

## Appendix A

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### Origin Destination Survey Complete Findings

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## Origin Destination Survey Results

### Highway 97 Quesnel - Existing Conditions Review

Traffic Pattern Zones		Blackwater Road		Anderson Road		North of Quesnel (Airport)		Highway 26 to Barkerville		Southill Neighbourhood		South of Quesnel (97 Basalt)	
		Inbound (Northbound)	Outbound (Southbound)	Inbound (Southbound)	Outbound (Northbound)	Inbound (Northbound)	Outbound (Southbound)	Inbound (Eastbound)	Outbound (Westbound)	Inbound (Eastbound)	Outbound (Westbound)	Inbound (Southbound)	Outbound (Northbound)
External Zone	Blackwater Road	100.0%	100.0%	0.4%	0.3%	0.9%	0.8%	1.1%	0.9%	0.2%	0.2%	0.2%	0.7%
	Anderson Road	0.8%	1.2%	100.0%	100.0%	0.1%	0.2%	0.2%	0.2%	0.3%	0.2%	0.0%	0.0%
	North of Quesnel (Highway 97)	3.0%	3.4%	0.3%	0.1%	100.0%	100.0%	4.2%	5.0%	1.8%	1.2%	7.7%	6.1%
	Highway 26	1.0%	1.2%	0.1%	0.1%	1.4%	1.2%	100.0%	100.0%	0.0%	0.1%	0.1%	0.2%
	Southill Neighbourhood (Quesnel-Hydraulic Rd)	0.4%	0.4%	0.1%	0.2%	0.6%	0.8%	0.2%	0.0%	100.0%	100.0%	1.3%	0.7%
	South of Quesnel (Highway 97)	2.7%	0.8%	0.1%	0.1%	6.5%	8.2%	0.7%	0.6%	1.7%	2.7%	100.0%	100.0%
Internal Zone	West Quesnel	10.1%	10.8%	84.9%	83.9%	7.4%	7.0%	10.2%	10.4%	9.9%	9.1%	4.5%	3.8%
	Johnston Neighbourhood	5.3%	3.6%	0.7%	1.3%	1.2%	2.5%	3.7%	5.0%	1.2%	1.0%	0.7%	1.1%
	Two Mile Flats	22.8%	23.1%	1.7%	1.6%	24.7%	26.3%	35.1%	40.8%	6.5%	8.9%	20.9%	21.2%
	North Star Interchange (Cariiboo Pulp)	4.0%	2.4%	1.1%	1.6%	5.7%	6.3%	6.7%	5.5%	3.4%	4.6%	3.9%	4.2%
	South Quesnel Commercial	12.6%	12.4%	2.2%	2.3%	33.7%	35.1%	11.4%	7.0%	53.6%	48.8%	45.1%	42.8%
	Downtown Quesnel	37.3%	40.7%	8.3%	8.5%	17.7%	11.5%	26.6%	24.6%	21.3%	23.1%	15.5%	19.2%

Traffic Pattern Zones		West Quesnel		Johnston Neighbourhood		Two Mile Flats		North Star Interchange		South Quesnel Commercial		Downtown	
		Inbound	Outbound	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound	Inbound	Outbound
External Zone	Blackwater Road	1.0%	0.9%	1.3%	2.2%	2.7%	2.8%	1.2%	1.6%	1.2%	1.4%	2.5%	2.5%
	Anderson Road	20.7%	20.1%	1.3%	0.7%	0.5%	0.6%	0.9%	0.8%	0.6%	0.6%	1.4%	1.4%
	North of Quesnel (Highway 97)	2.9%	2.8%	3.8%	1.8%	10.5%	9.5%	15.7%	14.3%	15.4%	13.5%	2.9%	4.3%
	Highway 26	1.1%	1.1%	2.0%	1.7%	4.4%	4.0%	1.1%	1.7%	0.7%	1.2%	1.7%	1.9%
	Southill Neighbourhood (Quesnel-Hydraulic Rd)	1.7%	1.7%	0.7%	0.9%	2.0%	1.5%	7.5%	6.5%	8.5%	8.4%	2.9%	2.4%
	South of Quesnel (Highway 97)	1.7%	1.8%	1.6%	1.2%	11.2%	12.2%	18.1%	18.1%	15.4%	16.5%	4.9%	4.1%
Internal Zone	West Quesnel	100.0%	100.0%	21.1%	20.5%	13.8%	12.0%	18.6%	18.2%	14.5%	14.2%	24.5%	24.5%
	Johnston Neighbourhood	5.3%	5.6%	100.0%	100.0%	3.8%	4.5%	0.9%	1.4%	1.2%	1.1%	8.8%	8.8%
	Two Mile Flats	10.9%	11.1%	11.2%	11.7%	100.0%	100.0%	9.9%	10.9%	9.2%	10.1%	20.3%	19.6%
	North Star Interchange (Cariiboo Pulp)	6.4%	7.1%	2.0%	0.0%	4.9%	5.3%	100.0%	100.0%	10.3%	9.7%	13.4%	13.8%
	South Quesnel Commercial	13.5%	13.0%	2.4%	3.2%	15.4%	15.2%	8.8%	9.4%	100.0%	100.0%	16.8%	16.6%
	Downtown Quesnel	34.9%	34.7%	52.4%	56.1%	30.9%	32.4%	17.1%	17.1%	23.1%	23.3%	100.0%	100.0%



## Appendix B

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# Synchro, SimTraffic and Sidra Traffic Analysis Reports

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## Appendix B Cont.

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### Intersection Reports - Existing 2015 AM and PM Peak Conditions

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






















Intersection													
Int Delay, s/veh	3.3												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	7	126	1	4	7	122	85	6	171	3
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	-	-	Yield	-	-	Yield	-	-	None
Storage Length	-	-	-	-	-	300	600	-	1000	500	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	8	137	1	4	8	133	92	7	186	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	283	349	188	352	350	66	189	0	0	133	0	0
Stage 1	201	201	-	148	148	-	-	-	-	-	-	-
Stage 2	82	148	-	204	202	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	7.33	6.53	6.93	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.218	-	-	2.22	-	-
Pot Cap-1 Maneuver	658	574	853	590	574	985	1385	-	-	1449	-	-
Stage 1	800	734	-	840	774	-	-	-	-	-	-	-
Stage 2	917	774	-	797	734	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	649	568	853	580	568	985	1385	-	-	1449	-	-
Mov Cap-2 Maneuver	677	599	-	631	598	-	-	-	-	-	-	-
Stage 1	795	730	-	835	770	-	-	-	-	-	-	-
Stage 2	906	770	-	786	730	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.3	12.2	0.2	0.2
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1385	-	-	853	631	985	1449	-	-
HCM Lane V/C Ratio	0.005	-	-	0.009	0.219	0.004	0.005	-	-
HCM Control Delay (s)	7.6	-	-	9.3	12.3	8.7	7.5	-	-
HCM Lane LOS	A	-	-	A	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.8	0	0	-	-

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	4	109	4	6	6	86	218	56	12	272	14
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	8	8	0	8	16	0	119	251	0	22	320	0
Adj No. of Lanes	1	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.50	0.84	0.50	0.38	0.50	0.72	0.87	0.60	0.54	0.85	0.54
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	320	123	105	326	123	105	801	2034	910	849	2034	910
Arrive On Green	0.07	0.07	0.00	0.07	0.07	0.00	0.57	0.57	0.00	0.57	0.57	0.00
Sat Flow, veh/h	1392	1863	1583	1402	1863	1583	1055	3539	1583	1123	3539	1583
Grp Volume(v), veh/h	8	8	0	8	16	0	119	251	0	22	320	0
Grp Sat Flow(s),veh/h/ln	1392	1863	1583	1402	1863	1583	1055	1770	1583	1123	1770	1583
Q Serve(g_s), s	0.2	0.1	0.0	0.2	0.2	0.0	1.8	1.0	0.0	0.3	1.3	0.0
Cycle Q Clear(g_c), s	0.4	0.1	0.0	0.3	0.2	0.0	3.1	1.0	0.0	1.3	1.3	0.0
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	320	123	105	326	123	105	801	2034	910	849	2034	910
V/C Ratio(X)	0.02	0.06	0.00	0.02	0.13	0.00	0.15	0.12	0.00	0.03	0.16	0.00
Avail Cap(c_a), veh/h	677	601	511	686	601	511	1581	4649	2080	1679	4649	2080
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	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	13.4	13.2	0.0	13.3	13.2	0.0	3.7	2.9	0.0	3.2	3.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	0.0	0.0	0.5	0.0	0.1	0.0	0.0	0.0	0.0	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	0.1	0.1	0.0	0.1	0.1	0.0	0.5	0.4	0.0	0.1	0.5	0.0
LnGrp Delay(d),s/veh	13.4	13.4	0.0	13.3	13.7	0.0	3.8	3.0	0.0	3.2	3.0	0.0
LnGrp LOS	B	B		B	B		A	A		A	A	
Approach Vol, veh/h		16			24			370			342	
Approach Delay, s/veh		13.4			13.6			3.2			3.0	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		22.8		7.3		22.8		7.3				
Change Period (Y+Rc), s		5.5		5.3		5.5		5.3				
Max Green Setting (Gmax), s		39.5		9.7		39.5		9.7				
Max Q Clear Time (g_c+I1), s		5.1		2.4		3.3		2.3				
Green Ext Time (p_c), s		12.2		0.1		12.5		0.1				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			3.7									
HCM 2010 LOS			A									
<b>Notes</b>												
User approved pedestrian interval to be less than phase max green.												

**Intersection**













Int Delay, s/veh 1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	6	0	13	17	3	38	13	347	20	21	396	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Yield	-	-	Yield	-	-	Yield
Storage Length	-	-	-	-	-	-	500	-	1150	1000	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	30	25	70	75	75	68	88	80	58	72	92	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	0	19	23	4	56	15	434	34	29	430	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	737	952	216	737	952	218	430	0	0	434	0	0
Stage 1	489	489	-	463	463	-	-	-	-	-	-	-
Stage 2	248	463	-	274	489	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	307	258	789	307	258	786	1126	-	-	1122	-	-
Stage 1	529	548	-	548	562	-	-	-	-	-	-	-
Stage 2	734	562	-	709	548	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	274	248	788	291	248	785	1125	-	-	1121	-	-
Mov Cap-2 Maneuver	385	355	-	402	358	-	-	-	-	-	-	-
Stage 1	522	534	-	541	555	-	-	-	-	-	-	-
Stage 2	667	555	-	674	534	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.6	8.3	0.3	0.5
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1125	-	-	511	1160	1121	-	-
HCM Lane V/C Ratio	0.013	-	-	0.075	0.071	0.026	-	-
HCM Control Delay (s)	8.2	-	-	12.6	8.3	8.3	-	-
HCM Lane LOS	A	-	-	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0.1	-	-

								
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Volume (veh/h)	55	3	380	78	4	381		
Number	3	18	2	12	1	6		
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		
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863		
Adj Flow Rate, veh/h	90	4	521	0	16	405		
Adj No. of Lanes	0	0	2	1	1	2		
Peak Hour Factor	0.61	0.75	0.73	0.60	0.25	0.94		
Percent Heavy Veh, %	0	0	2	2	2	2		
Cap, veh/h	204	9	2053	918	656	2053		
Arrive On Green	0.12	0.12	0.58	0.00	0.58	0.58		
Sat Flow, veh/h	1673	74	3632	1583	877	3632		
Grp Volume(v), veh/h	95	0	521	0	16	405		
Grp Sat Flow(s),veh/h/ln	1766	0	1770	1583	877	1770		
Q Serve(g_s), s	1.7	0.0	2.5	0.0	0.3	1.9		
Cycle Q Clear(g_c), s	1.7	0.0	2.5	0.0	2.8	1.9		
Prop In Lane	0.95	0.04		1.00	1.00			
Lane Grp Cap(c), veh/h	215	0	2053	918	656	2053		
V/C Ratio(X)	0.44	0.00	0.25	0.00	0.02	0.20		
Avail Cap(c_a), veh/h	532	0	3054	1366	904	3054		
HCM Platoon Ratio	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		
Uniform Delay (d), s/veh	13.9	0.0	3.5	0.0	4.2	3.4		
Incr Delay (d2), s/veh	1.4	0.0	0.1	0.0	0.0	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.9	0.0	1.1	0.0	0.1	0.9		
LnGrp Delay(d),s/veh	15.4	0.0	3.6	0.0	4.2	3.5		
LnGrp LOS	B		A		A	A		
Approach Vol, veh/h	95		521			421		
Approach Delay, s/veh	15.4		3.6			3.5		
Approach LOS	B		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		25.3				25.3		8.9
Change Period (Y+Rc), s		5.5				5.5		4.7
Max Green Setting (Gmax), s		29.5				29.5		10.3
Max Q Clear Time (g_c+11), s		4.5				4.8		3.7
Green Ext Time (p_c), s		15.2				15.0		0.2
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			4.6					
HCM 2010 LOS			A					
<b>Notes</b>								
User approved pedestrian interval to be less than phase max green.								

**Intersection**

Int Delay, s/veh 1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	1	2	2	0	7	6	25	558	8	5	468	13
Conflicting Peds, #/hr	1	0	0	0	0	1	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	25	25	50	25	88	50	56	85	75	42	82	58
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	8	4	0	8	12	45	656	11	12	571	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1369	1364	298	1066	1370	663	594	0	0	668	0	0
Stage 1	607	607	-	752	752	-	-	-	-	-	-	-
Stage 2	762	757	-	314	618	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.14	-	-	4.12	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.22	-	-	2.218	-	-
Pot Cap-1 Maneuver	114	147	699	188	146	460	978	-	-	922	-	-
Stage 1	451	485	-	401	417	-	-	-	-	-	-	-
Stage 2	396	415	-	672	480	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	99	133	698	166	133	460	978	-	-	922	-	-
Mov Cap-2 Maneuver	99	133	-	166	133	-	-	-	-	-	-	-
Stage 1	418	475	-	371	386	-	-	-	-	-	-	-
Stage 2	350	384	-	644	470	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	31.6	22	0.6	0.3
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	978	-	-	151	232	922	-
HCM Lane V/C Ratio	0.046	-	-	0.106	0.086	0.013	-
HCM Control Delay (s)	8.9	0	-	31.6	22	9	0.1
HCM Lane LOS	A	A	-	D	C	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.3	0	-












Intersection												
Int Delay, s/veh	2											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	5	5	2	44	48	541	10	36	432	7
Conflicting Peds, #/hr	1	0	5	5	0	1	2	0	2	2	0	2
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	42	42	50	69	65	85	69	61	87	58
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	12	12	4	64	74	636	14	59	497	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1424	1430	261	1167	1428	651	514	0	0	656	0	0
Stage 1	626	626	-	796	796	-	-	-	-	-	-	-
Stage 2	798	804	-	371	632	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	6	6	6.23	4.14	-	-	4.12	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.22	-	-	2.218	-	-
Pot Cap-1 Maneuver	104	134	738	245	166	468	1048	-	-	931	-	-
Stage 1	439	476	-	380	398	-	-	-	-	-	-	-
Stage 2	379	395	-	622	473	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	74	108	734	205	133	465	1046	-	-	929	-	-
Mov Cap-2 Maneuver	74	108	-	205	133	-	-	-	-	-	-	-
Stage 1	389	432	-	336	352	-	-	-	-	-	-	-
Stage 2	287	350	-	557	429	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10	16.6	0.9	1.2
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1046	-	-	734	180	465	929	-	-
HCM Lane V/C Ratio	0.071	-	-	0.016	0.088	0.137	0.064	-	-
HCM Control Delay (s)	8.7	0	-	10	26.9	14	9.1	0.3	-
HCM Lane LOS	A	A	-	B	D	B	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	0.3	0.5	0.2	-	-

									
Movement	WBL	WBR	NBT	NBR	SBL	SBT			
Lane Configurations									
Volume (veh/h)	29	31	568	46	27	432			
Number	3	18	2	12	1	6			
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			
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1900	1863			
Adj Flow Rate, veh/h	56	53	728	67	33	514			
Adj No. of Lanes	1	1	1	0	0	2			
Peak Hour Factor	0.52	0.59	0.78	0.69	0.81	0.84			
Percent Heavy Veh, %	2	2	2	2	2	2			
Cap, veh/h	134	119	1318	121	163	2435			
Arrive On Green	0.08	0.08	0.78	0.78	0.78	0.78			
Sat Flow, veh/h	1774	1583	1680	155	135	3189			
Grp Volume(v), veh/h	56	53	0	795	279	268			
Grp Sat Flow(s),veh/h/ln	1774	1583	0	1835	1628	1610			
Q Serve(g_s), s	2.1	2.2	0.0	11.5	0.0	3.0			
Cycle Q Clear(g_c), s	2.1	2.2	0.0	11.5	2.7	3.0			
Prop In Lane	1.00	1.00		0.08	0.12				
Lane Grp Cap(c), veh/h	134	119	0	1440	1335	1263			
V/C Ratio(X)	0.42	0.44	0.00	0.55	0.21	0.21			
Avail Cap(c_a), veh/h	340	303	0	1440	1335	1263			
HCM Platoon Ratio	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	1.00			
Uniform Delay (d), s/veh	30.9	31.0	0.0	2.9	1.9	1.9			
Incr Delay (d2), s/veh	2.1	2.6	0.0	1.5	0.4	0.4			
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOfQ(50%),veh/ln	1.1	1.0	0.0	5.9	1.4	1.3			
LnGrp Delay(d),s/veh	33.0	33.5	0.0	4.4	2.3	2.3			
LnGrp LOS	C	C		A	A	A			
Approach Vol, veh/h	109		795			547			
Approach Delay, s/veh	33.2		4.4			2.3			
Approach LOS	C		A			A			
Timer	1	2	3	4	5	6	7	8	
Assigned Phs		2				6		8	
Phs Duration (G+Y+Rc), s		60.1				60.1		9.9	
Change Period (Y+Rc), s		5.2				5.2		4.6	
Max Green Setting (Gmax), s		46.8				46.8		13.4	
Max Q Clear Time (g_c+1), s		13.5				5.0		4.2	
Green Ext Time (p_c), s		26.9				32.4		0.3	
<b>Intersection Summary</b>									
HCM 2010 Ctrl Delay			5.8						
HCM 2010 LOS			A						



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	7	287	396	30	198	221
Number	3	18	2	12	1	6
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
Adj Sat Flow, veh/h/ln	1676	1676	1676	1710	1676	1676
Adj Flow Rate, veh/h	16	0	455	45	239	251
Adj No. of Lanes	1	1	1	0	1	1
Peak Hour Factor	0.44	0.78	0.87	0.67	0.83	0.88
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	37	33	527	52	844	1418
Arrive On Green	0.02	0.00	0.35	0.35	0.42	0.85
Sat Flow, veh/h	1597	1425	1501	148	1597	1676
Grp Volume(v), veh/h	16	0	0	500	239	251
Grp Sat Flow(s),veh/h/ln	1597	1425	0	1650	1597	1676
Q Serve(g_s), s	0.6	0.0	0.0	18.3	2.2	1.8
Cycle Q Clear(g_c), s	0.6	0.0	0.0	18.3	2.2	1.8
Prop In Lane	1.00	1.00		0.09	1.00	
Lane Grp Cap(c), veh/h	37	33	0	579	844	1418
V/C Ratio(X)	0.43	0.00	0.00	0.86	0.28	0.18
Avail Cap(c_a), veh/h	273	243	0	645	844	1418
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	0.0	0.0	19.6	5.7	0.9
Incr Delay (d2), s/veh	7.8	0.0	0.0	10.8	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.4	0.0	0.0	9.8	1.6	0.7
LnGrp Delay(d),s/veh	39.1	0.0	0.0	30.5	5.8	1.0
LnGrp LOS	D			C	A	A
Approach Vol, veh/h	16		500			490
Approach Delay, s/veh	39.1		30.5			3.3
Approach LOS	D		C			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	32.2	27.4				59.6		5.4
Change Period (Y+Rc), s	4.6	* 4.6				* 4.6		3.9
Max Green Setting (Gmax), s	15	* 25				* 25		11.1
Max Q Clear Time (g_c+1), s	11.25	20.3				3.8		2.6
Green Ext Time (p_c), s	1.0	2.5				11.9		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.4
HCM 2010 LOS	B

**Notes**  
 \* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.



**Intersection**

Int Delay, s/veh 4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	173	49	83	346	92	80
Conflicting Peds, #/hr	0	0	0	0	3	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	-	500	-	0	300
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	78	67	88	83	65
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	194	63	124	393	111	123

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	197
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1376
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1376
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.9	13.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	397	842	-	-	1376	-
HCM Lane V/C Ratio	0.279	0.146	-	-	0.09	-
HCM Control Delay (s)	17.5	10	-	-	7.9	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	1.1	0.5	-	-	0.3	-

**Intersection**




















Int Delay, s/veh 3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	6	82	136	7	312	36	15	34	17	12	33	12
Conflicting Peds, #/hr	5	0	10	10	0	5	5	0	3	3	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	300	-	-	200	-	-	350
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	69	79	50	92	70	57	66	75	41	69	65
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	119	172	14	339	51	26	52	23	29	48	18

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	344	0	0	296	0	0	622	598	220	624	684	354
Stage 1	-	-	-	-	-	-	226	226	-	372	372	-
Stage 2	-	-	-	-	-	-	396	372	-	252	312	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1215	-	-	1265	-	-	399	416	820	398	371	690
Stage 1	-	-	-	-	-	-	777	717	-	648	619	-
Stage 2	-	-	-	-	-	-	629	619	-	752	658	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1205	-	-	1254	-	-	339	403	810	339	360	681
Mov Cap-2 Maneuver	-	-	-	-	-	-	339	403	-	339	360	-
Stage 1	-	-	-	-	-	-	768	708	-	640	608	-
Stage 2	-	-	-	-	-	-	551	608	-	667	650	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.3	15.3	16.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	379	810	1205	-	-	1254	-	-	352	681
HCM Lane V/C Ratio	0.205	0.028	0.007	-	-	0.011	-	-	0.219	0.027
HCM Control Delay (s)	16.9	9.6	8	0	-	7.9	0	-	18.1	10.4
HCM Lane LOS	C	A	A	A	-	A	A	-	C	B
HCM 95th %tile Q(veh)	0.8	0.1	0	-	-	0	-	-	0.8	0.1

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	7	76	17	17	348	72	6	73	5	76	51	10
Number	5	2	12	1	6	16	3	8	18	7	4	14
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	0.98		1.00	0.99		0.99
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
Adj Sat Flow, veh/h/ln	1710	1676	1710	1710	1676	1676	1676	1676	1710	1676	1676	1710
Adj Flow Rate, veh/h	14	107	24	34	441	90	10	96	0	113	74	11
Adj No. of Lanes	0	1	0	0	1	1	1	1	0	1	1	0
Peak Hour Factor	0.50	0.71	0.71	0.50	0.79	0.80	0.63	0.76	0.42	0.67	0.69	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	111	738	157	93	983	882	216	164	0	280	346	51
Arrive On Green	0.62	0.62	0.62	0.62	0.62	0.62	0.10	0.10	0.00	0.08	0.24	0.24
Sat Flow, veh/h	88	1190	253	61	1586	1424	1155	1676	0	1597	1425	212
Grp Volume(v), veh/h	145	0	0	475	0	90	10	96	0	113	0	85
Grp Sat Flow(s),veh/h/ln	1532	0	0	1647	0	1424	1155	1676	0	1597	0	1637
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	1.8	0.6	3.8	0.0	4.2	0.0	2.9
Cycle Q Clear(g_c), s	2.6	0.0	0.0	10.5	0.0	1.8	0.6	3.8	0.0	4.2	0.0	2.9
Prop In Lane	0.10		0.17	0.07		1.00	1.00		0.00	1.00		0.13
Lane Grp Cap(c), veh/h	1006	0	0	1076	0	882	216	164	0	280	0	398
V/C Ratio(X)	0.14	0.00	0.00	0.44	0.00	0.10	0.05	0.59	0.00	0.40	0.00	0.21
Avail Cap(c_a), veh/h	1006	0	0	1076	0	882	225	177	0	321	0	547
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	0.00	0.78	0.00	0.78	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	5.6	0.0	0.0	7.1	0.0	5.4	28.8	30.2	0.0	24.0	0.0	21.2
Incr Delay (d2), s/veh	0.3	0.0	0.0	1.0	0.0	0.2	0.1	4.3	0.0	0.9	0.0	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	1.2	0.0	0.0	4.9	0.0	0.7	0.2	1.9	0.0	1.9	0.0	1.3
LnGrp Delay(d),s/veh	5.9	0.0	0.0	8.1	0.0	5.6	28.8	34.5	0.0	25.0	0.0	21.4
LnGrp LOS	A			A		A	C	C		C		C
Approach Vol, veh/h		145			565			106			198	
Approach Delay, s/veh		5.9			7.7			34.0			23.4	
Approach LOS		A			A			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		48.4		21.6		48.4	10.2	11.4				
Change Period (Y+Rc), s		5.0		* 4.6		5.0	* 4.6	* 4.6				
Max Green Setting (Gmax), s		37.0		* 23		37.0	* 7.4	* 7.4				
Max Q Clear Time (g_c+I1), s		4.6		4.9		12.5	6.2	5.8				
Green Ext Time (p_c), s		13.3		2.4		11.4	0.0	0.3				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				13.3								
HCM 2010 LOS				B								
<b>Notes</b>												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

**Intersection**

Int Delay, s/veh 2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	428	32	0	272	126	0	0	201	0	0	42
Conflicting Peds, #/hr	16	0	3	3	0	16	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	Free	-	-	Yield	-	-	Free
Storage Length	-	-	-	-	-	300	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	80	77	92	88	73	92	92	90	92	92	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	535	42	0	309	173	0	0	223	0	0	64

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	309	0	844	844
Stage 1	-	-	535	535
Stage 2	-	-	309	309
Critical Hdwy	4.12	-	7.33	6.53
Critical Hdwy Stg 1	-	-	6.53	5.53
Critical Hdwy Stg 2	-	-	6.13	5.53
Follow-up Hdwy	2.218	-	3.519	4.019
Pot Cap-1 Maneuver	1252	0	269	299
Stage 1	-	0	498	523
Stage 2	-	0	700	659
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	1235	-	265	299
Mov Cap-2 Maneuver	-	-	265	299
Stage 1	-	-	498	523
Stage 2	-	-	691	659

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	12.1	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBL	WBT	SBLn1
Capacity (veh/h)	726	1235	-	1026	-	-
HCM Lane V/C Ratio	0.308	-	-	-	-	-
HCM Control Delay (s)	12.1	0	-	0	-	0
HCM Lane LOS	B	A	-	A	-	A
HCM 95th %tile Q(veh)	1.3	0	-	0	-	-

**Intersection**

Int Delay, s/veh 5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	53	221	7	11	155	8	67	13	11	0	0	171
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	-	-	Yield
Storage Length	450	-	-	250	-	500	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	74	85	58	75	93	75	78	70	60	92	92	79
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	72	260	12	15	167	11	86	19	18	0	0	216

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	167	0	0	272	0	0	605	605	136	479	611	167
Stage 1	-	-	-	-	-	-	409	409	-	196	196	-
Stage 2	-	-	-	-	-	-	196	196	-	283	415	-
Critical Hdwy	4.12	-	-	4.14	-	-	7.33	6.53	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	6.53	5.53	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.13	5.53	-	6.53	5.53	-
Follow-up Hdwy	2.218	-	-	2.22	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1411	-	-	1288	-	-	395	411	888	483	408	877
Stage 1	-	-	-	-	-	-	591	595	-	805	738	-
Stage 2	-	-	-	-	-	-	805	738	-	701	592	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1411	-	-	1288	-	-	283	385	888	437	383	877
Mov Cap-2 Maneuver	-	-	-	-	-	-	377	450	-	504	451	-
Stage 1	-	-	-	-	-	-	561	565	-	764	729	-
Stage 2	-	-	-	-	-	-	599	729	-	630	562	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.6	0.6	16.9	10.4
HCM LOS			C	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	424	1411	-	-	1288	-	-	877
HCM Lane V/C Ratio	0.29	0.051	-	-	0.011	-	-	0.247
HCM Control Delay (s)	16.9	7.7	-	-	7.8	-	-	10.4
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	1.2	0.2	-	-	0	-	-	1

**Intersection**

Int Delay, s/veh 4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	61	166	2	14	129	6	11	17	141	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	Yield	-	-	Yield
Storage Length	700	-	0	450	-	-	-	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	88	50	75	89	50	75	75	84	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	189	4	19	145	12	15	23	168	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	159	0	0	191	0	0	535	541	191	546	535	153
Stage 1	-	-	-	-	-	-	345	345	-	190	190	-
Stage 2	-	-	-	-	-	-	190	196	-	356	345	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1420	-	-	1383	-	-	456	448	851	448	452	893
Stage 1	-	-	-	-	-	-	671	636	-	812	743	-
Stage 2	-	-	-	-	-	-	812	739	-	661	636	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1420	-	-	1383	-	-	432	416	850	328	420	891
Mov Cap-2 Maneuver	-	-	-	-	-	-	503	474	-	394	480	-
Stage 1	-	-	-	-	-	-	634	600	-	767	732	-
Stage 2	-	-	-	-	-	-	801	728	-	483	600	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.2	0.8	10.8	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	485	850	1420	-	-	1383	-	-	-	-
HCM Lane V/C Ratio	0.077	0.197	0.054	-	-	0.013	-	-	-	-
HCM Control Delay (s)	13	10.3	7.7	-	-	7.6	-	-	0	0
HCM Lane LOS	B	B	A	-	-	A	-	-	A	A
HCM 95th %tile Q(veh)	0.2	0.7	0.2	-	-	0	-	-	-	-

**Intersection**

Int Delay, s/veh 6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	86	1	47	85	73	0	0	12	31
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	Free	-	-	None	-	-	Free
Storage Length	-	-	-	-	-	1300	600	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	79	25	71	76	55	92	92	65	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	109	4	66	112	133	0	0	18	37

Major/Minor	Minor1		Major1			Major2			
Conflicting Flow All	374	374	-	18	0	0	133	0	0
Stage 1	356	356	-	-	-	-	-	-	-
Stage 2	18	18	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	-	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	627	557	0	1599	-	-	1452	-	0
Stage 1	709	629	0	-	-	-	-	-	0
Stage 2	1005	880	0	-	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	583	0	-	1598	-	-	1451	-	-
Mov Cap-2 Maneuver	588	0	-	-	-	-	-	-	-
Stage 1	659	0	-	-	-	-	-	-	-
Stage 2	1004	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.6	3.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	1598	-	-	588	-	1451	-
HCM Lane V/C Ratio	0.07	-	-	0.192	-	-	-
HCM Control Delay (s)	7.4	-	-	12.6	0	0	-
HCM Lane LOS	A	-	-	B	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.7	-	0	-

**Intersection**

Int Delay, s/veh 5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	73	0	87	0	0	0	0	85	31	5	90	4
Conflicting Peds, #/hr	0	0	1	1	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Yield	-	-	None	-	-	Free	-	-	None
Storage Length	1800	-	-	-	-	-	-	-	1200	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	65	25	81	92	92	92	92	81	83	63	81	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	112	0	107	0	0	0	0	105	37	8	111	4

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	0	283 225 -
Stage 1	-	-	-	225 225 -
Stage 2	-	-	-	58 0 -
Critical Hdwy	4.12	-	-	7.12 6.52 -
Critical Hdwy Stg 1	-	-	-	6.12 5.52 -
Critical Hdwy Stg 2	-	-	-	6.12 5.52 -
Follow-up Hdwy	2.218	-	-	3.518 4.018 -
Pot Cap-1 Maneuver	-	-	-	669 674 0
Stage 1	-	-	-	778 718 0
Stage 2	-	-	-	954 - 0
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	579 674 -
Mov Cap-2 Maneuver	-	-	-	631 658 -
Stage 1	-	-	-	778 718 -
Stage 2	-	-	-	949 - -

Approach	EB	WB	NB	SB
HCM Control Delay, s		0	11.5	11.7
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	658	-	-	-	-	-	-	-	660
HCM Lane V/C Ratio	0.159	-	-	-	-	-	-	-	0.187
HCM Control Delay (s)	11.5	0	-	-	-	0	-	-	11.7
HCM Lane LOS	B	A	-	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.6	-	-	-	-	-	-	-	0.7



**Intersection**

Int Delay, s/veh 1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	13	409	0	7	584	20	6	2	6	13	2	44
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	-	-	Yield	-	-	Yield	-	-	Yield	-	-	Yield
Storage Length	500	-	-	500	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	70	86	25	58	80	75	50	50	50	58	25	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	19	476	0	12	730	27	12	4	12	22	8	56

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	730	0	0	476	0	0	906	1267	238	1031	1267	365
Stage 1	-	-	-	-	-	-	513	513	-	754	754	-
Stage 2	-	-	-	-	-	-	393	754	-	277	513	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	870	-	-	1082	-	-	231	168	763	187	163	632
Stage 1	-	-	-	-	-	-	512	534	-	367	415	-
Stage 2	-	-	-	-	-	-	603	415	-	706	534	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	870	-	-	1082	-	-	201	163	763	177	163	632
Mov Cap-2 Maneuver	-	-	-	-	-	-	323	276	-	282	280	-
Stage 1	-	-	-	-	-	-	501	522	-	359	410	-
Stage 2	-	-	-	-	-	-	532	410	-	675	522	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	12	10
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	542	870	-	-	1082	-	-	804
HCM Lane V/C Ratio	0.052	0.021	-	-	0.011	-	-	0.108
HCM Control Delay (s)	12	9.2	-	-	8.4	-	-	10
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.1	-	-	0	-	-	0.4

**Intersection**

Int Delay, s/veh 2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	60	368	0	0	471	13	0	0	0	2	1	140
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	-	-	Yield	-	-	Yield	-	-	Yield
Storage Length	600	-	-	400	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	85	25	25	87	58	25	25	25	50	25	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	64	433	0	0	541	22	0	0	0	4	4	179

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	541	0	0	433	0	0	834	1102	216	885	1102	271
Stage 1	-	-	-	-	-	-	561	561	-	541	541	-
Stage 2	-	-	-	-	-	-	273	541	-	344	561	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1024	-	-	1123	-	-	261	210	789	239	210	727
Stage 1	-	-	-	-	-	-	480	508	-	493	519	-
Stage 2	-	-	-	-	-	-	710	519	-	645	508	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1024	-	-	1123	-	-	185	197	789	228	197	727
Mov Cap-2 Maneuver	-	-	-	-	-	-	294	302	-	340	316	-
Stage 1	-	-	-	-	-	-	450	476	-	462	519	-
Stage 2	-	-	-	-	-	-	531	519	-	605	476	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0	0	11.7
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1024	-	-	1123	-	-	725
HCM Lane V/C Ratio	-	0.062	-	-	-	-	-	0.259
HCM Control Delay (s)	0	8.7	-	-	0	-	-	11.7
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0.2	-	-	0	-	-	1

**Intersection**

Int Delay, s/veh      0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	6	478	35	0	370
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	38	93	86	92	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	16	514	41	0	411

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	720	257	0 0 514 0
Stage 1	514	-	- - - -
Stage 2	206	-	- - - -
Critical Hdwy	6.84	6.94	- - 4.14 -
Critical Hdwy Stg 1	5.84	-	- - - -
Critical Hdwy Stg 2	5.84	-	- - - -
Follow-up Hdwy	3.52	3.32	- - 2.22 -
Pot Cap-1 Maneuver	363	742	- - 1048 -
Stage 1	565	-	- - - -
Stage 2	808	-	- - - -
Platoon blocked, %			- - - -
Mov Cap-1 Maneuver	363	742	- - 1048 -
Mov Cap-2 Maneuver	458	-	- - - -
Stage 1	565	-	- - - -
Stage 2	808	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 742	1048	-
HCM Lane V/C Ratio	-	- 0.021	-	-
HCM Control Delay (s)	-	- 10	0	-
HCM Lane LOS	-	- B	A	-
HCM 95th %tile Q(veh)	-	- 0.1	0	-

**Intersection**

Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	33	3	0	0	7	0	3	0	2	21	2
Peak Hour Factor	0.92	0.80	0.75	0.25	0.92	0.58	0.25	0.38	0.92	0.50	0.52	0.25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	41	4	0	0	12	0	8	0	4	40	8
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.8	7.4	7.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	92%	70%	6%
Vol Thru, %	84%	8%	0%	92%
Vol Right, %	8%	0%	30%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	25	36	10	83
LT Vol	2	33	7	5
Through Vol	21	3	0	76
RT Vol	2	0	3	2
Lane Flow Rate	52	45	20	109
Geometry Grp	1	1	1	1
Degree of Util (X)	0.06	0.055	0.023	0.123
Departure Headway (Hd)	4.098	4.413	4.209	4.085
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	866	802	838	872
Service Time	2.161	2.493	2.298	2.136
HCM Lane V/C Ratio	0.06	0.056	0.024	0.125
HCM Control Delay	7.4	7.8	7.4	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.2	0.1	0.4

**Intersection**

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	5	76	2
Peak Hour Factor	0.92	0.63	0.82	0.25
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	8	93	8
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.7
HCM LOS	A

**Lane**



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑	↗	↖	↑↑	↗
Volume (veh/h)	58	9	6	36	14	21	7	434	9	55	295	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1844	1844	1844	1881	1881	1881
Adj Flow Rate, veh/h	76	11	0	63	22	0	16	472	0	67	339	0
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.76	0.83	0.50	0.57	0.63	0.79	0.44	0.92	0.63	0.82	0.87	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	178	0	284	178	0	667	1620	725	644	1844	825
Arrive On Green	0.10	0.10	0.00	0.10	0.10	0.00	0.02	0.46	0.00	0.08	0.52	0.00
Sat Flow, veh/h	1384	1863	0	1398	1863	0	1756	3504	1568	1792	3575	1599
Grp Volume(v), veh/h	76	11	0	63	22	0	16	472	0	67	339	0
Grp Sat Flow(s),veh/h/ln	1384	1863	0	1398	1863	0	1756	1752	1568	1792	1787	1599
Q Serve(g_s), s	2.4	0.2	0.0	2.0	0.5	0.0	0.2	3.8	0.0	0.8	2.3	0.0
Cycle Q Clear(g_c), s	2.9	0.2	0.0	2.2	0.5	0.0	0.2	3.8	0.0	0.8	2.3	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	275	178	0	284	178	0	667	1620	725	644	1844	825
V/C Ratio(X)	0.28	0.06	0.00	0.22	0.12	0.00	0.02	0.29	0.00	0.10	0.18	0.00
Avail Cap(c_a), veh/h	277	180	0	286	180	0	822	2608	1167	903	2692	1204
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	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.2	18.7	0.0	19.7	18.8	0.0	6.2	7.6	0.0	5.2	5.9	0.0
Incr Delay (d2), s/veh	0.5	0.1	0.0	0.4	0.3	0.0	0.0	0.1	0.0	0.1	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	10.9	0.1	0.0	0.8	0.3	0.0	0.1	1.8	0.0	0.4	1.1	0.0
LnGrp Delay(d),s/veh	20.7	18.9	0.0	20.1	19.2	0.0	6.2	7.7	0.0	5.3	6.0	0.0
LnGrp LOS	C	B		C	B		A	A		A	A	
Approach Vol, veh/h		87			85			488			406	
Approach Delay, s/veh		20.5			19.9			7.7			5.9	
Approach LOS		C			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.4	27.2		10.0	6.0	29.6		10.0				
Change Period (Y+Rc), s	5.0	6.1		* 5.6	5.1	* 6.1		* 5.6				
Max Green Setting (Gmax), s	10.0	33.9		* 4.4	4.9	* 3.4		* 4.4				
Max Q Clear Time (g_c+I), s	10.0	5.8		4.9	2.2	4.3		4.2				
Green Ext Time (p_c), s	0.1	15.2		0.0	0.0	15.9		0.0				

**Intersection Summary**

HCM 2010 Ctrl Delay	9.0
HCM 2010 LOS	A

**Notes**

\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

**Intersection**

























Int Delay, s/veh 1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	6	0	0	59	3	391	57	36	286	15
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	-	-	Yield	-	-	Yield	-	-	Yield	-	-	Yield
Storage Length	-	-	0	-	-	0	600	-	1000	600	-	900
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	50	25	25	74	38	90	85	70	88	67
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	12	0	0	80	8	434	67	51	325	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	661	878	163	715	878	217	325	0	0	434	0	0
Stage 1	428	428	-	450	450	-	-	-	-	-	-	-
Stage 2	233	450	-	265	428	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	348	285	853	318	285	787	1231	-	-	1122	-	-
Stage 1	575	583	-	558	570	-	-	-	-	-	-	-
Stage 2	749	570	-	717	583	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	300	270	853	301	270	787	1231	-	-	1122	-	-
Mov Cap-2 Maneuver	407	367	-	411	378	-	-	-	-	-	-	-
Stage 1	571	557	-	554	566	-	-	-	-	-	-	-
Stage 2	669	566	-	675	557	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.3	10.1	0.1	1.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1231	-	-	853	787	1122	-	-
HCM Lane V/C Ratio	0.006	-	-	0.014	0.101	0.046	-	-
HCM Control Delay (s)	7.9	-	-	9.3	10.1	8.4	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.3	0.1	-	-

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	73	48	10	48	31	68	15	310	40	59	199	35
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.99		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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	83	67	0	55	53	0	16	344	0	79	226	0
Adj No. of Lanes	1	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.88	0.72	0.69	0.87	0.59	0.82	0.92	0.90	0.77	0.75	0.88	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	371	260	221	354	233	198	489	1025	459	451	1152	515
Arrive On Green	0.05	0.14	0.00	0.04	0.13	0.00	0.02	0.29	0.00	0.05	0.33	0.00
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	83	67	0	55	53	0	16	344	0	79	226	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	2.1	1.6	0.0	1.4	1.3	0.0	0.3	3.9	0.0	1.6	2.4	0.0
Cycle Q Clear(g_c), s	2.1	1.6	0.0	1.4	1.3	0.0	0.3	3.9	0.0	1.6	2.4	0.0
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	371	260	221	354	233	198	489	1025	459	451	1152	515
V/C Ratio(X)	0.22	0.26	0.00	0.16	0.23	0.00	0.03	0.34	0.00	0.18	0.20	0.00
Avail Cap(c_a), veh/h	404	500	425	414	500	425	596	1647	737	495	1647	737
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	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.1	19.7	0.0	18.5	20.2	0.0	12.5	14.4	0.0	11.8	12.5	0.0
Incr Delay (d2), s/veh	0.3	0.5	0.0	0.2	0.5	0.0	0.0	0.3	0.0	0.2	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	1.0	0.9	0.0	0.7	0.7	0.0	0.2	1.9	0.0	0.8	1.1	0.0
LnGrp Delay(d),s/veh	18.4	20.2	0.0	18.7	20.7	0.0	12.5	14.6	0.0	12.0	12.6	0.0
LnGrp LOS	B	C		B	C		B	B		B	B	
Approach Vol, veh/h		150			108			360			305	
Approach Delay, s/veh		19.2			19.7			14.5			12.4	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	21.0	8.3	13.4	6.9	22.8	9.0	12.6				
Change Period (Y+Rc), s	6.1	6.1	6.2	6.2	6.1	6.1	6.2	6.2				
Max Green Setting (Gmax), s	3.9	23.9	3.8	13.8	3.9	23.9	3.8	13.8				
Max Q Clear Time (g_c+1), s	3.6	5.9	3.4	3.6	2.3	4.4	4.1	3.3				
Green Ext Time (p_c), s	0.0	8.9	0.0	0.9	0.0	9.4	0.0	0.9				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			15.2									
HCM 2010 LOS			B									



Intersection												
Int Delay, s/veh	3.3											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	12	7	5	12	10	81	9	250	7	30	179	17
Conflicting Peds, #/hr	1	0	0	0	0	1	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	-	-	-	-	-	-	500	-	500	500	-	500
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	54	58	63	81	69	87	63	88	50	73	89	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	12	8	15	14	93	14	284	14	41	201	23

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	651	598	202	608	598	285	202	0	0	285	0	0
Stage 1	284	284	-	314	314	-	-	-	-	-	-	-
Stage 2	367	314	-	294	284	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	382	416	839	408	416	754	1370	-	-	1277	-	-
Stage 1	723	676	-	697	656	-	-	-	-	-	-	-
Stage 2	653	656	-	714	676	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	316	398	838	383	398	753	1370	-	-	1277	-	-
Mov Cap-2 Maneuver	409	469	-	482	476	-	-	-	-	-	-	-
Stage 1	715	654	-	689	649	-	-	-	-	-	-	-
Stage 2	554	649	-	672	654	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.4	11.7	0.4	1.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1370	-	-	472	662	1277	-
HCM Lane V/C Ratio	0.01	-	-	0.089	0.185	0.032	-
HCM Control Delay (s)	7.7	-	-	13.4	11.7	7.9	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.7	0.1	-













Intersection												
Int Delay, s/veh	2.2											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	17	0	1	6	0	31	4	185	5	16	166	11
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	-	-	-	-	-	-	1250	-	1250	1250	-	1250
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	64	25	25	50	25	59	50	83	42	71	84	60
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	0	4	12	0	53	8	223	12	23	198	18

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	508	482	198	484	482	223	198	0	0	223	0	0
Stage 1	243	243	-	239	239	-	-	-	-	-	-	-
Stage 2	265	239	-	245	243	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	475	484	843	493	484	817	1375	-	-	1346	-	-
Stage 1	761	705	-	764	708	-	-	-	-	-	-	-
Stage 2	740	708	-	759	705	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	437	473	843	482	473	817	1375	-	-	1346	-	-
Mov Cap-2 Maneuver	520	529	-	561	533	-	-	-	-	-	-	-
Stage 1	757	693	-	760	704	-	-	-	-	-	-	-
Stage 2	688	704	-	742	693	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12	10.2	0.3	0.7
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1375	-	-	547	753	1346	-
HCM Lane V/C Ratio	0.006	-	-	0.056	0.086	0.017	-
HCM Control Delay (s)	7.6	-	-	12	10.2	7.7	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0.1	-

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↑			↑			↑↑	
Volume (veh/h)	0	0	0	0	0	0	0	565	0	0	485	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	614	0	0	527	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	2	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, %	0	2	0	0	2	0	0	2	0	0	2	0
Cap, veh/h	0	3	0	0	3	0	0	1712	0	0	3252	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.00	0.00	0.92	0.00
Sat Flow, veh/h	0	-55882	0	0	-55882	0	0	1863	0	0	3725	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	614	0	0	527	0
Grp Sat Flow(s),veh/h/ln	0	1863	0	0	1863	0	0	1863	0	0	1770	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	1.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	1.0	0.0
Prop In Lane	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	0	3	0	0	1712	0	0	3252	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.36	0.00	0.00	0.16	0.00
Avail Cap(c_a), veh/h	0	478	0	0	478	0	0	1712	0	0	3252	0
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	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	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	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.4	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.4	0.0
LnGrp LOS								A			A	
Approach Vol, veh/h		0			0			614			527	
Approach Delay, s/veh		0.0			0.0			0.9			0.4	
Approach LOS								A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		74.0		0.0		74.0		0.0				
Change Period (Y+Rc), s		6.0		3.0		6.0		3.0				
Max Green Setting (Gmax), s		46.0		19.0		46.0		19.0				
Max Q Clear Time (g_c+11), s		5.0		0.0		3.0		0.0				
Green Ext Time (p_c), s		27.1		0.0		28.0		0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				0.7								
HCM 2010 LOS				A								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↑			↑			↑↑	
Volume (veh/h)	0	0	0	0	0	0	0	600	0	0	442	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	652	0	0	480	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	2	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, %	0	2	0	0	2	0	0	2	0	0	2	0
Cap, veh/h	0	3	0	0	3	0	0	1712	0	0	3252	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.92	0.00	0.00	0.92	0.00
Sat Flow, veh/h	0-55882		0	0-55882		0	0	1863	0	0	3725	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	652	0	0	480	0
Grp Sat Flow(s),veh/h/ln	0	1863	0	0	1863	0	0	1863	0	0	1770	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.9	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.2	0.0	0.0	0.9	0.0
Prop In Lane	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	3	0	0	3	0	0	1712	0	0	3252	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.00	0.00	0.15	0.00
Avail Cap(c_a), veh/h	0	478	0	0	478	0	0	1712	0	0	3252	0
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	0.00	0.00	0.00	0.00	0.84	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	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	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.4	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.4	0.0
LnGrp LOS								A			A	
Approach Vol, veh/h		0			0			652			480	
Approach Delay, s/veh		0.0			0.0			0.9			0.4	
Approach LOS								A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		74.0		0.0		74.0		0.0				
Change Period (Y+Rc), s		6.0		3.0		6.0		3.0				
Max Green Setting (Gmax), s		46.0		19.0		46.0		19.0				
Max Q Clear Time (g_c+1), s		5.2		0.0		2.9		0.0				
Green Ext Time (p_c), s		14.3		0.0		14.5		0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				0.7								
HCM 2010 LOS				A								

**Intersection**

Int Delay, s/veh -

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

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

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

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

# MOVEMENT SUMMARY

 **Site: 2015 AM Peak - Front St. & Johnston Ave**

New Site  
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Demand Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	95% Back of Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Johnston Avenue											
4u	U	1	0.0	0.152	5.9	LOS A	0.6	4.1	0.26	0.15	49.5
5	T1	33	0.0	0.152	5.9	LOS A	0.6	4.1	0.26	0.15	47.1
6	R2	92	0.6	0.152	5.9	LOS A	0.6	4.1	0.26	0.15	45.7
Approach		125	0.4	0.152	5.9	LOS A	0.6	4.1	0.26	0.15	46.1
North: Front Street											
7u	U	1	0.0	0.144	5.5	LOS A	0.5	4.0	0.14	0.05	55.6
7	L2	21	5.6	0.144	5.5	LOS A	0.5	4.0	0.14	0.05	53.9
9	R2	104	6.1	0.144	5.5	LOS A	0.5	4.0	0.14	0.05	51.7
Approach		126	6.0	0.144	5.5	LOS A	0.5	4.0	0.14	0.05	52.1
West: Johnston Avenue											
10u	U	1	0.0	0.148	5.5	LOS A	0.6	4.1	0.11	0.04	53.2
10	L2	97	8.2	0.148	5.5	LOS A	0.6	4.1	0.11	0.04	51.6
11	T1	33	0.0	0.148	5.5	LOS A	0.6	4.1	0.11	0.04	51.3
Approach		131	6.1	0.148	5.5	LOS A	0.6	4.1	0.11	0.04	51.5
All Vehicles		382	4.2	0.152	5.6	LOS A	0.6	4.1	0.17	0.08	49.8

Level of Service (LOS) Method: Delay (HCM 2000).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: US HCM 2010.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Project: U:\Projects\_KEL\1961\0323\08\D-Drafting-Design-Analysis\Sidra Modeling\Johnston Avenue and Front Street.sip6

























Intersection												
Int Delay, s/veh	3.4											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	1	1	9	106	1	11	12	234	140	11	198	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	-	-	Yield	-	-	Yield	-	-	None
Storage Length	-	-	-	-	-	300	600	-	1000	500	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	28	81	25	75	65	80	87	38	99	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	4	4	32	131	4	15	18	292	161	29	200	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	445	589	202	607	591	146	204	0	0	293	0	0
Stage 1	260	260	-	329	329	-	-	-	-	-	-	-
Stage 2	185	329	-	278	262	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.23	7.33	6.53	6.93	4.12	-	-	4.14	-	-
Critical Hdwy Stg 1	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.218	-	-	2.22	-	-
Pot Cap-1 Maneuver	510	420	838	394	419	875	1368	-	-	1265	-	-
Stage 1	744	692	-	659	646	-	-	-	-	-	-	-
Stage 2	800	646	-	728	691	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	485	405	838	366	404	875	1368	-	-	1265	-	-
Mov Cap-2 Maneuver	558	476	-	466	480	-	-	-	-	-	-	-
Stage 1	734	676	-	650	638	-	-	-	-	-	-	-
Stage 2	771	638	-	680	675	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.1	15.2	0.3	1
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1368	-	-	744	466	875	1265	-	-
HCM Lane V/C Ratio	0.013	-	-	0.054	0.289	0.017	0.023	-	-
HCM Control Delay (s)	7.7	-	-	10.1	15.8	9.2	7.9	-	-
HCM Lane LOS	A	-	-	B	C	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	1.2	0.1	0.1	-	-

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	22	1	156	41	9	5	115	338	7	6	333	12
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	37	4	0	79	21	0	146	345	0	12	378	0
Adj No. of Lanes	1	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.60	0.25	0.79	0.52	0.42	0.31	0.79	0.98	0.58	0.50	0.88	0.81
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	368	263	224	382	263	224	716	2052	918	737	2052	918
Arrive On Green	0.14	0.14	0.00	0.14	0.14	0.00	0.58	0.58	0.00	0.58	0.58	0.00
Sat Flow, veh/h	1385	1863	1583	1407	1863	1583	1001	3539	1583	1031	3539	1583
Grp Volume(v), veh/h	37	4	0	79	21	0	146	345	0	12	378	0
Grp Sat Flow(s),veh/h/ln	1385	1863	1583	1407	1863	1583	1001	1770	1583	1031	1770	1583
Q Serve(g_s), s	0.9	0.1	0.0	2.0	0.4	0.0	3.1	1.8	0.0	0.2	1.9	0.0
Cycle Q Clear(g_c), s	1.3	0.1	0.0	2.1	0.4	0.0	5.1	1.8	0.0	2.0	1.9	0.0
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	368	263	224	382	263	224	716	2052	918	737	2052	918
V/C Ratio(X)	0.10	0.02	0.00	0.21	0.08	0.00	0.20	0.17	0.00	0.02	0.18	0.00
Avail Cap(c_a), veh/h	520	467	397	536	467	397	1157	3613	1617	1192	3613	1617
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	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	15.0	14.3	0.0	15.2	14.4	0.0	5.0	3.8	0.0	4.2	3.8	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.3	0.1	0.0	0.1	0.0	0.0	0.0	0.0	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	0.4	0.0	0.0	0.8	0.2	0.0	0.8	0.8	0.0	0.1	0.9	0.0
LnGrp Delay(d),s/veh	15.1	14.3	0.0	15.4	14.6	0.0	5.2	3.8	0.0	4.3	3.9	0.0
LnGrp LOS	B	B		B	B		A	A		A	A	
Approach Vol, veh/h		41			100			491			390	
Approach Delay, s/veh		15.0			15.3			4.2			3.9	
Approach LOS		B			B			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.9		10.8		27.9		10.8				
Change Period (Y+Rc), s		5.5		5.3		5.5		5.3				
Max Green Setting (Gmax), s		39.5		9.7		39.5		9.7				
Max Q Clear Time (g_c+l1), s		7.1		3.3		4.0		4.1				
Green Ext Time (p_c), s		15.4		0.4		16.1		0.3				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			5.6									
HCM 2010 LOS			A									



**Intersection**












Int Delay, s/veh 1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	5	2	15	17	1	40	8	492	10	14	552	9
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	-	-	Yield	-	-	Yield	-	-	Yield
Storage Length	-	-	-	-	-	-	500	-	1150	1000	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	42	50	57	56	25	63	75	97	69	54	85	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	4	26	30	4	63	11	507	14	26	649	18

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	978	1230	325	908	1230	254	649	0	0	507	0	0
Stage 1	701	701	-	529	529	-	-	-	-	-	-	-
Stage 2	277	529	-	379	701	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	205	176	671	230	176	745	933	-	-	1054	-	-
Stage 1	395	439	-	501	525	-	-	-	-	-	-	-
Stage 2	706	525	-	615	439	-	-	-	-	-	-	-
Platoon blocked, %							-	-	-	-	-	-
Mov Cap-1 Maneuver	180	170	671	213	170	745	933	-	-	1054	-	-
Mov Cap-2 Maneuver	293	286	-	336	287	-	-	-	-	-	-	-
Stage 1	390	428	-	495	519	-	-	-	-	-	-	-
Stage 2	633	519	-	571	428	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.8	9.3	0.2	0.3
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	933	-	-	450	938	1054	-
HCM Lane V/C Ratio	0.011	-	-	0.094	0.104	0.025	-
HCM Control Delay (s)	8.9	-	-	13.8	9.3	8.5	-
HCM Lane LOS	A	-	-	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.3	0.1	-

								
Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Volume (veh/h)	111	1	498	53	4	498		
Number	3	18	2	12	1	6		
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		
Adj Sat Flow, veh/h/ln	1863	1900	1863	1863	1863	1863		
Adj Flow Rate, veh/h	236	4	541	0	8	560		
Adj No. of Lanes	0	0	2	1	1	2		
Peak Hour Factor	0.47	0.25	0.92	0.79	0.50	0.89		
Percent Heavy Veh, %	0	0	2	2	2	2		
Cap, veh/h	306	5	2001	895	601	2001		
Arrive On Green	0.18	0.18	0.57	0.00	0.57	0.57		
Sat Flow, veh/h	1734	29	3632	1583	861	3632		
Grp Volume(v), veh/h	241	0	541	0	8	560		
Grp Sat Flow(s),veh/h/ln	1771	0	1770	1583	861	1770		
Q Serve(g_s), s	5.1	0.0	3.1	0.0	0.2	3.2		
Cycle Q Clear(g_c), s	5.1	0.0	3.1	0.0	3.3	3.2		
Prop In Lane	0.98	0.02		1.00	1.00			
Lane Grp Cap(c), veh/h	313	0	2001	895	601	2001		
V/C Ratio(X)	0.77	0.00	0.27	0.00	0.01	0.28		
Avail Cap(c_a), veh/h	462	0	2643	1182	758	2643		
HCM Platoon Ratio	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		
Uniform Delay (d), s/veh	15.5	0.0	4.4	0.0	5.3	4.4		
Incr Delay (d2), s/veh	4.6	0.0	0.1	0.0	0.0	0.1		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.8	0.0	1.4	0.0	0.0	1.5		
LnGrp Delay(d),s/veh	20.1	0.0	4.5	0.0	5.3	4.5		
LnGrp LOS	C		A		A	A		
Approach Vol, veh/h	241		541			568		
Approach Delay, s/veh	20.1		4.5			4.5		
Approach LOS	C		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		27.8				27.8		11.7
Change Period (Y+Rc), s		5.5				5.5		4.7
Max Green Setting (Gmax), s		29.5				29.5		10.3
Max Q Clear Time (g_c+1), s		5.1				5.3		7.1
Green Ext Time (p_c), s		17.1				17.0		0.4
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			7.3					
HCM 2010 LOS			A					
<b>Notes</b>								
User approved volume balancing among the lanes for turning movement.								

**Intersection**

Int Delay, s/veh 2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	5	3	33	1	4	7	18	593	6	12	698	7
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	63	25	80	25	100	58	68	90	50	54	79	33
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	12	41	4	4	12	26	659	12	22	884	21

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1665	1663	452	1210	1667	665	905	0	0	671	0	0
Stage 1	939	939	-	718	718	-	-	-	-	-	-	-
Stage 2	726	724	-	492	949	-	-	-	-	-	-	-
Critical Hdwy	7.33	6.53	6.93	7.33	6.53	6.23	4.14	-	-	4.12	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.22	-	-	2.218	-	-
Pot Cap-1 Maneuver	70	97	556	148	96	459	747	-	-	919	-	-
Stage 1	285	342	-	419	432	-	-	-	-	-	-	-
Stage 2	415	429	-	528	338	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	61	87	556	113	86	459	747	-	-	919	-	-
Mov Cap-2 Maneuver	61	87	-	113	86	-	-	-	-	-	-	-
Stage 1	269	326	-	396	408	-	-	-	-	-	-	-
Stage 2	378	405	-	448	322	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	35.2	26.8	0.4	0.4
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	747	-	-	179	185	919	-	-
HCM Lane V/C Ratio	0.035	-	-	0.342	0.108	0.024	-	-
HCM Control Delay (s)	10	0	-	35.2	26.8	9	0.2	-
HCM Lane LOS	A	A	-	E	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.4	0.4	0.1	-	-

Intersection												
Int Delay, s/veh	3.1											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	4	5	20	6	2	74	9	538	17	62	665	2
Conflicting Peds, #/hr	0	0	11	11	0	0	7	0	1	1	0	7
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	150	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	42	88	50	50	80	67	79	25	83	92	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	8	12	23	12	4	92	13	681	68	75	723	2

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1639	1671	381	1281	1638	733	736	0	0	760	0	0
Stage 1	884	884	-	753	753	-	-	-	-	-	-	-
Stage 2	755	787	-	528	885	-	-	-	-	-	-	-
Critical Hdwy	6.5	6.5	6.93	6.5	6.5	6.23	4.14	-	-	4.12	-	-
Critical Hdwy Stg 1	6.53	5.53	-	6.13	5.53	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.13	5.53	-	6.53	5.53	-	-	-	-	-	-	-
Follow-up Hdwy	3.519	4.019	3.319	3.519	4.019	3.319	2.22	-	-	2.218	-	-
Pot Cap-1 Maneuver	106	97	618	178	101	420	865	-	-	852	-	-
Stage 1	307	362	-	401	417	-	-	-	-	-	-	-
Stage 2	400	402	-	503	362	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	68	79	609	130	82	414	860	-	-	847	-	-
Mov Cap-2 Maneuver	68	79	-	130	82	-	-	-	-	-	-	-
Stage 1	296	306	-	387	402	-	-	-	-	-	-	-
Stage 2	298	388	-	394	306	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	42	20	0.2	1.4
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	860	-	-	139	113	414	847	-	-
HCM Lane V/C Ratio	0.016	-	-	0.307	0.142	0.223	0.088	-	-
HCM Control Delay (s)	9.3	0	-	42	42	16.2	9.7	0.6	-
HCM Lane LOS	A	A	-	E	E	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.2	0.5	0.8	0.3	-	-



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Volume (veh/h)	100	51	524	52	32	691		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1900	1863		
Adj Flow Rate, veh/h	116	74	546	67	45	853		
Adj No. of Lanes	1	1	1	0	0	2		
Peak Hour Factor	0.86	0.69	0.96	0.78	0.71	0.81		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	170	152	1271	156	139	2507		
Arrive On Green	0.10	0.10	0.78	0.78	0.78	0.78		
Sat Flow, veh/h	1774	1583	1627	200	115	3293		
Grp Volume(v), veh/h	116	74	0	613	464	434		
Grp Sat Flow(s),veh/h/ln	1774	1583	0	1826	1712	1610		
Q Serve(g_s), s	5.1	3.5	0.0	8.8	0.0	6.5		
Cycle Q Clear(g_c), s	5.1	3.5	0.0	8.8	5.8	6.5		
Prop In Lane	1.00	1.00		0.11	0.10			
Lane Grp Cap(c), veh/h	170	152	0	1427	1387	1258		
V/C Ratio(X)	0.68	0.49	0.00	0.43	0.33	0.35		
Avail Cap(c_a), veh/h	408	364	0	1427	1387	1258		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	1.00	1.00	0.00	1.00	0.99	0.99		
Uniform Delay (d), s/veh	35.0	34.3	0.0	2.9	2.5	2.6		
Incr Delay (d2), s/veh	4.7	2.4	0.0	0.9	0.6	0.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.7	1.6	0.0	4.5	3.0	2.9		
LnGrp Delay(d),s/veh	39.7	36.7	0.0	3.8	3.2	3.4		
LnGrp LOS	D	D		A	A	A		
Approach Vol, veh/h	190		613			898		
Approach Delay, s/veh	38.5		3.8			3.3		
Approach LOS	D		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		67.7				67.7		12.3
Change Period (Y+Rc), s		5.2				5.2		4.6
Max Green Setting (Gmax), s		51.8				51.8		18.4
Max Q Clear Time (g_c+l1), s		10.8				8.5		7.1
Green Ext Time (p_c), s		33.7				35.3		0.7
<b>Intersection Summary</b>								
HCM 2010 Ctrl Delay			7.4					
HCM 2010 LOS			A					



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Volume (veh/h)	25	233	281	37	361	418		
Number	3	18	2	12	1	6		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00	1.00		0.99	1.00			
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1676	1676	1676	1710	1676	1676		
Adj Flow Rate, veh/h	41	0	316	48	430	498		
Adj No. of Lanes	1	1	1	0	1	1		
Peak Hour Factor	0.61	0.87	0.89	0.77	0.84	0.84		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	77	69	847	129	795	1376		
Arrive On Green	0.05	0.00	0.60	0.60	0.15	0.82		
Sat Flow, veh/h	1597	1425	1421	216	1597	1676		
Grp Volume(v), veh/h	41	0	0	364	430	498		
Grp Sat Flow(s),veh/h/ln	1597	1425	0	1637	1597	1676		
Q Serve(g_s), s	1.6	0.0	0.0	7.5	5.2	4.9		
Cycle Q Clear(g_c), s	1.6	0.0	0.0	7.5	5.2	4.9		
Prop In Lane	1.00	1.00		0.13	1.00			
Lane Grp Cap(c), veh/h	77	69	0	976	795	1376		
V/C Ratio(X)	0.53	0.00	0.00	0.37	0.54	0.36		
Avail Cap(c_a), veh/h	273	243	0	976	927	1376		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(l)	0.98	0.00	0.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	30.2	0.0	0.0	6.8	3.5	1.5		
Incr Delay (d2), s/veh	5.5	0.0	0.0	1.1	0.6	0.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	10.8	0.0	0.0	3.5	2.2	2.2		
LnGrp Delay(d),s/veh	35.7	0.0	0.0	7.9	4.0	2.2		
LnGrp LOS	D			A	A	A		
Approach Vol, veh/h	41		364			928		
Approach Delay, s/veh	35.7		7.9			3.1		
Approach LOS	D		A			A		
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2				6		8
Phs Duration (G+Y+Rc), s	4.6	43.4				58.0		7.0
Change Period (Y+Rc), s	4.6	* 4.6				* 4.6		3.9
Max Green Setting (Gmax), s	15	* 25				* 25		11.1
Max Q Clear Time (g_c+I1), s	17	9.5				6.9		3.6
Green Ext Time (p_c), s	1.7	10.7				12.0		0.1

**Intersection Summary**

HCM 2010 Ctrl Delay	5.4
HCM 2010 LOS	A

**Notes**

\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

**Intersection**

Int Delay, s/veh 4.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Vol, veh/h	294	115	108	210	85	87
Conflicting Peds, #/hr	0	0	0	0	1	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	Yield	-	None	-	Yield
Storage Length	-	-	500	-	0	300
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	84	78	81	91	78	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	350	147	133	231	109	140

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	351
Stage 1	-	-	351
Stage 2	-	-	497
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	5.42
Critical Hdwy Stg 2	-	-	5.42
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1208
Stage 1	-	-	713
Stage 2	-	-	611
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1208
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	712
Stage 2	-	-	544

Approach	EB	WB	NB
HCM Control Delay, s	0	3.1	13.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	412	691	-	-	1208	-
HCM Lane V/C Ratio	0.265	0.203	-	-	0.11	-
HCM Control Delay (s)	16.9	11.5	-	-	8.3	-
HCM Lane LOS	C	B	-	-	A	-
HCM 95th %tile Q(veh)	1.1	0.8	-	-	0.4	-

Intersection												
Int Delay, s/veh	6.5											




















Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	7	109	260	7	379	33	24	41	13	35	64	45
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	5	5	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	300	-	-	200	-	-	350
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	86	90	35	89	64	59	79	58	73	78	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	127	289	20	426	52	41	52	22	48	82	56

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	431	0	0	421	0	0	816	775	277	801	920	432
Stage 1	-	-	-	-	-	-	304	304	-	471	471	-
Stage 2	-	-	-	-	-	-	512	471	-	330	449	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1129	-	-	1138	-	-	296	329	762	303	271	624
Stage 1	-	-	-	-	-	-	705	663	-	573	560	-
Stage 2	-	-	-	-	-	-	545	560	-	683	572	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1128	-	-	1137	-	-	196	313	758	248	258	621
Mov Cap-2 Maneuver	-	-	-	-	-	-	196	313	-	248	258	-
Stage 1	-	-	-	-	-	-	690	649	-	561	544	-
Stage 2	-	-	-	-	-	-	410	544	-	599	560	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.3	24.4	26.5
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	248	758	1128	-	-	1137	-	-	254	621
HCM Lane V/C Ratio	0.373	0.03	0.012	-	-	0.018	-	-	0.512	0.091
HCM Control Delay (s)	27.9	9.9	8.2	0	-	8.2	0	-	33.1	11.4
HCM Lane LOS	D	A	A	A	-	A	A	-	D	B
HCM 95th %tile Q(veh)	1.6	0.1	0	-	-	0.1	-	-	2.7	0.3



												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	4	139	14	11	350	67	11	40	8	207	192	25
Number	5	2	12	1	6	16	3	8	18	7	4	14
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	0.98		1.00	0.98		0.99
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
Adj Sat Flow, veh/h/ln	1710	1676	1710	1710	1676	1676	1676	1676	1710	1676	1676	1710
Adj Flow Rate, veh/h	8	167	20	20	376	89	28	41	0	225	209	27
Adj No. of Lanes	0	1	0	0	1	1	1	1	0	1	1	0
Peak Hour Factor	0.50	0.83	0.70	0.56	0.93	0.75	0.39	0.98	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	864	100	69	978	858	179	148	0	376	401	52
Arrive On Green	0.60	0.60	0.60	0.60	0.60	0.60	0.09	0.09	0.00	0.13	0.28	0.28
Sat Flow, veh/h	25	1430	166	37	1619	1420	1001	1676	0	1597	1453	188
Grp Volume(v), veh/h	195	0	0	396	0	89	28	41	0	225	0	236
Grp Sat Flow(s),veh/h/ln	1621	0	0	1656	0	1420	1001	1676	0	1597	0	1641
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	2.1	2.1	1.8	0.0	9.9	0.0	9.7
Cycle Q Clear(g_c), s	4.3	0.0	0.0	9.8	0.0	2.1	2.1	1.8	0.0	9.9	0.0	9.7
Prop In Lane	0.04		0.10	0.05		1.00	1.00		0.00	1.00		0.11
Lane Grp Cap(c), veh/h	1026	0	0	1047	0	858	179	148	0	376	0	453
V/C Ratio(X)	0.19	0.00	0.00	0.38	0.00	0.10	0.16	0.28	0.00	0.60	0.00	0.52
Avail Cap(c_a), veh/h	1026	0	0	1047	0	858	283	323	0	376	0	706
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	0.00	0.89	0.00	0.89	1.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.1	0.0	0.0	8.2	0.0	6.7	34.2	34.1	0.0	26.8	0.0	24.5
Incr Delay (d2), s/veh	0.4	0.0	0.0	0.9	0.0	0.2	0.4	1.0	0.0	2.6	0.0	0.9
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	0.0	4.6	0.0	0.8	0.6	0.9	0.0	4.5	0.0	4.4
LnGrp Delay(d),s/veh	7.5	0.0	0.0	9.1	0.0	6.9	34.6	35.1	0.0	29.4	0.0	25.4
LnGrp LOS	A			A		A	C	D		C		C
Approach Vol, veh/h		195			485			69			461	
Approach Delay, s/veh		7.5			8.7			34.9			27.3	
Approach LOS		A			A			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		53.3		26.7		53.3	15.0	11.7				
Change Period (Y+Rc), s		5.0		* 4.6		5.0	* 4.6	* 4.6				
Max Green Setting (Gmax), s		36.0		* 34		36.0	* 10	* 15				
Max Q Clear Time (g_c+1), s		6.3		11.7		11.8	11.9	4.1				
Green Ext Time (p_c), s		11.9		4.6		10.7	0.0	3.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				17.1								
HCM 2010 LOS				B								
<b>Notes</b>												
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.												

**Intersection**

Int Delay, s/veh 1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	426	90	0	673	266	0	0	153	0	0	60
Conflicting Peds, #/hr	18	0	6	6	0	18	1	0	0	0	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	Free	-	-	Free	-	-	Yield	-	-	Free
Storage Length	-	-	-	-	-	300	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	89	87	92	91	89	92	92	79	92	92	70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	479	103	0	740	299	0	0	194	0	0	86

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	740	0	480	0
Stage 1	-	-	480	480
Stage 2	-	-	740	740
Critical Hdwy	4.12	-	4.14	-
Critical Hdwy Stg 1	-	-	6.53	5.53
Critical Hdwy Stg 2	-	-	6.13	5.53
Follow-up Hdwy	2.218	-	3.519	4.019
Pot Cap-1 Maneuver	867	0	146	179
Stage 1	-	0	537	554
Stage 2	-	0	408	422
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	854	-	144	179
Mov Cap-2 Maneuver	-	-	144	179
Stage 1	-	-	537	554
Stage 2	-	-	402	422

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	11.5	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	WBL	WBT	SBLn1
Capacity (veh/h)	751	854	-	1074	-	-
HCM Lane V/C Ratio	0.258	-	-	-	-	-
HCM Control Delay (s)	11.5	0	-	0	-	0
HCM Lane LOS	B	A	-	A	-	A
HCM 95th %tile Q(veh)	1	0	-	0	-	-

**Intersection**

Int Delay, s/veh 49.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	40	243	7	46	471	6	69	6	9	0	0	423
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	-	-	Yield
Storage Length	450	-	-	250	-	500	-	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	67	96	88	61	93	50	74	38	50	92	92	93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	253	8	75	506	12	93	16	18	0	0	455

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	506	0	0	261	0	0	1034	1034	131	911	1037	506
Stage 1	-	-	-	-	-	-	377	377	-	657	657	-
Stage 2	-	-	-	-	-	-	657	657	-	254	380	-
Critical Hdwy	4.12	-	-	4.14	-	-	6	6	6.93	7.33	6.53	6.23
Critical Hdwy Stg 1	-	-	-	-	-	-	5	5	-	6.13	5.53	-
Critical Hdwy Stg 2	-	-	-	-	-	-	4	4	-	6.53	5.53	-
Follow-up Hdwy	2.218	-	-	2.22	-	-	3.519	4.019	3.319	3.519	4.019	3.319
Pot Cap-1 Maneuver	1059	-	-	1300	-	-	290	270	895	242	231	565
Stage 1	-	-	-	-	-	-	725	650	-	453	461	-
Stage 2	-	-	-	-	-	-	668	609	-	729	613	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1059	-	-	1300	-	-	~ 52	240	895	210	205	565
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 57	363	-	317	305	-
Stage 1	-	-	-	-	-	-	684	613	-	427	434	-
Stage 2	-	-	-	-	-	-	123	574	-	657	578	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.6	1	\$ 456	32.6
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	75	1059	-	-	1300	-	-	565
HCM Lane V/C Ratio	1.694	0.056	-	-	0.058	-	-	0.805
HCM Control Delay (s)	\$ 456	8.6	-	-	7.9	-	-	32.6
HCM Lane LOS	F	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	10.9	0.2	-	-	0.2	-	-	7.9

**Notes**

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

**Intersection**

Int Delay, s/veh 6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	34	216	5	11	276	1	27	7	308	0	0	9
Conflicting Peds, #/hr	1	0	0	0	0	1	1	0	10	10	0	1
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	Yield	-	-	Yield
Storage Length	700	-	0	450	-	-	-	-	0	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	91	63	75	89	25	48	50	81	92	92	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	37	237	8	15	310	4	56	14	380	0	0	18

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	324	0	0	247	0	0	671	673	248	678	671	323
Stage 1	-	-	-	-	-	-	320	320	-	351	351	-
Stage 2	-	-	-	-	-	-	351	353	-	327	320	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1236	-	-	1319	-	-	370	377	791	366	378	718
Stage 1	-	-	-	-	-	-	692	652	-	666	632	-
Stage 2	-	-	-	-	-	-	666	631	-	686	652	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1235	-	-	1318	-	-	346	355	784	176	356	711
Mov Cap-2 Maneuver	-	-	-	-	-	-	446	437	-	261	444	-
Stage 1	-	-	-	-	-	-	666	627	-	641	620	-
Stage 2	-	-	-	-	-	-	641	619	-	335	627	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	0.3	13.9	10.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	444	784	1235	-	-	1318	-	-	-	711
HCM Lane V/C Ratio	0.158	0.485	0.03	-	-	0.011	-	-	-	0.025
HCM Control Delay (s)	14.6	13.8	8	-	-	7.8	-	-	0	10.2
HCM Lane LOS	B	B	A	-	-	A	-	-	A	B
HCM 95th %tile Q(veh)	0.6	2.7	0.1	-	-	0	-	-	-	0.1

**Intersection**

Int Delay, s/veh 4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	0	71	0	22	75	64	0	0	99	84
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	-	-	Free	-	-	None	-	-	Free
Storage Length	-	-	-	-	-	1300	600	-	-	-	-	0
Veh in Median Storage, #	-	0	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	79	25	67	75	82	92	92	72	66
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	90	0	33	100	78	0	0	138	127

Major/Minor	Minor1		Major1			Major2			
Conflicting Flow All	416	416	-	138	0	0	78	0	0
Stage 1	278	278	-	-	-	-	-	-	-
Stage 2	138	138	-	-	-	-	-	-	-
Critical Hdwy	6.42	6.52	-	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	5.42	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	5.42	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	-	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	593	527	0	1446	-	-	1520	-	0
Stage 1	769	680	0	-	-	-	-	-	0
Stage 2	889	782	0	-	-	-	-	-	0
Platoon blocked, %									
Mov Cap-1 Maneuver	552	0	-	1446	-	-	1520	-	-
Mov Cap-2 Maneuver	592	0	-	-	-	-	-	-	-
Stage 1	716	0	-	-	-	-	-	-	-
Stage 2	889	0	-	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.2	4.3	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	1446	-	-	592	-	1520	-
HCM Lane V/C Ratio	0.069	-	-	0.152	-	-	-
HCM Control Delay (s)	7.7	-	-	12.2	0	0	-
HCM Lane LOS	A	-	-	B	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.5	-	0	-

**Intersection**

Int Delay, s/veh 8.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	56	0	87	0	1	0	0	82	86	56	95	15
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	-	-	Yield	-	-	None	-	-	Free	-	-	None
Storage Length	1800	-	-	-	-	-	-	-	1200	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	25	73	92	92	92	92	79	88	71	85	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	71	0	119	0	1	0	0	104	98	79	112	16

Major/Minor	Major1	Major2	Minor1	Minor2							
Conflicting Flow All	1	0	0	0	0	207	143	-	195	143	1
Stage 1	-	-	-	-	-	142	142	-	1	1	-
Stage 2	-	-	-	-	-	65	1	-	194	142	-
Critical Hdwy	4.12	-	-	4.12	-	7.12	6.52	-	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	3.518	4.018	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	-	-	751	748	0	764	748	1084
Stage 1	-	-	-	-	-	861	779	0	1022	895	-
Stage 2	-	-	-	-	-	946	895	0	808	779	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1622	-	-	-	-	625	715	-	652	715	1084
Mov Cap-2 Maneuver	-	-	-	-	-	638	674	-	607	676	-
Stage 1	-	-	-	-	-	823	745	-	977	895	-
Stage 2	-	-	-	-	-	815	895	-	665	745	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.7	0	11.3	12.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	674	-	1622	-	-	-	-	-	667
HCM Lane V/C Ratio	0.154	-	0.044	-	-	-	-	-	0.31
HCM Control Delay (s)	11.3	0	7.3	-	-	0	-	-	12.8
HCM Lane LOS	B	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.5	-	0.1	-	-	-	-	-	1.3

**Intersection**

Int Delay, s/veh 1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	52	863	4	8	635	19	7	2	52	3	1	37
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	-	-	Yield	-	-	Yield	-	-	Yield	-	-	Yield
Storage Length	500	-	-	500	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	93	92	45	97	71	44	50	82	38	25	71
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	59	928	4	18	655	27	16	4	63	8	4	52

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	655	0	0	928
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	4.14	-	-	4.14
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22
Pot Cap-1 Maneuver	928	-	-	733
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	928	-	-	733
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0.3	10.7	9.7
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	716	928	-	-	733	-	-	822
HCM Lane V/C Ratio	0.116	0.064	-	-	0.024	-	-	0.078
HCM Control Delay (s)	10.7	9.1	-	-	10	-	-	9.7
HCM Lane LOS	B	A	-	-	B	-	-	A
HCM 95th %tile Q(veh)	0.4	0.2	-	-	0.1	-	-	0.3

**Intersection**

Int Delay, s/veh 1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	206	712	0	1	581	23	0	0	0	7	0	81
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	-	-	Yield	-	-	Yield	-	-	Yield
Storage Length	600	-	-	400	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	96	25	25	94	63	25	25	25	58	25	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	224	742	0	4	618	37	0	0	0	12	0	85

Major/Minor	Major1	Major2	Minor1	Minor2								
Conflicting Flow All	618	0	0	742	0	0	1506	1815	371	1445	1815	309
Stage 1	-	-	-	-	-	-	1189	1189	-	626	626	-
Stage 2	-	-	-	-	-	-	317	626	-	819	1189	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	958	-	-	861	-	-	83	77	626	93	77	687
Stage 1	-	-	-	-	-	-	199	260	-	439	475	-
Stage 2	-	-	-	-	-	-	669	475	-	336	260	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	958	-	-	861	-	-	59	59	626	76	59	687
Mov Cap-2 Maneuver	-	-	-	-	-	-	119	127	-	165	147	-
Stage 1	-	-	-	-	-	-	152	199	-	336	473	-
Stage 2	-	-	-	-	-	-	583	473	-	257	199	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.3	0.1	0	10.2
HCM LOS			A	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	958	-	-	861	-	-	784
HCM Lane V/C Ratio	-	0.234	-	-	0.005	-	-	0.124
HCM Control Delay (s)	0	9.9	-	-	9.2	-	-	10.2
HCM Lane LOS	A	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0.9	-	-	0	-	-	0.4



**Intersection**

Int Delay, s/veh      0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Vol, veh/h	0	10	595	46	0	719
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Yield	-	Yield	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	39	94	66	92	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	26	633	70	0	773

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1020	316	0	0	633	0
Stage 1	633	-	-	-	-	-
Stage 2	387	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	233	680	-	-	946	-
Stage 1	491	-	-	-	-	-
Stage 2	656	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	233	680	-	-	946	-
Mov Cap-2 Maneuver	359	-	-	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	656	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	10.5		0		0
HCM LOS	B				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 680	946	-
HCM Lane V/C Ratio	-	- 0.038	-	-
HCM Control Delay (s)	-	- 10.5	0	-
HCM Lane LOS	-	- B	A	-
HCM 95th %tile Q(veh)	-	- 0.1	0	-

**Intersection**

Intersection Delay, s/veh	8.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Vol, veh/h	0	44	1	2	0	6	0	11	0	6	72	4
Peak Hour Factor	0.92	0.80	0.75	0.25	0.92	0.58	0.25	0.38	0.92	0.50	0.52	0.25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	55	1	8	0	10	0	29	0	12	138	16
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	8.4	7.7	8.4
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	7%	94%	35%	5%
Vol Thru, %	88%	2%	0%	95%
Vol Right, %	5%	4%	65%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	82	47	17	130
LT Vol	6	44	6	7
Through Vol	72	1	0	123
RT Vol	4	2	11	0
Lane Flow Rate	166	64	39	161
Geometry Grp	1	1	1	1
Degree of Util (X)	0.201	0.087	0.048	0.196
Departure Headway (Hd)	4.341	4.874	4.43	4.371
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	829	736	809	823
Service Time	2.357	2.898	2.456	2.387
HCM Lane V/C Ratio	0.2	0.087	0.048	0.196
HCM Control Delay	8.4	8.4	7.7	8.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.7	0.3	0.2	0.7

**Intersection**

Intersection Delay, s/veh

Intersection LOS

Movement	SBU	SBL	SBT	SBR
Vol, veh/h	0	7	123	0
Peak Hour Factor	0.92	0.63	0.82	0.25
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	11	150	0
Number of Lanes	0	0	1	0

**Approach SB**

Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	8.5
HCM LOS	A

**Lane**



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↑↑	↗	↖	↑↑	↗
Volume (veh/h)	63	18	9	94	22	57	13	521	28	90	596	33
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.99		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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1844	1844	1844	1881	1881	1881
Adj Flow Rate, veh/h	68	26	0	112	37	0	15	543	0	114	648	0
Adj No. of Lanes	1	1	0	1	1	0	1	2	1	1	2	1
Peak Hour Factor	0.93	0.68	0.63	0.84	0.60	0.75	0.88	0.96	0.68	0.79	0.92	0.70
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	220	153	0	229	153	0	548	1803	807	668	2094	937
Arrive On Green	0.08	0.08	0.00	0.08	0.08	0.00	0.02	0.51	0.00	0.09	0.59	0.00
Sat Flow, veh/h	1353	1863	0	1366	1863	0	1756	3504	1568	1792	3575	1599
Grp Volume(v), veh/h	68	26	0	112	37	0	15	543	0	114	648	0
Grp Sat Flow(s),veh/h/ln	1353	1863	0	1366	1863	0	1756	1752	1568	1792	1787	1599
Q Serve(g_s), s	2.7	0.7	0.0	3.7	1.0	0.0	0.2	4.8	0.0	1.4	4.9	0.0
Cycle Q Clear(g_c), s	3.7	0.7	0.0	4.4	1.0	0.0	0.2	4.8	0.0	1.4	4.9	0.0
Prop In Lane	1.00		0.00	1.00		0.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	153	0	229	153	0	548	1803	807	668	2094	937
V/C Ratio(X)	0.31	0.17	0.00	0.49	0.24	0.00	0.03	0.30	0.00	0.17	0.31	0.00
Avail Cap(c_a), veh/h	220	153	0	229	153	0	677	2218	992	838	2289	1024
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	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.7	22.9	0.0	25.2	23.0	0.0	5.9	7.5	0.0	4.4	5.6	0.0
Incr Delay (d2), s/veh	0.8	0.5	0.0	1.6	0.8	0.0	0.0	0.1	0.0	0.1	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	0.4	0.0	1.7	0.5	0.0	0.1	2.2	0.0	0.6	2.3	0.0
LnGrp Delay(d),s/veh	25.5	23.4	0.0	26.8	23.8	0.0	5.9	7.6	0.0	4.6	5.7	0.0
LnGrp LOS	C	C		C	C		A	A		A	A	
Approach Vol, veh/h		94			149			558			762	
Approach Delay, s/veh		24.9			26.1			7.5			5.6	
Approach LOS		C			C			A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	33.7		10.0	6.1	37.5		10.0				
Change Period (Y+Rc), s	5.0	6.1		* 5.6	5.1	* 6.1		* 5.6				
Max Green Setting (Gmax), s	10.0	33.9		* 4.4	4.9	* 34		* 4.4				
Max Q Clear Time (g_c+I), s	10.0	6.8		5.7	2.2	6.9		6.4				
Green Ext Time (p_c), s	0.2	20.8		0.0	0.0	21.0		0.0				

**Intersection Summary**

HCM 2010 Ctrl Delay	9.4
HCM 2010 LOS	A

**Notes**

\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

**Intersection**

























Int Delay, s/veh 1.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	0	0	20	0	0	45	17	517	30	64	572	63
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	-	-	Yield	-	-	Yield	-	-	Yield	-	-	Yield
Storage Length	-	-	0	-	-	0	600	-	1000	600	-	900
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	25	25	69	25	25	85	56	99	80	75	89	70
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	29	0	0	53	30	522	38	85	643	90

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1135	1396	321	1075	1396	261	643	0	0	522	0	0
Stage 1	813	813	-	583	583	-	-	-	-	-	-	-
Stage 2	322	583	-	492	813	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	157	140	675	174	140	738	938	-	-	1041	-	-
Stage 1	339	390	-	465	497	-	-	-	-	-	-	-
Stage 2	664	497	-	527	390	-	-	-	-	-	-	-
Platoon blocked, %							-	-	-	-	-	-
Mov Cap-1 Maneuver	133	124	675	152	124	738	938	-	-	1041	-	-
Mov Cap-2 Maneuver	239	228	-	271	232	-	-	-	-	-	-	-
Stage 1	328	358	-	450	481	-	-	-	-	-	-	-
Stage 2	597	481	-	463	358	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.6	10.3	0.5	0.9
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	938	-	-	675	738	1041	-	-
HCM Lane V/C Ratio	0.032	-	-	0.043	0.072	0.082	-	-
HCM Control Delay (s)	9	-	-	10.6	10.3	8.8	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.2	0.3	-	-

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	107	77	25	103	86	132	13	325	70	139	368	85
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		1.00	0.99		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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	134	93	0	145	104	0	22	342	0	172	391	0
Adj No. of Lanes	1	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.80	0.83	0.68	0.71	0.83	0.86	0.58	0.95	0.82	0.81	0.94	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	338	230	196	347	230	196	433	1075	481	488	1249	559
Arrive On Green	0.07	0.12	0.00	0.07	0.12	0.00	0.02	0.30	0.00	0.07	0.35	0.00
Sat Flow, veh/h	1774	1863	1583	1774	1863	1583	1774	3539	1583	1774	3539	1583
Grp Volume(v), veh/h	134	93	0	145	104	0	22	342	0	172	391	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583	1774	1770	1583	1774	1770	1583
Q Serve(g_s), s	3.7	2.6	0.0	3.8	2.9	0.0	0.5	4.2	0.0	3.8	4.5	0.0
Cycle Q Clear(g_c), s	3.7	2.6	0.0	3.8	2.9	0.0	0.5	4.2	0.0	3.8	4.5	0.0
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	338	230	196	347	230	196	433	1075	481	488	1249	559
V/C Ratio(X)	0.40	0.40	0.00	0.42	0.45	0.00	0.05	0.32	0.00	0.35	0.31	0.00
Avail Cap(c_a), veh/h	338	456	387	347	456	387	520	1500	671	488	1500	671
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	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.1	22.8	0.0	20.3	22.9	0.0	13.1	15.1	0.0	12.5	13.3	0.0
Incr Delay (d2), s/veh	0.8	1.1	0.0	0.8	1.4	0.0	0.0	0.2	0.0	0.4	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	1.8	1.4	0.0	0.3	1.6	0.0	0.2	2.0	0.0	1.8	2.2	0.0
LnGrp Delay(d),s/veh	20.8	23.9	0.0	21.1	24.3	0.0	13.1	15.4	0.0	12.9	13.5	0.0
LnGrp LOS	C	C		C	C		B	B		B	B	
Approach Vol, veh/h		227			249			364			563	
Approach Delay, s/veh		22.1			22.5			15.2			13.3	
Approach LOS		C			C			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	23.2	10.0	13.2	7.2	26.0	10.0	13.2				
Change Period (Y+Rc), s	6.1	6.1	6.2	6.2	6.1	6.1	6.2	6.2				
Max Green Setting (Gmax), s	3.9	23.9	3.8	13.8	3.9	23.9	3.8	13.8				
Max Q Clear Time (g_c+1), s	5.8	6.2	5.8	4.6	2.5	6.5	5.7	4.9				
Green Ext Time (p_c), s	0.0	10.9	0.0	1.6	0.0	10.8	0.0	1.5				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay			16.9									
HCM 2010 LOS			B									

**Intersection**

Int Delay, s/veh 4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	27	9	14	20	10	64	7	308	15	87	379	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	500	-	500	500	-	500
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	82	63	47	66	55	73	50	95	57	71	88	81
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	14	30	30	18	88	14	324	26	123	431	33

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1081	1028	432	1050	1028	325	431	0	0	324	0	0
Stage 1	676	676	-	352	352	-	-	-	-	-	-	-
Stage 2	405	352	-	698	676	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	195	234	624	205	234	716	1129	-	-	1236	-	-
Stage 1	443	453	-	665	632	-	-	-	-	-	-	-
Stage 2	622	632	-	431	453	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	149	208	623	172	208	715	1128	-	-	1235	-	-
Mov Cap-2 Maneuver	259	298	-	272	307	-	-	-	-	-	-	-
Stage 1	438	408	-	657	624	-	-	-	-	-	-	-
Stage 2	523	624	-	356	408	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.4	15.9	0.3	1.7
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1128	-	-	345	464	1235	-
HCM Lane V/C Ratio	0.012	-	-	0.223	0.293	0.099	-
HCM Control Delay (s)	8.2	-	-	18.4	15.9	8.2	-
HCM Lane LOS	A	-	-	C	C	A	-
HCM 95th %tile Q(veh)	0	-	-	0.8	1.2	0.3	-

**Intersection**

Int Delay, s/veh 1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Vol, veh/h	12	0	2	9	1	19	4	282	5	43	350	14
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	-	-	-	-	-	-	1250	-	1250	1250	-	1250
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	81	25	25	63	25	71	50	93	42	82	84	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	0	8	14	4	27	8	303	12	52	417	19

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	857	841	417	845	841	303	417	0	0	303	0	0
Stage 1	522	522	-	319	319	-	-	-	-	-	-	-
Stage 2	335	319	-	526	522	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	277	301	636	283	301	737	1142	-	-	1258	-	-
Stage 1	538	531	-	693	653	-	-	-	-	-	-	-
Stage 2	679	653	-	535	531	-	-	-	-	-	-	-
Platoon blocked, %												
Mov Cap-1 Maneuver	255	287	636	269	287	737	1142	-	-	1258	-	-
Mov Cap-2 Maneuver	372	380	-	381	385	-	-	-	-	-	-	-
Stage 1	534	509	-	688	648	-	-	-	-	-	-	-
Stage 2	646	648	-	506	509	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	12.3	0.2	0.9
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1142	-	-	435	535	1258	-
HCM Lane V/C Ratio	0.007	-	-	0.052	0.084	0.042	-
HCM Control Delay (s)	8.2	-	-	13.7	12.3	8	-
HCM Lane LOS	A	-	-	B	B	A	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.3	0.1	-





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↑			↑			↑↑	
Volume (veh/h)	0	0	0	0	0	0	0	564	0	0	690	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
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
Adj Sat Flow, veh/h/ln	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Adj Flow Rate, veh/h	0	0	0	0	0	0	0	613	0	0	750	0
Adj No. of Lanes	0	1	0	0	1	0	0	1	0	0	2	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, %	0	2	0	0	2	0	0	2	0	0	2	0
Cap, veh/h	0	2	0	0	2	0	0	1739	0	0	3303	0
Arrive On Green	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.93	0.00	0.00	0.93	0.00
Sat Flow, veh/h	0-55882		0	0-55882		0	0	1863	0	0	3725	0
Grp Volume(v), veh/h	0	0	0	0	0	0	0	613	0	0	750	0
Grp Sat Flow(s),veh/h/ln	0	1863	0	0	1863	0	0	1863	0	0	1770	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	1.6	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0	1.6	0.0
Prop In Lane	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00
Lane Grp Cap(c), veh/h	0	2	0	0	2	0	0	1739	0	0	3303	0
V/C Ratio(X)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.35	0.00	0.00	0.23	0.00
Avail Cap(c_a), veh/h	0	393	0	0	393	0	0	1739	0	0	3303	0
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	0.00	0.00	0.00	0.00	0.92	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	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	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.7	0.0
LnGrp Delay(d),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.4	0.0
LnGrp LOS								A			A	
Approach Vol, veh/h		0			0			613			750	
Approach Delay, s/veh		0.0			0.0			0.8			0.4	
Approach LOS								A			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		90.0		0.0		90.0		0.0				
Change Period (Y+Rc), s		6.0		3.0		6.0		3.0				
Max Green Setting (Gmax), s		62.0		19.0		56.0		19.0				
Max Q Clear Time (g_c+11), s		4.9		0.0		3.6		0.0				
Green Ext Time (p_c), s		20.5		0.0		20.0		0.0				
<b>Intersection Summary</b>												
HCM 2010 Ctrl Delay				0.6								
HCM 2010 LOS				A								



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕	↕		↕			↕	
Volume (veh/h)	56	339	6	16	282	181	4	5	22	0	0	0
Number	5	2	12	1	6	16	7	4	14	3	8	18
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
Adj Sat Flow, veh/h/ln	1710	1676	1710	1710	1676	1676	1710	1676	1710	0	1676	0
Adj Flow Rate, veh/h	61	368	7	17	307	197	4	5	24	0	0	0
Adj No. of Lanes	0	1	0	0	1	1	0	1	0	0	1	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, %	2	2	2	2	2	2	2	2	2	0	2	0
Cap, veh/h	191	1094	20	86	1337	1199	55	12	48	0	76	0
Arrive On Green	0.84	0.84	0.84	0.84	0.84	0.84	0.05	0.05	0.05	0.00	0.00	0.00
Sat Flow, veh/h	167	1300	24	47	1590	1425	125	271	1055	0	1676	0
Grp Volume(v), veh/h	436	0	0	324	0	197	33	0	0	0	0	0
Grp Sat Flow(s),veh/h/ln	491	0	0	1637	0	1425	1450	0	0	0	1676	0
Q Serve(g_s), s	0.0	0.0	0.0	0.0	0.0	2.1	0.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.5	0.0	0.0	3.1	0.0	2.1	1.8	0.0	0.0	0.0	0.0	0.0
Prop In Lane	0.14		0.02	0.05		1.00	0.12		0.73	0.00		0.00
Lane Grp Cap(c), veh/h	1304	0	0	1423	0	1199	116	0	0	0	76	0
V/C Ratio(X)	0.33	0.00	0.00	0.23	0.00	0.16	0.29	0.00	0.00	0.00	0.00	0.00
Avail Cap(c_a), veh/h	1304	0	0	1423	0	1199	306	0	0	0	298	0
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)	0.74	0.00	0.00	1.00	0.00	1.00	1.00	0.00	0.00	0.00	0.00	0.00
Uniform Delay (d), s/veh	1.4	0.0	0.0	1.3	0.0	1.2	37.8	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.5	0.0	0.0	0.4	0.0	0.3	1.3	0.0	0.0	0.0	0.0	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	1.4	0.0	0.8	0.8	0.0	0.0	0.0	0.0	0.0
LnGrp Delay(d),s/veh	1.9	0.0	0.0	1.6	0.0	1.5	39.1	0.0	0.0	0.0	0.0	0.0
LnGrp LOS	A			A		A	D					

Approach Vol, veh/h		436			521			33				0
Approach Delay, s/veh		1.9			1.6			39.1				0.0
Approach LOS		A			A			D				

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		72.7		8.3		72.7		8.3
Change Period (Y+Rc), s		* 4.6		* 4.6		* 4.6		* 4.6
Max Green Setting (Gmax), s		* 57		* 14		* 57		* 14
Max Q Clear Time (g_c+1), s		6.5		3.8		5.1		0.0
Green Ext Time (p_c), s		21.5		0.2		21.8		0.0

**Intersection Summary**

HCM 2010 Ctrl Delay		3.0						
HCM 2010 LOS		A						

**Notes**

\* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

**Intersection**

Int Delay, s/veh -

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

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

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

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

# MOVEMENT SUMMARY

 **Site: 2015 PM Peak - Front St. & Johnston Ave**

New Site  
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Johnston Avenue											
4u	U	1	0.0	0.126	5.8	LOS A	0.5	3.3	0.28	0.17	49.6
5	T1	27	0.0	0.126	5.8	LOS A	0.5	3.3	0.28	0.17	47.2
6	R2	73	0.5	0.126	5.8	LOS A	0.5	3.3	0.28	0.17	45.8
Approach		101	0.4	0.126	5.8	LOS A	0.5	3.3	0.28	0.17	46.2
North: Front Street											
7u	U	1	0.0	0.314	7.4	LOS A	1.5	10.7	0.16	0.06	53.2
7	L2	106	0.0	0.314	7.4	LOS A	1.5	10.7	0.16	0.06	51.7
9	R2	175	4.1	0.314	7.4	LOS A	1.5	10.7	0.16	0.06	49.7
Approach		282	2.5	0.314	7.4	LOS A	1.5	10.7	0.16	0.06	50.4
West: Johnston Avenue											
10u	U	1	0.0	0.218	6.8	LOS A	0.9	6.3	0.28	0.17	52.5
10	L2	124	3.7	0.218	6.8	LOS A	0.9	6.3	0.28	0.17	51.0
11	T1	52	0.0	0.218	6.8	LOS A	0.9	6.3	0.28	0.17	50.6
Approach		177	2.6	0.218	6.8	LOS A	0.9	6.3	0.28	0.17	50.9
All Vehicles		560	2.2	0.314	6.9	LOS A	1.5	10.7	0.22	0.12	49.8

Level of Service (LOS) Method: Delay (HCM 2000).

Roundabout LOS Method: SIDRA Roundabout LOS.

Vehicle movement LOS values are based on average delay per movement

Intersection and Approach LOS values are based on average delay for all vehicle movements.

Roundabout Capacity Model: US HCM 2010.

HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Gap-Acceptance Capacity: Traditional M1.

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

## Appendix B Cont.

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### SimTraffic Arterial Reports - Existing 2015 AM and PM Peak Conditions

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Arterial Level of Service: NB Hwy 97

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Basalt Road	27	0.5	14.6	0.3	79
Gook Road	26	1.5	32.4	0.8	84
	84	1.1	20.8	0.4	77
	83	0.1	3.3	0.1	77
Maple Avenue	25	9.1	26.3	0.4	54
Balsam Avenue	24	3.5	18.8	0.3	64
Cedar Avenue	23	5.7	26.2	0.5	64
Juniper Road Hwy 97	21	3.3	22.2	0.4	68
Quesnel Hydraulic Ro	20	1.5	22.1	0.5	76
Racing Road	19	1.4	21.4	0.5	76
	76	0.7	17.9	0.4	77
	31	1.1	30.6	0.7	77
	104	1.0	21.2	0.4	76
	100	1.2	17.7	0.4	74
	99	0.3	5.2	0.1	74
	34	1.2	8.3	0.2	68
	35	3.3	42.6	0.7	56
	39	2.7	30.9	0.4	46
Hwy 97	16	9.2	33.6	0.4	46
Kinchant Street	12	16.6	39.3	0.3	24
McLean Street	11	2.9	9.8	0.1	35
Hwy 97	8	7.6	23.5	0.2	32
St. Laurent Avenue	7	10.7	38.2	0.4	35
	29	3.6	14.6	0.2	39
Shepherd Ave	6	0.7	2.5	0.0	36
McNaughton Avenue	5	1.8	14.8	0.2	44
	28	0.2	1.6	0.0	44
	44	1.1	15.8	0.2	46
	63	2.9	35.2	0.5	46
	59	1.4	26.9	0.5	64
Rome Avenue	4	3.6	30.8	0.6	70
Brownmiller Rd	3	3.9	60.6	1.1	68
	54	1.1	35.7	0.5	48
	53	0.3	8.2	0.1	48
Finning Rd	2	3.4	12.5	0.2	50
Hwy 26 (Barkerville)	1	2.4	41.9	0.8	70
Total		112.7	828.5	13.4	59

Arterial Level of Service: SB Hwy 97

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
	1	0.6	18.3	0.3	68
Quesnel-Hixon Rd	2	3.3	43.6	0.8	68
	53	0.7	13.2	0.2	47
	54	0.1	8.1	0.1	49
Pinecrest Rod	3	0.7	25.3	0.5	68
Rome Avenue	4	3.9	59.0	1.1	70
	59	1.8	44.6	0.6	48
	63	1.4	35.7	0.5	48
	44	1.5	33.9	0.5	48
	28	0.7	14.7	0.2	50
McNaughton Avenue	5	0.1	1.5	0.0	48
Shepherd Ave	6	0.7	13.6	0.2	48
	29	0.1	1.9	0.0	46
St. Laurent Avenue	7	2.3	13.3	0.2	42
Hwy 97	8	4.6	32.5	0.4	41
McLean Street	11	1.7	17.6	0.2	42
Davie Street	12	26.9	33.6	0.1	10
Hwy 97 (Moffat Bridg	16	18.2	38.3	0.3	25
	39	1.6	31.7	0.4	44
	35	1.5	30.0	0.4	47
	34	2.8	42.3	0.7	56
	99	0.5	10.0	0.2	57
	100	0.3	6.0	0.1	65
	104	0.6	17.3	0.4	76
	31	0.9	21.2	0.4	76
	76	1.5	31.1	0.7	76
Dragon Hill Road	19	0.9	13.7	0.4	101
Dragon Hill Road	20	1.1	21.4	0.5	76
Juniper Road Hwy 97	21	1.0	21.9	0.5	76
Cedar Avenue	23	3.6	21.9	0.4	69
Balsam Avenue	24	2.0	22.5	0.5	75
Maple Avenue	25	6.3	21.3	0.3	57
	83	3.4	21.4	0.4	67
	84	0.1	3.3	0.1	76
Gook Road	26	1.1	19.4	0.4	82
Basalt Road	27	2.6	35.3	0.8	77
Total		101.1	840.6	13.5	58



Arterial Level of Service: NB Hwy 97

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
Basalt Road	27	0.6	14.7	0.3	78
Gook Road	26	1.9	34.8	0.8	78
	84	1.2	21.1	0.4	75
	83	0.1	3.3	0.1	76
Maple Avenue	25	13.9	31.5	0.4	45
Balsam Avenue	24	4.5	19.4	0.3	62
Cedar Avenue	23	7.6	28.3	0.5	59
Juniper Road Hwy 97	21	3.9	22.8	0.4	66
Quesnel Hydraulic Ro	20	2.0	22.9	0.5	73
Racing Road	19	1.5	22.0	0.5	74
	76	0.7	18.0	0.4	76
	31	1.2	30.9	0.7	77
	104	1.1	21.4	0.4	75
	100	1.4	18.0	0.4	73
	99	0.4	5.3	0.1	73
	34	1.2	8.4	0.2	68
	35	3.3	42.8	0.7	55
	39	2.7	30.9	0.4	46
Hwy 97	16	7.6	32.6	0.4	48
Kinchant Street	12	17.0	39.3	0.3	24
McLean Street	11	3.2	10.3	0.1	34
Reid Street	30	3.9	11.7	0.1	33
Hwy 97	8	3.6	11.7	0.1	31
St. Laurent Avenue	7	12.3	41.2	0.4	32
	29	2.8	14.1	0.2	40
Shepherd Ave	6	0.5	2.2	0.0	40
McNaughton Avenue	5	1.8	14.5	0.2	45
	28	0.2	1.6	0.0	45
	44	1.1	15.9	0.2	46
	63	2.9	35.4	0.5	46
	59	1.4	26.9	0.5	64
Rome Avenue	4	4.6	33.8	0.6	63
Brownmiller Rd	3	5.0	62.6	1.1	66
	54	1.6	36.3	0.5	48
	53	0.4	8.3	0.1	47
Finning Rd	2	3.7	12.5	0.2	50
Hwy 26 (Barkerville	1	2.8	44.2	0.8	67
Total		125.8	851.8	13.4	57

Arterial Level of Service: SB Hwy 97

Cross Street	Node	Delay (s/veh)	Travel time (s)	Dist (km)	Arterial Speed
	1	0.5	18.0	0.3	70
Quesnel-Hixon Rd	2	4.6	43.0	0.8	68
	53	1.0	13.5	0.2	46
	54	0.1	8.1	0.1	49
Pinecrest Rod	3	0.8	25.3	0.5	68
Rome Avenue	4	4.7	58.8	1.1	70
	59	2.2	44.8	0.6	48
	63	1.8	36.2	0.5	48
	44	1.9	34.3	0.5	47
	28	1.0	14.5	0.2	51
McNaughton Avenue	5	0.1	1.5	0.0	47
Shepherd Ave	6	1.4	13.9	0.2	47
	29	0.2	2.1	0.0	43
St. Laurent Avenue	7	4.5	15.4	0.2	37
Hwy 97	8	9.2	37.3	0.4	35
Reid Street	30	3.9	12.9	0.1	28
McLean Street	11	3.6	11.0	0.1	35
Davie Street	12	9.9	16.6	0.1	21
Hwy 97 (Moffat Bridg	16	37.7	57.8	0.3	17
	39	2.5	32.7	0.4	43
	35	2.8	31.1	0.4	45
	34	4.6	44.3	0.7	54
	99	0.6	10.1	0.2	56
	100	0.4	6.1	0.1	64
	104	1.0	17.6	0.4	75
	31	1.4	21.7	0.4	74
	76	2.2	31.9	0.7	74
Dragon Hill Road	19	2.9	16.0	0.4	88
Dragon Hill Road	20	3.3	23.5	0.5	69
Juniper Road Hwy 97	21	1.4	22.4	0.5	75
Cedar Avenue	23	5.4	23.8	0.4	63
Balsam Avenue	24	4.2	25.2	0.5	67
Maple Avenue	25	12.1	27.1	0.3	45
	83	7.0	24.9	0.4	57
	84	0.2	3.4	0.1	74
Gook Road	26	2.5	22.3	0.4	71
Basalt Road	27	3.7	37.1	0.8	73
Total		147.4	886.4	13.5	55

## Appendix C

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### Collision Data Charts for Key Intersections

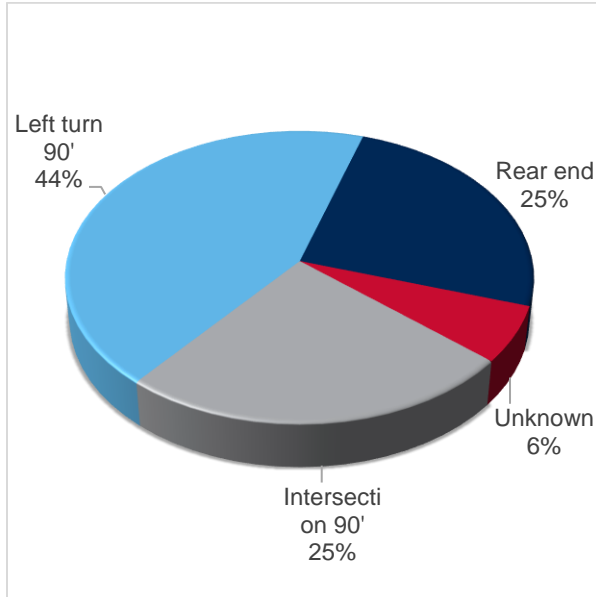
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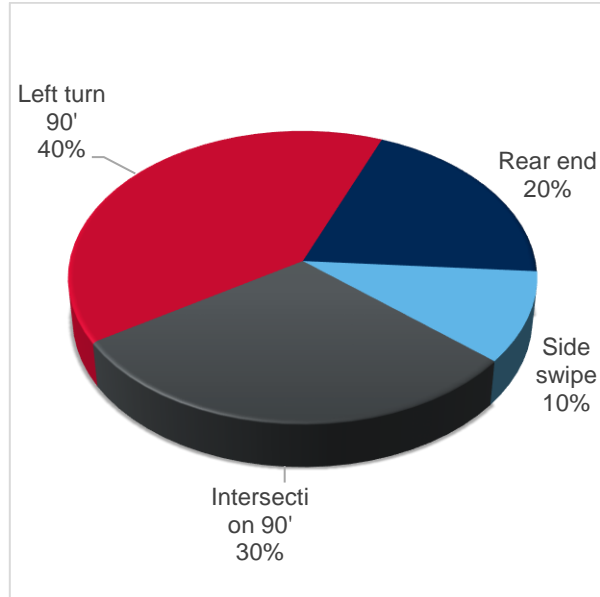
# Collision Configuration Charts for Key Intersections

(Intersections where Collision Rates and/or CSI are above Provincial Averages)

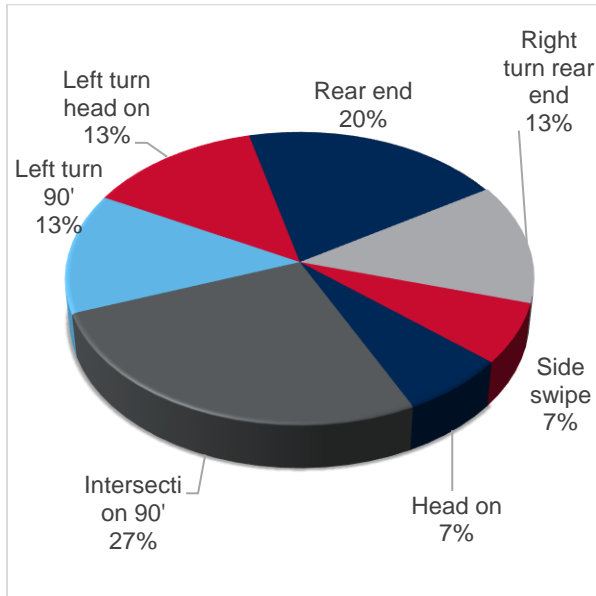
**Highway 97 / Cedar Avenue**



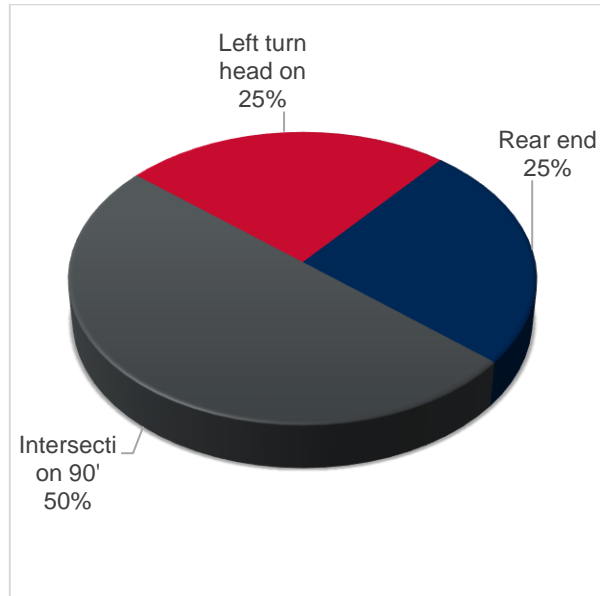
**Highway 97 Davie Street (Kinchant Street)**



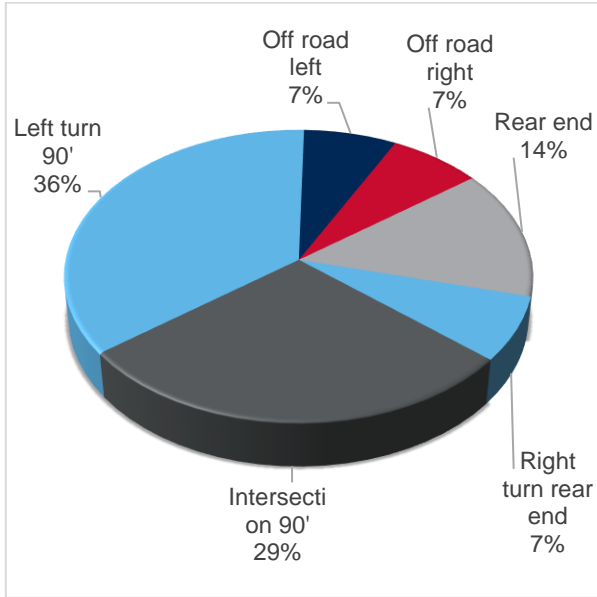
**Highway 97 / Front Street**



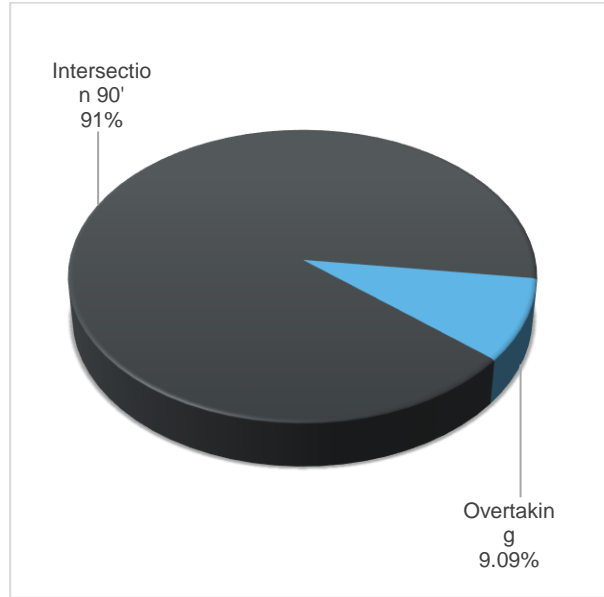
**Highway 97 / Highway 26**



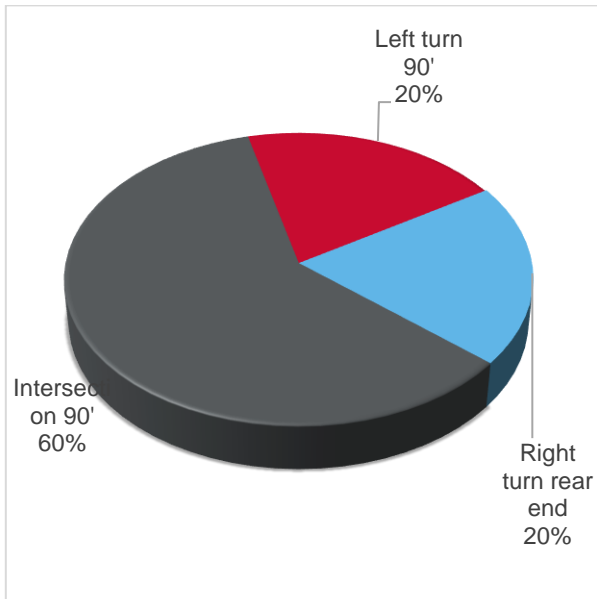
**Highway 97 / Maple Drive**



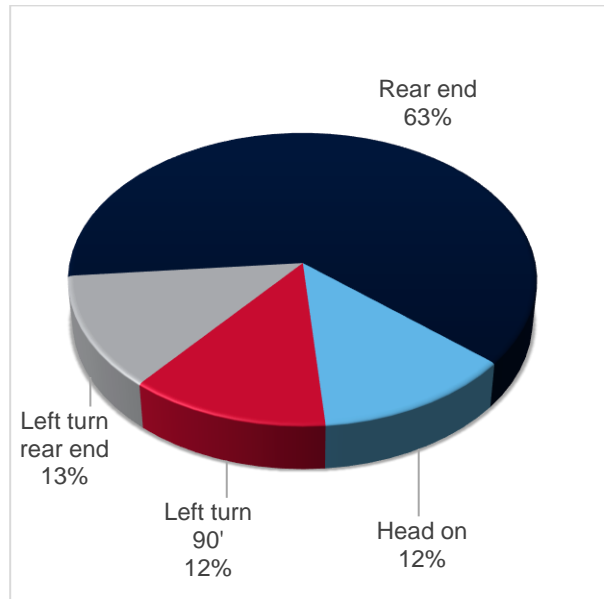
**Highway 97 . McLean Street**



**Highway 97 / Racing Road**



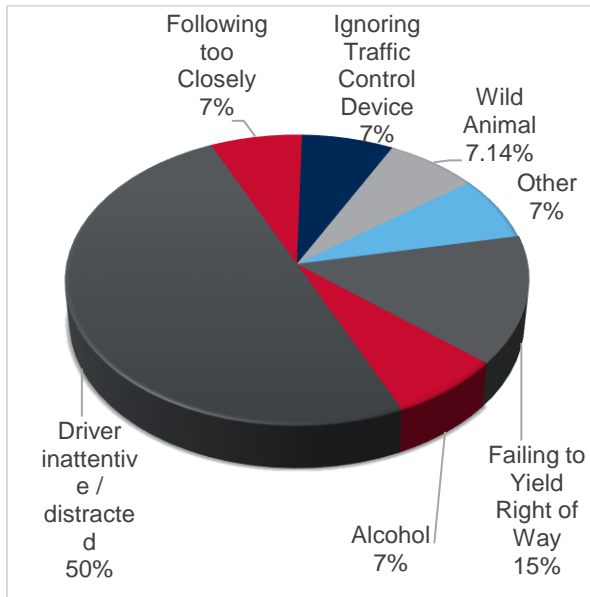
**Highway 97 / St. Laurent Avenue**



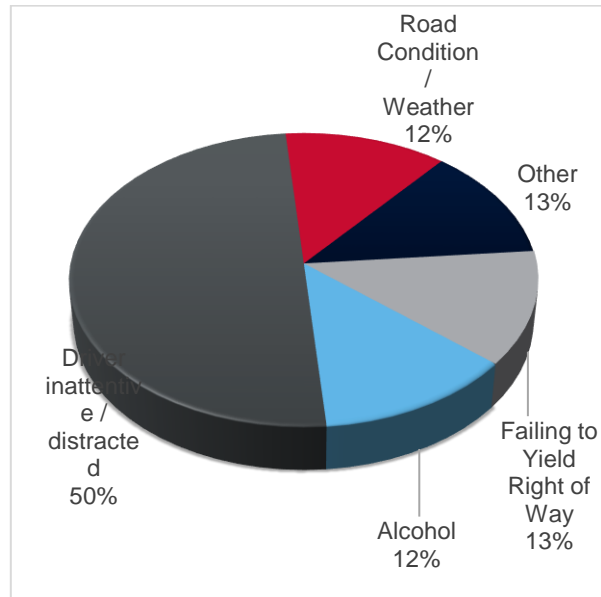
# Collision Primary Contributing Factors for Key Intersections

(Intersections where Collision Rates and/or CSI are above Provincial Averages)

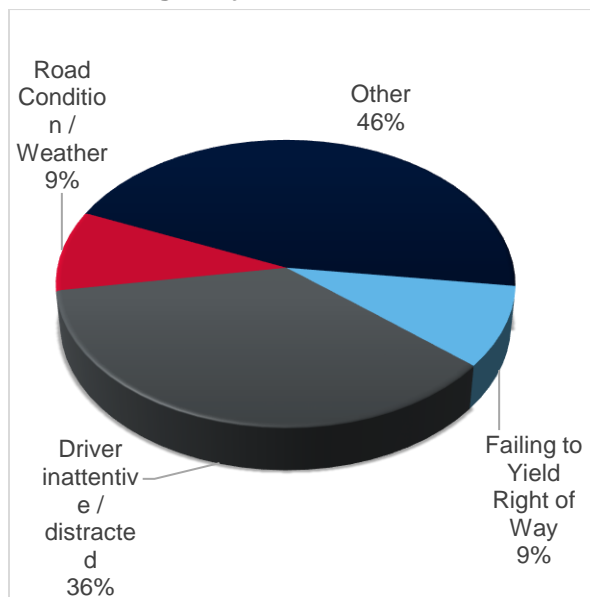
**Highway 97 / Cedar Avenue**



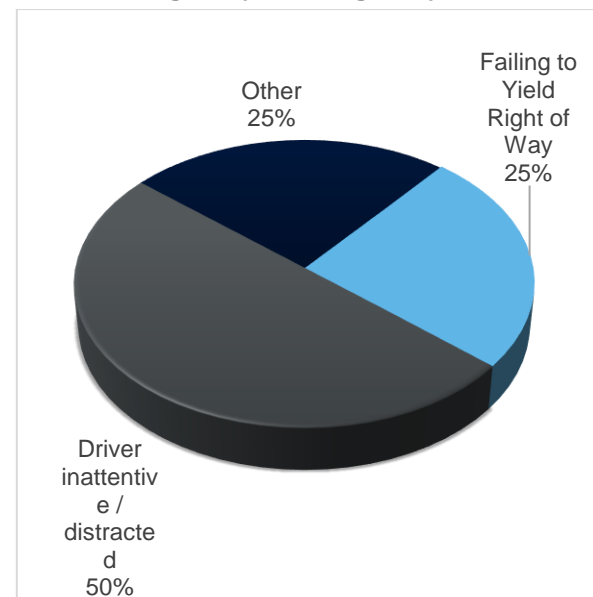
**Highway 97 Davie Street (Kinchant Street)**



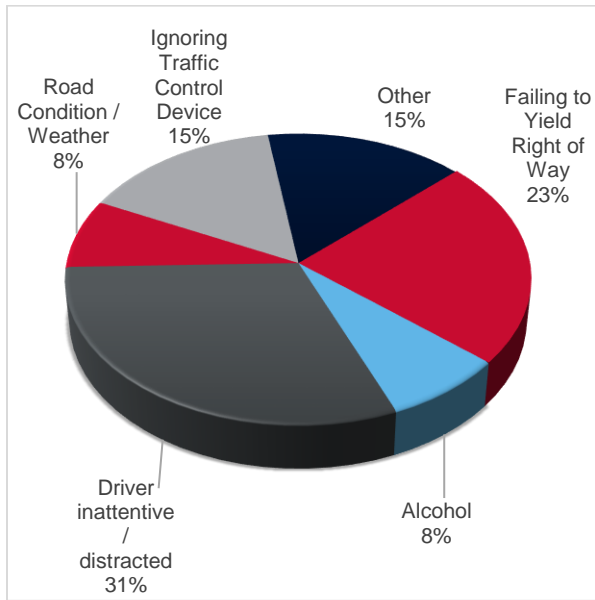
**Highway 97 / Front Street**



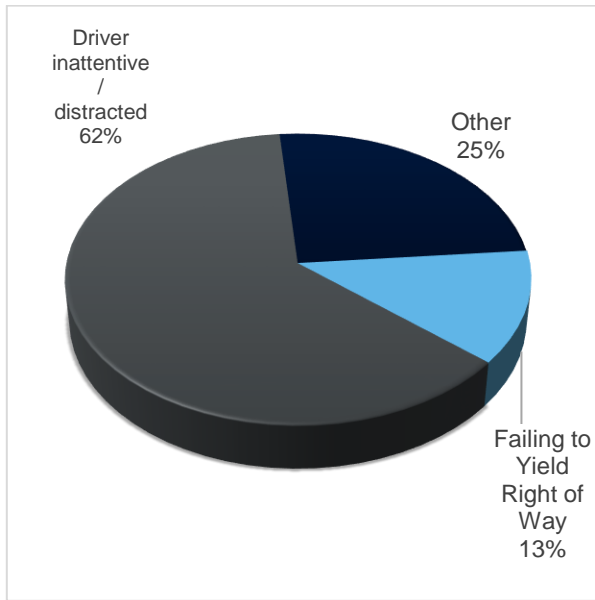
**Highway 97 / Highway 26**



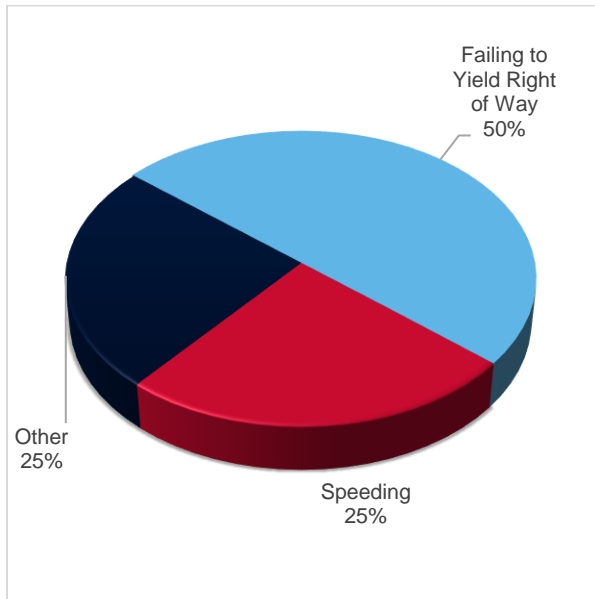
**Highway 97 / Maple Drive**



**Highway 97 . McLean Street**



**Highway 97 / Racing Road**



**Highway 97 / St. Laurent Avenue**

