

HCM 7th Signalized Intersection Summary

16: NC Hwy 96 E & NC 96 Bypass

06/14/2024



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	85	557	281	79	143	85
Future Volume (veh/h)	85	557	281	79	143	85
Initial Q (Qb), veh	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	94	619	312	88	159	94
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	327	1145	611	518	327	291
Arrive On Green	0.18	0.61	0.33	0.33	0.18	0.18
Sat Flow, veh/h	1781	1870	1870	1585	1781	1585
Grp Volume(v), veh/h	94	619	312	88	159	94
Grp Sat Flow(s),veh/h/ln	1781	1870	1870	1585	1781	1585
Q Serve(g_s), s	2.2	9.4	6.6	1.9	3.9	2.5
Cycle Q Clear(g_c), s	2.2	9.4	6.6	1.9	3.9	2.5
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	327	1145	611	518	327	291
V/C Ratio(X)	0.29	0.54	0.51	0.17	0.49	0.32
Avail Cap(c_a), veh/h	727	1718	763	647	727	647
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	5.5	13.3	11.8	17.9	17.4
Incr Delay (d2), s/veh	0.5	0.4	0.7	0.2	1.1	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.3	2.0	0.5	1.4	0.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d), s/veh	17.7	5.9	14.0	11.9	19.0	18.0
LnGrp LOS	B	A	B	B	B	B
Approach Vol, veh/h		713	400		253	
Approach Delay, s/veh		7.5	13.5		18.7	
Approach LOS		A	B		B	
Timer - Assigned Phs		2	3	4		8
Phs Duration (G+Y+Rc), s		14.0	14.0	21.0		35.0
Change Period (Y+Rc), s		7.0	7.0	7.0		7.0
Max Green Setting (Gmax), s		18.0	18.0	18.0		43.0
Max Q Clear Time (g_c+I1), s		5.9	4.2	8.6		11.4
Green Ext Time (p_c), s		0.6	0.1	1.2		3.7
Intersection Summary						
HCM 7th Control Delay, s/veh			11.3			
HCM 7th LOS			B			