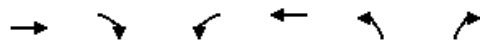


# ANEXO 12

## MEMÓRIA DE CÁLCULO DA SIMULAÇÃO DO CENÁRIO 01



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↻			↻	↻	
Volume (veh/h)	242	4	7	476	5	17
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	263	4	8	517	5	18
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume			267		798	265
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			267		798	265
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			99		98	98
cM capacity (veh/h)			1296		353	773
<b>Direction, Lane #</b>						
	EB 1	WB 1	NB 1			
Volume Total	267	525	24			
Volume Left	0	8	5			
Volume Right	4	0	18			
cSH	1700	1296	609			
Volume to Capacity	0.16	0.01	0.04			
Queue Length 95th (m)	0.0	0.1	1.0			
Control Delay (s)	0.0	0.2	11.2			
Lane LOS		A	B			
Approach Delay (s)	0.0	0.2	11.2			
Approach LOS			B			
<b>Intersection Summary</b>						
Average Delay			0.4			
Intersection Capacity Utilization			40.6%	ICU Level of Service		A
Analysis Period (min)			15			

**Intersection**

Intersection Delay (sec/veh): 0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	242	4	7	476	5	17
Conflicting Peds.(#/hr)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Right Turn Channelized	None	None	None	None	None	None
Storage Length		0.0	0.0		0.0	0.0
Median Width	0.0			0.0	3.6	
Grade (%)	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles(%)	2	2	2	2	2	2
Movement Flow Rate	263	4	8	517	5	18
Number of Lanes	1	0	0	1	1	0

Major/Minor	Major 1		Major 2			
Conflicting Flow Rate - All	0	0	267	0	798	265
Stage 1	-	-	-	-	265	-
Stage 2	-	-	-	-	533	-
Follow-up Headway	-	-	2.218	-	3.518	3.318
Pot Capacity-1 Maneuver	-	-	1297	-	355	774
Stage 1	-	-	-	-	779	-
Stage 2	-	-	-	-	588	-
Time blocked-Platoon(%)	-	-	0	-	0	0
Mov Capacity-1 Maneuver	-	-	1297	-	352	774
Mov Capacity-2 Maneuver	-	-	-	-	352	-
Stage 1	-	-	-	-	779	-
Stage 2	-	-	-	-	583	-

Approach	EB	WB	NB
HCM Control Delay (s)	0	0.1	11.2
HCM LOS	A	A	B

Lane	NBLn1	EBT	EBR	WBL	WBT
Capacity (vph)	608				
HCM Control Delay (s)	11.2	-	-	7.792	-
HCM Lane VC Ratio	0.039	-	-	0.006	-
HCM Lane LOS	B	-	-	A	-
HCM 95th Percentile Queue (veh)	0.123	-	-	0.018	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↕			↕	
Volume (vph)	43	2	22	7	0	2	24	257	10	15	337	34
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Queue, 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 Rate	1863	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863
Lanes	0	1	0	0	1	0	0	2	0	0	2	0
Capacity, veh/h	593	54	244	160	0	0	151	1223	46	114	1231	121
Arriving On Green	0.40	0.40	0.40	0.40	0.00	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1190.9	28.5	609.3	0.0	0.0	0.0	264.5	2866.0	116.0	132.8	2983.9	302.0
Grp Volume(v), veh/h	72.8	0.0	0.0	9.8	0.0	0.0	159.4	0.0	156.9	218.6	0.0	200.9
Grp Sat Flow(s),veh/h/ln	1855.6	0.0	0.0	0.0	0.0	0.0	1615.8	0.0	1674.6	1780.6	0.0	1641.8
Q Serve(g_s), s	0.0	0.0	0.0	15.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	3.3
Cycle Q Clear(g_c), s	1.0	0.0	0.0	16.0	0.0	0.0	2.2	0.0	2.5	3.2	0.0	3.3
Proportion In Lane	0.642		0.328	0.778		0.222	0.164		0.069	0.075		0.184
Lane Grp Cap(c), veh/h	890.0	0.0	0.0	160.0	0.0	0.0	751.1	0.0	669.9	808.9	0.0	656.7
V/C Ratio(X)	0.082	0.000	0.000	0.061	0.000	0.000	0.212	0.000	0.234	0.270	0.000	0.306
Avail Cap(c_a), veh/h	890.0	0.0	0.0	160.0	0.0	0.0	751.1	0.0	669.9	808.9	0.0	656.7
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)	1.000	0.000	0.000	1.000	0.000	0.000	1.000	0.000	1.000	1.000	0.000	1.000
Uniform Delay (d), s/veh	7.5	0.0	0.0	15.2	0.0	0.0	7.9	0.0	7.9	8.2	0.0	8.2
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.7	0.0	0.0	0.6	0.0	0.8	0.8	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Group Delay (d), s/veh	7.7	0.0	0.0	15.9	0.0	0.0	8.5	0.0	8.8	9.0	0.0	9.4
Lane Group LOS	A			B			A		A	A		A
Approach Volume, veh/h		73			10			316			420	
Approach Delay, s/veh		7.7			15.9			8.6			9.2	
Approach LOS		A			B			A			A	
<b>Timer</b>												
Assigned Phase		4			8			2			6	
Phase Duration (G+Y+Rc), s		20.00			20.00			20.00			20.00	
Change Period (Y+Rc), s		4.00			4.00			4.00			4.00	
Max Green Setting (Gmax), s		16.00			16.00			16.00			16.00	
Max Q Clear Time (g_c+l1), s		3.04			18.00			4.48			5.35	
Green Extension Time (p_c)		0.60			0.00			7.43			6.97	
<b>Intersection Summary</b>												
HCM 2010 Control Delay				8.9								
HCM 2010 Level of Service				A								

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↗	↘		↗	↘	
Volume (vph)	1	0	0	4	3	1	18	267	22	29	398	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Queue, 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 Rate	1863	0	0	1863	1863	1863	1863	1863	1863	1863	1863	0
Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Capacity, veh/h	120	0	0	307	216	62	118	764	63	148	869	0
Arriving On Green	0.27	0.00	0.00	0.27	0.27	0.27	0.07	0.45	0.45	0.08	0.47	0.00
Sat Flow, veh/h	0.0	0.0	0.0	928.9	408.4	232.2	1774.0	1698.1	139.9	1774.0	1862.7	0.0
Grp Volume(v), veh/h	1.1	0.0	0.0	8.7	0.0	0.0	19.6	0.0	314.1	31.5	432.6	0.0
Grp Sat Flow(s),veh/h/ln	0.0	0.0	0.0	1857.7	0.0	0.0	1774.0	0.0	1838.1	1774.0	1862.7	0.0
Q Serve(g_s), s	15.8	0.0	0.0	0.0	0.0	0.0	0.6	0.0	6.8	1.0	9.7	0.0
Cycle Q Clear(g_c), s	16.0	0.0	0.0	0.2	0.0	0.0	0.6	0.0	6.8	1.0	9.7	0.0
Proportion In Lane	1.000		0.000	0.500		0.125	1.000		0.076	1.000		0.000
Lane Grp Cap(c), veh/h	120.0	0.0	0.0	585.4	0.0	0.0	118.3	0.0	827.1	147.8	869.3	0.0
V/C Ratio(X)	0.009	0.000	0.000	0.015	0.000	0.000	0.165	0.000	0.380	0.213	0.498	0.000
Avail Cap(c_a), veh/h	120.0	0.0	0.0	585.4	0.0	0.0	118.3	0.0	827.1	147.8	869.3	0.0
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(l)	1.000	0.000	0.000	1.000	0.000	0.000	1.000	0.000	1.000	1.000	1.000	0.000
Uniform Delay (d), s/veh	30.0	0.0	0.0	16.2	0.0	0.0	26.4	0.0	10.9	25.7	11.1	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.0	0.0	0.0	3.0	0.0	1.3	3.3	2.0	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
Lane Group Delay (d), s/veh	30.1	0.0	0.0	16.3	0.0	0.0	29.4	0.0	12.3	28.9	13.1	0.0
Lane Group LOS	C			B			C		B	C	B	
Approach Volume, veh/h		1			9			334			464	
Approach Delay, s/veh		30.1			16.3			13.3			14.2	
Approach LOS		C			B			B			B	
<b>Timer</b>												
Assigned Phase		4			8		5	2		1		6
Phase Duration (G+Y+Rc), s		20.00			20.00		8.00	31.00		9.00		32.00
Change Period (Y+Rc), s		4.00			4.00		4.00	4.00		4.00		4.00
Max Green Setting (Gmax), s		16.00			16.00		4.00	27.00		5.00		28.00
Max Q Clear Time (g_c+l1), s		18.00			2.21		2.62	8.80		2.99		11.68
Green Extension Time (p_c)		0.00			0.02		0.01	11.05		0.02		10.18
<b>Intersection Summary</b>												
HCM 2010 Control Delay				13.9								
HCM 2010 Level of Service				B								

	↙	↖	↑	↗	↘	↓
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘		↗			↖
Volume (veh/h)	11	3	2	1	0	8
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	12	3	2	1	0	9
Pedestrians						
Lane Width (m)						
Walking Speed (m/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (m)						
pX, platoon unblocked						
vC, conflicting volume	11	3			3	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	11	3			3	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	1008	1081			1619	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	15	3	9			
Volume Left	12	0	0			
Volume Right	3	1	0			
cSH	1023	1700	1619			
Volume to Capacity	0.01	0.00	0.00			
Queue Length 95th (m)	0.4	0.0	0.0			
Control Delay (s)	8.6	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	8.6	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			4.8			
Intersection Capacity Utilization		13.3%		ICU Level of Service		A
Analysis Period (min)			15			

**Intersection**

Intersection Delay (sec/veh): 4.8

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Volume (vph)	11	3	2	1	0	8
Conflicting Peds.(#/hr)	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None
Storage Length	0.0	0.0		0.0	0.0	
Median Width	3.6		0.0			0.0
Grade (%)	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles(%)	2	2	2	2	2	2
Movement Flow Rate	12	3	2	1	0	9
Number of Lanes	1	0	1	0	0	1

Major/Minor	Major 1		Major 2			
Conflicting Flow Rate - All	12	3	0	0	-	0
Stage 1	3	-	-	-	-	-
Stage 2	9	-	-	-	-	-
Follow-up Headway	3.518	3.318	-	-	0	-
Pot Capacity-1 Maneuver	1008	1081	-	-	0	-
Stage 1	1020	-	-	-	0	-
Stage 2	1014	-	-	-	0	-
Time blocked-Platoon(%)	0	0	-	-	0	-
Mov Capacity-1 Maneuver	1008	1081	-	-	-	-
Mov Capacity-2 Maneuver	1008	-	-	-	-	-
Stage 1	1020	-	-	-	-	-
Stage 2	1014	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay (s)	8.6	0	0
HCM LOS	A	A	A

Lane	NBT	NBR	WBLn1	SBT
Capacity (vph)			1023	
HCM Control Delay (s)	-	-	8.6	-
HCM Lane VC Ratio	-	-	0.015	-
HCM Lane LOS	-	-	A	-
HCM 95th Percentile Queue (veh)	-	-	0.045	-

HCM Unsignalized Intersection Capacity Analysis  
400: Av. Meaípe/Rod. Paulo Borges & Av. Norte Sul

Hora pico: Manhã  
22/09/2024

<b>Movement</b>	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations		↔			↔			↔			↔		
Volume (veh/h)	18	2	5	2	0	3	6	283	1	0	377	17	
Sign Control		Stop			Stop			Free			Free		
Grade		0%			0%			0%			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	
Hourly flow rate (vph)	20	2	5	2	0	3	7	308	1	0	410	18	
<b>Pedestrians</b>													
Lane Width (m)													
Walking Speed (m/s)													
Percent Blockage													
Right turn flare (veh)													
Median type							None						
Median storage veh													
Upstream signal (m)							365						
pX, platoon unblocked													
vC, conflicting volume	743	741	419	747	749	308	428					309	
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	743	741	419	747	749	308	428					309	
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1					4.1	
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2					2.2	
p0 queue free %	94	99	99	99	100	100	99					100	
cM capacity (veh/h)	328	342	634	323	338	732	1131					1252	
<b>Direction, Lane #</b>	EB 1	WB 1	NB 1	SB 1									
Volume Total	27	5	315	428									
Volume Left	20	2	7	0									
Volume Right	5	3	1	18									
cSH	364	486	1131	1700									
Volume to Capacity	0.07	0.01	0.01	0.25									
Queue Length 95th (m)	1.9	0.3	0.1	0.0									
Control Delay (s)	15.7	12.5	0.2	0.0									
Lane LOS	C	B	A										
Approach Delay (s)	15.7	12.5	0.2	0.0									
Approach LOS	C	B											
<b>Intersection Summary</b>													
Average Delay			0.7										
Intersection Capacity Utilization			30.9%	ICU Level of Service								A	
Analysis Period (min)			15										



**Intersection**

Intersection Delay (sec/veh): 0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	18	2	5	2	0	3	6	283	1	0	377	17
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
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Median Width		0.0			0.0			0.0			0.0	
Grade (%)		0%			0%			0%			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
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	20	2	5	2	0	3	7	308	1	0	410	18
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Major/Minor	Minor 2			Minor 1			Major 1			Major 2		
Conflicting Flow Rate - All	743	742	419	746	751	309	428	0	0	309	0	0
Stage 1	419	419	-	323	323	-	-	-	-	-	-	-
Stage 2	324	323	-	423	428	-	-	-	-	-	-	-
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Capacity-1 Maneuver	331	344	634	330	340	731	1131	-	-	1252	-	-
Stage 1	612	590	-	689	651	-	-	-	-	-	-	-
Stage 2	688	650	-	609	585	-	-	-	-	-	-	-
Time blocked-Platoon(%)	0	0	0	0	0	0	0	-	-	0	-	-
Mov Capacity-1 Maneuver	328	342	634	324	338	731	1131	-	-	1252	-	-
Mov Capacity-2 Maneuver	328	342	-	324	338	-	-	-	-	-	-	-
Stage 1	608	590	-	684	646	-	-	-	-	-	-	-
Stage 2	680	645	-	602	585	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	15.7	12.5	0.2	0
HCM LOS	C	B	A	A

Lane	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (vph)				364	487			
HCM Control Delay (s)	8.201	0	-	15.7	12.5	0	-	-
HCM Lane VC Ratio	0.006	-	-	0.075	0.011	-	-	-
HCM Lane LOS	A	A	-	C	B	A	-	-
HCM 95th Percentile Queue (veh)	0.017	-	-	0.241	0.034	0	-	-

**Intersection**

Intersection Delay (sec/veh): 1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	447	14	19	327	16	34
Conflicting Peds.(#/hr)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Right Turn Channelized	None	None	None	None	None	None
Storage Length		0.0	0.0		0.0	0.0
Median Width	0.0			0.0	3.6	
Grade (%)	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles(%)	2	2	2	2	2	2
Movement Flow Rate	486	15	21	355	17	37
Number of Lanes	1	0	0	1	1	0

Major/Minor	Major 1		Major 2			
Conflicting Flow Rate - All	0	0	501	0	891	494
Stage 1	-	-	-	-	494	-
Stage 2	-	-	-	-	397	-
Follow-up Headway	-	-	2.218	-	3.518	3.318
Pot Capacity-1 Maneuver	-	-	1063	-	313	575
Stage 1	-	-	-	-	613	-
Stage 2	-	-	-	-	679	-
Time blocked-Platoon(%)	-	-	0	-	0	0
Mov Capacity-1 Maneuver	-	-	1063	-	305	575
Mov Capacity-2 Maneuver	-	-	-	-	305	-
Stage 1	-	-	-	-	613	-
Stage 2	-	-	-	-	662	-

Approach	EB	WB	NB
HCM Control Delay (s)	0	0.5	14.1
HCM LOS	A	A	B

Lane	NBLn1	EBT	EBR	WBL	WBT
Capacity (vph)	448				
HCM Control Delay (s)	14.1	-	-	8.454	-
HCM Lane VC Ratio	0.121	-	-	0.019	-
HCM Lane LOS	B	-	-	A	-
HCM 95th Percentile Queue (veh)	0.411	-	-	0.059	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Volume (vph)	59	4	29	15	0	35	39	422	14	21	268	42
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Queue, 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 Rate	1863	1863	1863	1863	0	1863	1863	1863	1863	1863	1863	1863
Lanes	0	1	0	0	1	0	0	2	0	0	2	0
Capacity, veh/h	592	64	234	117	0	0	154	1231	39	131	1124	169
Arriving On Green	0.40	0.40	0.40	0.40	0.00	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1190.2	40.7	585.0	0.0	0.0	0.0	267.5	2907.0	98.3	208.1	2584.9	423.3
Grp Volume(v), veh/h	100.0	0.0	0.0	54.3	0.0	0.0	256.6	0.0	259.7	185.0	0.0	174.7
Grp Sat Flow(s),veh/h/ln	1855.9	0.0	0.0	0.0	0.0	0.0	1619.1	0.0	1677.7	1687.1	0.0	1620.4
Q Serve(g_s), s	0.0	0.0	0.0	11.6	0.0	0.0	0.0	0.0	4.4	0.0	0.0	2.9
Cycle Q Clear(g_c), s	1.4	0.0	0.0	16.0	0.0	0.0	3.8	0.0	4.4	2.6	0.0	2.9
Proportion In Lane	0.641		0.315	0.300		0.700	0.165		0.059	0.123		0.261
Lane Grp Cap(c), veh/h	890.1	0.0	0.0	117.0	0.0	0.0	752.5	0.0	671.1	775.9	0.0	648.2
V/C Ratio(X)	0.112	0.000	0.000	0.465	0.000	0.000	0.341	0.000	0.387	0.238	0.000	0.270
Avail Cap(c_a), veh/h	890.1	0.0	0.0	117.0	0.0	0.0	752.5	0.0	671.1	775.9	0.0	648.2
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)	1.000	0.000	0.000	1.000	0.000	0.000	1.000	0.000	1.000	1.000	0.000	1.000
Uniform Delay (d), s/veh	7.6	0.0	0.0	15.9	0.0	0.0	8.4	0.0	8.5	8.0	0.0	8.1
Incr Delay (d2), s/veh	0.3	0.0	0.0	12.7	0.0	0.0	1.2	0.0	1.7	0.7	0.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane Group Delay (d), s/veh	7.9	0.0	0.0	28.6	0.0	0.0	9.6	0.0	10.2	8.7	0.0	9.1
Lane Group LOS	A			C			A		B	A		A
Approach Volume, veh/h		100			54			516			360	
Approach Delay, s/veh		7.9			28.6			9.9			8.9	
Approach LOS		A			C			A			A	
<b>Timer</b>												
Assigned Phase		4			8			2			6	
Phase Duration (G+Y+Rc), s		20.00			20.00			20.00			20.00	
Change Period (Y+Rc), s		4.00			4.00			4.00			4.00	
Max Green Setting (Gmax), s		16.00			16.00			16.00			16.00	
Max Q Clear Time (g_c+l1), s		3.42			18.00			6.39			4.90	
Green Extension Time (p_c)		0.82			0.00			7.18			8.14	
<b>Intersection Summary</b>												
HCM 2010 Control Delay				10.3								
HCM 2010 Level of Service				B								

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↗	↘		↗	↘	
Volume (vph)	1	0	0	11	5	4	34	490	6	13	288	0
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Queue, 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 Rate	1863	0	0	1863	1863	1863	1863	1863	1863	1863	1863	0
Lanes	0	1	0	0	1	0	1	1	0	1	1	0
Capacity, veh/h	120	0	0	338	151	99	118	826	10	148	869	0
Arriving On Green	0.27	0.00	0.00	0.27	0.27	0.27	0.07	0.45	0.45	0.08	0.47	0.00
Sat Flow, veh/h	0.0	0.0	0.0	1020.9	259.8	371.3	1774.0	1836.3	22.5	1774.0	1862.7	0.0
Grp Volume(v), veh/h	1.1	0.0	0.0	21.7	0.0	0.0	37.0	0.0	539.1	14.1	313.0	0.0
Grp Sat Flow(s),veh/h/ln	0.0	0.0	0.0	1856.3	0.0	0.0	1774.0	0.0	1858.8	1774.0	1862.7	0.0
Q Serve(g_s), s	15.5	0.0	0.0	0.0	0.0	0.0	1.2	0.0	13.5	0.4	6.5	0.0
Cycle Q Clear(g_c), s	16.0	0.0	0.0	0.5	0.0	0.0	1.2	0.0	13.5	0.4	6.5	0.0
Proportion In Lane	1.000		0.000	0.550		0.200	1.000		0.012	1.000		0.000
Lane Grp Cap(c), veh/h	120.0	0.0	0.0	588.0	0.0	0.0	118.3	0.0	836.4	147.8	869.3	0.0
V/C Ratio(X)	0.009	0.000	0.000	0.037	0.000	0.000	0.312	0.000	0.645	0.096	0.360	0.000
Avail Cap(c_a), veh/h	120.0	0.0	0.0	588.0	0.0	0.0	118.3	0.0	836.4	147.8	869.3	0.0
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(l)	1.000	0.000	0.000	1.000	0.000	0.000	1.000	0.000	1.000	1.000	1.000	0.000
Uniform Delay (d), s/veh	30.0	0.0	0.0	16.3	0.0	0.0	26.7	0.0	12.8	25.4	10.3	0.0
Incr Delay (d2), s/veh	0.1	0.0	0.0	0.1	0.0	0.0	6.8	0.0	3.8	1.3	1.2	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
Lane Group Delay (d), s/veh	30.1	0.0	0.0	16.4	0.0	0.0	33.5	0.0	16.6	26.7	11.4	0.0
Lane Group LOS	C			B			C		B	C	B	
Approach Volume, veh/h		1			22			576			327	
Approach Delay, s/veh		30.1			16.4			17.7			12.1	
Approach LOS		C			B			B			B	
<b>Timer</b>												
Assigned Phase		4			8		5	2		1		6
Phase Duration (G+Y+Rc), s		20.00			20.00		8.00	31.00		9.00		32.00
Change Period (Y+Rc), s		4.00			4.00		4.00	4.00		4.00		4.00
Max Green Setting (Gmax), s		16.00			16.00		4.00	27.00		5.00		28.00
Max Q Clear Time (g_c+l1), s		18.00			2.54		3.19	15.48		2.44		8.46
Green Extension Time (p_c)		0.00			0.10		0.01	8.49		0.01		13.08
<b>Intersection Summary</b>												
HCM 2010 Control Delay				15.7								
HCM 2010 Level of Service				B								

**Intersection**

Intersection Delay (sec/veh): 3.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Volume (vph)	66	0	66	9	0	12
Conflicting Peds.(#/hr)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Right Turn Channelized	None	None	None	None	None	None
Storage Length		0.0	0.0		0.0	0.0
Median Width	0.0			0.0	3.6	
Grade (%)	0%			0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles(%)	2	2	2	2	2	2
Movement Flow Rate	72	0	72	10	0	13
Number of Lanes	1	0	0	1	1	0

Major/Minor	Major 1		Major 2			
Conflicting Flow Rate - All	0	-	72	0	226	72
Stage 1	-	-	-	-	72	-
Stage 2	-	-	-	-	154	-
Follow-up Headway	-	0	2.218	-	3.518	3.318
Pot Capacity-1 Maneuver	-	0	1528	-	762	990
Stage 1	-	0	-	-	951	-
Stage 2	-	0	-	-	874	-
Time blocked-Platoon(%)	-	0	0	-	0	0
Mov Capacity-1 Maneuver	-	-	1528	-	726	990
Mov Capacity-2 Maneuver	-	-	-	-	726	-
Stage 1	-	-	-	-	951	-
Stage 2	-	-	-	-	833	-

Approach	EB	WB	NB
HCM Control Delay (s)	0	6.6	8.7
HCM LOS	A	A	A

Lane	NBLn1	EBT	WBL	WBT
Capacity (vph)	990			
HCM Control Delay (s)	8.7	-	7.472	-
HCM Lane VC Ratio	0.013	-	0.047	-
HCM Lane LOS	A	-	A	-
HCM 95th Percentile Queue (veh)	0.04	-	0.148	-

**Intersection**

Intersection Delay (sec/veh): 1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	32	1	10	4	0	1	9	502	2	0	309	21
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0.0		0.0	0.0		0.0	0.0		0.0	0.0		0.0
Median Width		0.0			0.0			0.0			0.0	
Grade (%)		0%			0%			0%			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
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	35	1	11	4	0	1	10	546	2	0	336	23
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Major/Minor	Minor 2			Minor 1			Major 1			Major 2		
Conflicting Flow Rate - All	916	916	348	921	926	547	359	0	0	548	0	0
Stage 1	348	348	-	567	567	-	-	-	-	-	-	-
Stage 2	568	568	-	354	359	-	-	-	-	-	-	-
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Capacity-1 Maneuver	253	272	695	251	269	537	1200	-	-	1021	-	-
Stage 1	668	634	-	508	507	-	-	-	-	-	-	-
Stage 2	508	506	-	663	627	-	-	-	-	-	-	-
Time blocked-Platoon(%)	0	0	0	0	0	0	0	-	-	0	-	-
Mov Capacity-1 Maneuver	250	269	695	244	266	537	1200	-	-	1021	-	-
Mov Capacity-2 Maneuver	250	269	-	244	266	-	-	-	-	-	-	-
Stage 1	660	634	-	502	501	-	-	-	-	-	-	-
Stage 2	501	500	-	652	627	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	19.5	18.4	0.1	0
HCM LOS	C	C	A	A

Lane	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (vph)				294	274			
HCM Control Delay (s)	8.025	0	-	19.5	18.4	0	-	-
HCM Lane VC Ratio	0.008	-	-	0.159	0.02	-	-	-
HCM Lane LOS	A	A	-	C	C	A	-	-
HCM 95th Percentile Queue (veh)	0.025	-	-	0.557	0.061	0	-	-