	9.4	0.0	11.1	0.7	0.0	10.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	44.8	29.8	8.9	39.2	39.7	11.3	55.0	0.0	37.0	28.5	0.0	83.8
LnGrp LOS	D	C	A	D	D	B	D		D	C		F
Approach Vol, veh/h	2075			1608			1195			354		
Approach Delay, s/veh	23.6			38.8			47.5			77.3		
Approach LOS	C			D			D			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.6	34.4		46.0	23.4	20.6		46.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s	7.0	27.0		41.0	19.4	15.6		41.0				
Max Q Clear Time (g_c+I13), s	13.7	24.4		43.0	20.0	17.3		40.8				
Green Ext Time (p_c), s	0.0	0.8		0.0	0.0	0.0		0.2				
Intersection Summary												
HCM 6th Ctrl Delay, s/veh				37.4								
HCM 6th LOS				D								

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕↕			↕	
Traffic Vol, veh/h	5	0	36	0	0	24	1	567	2	39	866	0
Future Vol, veh/h	5	0	36	0	0	24	1	567	2	39	866	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	5	0	39	0	0	26	1	616	2	42	941	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1335	1645	941	1664	1644	309	941	0	0	618	0	0
Stage 1	1025	1025	-	619	619	-	-	-	-	-	-	-
Stage 2	310	620	-	1045	1025	-	-	-	-	-	-	-
Critical Hdwy	7.345	6.545	6.245	7.345	6.545	6.945	4.145	-	-	4.145	-	-
Critical Hdwy Stg 1	6.145	5.545	-	6.545	5.545	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.545	5.545	-	6.145	5.545	-	-	-	-	-	-	-
Follow-up Hdwy	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285	2.2285	-	-	2.2285	-	-
Pot Cap-1 Maneuver	120	98	317	69	98	685	721	-	-	954	-	-
Stage 1	281	310	-	442	477	-	-	-	-	-	-	-
Stage 2	673	477	-	274	310	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	107	89	317	56	89	685	721	-	-	954	-	-
Mov Cap-2 Maneuver	107	89	-	56	89	-	-	-	-	-	-	-
Stage 1	280	281	-	441	476	-	-	-	-	-	-	-
Stage 2	646	476	-	218	281	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	22		10.5		0		0.4					
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	721	-	-	256	685	954	-	-				
HCM Lane V/C Ratio	0.002	-	-	0.174	0.038	0.044	-	-				
HCM Control Delay (s)	10	0	-	22	10.5	8.9	0	-				
HCM Lane LOS	B	A	-	C	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.6	0.1	0.1	-	-				

Intersection												
Int Delay, s/veh	1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕↗			↕	
Traffic Vol, veh/h	5	0	36	0	0	24	1	567	2	39	866	0
Future Vol, veh/h	5	0	36	0	0	24	1	567	2	39	866	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	5	0	39	0	0	26	1	616	2	42	941	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1335	1645	941	1664	1644	309	941	0	0	618	0	0
Stage 1	1025	1025	-	619	619	-	-	-	-	-	-	-
Stage 2	310	620	-	1045	1025	-	-	-	-	-	-	-
Critical Hdwy	7.345	6.545	6.245	7.345	6.545	6.945	4.145	-	-	4.145	-	-
Critical Hdwy Stg 1	6.145	5.545	-	6.545	5.545	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.545	5.545	-	6.145	5.545	-	-	-	-	-	-	-
Follow-up Hdwy	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285	2.2285	-	-	2.2285	-	-
Pot Cap-1 Maneuver	120	98	317	69	98	685	721	-	-	954	-	-
Stage 1	281	310	-	442	477	-	-	-	-	-	-	-
Stage 2	673	477	-	274	310	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	107	89	317	56	89	685	721	-	-	954	-	-
Mov Cap-2 Maneuver	107	89	-	56	89	-	-	-	-	-	-	-
Stage 1	280	281	-	441	476	-	-	-	-	-	-	-
Stage 2	646	476	-	218	281	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	22		10.5		0		0.4					
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	721	-	-	256	685	954	-	-				
HCM Lane V/C Ratio	0.002	-	-	0.174	0.038	0.044	-	-				
HCM Control Delay (s)	10	0	-	22	10.5	8.9	0	-				
HCM Lane LOS	B	A	-	C	B	A	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.6	0.1	0.1	-	-				

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	0	36	0	0	24	1	1078	2	39	867	0
Future Vol, veh/h	5	0	36	0	0	24	1	1078	2	39	867	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	5	0	39	0	0	26	1	1172	2	42	942	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1614	2202	942	2221	2201	587	942	0	0	1174	0	0
Stage 1	1026	1026	-	1175	1175	-	-	-	-	-	-	-
Stage 2	588	1176	-	1046	1026	-	-	-	-	-	-	-
Critical Hdwy	7.345	6.545	6.245	7.345	6.545	6.945	4.145	-	-	4.145	-	-
Critical Hdwy Stg 1	6.145	5.545	-	6.545	5.545	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.545	5.545	-	6.145	5.545	-	-	-	-	-	-	-
Follow-up Hdwy	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285	2.2285	-	-	2.2285	-	-
Pot Cap-1 Maneuver	75	44	316	27	44	452	721	-	-	588	-	-
Stage 1	281	309	-	203	263	-	-	-	-	-	-	-
Stage 2	461	263	-	274	309	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	62	37	316	21	37	452	721	-	-	588	-	-
Mov Cap-2 Maneuver	62	37	-	21	37	-	-	-	-	-	-	-
Stage 1	280	263	-	202	262	-	-	-	-	-	-	-
Stage 2	433	262	-	204	263	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	26.6		13.5		0		0.5					
HCM LOS	D		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	721	-	-	211	452	588	-	-				
HCM Lane V/C Ratio	0.002	-	-	0.211	0.058	0.072	-	-				
HCM Control Delay (s)	10	0	-	26.6	13.5	11.6	0	-				
HCM Lane LOS	B	A	-	D	B	B	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.8	0.2	0.2	-	-				

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	0	36	0	0	24	1	1078	2	39	867	0
Future Vol, veh/h	5	0	36	0	0	24	1	1078	2	39	867	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3	3	3	3	3	3	3
Mvmt Flow	5	0	39	0	0	26	1	1172	2	42	942	0
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1614	2202	942	2221	2201	587	942	0	0	1174	0	0
Stage 1	1026	1026	-	1175	1175	-	-	-	-	-	-	-
Stage 2	588	1176	-	1046	1026	-	-	-	-	-	-	-
Critical Hdwy	7.345	6.545	6.245	7.345	6.545	6.945	4.145	-	-	4.145	-	-
Critical Hdwy Stg 1	6.145	5.545	-	6.545	5.545	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.545	5.545	-	6.145	5.545	-	-	-	-	-	-	-
Follow-up Hdwy	3.5285	4.0285	3.3285	3.5285	4.0285	3.3285	2.2285	-	-	2.2285	-	-
Pot Cap-1 Maneuver	75	44	316	27	44	452	721	-	-	588	-	-
Stage 1	281	309	-	203	263	-	-	-	-	-	-	-
Stage 2	461	263	-	274	309	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	62	37	316	21	37	452	721	-	-	588	-	-
Mov Cap-2 Maneuver	62	37	-	21	37	-	-	-	-	-	-	-
Stage 1	280	263	-	202	262	-	-	-	-	-	-	-
Stage 2	433	262	-	204	263	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	26.6		13.5		0		0.5					
HCM LOS	D		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	721	-	-	211	452	588	-	-				
HCM Lane V/C Ratio	0.002	-	-	0.211	0.058	0.072	-	-				
HCM Control Delay (s)	10	0	-	26.6	13.5	11.6	0	-				
HCM Lane LOS	B	A	-	D	B	B	A	-				
HCM 95th %tile Q(veh)	0	-	-	0.8	0.2	0.2	-	-				

Intersection						
Intersection Delay, s/veh	0.0					
Intersection LOS	-					
Approach	EB		NB		SB	
Entry Lanes	2		2		2	
Conflicting Circle Lanes	2		2		2	
Adj Approach Flow, veh/h	0		0		0	
Demand Flow Rate, veh/h	0		0		0	
Vehicles Circulating, veh/h	0		0		0	
Vehicles Exiting, veh/h	0		0		0	
Ped Vol Crossing Leg, #/h	0		0		0	
Ped Cap Adj	1.000		1.000		1.000	
Approach Delay, s/veh	0.0		0.0		0.0	
Approach LOS	-		-		-	
Lane	Left	Right	Left	Right	Left	Right
Designated Moves	LTR	R	L	LTR	LT	TR
Assumed Moves	LTR	R	L	LTR	LT	TR
RT Channelized						
Lane Util	0.500	0.500	0.500	0.500	0.500	0.500
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	0	0	0	0	0	0
Cap Entry Lane, veh/h	1350	1420	1350	1420	1350	1420
Entry HV Adj Factor	1.000	1.000	1.000	1.000	1.000	1.000
Flow Entry, veh/h	0	0	0	0	0	0
Cap Entry, veh/h	1350	1420	1350	1420	1350	1420
V/C Ratio	0.000	0.000	0.000	0.000	0.000	0.000
Control Delay, s/veh	2.7	2.5	2.7	2.5	2.7	2.5
LOS	A	A	A	A	A	A
95th %tile Queue, veh	0	0	0	0	0	0

Intersection						
Intersection Delay, s/veh	0.0					
Intersection LOS	-					
Approach	EB		NB		SB	
Entry Lanes	2		2		2	
Conflicting Circle Lanes	2		2		2	
Adj Approach Flow, veh/h	0		0		0	
Demand Flow Rate, veh/h	0		0		0	
Vehicles Circulating, veh/h	0		0		0	
Vehicles Exiting, veh/h	0		0		0	
Ped Vol Crossing Leg, #/h	0		0		0	
Ped Cap Adj	1.000		1.000		1.000	
Approach Delay, s/veh	0.0		0.0		0.0	
Approach LOS	-		-		-	
Lane	Left	Right	Left	Right	Left	Right
Designated Moves	LTR	R	L	LTR	LT	TR
Assumed Moves	LTR	R	L	LTR	LT	TR
RT Channelized						
Lane Util	0.500	0.500	0.500	0.500	0.500	0.500
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	0	0	0	0	0	0
Cap Entry Lane, veh/h	1350	1420	1350	1420	1350	1420
Entry HV Adj Factor	1.000	1.000	1.000	1.000	1.000	1.000
Flow Entry, veh/h	0	0	0	0	0	0
Cap Entry, veh/h	1350	1420	1350	1420	1350	1420
V/C Ratio	0.000	0.000	0.000	0.000	0.000	0.000
Control Delay, s/veh	2.7	2.5	2.7	2.5	2.7	2.5
LOS	A	A	A	A	A	A
95th %tile Queue, veh	0	0	0	0	0	0

HCM 6th Roundabout
237: 8th St & Pleasant St Extension

Future AM Peak

Intersection						
Intersection Delay, s/veh	26.9					
Intersection LOS	D					
Approach	EB		NB		SB	
Entry Lanes	2		2		2	
Conflicting Circle Lanes	2		2		2	
Adj Approach Flow, veh/h	1024		2032		963	
Demand Flow Rate, veh/h	1055		2093		992	
Vehicles Circulating, veh/h	991		0		924	
Vehicles Exiting, veh/h	925		2046		1169	
Ped Vol Crossing Leg, #/h	0		0		0	
Ped Cap Adj	1.000		1.000		1.000	
Approach Delay, s/veh	46.6		15.0		30.9	
Approach LOS	E		B		D	
Lane	Left	Right	Left	Right	Left	Right
Designated Moves	LTR	R	L	LTR	LT	TR
Assumed Moves	LTR	R	L	TR	LT	TR
RT Channelized						
Lane Util	0.470	0.530	0.441	0.559	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	496	559	924	1169	466	526
Cap Entry Lane, veh/h	542	612	1350	1420	577	647
Entry HV Adj Factor	0.970	0.971	0.971	0.971	0.971	0.970
Flow Entry, veh/h	481	543	897	1135	453	510
Cap Entry, veh/h	526	594	1310	1379	560	628
V/C Ratio	0.914	0.914	0.685	0.823	0.808	0.812
Control Delay, s/veh	48.6	44.8	11.9	17.4	32.1	29.9
LOS	E	E	B	C	D	D
95th %tile Queue, veh	11	11	6	10	8	8

HCM 6th Roundabout
237: 8th St & Pleasant St Extension

Future PM Peak

Intersection						
Intersection Delay, s/veh	26.9					
Intersection LOS	D					
Approach	EB		NB		SB	
Entry Lanes	2		2		2	
Conflicting Circle Lanes	2		2		2	
Adj Approach Flow, veh/h	1024		2032		963	
Demand Flow Rate, veh/h	1055		2093		992	
Vehicles Circulating, veh/h	991		0		924	
Vehicles Exiting, veh/h	925		2046		1169	
Ped Vol Crossing Leg, #/h	0		0		0	
Ped Cap Adj	1.000		1.000		1.000	
Approach Delay, s/veh	46.6		15.0		30.9	
Approach LOS	E		B		D	
Lane	Left	Right	Left	Right	Left	Right
Designated Moves	LTR	R	L	LTR	LT	TR
Assumed Moves	LTR	R	L	TR	LT	TR
RT Channelized						
Lane Util	0.470	0.530	0.441	0.559	0.470	0.530
Follow-Up Headway, s	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	496	559	924	1169	466	526
Cap Entry Lane, veh/h	542	612	1350	1420	577	647
Entry HV Adj Factor	0.970	0.971	0.971	0.971	0.971	0.970
Flow Entry, veh/h	481	543	897	1135	453	510
Cap Entry, veh/h	526	594	1310	1379	560	628
V/C Ratio	0.914	0.914	0.685	0.823	0.808	0.812
Control Delay, s/veh	48.6	44.8	11.9	17.4	32.1	29.9
LOS	E	E	B	C	D	D
95th %tile Queue, veh	11	11	6	10	8	8

Intersection							
Intersection Delay, s/veh 6.1							
Intersection LOS A							
Approach	EB	WB		NB		SB	
Entry Lanes	1	2		2		2	
Conflicting Circle Lanes	2	2		2		2	
Adj Approach Flow, veh/h	5	182		422		962	
Demand Flow Rate, veh/h	5	187		434		991	
Vehicles Circulating, veh/h	990	424		348		15	
Vehicles Exiting, veh/h	16	358		647		596	
Ped Vol Crossing Leg, #/h	0	0		0		0	
Ped Cap Adj	1.000	1.000		1.000		1.000	
Approach Delay, s/veh	6.1	5.3		5.7		6.5	
Approach LOS	A	A		A		A	
Lane	Left	Left	Right	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	L	TR
Assumed Moves	LTR	LT	R	LT	TR	L	TR
RT Channelized							
Lane Util	1.000	0.080	0.920	0.470	0.530	0.346	0.654
Follow-Up Headway, s	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	5	15	172	204	230	343	648
Cap Entry Lane, veh/h	612	914	990	980	1056	1331	1402
Entry HV Adj Factor	0.977	0.979	0.971	0.972	0.972	0.971	0.971
Flow Entry, veh/h	5	15	167	198	223	333	629
Cap Entry, veh/h	598	894	962	952	1027	1293	1362
V/C Ratio	0.008	0.016	0.174	0.208	0.218	0.258	0.462
Control Delay, s/veh	6.1	4.2	5.4	5.8	5.6	5.0	7.2
LOS	A	A	A	A	A	A	A
95th %tile Queue, veh	0	0	1	1	1	1	3

Intersection							
Intersection Delay, s/veh 6.1							
Intersection LOS A							
Approach	EB	WB		NB		SB	
Entry Lanes	1	2		2		2	
Conflicting Circle Lanes	2	2		2		2	
Adj Approach Flow, veh/h	5	182		422		962	
Demand Flow Rate, veh/h	5	187		434		991	
Vehicles Circulating, veh/h	990	424		348		15	
Vehicles Exiting, veh/h	16	358		647		596	
Ped Vol Crossing Leg, #/h	0	0		0		0	
Ped Cap Adj	1.000	1.000		1.000		1.000	
Approach Delay, s/veh	6.1	5.3		5.7		6.5	
Approach LOS	A	A		A		A	
Lane	Left	Left	Right	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	L	TR
Assumed Moves	LTR	LT	R	LT	TR	L	TR
RT Channelized							
Lane Util	1.000	0.080	0.920	0.470	0.530	0.346	0.654
Follow-Up Headway, s	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	5	15	172	204	230	343	648
Cap Entry Lane, veh/h	612	914	990	980	1056	1331	1402
Entry HV Adj Factor	0.977	0.979	0.971	0.972	0.972	0.971	0.971
Flow Entry, veh/h	5	15	167	198	223	333	629
Cap Entry, veh/h	598	894	962	952	1027	1293	1362
V/C Ratio	0.008	0.016	0.174	0.208	0.218	0.258	0.462
Control Delay, s/veh	6.1	4.2	5.4	5.8	5.6	5.0	7.2
LOS	A	A	A	A	A	A	A
95th %tile Queue, veh	0	0	1	1	1	1	3

Intersection							
Intersection Delay, s/veh99.4							
Intersection LOS F							
Approach	EB	WB		NB		SB	
Entry Lanes	1	2		2		2	
Conflicting Circle Lanes	2	2		2		2	
Adj Approach Flow, veh/h	5	895		1161		1984	
Demand Flow Rate, veh/h	5	921		1195		2043	
Vehicles Circulating, veh/h	2042	1186		840		15	
Vehicles Exiting, veh/h	16	850		1207		2092	
Ped Vol Crossing Leg, #/h	0	0		0		0	
Ped Cap Adj	1.000	1.000		1.000		1.000	
Approach Delay, s/veh	15.1	359.1		41.4		16.4	
Approach LOS	C	F		E		C	
Lane	Left	Left	Right	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	L	TR
Assumed Moves	LTR	LT	R	LT	TR	L	TR
RT Channelized							
Lane Util	1.000	0.016	0.984	0.470	0.530	0.409	0.591
Follow-Up Headway, s	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	5	15	906	562	633	835	1208
Cap Entry Lane, veh/h	250	453	518	623	695	1331	1402
Entry HV Adj Factor	0.977	0.979	0.971	0.971	0.972	0.971	0.971
Flow Entry, veh/h	5	15	880	545	615	811	1173
Cap Entry, veh/h	244	444	503	605	676	1293	1361
V/C Ratio	0.020	0.033	1.749	0.902	0.910	0.627	0.862
Control Delay, s/veh	15.1	8.6	365.0	42.2	40.6	10.5	20.5
LOS	C	A	F	E	E	B	C
95th %tile Queue, veh	0	0	53	11	12	5	12

Intersection							
Intersection Delay, s/veh99.4							
Intersection LOS F							
Approach	EB	WB		NB		SB	
Entry Lanes	1	2		2		2	
Conflicting Circle Lanes	2	2		2		2	
Adj Approach Flow, veh/h	5	895		1161		1984	
Demand Flow Rate, veh/h	5	921		1195		2043	
Vehicles Circulating, veh/h	2042	1186		840		15	
Vehicles Exiting, veh/h	16	850		1207		2092	
Ped Vol Crossing Leg, #/h	0	0		0		0	
Ped Cap Adj	1.000	1.000		1.000		1.000	
Approach Delay, s/veh	15.1	359.1		41.4		16.4	
Approach LOS	C	F		E		C	
Lane	Left	Left	Right	Left	Right	Left	Right
Designated Moves	LTR	LT	R	LT	TR	L	TR
Assumed Moves	LTR	LT	R	LT	TR	L	TR
RT Channelized							
Lane Util	1.000	0.016	0.984	0.470	0.530	0.409	0.591
Follow-Up Headway, s	2.535	2.667	2.535	2.667	2.535	2.667	2.535
Critical Headway, s	4.328	4.645	4.328	4.645	4.328	4.645	4.328
Entry Flow, veh/h	5	15	906	562	633	835	1208
Cap Entry Lane, veh/h	250	453	518	623	695	1331	1402
Entry HV Adj Factor	0.977	0.979	0.971	0.971	0.972	0.971	0.971
Flow Entry, veh/h	5	15	880	545	615	811	1173
Cap Entry, veh/h	244	444	503	605	676	1293	1361
V/C Ratio	0.020	0.033	1.749	0.902	0.910	0.627	0.862
Control Delay, s/veh	15.1	8.6	365.0	42.2	40.6	10.5	20.5
LOS	C	A	F	E	E	B	C
95th %tile Queue, veh	0	0	53	11	12	5	12

Intersection						
Int Delay, s/veh	6.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	205	164	14	412	156
Future Vol, veh/h	10	205	164	14	412	156
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	223	178	15	448	170
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1252	186	0	0	193	0
Stage 1	186	-	-	-	-	-
Stage 2	1066	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	189	854	-	-	1374	-
Stage 1	843	-	-	-	-	-
Stage 2	329	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	127	854	-	-	1374	-
Mov Cap-2 Maneuver	127	-	-	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	222	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	13.1	0		6.4		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	674	1374	-	
HCM Lane V/C Ratio	-	-	0.347	0.326	-	
HCM Control Delay (s)	-	-	13.1	8.9	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	1.5	1.4	-	

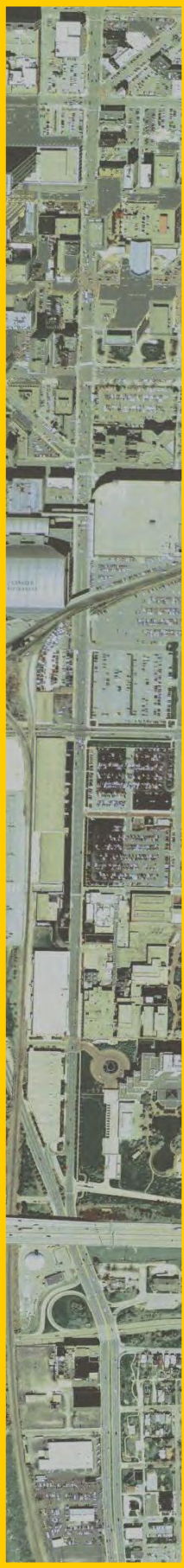
Intersection						
Int Delay, s/veh	6.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	205	164	14	412	156
Future Vol, veh/h	10	205	164	14	412	156
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	223	178	15	448	170
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1252	186	0	0	193	0
Stage 1	186	-	-	-	-	-
Stage 2	1066	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	189	854	-	-	1374	-
Stage 1	843	-	-	-	-	-
Stage 2	329	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	127	854	-	-	1374	-
Mov Cap-2 Maneuver	127	-	-	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	222	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	13.1	0	6.4			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	674	1374	-	
HCM Lane V/C Ratio	-	-	0.347	0.326	-	
HCM Control Delay (s)	-	-	13.1	8.9	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	1.5	1.4	-	

Intersection						
Int Delay, s/veh	227					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	885	164	14	913	156
Future Vol, veh/h	10	885	164	14	913	156
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	962	178	15	992	170
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	2340	186	0	0	193	0
Stage 1	186	-	-	-	-	-
Stage 2	2154	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	40	~ 854	-	-	1374	-
Stage 1	843	-	-	-	-	-
Stage 2	95	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	11	~ 854	-	-	1374	-
Mov Cap-2 Maneuver	11	-	-	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	26	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s\$	528.9	0		12		
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	460	1374	-	
HCM Lane V/C Ratio	-	-	2.115	0.722	-	
HCM Control Delay (s)	-	-\$	528.9	14.1	-	
HCM Lane LOS	-	-	F	B	-	
HCM 95th %tile Q(veh)	-	-	69.4	6.8	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	227					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	10	885	164	14	913	156
Future Vol, veh/h	10	885	164	14	913	156
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	-	-	-	100	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	3	3	3	3	3	3
Mvmt Flow	11	962	178	15	992	170
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	2340	186	0	0	193	0
Stage 1	186	-	-	-	-	-
Stage 2	2154	-	-	-	-	-
Critical Hdwy	6.43	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.43	-	-	-	-	-
Follow-up Hdwy	3.527	3.327	-	-	2.227	-
Pot Cap-1 Maneuver	40	~ 854	-	-	1374	-
Stage 1	843	-	-	-	-	-
Stage 2	95	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	11	~ 854	-	-	1374	-
Mov Cap-2 Maneuver	11	-	-	-	-	-
Stage 1	843	-	-	-	-	-
Stage 2	26	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s\$	528.9	0		12		
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	460	1374	-	
HCM Lane V/C Ratio	-	-	2.115	0.722	-	
HCM Control Delay (s)	-	-\$ 528.9		14.1	-	
HCM Lane LOS	-	-	F	B	-	
HCM 95th %tile Q(veh)	-	-	69.4	6.8	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection			
Intersection Delay, s/veh28.1			
Intersection LOS D			
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	213	136	1274
Demand Flow Rate, veh/h	219	140	1312
Vehicles Circulating, veh/h	136	1046	8
Vehicles Exiting, veh/h	1050	274	347
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	4.7	12.5	33.6
Approach LOS	A	B	D
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	219	140	1312
Cap Entry Lane, veh/h	1201	475	1369
Entry HV Adj Factor	0.973	0.972	0.971
Flow Entry, veh/h	213	136	1274
Cap Entry, veh/h	1168	461	1329
V/C Ratio	0.182	0.295	0.959
Control Delay, s/veh	4.7	12.5	33.6
LOS	A	B	D
95th %tile Queue, veh	1	1	19

Intersection			
Intersection Delay, s/veh 22.8			
Intersection LOS C			
Approach	WB	NB	SB
Entry Lanes	1	1	1
Conflicting Circle Lanes	1	1	1
Adj Approach Flow, veh/h	973	193	1162
Demand Flow Rate, veh/h	1002	198	1197
Vehicles Circulating, veh/h	183	1022	11
Vehicles Exiting, veh/h	1037	186	1174
Ped Vol Crossing Leg, #/h	0	0	0
Ped Cap Adj	1.000	1.000	1.000
Approach Delay, s/veh	25.0	14.8	22.3
Approach LOS	C	B	C
Lane	Left	Left	Left
Designated Moves	LR	TR	LT
Assumed Moves	LR	TR	LT
RT Channelized			
Lane Util	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976
Entry Flow, veh/h	1002	198	1197
Cap Entry Lane, veh/h	1145	487	1364
Entry HV Adj Factor	0.971	0.973	0.971
Flow Entry, veh/h	973	193	1162
Cap Entry, veh/h	1112	473	1324
V/C Ratio	0.875	0.407	0.877
Control Delay, s/veh	25.0	14.8	22.3
LOS	C	B	C
95th %tile Queue, veh	12	2	13



APPENDIX D: FUTURE SEGMENT CAPACITY OUTPUT SHEETS

CITY OF NOBLESVILLE



MARCH 2024

TABLE OF CONTENTS

FIGURE 1: STUDY AREA ROADWAY NETWORK

1

SEGMENT ID	STREET / ROAD	LOCATION	PAGE #
1	216th Street	Hinkle Road - Little Chicago Road	2
2	216th Street	Little Chicago Road - Mill Creek Road	6
3	Schuller Road	221st Street - 211th Street	14
4	Hague Road	North of 216th Street	18
5	216th Street	Hague Road - SR 19	22
6	Cumberland Road	North of 206th Street (till E 234 Street)	26
7	Overdorf Road	North of 211th Street (till E 221 street)	34
8	Riverwood Avenue	North of 211th Street	38
9	216th Street	SR 37 - Creek Road	42
18	Hague Road	211th Street - 216th Street	46
19	Mill Creek Road	211th Street - 216th Street	50
20	Little Chicago Road	211th Street - 216th Street	54
21	Hinkle Road	216th Street - Sr 38	58
22	211th Street	Mill Creek Road - Schullley Road	62
23	Carrigan Road	Harbor Drive - Hague Road	70
24	Hague Road	Carrigan Road - 211th Street (James Rd)	74
25	211th Street	Hague Road - James Road	82
26	Overdorf Road	211th Street - 206th Street	86
27	211th Street	Overdorf Road - Riverwood Avenue	90
28	211th Street	SR 37 - Creek Road	98
42	206th Street	Creek Road - SR 37	102
43	Riverwood Avenue	206th Street - 211th Street	106
44	206th Street	Riverwood Ave - Overdorf Road	110
45	206th Street	Overdorf Road - Cumberland Road	118
46	206th Street	Cumberland Road - Edith Ave	126
47	206th Street	Edith Ave - Cicero Road	130
48	206th Street	Cicero Road - James Road	134
49	206th Street	James Road - Hague Road	138
50	Hague Road	Carrigan Road - 206th Street	142
51	Little Chicago Road	Buttonwood Road - 211th Street	146
52	Hague Road	206th Street - 196th Street	154
53	James Road	196th Street - 206th Street	158
54	Cicero Road	206th Street - 196th Street	162
55	Edith Avenue	206th - Riverwood Avenue	166
56	Riverwood Avenue	Edith Ave - Cumberland Road	170

57	Riverwood Avenue	Cumberland Road - Overdorf Road	178
58	Overdorf Road	206th Street - Riverwood Avenue	186
59	Riverwood Avenue	Overdorf Road - 206th Street	194
68	Promise Road	SR 37 - 196th Street	202
69	Moontown Road	191th Street - SR 38	206
70	196th Street	Hague Road - James Road	210
71	196th Street	James Road - SR 19	214
72	Allisonville Road	Cumberland Road - 10th Street	218
73	Allisonville Road	Cumberland Road - SR 37	226
74	196th Street	Promise Road - Summer Road	234
89	Summer Road	196th Street - 191st Street	238
90	Promise Road	196th Street - 191st Street	242
91	Cumberland Road	Allisonville Road - 191st Street	246
92	Cicero Road	196th Street - Field Drive	254
93a	Hague Road	196th Street - Lakeview Drive	260
93b	Hague Road	196th Street - Lakeview Drive	264
94	191st Street	Little Chicago Road - Moontown Road	268
95	Little Chicago Road	191st Street - SR 32	276
96	Mill Creek Road	SR 38 - SR 32	280
97	Hague Road	Lakeview Drive - SR 38	284
98	10th Street	Field Drive - 191st Street	288
99	191st Street	Cumberland Road - 10th Street	292
100	191st Street	Cumberland Road - SR 37	296
101	191st Street	SR 37 - Promise Road	300
102	191st Street	Promise Road - Mallery Road	304
103	191st Street	Mallery Road - Summer Road	308
115	Mallery Road	191st Street - 181st Street	312
116	Promise Road	191st Street - 186th Street	316
117	186th Street	Promise Road - SR 37	320
118	186th Street	SR 37 - Cumberland Road	324
119	Cumberland Road	191st Street - 186th Street	328
120	Field Drive	Cumberland Road - 16th Street	332
121	Field Drive	16th Street - 10th Street	336
122	Field Drive	10th Street - Cicero Road	340
123	Moontown Road	SR 32 - 191st Street	344
124	Hague Road	SR 32 - SR 38	348
125	River Avenue	SR 32 - SR 38	352
126	N Lakeview Drive	Lakeview Drive - SR 32	356
127	10th Street	Monument Street - Field Drive	364
128	16th Street	Field Drive - Monument Street	368
129	Cumberland Road	Monument Street - Field Drive	372
130	Promise Road	181st Street - 186th Street	380
144	181st Street	Deshane Avenue - Mallery Road	384

145	181st Street	Mallery Road - Promise Road	388
146	Monument Street	Cumberland Road - 16th Street	392
147	Cicero Road	Field Drive - Logan Street	400
148	10th Street	Monument Street - Logan Street	404
149	16th Street	Monument Street - Logan Street	408
150	Cumberland Road	Monument Street - Conner Street	412
151	Promise Road	SR 32 - 181st Street	420
162	Pleasant Street	Presley Drive - Union Chapel Road	424
163	Presley Drive	SR 32 - Pleasant Street	432
164	Pleasant Street	19th Street - Clover Road	436
165	Cherry Street	16th Street - 19th Street	440
166	Cherry Street	10th Street - 16th Street	444
167	Pleasant Street	16th Street - 10th Street	448
168a	Pleasant Street	8th Street - 10th Street	452
168b	Pleasant Street	2nd Street - 8th Street	456
169	Cherry Tree Road	SR 32 - 171st Street	460
170	Willowview Road	171st Street - SR 32	464
171	Mill Creek Road	SR 32 - 171st Street	468
173	169th Street	Hazel Dell Road - Gray Road	472
174	169th Street	Hazel Dell Road - Seminole Road	476
175	171st Street	Seminole Road - Willowview Road	484
176	171st Street	Willowview Road - Cherry Tree Road	492
177	Allisonville Road	Pleasant Street - Christian Road	500
178	16th Street	Greenfield Avenue - Pleasant Street	508
179	Mercantile Road	Town and Country Blvd - Pleasant Street	516
185	166th Street	SR 38 - Olio Road	524
186	Olio Road	SR 38 - 166th Street	528
187	166th Street	Boden Road - Olio Road	532
188	Boden Road	166th Street - SR 38	536
189	166th Street	Summer Road - Boden Road	540
190	166th Street	Union Chapel Road - Summer Road	544
191	166th Street	Union Chapel Road - Mercantile Road	552
192	Town and Country Blvd	Union Chapel Road & Mercantile Road	560
193	Greenfield Avenue	16th Street - Allisonville Road	568
194	Cherry Tree Road	161st Street - 171st Street	580
196	161st Street	Gray Road - Hazel Dell Road	584
197	161st Street	Hazel Dell Road - Seminole Road	588
198	161st Street	Seminole Road - Cherry Tree Road	596
199a	River Avenue	160th Street - SR 32	604
199b	River Avenue	160th Street - SR 32	608
199c	River Avenue	160th Street - SR 32	612
200	Allisonville Road	146th Street - Christian Street	616
201	Greenfield Avenue	16th Street - Herriman Blvd	624