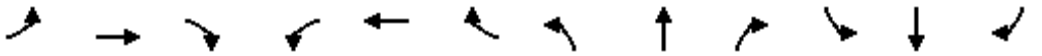
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	7	198	207	84	242	79	21	211	120	57	61	86
Future Volume (veh/h)	7	198	207	84	242	79	21	211	120	57	61	86
Number	7	4	14	3	8	18		5	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0		0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	7	206	216	88	252	82		220	125	59	51	108
Adj No. of Lanes	1	2	1	1	2	1		2	1	1	1	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2	2	2
Cap, veh/h	13	763	341	112	960	429		576	303	257	257	539
Arrive On Green	0.01	0.22	0.22	0.06	0.27	0.27		0.16	0.16	0.16	0.14	0.14
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583		3548	1863	1583	1774	3725
Grp Volume(v), veh/h	7	206	216	88	252	82		220	125	59	51	108
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583		1774	1863	1583	1774	1863
Q Serve(g_s), s	0.2	2.4	6.1	2.4	2.8	2.0		2.7	3.0	1.6	1.2	1.3
Cycle Q Clear(g_c), s	0.2	2.4	6.1	2.4	2.8	2.0		2.7	3.0	1.6	1.2	1.3
Prop In Lane	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	13	763	341	112	960	429		576	303	257	257	539
V/C Ratio(X)	0.53	0.27	0.63	0.79	0.26	0.19		0.38	0.41	0.23	0.20	0.20
Avail Cap(c_a), veh/h	180	3018	1350	306	3270	1463		2673	1403	1193	1333	2799
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.4	16.1	17.5	22.7	14.1	13.8		18.4	18.5	17.9	18.5	18.5
Incr Delay (d2), s/veh	11.8	0.2	2.3	4.5	0.2	0.3		0.6	1.3	0.6	0.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.2	2.9	1.3	1.4	0.9		1.4	1.6	0.7	0.6	0.7
LnGrp Delay(d),s/veh	36.2	16.3	19.9	27.3	14.3	14.1		19.0	19.8	18.6	19.1	18.8
LnGrp LOS	D	B	B	C	B	B		B	B	B	B	B
Approach Vol, veh/h		429			422				404			162
Approach Delay, s/veh		18.4			16.9				19.2			18.9
Approach LOS		B			B				B			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		13.3	7.6	15.9		12.4	4.9	18.7
Change Period (Y+Rc), s		5.3	4.5	5.3		5.3	4.5	5.3
Max Green Setting (Gmax), s		37.1	8.5	42.0		37.0	5.0	45.5
Max Q Clear Time (g_c+I1), s		5.0	4.4	8.1		3.3	2.2	4.8
Green Ext Time (p_c), s		2.6	0.0	2.5		1.2	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	18.3
HCM 2010 LOS	B

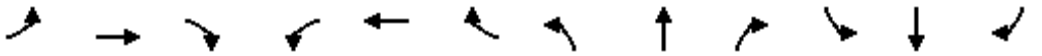
Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	9	33	75	14	23	46	439	116	28	357	12
Future Volume (veh/h)	8	9	33	75	14	23	46	439	116	28	357	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	9	34	78	15	24	48	457	121	29	372	12
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	15	34	129	108	98	158	76	979	437	50	928	414
Arrive On Green	0.01	0.10	0.10	0.06	0.15	0.15	0.04	0.28	0.28	0.03	0.26	0.26
Sat Flow, veh/h	1781	343	1295	1781	648	1036	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	8	0	43	78	0	39	48	457	121	29	372	12
Grp Sat Flow(s),veh/h/ln	1781	0	1637	1781	0	1684	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.2	0.0	0.9	1.5	0.0	0.7	0.9	3.8	2.1	0.6	3.0	0.2
Cycle Q Clear(g_c), s	0.2	0.0	0.9	1.5	0.0	0.7	0.9	3.8	2.1	0.6	3.0	0.2
Prop In Lane	1.00		0.79	1.00		0.62	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	15	0	164	108	0	256	76	979	437	50	928	414
V/C Ratio(X)	0.53	0.00	0.26	0.72	0.00	0.15	0.63	0.47	0.28	0.58	0.40	0.03
Avail Cap(c_a), veh/h	254	0	1633	381	0	1800	279	2907	1296	254	2856	1274
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.3	0.0	14.6	16.2	0.0	12.9	16.5	10.6	10.0	16.8	10.7	9.7
Incr Delay (d2), s/veh	10.0	0.0	1.0	3.4	0.0	0.3	3.2	0.4	0.4	3.9	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.3	0.6	0.0	0.2	0.4	1.0	0.6	0.2	0.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.3	0.0	15.6	19.6	0.0	13.2	19.7	11.0	10.4	20.8	11.0	9.7
LnGrp LOS	C	A	B	B	A	B	B	B	B	C	B	A
Approach Vol, veh/h		51			117			626			413	
Approach Delay, s/veh		17.5			17.5			11.5			11.7	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	15.0	6.6	8.0	6.0	14.5	4.8	9.8
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	5.0	28.7	7.5	35.0	5.5	28.2	5.0	37.5
Max Q Clear Time (g_c+I1), s	2.6	5.8	3.5	2.9	2.9	5.0	2.2	2.7
Green Ext Time (p_c), s	0.0	3.9	0.0	0.2	0.0	2.7	0.0	0.2

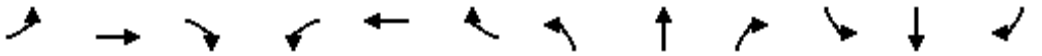
Intersection Summary	
HCM 6th Ctrl Delay	12.4
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	24	41	60	30	62	57	538	83	38	429	20
Future Volume (veh/h)	20	24	41	60	30	62	57	538	83	38	429	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	25	43	63	32	65	60	566	87	40	452	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	243	206	89	298	252	86	1070	477	64	1025	457
Arrive On Green	0.02	0.13	0.13	0.05	0.16	0.16	0.05	0.30	0.30	0.04	0.29	0.29
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	21	25	43	63	32	65	60	566	87	40	452	21
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.5	0.5	1.0	1.4	0.6	1.5	1.3	5.4	1.6	0.9	4.2	0.4
Cycle Q Clear(g_c), s	0.5	0.5	1.0	1.4	0.6	1.5	1.3	5.4	1.6	0.9	4.2	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	37	243	206	89	298	252	86	1070	477	64	1025	457
V/C Ratio(X)	0.57	0.10	0.21	0.71	0.11	0.26	0.70	0.53	0.18	0.63	0.44	0.05
Avail Cap(c_a), veh/h	237	1614	1368	285	1665	1411	285	2418	1079	277	2401	1071
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	15.6	15.8	19.0	14.6	15.0	19.0	11.8	10.5	19.3	11.8	10.4
Incr Delay (d2), s/veh	5.0	0.2	0.6	3.8	0.2	0.6	3.7	0.5	0.2	3.7	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.3	0.6	0.2	0.5	0.6	1.8	0.5	0.4	1.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	15.8	16.4	22.7	14.8	15.6	22.7	12.3	10.7	23.0	12.1	10.5
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		89			160			713			513	
Approach Delay, s/veh		18.2			18.2			13.0			12.9	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.0	17.5	6.5	10.6	6.5	17.0	5.3	11.8
Change Period (Y+Rc), s	4.5	5.3	4.5	5.3	4.5	5.3	4.5	5.3
Max Green Setting (Gmax), s	6.3	27.6	6.5	35.0	6.5	27.4	5.4	36.1
Max Q Clear Time (g_c+I1), s	2.9	7.4	3.4	3.0	3.3	6.2	2.5	3.5
Green Ext Time (p_c), s	0.0	4.8	0.0	0.3	0.0	3.3	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	13.8
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	17	60	77	46	59	187	568	62	34	398	91
Future Volume (veh/h)	26	17	60	77	46	59	187	568	62	34	398	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	18	62	80	48	61	195	592	65	35	415	95
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	46	242	205	102	302	256	245	1215	542	57	838	374
Arrive On Green	0.03	0.13	0.13	0.06	0.16	0.16	0.14	0.34	0.34	0.03	0.24	0.24
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	27	18	62	80	48	61	195	592	65	35	415	95
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.6	0.4	1.5	1.9	0.9	1.4	4.5	5.6	1.2	0.8	4.3	2.1
Cycle Q Clear(g_c), s	0.6	0.4	1.5	1.9	0.9	1.4	4.5	5.6	1.2	0.8	4.3	2.1
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	46	242	205	102	302	256	245	1215	542	57	838	374
V/C Ratio(X)	0.59	0.07	0.30	0.78	0.16	0.24	0.79	0.49	0.12	0.62	0.50	0.25
Avail Cap(c_a), veh/h	208	1705	1445	208	1705	1445	271	2667	1190	212	2551	1138
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	16.4	16.9	19.9	15.4	15.6	17.9	11.1	9.7	20.4	14.1	13.3
Incr Delay (d2), s/veh	4.5	0.2	1.0	4.9	0.3	0.6	12.2	0.4	0.1	4.0	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.6	0.9	0.4	0.5	2.3	1.7	0.4	0.4	1.5	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.1	16.5	17.9	24.8	15.7	16.2	30.1	11.5	9.8	24.5	14.7	13.7
LnGrp LOS	C	B	B	C	B	B	C	B	A	C	B	B
Approach Vol, veh/h		107			189			852			545	
Approach Delay, s/veh		19.4			19.7			15.6			15.1	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.9	19.9	7.0	10.0	10.4	15.4	5.6	11.4
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	5.1	32.1	5.0	39.0	6.5	30.7	5.0	39.0
Max Q Clear Time (g_c+I1), s	2.8	7.6	3.9	3.5	6.5	6.3	2.6	3.4
Green Ext Time (p_c), s	0.0	4.9	0.0	0.4	0.0	3.8	0.0	0.6

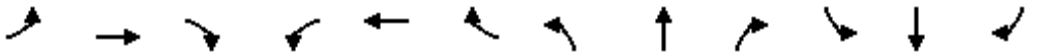
Intersection Summary	
HCM 6th Ctrl Delay	16.2
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	13.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	8	0	0	0	14	808	2	1	516	14
Future Vol, veh/h	10	0	8	0	0	0	14	808	2	1	516	14
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	8	0	0	0	14	824	2	1	527	14
Number of Lanes	0	1	0	0	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	9.5	0	15.2	11.8
HCM LOS	A	-	C	B

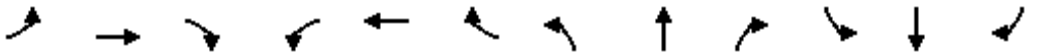
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	3%	0%	56%	0%	0%	0%
Vol Thru, %	97%	100%	0%	100%	100%	95%
Vol Right, %	0%	0%	44%	0%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	418	406	18	0	259	272
LT Vol	14	0	10	0	1	0
Through Vol	404	404	0	0	258	258
RT Vol	0	2	8	0	0	14
Lane Flow Rate	427	414	18	0	264	278
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.606	0.586	0.032	0	0.398	0.415
Departure Headway (Hd)	5.111	5.091	6.2	6.416	5.415	5.377
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	704	708	573	0	661	666
Service Time	2.862	2.841	4.282	4.506	3.172	3.134
HCM Lane V/C Ratio	0.607	0.585	0.031	0	0.399	0.417
HCM Control Delay	15.5	14.9	9.5	9.5	11.7	11.9
HCM Lane LOS	C	B	A	N	B	B
HCM 95th-tile Q	4.1	3.8	0.1	0	1.9	2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	5	41	16	14	49	55	790	18	23	507	1
Future Volume (veh/h)	7	5	41	16	14	49	55	790	18	23	507	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	5	44	17	15	52	59	840	19	24	539	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	16	11	99	96	85	157	142	1274	29	71	1160	2
Arrive On Green	0.08	0.08	0.08	0.10	0.10	0.10	0.08	0.36	0.36	0.04	0.32	0.32
Sat Flow, veh/h	204	146	1280	968	854	1585	1781	3552	80	1781	3639	7
Grp Volume(v), veh/h	56	0	0	32	0	52	59	420	439	24	263	277
Grp Sat Flow(s),veh/h/ln	1630	0	0	1822	0	1585	1781	1777	1856	1781	1777	1869
Q Serve(g_s), s	1.5	0.0	0.0	0.8	0.0	1.4	1.5	9.3	9.3	0.6	5.6	5.6
Cycle Q Clear(g_c), s	1.5	0.0	0.0	0.8	0.0	1.4	1.5	9.3	9.3	0.6	5.6	5.6
Prop In Lane	0.12		0.79	0.53		1.00	1.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	126	0	0	181	0	157	142	637	666	71	566	596
V/C Ratio(X)	0.45	0.00	0.00	0.18	0.00	0.33	0.41	0.66	0.66	0.34	0.46	0.46
Avail Cap(c_a), veh/h	1177	0	0	1316	0	1145	269	1133	1183	265	1129	1188
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	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.8	0.0	0.0	19.4	0.0	19.7	20.6	12.7	12.7	22.0	12.8	12.8
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.2	0.0	0.5	0.7	1.2	1.1	1.0	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.3	0.0	0.5	0.6	3.0	3.1	0.2	1.8	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.7	0.0	0.0	19.6	0.0	20.2	21.3	13.8	13.8	23.0	13.4	13.4
LnGrp LOS	C	A	A	B	A	C	C	B	B	C	B	B
Approach Vol, veh/h		56			84			918			564	
Approach Delay, s/veh		21.7			20.0			14.3			13.8	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	22.4		8.6	8.3	20.5		9.7				
Change Period (Y+Rc), s	4.5	5.5		5.0	4.5	5.5		5.0				
Max Green Setting (Gmax), s	7.0	30.0		34.0	7.1	29.9		34.0				
Max Q Clear Time (g_c+I1), s	2.6	11.3		3.5	3.5	7.6		3.4				
Green Ext Time (p_c), s	0.0	4.9		0.2	0.0	3.0		0.2				

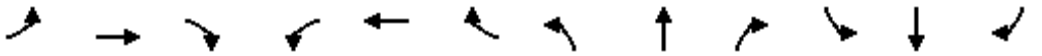
Intersection Summary			
HCM 6th Ctrl Delay		14.7	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	368	204	10	493	39	346	50	12	16	22	8
Future Volume (veh/h)	12	368	204	10	493	39	346	50	12	16	22	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	387	215	11	519	41	364	53	13	17	23	8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	997	445	35	926	73	469	382	94	42	57	20
Arrive On Green	0.02	0.28	0.28	0.02	0.28	0.28	0.26	0.26	0.26	0.07	0.07	0.07
Sat Flow, veh/h	1781	3554	1585	1781	3337	263	1781	1451	356	632	855	298
Grp Volume(v), veh/h	13	387	215	11	276	284	364	0	66	48	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1823	1781	0	1806	1785	0	0
Q Serve(g_s), s	0.4	4.8	6.1	0.3	7.2	7.2	10.2	0.0	1.5	1.4	0.0	0.0
Cycle Q Clear(g_c), s	0.4	4.8	6.1	0.3	7.2	7.2	10.2	0.0	1.5	1.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.20	0.35		0.17
Lane Grp Cap(c), veh/h	41	997	445	35	493	506	469	0	475	119	0	0
V/C Ratio(X)	0.32	0.39	0.48	0.31	0.56	0.56	0.78	0.00	0.14	0.40	0.00	0.00
Avail Cap(c_a), veh/h	231	2038	909	231	1019	1045	1252	0	1270	1123	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(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.0	15.7	16.2	26.1	16.7	16.7	18.4	0.0	15.2	24.2	0.0	0.0
Incr Delay (d2), s/veh	1.6	0.2	0.8	1.9	1.0	1.0	3.4	0.0	0.2	0.8	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	0.2	1.7	2.0	0.1	2.6	2.7	4.3	0.0	0.6	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.6	15.9	17.0	28.0	17.7	17.7	21.8	0.0	15.4	25.0	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	C	A	B	C	A	A
Approach Vol, veh/h		615			571			430			48	
Approach Delay, s/veh		16.6			17.9			20.8			25.0	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.7	20.5		19.2	5.6	20.7		8.6				
Change Period (Y+Rc), s	4.5	5.5		5.0	4.5	5.5		5.0				
Max Green Setting (Gmax), s	7.0	31.0		38.0	7.0	31.0		34.0				
Max Q Clear Time (g_c+I1), s	2.4	9.2		12.2	2.3	8.1		3.4				
Green Ext Time (p_c), s	0.0	3.1		2.0	0.0	3.1		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		18.4	
HCM 6th LOS		B	



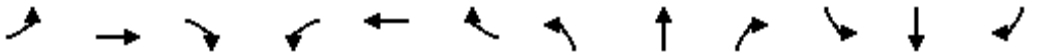
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	207	147	135	214	27	326	279	78	92	269	59
Future Volume (veh/h)	39	207	147	135	214	27	326	279	78	92	269	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	220	0	144	228	0	347	297	0	98	286	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	100	802		338	951		519	1022		304	802	
Arrive On Green	0.06	0.23	0.00	0.10	0.27	0.00	0.15	0.29	0.00	0.09	0.23	0.00
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	41	220	0	144	228	0	347	297	0	98	286	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	1.5	3.4	0.0	2.6	3.3	0.0	6.3	4.3	0.0	1.8	4.5	0.0
Cycle Q Clear(g_c), s	1.5	3.4	0.0	2.6	3.3	0.0	6.3	4.3	0.0	1.8	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	100	802		338	951		519	1022		304	802	
V/C Ratio(X)	0.41	0.27		0.43	0.24		0.67	0.29		0.32	0.36	
Avail Cap(c_a), veh/h	188	1443		390	1470		650	1790		364	1496	
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	30.3	21.3	0.0	28.2	19.1	0.0	26.7	18.4	0.0	28.5	21.7	0.0
Incr Delay (d2), s/veh	2.7	0.2	0.0	0.8	0.1	0.0	1.9	0.2	0.0	0.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.3	0.0	1.0	1.2	0.0	2.5	1.6	0.0	0.7	1.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.0	21.4	0.0	29.1	19.2	0.0	28.6	18.6	0.0	29.1	22.0	0.0
LnGrp LOS	C	C		C	B		C	B		C	C	
Approach Vol, veh/h		261	A		372	A		644	A		384	A
Approach Delay, s/veh		23.3			23.0			23.9			23.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	20.5	8.2	23.3	10.4	24.6	11.0	20.5
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5
Max Green Setting (Gmax), s	12.5	28.0	7.0	27.5	7.0	33.5	7.5	27.0
Max Q Clear Time (g_c+I1), s	8.3	6.5	3.5	5.3	3.8	6.3	4.6	5.4
Green Ext Time (p_c), s	0.5	1.6	0.0	1.2	0.1	1.8	0.1	1.2

Intersection Summary	
HCM 6th Ctrl Delay	23.6
HCM 6th LOS	C

Notes

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



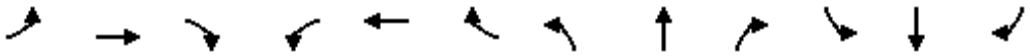
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	48	181	268	86	106	309	575	87	103	440	16
Future Volume (veh/h)	14	48	181	268	86	106	309	575	87	103	440	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	14	49	187	182	220	109	319	593	90	106	454	16
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	372	566	505	392	596	505	245	1586	492	355	1407	437
Arrive On Green	0.32	0.32	0.32	0.32	0.32	0.32	0.14	0.31	0.31	0.10	0.28	0.28
Sat Flow, veh/h	1051	1777	1585	1144	1870	1585	1781	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	14	49	187	182	220	109	319	593	90	106	454	16
Grp Sat Flow(s),veh/h/ln	1051	1777	1585	1144	1870	1585	1781	1702	1585	1728	1702	1585
Q Serve(g_s), s	0.6	1.1	5.0	8.0	4.9	2.7	7.5	4.9	2.3	1.5	3.8	0.4
Cycle Q Clear(g_c), s	5.5	1.1	5.0	12.9	4.9	2.7	7.5	4.9	2.3	1.5	3.8	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	372	566	505	392	596	505	245	1586	492	355	1407	437
V/C Ratio(X)	0.04	0.09	0.37	0.46	0.37	0.22	1.30	0.37	0.18	0.30	0.32	0.04
Avail Cap(c_a), veh/h	732	1175	1048	785	1237	1048	245	2570	798	444	2523	783
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	13.0	14.3	19.3	14.3	13.6	23.5	14.6	13.7	22.6	15.7	14.4
Incr Delay (d2), s/veh	0.0	0.1	0.5	0.9	0.4	0.2	161.5	0.1	0.2	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	0.1	0.4	1.7	2.0	2.0	0.9	13.8	1.6	0.7	0.6	1.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.5	13.1	14.8	20.2	14.7	13.8	185.0	14.8	13.9	22.8	15.8	14.5
LnGrp LOS	B	B	B	C	B	B	F	B	B	C	B	B
Approach Vol, veh/h		250			511			1002			576	
Approach Delay, s/veh		14.5			16.5			68.9			17.1	
Approach LOS		B			B			E			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	20.6		21.8	10.1	22.5		21.8				
Change Period (Y+Rc), s	4.5	5.6		4.5	4.5	5.6		4.5				
Max Green Setting (Gmax), s	7.5	26.9		36.0	7.0	27.4		36.0				
Max Q Clear Time (g_c+I1), s	9.5	5.8		14.9	3.5	6.9		7.5				
Green Ext Time (p_c), s	0.0	2.8		2.4	0.0	4.0		1.7				

Intersection Summary			
HCM 6th Ctrl Delay		38.9	
HCM 6th LOS		D	

Notes

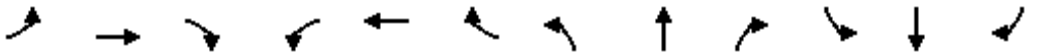
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	476	0	0	763	144	408	0	595	0	0	0
Future Volume (vph)	20	476	0	0	763	144	408	0	595	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.4			5.4	5.4	5.4	5.4	5.4			
Lane Util. Factor	1.00	0.95			0.91	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			5085	1583	1681	1681	2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			5085	1583	1681	1681	2787			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	21	496	0	0	795	150	425	0	620	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	121	0	0	501	0	0	0
Lane Group Flow (vph)	21	496	0	0	795	29	212	213	119	0	0	0
Turn Type	Prot	NA			NA	custom	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						8	8		8			
Actuated Green, G (s)	2.4	23.5			16.4	15.4	15.4	15.4	15.4			
Effective Green, g (s)	2.4	23.5			16.4	15.4	15.4	15.4	15.4			
Actuated g/C Ratio	0.03	0.29			0.20	0.19	0.19	0.19	0.19			
Clearance Time (s)	4.7	5.4			5.4	5.4	5.4	5.4	5.4			
Vehicle Extension (s)	2.0	2.0			3.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	52	1036			1039	303	322	322	535			
v/s Ratio Prot	0.01	c0.14			c0.16							
v/s Ratio Perm						0.02	0.13	0.13	0.04			
v/c Ratio	0.40	0.48			0.77	0.10	0.66	0.66	0.22			
Uniform Delay, d1	38.2	23.3			30.1	26.7	30.0	30.0	27.3			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	1.9	0.1			3.4	0.0	3.7	3.9	0.1			
Delay (s)	40.1	23.4			33.5	26.7	33.6	33.9	27.4			
Level of Service	D	C			C	C	C	C	C			
Approach Delay (s)		24.1			32.4			30.0			0.0	
Approach LOS		C			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.40		
Actuated Cycle Length (s)	80.2	Sum of lost time (s)	18.5
Intersection Capacity Utilization	43.0%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	371	254	0	835	332	0	0	0	130	0	50
Future Volume (veh/h)	0	371	254	0	835	332	0	0	0	130	0	50
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1945	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	0	453	215	0	861	0				134	0	52
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	0	2	2				2	2	2
Cap, veh/h	0	1425	581	0	1871					412	0	367
Arrive On Green	0.00	0.37	0.37	0.00	0.37	0.00				0.23	0.00	0.23
Sat Flow, veh/h	0	3890	1585	0	5274	1585				1781	0	1585
Grp Volume(v), veh/h	0	453	215	0	861	0				134	0	52
Grp Sat Flow(s),veh/h/ln	0	1945	1585	0	1702	1585				1781	0	1585
Q Serve(g_s), s	0.0	2.1	2.5	0.0	3.2	0.0				1.6	0.0	0.7
Cycle Q Clear(g_c), s	0.0	2.1	2.5	0.0	3.2	0.0				1.6	0.0	0.7
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1425	581	0	1871					412	0	367
V/C Ratio(X)	0.00	0.32	0.37	0.00	0.46					0.32	0.00	0.14
Avail Cap(c_a), veh/h	0	4972	2026	0	6525					1262	0	1123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.7	5.8	0.0	6.1	0.0				8.0	0.0	7.7
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.1	0.0				0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.3	0.0	0.4	0.0				0.3	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.8	6.0	0.0	6.1	0.0				8.2	0.0	7.7
LnGrp LOS	A	A	A	A	A					A	A	A
Approach Vol, veh/h		668			861	A					186	
Approach Delay, s/veh		5.8			6.1						8.1	
Approach LOS		A			A						A	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		14.6		10.5		14.6						
Change Period (Y+Rc), s		5.4		* 4.7		5.4						
Max Green Setting (Gmax), s		32.1		* 18		32.1						
Max Q Clear Time (g_c+I1), s		4.5		3.6		5.2						
Green Ext Time (p_c), s		2.2		0.4		4.0						

Intersection Summary	
HCM 6th Ctrl Delay	6.2
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

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

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

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	304	12	12	369	37	7
Future Vol, veh/h	304	12	12	369	37	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	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	330	13	13	401	40	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	343	0	757	330
Stage 1	-	-	-	-	330	-
Stage 2	-	-	-	-	427	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1216	-	375	712
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	658	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1216	-	370	712
Mov Cap-2 Maneuver	-	-	-	-	370	-
Stage 1	-	-	-	-	728	-
Stage 2	-	-	-	-	649	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	15.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	401	-	-	1216	-
HCM Lane V/C Ratio	0.119	-	-	0.011	-
HCM Control Delay (s)	15.2	-	-	8	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	29	380	87	12	388
Future Vol, veh/h	0	29	380	87	12	388
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	150	150	-
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	32	413	95	13	422

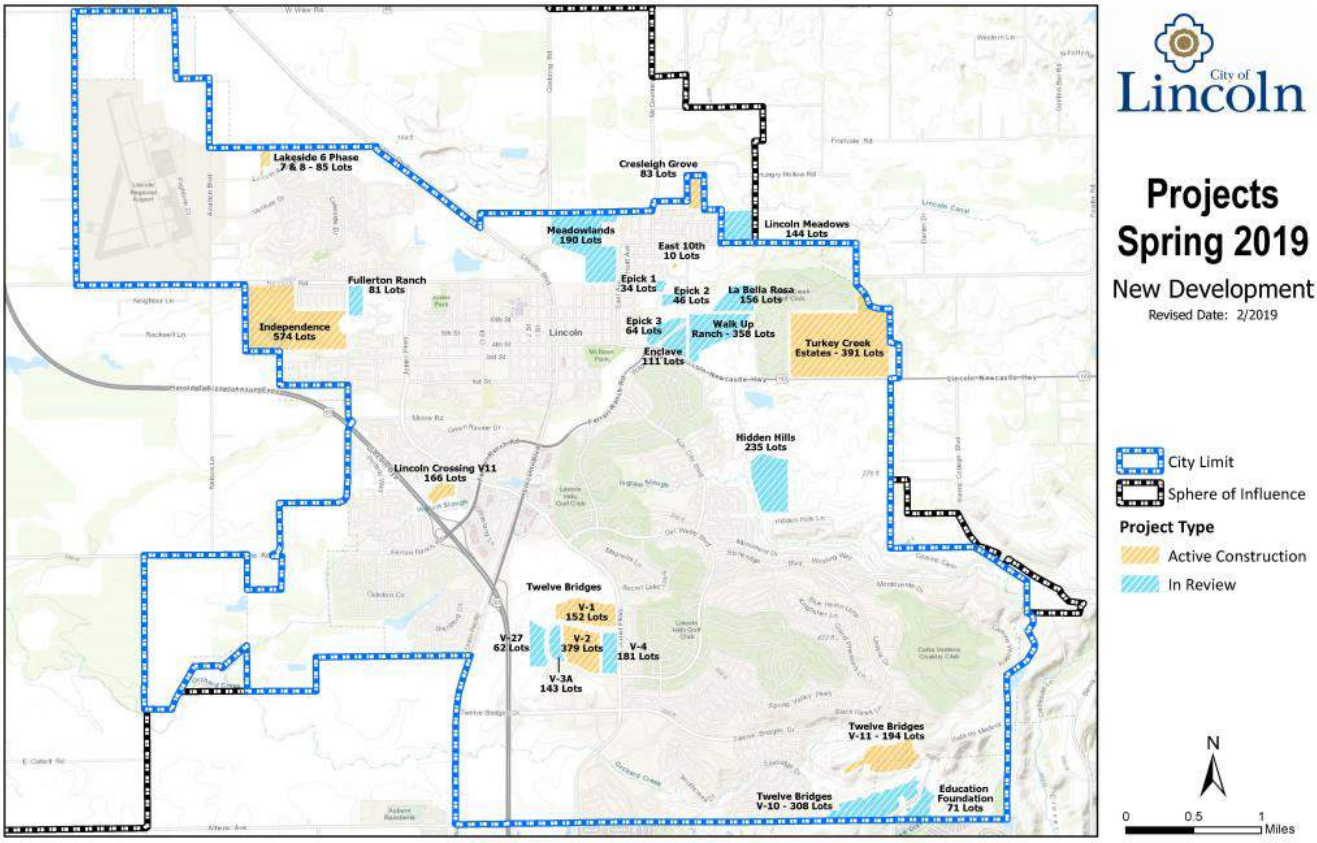
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	650	207	0	0	508	0
Stage 1	413	-	-	-	-	-
Stage 2	237	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	402	799	-	-	1053	-
Stage 1	636	-	-	-	-	-
Stage 2	780	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	397	799	-	-	1053	-
Mov Cap-2 Maneuver	397	-	-	-	-	-
Stage 1	636	-	-	-	-	-
Stage 2	771	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	0.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	799	1053	-
HCM Lane V/C Ratio	-	-	0.039	0.012	-
HCM Control Delay (s)	-	-	9.7	8.5	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Michael Baker
INTERNATIONAL

Appendix E: Approved & Pending Project Information


Lakeside 6 Phase
7 & 8 - 85 Lots
Cresleigh Grove
83 Lots
Meadowlands
190 Lots
East 10th
10 Lots
Lincoln Meadows
144 Lots
Fullerton Ranch
81 Lots
Epick 1
34 Lots
Epick 2
46 Lots
La Bella Rosa
156 Lots
Independence
574 Lots
Lincoln
Epick 3
64 Lots
Walk Up
Ranch - 358 Lots
Enclave
111 Lots
Turkey Creek
Estates - 391 Lots
Hidden Hills
235 Lots
Lincoln Crossing V11
166 Lots
Twelve Bridges
V-1
152 Lots
V-27
62 Lots
V-2
379 Lots
V-4
181 Lots
V-3A
143 Lots
Twelve Bridges
V-11 - 194 Lots
Twelve Bridges
V-10 - 308 Lots
Education
Foundation
71 Lots
City of
Lincoln
Projects
Spring 2019
New Development
Revised Date: 2/2019
City Limit
Sphere of Influence
Project Type
Active Construction
In Review
N
0
0.5
1
Miles

Cumulative Projects Peak Hour Trip Assignment

Inbound Outbound

Int. 1	Independence				Fullerton Ranch				Lincoln Crossing Village 11			
	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.
NBL												
NBT												
NBR			29	143			2	8	3%		1	3
SBL			6	21					1%		0	1
SBT												
SBR												
EBL												
EBT			6	21			1	4				
EBR												
WBL			86	85			9	5	3%		3	2
WBT			17	12			3	2				
WBR			17	12					1%		1	1

Int. 2	Independence				Fullerton Ranch				Lincoln Crossing Village 11			
	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.
NBL			5	4								
NBT			2	0								
NBR			7	4								
SBL							1	1				
SBT			1	1								
SBR			16	15								
EBL			49	9								
EBT			150	111			3	12	4%		1	4
EBR			2	7								
WBL			2	8								
WBT			48	196			12	7	4%		4	2
WBR							1	1				

Int. 3	Independence				Fullerton Ranch				Lincoln Crossing Village 11			
	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.
NBL			23	122			8	15	4%		4	2
NBT									3%		3	2
NBR									3%		3	2
SBL												
SBT									3%		1	3
SBR			4	4			1	1				
EBL			11	2			1	1				
EBT			78	45			6	4				
EBR			68	68			13	8	4%		1	4
WBL									3%		1	3
WBT			23	78			2	7				
WBR												

Int. 4	Independence				Fullerton Ranch				Lincoln Crossing Village 11			
	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.
NBL							3	14				
NBT							3	15	10%		9	6
NBR									2%		2	1
SBL												
SBT							13	8	10%		3	10
SBR												
EBL												
EBT												
EBR							14	9				
WBL									2%		1	2
WBT												
WBR												

Int. 5	Independence				Fullerton Ranch				Lincoln Crossing Village 11			
	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.
NBL												
NBT			19	113			10	29	12%		11	7
NBR												
SBL			11	4								
SBT			57	64			27	17	12%		4	12
SBR												
EBL												
EBT												
EBR												
WBL												
WBT												
WBR			4	9			1	0				

Int. 6	Independence				Fullerton Ranch				Lincoln Crossing Village 11			
	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.
NBL									3%		3	2
NBT			17	101			8	28	12%		11	7
NBR												
SBL			6	6			1	1				
SBT			51	58			25	16	12%		4	12
SBR							1	0				
EBL							1	0				
EBT												
EBR									3%		1	3
WBL												
WBT												
WBR			2	12			1	1				

Int. 7	Independence				Fullerton Ranch				Lincoln Crossing Village 11			
	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.
NBL												
NBT									15%		14	9
NBR												
SBL												
SBT									15%		5	16
SBR												
EBL												
EBT												
EBR												
WBL												
WBT												
WBR												

Int. 8	Independence				Fullerton Ranch				Lincoln Crossing Village 11			
	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.
NBL												
NBT									15%		14	9
NBR												
SBL												
SBT									15%		5	16
SBR												
EBL												
EBT												
EBR												
WBL												
WBT												
WBR												

Int. 9	Independence				Fullerton Ranch				Lincoln Crossing Village 11			
	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.
NBL									15%		14	9
NBT												
NBR									5%		5	3
SBL												
SBT												
SBR												
EBL												
EBT												
EBR									15%		5	16
WBL									5%		2	5
WBT												
WBR												

Int. 10	Independence				Fullerton Ranch				Lincoln Crossing Village 11			
	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.
NBL												
NBT									5%		5	3
NBR									10%		9	6
SBL												
SBT									5%		2	5
SBR												
EBL												
EBT									5%		5	3
EBR												
WBL									10%		3	10
WBT												
WBR												

Int. 11	Independence				Fullerton Ranch				Lincoln Crossing Village 11			
	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.
NBL									60%		19	62
NBT												

NBR												
SBL												
SBT												
SBR									15%		5	16
EBL									15%		14	9
EBT									5%		5	3
EBR									60%		55	37
WBL												
WBT									5%		2	5
WBR												

Int. 12	Independence				Fullerton Ranch				Lincoln Crossing Village 11			
	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.
NBL												
NBT												
NBR									50%		16	52
SBL												
SBT												
SBR												
EBL												
EBT									10%		3	10
EBR												
WBL												
WBT									50%		46	31
WBR									10%		9	6

Int. 13	Independence				Fullerton Ranch				Lincoln Crossing Village 11			
	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.
NBL												
NBT												
NBR												
SBL									10%		3	10
SBT												
SBR												
EBL												
EBT												
EBR												
WBL												
WBT												
WBR									50%		46	31

Int. 14	Independence				Fullerton Ranch				Lincoln Crossing Village 11			
	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.
NBL												
NBT												
NBR												
SBL												
SBT												
SBR												
EBL												
EBT									3%		3	2
EBR												
WBL												
WBT									3%		1	3
WBR												

Int. 15	Independence				Fullerton Ranch				Lincoln Crossing Village 11			
	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.	Car Dist.	Truck Dist.	AM. Vol.	PM Vol.
NBL												
NBT									10%		9	6
NBR												
SBL												
SBT									10%		3	10
SBR												
EBL												
EBT												
EBR												
WBL												
WBT												
WBR												

TRAFFIC AND CIRCULATION SECTION OF THE
FULLERTON RANCH PROJECT IS/MND

Prepared for:

Submitted on August 16, 2017 by:

FEHR PEERS

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1013 Galleria Blvd., Suite 255
Roseville, CA 95678

916.773.1900

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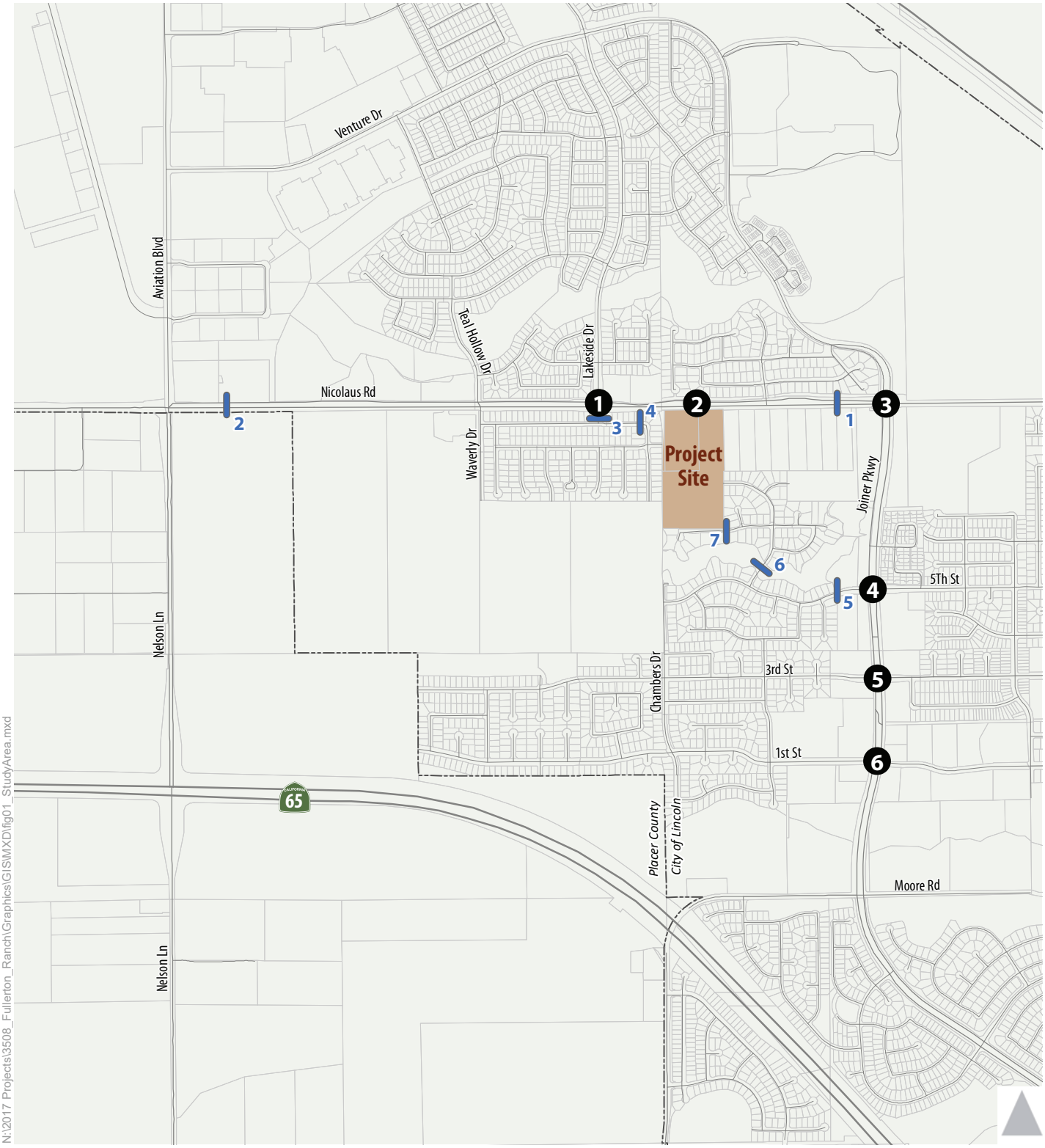


1 Study Intersection

Study Roadway

Project Site

Figure 1

Fullerton Ranch Project Study Area

2. Existing travel patterns along Nicolaus Road, Nelson Lane, and Joiner Parkway (to understand regional travel patterns).

3. Complementary land uses (i.e., employment, retail, and schools) within the study area.

Table 16-3 Project Trip Generation

Land Use (ITE Code)	Quantity	Unit	Trip Rate [1]			Trips						
						Daily	A.M. Peak Hour			P.M. Peak Hour		
			Daily	AM	PM		In	Out	Total	In	Out	Total
Single Family Residential (210)	81	du	9.52	0.75	1.00	771	15	46	61	51	30	81
Total External Vehicle Trips						**771**	**15**	**46**	**61**	**51**	**30**	**81**

Notes: du = dwelling units

[1] Trip rate for single family residential units based on LU categories 210 from the *Trip Generation Manual* (Institute of Transportation Engineers 2012).

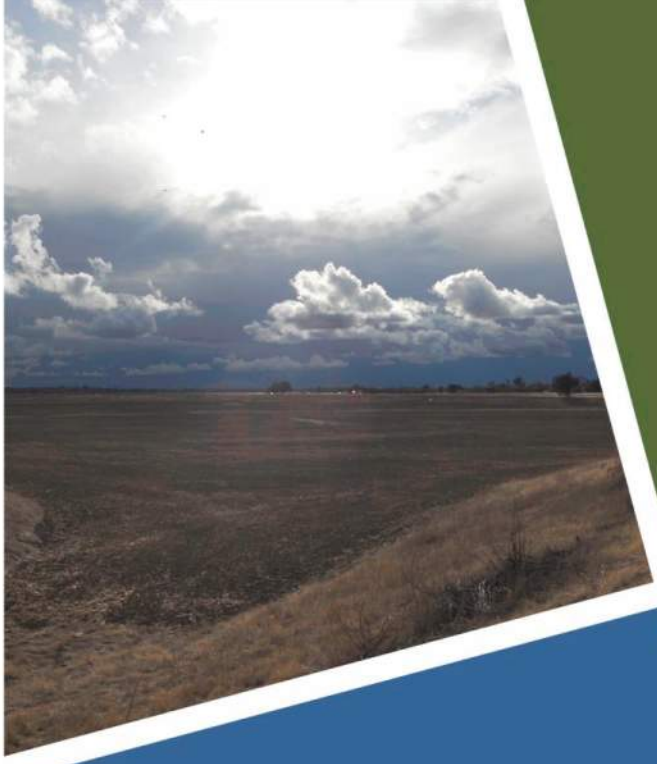
Source: Fehr & Peers 2017

The AM peak hour trip distribution for the 81 single family residential units was determined to be:

1. 52% to and from the west on Nicolaus Road;
2. 15% to and from the east on Nicolaus Road;
3. 3% to and from the north on Joiner Parkway;
4. 25% to and from the south on Joiner Parkway;
5. 2% to and from the south-east on 1st Street; and
6. 3% to and from the south-west on 1st Street.

The PM peak hour trip distribution for the 81 single family residential units was determined to be:

1. 57% to and from the west on Nicolaus Road;
2. 13% to and from the east on Nicolaus Road;
3. 2% to and from the north on Joiner Parkway;
4. 25% to and from the south on Joiner Parkway;
5. 2% to and from the south-east on 1st Street; and
6. 1% to and from the south-west on 1st Street.



Draft Environmental Impact Report

Independence at Lincoln Development Project

September 30, 2016

PREPARED FOR:
City of Lincoln
Community Development Department
Steve Prosser, AICP
600 Sixth Street
Lincoln, CA 95648
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Draft Environmental Impact Report

for the

Independence at Lincoln Development Project

PREPARED FOR

City of Lincoln
Community Development Department
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Lincoln, California 95648
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September 30, 2016

4.10 TRANSPORTATION AND CIRCULATION

This chapter analyzes the potential impacts of the project on the surrounding transportation system including roadways, bicycle/pedestrian facilities, and transit facilities/services. This chapter identifies the significant impacts of the project and recommends mitigation measures to lessen their significance. All technical calculations can be found in Appendix F.

4.10.1 Environmental Setting

This section describes existing regional and local environmental conditions relevant to transportation and circulation.

STUDY AREA ROADWAYS AND INTERSECTIONS

Study intersections and roadways were selected for analysis based on their proximity to the project site, expected use by project traffic, and their susceptibility of being adversely affected by the project. The following seven intersections and nine study roadway segments were selected for study. Although State Route (SR) 65 freeway/highway segments in the project vicinity could have also be analyzed, study intersection 7 (SR 65/Nelson Lane) is the critical facility, which dictates that corridor's operation. Therefore, it was studied while the adjacent freeway/highway segments were not. Exhibit 4.10-1 displays the study intersections included in the transportation analysis, which encompass the "study area" for the project's transportation and circulation analysis.

Intersections

1. Nicolaus Road/Nelson Lane
2. Nicolaus Road/Waverly Drive
3. Nicolaus Road/Lakeside Drive
4. Nicolaus Road/Joiner Parkway
5. Joiner Parkway/First Street
6. Joiner Parkway/Third Street
7. State Route 65/Nelson Lane

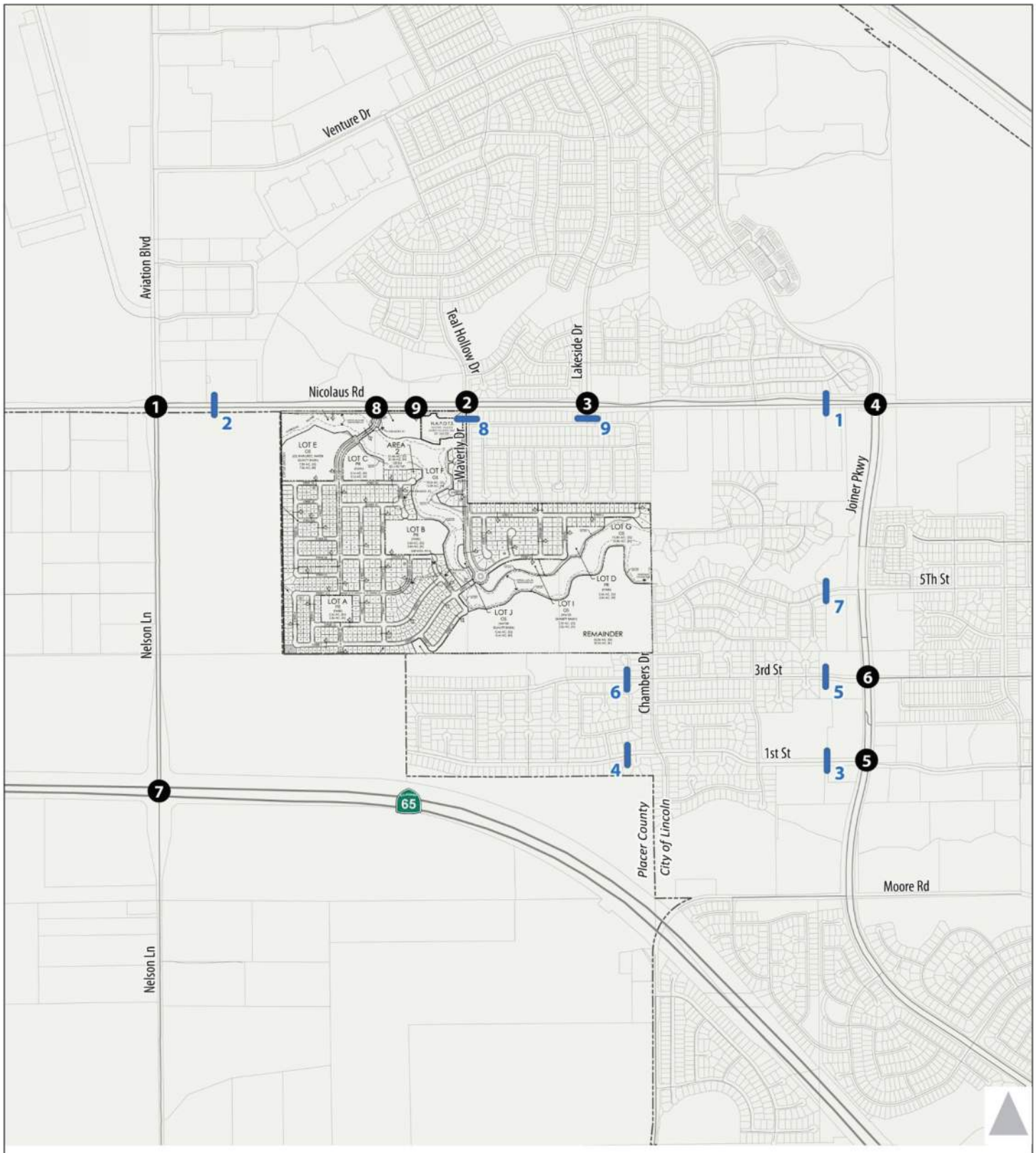
Roadways

1. Nicolaus Road west of Joiner Parkway
2. Nicolaus Road east of Nelson Lane
3. First Street west of Joiner Parkway
4. First Street west of Chambers Drive
5. Third Street west of Joiner Parkway
6. Third Street west of Chambers Drive
7. Fifth Street west of Joiner Parkway
8. Waverly Drive south of Nicolaus Road
9. Glenmoor Lane south of Nicolaus Road

Exhibit 4.10-1 shows that all study intersections are located along Nelson Lane, Nicolaus Road, or Joiner Parkway; at least one of these must be used to access the project site. The study roadway segments on First, Third, and Fifth Street were selected for analysis because in cumulative conditions, project access is possible along these segments. In the near-term, however, the project's effect on these segments would be expected to be minimal because access via these streets would not be provided until surrounding project develop.

Exhibit 4.10-2 displays roadway classification, number of lanes, speed limits, and intersection control types within the study area. Major roadways in the study area are described below:

State Route 65 is a north-south state highway that begins at Interstate 80 (I-80) and extends north through Lincoln to SR 70 south of Marysville. SR 65 is a four-lane freeway from I-80 to the at-grade intersection with Nelson Lane. It continues as a four-lane divided highway from Nelson Lane to north of Wise Road. North of Wise Road, it becomes a two-lane state highway connecting the area to Yuba County and



Source: Fehr & Peers 2016

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Exhibit 4.10-1 **Study Area**

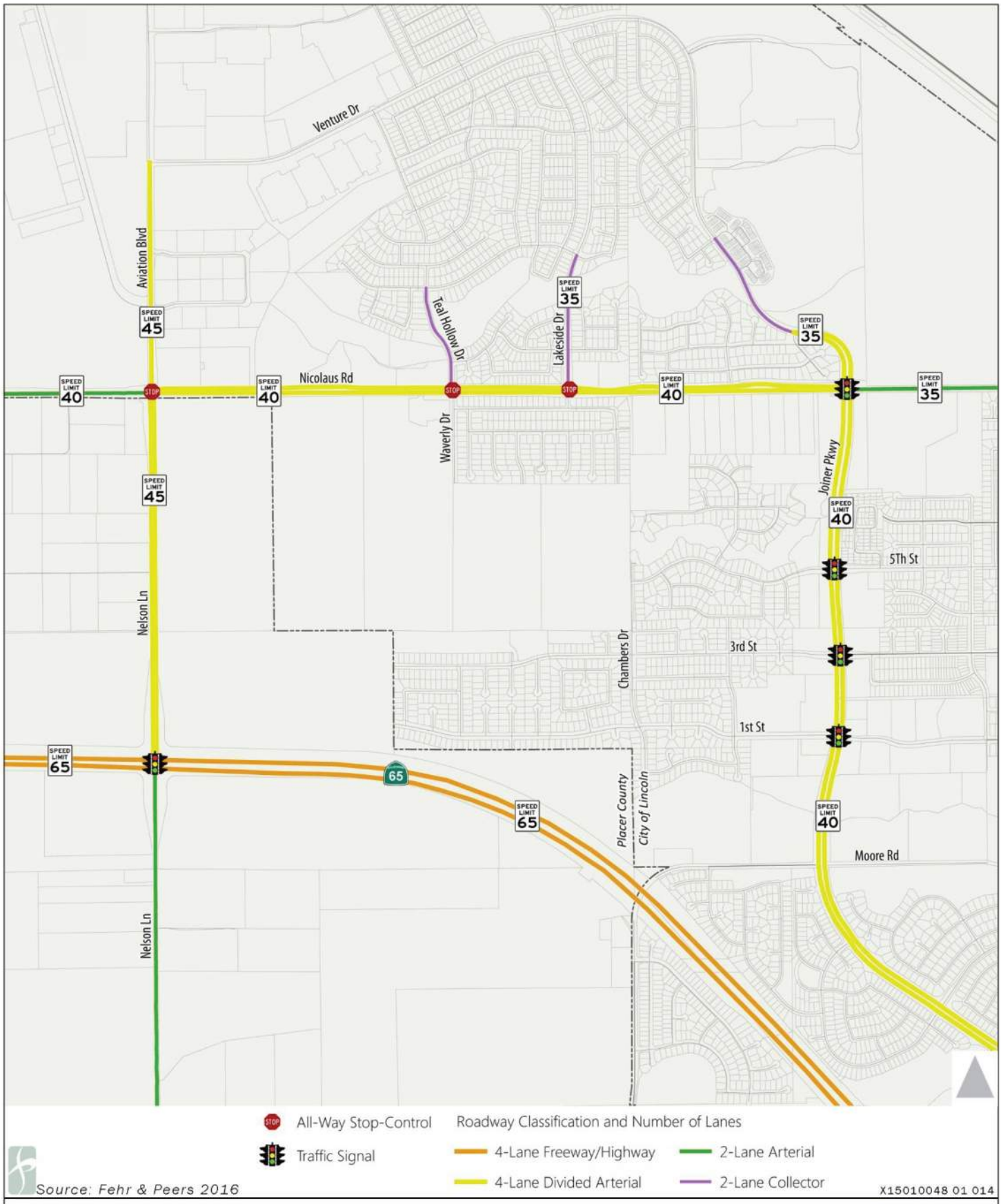


Exhibit 4.10-2 **Existing Roadway System**

Marysville to the north. The section of SR 65 between Lincoln Boulevard and Riosa Road is known as the Lincoln Bypass. The Lincoln Bypass opened in 2012 to facilitate travel between South Placer County and Yuba County and reduce through traffic in the City of Lincoln. The former SR 65 alignment through Downtown Lincoln is now called Lincoln Boulevard.

Nicolaus Road is an east-west arterial roadway that extends from O Street in Lincoln west to Pleasant Grove Road in unincorporated Placer County. Within the study area, it is a four-lane divided roadway between Nelson Lane and Joiner Parkway. It is two lanes east of Joiner Parkway and a two-lane rural roadway west of Nelson Lane. It has a grade separated overcrossing of the SR 65 bypass. In addition, Nicolaus Road is an STAA truck route, which means that California legal trucks may use it to deliver goods and materials to industrial uses in the Lincoln Airport Industrial Area.

Nelson Lane is a north-south rural roadway that runs from Moore Road south of SR 65 northerly to Nicolaus Road. Within the study area, it was recently widened to four lanes and has a signalized intersection with SR 65 and an all-way stop with Nicolaus Road.

Joiner Parkway is an arterial street that spans much of the City of Lincoln from south to north. Within the study area, Joiner Parkway is a four-lane divided arterial. North of Nicolaus Road, Joiner Parkway narrows from four to two lanes.

Waverly Drive is a two-lane collector street that that extends southerly from Nicolaus Road to serve an existing residential neighborhood. Residences do not front on the street. The southerly extension of this street would serve as one of the primary accesses to the project, as is discussed later.

Glenmoor Lane is a short two-lane residential street (located opposite Lakeside Drive) that provides access an existing residential neighborhood. As is discussed later, the project would provide two street connections into this neighborhood, which would enable project trips to access Nicolaus Road via Glenmoor Lane.

STUDY PERIODS

This report analyzes project impacts during the following analysis periods:

- Weekday AM Peak Hour – the AM peak hour is defined as the consecutive 60-minute period that has the greatest traffic volume within the 7:00 to 9:00 a.m. peak period.

- Weekday PM Peak Hour – the PM peak hour is defined as the consecutive 60-minute period that has the greatest traffic volume within the 4:00 to 6:00 p.m. peak period

Peak hours were defined on the basis of individual intersection peak hours because (1) it is more conservative to analyze peak hours at the intersection level, (2) intersections are relatively isolated from each other so balancing is not always critical, and (3) there are no coordinated corridors being studied. The most common AM peak hour was from 7:30 to 8:30 a.m., while the most common PM peak hour was from 4:30 to 5:30 p.m.

TRAFFIC DATA COLLECTION

Traffic counts were collected at the following intersections on Wednesday, May 20, 2015:

- Nicolaus Road/Nelson Lane
- Nicolaus Road/Waverly Drive
- Nicolaus Road/Lakeside Drive
- Nicolaus Road/Joiner Parkway
- Joiner Parkway/Third Street

Existing conditions volumes for Joiner Parkway/First Street and Nicolaus Road/SR 65 were taken from the transportation impact analysis prepared by Fehr & Peers for the *Village 5 Specific Plan Administrative Draft EIR* (2016). The counts for these intersections were completed on Wednesday, April 9, 2014. Exhibit 4.10-3 presents the existing traffic volumes, lane configurations, and traffic control devices at the study intersections.

Twenty-four hour traffic counts were taken at the study segments 1 - 7 on Wednesday, May 20, 2015. No unusual traffic conditions were present at the time and local schools were still in session. Table 4.10-1 presents the average daily traffic (ADT) volumes for each study roadway segment. In addition to ADT at study roadway segments, ADT at existing project accesses (segments 8 and 9) was estimated (using the ratio of AM and PM peak hour-to-daily traffic from adjacent streets) and is displayed below. All study roadway segments and project access roadways lie within City of Lincoln limits. Table 4.10-1 shows that daily traffic volumes along Nicolaus Road are less than 9,000 ADT, which is well within the capacity of a four-lane arterial.

The roadway ADT information is used as inputs for air/noise analysis (presented in other chapters), and to understand how daily traffic levels would change with the project. The City of Lincoln does not have adopted criteria for daily roadway segment level of service (LOS). Therefore, LOS results for roadway segments is not presented in this study.

Table 4.10-1 Two-Way Average Daily Traffic – Existing Conditions

Roadway Segment	Number of Lanes	Average Daily Traffic
Nicolaus Road west of Joiner Parkway	4	8,700
Nicolaus Road east of Nelson Lane	4	7,300
First Street west of Joiner Parkway	2	4,300
First Street west of Chambers Drive	2	1,500
Third Street west of Joiner Parkway	2	2,000
Third Street west of Chambers Drive	2	800
Fifth Street west of Joiner Parkway	2	1,600
Waverly Drive south of Nicolaus Road	2	900
Glenmoor Lane (opposite Lakeside Drive) south of Nicolaus Road	2	1,300

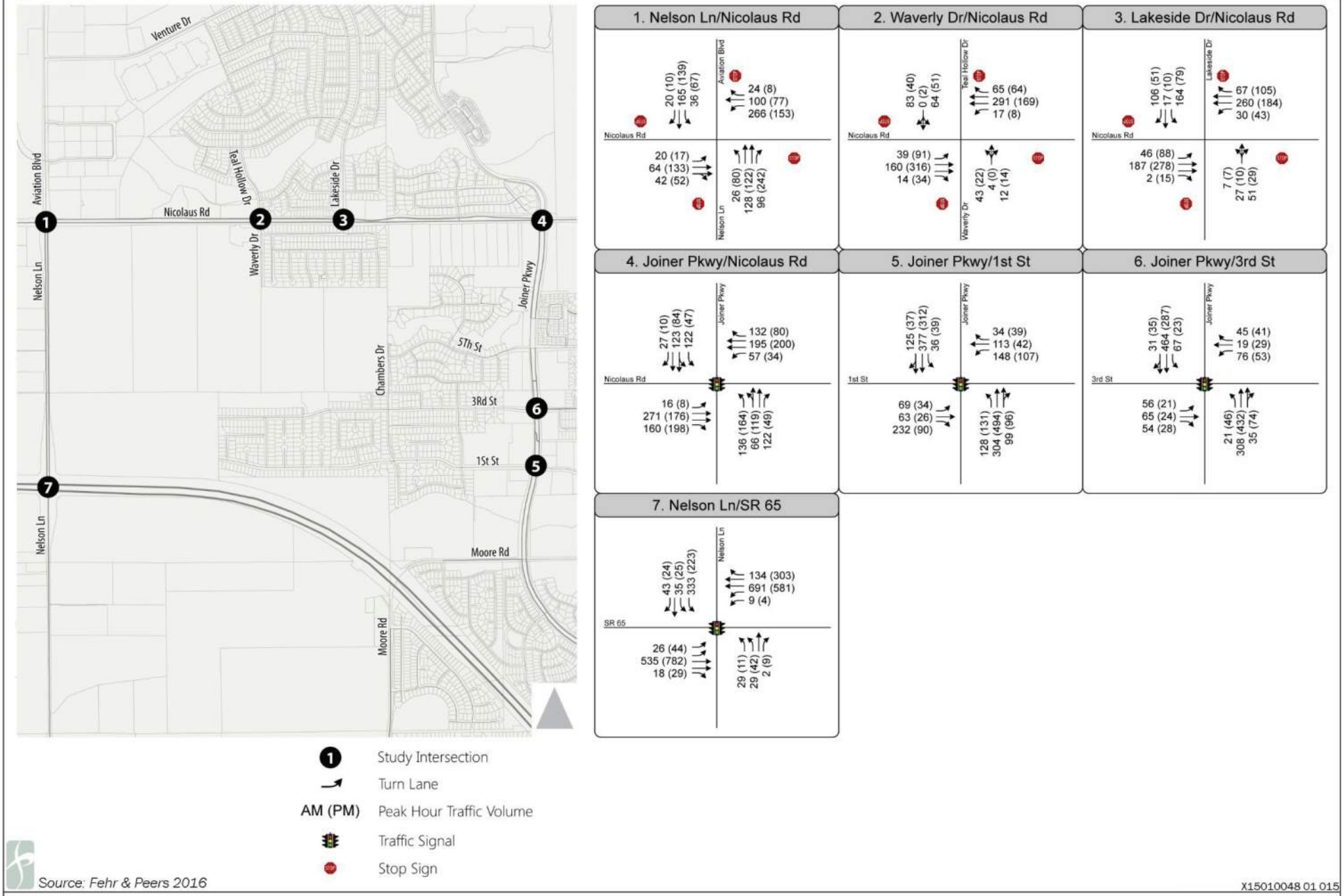
Notes: - Counts conducted on Wednesday, May 20, 2015.

Values rounded to the nearest one hundred vehicles.

LEVELS OF SERVICE

The operational performance of the roadway network is commonly described with the term Level of Service (LOS). LOS is a qualitative description of operating conditions, ranging from LOS A (free-flow traffic conditions with little or no delay) to LOS F (oversaturated conditions where traffic flows exceed design capacity, resulting in long queues and delays). The LOS analysis methods outlined in the *Highway Capacity Manual* (HCM) (Transportation Research Board 2010) were used in this report. The HCM methods for calculating LOS for intersections are described below.

Refer to Section 4.10.2 for a description of the City's level of service policies.



Source: Fehr & Peers 2016

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Exhibit 4.10-3 **Peak Hour Traffic Volumes and Lane Configurations – Existing Conditions**

The *Guide for the Preparation of Traffic Impact Studies* states that where "an existing State highway facility is operating at less than the appropriate target LOS, the existing measure of effectiveness should be maintained."[1] [2]

LOCAL

The project and all study intersections (with the exception of SR 65/Nelson Lane) are located within City of Lincoln limits. The local policies and regulations applicable to the project related to transportation and circulation are presented below.

City of Lincoln General Plan

The Transportation & Circulation Element of the *City of Lincoln General Plan* (March 2008) includes the following goals and policies that are relevant to transportation and circulation.

- **Policy T-2.2:** New Development. The City shall ensure that streets and highways will be available to serve new development by requiring detailed traffic studies and necessary improvements as a part of all major development proposals.

- **Policy T-2.3:** Level of Service for Local Streets and Intersections. Strive to maintain a LOS C at all signalized intersections in the City during the p.m. peak hours. Exceptions to this standard may be considered for intersections where the city determines that the required road improvements are not acceptable (i.e., due to factors such as the cost of improvements exceeding benefits achieved, results are contrary to achieving a pedestrian design, or other factors) or that based upon overriding considerations regarding project benefits, an alternative LOS may be accepted. For purposes of this policy, City intersections along McBean Park Drive between East Avenue and G Street, and G Street between First Street and Seventh Street, are excluded from the LOS C standard, and will operate at a lower LOS. [Note that G Street is also known as Lincoln Boulevard and/or "Old Highway 65."]

- **Policy T-2.14:** Developer Requirements. The City shall require developers to construct at least the first two lanes of any road (including curbs, gutters and sidewalks) within their projects.

- **Policy T-4.3:** Promote Public Transit. The City shall promote the use of public transit through development conditions requiring park-and-ride lots, bus turnouts and passenger shelters along major streets adjacent to appropriate land uses.

- **Policy T-5.1:** Develop Bike Lanes. The City shall require bike lanes in the design and construction of major new street and highway improvements, and to establish bike lanes on those city streets wide enough to accommodate bicycles safely.

- **Policy T-5.4:** Bicycle and Pedestrian Crossings. The City shall provide pedestrian/bicycle crossings at appropriate intervals along new roadways that will adequately serve new large-scale commercial office, industrial development, and residential development as well as parks and schools.

- **Policy T-5.6:** Trails and Pathways to Retail and Employment Centers. The City shall promote pedestrian convenience and safety through development conditions requiring sidewalks, walking paths, or hiking trails that connect residential areas with commercial, shopping, and employment centers. Where feasible, trails will be looped and interconnected.

- **Policy T-5.7:** Trails and Pathways along Creeks and Wetland Areas. The City shall encourage the development of trails and pathways along the edges of creeks and wetland areas. Where feasible, trails will be looped and interconnected.

[1] Caltrans, 2009, *State Route 65 Corridor System Management Plan*. Approved June 24, 2009. Table 11.
[2] Caltrans, 2002. *Guide for the Preparation of Traffic Impact Studies*. p. 1.

- **Policy T-5.9:** Pedestrian Access. The City shall encourage specific plans and development plans to include design of pedestrian access that enables residents to walk from their homes to places of work, recreation and shopping.

- **Policy HS-3.10:** Travel Demand Measures. Coordinating with the PCAPCD, the City shall require large development projects to mitigate air quality impacts. As feasible, mitigations may include, but are not limited to, the following:

  - providing bicycle access and bicycle parking facilities,

  - providing preferential parking for high-occupancy vehicles, car pools, or alternative fuels vehicles (including neighborhood electric vehicles or NEVs), and

  - establishing telecommuting programs or satellite work centers.

- **Policy HS-3.18:** Design for Transportation Alternatives. The City shall encourage all new development to be designed to promote pedestrian and bicycle access and circulation (including the use of NEVs), to the greatest extent feasible.

Policy T-2.3 establishes the City of Lincoln's LOS C policy for signalized intersections during the PM peak hour. Because the City does not have an adopted LOS policy for unsignalized intersections or other time periods (i.e., AM peak hour), this study applies this LOS C standard to all City of Lincoln intersections—signalized and unsignalized—during both the AM and PM peak hour, consistent with previous traffic analyses prepared for the City of Lincoln. Unacceptable AM peak hour and/or unsignalized conditions are conservatively treated as significant impacts if caused or exacerbated (to a significant degree) by the project, even if such a result is not prescribed under the City's level of service policy.

City of Lincoln 2012 Bicycle Transportation Plan Update

The *City of Lincoln Bicycle Transportation Plan Update* (2012) includes the following goals policies related to bicycle circulation in new development areas that are relevant to the project.

- **Policy 1.5:** Provide bicycle connections that allow for regional bike travel to and from the City of Lincoln.

- **Policy 1.6:** Integrate bicycle planning with other community planning, including land use and transportation planning.

- **Policy 2.1:** Require new development projects to reserve the right-of-way for multi-use trails shown in the proposed system of bikeways.

- **Policy 2.3:** Provide pedestrian/bicycle crossings at appropriate intervals along new roadways that will adequately serve new large-scale commercial office, industrial development, and residential development.

4.10.3 Environmental Impacts and Mitigation Measures

ANALYSIS METHODOLOGY

This section assesses the operation of street segments, key intersections, and freeway ramp in the study area, based on the anticipated distribution of traffic related to the construction and operation of the project.

Vehicular access to the project would be provided by four access points on Nicolaus Road:

1. Westerly Access: Street 18 would intersect with Nicolaus Road approximately 800 feet west of Waverly Drive. This access would provide access to the west side of the project. Full access is assumed at the

intersection of Nicolaus Road/Street 18 with stop-control on the Street 18 approach. The site plan shows a proposed 175-foot westbound left-turn lane at the intersection.

2. Central Access: The project would extend Waverly Drive southerly into the central portion of the project site. The Nicolaus Road/Waverly Drive intersection currently features all-way stop-control and would remain as such.

3. Easterly Access: The project would include two street connections into the existing residential development located east of Waverly Drive. Project trips could travel through this neighborhood to access the Nicolaus Road/Lakeside Drive/Glenmoor Lane intersection, which features all-way stop-control. This route, however, is circuitous.

4. Additional Multi-Family Access: A separate right in/right out driveway that provides access to the multi-family residential is assumed on Nicolaus Road east of Street 18. A second right-turn only driveway to this parcel is also assumed along Street 18.

The project site plan shows details of planned bicycle and pedestrian facilities within the site including:

- Class II bike lanes along Street 18 and Waverly Drive, which are the two major points of access from Nicolaus Road.
- Class II bike lanes on the south side of Nicolaus Road along the project frontage (where not already present).
- Class I bicycle/pedestrian trails on both sides of an unnamed tributary to Markham Ravine with connections to Street 18, Waverly Drive, and other internal streets.
- A pedestrian connection from the Class I multi-use path along Markham Ravine to Chambers Drive (located east of the project).
- Sidewalks are proposed throughout the project site, including Street 18, Waverly Drive, and the south side of Nicolaus Road within project boundaries. The only location along Nicolaus Road where sidewalks are currently missing and not proposed as part of the project is a 475-foot segment along the Western Placer Unified School District Bus Yard (directly west of Waverly Drive).

PROJECT TRAVEL CHARACTERISTICS UNDER EXISTING CONDITIONS

Traffic generated by the project is assigned to the roadway network using the following three-step process:

1. Trip Generation – estimates the amount of traffic generated by the project based on its planned land uses.

2. Trip Distribution – spatially distributes project trips based on anticipated origins and destinations of trips.

3. Trip Assignment – assigns project trips to the roadway network based on expected routes to be taken by project trips.

This study uses the Placer County base year travel demand forecasting (TDF) model for this three-step process. This TDF model uses land use inputs, trip rates, the existing roadway network, and other traffic engineering inputs to estimate travel demand. The model's roadway network includes major roadways, including freeways, highways, arterials, and collector streets. This study uses a version of the Placer County base year TDF model that has been updated to include the SR 65 Lincoln Bypass, as well as updated land uses and infrastructure improvements to reflect recent land development. In addition, this version of the TDF model was utilized for traffic studies of the nearby Village 5 Specific Plan and the SUD-B projects.

Trip Generation, Distribution, and Assignment

Table 4.10-4 shows the estimated trips generated for each land use under weekday daily, AM peak hour, and PM peak hour conditions. Footnote 2 of this table indicates that the park was assumed to be used by two soccer teams for practices during the weekday PM peak hour. This is more conservative than applying a generic trip rate (acre of park space) because the generic trip rate for parks is for a regional or community park and would generate maybe 1 or 2 PM peak hour trips versus the 35 peak hour trips assumed for this project. As shown below, the project would generate approximately 5,900 daily vehicle trips, 460 new AM peak hour trips, and 645 new PM peak hour trips. The trips generated by the residential land uses are based on trip rates from the *Trip Generation Manual* (9th Edition, Institute of Transportation Engineers 2012) while the trip generation of the soccer fields is estimated based on the expected travel patterns of two teams practicing at the site during a weekday afternoon. No reduction is made for internalization given that the vast majority of the project's land use is residential.

Table 4.10-4 Project Trip Generation

Land Use (ITE Code)	Quantity	Unit	Trip Rate [1,2,3]			Trips						
						Daily	A.M. Peak Hour			P.M. Peak Hour		
			Daily	AM	PM		In	Out	Total	In	Out	Total
Single Family Residential (210)	575	du	9.52	0.75	1.00	5,475	108	323	431	362	213	576
Multi-Family Residential (220)	54	du	6.65	0.51	0.62	359	6	22	28	22	12	34
Sports Fields	2	Soccer Fields	-	-	-	70	0	0	0	25	10	35
Total External Vehicle Trips [5]						**5,904**	**114**	**345**	**459**	**409**	**235**	**645**

Notes: du = dwelling units

[1] Trip rate for single family and multi-family residential units based on LU categories 210 and 220, respectively, from the *Trip Generation Manual* (Institute of Transportation Engineers 2012).

[2] The trip generation of the sports fields is estimated based on expected travel patterns of two teams practicing at the site during a weekday afternoon. During a weekday PM peak hour, 25 inbound vehicles would be expected with only 10 outbound, representing trips to drop passengers off at the sports fields. The remaining inbound vehicles would be expected to depart after the peak hour ends.

Source: Fehr & Peers 2016

Exhibit 4.10-5 shows the AM and PM peak hours' expected distribution of vehicle trips (for both inbound and outbound travel directions) under existing conditions. The distribution of project trips was based on the following information and analysis methods:

1. Directionality of trips entering/exiting 204-unit residential neighborhood directly east of the project. This data revealed moderately different distribution patterns among inbound versus outbound trips. Given the project's similar location and land uses, a comparable distribution of trips to this neighborhood is expected.

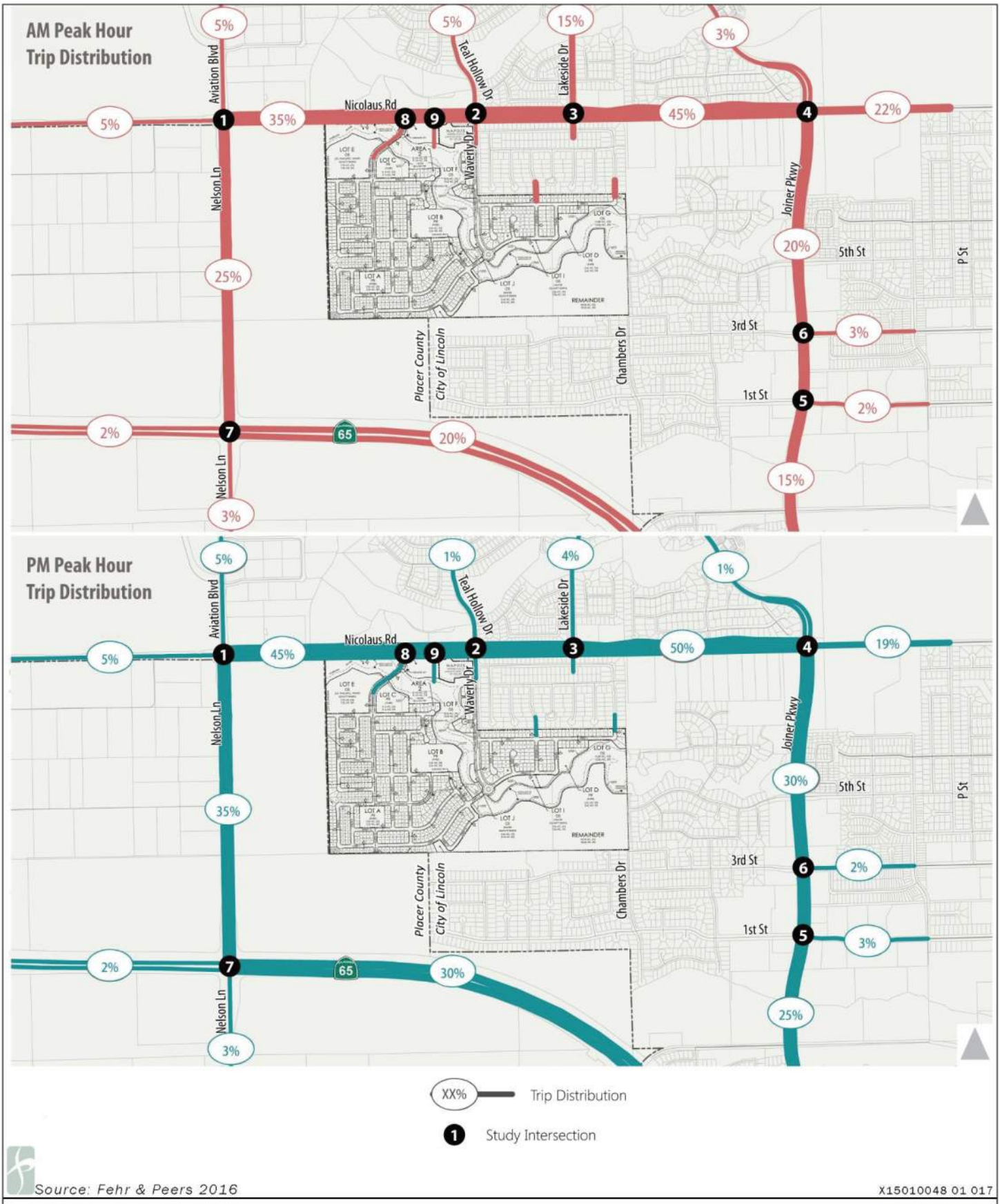
2. Existing directional travel patters to and from the housing development south of Nicolaus Road between Waverly Drive and Lakeside Drive.

3. Existing travel patterns along Nicolaus Road, Nelson Lane, and Joiner Parkway (to understand regional travel patterns).

4. Complementary land uses (i.e., employment, retail, and schools) within the study area.

The AM peak hour distribution shows a slightly greater orientation of trips towards schools in the area (including Foskett Ranch Elementary, Glen Edwards Middle School, and Lincoln High School), while the PM peak hour distribution shows a somewhat greater directionality toward commercial areas.

Exhibit 4.10-6 shows the "project only" trips, which are derived from the aforementioned trip generation and distribution estimates.



Source: Fehr & Peers 2016

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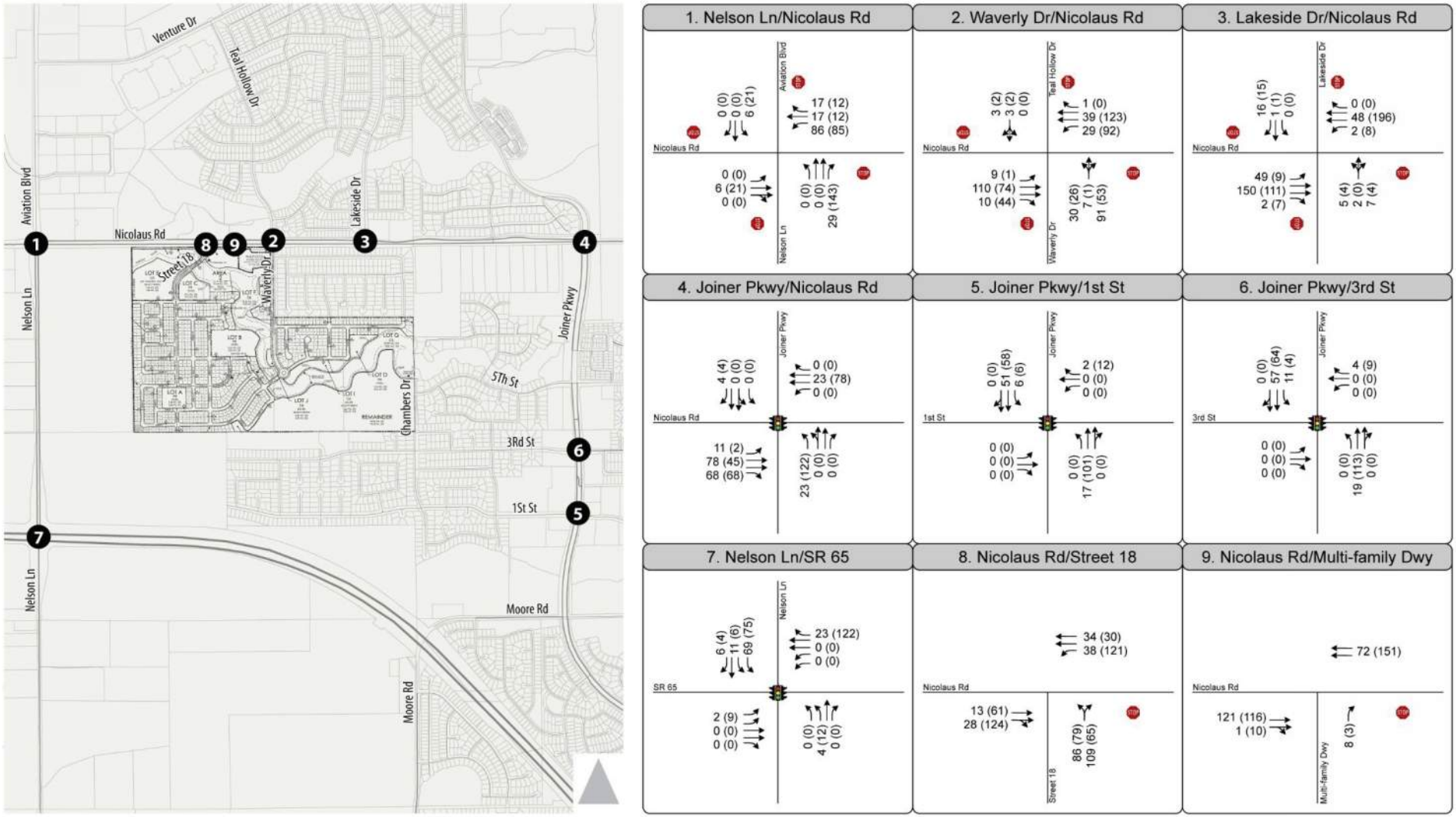
Exhibit 4.10-5 **Peak Hour Project Trip Distribution**



Source: Fehr & Peers 2016

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Exhibit 4.10-6

Project Only Trips

CUMULATIVE CONDITIONS

The cumulative analysis consists of two scenarios:

1. Cumulative No Project Conditions – This scenario represents reasonably foreseeable land developments and roadway improvements (see description below) anticipated under cumulative conditions. Under this scenario, the project site is assumed to remain undeveloped.

2. Cumulative Plus Project conditions – This scenario assumes development of the project under the same cumulative setting to measure the project's contribution to cumulative impacts.

This study uses a version of the Placer County cumulative year TDF model that has been updated to include the SR 65 Lincoln Bypass. In addition, this version of the TDF model was utilized in the transportation impact studies for the Village 5 Specific Plan and the SUD-B project. Planned roadway improvements and land use changes from these and other previous projects are incorporated into this version of the TDF model. Within the study area, the following roadway improvements are anticipated under cumulative conditions (based on their inclusion in the City's Public Facilities Element):

- Traffic signal at the Lakeside Drive/Nicolaus Road intersection
- Traffic signal (and additional lanes) at the Nelson Lane/Nicolaus Road intersection

No improvements were assumed at the SR 65/Nelson Lane intersection. All other study intersections were assumed to have identical lane configurations and traffic controls as existing conditions.

Cumulative land use assumptions in the study area vicinity include buildout of Lincoln Villages 5 and 7 as well as the SUD-B project which would consist of a mix of residential and retail east of Nelson Lane adjacent to the project. Road connections between SUD-B and the project are discussed in detail below. In addition, the four-acre property located directly north of the Nicolaus Road/Street 18 intersection is zoned for commercial land uses per the City of Lincoln "Zoning Map" (2013). This property was assumed to be developed and have access via a fourth leg to the Nicolaus Road/Street 18 intersection.

The project was added to the Placer County cumulative year TDF model as follows. Its land uses were represented by four geographically defined traffic analysis zones. Its proposed internal roadway system and vehicular accesses onto Nicolaus Road were also added. Under cumulative conditions, the project would also have access connections to the adjacent SUD-B project as follows:

1. Street 26 (West): Project trips would be able to access the project site through a western connection to the planned SUD-B project. This would involve accessing the SUD-B site from a major intersection on Nelson Lane, traveling east, and entering Street 26 of the project.

2. Street 10 (South): Project trips would be able to access the project site through a southern connection to the planned SUD-B project. This would involve accessing the SUD-B site from Nelson Lane and traveling to Street 10 of the project. This could also involve traveling along First or Third Street south of the project, which would be connected via streets within SUD-B (though these routes are quite circuitous to the project).

An important component of the travel demand modeling related to selecting a proper free-flow travel speed for the Street 26 / SUD-B street connection that would link Nelson Lane and Street 18. Within SUD-B, this roadway would feature horizontal curvature and include a roundabout. In addition, several residences would front onto this street connection. Within the project site, it would be designed as a residential street with a 31-foot width from face of curb. For this reason, it was decided that this roadway connection should be modeled with a free-flow speed of 30 miles per hour. This is important because this route serves as a potential cut-through or bypass to staying on Nelson Lane and Nicolaus Road. The modeling results are discussed later in this section.

To develop peak hour turning movements under both cumulative scenarios, the "difference method" was employed. The "difference method" accounts for model error through the following adjustment technique:

> *Cumulative Forecast = Existing Traffic Count + (Cumulative Model Volume – Base Year Model Volume)*

In other words, the incremental growth between the base year and cumulative versions of the TDF model are added to the existing traffic count.

THRESHOLDS OF SIGNIFICANCE

The following section describes the standards of significance utilized to analyze and determine the project's potential impacts related to transportation and circulation. These criteria take into account the applicable level of service policies and standards from Appendix G of the CEQA Guidelines and the City of Lincoln and Caltrans adopted policies.

Intersections

Impacts to intersections are considered significant if the project would:

1. Cause the LOS to worsen from acceptable to unacceptable levels according to the following:

    a. For all intersections within Lincoln city limits, LOS C or better is considered acceptable and LOS D-F is considered unacceptable.

    b. For the SR 65/Nelson Lane intersection, LOS E or better is considered acceptable and LOS F is considered unacceptable.

2. Worsen unacceptable existing (or projected cumulative) operations according to the following:

    a. For all intersections within Lincoln city limits, it is considered unacceptable if the average vehicle delay increases by five seconds or more for an intersection that is already (or projected to be) operating at an unacceptable LOS without the project.

    b. For the SR 65/Nelson Lane intersection, it is considered unacceptable if the average vehicle delay increases by one second or more and the intersection is already (or projected to be) operating at an unacceptable LOS without project.

Bicycle and Pedestrian Facilities

The following significance criteria related to bicycle and pedestrian facilities reflect whether the project would conflict with adopted plans, policies, or programs regarding bicycle and pedestrian facilities. Impacts to bicycle and pedestrian facilities are considered significant if the project would:

1. Disrupt or interfere with existing or planned bicycle and pedestrian facilities.

2. Create a demand for bicycling or walking above the capacity which is provided or planned.

3. Create inconsistencies with adopted pedestrian or bicycle system plans, guidelines, policies, or standards.

Transit Facilities

The following significance criteria related to transit facilities reflect whether the project would conflict with adopted plans, policies, or programs regarding transit facilities. Impacts to the transit system are considered significant if the project would:

1. Create a demand for mass transit services above the capacity which is provided or planned.
2. Interfere with existing or planned transit facilities.

Emergency Vehicle Access and Emergency Evacuation

Impacts to transportation and circulation are considered significant if the project would:

1. Result in inadequate emergency access.

2. Fail to provide an adequate means for residents/visitors to evacuate the project site in a reasonable period of time in the event of an emergency.

Construction Impacts

Impacts to the transportation and circulation system are considered significant if construction activities for the project would:

1. Create a prolonged impact on travel conditions or facilities, including inadequate emergency vehicle access, traffic hazards to bicyclists and pedestrians, damage to roadbeds, or substantial truck traffic on roadways not designated as truck routes.

ISSUES OR POTENTIAL IMPACTS NOT DISCUSSED FURTHER

Project impacts to air, water, and rail modes of travel are considered to be less than significant due to the lack of such facilities within the study area or project consistency with any applicable policies such as land use planning requirements in the vicinity of the Lincoln Airport (see Chapter 1, Introduction).

IMPACT ANALYSIS

This section presents the results of the impact analysis, identifies significant impacts, and provides mitigations (where necessary). First, the focus is on presenting the effects of the project on existing conditions (i.e., the Existing Plus Project Condition) and addressing these effects. Then, the focus of analysis is on presenting the transportation effects of the project in the context of cumulative conditions and addressing those effects.

Existing Plus Project Conditions

The “project only” (Exhibit 4.10-6) trips developed through the trip generation and distribution processes were assigned to the roadway network by adding those new trips to existing traffic volumes. Exhibit 4.10-7 shows the peak hour turning movement volumes and lane configurations under existing plus project conditions.

Michael Baker
INTERNATIONAL

Appendix F: Existing + Approved/Pending Projects Without Project Synchro Worksheets

1: Nelson Ln & Nicolaus Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.6	0.1	0.0	0.0	0.0	0.0	0.1	0.2	3.8
Total Del/Veh (s)	7.3	12.6	4.5	64.6	37.3	5.4	9.8	11.1	4.6	8.6	15.3	5.8

1: Nelson Ln & Nicolaus Rd Performance by movement

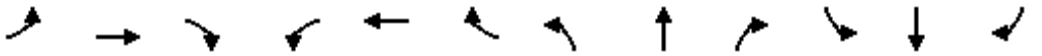
Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	26.8

2: Lakeside Dr & Nicolaus Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.8	0.1	1.2	0.0	0.0	0.0	0.2	0.1	0.1	0.2	0.2	3.6
Total Del/Veh (s)	8.9	12.2	4.9	6.9	10.6	3.5	6.8	8.6	3.8	10.6	8.7	3.5

2: Lakeside Dr & Nicolaus Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	9.4



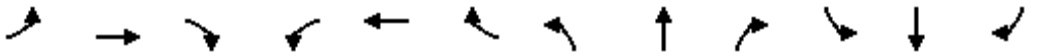
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	412	271	83	215	122	176	94	193	147	175	29
Future Volume (veh/h)	21	412	271	83	215	122	176	94	193	147	175	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	28	542	357	109	283	161	232	124	254	141	303	38
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	1074	479	139	1268	566	781	410	347	261	548	232
Arrive On Green	0.02	0.30	0.30	0.08	0.36	0.36	0.22	0.22	0.22	0.15	0.15	0.15
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3563	1870	1585	1781	3741	1585
Grp Volume(v), veh/h	28	542	357	109	283	161	232	124	254	141	303	38
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.3	10.1	16.3	4.8	4.5	5.8	4.4	4.4	11.9	5.9	6.0	1.7
Cycle Q Clear(g_c), s	1.3	10.1	16.3	4.8	4.5	5.8	4.4	4.4	11.9	5.9	6.0	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	41	1074	479	139	1268	566	781	410	347	261	548	232
V/C Ratio(X)	0.68	0.50	0.75	0.79	0.22	0.28	0.30	0.30	0.73	0.54	0.55	0.16
Avail Cap(c_a), veh/h	111	1861	830	189	2016	899	1648	865	733	822	1726	731
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.9	23.0	25.2	36.3	18.0	18.5	26.1	26.2	29.1	31.7	31.8	29.9
Incr Delay (d2), s/veh	7.1	0.4	2.8	9.7	0.1	0.3	0.3	0.6	4.2	2.5	1.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	4.0	6.0	2.4	1.7	2.1	1.8	1.9	4.7	2.6	2.7	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	23.5	28.0	46.0	18.1	18.8	26.4	26.8	33.3	34.2	33.0	30.4
LnGrp LOS	D	C	C	D	B	B	C	C	C	C	C	C
Approach Vol, veh/h		927			553			610			482	
Approach Delay, s/veh		25.9			23.8			29.4			33.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		22.9	10.7	29.5		17.0	6.4	33.9				
Change Period (Y+Rc), s		5.3	4.5	5.3		5.3	4.5	5.3				
Max Green Setting (Gmax), s		37.1	8.5	42.0		37.0	5.0	45.5				
Max Q Clear Time (g_c+I1), s		13.9	6.8	18.3		8.0	3.3	7.8				
Green Ext Time (p_c), s		3.6	0.0	6.0		3.7	0.0	3.0				

Intersection Summary	
HCM 6th Ctrl Delay	27.6
HCM 6th LOS	C

Notes

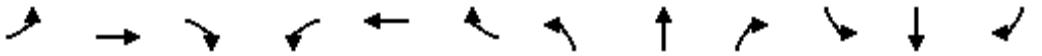
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	28	55	203	12	39	22	369	166	44	411	13
Future Volume (veh/h)	23	28	55	203	12	39	22	369	166	44	411	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	39	76	282	17	54	31	512	231	61	571	18
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	52	67	131	316	105	334	50	942	420	83	1007	449
Arrive On Green	0.03	0.12	0.12	0.18	0.27	0.27	0.03	0.27	0.27	0.05	0.28	0.28
Sat Flow, veh/h	1781	567	1105	1781	394	1251	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	32	0	115	282	0	71	31	512	231	61	571	18
Grp Sat Flow(s),veh/h/ln	1781	0	1672	1781	0	1645	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.9	0.0	3.1	7.4	0.0	1.6	0.8	5.9	6.0	1.6	6.6	0.4
Cycle Q Clear(g_c), s	0.9	0.0	3.1	7.4	0.0	1.6	0.8	5.9	6.0	1.6	6.6	0.4
Prop In Lane	1.00		0.66	1.00		0.76	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	52	0	198	316	0	439	50	942	420	83	1007	449
V/C Ratio(X)	0.62	0.00	0.58	0.89	0.00	0.16	0.62	0.54	0.55	0.74	0.57	0.04
Avail Cap(c_a), veh/h	223	0	1222	316	0	1288	186	2055	917	186	2055	917
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	0.0	20.0	19.2	0.0	13.5	23.0	15.1	15.1	22.5	14.7	12.4
Incr Delay (d2), s/veh	4.5	0.0	3.2	24.9	0.0	0.2	4.5	0.6	1.4	4.7	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	1.3	5.0	0.0	0.6	0.4	2.0	2.1	0.7	2.2	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	0.0	23.2	44.2	0.0	13.7	27.5	15.7	16.5	27.3	15.3	12.5
LnGrp LOS	C	A	C	D	A	B	C	B	B	C	B	B
Approach Vol, veh/h		147			353			774			650	
Approach Delay, s/veh		24.1			38.0			16.4			16.3	
Approach LOS		C			D			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.7	18.0	13.0	10.2	5.9	18.9	5.9	17.3
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	5.0	27.7	8.5	35.0	5.0	27.7	6.0	37.5
Max Q Clear Time (g_c+I1), s	3.6	8.0	9.4	5.1	2.8	8.6	2.9	3.6
Green Ext Time (p_c), s	0.0	4.7	0.0	0.8	0.0	4.2	0.0	0.5

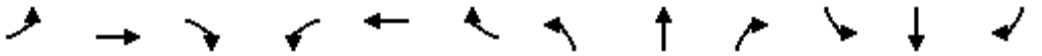
Intersection Summary	
HCM 6th Ctrl Delay	20.9
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	58	81	104	19	68	22	411	65	111	613	28
Future Volume (veh/h)	92	58	81	104	19	68	22	411	65	111	613	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	119	75	105	135	25	88	29	534	84	144	796	36
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	231	195	173	250	212	48	968	432	184	1239	553
Arrive On Green	0.09	0.12	0.12	0.10	0.13	0.13	0.03	0.27	0.27	0.10	0.35	0.35
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	119	75	105	135	25	88	29	534	84	144	796	36
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	3.2	1.8	3.0	3.6	0.6	2.5	0.8	6.2	2.0	3.8	9.1	0.7
Cycle Q Clear(g_c), s	3.2	1.8	3.0	3.6	0.6	2.5	0.8	6.2	2.0	3.8	9.1	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	231	195	173	250	212	48	968	432	184	1239	553
V/C Ratio(X)	0.77	0.33	0.54	0.78	0.10	0.42	0.61	0.55	0.19	0.78	0.64	0.07
Avail Cap(c_a), veh/h	474	1351	1145	239	1104	935	213	2009	896	239	2060	919
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	19.4	19.9	21.4	18.4	19.3	23.3	15.1	13.5	21.2	13.2	10.5
Incr Delay (d2), s/veh	3.1	1.0	2.8	7.0	0.2	1.6	4.6	0.6	0.3	8.8	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.8	1.2	1.7	0.2	0.9	0.4	2.3	0.7	1.8	2.9	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.7	20.4	22.7	28.4	18.6	20.8	28.0	15.7	13.8	30.0	13.9	10.6
LnGrp LOS	C	C	C	C	B	C	C	B	B	C	B	B
Approach Vol, veh/h		299			248			647			976	
Approach Delay, s/veh		22.9			24.7			16.0			16.2	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	18.5	9.2	11.3	5.8	22.2	8.7	11.8
Change Period (Y+Rc), s	4.5	5.3	4.5	5.3	4.5	5.3	4.5	5.3
Max Green Setting (Gmax), s	6.5	27.4	6.5	35.0	5.8	28.1	12.9	28.6
Max Q Clear Time (g_c+I1), s	5.8	8.2	5.6	5.0	2.8	11.1	5.2	4.5
Green Ext Time (p_c), s	0.0	4.4	0.0	1.0	0.0	5.8	0.1	0.5

Intersection Summary	
HCM 6th Ctrl Delay	18.0
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	45	235	131	96	35	145	402	82	40	590	155
Future Volume (veh/h)	51	45	235	131	96	35	145	402	82	40	590	155
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	58	301	168	123	45	186	515	105	51	756	199
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	83	428	363	205	555	471	224	1350	602	65	1032	460
Arrive On Green	0.05	0.23	0.23	0.12	0.30	0.30	0.13	0.38	0.38	0.04	0.29	0.29
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	65	58	301	168	123	45	186	515	105	51	756	199
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	2.8	1.9	14.2	7.2	3.9	1.6	8.0	8.2	3.4	2.2	15.0	8.0
Cycle Q Clear(g_c), s	2.8	1.9	14.2	7.2	3.9	1.6	8.0	8.2	3.4	2.2	15.0	8.0
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	83	428	363	205	555	471	224	1350	602	65	1032	460
V/C Ratio(X)	0.78	0.14	0.83	0.82	0.22	0.10	0.83	0.38	0.17	0.79	0.73	0.43
Avail Cap(c_a), veh/h	216	931	789	239	955	809	257	1583	706	155	1379	615
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	24.0	28.8	33.9	20.7	19.9	33.4	17.6	16.1	37.4	25.0	22.5
Incr Delay (d2), s/veh	5.8	0.2	5.9	15.3	0.2	0.1	16.0	0.2	0.2	7.8	1.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.9	5.8	4.0	1.7	0.6	4.2	3.1	1.2	1.1	6.3	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.7	24.2	34.6	49.2	21.0	20.0	49.5	17.8	16.3	45.2	26.6	23.3
LnGrp LOS	D	C	C	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		424			336			806			1006	
Approach Delay, s/veh		34.4			34.9			24.9			26.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.3	35.1	13.5	22.4	14.3	28.1	8.2	27.8
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	6.8	34.9	10.5	39.0	11.3	30.4	9.5	40.0
Max Q Clear Time (g_c+I1), s	4.2	10.2	9.2	16.2	10.0	17.0	4.8	5.9
Green Ext Time (p_c), s	0.0	4.4	0.0	1.8	0.0	5.7	0.0	1.1

Intersection Summary	
HCM 6th Ctrl Delay	28.6
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	36.3
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	0	26	1	0	0	10	581	2	0	860	11
Future Vol, veh/h	22	0	26	1	0	0	10	581	2	0	860	11
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	0	31	1	0	0	12	684	2	0	1012	13
Number of Lanes	0	1	0	0	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	10.5	10.4	16.2	51.5
HCM LOS	B	B	C	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	3%	0%	46%	100%	0%	0%
Vol Thru, %	97%	99%	0%	0%	100%	96%
Vol Right, %	0%	1%	54%	0%	0%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	301	293	48	1	573	298
LT Vol	10	0	22	1	0	0
Through Vol	291	291	0	0	573	287
RT Vol	0	2	26	0	0	11
Lane Flow Rate	354	344	56	1	675	350
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.572	0.555	0.103	0.002	1.045	0.54
Departure Headway (Hd)	5.992	5.97	6.694	7.387	5.577	5.551
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	605	609	539	487	654	655
Service Time	3.692	3.67	4.694	5.387	3.277	3.251
HCM Lane V/C Ratio	0.585	0.565	0.104	0.002	1.032	0.534
HCM Control Delay	16.4	15.9	10.5	10.4	70.6	14.6
HCM Lane LOS	C	C	B	B	F	B
HCM 95th-tile Q	3.6	3.4	0.3	0	17.8	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	19	85	48	16	56	23	510	12	50	846	0
Future Volume (veh/h)	22	19	85	48	16	56	23	510	12	50	846	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	22	100	56	19	66	27	600	14	59	995	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	35	29	134	148	50	174	76	1225	29	133	1340	0
Arrive On Green	0.12	0.12	0.12	0.11	0.11	0.11	0.04	0.35	0.35	0.07	0.38	0.00
Sat Flow, veh/h	291	246	1118	1346	457	1585	1781	3550	83	1781	3647	0
Grp Volume(v), veh/h	148	0	0	75	0	66	27	300	314	59	995	0
Grp Sat Flow(s),veh/h/ln	1655	0	0	1803	0	1585	1781	1777	1855	1781	1777	0
Q Serve(g_s), s	4.9	0.0	0.0	2.2	0.0	2.2	0.8	7.6	7.6	1.8	13.8	0.0
Cycle Q Clear(g_c), s	4.9	0.0	0.0	2.2	0.0	2.2	0.8	7.6	7.6	1.8	13.8	0.0
Prop In Lane	0.18		0.68	0.75		1.00	1.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	198	0	0	198	0	174	76	613	641	133	1340	0
V/C Ratio(X)	0.75	0.00	0.00	0.38	0.00	0.38	0.35	0.49	0.49	0.44	0.74	0.00
Avail Cap(c_a), veh/h	987	0	0	1076	0	946	219	935	977	219	1871	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)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	24.3	0.0	0.0	23.6	0.0	23.6	26.5	14.7	14.7	25.2	15.4	0.0
Incr Delay (d2), s/veh	2.1	0.0	0.0	0.4	0.0	0.5	1.0	0.6	0.6	0.9	1.0	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	1.9	0.0	0.0	0.9	0.0	0.8	0.3	2.6	2.8	0.7	4.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.4	0.0	0.0	24.0	0.0	24.1	27.6	15.3	15.3	26.1	16.4	0.0
LnGrp LOS	C	A	A	C	A	C	C	B	B	C	B	A
Approach Vol, veh/h		148			141			641			1054	
Approach Delay, s/veh		26.4			24.0			15.8			16.9	
Approach LOS		C			C			B			B	

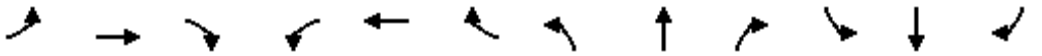
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.7	25.2		11.8	6.9	27.0		11.2				
Change Period (Y+Rc), s	4.5	5.5		5.0	4.5	5.5		5.0				
Max Green Setting (Gmax), s	7.0	30.0		34.0	7.0	30.0		34.0				
Max Q Clear Time (g_c+I1), s	3.8	9.6		6.9	2.8	15.8		4.2				
Green Ext Time (p_c), s	0.0	3.4		0.6	0.0	5.7		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		17.8	
HCM 6th LOS		B	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	668	270	8	306	184	230	83	25	112	58	18
Future Volume (veh/h)	45	668	270	8	306	184	230	83	25	112	58	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	815	329	10	373	224	280	101	30	137	71	22
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	118	1139	508	32	584	346	369	287	85	174	90	28
Arrive On Green	0.07	0.32	0.32	0.02	0.27	0.27	0.21	0.21	0.21	0.16	0.16	0.16
Sat Flow, veh/h	1781	3554	1585	1781	2148	1270	1781	1385	411	1064	551	171
Grp Volume(v), veh/h	55	815	329	10	308	289	280	0	131	230	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1642	1781	0	1796	1786	0	0
Q Serve(g_s), s	2.0	13.9	12.2	0.4	10.5	10.7	10.2	0.0	4.3	8.5	0.0	0.0
Cycle Q Clear(g_c), s	2.0	13.9	12.2	0.4	10.5	10.7	10.2	0.0	4.3	8.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.77	1.00		0.23	0.60		0.10
Lane Grp Cap(c), veh/h	118	1139	508	32	483	446	369	0	372	293	0	0
V/C Ratio(X)	0.47	0.72	0.65	0.32	0.64	0.65	0.76	0.00	0.35	0.79	0.00	0.00
Avail Cap(c_a), veh/h	184	1705	760	181	850	785	932	0	940	883	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(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.9	20.6	20.0	33.4	22.0	22.1	25.7	0.0	23.3	27.6	0.0	0.0
Incr Delay (d2), s/veh	1.1	0.9	1.4	2.1	1.4	1.6	3.9	0.0	0.7	1.8	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	0.9	5.2	4.2	0.2	4.1	3.9	4.5	0.0	1.8	3.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.0	21.5	21.4	35.5	23.4	23.7	29.5	0.0	24.0	29.4	0.0	0.0
LnGrp LOS	C	C	C	D	C	C	C	A	C	C	A	A
Approach Vol, veh/h		1199			607			411			230	
Approach Delay, s/veh		21.9			23.8			27.8			29.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.1	24.2		19.2	5.7	27.5		16.3				
Change Period (Y+Rc), s	4.5	5.5		5.0	4.5	5.5		5.0				
Max Green Setting (Gmax), s	7.1	32.9		36.0	7.0	33.0		34.0				
Max Q Clear Time (g_c+I1), s	4.0	12.7		12.2	2.4	15.9		10.5				
Green Ext Time (p_c), s	0.0	3.4		2.1	0.0	6.1		0.9				

Intersection Summary			
HCM 6th Ctrl Delay		24.1	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	375	389	54	161	35	298	251	87	88	266	21
Future Volume (veh/h)	52	375	389	54	161	35	298	251	87	88	266	21
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	469	0	68	201	0	372	314	0	110	332	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	821		263	827		532	1037		321	821	
Arrive On Green	0.07	0.23	0.00	0.08	0.23	0.00	0.15	0.29	0.00	0.09	0.23	0.00
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	65	469	0	68	201	0	372	314	0	110	332	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	2.3	7.6	0.0	1.2	3.0	0.0	6.6	4.5	0.0	1.9	5.1	0.0
Cycle Q Clear(g_c), s	2.3	7.6	0.0	1.2	3.0	0.0	6.6	4.5	0.0	1.9	5.1	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	133	821		263	827		532	1037		321	821	
V/C Ratio(X)	0.49	0.57		0.26	0.24		0.70	0.30		0.34	0.40	
Avail Cap(c_a), veh/h	192	1478		373	1478		718	1861		373	1505	
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	28.9	22.1	0.0	28.3	20.3	0.0	26.1	17.9	0.0	27.6	21.2	0.0
Incr Delay (d2), s/veh	2.8	0.6	0.0	0.5	0.2	0.0	1.9	0.2	0.0	0.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	2.9	0.0	0.5	1.1	0.0	2.6	1.6	0.0	0.8	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.7	22.7	0.0	28.8	20.4	0.0	28.0	18.0	0.0	28.2	21.5	0.0
LnGrp LOS	C	C		C	C		C	B		C	C	
Approach Vol, veh/h		534	A		269	A		686	A		442	A
Approach Delay, s/veh		23.8			22.5			23.4			23.2	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	20.5	9.3	20.6	10.5	24.5	9.4	20.5
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5
Max Green Setting (Gmax), s	13.5	27.5	7.0	27.0	7.0	34.0	7.0	27.0
Max Q Clear Time (g_c+I1), s	8.6	7.1	4.3	5.0	3.9	6.5	3.2	9.6
Green Ext Time (p_c), s	0.6	1.9	0.0	1.0	0.1	1.9	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	23.3
HCM 6th LOS	C

Notes

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

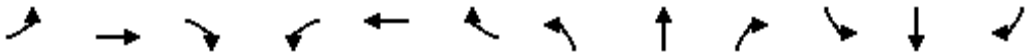
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	29	373	174	41	62	268	585	58	67	621	13
Future Volume (veh/h)	26	29	373	174	41	62	268	585	58	67	621	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	34	434	125	156	72	312	680	67	78	722	15
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	521	722	644	284	760	644	214	1414	439	287	1225	380
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.12	0.28	0.28	0.08	0.24	0.24
Sat Flow, veh/h	1153	1777	1585	925	1870	1585	1781	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	30	34	434	125	156	72	312	680	67	78	722	15
Grp Sat Flow(s),veh/h/ln	1153	1777	1585	925	1870	1585	1781	1702	1585	1728	1702	1585
Q Serve(g_s), s	1.1	0.7	14.0	8.0	3.4	1.8	7.5	6.9	2.0	1.3	7.8	0.5
Cycle Q Clear(g_c), s	4.5	0.7	14.0	22.0	3.4	1.8	7.5	6.9	2.0	1.3	7.8	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	521	722	644	284	760	644	214	1414	439	287	1225	380
V/C Ratio(X)	0.06	0.05	0.67	0.44	0.21	0.11	1.46	0.48	0.15	0.27	0.59	0.04
Avail Cap(c_a), veh/h	717	1023	913	441	1077	913	214	2238	695	387	2198	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.5	11.2	15.2	24.1	12.0	11.5	27.5	18.9	17.1	26.9	21.0	18.2
Incr Delay (d2), s/veh	0.0	0.0	1.2	1.1	0.1	0.1	230.8	0.3	0.2	0.2	0.5	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	0.3	0.3	4.8	1.7	1.3	0.6	16.6	2.4	0.7	0.5	2.8	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	11.3	16.4	25.2	12.1	11.6	258.3	19.1	17.2	27.1	21.5	18.3
LnGrp LOS	B	B	B	C	B	B	F	B	B	C	C	B
Approach Vol, veh/h		498			353			1059			815	
Approach Delay, s/veh		15.9			16.7			89.5			22.0	
Approach LOS		B			B			F			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	20.6		29.9	9.7	22.9		29.9				
Change Period (Y+Rc), s	4.5	5.6		4.5	4.5	5.6		4.5				
Max Green Setting (Gmax), s	7.5	26.9		36.0	7.0	27.4		36.0				
Max Q Clear Time (g_c+I1), s	9.5	9.8		24.0	3.3	8.9		16.0				
Green Ext Time (p_c), s	0.0	4.4		1.4	0.0	4.4		3.5				

Intersection Summary	
HCM 6th Ctrl Delay	46.4
HCM 6th LOS	D

Notes

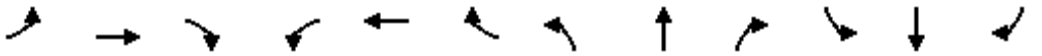
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	733	0	0	1033	95	159	0	272	0	0	0
Future Volume (vph)	57	733	0	0	1033	95	159	0	272	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.4			5.4	5.4	5.4	5.4	5.4			
Lane Util. Factor	1.00	0.95			0.91	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			5085	1583	1681	1681	2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			5085	1583	1681	1681	2787			
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	67	862	0	0	1215	112	187	0	320	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	98	0	0	280	0	0	0
Lane Group Flow (vph)	67	862	0	0	1215	14	93	94	40	0	0	0
Turn Type	Prot	NA			NA	custom	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						8	8		8			
Actuated Green, G (s)	5.4	27.7			17.6	9.7	9.7	9.7	9.7			
Effective Green, g (s)	5.4	27.7			17.6	9.7	9.7	9.7	9.7			
Actuated g/C Ratio	0.07	0.35			0.22	0.12	0.12	0.12	0.12			
Clearance Time (s)	4.7	5.4			5.4	5.4	5.4	5.4	5.4			
Vehicle Extension (s)	2.0	2.0			3.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	121	1250			1141	195	207	207	344			
v/s Ratio Prot	0.04	c0.24			c0.24							
v/s Ratio Perm						0.01	0.06	0.06	0.01			
v/c Ratio	0.55	0.69			1.06	0.07	0.45	0.45	0.12			
Uniform Delay, d1	35.3	21.7			30.4	30.4	31.9	31.9	30.5			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	3.1	1.3			45.7	0.1	0.6	0.6	0.1			
Delay (s)	38.4	23.0			76.1	30.4	32.4	32.5	30.6			
Level of Service	D	C			E	C	C	C	C			
Approach Delay (s)		24.1			72.3			31.3			0.0	
Approach LOS		C			E			C			A	

Intersection Summary			
HCM 2000 Control Delay	48.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	78.4	Sum of lost time (s)	18.5
Intersection Capacity Utilization	44.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	710	670	0	477	710	0	0	0	80	0	17
Future Volume (veh/h)	0	710	670	0	477	710	0	0	0	80	0	17
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1945	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	0	1152	517	0	536	0				90	0	19
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	0	2	2	0	2	2				2	2	2
Cap, veh/h	0	2012	820	0	2641					280	0	249
Arrive On Green	0.00	0.52	0.52	0.00	0.52	0.00				0.16	0.00	0.16
Sat Flow, veh/h	0	3890	1585	0	5274	1585				1781	0	1585
Grp Volume(v), veh/h	0	1152	517	0	536	0				90	0	19
Grp Sat Flow(s),veh/h/ln	0	1945	1585	0	1702	1585				1781	0	1585
Q Serve(g_s), s	0.0	6.3	7.2	0.0	1.8	0.0				1.4	0.0	0.3
Cycle Q Clear(g_c), s	0.0	6.3	7.2	0.0	1.8	0.0				1.4	0.0	0.3
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2012	820	0	2641					280	0	249
V/C Ratio(X)	0.00	0.57	0.63	0.00	0.20					0.32	0.00	0.08
Avail Cap(c_a), veh/h	0	4027	1641	0	5285					1022	0	910
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.1	5.4	0.0	4.0	0.0				11.6	0.0	11.2
Incr Delay (d2), s/veh	0.0	0.1	0.3	0.0	0.0	0.0				0.2	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
%ile BackOfQ(50%),veh/ln	0.0	0.7	0.7	0.0	0.2	0.0				0.4	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.2	5.7	0.0	4.1	0.0				11.8	0.0	11.2
LnGrp LOS	A	A	A	A	A					B	A	B
Approach Vol, veh/h		1669			536	A					109	
Approach Delay, s/veh		5.4			4.1						11.7	
Approach LOS		A			A						B	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		21.4		9.6		21.4						
Change Period (Y+Rc), s		5.4		* 4.7		5.4						
Max Green Setting (Gmax), s		32.1		* 18		32.1						
Max Q Clear Time (g_c+I1), s		9.2		3.4		3.8						
Green Ext Time (p_c), s		6.8		0.2		2.3						

Intersection Summary												
HCM 6th Ctrl Delay			5.4									
HCM 6th LOS			A									

Notes

User approved volume balancing among the lanes for turning movement.

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

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

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	668	0	0	395	0	0
Future Vol, veh/h	668	0	0	395	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	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	726	0	0	429	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	726	0	1155	726
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	429	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	877	-	218	425
Stage 1	-	-	-	-	479	-
Stage 2	-	-	-	-	657	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	877	-	218	425
Mov Cap-2 Maneuver	-	-	-	-	218	-
Stage 1	-	-	-	-	479	-
Stage 2	-	-	-	-	657	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	877	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	431	0	0	448
Future Vol, veh/h	0	0	431	0	0	448
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	150	150	-
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	468	0	0	487

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	712	234	0	0	468	0
Stage 1	468	-	-	-	-	-
Stage 2	244	-	-	-	-	-
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	367	768	-	-	1090	-
Stage 1	597	-	-	-	-	-
Stage 2	774	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	367	768	-	-	1090	-
Mov Cap-2 Maneuver	367	-	-	-	-	-
Stage 1	597	-	-	-	-	-
Stage 2	774	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1090	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

1: Nelson Ln & Nicolaus Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	3.4
Total Del/Veh (s)	8.4	14.8	4.9	39.2	14.0	6.4	14.3	11.5	7.0	11.4	19.1	5.8

1: Nelson Ln & Nicolaus Rd Performance by movement

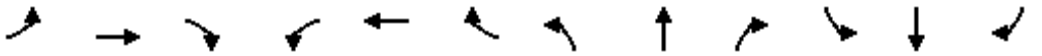
Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	15.8

2: Lakeside Dr & Nicolaus Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.3	3.9
Total Del/Veh (s)	8.0	9.8	6.0	6.5	9.2	3.8	5.6	6.6	2.9	7.4	8.4	3.4

2: Lakeside Dr & Nicolaus Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	8.3



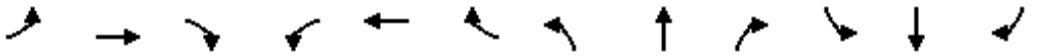
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	235	281	57	322	78	344	120	59	61	85	8
Future Volume (veh/h)	10	235	281	57	322	78	344	120	59	61	85	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	10	245	293	59	335	81	358	125	61	51	107	8
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	18	932	416	77	1049	468	675	354	300	239	501	212
Arrive On Green	0.01	0.26	0.26	0.04	0.30	0.30	0.19	0.19	0.19	0.13	0.13	0.13
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	3563	1870	1585	1781	3741	1585
Grp Volume(v), veh/h	10	245	293	59	335	81	358	125	61	51	107	8
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.3	3.0	9.2	1.8	4.0	2.1	5.0	3.2	1.8	1.4	1.4	0.2
Cycle Q Clear(g_c), s	0.3	3.0	9.2	1.8	4.0	2.1	5.0	3.2	1.8	1.4	1.4	0.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	18	932	416	77	1049	468	675	354	300	239	501	212
V/C Ratio(X)	0.54	0.26	0.71	0.77	0.32	0.17	0.53	0.35	0.20	0.21	0.21	0.04
Avail Cap(c_a), veh/h	162	2716	1211	275	2942	1312	2405	1263	1070	1199	2518	1067
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.1	16.1	18.4	26.0	15.1	14.4	20.1	19.3	18.8	21.2	21.2	20.7
Incr Delay (d2), s/veh	9.0	0.2	2.6	5.8	0.2	0.2	0.9	0.9	0.5	0.6	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	1.1	3.2	0.8	1.4	0.7	1.9	1.3	0.6	0.6	0.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.1	16.2	21.0	31.9	15.3	14.6	21.0	20.2	19.2	21.8	21.5	20.8
LnGrp LOS	D	B	C	C	B	B	C	C	B	C	C	C
Approach Vol, veh/h		548			475			544			166	
Approach Delay, s/veh		19.2			17.2			20.6			21.6	
Approach LOS		B			B			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		15.7	6.9	19.7		12.7	5.1	21.5				
Change Period (Y+Rc), s		5.3	4.5	5.3		5.3	4.5	5.3				
Max Green Setting (Gmax), s		37.1	8.5	42.0		37.0	5.0	45.5				
Max Q Clear Time (g_c+I1), s		7.0	3.8	11.2		3.4	2.3	6.0				
Green Ext Time (p_c), s		3.4	0.0	3.2		1.2	0.0	3.1				

Intersection Summary	
HCM 6th Ctrl Delay	19.3
HCM 6th LOS	B

Notes

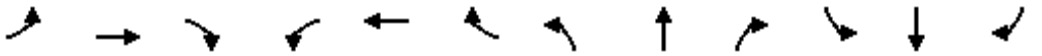
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	9	42	77	14	18	60	378	117	25	327	12
Future Volume (veh/h)	8	9	42	77	14	18	60	378	117	25	327	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	9	44	80	15	19	62	394	122	26	341	12
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	15	29	141	111	119	151	93	899	401	46	804	359
Arrive On Green	0.01	0.10	0.10	0.06	0.16	0.16	0.05	0.25	0.25	0.03	0.23	0.23
Sat Flow, veh/h	1781	276	1351	1781	750	950	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	8	0	53	80	0	34	62	394	122	26	341	12
Grp Sat Flow(s),veh/h/ln	1781	0	1627	1781	0	1699	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.2	0.0	1.0	1.5	0.0	0.6	1.2	3.2	2.1	0.5	2.8	0.2
Cycle Q Clear(g_c), s	0.2	0.0	1.0	1.5	0.0	0.6	1.2	3.2	2.1	0.5	2.8	0.2
Prop In Lane	1.00		0.83	1.00		0.56	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	15	0	170	111	0	269	93	899	401	46	804	359
V/C Ratio(X)	0.52	0.00	0.31	0.72	0.00	0.13	0.67	0.44	0.30	0.57	0.42	0.03
Avail Cap(c_a), veh/h	263	0	1679	394	0	1879	289	3008	1341	263	2955	1318
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.7	0.0	14.1	15.6	0.0	12.3	15.8	10.6	10.3	16.3	11.2	10.2
Incr Delay (d2), s/veh	10.0	0.0	1.2	3.2	0.0	0.3	3.1	0.4	0.5	4.1	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.4	0.6	0.0	0.2	0.4	0.9	0.6	0.2	0.8	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.7	0.0	15.3	18.8	0.0	12.5	18.8	11.1	10.8	20.4	11.7	10.3
LnGrp LOS	C	A	B	B	A	B	B	B	B	C	B	B
Approach Vol, veh/h		61			114			578			379	
Approach Delay, s/veh		16.8			17.0			11.8			12.2	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.4	13.9	6.6	8.0	6.3	13.0	4.8	9.9
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	5.0	28.7	7.5	35.0	5.5	28.2	5.0	37.5
Max Q Clear Time (g_c+I1), s	2.5	5.2	3.5	3.0	3.2	4.8	2.2	2.6
Green Ext Time (p_c), s	0.0	3.4	0.0	0.3	0.0	2.5	0.0	0.2

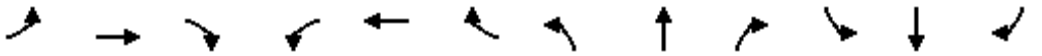
Intersection Summary	
HCM 6th Ctrl Delay	12.7
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	24	41	60	30	67	57	609	83	40	476	20
Future Volume (veh/h)	20	24	41	60	30	67	57	609	83	40	476	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	25	43	63	32	71	60	641	87	42	501	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	237	201	88	291	247	85	1151	513	66	1112	496
Arrive On Green	0.02	0.13	0.13	0.05	0.16	0.16	0.05	0.32	0.32	0.04	0.31	0.31
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	21	25	43	63	32	71	60	641	87	42	501	21
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.5	0.5	1.0	1.5	0.6	1.7	1.4	6.3	1.7	1.0	4.8	0.4
Cycle Q Clear(g_c), s	0.5	0.5	1.0	1.5	0.6	1.7	1.4	6.3	1.7	1.0	4.8	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	37	237	201	88	291	247	85	1151	513	66	1112	496
V/C Ratio(X)	0.57	0.11	0.21	0.72	0.11	0.29	0.70	0.56	0.17	0.64	0.45	0.04
Avail Cap(c_a), veh/h	227	1546	1310	273	1595	1352	273	2317	1033	265	2300	1026
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.5	16.4	16.6	19.8	15.4	15.8	19.9	11.8	10.2	20.1	11.6	10.1
Incr Delay (d2), s/veh	5.1	0.2	0.6	4.0	0.2	0.8	3.9	0.5	0.2	3.8	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.2	0.4	0.7	0.3	0.6	0.6	2.1	0.5	0.4	1.4	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.6	16.6	17.2	23.8	15.6	16.6	23.8	12.3	10.4	23.9	12.0	10.2
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h		89			166			788			564	
Approach Delay, s/veh		19.0			19.1			13.0			12.8	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	19.0	6.6	10.7	6.5	18.5	5.4	11.9
Change Period (Y+Rc), s	4.5	5.3	4.5	5.3	4.5	5.3	4.5	5.3
Max Green Setting (Gmax), s	6.3	27.6	6.5	35.0	6.5	27.4	5.4	36.1
Max Q Clear Time (g_c+I1), s	3.0	8.3	3.5	3.0	3.4	6.8	2.5	3.7
Green Ext Time (p_c), s	0.0	5.4	0.0	0.3	0.0	3.7	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	17	63	77	46	68	189	630	62	39	440	91
Future Volume (veh/h)	26	17	63	77	46	68	189	630	62	39	440	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	18	66	80	48	71	197	656	65	41	458	95
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	46	239	203	101	298	252	247	1255	560	64	889	397
Arrive On Green	0.03	0.13	0.13	0.06	0.16	0.16	0.14	0.35	0.35	0.04	0.25	0.25
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	27	18	66	80	48	71	197	656	65	41	458	95
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.7	0.4	1.7	2.0	1.0	1.7	4.7	6.5	1.2	1.0	4.9	2.1
Cycle Q Clear(g_c), s	0.7	0.4	1.7	2.0	1.0	1.7	4.7	6.5	1.2	1.0	4.9	2.1
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	46	239	203	101	298	252	247	1255	560	64	889	397
V/C Ratio(X)	0.59	0.08	0.33	0.79	0.16	0.28	0.80	0.52	0.12	0.64	0.52	0.24
Avail Cap(c_a), veh/h	202	1654	1402	202	1654	1402	263	2587	1154	206	2475	1104
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.3	16.9	17.5	20.5	16.0	16.3	18.4	11.3	9.6	21.0	14.2	13.2
Incr Delay (d2), s/veh	4.5	0.2	1.1	5.2	0.3	0.7	13.5	0.4	0.1	4.0	0.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.6	0.9	0.4	0.6	2.5	1.9	0.4	0.4	1.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.8	17.1	18.6	25.7	16.3	17.0	31.8	11.7	9.7	24.9	14.8	13.6
LnGrp LOS	C	B	B	C	B	B	C	B	A	C	B	B
Approach Vol, veh/h		111			199			918			594	
Approach Delay, s/veh		20.1			20.4			15.9			15.3	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.1	20.9	7.0	10.1	10.6	16.3	5.6	11.5
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	5.1	32.1	5.0	39.0	6.5	30.7	5.0	39.0
Max Q Clear Time (g_c+I1), s	3.0	8.5	4.0	3.7	6.7	6.9	2.7	3.7
Green Ext Time (p_c), s	0.0	5.5	0.0	0.4	0.0	4.1	0.0	0.6

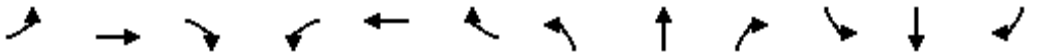
Intersection Summary	
HCM 6th Ctrl Delay	16.4
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	12.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	8	0	0	0	14	743	2	1	488	14
Future Vol, veh/h	10	0	8	0	0	0	14	743	2	1	488	14
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	8	0	0	0	14	758	2	1	498	14
Number of Lanes	0	1	0	0	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	9.4	0	13.8	11.3
HCM LOS	A	-	B	B

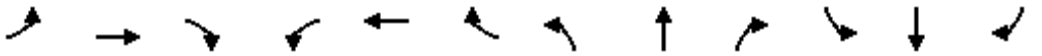
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	4%	0%	56%	0%	0%	0%
Vol Thru, %	96%	99%	0%	100%	100%	95%
Vol Right, %	0%	1%	44%	0%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	386	374	18	0	245	258
LT Vol	14	0	10	0	1	0
Through Vol	372	372	0	0	244	244
RT Vol	0	2	8	0	0	14
Lane Flow Rate	393	381	18	0	250	263
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.555	0.535	0.031	0	0.37	0.387
Departure Headway (Hd)	5.075	5.053	6.092	6.304	5.33	5.289
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	708	713	584	0	673	679
Service Time	2.816	2.794	4.167	4.386	3.078	3.038
HCM Lane V/C Ratio	0.555	0.534	0.031	0	0.371	0.387
HCM Control Delay	14	13.5	9.4	9.4	11.2	11.4
HCM Lane LOS	B	B	A	N	B	B
HCM 95th-tile Q	3.4	3.2	0.1	0	1.7	1.8



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	5	41	16	14	49	55	725	18	23	479	1
Future Volume (veh/h)	7	5	41	16	14	49	55	725	18	23	479	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	5	44	17	15	52	59	771	19	24	510	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	16	11	99	96	85	157	142	1271	31	71	1160	2
Arrive On Green	0.08	0.08	0.08	0.10	0.10	0.10	0.08	0.36	0.36	0.04	0.32	0.32
Sat Flow, veh/h	204	146	1280	968	854	1585	1781	3544	87	1781	3639	7
Grp Volume(v), veh/h	56	0	0	32	0	52	59	386	404	24	249	262
Grp Sat Flow(s),veh/h/ln	1630	0	0	1822	0	1585	1781	1777	1855	1781	1777	1869
Q Serve(g_s), s	1.5	0.0	0.0	0.8	0.0	1.4	1.5	8.4	8.4	0.6	5.2	5.2
Cycle Q Clear(g_c), s	1.5	0.0	0.0	0.8	0.0	1.4	1.5	8.4	8.4	0.6	5.2	5.2
Prop In Lane	0.12		0.79	0.53		1.00	1.00		0.05	1.00		0.00
Lane Grp Cap(c), veh/h	126	0	0	181	0	157	142	637	665	71	566	596
V/C Ratio(X)	0.45	0.00	0.00	0.18	0.00	0.33	0.41	0.61	0.61	0.34	0.44	0.44
Avail Cap(c_a), veh/h	1177	0	0	1316	0	1145	269	1133	1182	265	1129	1187
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.8	0.0	0.0	19.4	0.0	19.7	20.6	12.4	12.4	22.0	12.7	12.7
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.2	0.0	0.5	0.7	0.9	0.9	1.0	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.3	0.0	0.5	0.6	2.7	2.8	0.2	1.7	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.7	0.0	0.0	19.6	0.0	20.2	21.3	13.3	13.3	23.0	13.2	13.2
LnGrp LOS	C	A	A	B	A	C	C	B	B	C	B	B
Approach Vol, veh/h		56			84			849			535	
Approach Delay, s/veh		21.7			20.0			13.8			13.7	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	22.4		8.6	8.3	20.5		9.7				
Change Period (Y+Rc), s	4.5	5.5		5.0	4.5	5.5		5.0				
Max Green Setting (Gmax), s	7.0	30.0		34.0	7.1	29.9		34.0				
Max Q Clear Time (g_c+I1), s	2.6	10.4		3.5	3.5	7.2		3.4				
Green Ext Time (p_c), s	0.0	4.5		0.2	0.0	2.8		0.2				

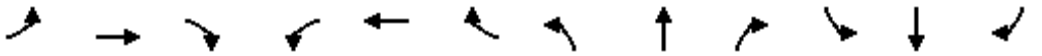
Intersection Summary			
HCM 6th Ctrl Delay		14.4	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	335	213	15	437	39	343	50	15	16	22	2
Future Volume (veh/h)	8	335	213	15	437	39	343	50	15	16	22	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	353	224	16	460	41	361	53	16	17	23	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	26	990	441	49	962	85	467	361	109	45	60	5
Arrive On Green	0.01	0.28	0.28	0.03	0.29	0.29	0.26	0.26	0.26	0.06	0.06	0.06
Sat Flow, veh/h	1781	3554	1585	1781	3301	293	1781	1379	416	736	996	87
Grp Volume(v), veh/h	8	353	224	16	247	254	361	0	69	42	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1818	1781	0	1795	1818	0	0
Q Serve(g_s), s	0.2	4.3	6.4	0.5	6.2	6.2	10.1	0.0	1.6	1.2	0.0	0.0
Cycle Q Clear(g_c), s	0.2	4.3	6.4	0.5	6.2	6.2	10.1	0.0	1.6	1.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.16	1.00		0.23	0.40		0.05
Lane Grp Cap(c), veh/h	26	990	441	49	518	530	467	0	470	110	0	0
V/C Ratio(X)	0.31	0.36	0.51	0.32	0.48	0.48	0.77	0.00	0.15	0.38	0.00	0.00
Avail Cap(c_a), veh/h	231	2045	912	231	1023	1046	1257	0	1266	1147	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(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.3	15.6	16.3	25.7	15.7	15.7	18.4	0.0	15.3	24.3	0.0	0.0
Incr Delay (d2), s/veh	2.4	0.2	0.9	1.4	0.7	0.7	3.3	0.0	0.2	0.8	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	1.5	2.1	0.2	2.2	2.2	4.2	0.0	0.6	0.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.7	15.8	17.2	27.1	16.4	16.4	21.7	0.0	15.4	25.1	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	C	A	B	C	A	A
Approach Vol, veh/h		585			517			430			42	
Approach Delay, s/veh		16.5			16.7			20.7			25.1	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.3	21.2		19.1	6.0	20.5		8.3				
Change Period (Y+Rc), s	4.5	5.5		5.0	4.5	5.5		5.0				
Max Green Setting (Gmax), s	7.0	31.0		38.0	7.0	31.0		34.0				
Max Q Clear Time (g_c+I1), s	2.2	8.2		12.1	2.5	8.4		3.2				
Green Ext Time (p_c), s	0.0	2.8		2.0	0.0	2.9		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		18.0	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	203	121	145	202	27	283	282	84	92	274	53
Future Volume (veh/h)	35	203	121	145	202	27	283	282	84	92	274	53
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	37	216	0	154	215	0	301	300	0	98	291	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	801		342	968		517	1020		304	801	
Arrive On Green	0.05	0.23	0.00	0.10	0.27	0.00	0.15	0.29	0.00	0.09	0.23	0.00
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	37	216	0	154	215	0	301	300	0	98	291	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	1.3	3.3	0.0	2.8	3.1	0.0	5.4	4.4	0.0	1.8	4.6	0.0
Cycle Q Clear(g_c), s	1.3	3.3	0.0	2.8	3.1	0.0	5.4	4.4	0.0	1.8	4.6	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	93	801		342	968		517	1020		304	801	
V/C Ratio(X)	0.40	0.27		0.45	0.22		0.58	0.29		0.32	0.36	
Avail Cap(c_a), veh/h	187	1442		389	1468		649	1789		363	1495	
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	30.5	21.3	0.0	28.3	18.8	0.0	26.4	18.5	0.0	28.5	21.7	0.0
Incr Delay (d2), s/veh	2.7	0.2	0.0	0.9	0.1	0.0	1.0	0.2	0.0	0.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	1.3	0.0	1.1	1.1	0.0	2.1	1.6	0.0	0.7	1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.3	21.4	0.0	29.2	18.9	0.0	27.4	18.6	0.0	29.1	22.0	0.0
LnGrp LOS	C	C		C	B		C	B		C	C	
Approach Vol, veh/h		253	A		369	A		601	A		389	A
Approach Delay, s/veh		23.2			23.2			23.0			23.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	20.5	8.0	23.6	10.4	24.6	11.1	20.5
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5
Max Green Setting (Gmax), s	12.5	28.0	7.0	27.5	7.0	33.5	7.5	27.0
Max Q Clear Time (g_c+I1), s	7.4	6.6	3.3	5.1	3.8	6.4	4.8	5.3
Green Ext Time (p_c), s	0.5	1.7	0.0	1.1	0.1	1.8	0.1	1.2

Intersection Summary	
HCM 6th Ctrl Delay	23.3
HCM 6th LOS	C

Notes

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	45	218	268	87	102	365	532	87	103	414	32
Future Volume (veh/h)	23	45	218	268	87	102	365	532	87	103	414	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	46	225	183	220	105	376	548	90	106	427	33
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	394	604	538	384	635	538	238	1530	475	348	1363	423
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.13	0.30	0.30	0.10	0.27	0.27
Sat Flow, veh/h	1055	1777	1585	1108	1870	1585	1781	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	24	46	225	183	220	105	376	548	90	106	427	33
Grp Sat Flow(s),veh/h/ln	1055	1777	1585	1108	1870	1585	1781	1702	1585	1728	1702	1585
Q Serve(g_s), s	1.0	1.0	6.1	8.6	4.9	2.6	7.5	4.7	2.4	1.6	3.8	0.9
Cycle Q Clear(g_c), s	5.9	1.0	6.1	14.7	4.9	2.6	7.5	4.7	2.4	1.6	3.8	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	394	604	538	384	635	538	238	1530	475	348	1363	423
V/C Ratio(X)	0.06	0.08	0.42	0.48	0.35	0.20	1.58	0.36	0.19	0.30	0.31	0.08
Avail Cap(c_a), veh/h	711	1139	1016	717	1198	1016	238	2490	773	431	2445	759
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	12.6	14.3	19.9	13.9	13.1	24.3	15.4	14.6	23.4	16.5	15.4
Incr Delay (d2), s/veh	0.1	0.1	0.5	0.9	0.3	0.2	280.7	0.1	0.2	0.2	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.4	2.1	2.1	2.0	0.9	21.3	1.6	0.7	0.6	1.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.2	12.6	14.8	20.8	14.2	13.3	305.1	15.6	14.8	23.6	16.6	15.5
LnGrp LOS	B	B	B	C	B	B	F	B	B	C	B	B
Approach Vol, veh/h		295			508			1014			566	
Approach Delay, s/veh		14.6			16.4			122.9			17.9	
Approach LOS		B			B			F			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	20.6		23.6	10.2	22.4		23.6				
Change Period (Y+Rc), s	4.5	5.6		4.5	4.5	5.6		4.5				
Max Green Setting (Gmax), s	7.5	26.9		36.0	7.0	27.4		36.0				
Max Q Clear Time (g_c+I1), s	9.5	5.8		16.7	3.6	6.7		8.1				
Green Ext Time (p_c), s	0.0	2.7		2.4	0.0	3.7		2.0				

Intersection Summary	
HCM 6th Ctrl Delay	61.8
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	467	0	0	776	139	408	0	616	0	0	0
Future Volume (vph)	20	467	0	0	776	139	408	0	616	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.4			5.4	5.4	5.4	5.4	5.4			
Lane Util. Factor	1.00	0.95			0.91	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			5085	1583	1681	1681	2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			5085	1583	1681	1681	2787			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	21	486	0	0	808	145	425	0	642	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	117	0	0	519	0	0	0
Lane Group Flow (vph)	21	486	0	0	808	28	212	213	123	0	0	0
Turn Type	Prot	NA			NA	custom	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						8	8		8			
Actuated Green, G (s)	2.4	23.7			16.6	15.4	15.4	15.4	15.4			
Effective Green, g (s)	2.4	23.7			16.6	15.4	15.4	15.4	15.4			
Actuated g/C Ratio	0.03	0.29			0.21	0.19	0.19	0.19	0.19			
Clearance Time (s)	4.7	5.4			5.4	5.4	5.4	5.4	5.4			
Vehicle Extension (s)	2.0	2.0			3.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	52	1043			1049	303	321	321	533			
v/s Ratio Prot	0.01	c0.14			c0.16							
v/s Ratio Perm						0.02	0.13	0.13	0.04			
v/c Ratio	0.40	0.47			0.77	0.09	0.66	0.66	0.23			
Uniform Delay, d1	38.3	23.2			30.1	26.7	30.1	30.1	27.5			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	1.9	0.1			3.5	0.0	3.9	4.0	0.1			
Delay (s)	40.2	23.3			33.6	26.8	34.0	34.1	27.6			
Level of Service	D	C			C	C	C	C	C			
Approach Delay (s)		24.0			32.6			30.1			0.0	
Approach LOS		C			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	29.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	80.4	Sum of lost time (s)	18.5
Intersection Capacity Utilization	43.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	371	254	0	835	345	0	0	0	121	0	50
Future Volume (veh/h)	0	371	254	0	835	345	0	0	0	121	0	50
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1945	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	0	453	215	0	861	0				125	0	52
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	0	2	2				2	2	2
Cap, veh/h	0	1432	583	0	1879					404	0	359
Arrive On Green	0.00	0.37	0.37	0.00	0.37	0.00				0.23	0.00	0.23
Sat Flow, veh/h	0	3890	1585	0	5274	1585				1781	0	1585
Grp Volume(v), veh/h	0	453	215	0	861	0				125	0	52
Grp Sat Flow(s),veh/h/ln	0	1945	1585	0	1702	1585				1781	0	1585
Q Serve(g_s), s	0.0	2.1	2.5	0.0	3.2	0.0				1.5	0.0	0.7
Cycle Q Clear(g_c), s	0.0	2.1	2.5	0.0	3.2	0.0				1.5	0.0	0.7
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1432	583	0	1879					404	0	359
V/C Ratio(X)	0.00	0.32	0.37	0.00	0.46					0.31	0.00	0.14
Avail Cap(c_a), veh/h	0	5011	2042	0	6577					1272	0	1132
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.6	5.8	0.0	6.0	0.0				8.0	0.0	7.7
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.1	0.0				0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.3	0.0	0.4	0.0				0.3	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.7	5.9	0.0	6.1	0.0				8.2	0.0	7.8
LnGrp LOS	A	A	A	A	A					A	A	A
Approach Vol, veh/h		668			861	A					177	
Approach Delay, s/veh		5.8			6.1						8.1	
Approach LOS		A			A						A	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		14.6		10.4		14.6						
Change Period (Y+Rc), s		5.4		* 4.7		5.4						
Max Green Setting (Gmax), s		32.1		* 18		32.1						
Max Q Clear Time (g_c+I1), s		4.5		3.5		5.2						
Green Ext Time (p_c), s		2.2		0.4		4.0						

Intersection Summary		
HCM 6th Ctrl Delay		6.1
HCM 6th LOS		A

Notes

User approved volume balancing among the lanes for turning movement.

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

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

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	306	0	0	372	0	0
Future Vol, veh/h	306	0	0	372	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	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	333	0	0	404	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	333	0	737	333
Stage 1	-	-	-	-	333	-
Stage 2	-	-	-	-	404	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1226	-	386	709
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	674	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1226	-	386	709
Mov Cap-2 Maneuver	-	-	-	-	386	-
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	674	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	-	-	-	1226	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	386	0	0	347
Future Vol, veh/h	0	0	386	0	0	347
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	150	150	-
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	420	0	0	377

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	609	210	0	0	420	0
Stage 1	420	-	-	-	-	-
Stage 2	189	-	-	-	-	-
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	427	796	-	-	1136	-
Stage 1	631	-	-	-	-	-
Stage 2	824	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	427	796	-	-	1136	-
Mov Cap-2 Maneuver	427	-	-	-	-	-
Stage 1	631	-	-	-	-	-
Stage 2	824	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1136	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Michael Baker
INTERNATIONAL

Appendix G: Existing + Approved/Pending Projects + Project Synchro Worksheets

1: Nelson Ln & Nicolaus Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.6	0.1	0.0	0.0	0.0	0.0	0.1	0.2	3.5
Total Del/Veh (s)	7.7	12.4	4.7	94.1	58.3	5.1	10.6	11.2	4.7	9.5	15.5	5.2

1: Nelson Ln & Nicolaus Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	37.4

2: Lakeside Dr & Nicolaus Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.8	0.1	1.4	0.0	0.0	0.0	0.2	0.1	0.2	0.2	0.3	3.6
Total Del/Veh (s)	8.8	12.3	4.3	7.0	10.7	3.7	6.3	8.6	3.7	10.7	9.1	3.5

2: Lakeside Dr & Nicolaus Rd Performance by movement

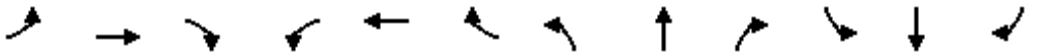
Movement	All
Denied Del/Veh (s)	0.4
Total Del/Veh (s)	9.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	21	416	273	128	223	124	32	185	97	193	147	181
Future Volume (veh/h)	21	416	273	128	223	124	32	185	97	193	147	181
Number	7	4	14	3	8	18		5	2	12	1	6
Initial Q (Qb), veh	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	
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	28	547	359	168	293	163		243	128	254	144	307
Adj No. of Lanes	1	2	1	1	2	1		2	1	1	1	2
Peak Hour Factor	0.76	0.76	0.76	0.76	0.76	0.76		0.76	0.76	0.76	0.76	0.76
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2	2	2
Cap, veh/h	40	1057	473	177	1331	595		769	404	343	256	539
Arrive On Green	0.02	0.30	0.30	0.10	0.38	0.38		0.22	0.22	0.22	0.14	0.14
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583		3548	1863	1583	1774	3725
Grp Volume(v), veh/h	28	547	359	168	293	163		243	128	254	144	307
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583		1774	1863	1583	1774	1863
Q Serve(g_s), s	1.3	10.9	17.5	8.0	4.8	6.1		4.9	4.9	12.7	6.4	6.5
Cycle Q Clear(g_c), s	1.3	10.9	17.5	8.0	4.8	6.1		4.9	4.9	12.7	6.4	6.5
Prop In Lane	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	40	1057	473	177	1331	595		769	404	343	256	539
V/C Ratio(X)	0.69	0.52	0.76	0.95	0.22	0.27		0.32	0.32	0.74	0.56	0.57
Avail Cap(c_a), veh/h	138	1749	782	177	1828	818		1548	813	691	772	1622
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.2	24.7	27.0	38.0	18.0	18.4		28.0	28.0	31.1	33.9	33.9
Incr Delay (d2), s/veh	7.7	0.5	3.0	51.7	0.1	0.3		0.3	0.6	4.4	2.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	5.4	8.0	6.5	2.3	2.7		2.4	2.6	6.0	3.4	3.5
LnGrp Delay(d),s/veh	48.9	25.2	30.1	89.7	18.1	18.7		28.3	28.6	35.5	36.6	35.3
LnGrp LOS	D	C	C	F	B	B		C	C	D	D	D
Approach Vol, veh/h		934			624				625			489
Approach Delay, s/veh		27.8			37.6				31.3			35.4
Approach LOS		C			D				C			D

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		23.7	13.0	30.7		17.6	6.4	37.3
Change Period (Y+Rc), s		5.3	4.5	5.3		5.3	4.5	5.3
Max Green Setting (Gmax), s		37.1	8.5	42.0		37.0	6.6	43.9
Max Q Clear Time (g_c+I1), s		14.7	10.0	19.5		8.5	3.3	8.1
Green Ext Time (p_c), s		3.7	0.0	5.9		3.8	0.0	3.1

Intersection Summary	
HCM 2010 Ctrl Delay	32.3
HCM 2010 LOS	C

Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	28	55	203	12	40	22	393	166	48	484	13
Future Volume (veh/h)	23	28	55	203	12	40	22	393	166	48	484	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	32	39	76	282	17	56	31	546	231	67	672	18
Peak Hour Factor	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	66	129	307	100	328	50	998	445	87	1071	478
Arrive On Green	0.03	0.12	0.12	0.17	0.26	0.26	0.03	0.28	0.28	0.05	0.30	0.30
Sat Flow, veh/h	1781	567	1105	1781	383	1261	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	32	0	115	282	0	73	31	546	231	67	672	18
Grp Sat Flow(s),veh/h/ln	1781	0	1672	1781	0	1643	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.9	0.0	3.2	7.7	0.0	1.7	0.8	6.4	6.0	1.8	8.0	0.4
Cycle Q Clear(g_c), s	0.9	0.0	3.2	7.7	0.0	1.7	0.8	6.4	6.0	1.8	8.0	0.4
Prop In Lane	1.00		0.66	1.00		0.77	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	51	0	195	307	0	428	50	998	445	87	1071	478
V/C Ratio(X)	0.62	0.00	0.59	0.92	0.00	0.17	0.62	0.55	0.52	0.77	0.63	0.04
Avail Cap(c_a), veh/h	217	0	1187	307	0	1250	181	1997	891	181	1997	891
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.7	0.0	20.7	20.1	0.0	14.1	23.7	15.1	14.9	23.2	14.8	12.2
Incr Delay (d2), s/veh	4.6	0.0	3.4	30.5	0.0	0.2	4.6	0.6	1.1	5.4	0.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	1.4	5.5	0.0	0.6	0.4	2.2	2.1	0.8	2.7	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.2	0.0	24.1	50.5	0.0	14.3	28.3	15.6	16.1	28.5	15.6	12.2
LnGrp LOS	C	A	C	D	A	B	C	B	B	C	B	B
Approach Vol, veh/h		147			355			808			757	
Approach Delay, s/veh		25.0			43.1			16.2			16.6	
Approach LOS		C			D			B			B	

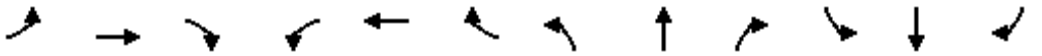
Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.9	19.1	13.0	10.2	5.9	20.2	5.9	17.3
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	5.0	27.7	8.5	35.0	5.0	27.7	6.0	37.5
Max Q Clear Time (g_c+I1), s	3.8	8.4	9.7	5.2	2.8	10.0	2.9	3.7
Green Ext Time (p_c), s	0.0	4.9	0.0	0.8	0.0	4.8	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	21.6
HCM 6th LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	58	81	104	19	69	22	434	65	114	682	28
Future Volume (veh/h)	92	58	81	104	19	69	22	434	65	114	682	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	119	75	105	135	25	90	29	564	84	148	886	36
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77	0.77
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	154	225	191	172	244	207	47	1035	462	188	1316	587
Arrive On Green	0.09	0.12	0.12	0.10	0.13	0.13	0.03	0.29	0.29	0.11	0.37	0.37
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	119	75	105	135	25	90	29	564	84	148	886	36
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	3.3	1.9	3.2	3.8	0.6	2.7	0.8	6.8	2.0	4.1	10.6	0.7
Cycle Q Clear(g_c), s	3.3	1.9	3.2	3.8	0.6	2.7	0.8	6.8	2.0	4.1	10.6	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	225	191	172	244	207	47	1035	462	188	1316	587
V/C Ratio(X)	0.77	0.33	0.55	0.78	0.10	0.43	0.62	0.54	0.18	0.79	0.67	0.06
Avail Cap(c_a), veh/h	453	1289	1093	228	1053	893	203	1918	855	228	1967	877
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.7	20.5	21.0	22.4	19.5	20.3	24.5	15.2	13.5	22.1	13.4	10.3
Incr Delay (d2), s/veh	3.1	1.0	3.0	8.6	0.2	1.7	4.8	0.5	0.2	11.2	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.8	1.2	1.9	0.3	1.0	0.4	2.5	0.7	2.1	3.4	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.8	21.5	24.0	31.1	19.7	22.1	29.2	15.7	13.7	33.3	14.1	10.3
LnGrp LOS	C	C	C	C	B	C	C	B	B	C	B	B
Approach Vol, veh/h		299			250			677			1070	
Approach Delay, s/veh		24.1			26.7			16.0			16.7	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.9	20.1	9.4	11.4	5.8	24.1	8.9	11.9
Change Period (Y+Rc), s	4.5	5.3	4.5	5.3	4.5	5.3	4.5	5.3
Max Green Setting (Gmax), s	6.5	27.4	6.5	35.0	5.8	28.1	12.9	28.6
Max Q Clear Time (g_c+I1), s	6.1	8.8	5.8	5.2	2.8	12.6	5.3	4.7
Green Ext Time (p_c), s	0.0	4.7	0.0	1.0	0.0	6.2	0.1	0.5

Intersection Summary	
HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	45	235	131	96	36	145	424	82	43	656	155
Future Volume (veh/h)	51	45	235	131	96	36	145	424	82	43	656	155
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	65	58	301	168	123	46	186	544	105	55	841	199
Peak Hour Factor	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	424	359	204	550	466	222	1390	620	70	1086	485
Arrive On Green	0.05	0.23	0.23	0.11	0.29	0.29	0.12	0.39	0.39	0.04	0.31	0.31
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	65	58	301	168	123	46	186	544	105	55	841	199
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	3.0	2.0	14.9	7.6	4.1	1.7	8.4	9.1	3.6	2.5	17.7	8.2
Cycle Q Clear(g_c), s	3.0	2.0	14.9	7.6	4.1	1.7	8.4	9.1	3.6	2.5	17.7	8.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	84	424	359	204	550	466	222	1390	620	70	1086	485
V/C Ratio(X)	0.78	0.14	0.84	0.83	0.22	0.10	0.84	0.39	0.17	0.78	0.77	0.41
Avail Cap(c_a), veh/h	206	886	751	227	909	770	245	1507	672	147	1313	586
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.8	25.4	30.4	35.6	21.9	21.1	35.2	18.0	16.3	39.2	26.0	22.7
Incr Delay (d2), s/veh	5.7	0.2	6.2	17.7	0.2	0.1	18.5	0.2	0.2	7.0	2.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.9	6.2	4.3	1.8	0.7	4.6	3.4	1.3	1.2	7.6	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.5	25.6	36.6	53.3	22.2	21.2	53.7	18.2	16.5	46.2	28.6	23.4
LnGrp LOS	D	C	D	D	C	C	D	B	B	D	C	C
Approach Vol, veh/h		424			337			835			1095	
Approach Delay, s/veh		36.3			37.6			25.9			28.5	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	37.5	13.9	23.2	14.8	30.5	8.4	28.7
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	6.8	34.9	10.5	39.0	11.3	30.4	9.5	40.0
Max Q Clear Time (g_c+I1), s	4.5	11.1	9.6	16.9	10.4	19.7	5.0	6.1
Green Ext Time (p_c), s	0.0	4.6	0.0	1.7	0.0	5.4	0.0	1.1

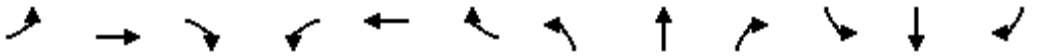
Intersection Summary	
HCM 6th Ctrl Delay	30.1
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	48.6
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	0	26	1	0	0	10	603	2	0	926	11
Future Vol, veh/h	22	0	26	1	0	0	10	603	2	0	926	11
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	0	31	1	0	0	12	709	2	0	1089	13
Number of Lanes	0	1	0	0	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	10.5	10.5	17.2	71.2
HCM LOS	B	B	C	F

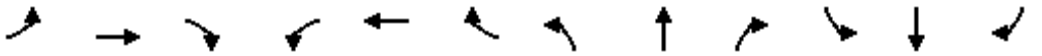
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	3%	0%	46%	100%	0%	0%
Vol Thru, %	97%	99%	0%	0%	100%	97%
Vol Right, %	0%	1%	54%	0%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	312	304	48	1	617	320
LT Vol	10	0	22	1	0	0
Through Vol	302	302	0	0	617	309
RT Vol	0	2	26	0	0	11
Lane Flow Rate	366	357	56	1	726	376
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.597	0.58	0.102	0.002	1.134	0.584
Departure Headway (Hd)	6.117	6.097	6.77	7.469	5.619	5.595
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	594	596	533	482	654	651
Service Time	3.817	3.797	4.77	5.469	3.319	3.295
HCM Lane V/C Ratio	0.616	0.599	0.105	0.002	1.11	0.578
HCM Control Delay	17.5	16.9	10.5	10.5	99.9	15.8
HCM Lane LOS	C	C	B	B	F	C
HCM 95th-tile Q	3.9	3.7	0.3	0	22.7	3.8



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	19	85	48	16	56	23	532	12	50	912	0
Future Volume (veh/h)	22	19	85	48	16	56	23	532	12	50	912	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	26	22	100	56	19	66	27	626	14	59	1073	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	35	29	133	144	49	169	76	1287	29	131	1397	0
Arrive On Green	0.12	0.12	0.12	0.11	0.11	0.11	0.04	0.36	0.36	0.07	0.39	0.00
Sat Flow, veh/h	291	246	1118	1346	457	1585	1781	3553	79	1781	3647	0
Grp Volume(v), veh/h	148	0	0	75	0	66	27	313	327	59	1073	0
Grp Sat Flow(s),veh/h/ln	1655	0	0	1803	0	1585	1781	1777	1856	1781	1777	0
Q Serve(g_s), s	5.1	0.0	0.0	2.3	0.0	2.3	0.9	8.1	8.1	1.9	15.5	0.0
Cycle Q Clear(g_c), s	5.1	0.0	0.0	2.3	0.0	2.3	0.9	8.1	8.1	1.9	15.5	0.0
Prop In Lane	0.18		0.68	0.75		1.00	1.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	197	0	0	193	0	169	76	643	672	131	1397	0
V/C Ratio(X)	0.75	0.00	0.00	0.39	0.00	0.39	0.36	0.49	0.49	0.45	0.77	0.00
Avail Cap(c_a), veh/h	952	0	0	1038	0	912	211	902	942	211	1805	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)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	25.2	0.0	0.0	24.6	0.0	24.6	27.5	14.6	14.6	26.2	15.6	0.0
Incr Delay (d2), s/veh	2.2	0.0	0.0	0.5	0.0	0.5	1.1	0.6	0.5	0.9	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.0	0.0	0.9	0.0	0.8	0.4	2.8	2.9	0.8	5.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.3	0.0	0.0	25.1	0.0	25.1	28.6	15.2	15.1	27.1	17.1	0.0
LnGrp LOS	C	A	A	C	A	C	C	B	B	C	B	A
Approach Vol, veh/h		148			141			667			1132	
Approach Delay, s/veh		27.3			25.1			15.7			17.6	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	26.9		12.0	7.0	28.7		11.3				
Change Period (Y+Rc), s	4.5	5.5		5.0	4.5	5.5		5.0				
Max Green Setting (Gmax), s	7.0	30.0		34.0	7.0	30.0		34.0				
Max Q Clear Time (g_c+I1), s	3.9	10.1		7.1	2.9	17.5		4.3				
Green Ext Time (p_c), s	0.0	3.5		0.6	0.0	5.7		0.3				

Intersection Summary			
HCM 6th Ctrl Delay		18.2	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	718	281	8	322	184	234	83	25	112	58	20
Future Volume (veh/h)	51	718	281	8	322	184	234	83	25	112	58	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	62	876	343	10	393	224	285	101	30	137	71	24
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	1183	528	31	617	347	370	288	85	173	90	30
Arrive On Green	0.07	0.33	0.33	0.02	0.28	0.28	0.21	0.21	0.21	0.16	0.16	0.16
Sat Flow, veh/h	1781	3554	1585	1781	2192	1233	1781	1385	411	1054	546	185
Grp Volume(v), veh/h	62	876	343	10	318	299	285	0	131	232	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1648	1781	0	1796	1784	0	0
Q Serve(g_s), s	2.4	15.7	13.3	0.4	11.3	11.5	10.9	0.0	4.5	9.0	0.0	0.0
Cycle Q Clear(g_c), s	2.4	15.7	13.3	0.4	11.3	11.5	10.9	0.0	4.5	9.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.75	1.00		0.23	0.59		0.10
Lane Grp Cap(c), veh/h	123	1183	528	31	500	464	370	0	373	293	0	0
V/C Ratio(X)	0.50	0.74	0.65	0.32	0.63	0.65	0.77	0.00	0.35	0.79	0.00	0.00
Avail Cap(c_a), veh/h	176	1629	726	173	812	753	891	0	898	843	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(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	32.3	21.3	20.4	34.9	22.6	22.7	26.9	0.0	24.4	28.9	0.0	0.0
Incr Delay (d2), s/veh	1.2	1.2	1.4	2.1	1.3	1.5	4.1	0.0	0.7	1.9	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	1.0	6.0	4.6	0.2	4.4	4.2	4.9	0.0	1.9	3.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.5	22.4	21.8	37.1	24.0	24.2	31.0	0.0	25.1	30.8	0.0	0.0
LnGrp LOS	C	C	C	D	C	C	C	A	C	C	A	A
Approach Vol, veh/h		1281			627			416			232	
Approach Delay, s/veh		22.8			24.3			29.1			30.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.5	25.8		20.0	5.8	29.5		16.8				
Change Period (Y+Rc), s	4.5	5.5		5.0	4.5	5.5		5.0				
Max Green Setting (Gmax), s	7.1	32.9		36.0	7.0	33.0		34.0				
Max Q Clear Time (g_c+I1), s	4.4	13.5		12.9	2.4	17.7		11.0				
Green Ext Time (p_c), s	0.0	3.5		2.1	0.0	6.3		0.9				

Intersection Summary												
HCM 6th Ctrl Delay			24.9									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	386	428	54	165	35	311	251	87	88	266	23
Future Volume (veh/h)	58	386	428	54	165	35	311	251	87	88	266	23
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	482	0	68	206	0	389	314	0	110	332	0
Peak Hour Factor	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	139	827		263	819		530	1035		321	819	
Arrive On Green	0.08	0.23	0.00	0.08	0.23	0.00	0.15	0.29	0.00	0.09	0.23	0.00
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	72	482	0	68	206	0	389	314	0	110	332	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	2.5	7.8	0.0	1.2	3.1	0.0	7.0	4.5	0.0	1.9	5.2	0.0
Cycle Q Clear(g_c), s	2.5	7.8	0.0	1.2	3.1	0.0	7.0	4.5	0.0	1.9	5.2	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	139	827		263	819		530	1035		321	819	
V/C Ratio(X)	0.52	0.58		0.26	0.25		0.73	0.30		0.34	0.41	
Avail Cap(c_a), veh/h	192	1474		372	1474		717	1856		372	1501	
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	28.8	22.2	0.0	28.3	20.5	0.0	26.3	17.9	0.0	27.7	21.3	0.0
Incr Delay (d2), s/veh	2.9	0.7	0.0	0.5	0.2	0.0	2.6	0.2	0.0	0.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	3.0	0.0	0.5	1.1	0.0	2.8	1.7	0.0	0.8	2.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.7	22.8	0.0	28.9	20.6	0.0	28.9	18.1	0.0	28.3	21.6	0.0
LnGrp LOS	C	C		C	C		C	B		C	C	
Approach Vol, veh/h		554	A		274	A		703	A		442	A
Approach Delay, s/veh		24.0			22.7			24.1			23.3	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	20.5	9.6	20.5	10.5	24.4	9.5	20.6
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5
Max Green Setting (Gmax), s	13.5	27.5	7.0	27.0	7.0	34.0	7.0	27.0
Max Q Clear Time (g_c+I1), s	9.0	7.2	4.5	5.1	3.9	6.5	3.2	9.8
Green Ext Time (p_c), s	0.6	1.9	0.0	1.1	0.1	1.9	0.0	2.7

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Notes

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

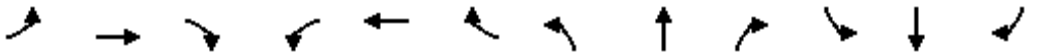
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	31	373	174	47	68	270	598	58	67	660	13
Future Volume (veh/h)	26	31	373	174	47	68	270	598	58	67	660	13
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	30	36	434	128	158	79	314	695	67	78	767	15
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	520	727	648	286	765	648	213	1409	437	286	1223	380
Arrive On Green	0.41	0.41	0.41	0.41	0.41	0.41	0.12	0.28	0.28	0.08	0.24	0.24
Sat Flow, veh/h	1143	1777	1585	923	1870	1585	1781	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	30	36	434	128	158	79	314	695	67	78	767	15
Grp Sat Flow(s),veh/h/ln	1143	1777	1585	923	1870	1585	1781	1702	1585	1728	1702	1585
Q Serve(g_s), s	1.1	0.8	14.0	8.2	3.4	1.9	7.5	7.2	2.0	1.3	8.5	0.5
Cycle Q Clear(g_c), s	4.5	0.8	14.0	22.2	3.4	1.9	7.5	7.2	2.0	1.3	8.5	0.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	520	727	648	286	765	648	213	1409	437	286	1223	380
V/C Ratio(X)	0.06	0.05	0.67	0.45	0.21	0.12	1.48	0.49	0.15	0.27	0.63	0.04
Avail Cap(c_a), veh/h	707	1017	908	437	1071	908	213	2225	691	385	2185	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.5	11.2	15.1	24.2	12.0	11.6	27.7	19.1	17.2	27.1	21.4	18.4
Incr Delay (d2), s/veh	0.0	0.0	1.2	1.1	0.1	0.1	238.5	0.3	0.2	0.2	0.5	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	0.3	0.3	4.8	1.8	1.3	0.6	17.0	2.5	0.7	0.5	3.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.5	11.2	16.3	25.3	12.1	11.6	266.2	19.3	17.4	27.2	21.9	18.4
LnGrp LOS	B	B	B	C	B	B	F	B	B	C	C	B
Approach Vol, veh/h		500			365			1076			860	
Approach Delay, s/veh		15.8			16.6			91.3			22.3	
Approach LOS		B			B			F			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	20.7		30.2	9.7	23.0		30.2				
Change Period (Y+Rc), s	4.5	5.6		4.5	4.5	5.6		4.5				
Max Green Setting (Gmax), s	7.5	26.9		36.0	7.0	27.4		36.0				
Max Q Clear Time (g_c+I1), s	9.5	10.5		24.2	3.3	9.2		16.0				
Green Ext Time (p_c), s	0.0	4.6		1.5	0.0	4.5		3.5				

Intersection Summary			
HCM 6th Ctrl Delay		46.9	
HCM 6th LOS		D	

Notes

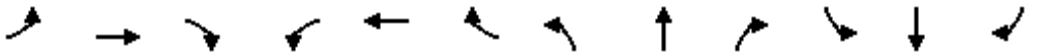
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	738	0	0	1061	112	159	0	281	0	0	0
Future Volume (vph)	57	738	0	0	1061	112	159	0	281	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.4			5.4	5.4	5.4	5.4	5.4			
Lane Util. Factor	1.00	0.95			0.91	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			5085	1583	1681	1681	2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			5085	1583	1681	1681	2787			
Peak-hour factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Adj. Flow (vph)	67	868	0	0	1248	132	187	0	331	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	115	0	0	289	0	0	0
Lane Group Flow (vph)	67	868	0	0	1248	17	93	94	42	0	0	0
Turn Type	Prot	NA			NA	custom	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						8	8		8			
Actuated Green, G (s)	5.4	27.7			17.6	9.9	9.9	9.9	9.9			
Effective Green, g (s)	5.4	27.7			17.6	9.9	9.9	9.9	9.9			
Actuated g/C Ratio	0.07	0.35			0.22	0.13	0.13	0.13	0.13			
Clearance Time (s)	4.7	5.4			5.4	5.4	5.4	5.4	5.4			
Vehicle Extension (s)	2.0	2.0			3.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	121	1247			1138	199	211	211	351			
v/s Ratio Prot	0.04	c0.25			c0.25							
v/s Ratio Perm						0.01	0.06	0.06	0.01			
v/c Ratio	0.55	0.70			1.10	0.08	0.44	0.45	0.12			
Uniform Delay, d1	35.4	21.8			30.5	30.3	31.8	31.8	30.5			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	3.1	1.4			57.2	0.1	0.5	0.5	0.1			
Delay (s)	38.5	23.2			87.7	30.4	32.3	32.4	30.5			
Level of Service	D	C			F	C	C	C	C			
Approach Delay (s)		24.3			82.2			31.2			0.0	
Approach LOS		C			F			C			A	

Intersection Summary			
HCM 2000 Control Delay	53.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	78.6	Sum of lost time (s)	18.5
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	710	670	0	477	738	0	0	0	85	0	17
Future Volume (veh/h)	0	710	670	0	477	738	0	0	0	85	0	17
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1945	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	0	1152	517	0	536	0				96	0	19
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89				0.89	0.89	0.89
Percent Heavy Veh, %	0	2	2	0	2	2				2	2	2
Cap, veh/h	0	2005	817	0	2632					288	0	256
Arrive On Green	0.00	0.52	0.52	0.00	0.52	0.00				0.16	0.00	0.16
Sat Flow, veh/h	0	3890	1585	0	5274	1585				1781	0	1585
Grp Volume(v), veh/h	0	1152	517	0	536	0				96	0	19
Grp Sat Flow(s),veh/h/ln	0	1945	1585	0	1702	1585				1781	0	1585
Q Serve(g_s), s	0.0	6.4	7.3	0.0	1.8	0.0				1.5	0.0	0.3
Cycle Q Clear(g_c), s	0.0	6.4	7.3	0.0	1.8	0.0				1.5	0.0	0.3
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2005	817	0	2632					288	0	256
V/C Ratio(X)	0.00	0.57	0.63	0.00	0.20					0.33	0.00	0.07
Avail Cap(c_a), veh/h	0	3993	1627	0	5241					1014	0	902
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.2	5.4	0.0	4.1	0.0				11.6	0.0	11.1
Incr Delay (d2), s/veh	0.0	0.1	0.3	0.0	0.0	0.0				0.3	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
%ile BackOfQ(50%),veh/ln	0.0	0.7	0.7	0.0	0.2	0.0				0.4	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.3	5.8	0.0	4.1	0.0				11.9	0.0	11.2
LnGrp LOS	A	A	A	A	A					B	A	B
Approach Vol, veh/h		1669			536	A					115	
Approach Delay, s/veh		5.4			4.1						11.8	
Approach LOS		A			A						B	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		21.5		9.8		21.5						
Change Period (Y+Rc), s		5.4		* 4.7		5.4						
Max Green Setting (Gmax), s		32.1		* 18		32.1						
Max Q Clear Time (g_c+I1), s		9.3		3.5		3.8						
Green Ext Time (p_c), s		6.8		0.2		2.3						

Intersection Summary												
HCM 6th Ctrl Delay			5.5									
HCM 6th LOS			A									

Notes

User approved volume balancing among the lanes for turning movement.

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

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

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	668	4	4	395	55	11
Future Vol, veh/h	668	4	4	395	55	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	726	4	4	429	60	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	730	0	1163	726
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	437	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	874	-	215	425
Stage 1	-	-	-	-	479	-
Stage 2	-	-	-	-	651	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	874	-	214	425
Mov Cap-2 Maneuver	-	-	-	-	214	-
Stage 1	-	-	-	-	479	-
Stage 2	-	-	-	-	647	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	27.2
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	233	-	-	874	-
HCM Lane V/C Ratio	0.308	-	-	0.005	-
HCM Control Delay (s)	27.2	-	-	9.1	0
HCM Lane LOS	D	-	-	A	A
HCM 95th %tile Q(veh)	1.3	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	44	431	25	4	525
Future Vol, veh/h	0	44	431	25	4	525
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	150	150	-
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	48	468	27	4	571

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	762	234	0	0	495	0
Stage 1	468	-	-	-	-	-
Stage 2	294	-	-	-	-	-
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	341	768	-	-	1065	-
Stage 1	597	-	-	-	-	-
Stage 2	730	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	340	768	-	-	1065	-
Mov Cap-2 Maneuver	340	-	-	-	-	-
Stage 1	597	-	-	-	-	-
Stage 2	727	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	768	1065	-
HCM Lane V/C Ratio	-	-	0.062	0.004	-
HCM Control Delay (s)	-	-	10	8.4	-
HCM Lane LOS	-	-	B	A	-
HCM 95th %tile Q(veh)	-	-	0.2	0	-

1: Nelson Ln & Nicolaus Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.3	3.5
Total Del/Veh (s)	8.6	14.5	4.5	36.5	13.4	6.3	14.3	11.5	7.1	11.3	17.7	5.4

1: Nelson Ln & Nicolaus Rd Performance by movement

Movement	All
Denied Del/Veh (s)	0.1
Total Del/Veh (s)	15.1

2: Lakeside Dr & Nicolaus Rd Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.2	0.3	3.9
Total Del/Veh (s)	8.0	9.8	5.5	6.6	8.9	3.8	5.6	7.0	3.1	7.3	9.1	3.5

2: Lakeside Dr & Nicolaus Rd Performance by movement

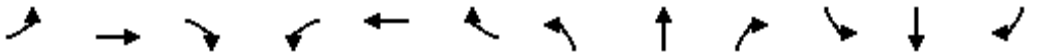
Movement	All
Denied Del/Veh (s)	0.2
Total Del/Veh (s)	8.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	10	247	287	87	327	79	21	350	122	59	61	89
Future Volume (veh/h)	10	247	287	87	327	79	21	350	122	59	61	89
Number	7	4	14	3	8	18		5	2	12	1	6
Initial Q (Qb), veh	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	
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	10	257	299	91	341	82		365	127	61	52	109
Adj No. of Lanes	1	2	1	1	2	1		2	1	1	1	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96		0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2	2	2
Cap, veh/h	18	933	417	117	1130	505		668	350	298	229	482
Arrive On Green	0.01	0.26	0.26	0.07	0.32	0.32		0.19	0.19	0.19	0.13	0.13
Sat Flow, veh/h	1774	3539	1583	1774	3539	1583		3548	1863	1583	1774	3725
Grp Volume(v), veh/h	10	257	299	91	341	82		365	127	61	52	109
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1583		1774	1863	1583	1774	1863
Q Serve(g_s), s	0.3	3.3	9.9	2.9	4.2	2.1		5.4	3.4	1.9	1.5	1.5
Cycle Q Clear(g_c), s	0.3	3.3	9.9	2.9	4.2	2.1		5.4	3.4	1.9	1.5	1.5
Prop In Lane	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	18	933	417	117	1130	505		668	350	298	229	482
V/C Ratio(X)	0.55	0.28	0.72	0.78	0.30	0.16		0.55	0.36	0.20	0.23	0.23
Avail Cap(c_a), veh/h	154	2573	1151	261	2788	1247		2279	1196	1017	1136	2386
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.5	16.9	19.3	26.6	14.8	14.1		21.2	20.4	19.8	22.6	22.6
Incr Delay (d2), s/veh	9.2	0.2	2.8	4.2	0.2	0.2		1.0	0.9	0.5	0.7	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
%ile BackOfQ(50%),veh/ln	0.2	1.6	4.6	1.6	2.1	1.0		2.7	1.9	0.9	0.8	0.8
LnGrp Delay(d),s/veh	37.7	17.1	22.1	30.8	15.0	14.3		22.2	21.3	20.3	23.3	22.9
LnGrp LOS	D	B	C	C	B	B		C	C	C	C	C
Approach Vol, veh/h		566			514				553			169
Approach Delay, s/veh		20.1			17.7				21.8			23.0
Approach LOS		C			B				C			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		16.2	8.3	20.5		12.8	5.1	23.7
Change Period (Y+Rc), s		5.3	4.5	5.3		5.3	4.5	5.3
Max Green Setting (Gmax), s		37.1	8.5	42.0		37.0	5.0	45.5
Max Q Clear Time (g_c+I1), s		7.4	4.9	11.9		3.5	2.3	6.2
Green Ext Time (p_c), s		3.5	0.0	3.3		1.2	0.0	3.2

Intersection Summary	
HCM 2010 Ctrl Delay	20.2
HCM 2010 LOS	C

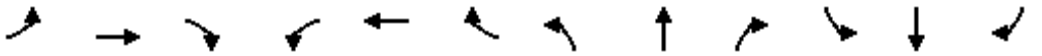
Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	9	42	77	14	23	60	460	117	28	375	12
Future Volume (veh/h)	8	9	42	77	14	23	60	460	117	28	375	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	8	9	44	80	15	24	62	479	122	29	391	12
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	15	29	142	109	102	164	92	1001	446	50	918	409
Arrive On Green	0.01	0.11	0.11	0.06	0.16	0.16	0.05	0.28	0.28	0.03	0.26	0.26
Sat Flow, veh/h	1781	276	1351	1781	648	1036	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	8	0	53	80	0	39	62	479	122	29	391	12
Grp Sat Flow(s),veh/h/ln	1781	0	1627	1781	0	1684	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.2	0.0	1.1	1.6	0.0	0.7	1.2	4.0	2.2	0.6	3.3	0.2
Cycle Q Clear(g_c), s	0.2	0.0	1.1	1.6	0.0	0.7	1.2	4.0	2.2	0.6	3.3	0.2
Prop In Lane	1.00		0.83	1.00		0.62	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	15	0	172	109	0	266	92	1001	446	50	918	409
V/C Ratio(X)	0.53	0.00	0.31	0.73	0.00	0.15	0.68	0.48	0.27	0.58	0.43	0.03
Avail Cap(c_a), veh/h	248	0	1586	372	0	1759	273	2841	1267	248	2791	1245
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.7	0.0	14.8	16.6	0.0	13.0	16.7	10.7	10.0	17.2	11.1	10.0
Incr Delay (d2), s/veh	10.0	0.0	1.2	3.5	0.0	0.3	3.2	0.4	0.4	3.9	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.0	0.4	0.7	0.0	0.3	0.5	1.1	0.6	0.2	0.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.8	0.0	16.1	20.1	0.0	13.3	20.0	11.1	10.4	21.2	11.5	10.0
LnGrp LOS	C	A	B	C	A	B	B	B	B	C	B	A
Approach Vol, veh/h		61			119			663			432	
Approach Delay, s/veh		17.6			17.9			11.8			12.1	
Approach LOS		B			B			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	15.4	6.7	8.3	6.3	14.6	4.8	10.2
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	5.0	28.7	7.5	35.0	5.5	28.2	5.0	37.5
Max Q Clear Time (g_c+I1), s	2.6	6.0	3.6	3.1	3.2	5.3	2.2	2.7
Green Ext Time (p_c), s	0.0	4.1	0.0	0.3	0.0	2.9	0.0	0.2

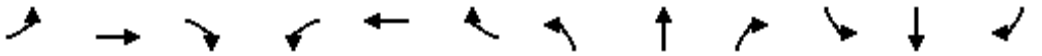
Intersection Summary	
HCM 6th Ctrl Delay	12.8
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	24	41	60	30	71	57	687	83	42	522	20
Future Volume (veh/h)	20	24	41	60	30	71	57	687	83	42	522	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	25	43	63	32	75	60	723	87	44	549	21
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	231	196	87	283	240	84	1234	550	67	1201	536
Arrive On Green	0.02	0.12	0.12	0.05	0.15	0.15	0.05	0.35	0.35	0.04	0.34	0.34
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	21	25	43	63	32	75	60	723	87	44	549	21
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.5	0.5	1.1	1.5	0.7	1.9	1.5	7.4	1.7	1.1	5.4	0.4
Cycle Q Clear(g_c), s	0.5	0.5	1.1	1.5	0.7	1.9	1.5	7.4	1.7	1.1	5.4	0.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	37	231	196	87	283	240	84	1234	550	67	1201	536
V/C Ratio(X)	0.57	0.11	0.22	0.73	0.11	0.31	0.71	0.59	0.16	0.65	0.46	0.04
Avail Cap(c_a), veh/h	217	1479	1254	262	1526	1293	262	2216	989	254	2200	981
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.5	17.2	17.5	20.8	16.2	16.7	20.8	11.8	10.0	21.0	11.5	9.8
Incr Delay (d2), s/veh	5.2	0.2	0.7	4.3	0.2	0.9	4.2	0.5	0.2	4.0	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.4	0.7	0.3	0.7	0.6	2.4	0.5	0.5	1.6	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.6	17.5	18.2	25.0	16.4	17.6	25.0	12.4	10.1	25.0	11.8	9.9
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	A
Approach Vol, veh/h		89			170			870			614	
Approach Delay, s/veh		20.0			20.1			13.0			12.7	
Approach LOS		B			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	20.7	6.7	10.8	6.6	20.3	5.4	12.0
Change Period (Y+Rc), s	4.5	5.3	4.5	5.3	4.5	5.3	4.5	5.3
Max Green Setting (Gmax), s	6.3	27.6	6.5	35.0	6.5	27.4	5.4	36.1
Max Q Clear Time (g_c+I1), s	3.1	9.4	3.5	3.1	3.5	7.4	2.5	3.9
Green Ext Time (p_c), s	0.0	6.0	0.0	0.3	0.0	4.1	0.0	0.5

Intersection Summary	
HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	17	63	77	46	72	189	704	62	41	484	91
Future Volume (veh/h)	26	17	63	77	46	72	189	704	62	41	484	91
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	18	66	80	48	75	197	733	65	43	504	95
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	45	234	199	100	292	248	247	1305	582	66	943	421
Arrive On Green	0.03	0.13	0.13	0.06	0.16	0.16	0.14	0.37	0.37	0.04	0.27	0.27
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	27	18	66	80	48	75	197	733	65	43	504	95
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	0.7	0.4	1.7	2.0	1.0	1.9	4.9	7.5	1.2	1.1	5.5	2.1
Cycle Q Clear(g_c), s	0.7	0.4	1.7	2.0	1.0	1.9	4.9	7.5	1.2	1.1	5.5	2.1
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	45	234	199	100	292	248	247	1305	582	66	943	421
V/C Ratio(X)	0.60	0.08	0.33	0.80	0.16	0.30	0.80	0.56	0.11	0.65	0.53	0.23
Avail Cap(c_a), veh/h	196	1608	1363	196	1608	1363	255	2515	1122	200	2405	1073
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.9	17.5	18.1	21.2	16.6	17.0	18.9	11.4	9.5	21.6	14.3	13.0
Incr Delay (d2), s/veh	4.6	0.2	1.2	5.4	0.3	0.8	14.4	0.5	0.1	4.1	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.2	0.6	0.9	0.4	0.7	2.7	2.2	0.4	0.5	2.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.5	17.7	19.3	26.5	16.9	17.8	33.4	11.9	9.6	25.6	14.8	13.3
LnGrp LOS	C	B	B	C	B	B	C	B	A	C	B	B
Approach Vol, veh/h		111			203			995			642	
Approach Delay, s/veh		20.8			21.0			16.0			15.3	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.2	22.0	7.1	10.2	10.8	17.3	5.7	11.6
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	5.1	32.1	5.0	39.0	6.5	30.7	5.0	39.0
Max Q Clear Time (g_c+I1), s	3.1	9.5	4.0	3.7	6.9	7.5	2.7	3.9
Green Ext Time (p_c), s	0.0	6.1	0.0	0.4	0.0	4.5	0.0	0.6

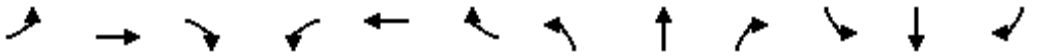
Intersection Summary	
HCM 6th Ctrl Delay	16.6
HCM 6th LOS	B

Intersection	
Intersection Delay, s/veh	14.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	8	0	0	0	14	817	2	1	532	14
Future Vol, veh/h	10	0	8	0	0	0	14	817	2	1	532	14
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	10	0	8	0	0	0	14	834	2	1	543	14
Number of Lanes	0	1	0	0	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	9.5	0	15.5	12.1
HCM LOS	A	-	C	B

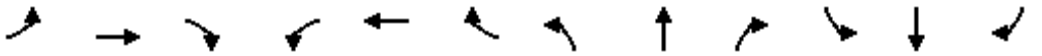
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	3%	0%	56%	0%	0%	0%
Vol Thru, %	97%	100%	0%	100%	100%	95%
Vol Right, %	0%	0%	44%	0%	0%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	423	411	18	0	267	280
LT Vol	14	0	10	0	1	0
Through Vol	409	409	0	0	266	266
RT Vol	0	2	8	0	0	14
Lane Flow Rate	431	419	18	0	272	286
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.614	0.595	0.032	0	0.411	0.428
Departure Headway (Hd)	5.13	5.11	6.23	6.447	5.428	5.391
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	703	704	570	0	659	666
Service Time	2.882	2.862	4.314	4.539	3.187	3.15
HCM Lane V/C Ratio	0.613	0.595	0.032	0	0.413	0.429
HCM Control Delay	15.8	15.2	9.5	9.5	12	12.2
HCM Lane LOS	C	C	A	N	B	B
HCM 95th-tile Q	4.2	4	0.1	0	2	2.1



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	5	41	16	14	49	55	799	18	23	523	1
Future Volume (veh/h)	7	5	41	16	14	49	55	799	18	23	523	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	7	5	44	17	15	52	59	850	19	24	556	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	16	11	99	96	85	157	142	1274	28	71	1160	2
Arrive On Green	0.08	0.08	0.08	0.10	0.10	0.10	0.08	0.36	0.36	0.04	0.32	0.32
Sat Flow, veh/h	204	146	1280	968	854	1585	1781	3553	79	1781	3639	7
Grp Volume(v), veh/h	56	0	0	32	0	52	59	425	444	24	271	286
Grp Sat Flow(s),veh/h/ln	1630	0	0	1822	0	1585	1781	1777	1856	1781	1777	1869
Q Serve(g_s), s	1.5	0.0	0.0	0.8	0.0	1.4	1.5	9.5	9.5	0.6	5.8	5.8
Cycle Q Clear(g_c), s	1.5	0.0	0.0	0.8	0.0	1.4	1.5	9.5	9.5	0.6	5.8	5.8
Prop In Lane	0.12		0.79	0.53		1.00	1.00		0.04	1.00		0.00
Lane Grp Cap(c), veh/h	126	0	0	181	0	157	142	637	666	71	566	596
V/C Ratio(X)	0.45	0.00	0.00	0.18	0.00	0.33	0.41	0.67	0.67	0.34	0.48	0.48
Avail Cap(c_a), veh/h	1177	0	0	1316	0	1145	269	1133	1183	265	1129	1188
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	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.8	0.0	0.0	19.4	0.0	19.7	20.6	12.7	12.7	22.0	12.9	12.9
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.2	0.0	0.5	0.7	1.2	1.2	1.0	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	0.0	0.3	0.0	0.5	0.6	3.0	3.2	0.2	1.9	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.7	0.0	0.0	19.6	0.0	20.2	21.3	13.9	13.9	23.0	13.5	13.5
LnGrp LOS	C	A	A	B	A	C	C	B	B	C	B	B
Approach Vol, veh/h		56			84			928			581	
Approach Delay, s/veh		21.7			20.0			14.4			13.9	
Approach LOS		C			B			B			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.4	22.4		8.6	8.3	20.5		9.7				
Change Period (Y+Rc), s	4.5	5.5		5.0	4.5	5.5		5.0				
Max Green Setting (Gmax), s	7.0	30.0		34.0	7.1	29.9		34.0				
Max Q Clear Time (g_c+I1), s	2.6	11.5		3.5	3.5	7.8		3.4				
Green Ext Time (p_c), s	0.0	5.0		0.2	0.0	3.1		0.2				

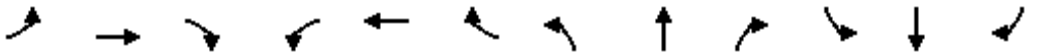
Intersection Summary			
HCM 6th Ctrl Delay		14.7	
HCM 6th LOS		B	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	12	368	220	15	493	39	355	50	15	16	22	8
Future Volume (veh/h)	12	368	220	15	493	39	355	50	15	16	22	8
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	13	387	232	16	519	41	374	53	16	17	23	8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	971	433	49	927	73	478	370	112	42	57	20
Arrive On Green	0.02	0.27	0.27	0.03	0.28	0.28	0.27	0.27	0.27	0.07	0.07	0.07
Sat Flow, veh/h	1781	3554	1585	1781	3337	263	1781	1379	416	632	855	298
Grp Volume(v), veh/h	13	387	232	16	276	284	374	0	69	48	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1823	1781	0	1795	1785	0	0
Q Serve(g_s), s	0.4	4.9	6.8	0.5	7.3	7.3	10.7	0.0	1.6	1.4	0.0	0.0
Cycle Q Clear(g_c), s	0.4	4.9	6.8	0.5	7.3	7.3	10.7	0.0	1.6	1.4	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.14	1.00		0.23	0.35		0.17
Lane Grp Cap(c), veh/h	41	971	433	49	494	507	478	0	482	118	0	0
V/C Ratio(X)	0.32	0.40	0.54	0.33	0.56	0.56	0.78	0.00	0.14	0.41	0.00	0.00
Avail Cap(c_a), veh/h	227	2007	895	227	1003	1030	1233	0	1243	1106	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(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	26.4	16.3	17.0	26.2	16.9	17.0	18.6	0.0	15.3	24.6	0.0	0.0
Incr Delay (d2), s/veh	1.6	0.3	1.0	1.4	1.0	1.0	3.4	0.0	0.2	0.8	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	0.2	1.7	2.2	0.2	2.6	2.7	4.5	0.0	0.6	0.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.0	16.5	18.0	27.6	17.9	17.9	22.0	0.0	15.4	25.4	0.0	0.0
LnGrp LOS	C	B	B	C	B	B	C	A	B	C	A	A
Approach Vol, veh/h		632			576			443			48	
Approach Delay, s/veh		17.3			18.2			21.0			25.4	
Approach LOS		B			B			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	20.8		19.7	6.0	20.5		8.6				
Change Period (Y+Rc), s	4.5	5.5		5.0	4.5	5.5		5.0				
Max Green Setting (Gmax), s	7.0	31.0		38.0	7.0	31.0		34.0				
Max Q Clear Time (g_c+I1), s	2.4	9.3		12.7	2.5	8.8		3.4				
Green Ext Time (p_c), s	0.0	3.1		2.1	0.0	3.1		0.1				

Intersection Summary			
HCM 6th Ctrl Delay		18.8	
HCM 6th LOS		B	



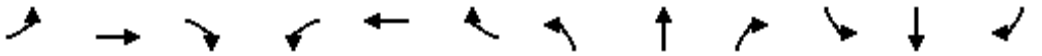
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	210	147	145	214	27	326	282	84	92	274	59
Future Volume (veh/h)	39	210	147	145	214	27	326	282	84	92	274	59
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	41	223	0	154	228	0	347	300	0	98	291	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	100	801		342	954		518	1021		304	801	
Arrive On Green	0.06	0.23	0.00	0.10	0.27	0.00	0.15	0.29	0.00	0.09	0.23	0.00
Sat Flow, veh/h	1781	3554	1585	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	41	223	0	154	228	0	347	300	0	98	291	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	1.5	3.5	0.0	2.8	3.3	0.0	6.3	4.4	0.0	1.8	4.6	0.0
Cycle Q Clear(g_c), s	1.5	3.5	0.0	2.8	3.3	0.0	6.3	4.4	0.0	1.8	4.6	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	100	801		342	954		518	1021		304	801	
V/C Ratio(X)	0.41	0.28		0.45	0.24		0.67	0.29		0.32	0.36	
Avail Cap(c_a), veh/h	187	1441		389	1468		649	1788		363	1495	
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	30.4	21.3	0.0	28.3	19.0	0.0	26.7	18.5	0.0	28.5	21.8	0.0
Incr Delay (d2), s/veh	2.7	0.2	0.0	0.9	0.1	0.0	1.9	0.2	0.0	0.6	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	1.3	0.0	1.1	1.2	0.0	2.5	1.6	0.0	0.7	1.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.1	21.5	0.0	29.2	19.2	0.0	28.6	18.6	0.0	29.1	22.0	0.0
LnGrp LOS	C	C		C	B		C	B		C	C	
Approach Vol, veh/h		264	A		382	A		647	A		389	A
Approach Delay, s/veh		23.3			23.2			24.0			23.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	20.5	8.2	23.4	10.4	24.6	11.1	20.5
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5
Max Green Setting (Gmax), s	12.5	28.0	7.0	27.5	7.0	33.5	7.5	27.0
Max Q Clear Time (g_c+I1), s	8.3	6.6	3.5	5.3	3.8	6.4	4.8	5.5
Green Ext Time (p_c), s	0.5	1.7	0.0	1.2	0.1	1.8	0.1	1.2

Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Notes

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



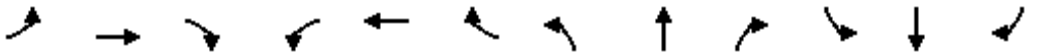
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	23	51	218	268	91	106	371	575	87	103	440	32
Future Volume (veh/h)	23	51	218	268	91	106	371	575	87	103	440	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	24	53	225	185	221	109	382	593	90	106	454	33
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	394	608	542	385	640	542	237	1524	473	347	1358	422
Arrive On Green	0.34	0.34	0.34	0.34	0.34	0.34	0.13	0.30	0.30	0.10	0.27	0.27
Sat Flow, veh/h	1050	1777	1585	1101	1870	1585	1781	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	24	53	225	185	221	109	382	593	90	106	454	33
Grp Sat Flow(s),veh/h/ln	1050	1777	1585	1101	1870	1585	1781	1702	1585	1728	1702	1585
Q Serve(g_s), s	1.0	1.1	6.1	8.7	5.0	2.7	7.5	5.2	2.4	1.6	4.0	0.9
Cycle Q Clear(g_c), s	6.0	1.1	6.1	14.9	5.0	2.7	7.5	5.2	2.4	1.6	4.0	0.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	394	608	542	385	640	542	237	1524	473	347	1358	422
V/C Ratio(X)	0.06	0.09	0.41	0.48	0.35	0.20	1.61	0.39	0.19	0.31	0.33	0.08
Avail Cap(c_a), veh/h	705	1134	1012	711	1194	1012	237	2481	770	429	2436	756
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	12.6	14.2	19.9	13.8	13.1	24.4	15.7	14.7	23.5	16.7	15.5
Incr Delay (d2), s/veh	0.1	0.1	0.5	0.9	0.3	0.2	294.4	0.2	0.2	0.2	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.4	2.1	2.2	2.0	0.9	22.2	1.7	0.8	0.6	1.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	16.1	12.6	14.7	20.9	14.2	13.3	318.8	15.9	14.9	23.7	16.8	15.6
LnGrp LOS	B	B	B	C	B	B	F	B	B	C	B	B
Approach Vol, veh/h		302			515			1065			593	
Approach Delay, s/veh		14.5			16.4			124.4			18.0	
Approach LOS		B			B			F			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.0	20.6		23.8	10.2	22.4		23.8				
Change Period (Y+Rc), s	4.5	5.6		4.5	4.5	5.6		4.5				
Max Green Setting (Gmax), s	7.5	26.9		36.0	7.0	27.4		36.0				
Max Q Clear Time (g_c+I1), s	9.5	6.0		16.9	3.6	7.2		8.1				
Green Ext Time (p_c), s	0.0	2.9		2.4	0.0	4.0		2.0				

Intersection Summary			
HCM 6th Ctrl Delay		63.0	
HCM 6th LOS		E	

Notes

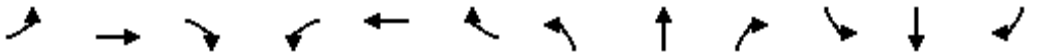
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	486	0	0	794	150	408	0	647	0	0	0
Future Volume (vph)	20	486	0	0	794	150	408	0	647	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.4			5.4	5.4	5.4	5.4	5.4			
Lane Util. Factor	1.00	0.95			0.91	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1770	3539			5085	1583	1681	1681	2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	1770	3539			5085	1583	1681	1681	2787			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	21	506	0	0	827	156	425	0	674	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	126	0	0	544	0	0	0
Lane Group Flow (vph)	21	506	0	0	827	30	212	213	130	0	0	0
Turn Type	Prot	NA			NA	custom	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						8	8		8			
Actuated Green, G (s)	2.4	24.0			16.9	15.6	15.6	15.6	15.6			
Effective Green, g (s)	2.4	24.0			16.9	15.6	15.6	15.6	15.6			
Actuated g/C Ratio	0.03	0.30			0.21	0.19	0.19	0.19	0.19			
Clearance Time (s)	4.7	5.4			5.4	5.4	5.4	5.4	5.4			
Vehicle Extension (s)	2.0	2.0			3.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	52	1049			1062	305	324	324	537			
v/s Ratio Prot	0.01	c0.14			c0.16							
v/s Ratio Perm						0.02	0.13	0.13	0.05			
v/c Ratio	0.40	0.48			0.78	0.10	0.65	0.66	0.24			
Uniform Delay, d1	38.5	23.4			30.2	26.9	30.2	30.2	27.6			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	1.9	0.1			3.7	0.1	3.6	3.6	0.1			
Delay (s)	40.4	23.5			33.9	26.9	33.8	33.8	27.7			
Level of Service	D	C			C	C	C	C	C			
Approach Delay (s)		24.2			32.8			30.1			0.0	
Approach LOS		C			C			C			A	

Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	80.9	Sum of lost time (s)	18.5
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	371	254	0	835	363	0	0	0	140	0	50
Future Volume (veh/h)	0	371	254	0	835	363	0	0	0	140	0	50
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1945	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	0	453	215	0	861	0				144	0	52
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97				0.97	0.97	0.97
Percent Heavy Veh, %	0	2	2	0	2	2				2	2	2
Cap, veh/h	0	1419	578	0	1863					421	0	375
Arrive On Green	0.00	0.36	0.36	0.00	0.36	0.00				0.24	0.00	0.24
Sat Flow, veh/h	0	3890	1585	0	5274	1585				1781	0	1585
Grp Volume(v), veh/h	0	453	215	0	861	0				144	0	52
Grp Sat Flow(s),veh/h/ln	0	1945	1585	0	1702	1585				1781	0	1585
Q Serve(g_s), s	0.0	2.1	2.5	0.0	3.3	0.0				1.7	0.0	0.7
Cycle Q Clear(g_c), s	0.0	2.1	2.5	0.0	3.3	0.0				1.7	0.0	0.7
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	1419	578	0	1863					421	0	375
V/C Ratio(X)	0.00	0.32	0.37	0.00	0.46					0.34	0.00	0.14
Avail Cap(c_a), veh/h	0	4932	2009	0	6473					1252	0	1114
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.8	5.9	0.0	6.1	0.0				8.0	0.0	7.6
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.1	0.0				0.2	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.3	0.3	0.0	0.4	0.0				0.4	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.8	6.1	0.0	6.2	0.0				8.2	0.0	7.7
LnGrp LOS	A	A	A	A	A					A	A	A
Approach Vol, veh/h		668			861	A					196	
Approach Delay, s/veh		5.9			6.2						8.1	
Approach LOS		A			A						A	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		14.6		10.7		14.6						
Change Period (Y+Rc), s		5.4		* 4.7		5.4						
Max Green Setting (Gmax), s		32.1		* 18		32.1						
Max Q Clear Time (g_c+I1), s		4.5		3.7		5.3						
Green Ext Time (p_c), s		2.2		0.5		4.0						

Intersection Summary	
HCM 6th Ctrl Delay	6.3
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

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

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

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	306	12	12	372	37	7
Future Vol, veh/h	306	12	12	372	37	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	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	333	13	13	404	40	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	346	0	763	333
Stage 1	-	-	-	-	333	-
Stage 2	-	-	-	-	430	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1213	-	372	709
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	656	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1213	-	367	709
Mov Cap-2 Maneuver	-	-	-	-	367	-
Stage 1	-	-	-	-	726	-
Stage 2	-	-	-	-	647	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	15.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	398	-	-	1213	-
HCM Lane V/C Ratio	0.12	-	-	0.011	-
HCM Control Delay (s)	15.3	-	-	8	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	29	386	87	12	398
Future Vol, veh/h	0	29	386	87	12	398
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	150	150	-
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	32	420	95	13	433

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	663	210	0	0	515	0
Stage 1	420	-	-	-	-	-
Stage 2	243	-	-	-	-	-
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	394	796	-	-	1047	-
Stage 1	631	-	-	-	-	-
Stage 2	775	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	389	796	-	-	1047	-
Mov Cap-2 Maneuver	389	-	-	-	-	-
Stage 1	631	-	-	-	-	-
Stage 2	766	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.7	0	0.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	796	1047	-
HCM Lane V/C Ratio	-	-	0.04	0.012	-
HCM Control Delay (s)	-	-	9.7	8.5	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-

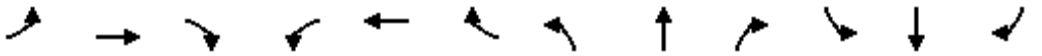
Michael Baker
INTERNATIONAL

Appendix H: Cumulative Year 2040 Without Project Synchro Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	164	232	682	217	113	88	498	345	59	462	29
Future Volume (veh/h)	41	164	232	682	217	113	88	498	345	59	462	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	173	244	718	228	119	93	524	363	62	486	31
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	63	312	278	732	1031	873	106	679	939	80	580	37
Arrive On Green	0.04	0.18	0.18	0.41	0.55	0.55	0.06	0.18	0.18	0.04	0.17	0.17
Sat Flow, veh/h	1781	1777	1585	1781	1870	1585	1781	3741	1585	1781	3479	221
Grp Volume(v), veh/h	43	173	244	718	228	119	93	524	363	62	261	256
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1870	1585	1781	1870	1585	1781	1870	1831
Q Serve(g_s), s	2.3	8.5	14.4	38.2	6.0	3.5	5.0	12.8	11.6	3.3	13.0	13.0
Cycle Q Clear(g_c), s	2.3	8.5	14.4	38.2	6.0	3.5	5.0	12.8	11.6	3.3	13.0	13.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	63	312	278	732	1031	873	106	679	939	80	312	305
V/C Ratio(X)	0.68	0.56	0.88	0.98	0.22	0.14	0.88	0.77	0.39	0.78	0.84	0.84
Avail Cap(c_a), veh/h	124	333	297	732	1031	873	106	759	973	93	366	358
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.8	36.2	38.6	27.9	11.0	10.5	44.8	37.4	10.3	45.4	38.7	38.8
Incr Delay (d2), s/veh	12.0	1.8	23.5	28.3	0.1	0.1	51.8	4.4	0.3	29.5	13.6	14.3
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	3.9	7.4	20.4	2.2	1.1	3.7	6.3	3.5	2.1	6.8	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.8	38.0	62.1	56.2	11.1	10.5	96.6	41.9	10.6	74.9	52.3	53.0
LnGrp LOS	E	D	E	E	B	B	F	D	B	E	D	D
Approach Vol, veh/h		460			1065			980			579	
Approach Delay, s/veh		52.6			41.5			35.5			55.1	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	21.9	44.0	21.3	10.2	20.5	7.9	57.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	19.5	39.5	18.0	5.7	18.8	6.7	50.8
Max Q Clear Time (g_c+I1), s	5.3	14.8	40.2	16.4	7.0	15.0	4.3	8.0
Green Ext Time (p_c), s	0.0	2.1	0.0	0.4	0.0	1.0	0.0	1.6

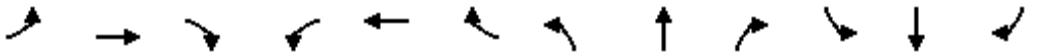
Intersection Summary	
HCM 6th Ctrl Delay	43.8
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	534	5	11	591	188	29	49	114	472	18	186
Future Volume (veh/h)	110	534	5	11	591	188	29	49	114	472	18	186
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	116	562	5	12	622	198	31	52	120	497	19	196
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	1038	440	26	783	332	39	66	152	555	583	494
Arrive On Green	0.08	0.28	0.28	0.01	0.21	0.21	0.15	0.15	0.15	0.31	0.31	0.31
Sat Flow, veh/h	1781	3741	1585	1781	3741	1585	256	430	992	1781	1870	1585
Grp Volume(v), veh/h	116	562	5	12	622	198	203	0	0	497	19	196
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1679	0	0	1781	1870	1585
Q Serve(g_s), s	4.7	9.5	0.2	0.5	11.7	8.4	8.6	0.0	0.0	19.7	0.5	7.2
Cycle Q Clear(g_c), s	4.7	9.5	0.2	0.5	11.7	8.4	8.6	0.0	0.0	19.7	0.5	7.2
Prop In Lane	1.00		1.00	1.00		1.00	0.15		0.59	1.00		1.00
Lane Grp Cap(c), veh/h	147	1038	440	26	783	332	257	0	0	555	583	494
V/C Ratio(X)	0.79	0.54	0.01	0.46	0.79	0.60	0.79	0.00	0.00	0.89	0.03	0.40
Avail Cap(c_a), veh/h	180	1038	440	163	909	385	430	0	0	661	694	588
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.3	22.8	19.4	36.2	27.8	26.5	30.2	0.0	0.0	24.3	17.7	20.0
Incr Delay (d2), s/veh	16.9	0.6	0.0	11.8	4.3	1.9	5.4	0.0	0.0	13.2	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	3.8	0.1	0.3	5.3	3.1	3.8	0.0	0.0	9.7	0.2	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.2	23.3	19.4	48.0	32.1	28.4	35.6	0.0	0.0	37.5	17.8	20.5
LnGrp LOS	D	C	B	D	C	C	D	A	A	D	B	C
Approach Vol, veh/h		683			832			203			712	
Approach Delay, s/veh		27.9			31.4			35.6			32.3	
Approach LOS		C			C			D			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		15.9	5.6	25.1		27.6	10.6	20.0				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.0	6.8	18.7		27.5	7.5	18.0				
Max Q Clear Time (g_c+I1), s		10.6	2.5	11.5		21.7	6.7	13.7				
Green Ext Time (p_c), s		0.7	0.0	2.0		1.4	0.0	1.8				

Intersection Summary												
HCM 6th Ctrl Delay			31.0									
HCM 6th LOS			C									



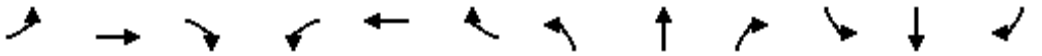
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	741	326	241	436	276	268	208	277	330	398	54
Future Volume (veh/h)	20	741	326	241	436	276	268	208	277	330	398	54
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	21	780	343	254	459	291	282	219	292	255	547	57
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	31	1065	451	141	1296	549	831	436	370	380	798	338
Arrive On Green	0.02	0.28	0.28	0.08	0.35	0.35	0.23	0.23	0.23	0.21	0.21	0.21
Sat Flow, veh/h	1781	3741	1585	1781	3741	1585	3563	1870	1585	1781	3741	1585
Grp Volume(v), veh/h	21	780	343	254	459	291	282	219	292	255	547	57
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.3	20.3	21.2	8.5	9.8	15.8	7.1	10.9	18.6	14.1	14.5	3.2
Cycle Q Clear(g_c), s	1.3	20.3	21.2	8.5	9.8	15.8	7.1	10.9	18.6	14.1	14.5	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	31	1065	451	141	1296	549	831	436	370	380	798	338
V/C Ratio(X)	0.68	0.73	0.76	1.80	0.35	0.53	0.34	0.50	0.79	0.67	0.69	0.17
Avail Cap(c_a), veh/h	99	1461	619	141	1548	656	1229	645	547	613	1287	545
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.6	34.8	35.1	49.5	26.2	28.1	34.3	35.8	38.8	38.8	39.0	34.5
Incr Delay (d2), s/veh	9.3	1.4	4.1	388.7	0.2	1.0	0.3	1.3	6.1	2.9	1.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	9.1	8.4	18.9	4.3	6.0	3.0	5.0	7.7	6.4	6.7	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.9	36.2	39.3	438.3	26.4	29.1	34.7	37.1	44.9	41.8	40.5	34.9
LnGrp LOS	E	D	D	F	C	C	C	D	D	D	D	C
Approach Vol, veh/h		1144			1004			793			859	
Approach Delay, s/veh		37.6			131.4			39.1			40.5	
Approach LOS		D			F			D			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		30.4	13.0	35.9		28.2	6.4	42.6				
Change Period (Y+Rc), s		5.3	4.5	5.3		5.3	4.5	5.3				
Max Green Setting (Gmax), s		37.1	8.5	42.0		37.0	6.0	44.5				
Max Q Clear Time (g_c+I1), s		20.6	10.5	23.2		16.5	3.3	17.8				
Green Ext Time (p_c), s		4.5	0.0	7.4		6.5	0.0	5.1				

Intersection Summary	
HCM 6th Ctrl Delay	63.3
HCM 6th LOS	E

Notes

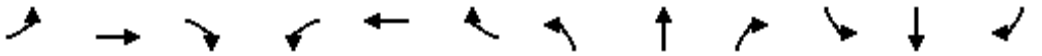
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	62	92	254	26	89	43	832	268	104	978	29
Future Volume (veh/h)	52	62	92	254	26	89	43	832	268	104	978	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	65	97	267	27	94	45	876	282	109	1029	31
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	69	94	140	314	101	351	60	1229	521	139	1395	591
Arrive On Green	0.04	0.14	0.14	0.18	0.28	0.28	0.03	0.33	0.33	0.08	0.37	0.37
Sat Flow, veh/h	1781	677	1011	1781	366	1275	1781	3741	1585	1781	3741	1585
Grp Volume(v), veh/h	55	0	162	267	0	121	45	876	282	109	1029	31
Grp Sat Flow(s),veh/h/ln	1781	0	1688	1781	0	1641	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.1	0.0	6.2	9.8	0.0	3.9	1.7	13.9	9.8	4.1	16.1	0.8
Cycle Q Clear(g_c), s	2.1	0.0	6.2	9.8	0.0	3.9	1.7	13.9	9.8	4.1	16.1	0.8
Prop In Lane	1.00		0.60	1.00		0.78	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	69	0	234	314	0	452	60	1229	521	139	1395	591
V/C Ratio(X)	0.79	0.00	0.69	0.85	0.00	0.27	0.75	0.71	0.54	0.78	0.74	0.05
Avail Cap(c_a), veh/h	232	0	876	409	0	1014	132	1586	672	187	1702	721
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.2	0.0	27.7	26.9	0.0	19.1	32.3	19.9	18.5	30.5	18.3	13.5
Incr Delay (d2), s/veh	7.4	0.0	4.4	10.3	0.0	0.4	6.7	1.2	1.1	9.7	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	2.7	4.9	0.0	1.5	0.8	5.5	3.6	2.0	6.3	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.6	0.0	32.1	37.2	0.0	19.5	39.0	21.1	19.6	40.2	19.8	13.6
LnGrp LOS	D	A	C	D	A	B	D	C	B	D	B	B
Approach Vol, veh/h		217			388			1203			1169	
Approach Delay, s/veh		34.0			31.7			21.4			21.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.8	27.5	16.4	13.8	6.8	30.5	7.1	23.1
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	7.1	28.6	15.5	35.0	5.0	30.7	8.8	41.7
Max Q Clear Time (g_c+I1), s	6.1	15.9	11.8	8.2	3.7	18.1	4.1	5.9
Green Ext Time (p_c), s	0.0	6.3	0.2	1.2	0.0	6.4	0.0	0.9

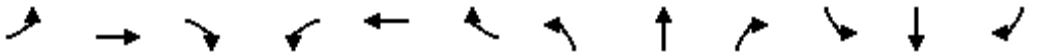
Intersection Summary	
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	206	131	182	234	43	143	49	861	146	229	1264	62
Future Volume (veh/h)	206	131	182	234	43	143	49	861	146	229	1264	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	217	138	192	246	45	151	52	906	154	241	1331	65
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	254	293	248	280	321	272	66	1203	510	276	1642	696
Arrive On Green	0.14	0.16	0.16	0.16	0.17	0.17	0.04	0.32	0.32	0.15	0.44	0.44
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3741	1585	1781	3741	1585
Grp Volume(v), veh/h	217	138	192	246	45	151	52	906	154	241	1331	65
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	11.1	6.3	10.9	12.6	1.9	8.2	2.7	20.3	6.8	12.4	29.0	2.2
Cycle Q Clear(g_c), s	11.1	6.3	10.9	12.6	1.9	8.2	2.7	20.3	6.8	12.4	29.0	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	254	293	248	280	321	272	66	1203	510	276	1642	696
V/C Ratio(X)	0.85	0.47	0.77	0.88	0.14	0.56	0.78	0.75	0.30	0.87	0.81	0.09
Avail Cap(c_a), veh/h	484	700	594	334	542	460	95	1389	588	347	1917	812
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.1	35.9	37.8	38.5	32.9	35.5	44.6	28.4	23.8	38.6	22.8	15.3
Incr Delay (d2), s/veh	3.2	1.4	6.1	17.9	0.2	2.1	14.0	2.2	0.4	15.6	2.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	3.0	4.6	6.9	0.9	3.3	1.4	9.2	2.6	6.4	12.2	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.3	37.3	43.9	56.4	33.1	37.6	58.6	30.6	24.2	54.2	25.3	15.4
LnGrp LOS	D	D	D	E	C	D	E	C	C	D	C	B
Approach Vol, veh/h		547			442			1112			1637	
Approach Delay, s/veh		41.6			47.6			31.0			29.2	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.0	35.4	19.2	19.9	8.0	46.3	17.8	21.3
Change Period (Y+Rc), s	4.5	5.3	4.5	5.3	4.5	5.3	4.5	5.3
Max Green Setting (Gmax), s	18.2	34.7	17.5	35.0	5.0	47.9	25.4	27.1
Max Q Clear Time (g_c+I1), s	14.4	22.3	14.6	12.9	4.7	31.0	13.1	10.2
Green Ext Time (p_c), s	0.1	6.3	0.1	1.8	0.0	10.1	0.3	0.8

Intersection Summary	
HCM 6th Ctrl Delay	33.7
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	101	526	194	216	73	219	849	184	77	1228	246
Future Volume (veh/h)	113	101	526	194	216	73	219	849	184	77	1228	246
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	119	106	554	204	227	77	231	894	194	81	1293	259
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	141	488	414	209	559	474	234	1645	697	101	1366	579
Arrive On Green	0.08	0.26	0.26	0.12	0.30	0.30	0.13	0.44	0.44	0.06	0.37	0.37
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3741	1585	1781	3741	1585
Grp Volume(v), veh/h	119	106	554	204	227	77	231	894	194	81	1293	259
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	9.9	6.6	39.0	17.1	14.5	5.4	19.4	26.3	11.7	6.7	50.1	18.5
Cycle Q Clear(g_c), s	9.9	6.6	39.0	17.1	14.5	5.4	19.4	26.3	11.7	6.7	50.1	18.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	141	488	414	209	559	474	234	1645	697	101	1366	579
V/C Ratio(X)	0.85	0.22	1.34	0.98	0.41	0.16	0.99	0.54	0.28	0.80	0.95	0.45
Avail Cap(c_a), veh/h	164	488	414	209	559	474	234	1645	697	174	1379	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.0	43.3	55.2	65.8	41.8	38.6	64.8	30.8	26.7	69.7	46.0	36.0
Incr Delay (d2), s/veh	25.4	0.3	168.5	55.7	0.6	0.2	55.6	0.4	0.3	5.5	13.5	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	3.2	35.0	11.1	6.9	0.0	12.3	11.8	4.6	3.2	25.8	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.3	43.6	223.7	121.5	42.4	38.8	120.4	31.3	27.0	75.2	59.6	36.7
LnGrp LOS	F	D	F	F	D	D	F	C	C	E	E	D
Approach Vol, veh/h		779			508			1319			1633	
Approach Delay, s/veh		179.3			73.6			46.2			56.7	
Approach LOS		F			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.0	71.0	22.0	43.5	24.1	59.9	16.3	49.2
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	14.6	60.1	17.5	39.0	19.6	55.1	13.8	42.7
Max Q Clear Time (g_c+I1), s	8.7	28.3	19.1	41.0	21.4	52.1	11.9	16.5
Green Ext Time (p_c), s	0.0	9.4	0.0	0.0	0.0	2.5	0.0	2.0

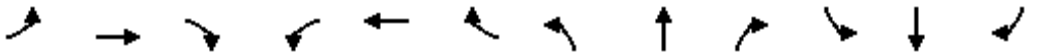
Intersection Summary	
HCM 6th Ctrl Delay	78.0
HCM 6th LOS	E

Intersection	
Intersection Delay, s/veh	119.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	49	0	59	2	0	0	23	1000	5	0	1202	25
Future Vol, veh/h	49	0	59	2	0	0	23	1000	5	0	1202	25
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	0	62	2	0	0	24	1053	5	0	1265	26
Number of Lanes	0	1	0	0	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	12	11.1	55.7	183.2
HCM LOS	B	B	F	F

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	4%	0%	45%	100%	0%	0%
Vol Thru, %	96%	99%	0%	0%	100%	94%
Vol Right, %	0%	1%	55%	0%	0%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	523	505	108	2	801	426
LT Vol	23	0	49	2	0	0
Through Vol	500	500	0	0	801	401
RT Vol	0	5	59	0	0	25
Lane Flow Rate	551	532	114	2	844	448
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.976	0.938	0.214	0.005	1.527	0.806
Departure Headway (Hd)	6.958	6.929	7.048	8.093	6.515	6.474
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	523	526	513	445	565	560
Service Time	4.658	4.629	5.048	6.093	4.255	4.213
HCM Lane V/C Ratio	1.054	1.011	0.222	0.004	1.494	0.8
HCM Control Delay	59.8	51.5	12	11.1	264.1	30.9
HCM Lane LOS	F	F	B	B	F	D
HCM 95th-tile Q	13	11.7	0.8	0	43.4	7.9



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	43	191	108	36	126	52	941	26	113	1170	0
Future Volume (veh/h)	49	43	191	108	36	126	52	941	26	113	1170	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	45	201	114	38	133	55	991	27	119	1232	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	52	232	150	50	176	102	1384	38	149	1527	0
Arrive On Green	0.21	0.21	0.21	0.11	0.11	0.11	0.06	0.38	0.38	0.08	0.41	0.00
Sat Flow, veh/h	289	250	1116	1352	451	1585	1781	3624	99	1781	3741	0
Grp Volume(v), veh/h	298	0	0	152	0	133	55	511	507	119	1232	0
Grp Sat Flow(s),veh/h/ln	1655	0	0	1803	0	1585	1781	1870	1853	1781	1870	0
Q Serve(g_s), s	16.1	0.0	0.0	7.6	0.0	7.6	2.8	21.6	21.6	6.1	27.0	0.0
Cycle Q Clear(g_c), s	16.1	0.0	0.0	7.6	0.0	7.6	2.8	21.6	21.6	6.1	27.0	0.0
Prop In Lane	0.17		0.67	0.75		1.00	1.00		0.05	1.00		0.00
Lane Grp Cap(c), veh/h	344	0	0	200	0	176	102	714	707	149	1527	0
V/C Ratio(X)	0.87	0.00	0.00	0.76	0.00	0.76	0.54	0.72	0.72	0.80	0.81	0.00
Avail Cap(c_a), veh/h	606	0	0	660	0	581	134	925	916	213	2015	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)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	35.5	0.0	0.0	40.0	0.0	40.0	42.6	24.4	24.4	41.8	24.2	0.0
Incr Delay (d2), s/veh	2.6	0.0	0.0	2.2	0.0	2.5	1.7	1.9	1.9	8.3	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	0.0	0.0	3.4	0.0	3.0	1.2	9.2	9.1	2.9	11.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.1	0.0	0.0	42.3	0.0	42.5	44.2	26.3	26.3	50.1	26.1	0.0
LnGrp LOS	D	A	A	D	A	D	D	C	C	D	C	A
Approach Vol, veh/h		298			285			1073			1351	
Approach Delay, s/veh		38.1			42.4			27.2			28.2	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.2	40.9		24.3	9.8	43.4		15.3				
Change Period (Y+Rc), s	4.5	5.5		5.0	4.5	5.5		5.0				
Max Green Setting (Gmax), s	11.1	45.9		34.0	7.0	50.0		34.0				
Max Q Clear Time (g_c+I1), s	8.1	23.6		18.1	4.8	29.0		9.6				
Green Ext Time (p_c), s	0.0	6.5		1.2	0.0	8.9		0.7				

Intersection Summary			
HCM 6th Ctrl Delay		30.2	
HCM 6th LOS		C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	1563	408	13	708	263	340	186	44	252	131	42
Future Volume (veh/h)	108	1563	408	13	708	263	340	186	44	252	131	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	114	1645	429	14	745	277	358	196	46	265	138	44
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	136	1402	594	37	830	309	396	326	76	255	133	42
Arrive On Green	0.08	0.37	0.37	0.02	0.32	0.32	0.22	0.22	0.22	0.24	0.24	0.24
Sat Flow, veh/h	1781	3741	1585	1781	2600	967	1781	1465	344	1059	551	176
Grp Volume(v), veh/h	114	1645	429	14	536	486	358	0	242	447	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1696	1781	0	1808	1786	0	0
Q Serve(g_s), s	8.9	53.0	32.8	1.1	38.7	38.7	27.7	0.0	17.0	34.0	0.0	0.0
Cycle Q Clear(g_c), s	8.9	53.0	32.8	1.1	38.7	38.7	27.7	0.0	17.0	34.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.57	1.00		0.19	0.59		0.10
Lane Grp Cap(c), veh/h	136	1402	594	37	597	542	396	0	402	429	0	0
V/C Ratio(X)	0.84	1.17	0.72	0.38	0.90	0.90	0.90	0.00	0.60	1.04	0.00	0.00
Avail Cap(c_a), veh/h	147	1402	594	88	639	579	453	0	460	429	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(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	64.4	44.2	37.9	68.3	45.9	45.9	53.5	0.0	49.4	53.7	0.0	0.0
Incr Delay (d2), s/veh	28.5	85.9	4.3	2.3	14.9	16.1	20.1	0.0	2.0	54.5	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	5.1	40.5	13.2	0.5	20.0	18.4	14.7	0.0	8.0	21.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.9	130.1	42.2	70.6	60.8	62.1	73.6	0.0	51.4	108.2	0.0	0.0
LnGrp LOS	F	F	D	E	E	E	E	A	D	F	A	A
Approach Vol, veh/h		2188			1036			600			447	
Approach Delay, s/veh		110.9			61.5			64.6			108.2	
Approach LOS		F			E			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.3	50.6		36.5	7.5	58.5		39.0				
Change Period (Y+Rc), s	4.5	5.5		5.0	4.5	5.5		5.0				
Max Green Setting (Gmax), s	11.7	48.3		36.0	7.0	53.0		34.0				
Max Q Clear Time (g_c+I1), s	10.9	40.7		29.7	3.1	55.0		36.0				
Green Ext Time (p_c), s	0.0	3.7		1.8	0.0	0.0		0.0				

Intersection Summary												
HCM 6th Ctrl Delay			92.2									
HCM 6th LOS			F									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	645	522	114	367	78	535	552	175	198	593	50
Future Volume (veh/h)	125	645	522	114	367	78	535	552	175	198	593	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	132	679	0	120	386	0	563	581	0	208	624	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	905		305	878		642	1172		328	843	
Arrive On Green	0.09	0.24	0.00	0.09	0.23	0.00	0.18	0.31	0.00	0.09	0.23	0.00
Sat Flow, veh/h	1781	3741	1585	3563	3741	1585	3563	3741	1585	3563	3741	1585
Grp Volume(v), veh/h	132	679	0	120	386	0	563	581	0	208	624	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	5.4	12.6	0.0	2.4	6.6	0.0	11.5	9.5	0.0	4.2	11.6	0.0
Cycle Q Clear(g_c), s	5.4	12.6	0.0	2.4	6.6	0.0	11.5	9.5	0.0	4.2	11.6	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	166	905		305	878		642	1172		328	843	
V/C Ratio(X)	0.80	0.75		0.39	0.44		0.88	0.50		0.63	0.74	
Avail Cap(c_a), veh/h	178	1372		333	1347		642	1512		485	1347	
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	33.3	26.3	0.0	32.4	24.5	0.0	29.9	20.9	0.0	32.8	27.0	0.0
Incr Delay (d2), s/veh	20.7	1.3	0.0	0.8	0.3	0.0	13.1	0.3	0.0	2.0	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	5.3	0.0	1.0	2.7	0.0	5.8	3.8	0.0	1.8	4.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.0	27.6	0.0	33.3	24.8	0.0	43.1	21.2	0.0	34.8	28.3	0.0
LnGrp LOS	D	C		C	C		D	C		C	C	
Approach Vol, veh/h		811	A		506	A		1144	A		832	A
Approach Delay, s/veh		31.9			26.8			32.0			29.9	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	22.4	11.5	23.1	11.4	29.0	10.9	23.6
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5
Max Green Setting (Gmax), s	13.5	27.0	7.5	27.0	10.2	30.3	7.0	27.5
Max Q Clear Time (g_c+I1), s	13.5	13.6	7.4	8.6	6.2	11.5	4.4	14.6
Green Ext Time (p_c), s	0.0	3.3	0.0	2.1	0.2	3.5	0.1	3.5

Intersection Summary	
HCM 6th Ctrl Delay	30.6
HCM 6th LOS	C

Notes

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

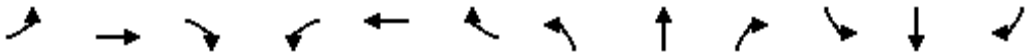
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	57	464	291	95	146	412	1030	131	150	1143	18
Future Volume (veh/h)	26	57	464	291	95	146	412	1030	131	150	1143	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	60	488	203	244	154	434	1084	138	158	1203	19
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	371	691	617	179	728	617	337	2126	600	265	1482	419
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.19	0.38	0.38	0.07	0.26	0.26
Sat Flow, veh/h	987	1777	1585	859	1870	1585	1781	5611	1585	3563	5611	1585
Grp Volume(v), veh/h	27	60	488	203	244	154	434	1084	138	158	1203	19
Grp Sat Flow(s),veh/h/ln	987	1777	1585	859	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.8	2.0	25.1	10.9	8.5	6.1	17.5	13.8	5.5	4.0	18.6	0.8
Cycle Q Clear(g_c), s	10.3	2.0	25.1	36.0	8.5	6.1	17.5	13.8	5.5	4.0	18.6	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	371	691	617	179	728	617	337	2126	600	265	1482	419
V/C Ratio(X)	0.07	0.09	0.79	1.14	0.34	0.25	1.29	0.51	0.23	0.60	0.81	0.05
Avail Cap(c_a), veh/h	371	691	617	179	728	617	337	2177	615	327	1631	461
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	17.9	25.0	43.2	19.9	19.1	37.5	22.1	19.6	41.5	31.9	25.4
Incr Delay (d2), s/veh	0.1	0.1	6.9	108.9	0.3	0.2	150.3	0.2	0.2	0.8	3.0	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	0.8	10.4	9.5	3.7	2.3	21.3	5.7	1.9	1.7	8.4	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.6	17.9	31.9	152.1	20.1	19.3	187.9	22.3	19.7	42.3	34.9	25.4
LnGrp LOS	C	B	C	F	C	B	F	C	B	D	C	C
Approach Vol, veh/h		575			601			1656			1380	
Approach Delay, s/veh		30.0			64.5			65.5			35.6	
Approach LOS		C			E			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.0	30.0		40.5	11.4	40.7		40.5				
Change Period (Y+Rc), s	4.5	5.6		4.5	4.5	5.6		4.5				
Max Green Setting (Gmax), s	17.5	26.9		36.0	8.5	35.9		36.0				
Max Q Clear Time (g_c+I1), s	19.5	20.6		38.0	6.0	15.8		27.1				
Green Ext Time (p_c), s	0.0	3.8		0.0	0.1	7.8		2.7				

Intersection Summary			
HCM 6th Ctrl Delay		50.7	
HCM 6th LOS		D	

Notes

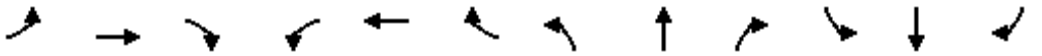
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	128	1645	0	0	2051	215	358	0	586	0	0	0
Future Volume (vph)	128	1645	0	0	2051	215	358	0	586	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.4			5.4	5.4	5.4	5.4	5.4			
Lane Util. Factor	1.00	*1.00			*1.00	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1770	3725			5588	1583	1681	1681	2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	1770	3725			5588	1583	1681	1681	2787			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	135	1732	0	0	2159	226	377	0	617	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	92	0	0	525	0	0	0
Lane Group Flow (vph)	135	1732	0	0	2159	134	188	189	92	0	0	0
Turn Type	Prot	NA			NA	custom	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						8	8		8			
Actuated Green, G (s)	9.3	59.2			45.2	17.5	17.5	17.5	17.5			
Effective Green, g (s)	9.3	59.2			45.2	17.5	17.5	17.5	17.5			
Actuated g/C Ratio	0.08	0.50			0.38	0.15	0.15	0.15	0.15			
Clearance Time (s)	4.7	5.4			5.4	5.4	5.4	5.4	5.4			
Vehicle Extension (s)	2.0	2.0			3.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	140	1876			2149	235	250	250	415			
v/s Ratio Prot	0.08	c0.46			c0.39							
v/s Ratio Perm						0.08	0.11	0.11	0.03			
v/c Ratio	0.96	0.92			1.00	0.57	0.75	0.76	0.22			
Uniform Delay, d1	53.9	27.0			36.1	46.5	47.9	48.0	44.0			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	64.4	8.0			20.5	2.1	10.8	11.0	0.1			
Delay (s)	118.3	35.1			56.7	48.6	58.7	58.9	44.1			
Level of Service	F	D			E	D	E	E	D			
Approach Delay (s)		41.1			55.9			49.7			0.0	
Approach LOS		D			E			D			A	

Intersection Summary			
HCM 2000 Control Delay	49.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	117.5	Sum of lost time (s)	18.5
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1395	1305	0	872	1226	0	0	0	179	0	38
Future Volume (veh/h)	0	1395	1305	0	872	1226	0	0	0	179	0	38
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1945	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	0	2108	947	0	918	0				188	0	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	0	2	2				2	2	2
Cap, veh/h	0	2803	1142	0	4043					241	0	215
Arrive On Green	0.00	0.72	0.72	0.00	0.72	0.00				0.14	0.00	0.14
Sat Flow, veh/h	0	3890	1585	0	5611	1585				1781	0	1585
Grp Volume(v), veh/h	0	2108	947	0	918	0				188	0	40
Grp Sat Flow(s),veh/h/ln	0	1945	1585	0	1870	1585				1781	0	1585
Q Serve(g_s), s	0.0	23.2	29.1	0.0	3.8	0.0				7.2	0.0	1.6
Cycle Q Clear(g_c), s	0.0	23.2	29.1	0.0	3.8	0.0				7.2	0.0	1.6
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2803	1142	0	4043					241	0	215
V/C Ratio(X)	0.00	0.75	0.83	0.00	0.23					0.78	0.00	0.19
Avail Cap(c_a), veh/h	0	3441	1402	0	4963					455	0	405
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.0	6.8	0.0	3.3	0.0				29.3	0.0	26.9
Incr Delay (d2), s/veh	0.0	0.6	3.0	0.0	0.0	0.0				2.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.0	5.9	0.0	0.8	0.0				3.0	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.5	9.8	0.0	3.3	0.0				31.4	0.0	27.0
LnGrp LOS	A	A	A	A	A					C	A	C
Approach Vol, veh/h		3055			918	A					228	
Approach Delay, s/veh		7.5			3.3						30.6	
Approach LOS		A			A						C	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		55.9		14.2		55.9						
Change Period (Y+Rc), s		5.4		* 4.7		5.4						
Max Green Setting (Gmax), s		62.0		* 18		62.0						
Max Q Clear Time (g_c+I1), s		31.1		9.2		5.8						
Green Ext Time (p_c), s		19.4		0.5		4.5						

Intersection Summary	
HCM 6th Ctrl Delay	7.9
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

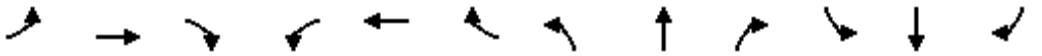
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	270	134	383	249	35	234	371	602	148	467	73
Future Volume (veh/h)	56	270	134	383	249	35	234	371	602	148	467	73
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	59	284	141	403	262	37	246	391	634	156	492	77
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	85	388	188	462	709	601	137	985	828	120	802	125
Arrive On Green	0.05	0.17	0.17	0.26	0.38	0.38	0.08	0.26	0.26	0.07	0.25	0.25
Sat Flow, veh/h	1781	2322	1123	1781	1870	1585	1781	3741	1585	1781	3160	492
Grp Volume(v), veh/h	59	215	210	403	262	37	246	391	634	156	290	279
Grp Sat Flow(s),veh/h/ln	1781	1777	1668	1781	1870	1585	1781	1870	1585	1781	1870	1782
Q Serve(g_s), s	2.4	8.5	8.9	16.0	7.5	1.1	5.7	6.4	19.5	5.0	10.2	10.3
Cycle Q Clear(g_c), s	2.4	8.5	8.9	16.0	7.5	1.1	5.7	6.4	19.5	5.0	10.2	10.3
Prop In Lane	1.00		0.67	1.00		1.00	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	85	297	279	462	709	601	137	985	828	120	475	452
V/C Ratio(X)	0.70	0.73	0.75	0.87	0.37	0.06	1.79	0.40	0.77	1.30	0.61	0.62
Avail Cap(c_a), veh/h	161	432	405	950	1283	1087	137	985	828	120	475	452
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	29.2	29.4	26.3	16.6	14.6	34.2	22.5	14.1	34.5	24.4	24.5
Incr Delay (d2), s/veh	9.9	3.4	4.5	5.3	0.3	0.0	385.2	0.3	4.3	182.0	2.3	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.8	3.8	6.8	2.9	0.4	17.1	2.8	7.6	8.1	4.4	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.7	32.6	33.9	31.6	16.9	14.7	419.4	22.7	18.4	216.5	26.7	27.0
LnGrp LOS	D	C	C	C	B	B	F	C	B	F	C	C
Approach Vol, veh/h		484			702			1271			725	
Approach Delay, s/veh		34.6			25.2			97.3			67.6	
Approach LOS		C			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	24.0	23.7	16.9	10.2	23.3	8.0	32.6
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	19.5	39.5	18.0	5.7	18.8	6.7	50.8
Max Q Clear Time (g_c+I1), s	7.0	21.5	18.0	10.9	7.7	12.3	4.4	9.5
Green Ext Time (p_c), s	0.0	0.0	1.2	1.5	0.0	1.7	0.0	1.6

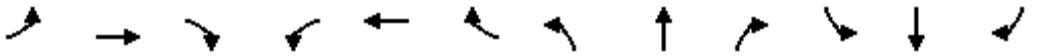
Intersection Summary	
HCM 6th Ctrl Delay	65.1
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	198	635	11	148	543	265	13	7	61	218	13	103
Future Volume (veh/h)	198	635	11	148	543	265	13	7	61	218	13	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	208	668	12	156	572	279	14	7	64	229	14	108
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	251	1045	443	197	933	395	25	13	116	317	333	282
Arrive On Green	0.14	0.28	0.28	0.11	0.25	0.25	0.09	0.09	0.09	0.18	0.18	0.18
Sat Flow, veh/h	1781	3741	1585	1781	3741	1585	269	135	1231	1781	1870	1585
Grp Volume(v), veh/h	208	668	12	156	572	279	85	0	0	229	14	108
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1635	0	0	1781	1870	1585
Q Serve(g_s), s	6.1	8.3	0.3	4.5	7.2	8.5	2.6	0.0	0.0	6.5	0.3	3.2
Cycle Q Clear(g_c), s	6.1	8.3	0.3	4.5	7.2	8.5	2.6	0.0	0.0	6.5	0.3	3.2
Prop In Lane	1.00		1.00	1.00		1.00	0.16		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	251	1045	443	197	933	395	154	0	0	317	333	282
V/C Ratio(X)	0.83	0.64	0.03	0.79	0.61	0.71	0.55	0.00	0.00	0.72	0.04	0.38
Avail Cap(c_a), veh/h	251	1313	556	227	1264	536	583	0	0	920	966	818
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	16.8	13.9	23.1	17.7	18.2	23.1	0.0	0.0	20.7	18.1	19.3
Incr Delay (d2), s/veh	20.2	0.7	0.0	15.0	0.7	2.7	3.1	0.0	0.0	3.1	0.1	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	3.6	3.0	0.1	2.5	2.7	2.9	1.1	0.0	0.0	2.7	0.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.5	17.5	14.0	38.1	18.4	20.9	26.2	0.0	0.0	23.8	18.2	20.2
LnGrp LOS	D	B	B	D	B	C	C	A	A	C	B	C
Approach Vol, veh/h		888			1007			85			351	
Approach Delay, s/veh		23.3			22.1			26.2			22.4	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.5	10.4	19.4		14.0	12.0	17.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.0	6.8	18.7		27.5	7.5	18.0				
Max Q Clear Time (g_c+I1), s		4.6	6.5	10.3		8.5	8.1	10.5				
Green Ext Time (p_c), s		0.3	0.0	2.6		1.0	0.0	2.7				

Intersection Summary												
HCM 6th Ctrl Delay			22.8									
HCM 6th LOS			C									



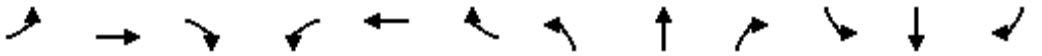
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	432	358	158	539	177	394	268	128	137	189	7
Future Volume (veh/h)	16	432	358	158	539	177	394	268	128	137	189	7
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	17	455	377	166	567	186	415	282	135	114	241	7
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	28	1137	482	183	1463	620	812	427	361	211	443	188
Arrive On Green	0.02	0.30	0.30	0.10	0.39	0.39	0.23	0.23	0.23	0.12	0.12	0.12
Sat Flow, veh/h	1781	3741	1585	1781	3741	1585	3563	1870	1585	1781	3741	1585
Grp Volume(v), veh/h	17	455	377	166	567	186	415	282	135	114	241	7
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.8	8.0	18.0	7.6	9.0	6.7	8.4	11.3	5.9	5.0	5.0	0.3
Cycle Q Clear(g_c), s	0.8	8.0	18.0	7.6	9.0	6.7	8.4	11.3	5.9	5.0	5.0	0.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	28	1137	482	183	1463	620	812	427	361	211	443	188
V/C Ratio(X)	0.61	0.40	0.78	0.91	0.39	0.30	0.51	0.66	0.37	0.54	0.54	0.04
Avail Cap(c_a), veh/h	129	1900	805	183	2013	853	1598	839	711	797	1674	709
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	22.8	26.3	36.7	18.1	17.4	27.9	29.0	26.9	34.3	34.4	32.3
Incr Delay (d2), s/veh	7.8	0.3	3.4	40.4	0.2	0.3	0.7	2.5	0.9	3.0	1.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	3.3	6.7	5.3	3.7	2.3	3.5	5.1	2.2	2.3	2.3	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.2	23.1	29.7	77.1	18.3	17.7	28.6	31.5	27.8	37.4	35.8	32.4
LnGrp LOS	D	C	C	E	B	B	C	C	C	D	D	C
Approach Vol, veh/h		849			919			832			362	
Approach Delay, s/veh		26.5			28.8			29.5			36.3	
Approach LOS		C			C			C			D	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.2	13.0	30.4		15.1	5.8	37.7				
Change Period (Y+Rc), s		5.3	4.5	5.3		5.3	4.5	5.3				
Max Green Setting (Gmax), s		37.1	8.5	42.0		37.0	6.0	44.5				
Max Q Clear Time (g_c+I1), s		13.3	9.6	20.0		7.0	2.8	11.0				
Green Ext Time (p_c), s		5.5	0.0	5.2		2.8	0.0	5.9				

Intersection Summary												
HCM 6th Ctrl Delay			29.2									
HCM 6th LOS			C									

Notes

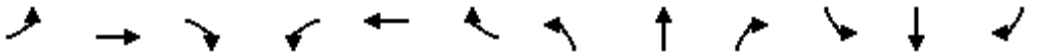
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	20	74	118	31	47	103	903	20	59	754	26
Future Volume (veh/h)	18	20	74	118	31	47	103	903	20	59	754	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	19	21	78	124	33	49	108	951	21	62	794	27
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	33	39	143	161	124	185	138	1430	606	82	1312	556
Arrive On Green	0.02	0.11	0.11	0.09	0.18	0.18	0.08	0.38	0.38	0.05	0.35	0.35
Sat Flow, veh/h	1781	347	1291	1781	680	1009	1781	3741	1585	1781	3741	1585
Grp Volume(v), veh/h	19	0	99	124	0	82	108	951	21	62	794	27
Grp Sat Flow(s),veh/h/ln	1781	0	1638	1781	0	1689	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.5	0.0	2.9	3.5	0.0	2.1	3.0	10.7	0.4	1.7	8.9	0.6
Cycle Q Clear(g_c), s	0.5	0.0	2.9	3.5	0.0	2.1	3.0	10.7	0.4	1.7	8.9	0.6
Prop In Lane	1.00		0.79	1.00		0.60	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	33	0	182	161	0	309	138	1430	606	82	1312	556
V/C Ratio(X)	0.58	0.00	0.54	0.77	0.00	0.27	0.78	0.67	0.03	0.76	0.61	0.05
Avail Cap(c_a), veh/h	309	0	1129	544	0	1387	175	2107	893	249	2261	958
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.7	0.0	21.4	22.6	0.0	17.8	23.0	13.0	9.8	23.9	13.6	10.9
Incr Delay (d2), s/veh	5.8	0.0	3.0	2.9	0.0	0.5	12.3	0.6	0.0	5.3	0.5	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	0.3	0.0	1.2	1.5	0.0	0.8	1.6	3.6	0.1	0.8	3.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	0.0	24.4	25.5	0.0	18.4	35.3	13.6	9.8	29.2	14.1	10.9
LnGrp LOS	C	A	C	C	A	B	D	B	A	C	B	B
Approach Vol, veh/h		118			206			1080			883	
Approach Delay, s/veh		25.4			22.6			15.7			15.1	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	6.8	24.7	9.1	10.1	8.4	23.1	5.4	13.8
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	7.1	28.6	15.5	35.0	5.0	30.7	8.8	41.7
Max Q Clear Time (g_c+I1), s	3.7	12.7	5.5	4.9	5.0	10.9	2.5	4.1
Green Ext Time (p_c), s	0.0	6.7	0.1	0.7	0.0	6.2	0.0	0.6

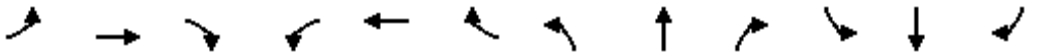
Intersection Summary	
HCM 6th Ctrl Delay	16.6
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	54	92	134	67	135	128	1130	186	83	918	44
Future Volume (veh/h)	44	54	92	134	67	135	128	1130	186	83	918	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	57	97	141	71	142	135	1189	196	87	966	46
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	62	189	160	180	313	266	136	1631	691	113	1583	671
Arrive On Green	0.03	0.10	0.10	0.10	0.17	0.17	0.08	0.44	0.44	0.06	0.42	0.42
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3741	1585	1781	3741	1585
Grp Volume(v), veh/h	46	57	97	141	71	142	135	1189	196	87	966	46
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.7	1.9	3.8	5.1	2.2	5.4	5.0	17.3	5.2	3.2	13.2	1.1
Cycle Q Clear(g_c), s	1.7	1.9	3.8	5.1	2.2	5.4	5.0	17.3	5.2	3.2	13.2	1.1
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	62	189	160	180	313	266	136	1631	691	113	1583	671
V/C Ratio(X)	0.75	0.30	0.61	0.78	0.23	0.53	1.00	0.73	0.28	0.77	0.61	0.07
Avail Cap(c_a), veh/h	689	997	845	475	772	654	136	1977	838	494	2729	1156
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	27.4	28.3	28.8	23.6	25.0	30.3	15.3	11.9	30.3	14.7	11.2
Incr Delay (d2), s/veh	6.5	1.1	4.4	2.8	0.4	2.0	75.7	1.2	0.3	4.2	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.9	1.6	2.2	1.0	2.1	4.9	6.7	1.8	1.4	4.8	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	28.5	32.7	31.6	24.1	27.0	106.1	16.5	12.2	34.4	15.2	11.3
LnGrp LOS	D	C	C	C	C	C	F	B	B	C	B	B
Approach Vol, veh/h		200			354			1520			1099	
Approach Delay, s/veh		32.7			28.2			23.9			16.5	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.7	33.9	11.2	11.9	9.5	33.1	6.8	16.3
Change Period (Y+Rc), s	4.5	5.3	4.5	5.3	4.5	5.3	4.5	5.3
Max Green Setting (Gmax), s	18.2	34.7	17.5	35.0	5.0	47.9	25.4	27.1
Max Q Clear Time (g_c+I1), s	5.2	19.3	7.1	5.8	7.0	15.2	3.7	7.4
Green Ext Time (p_c), s	0.1	9.4	0.1	0.8	0.0	9.4	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	38	134	123	103	128	270	1202	139	75	850	204
Future Volume (veh/h)	59	38	134	123	103	128	270	1202	139	75	850	204
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	62	40	141	129	108	135	284	1265	146	79	895	215
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	80	229	194	164	317	269	326	1827	774	102	1358	575
Arrive On Green	0.04	0.12	0.12	0.09	0.17	0.17	0.18	0.49	0.49	0.06	0.36	0.36
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3741	1585	1781	3741	1585
Grp Volume(v), veh/h	62	40	141	129	108	135	284	1265	146	79	895	215
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.7	1.5	6.7	5.6	4.0	6.1	12.1	20.5	4.1	3.4	15.7	7.8
Cycle Q Clear(g_c), s	2.7	1.5	6.7	5.6	4.0	6.1	12.1	20.5	4.1	3.4	15.7	7.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	80	229	194	164	317	269	326	1827	774	102	1358	575
V/C Ratio(X)	0.78	0.17	0.73	0.79	0.34	0.50	0.87	0.69	0.19	0.77	0.66	0.37
Avail Cap(c_a), veh/h	314	931	789	398	1019	864	445	2868	1215	332	2630	1114
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.0	30.8	33.1	34.8	28.7	29.5	31.1	15.5	11.3	36.4	20.9	18.4
Incr Delay (d2), s/veh	6.0	0.4	6.1	3.2	0.8	1.7	10.6	0.6	0.1	4.6	0.7	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.7	2.9	2.5	1.8	2.4	5.8	7.6	1.4	1.6	6.6	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.0	31.3	39.3	38.0	29.4	31.3	41.7	16.1	11.4	41.0	21.6	18.9
LnGrp LOS	D	C	D	D	C	C	D	B	B	D	C	B
Approach Vol, veh/h		243			372			1695			1189	
Approach Delay, s/veh		38.9			33.1			20.0			22.4	
Approach LOS		D			C			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	43.6	11.7	14.1	18.8	33.8	8.0	17.8
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	14.6	60.1	17.5	39.0	19.6	55.1	13.8	42.7
Max Q Clear Time (g_c+I1), s	5.4	22.5	7.6	8.7	14.1	17.7	4.7	8.1
Green Ext Time (p_c), s	0.0	15.0	0.1	0.9	0.2	10.7	0.0	1.4

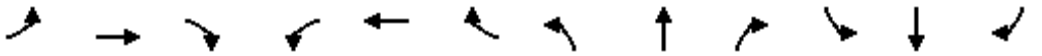
Intersection Summary	
HCM 6th Ctrl Delay	23.5
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	48.5
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	0	18	0	0	0	31	1140	5	2	815	31
Future Vol, veh/h	23	0	18	0	0	0	31	1140	5	2	815	31
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	0	19	0	0	0	33	1200	5	2	858	33
Number of Lanes	0	1	0	0	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	10.6	0	64.4	28.2
HCM LOS	B	-	F	D

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	5%	0%	56%	0%	0%	0%
Vol Thru, %	95%	99%	0%	100%	100%	93%
Vol Right, %	0%	1%	44%	0%	0%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	601	575	41	0	410	439
LT Vol	31	0	23	0	2	0
Through Vol	570	570	0	0	408	408
RT Vol	0	5	18	0	0	31
Lane Flow Rate	633	605	43	0	431	462
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	1.039	0.989	0.082	0	0.755	0.802
Departure Headway (Hd)	5.915	5.883	6.833	7.3	6.434	6.381
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	614	617	520	0	565	572
Service Time	3.657	3.625	4.932	5.3	4.134	4.081
HCM Lane V/C Ratio	1.031	0.981	0.083	0	0.763	0.808
HCM Control Delay	70.9	57.6	10.6	10.3	26.3	30
HCM Lane LOS	F	F	B	N	D	D
HCM 95th-tile Q	16.9	14.6	0.3	0	6.7	7.8



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	11	92	36	31	110	124	1200	41	52	795	2
Future Volume (veh/h)	16	11	92	36	31	110	124	1200	41	52	795	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	17	12	97	38	33	116	131	1263	43	55	837	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	22	16	127	99	86	162	165	1626	55	116	1584	4
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.45	0.45	0.07	0.42	0.42
Sat Flow, veh/h	220	156	1257	975	847	1585	1781	3596	122	1781	3730	9
Grp Volume(v), veh/h	126	0	0	71	0	116	131	656	650	55	420	419
Grp Sat Flow(s),veh/h/ln	1633	0	0	1822	0	1585	1781	1870	1848	1781	1870	1869
Q Serve(g_s), s	5.4	0.0	0.0	2.6	0.0	5.1	5.2	21.2	21.2	2.1	11.9	11.9
Cycle Q Clear(g_c), s	5.4	0.0	0.0	2.6	0.0	5.1	5.2	21.2	21.2	2.1	11.9	11.9
Prop In Lane	0.13		0.77	0.54		1.00	1.00		0.07	1.00		0.00
Lane Grp Cap(c), veh/h	165	0	0	186	0	162	165	846	836	116	794	794
V/C Ratio(X)	0.76	0.00	0.00	0.38	0.00	0.72	0.79	0.78	0.78	0.47	0.53	0.53
Avail Cap(c_a), veh/h	776	0	0	866	0	753	174	1200	1186	276	1308	1306
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	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.3	0.0	0.0	30.0	0.0	31.1	31.8	16.5	16.5	32.3	15.3	15.3
Incr Delay (d2), s/veh	2.7	0.0	0.0	0.5	0.0	2.2	19.0	2.1	2.1	1.1	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	0.0	1.1	0.0	1.9	2.9	8.1	8.0	0.9	4.5	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.0	0.0	0.0	30.5	0.0	33.3	50.8	18.6	18.7	33.4	15.8	15.8
LnGrp LOS	C	A	A	C	A	C	D	B	B	C	B	B
Approach Vol, veh/h		126			187			1437			894	
Approach Delay, s/veh		34.0			32.3			21.6			16.9	
Approach LOS		C			C			C			B	

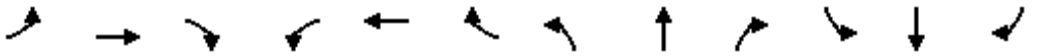
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.2	37.8		12.2	11.1	35.9		12.3				
Change Period (Y+Rc), s	4.5	5.5		5.0	4.5	5.5		5.0				
Max Green Setting (Gmax), s	11.1	45.9		34.0	7.0	50.0		34.0				
Max Q Clear Time (g_c+I1), s	4.1	23.2		7.4	7.2	13.9		7.1				
Green Ext Time (p_c), s	0.0	9.1		0.5	0.0	5.6		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		21.3	
HCM 6th LOS		C	

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	794	301	23	1052	88	514	113	26	36	49	12
Future Volume (veh/h)	22	794	301	23	1052	88	514	113	26	36	49	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	23	836	317	24	1107	93	541	119	27	38	52	13
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	58	1419	601	60	1294	109	576	477	108	50	68	17
Arrive On Green	0.03	0.38	0.38	0.03	0.38	0.38	0.32	0.32	0.32	0.07	0.07	0.07
Sat Flow, veh/h	1781	3741	1585	1781	3404	286	1781	1475	335	663	907	227
Grp Volume(v), veh/h	23	836	317	24	608	592	541	0	146	103	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1819	1781	0	1810	1796	0	0
Q Serve(g_s), s	1.3	18.9	16.4	1.4	31.6	31.7	31.2	0.0	6.3	6.0	0.0	0.0
Cycle Q Clear(g_c), s	1.3	18.9	16.4	1.4	31.6	31.7	31.2	0.0	6.3	6.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.16	1.00		0.18	0.37		0.13
Lane Grp Cap(c), veh/h	58	1419	601	60	711	692	576	0	586	134	0	0
V/C Ratio(X)	0.40	0.59	0.53	0.40	0.85	0.86	0.94	0.00	0.25	0.77	0.00	0.00
Avail Cap(c_a), veh/h	197	1873	794	118	853	830	606	0	616	577	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(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	50.2	26.3	25.5	50.1	30.1	30.1	34.8	0.0	26.3	48.1	0.0	0.0
Incr Delay (d2), s/veh	1.6	0.4	0.7	1.6	7.3	7.6	22.3	0.0	0.3	3.4	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	0.6	8.1	6.0	0.6	14.8	14.5	17.0	0.0	2.8	2.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.8	26.7	26.2	51.7	37.5	37.8	57.1	0.0	26.6	51.5	0.0	0.0
LnGrp LOS	D	C	C	D	D	D	E	A	C	D	A	A
Approach Vol, veh/h		1176			1224			687			103	
Approach Delay, s/veh		27.0			37.9			50.6			51.5	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.9	45.8		39.2	8.0	45.7		12.9				
Change Period (Y+Rc), s	4.5	5.5		5.0	4.5	5.5		5.0				
Max Green Setting (Gmax), s	11.7	48.3		36.0	7.0	53.0		34.0				
Max Q Clear Time (g_c+I1), s	3.3	33.7		33.2	3.4	20.9		8.0				
Green Ext Time (p_c), s	0.0	6.6		1.0	0.0	7.7		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		37.1	
HCM 6th LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	357	204	204	468	61	439	626	175	206	604	126
Future Volume (veh/h)	84	357	204	204	468	61	439	626	175	206	604	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	88	376	0	215	493	0	462	659	0	217	636	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	809		354	872		574	1111		354	879	
Arrive On Green	0.08	0.22	0.00	0.10	0.23	0.00	0.16	0.30	0.00	0.10	0.24	0.00
Sat Flow, veh/h	1781	3741	1585	3563	3741	1585	3563	3741	1585	3563	3741	1585
Grp Volume(v), veh/h	88	376	0	215	493	0	462	659	0	217	636	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	3.3	6.1	0.0	4.0	8.1	0.0	8.7	10.4	0.0	4.1	10.9	0.0
Cycle Q Clear(g_c), s	3.3	6.1	0.0	4.0	8.1	0.0	8.7	10.4	0.0	4.1	10.9	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	147	809		354	872		574	1111		354	879	
V/C Ratio(X)	0.60	0.46		0.61	0.57		0.80	0.59		0.61	0.72	
Avail Cap(c_a), veh/h	193	1483		359	1456		693	1634		524	1456	
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	30.7	23.7	0.0	30.0	23.5	0.0	28.0	20.8	0.0	30.0	24.5	0.0
Incr Delay (d2), s/veh	3.9	0.4	0.0	2.9	0.6	0.0	5.8	0.5	0.0	1.7	1.1	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	1.5	2.5	0.0	1.7	3.3	0.0	3.9	4.2	0.0	1.7	4.5	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.6	24.1	0.0	32.8	24.1	0.0	33.8	21.3	0.0	31.7	25.6	0.0
LnGrp LOS	C	C		C	C		C	C		C	C	
Approach Vol, veh/h		464	A		708	A		1121	A		853	A
Approach Delay, s/veh		26.1			26.7			26.5			27.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.7	21.8	10.2	21.7	11.4	26.1	11.4	20.5
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5
Max Green Setting (Gmax), s	13.5	27.0	7.5	27.0	10.2	30.3	7.0	27.5
Max Q Clear Time (g_c+I1), s	10.7	12.9	5.3	10.1	6.1	12.4	6.0	8.1
Green Ext Time (p_c), s	0.5	3.4	0.0	2.7	0.3	4.0	0.1	2.1

Intersection Summary	
HCM 6th Ctrl Delay	26.7
HCM 6th LOS	C

Notes

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

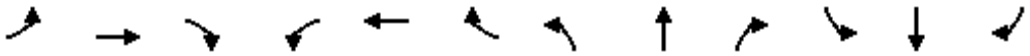
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	102	257	401	189	234	488	948	196	232	662	36
Future Volume (veh/h)	31	102	257	401	189	234	488	948	196	232	662	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	107	271	310	355	246	514	998	206	244	697	38
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	328	763	681	399	803	681	372	1715	484	324	1054	298
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.21	0.31	0.31	0.09	0.19	0.19
Sat Flow, veh/h	818	1777	1585	1005	1870	1585	1781	5611	1585	3563	5611	1585
Grp Volume(v), veh/h	33	107	271	310	355	246	514	998	206	244	697	38
Grp Sat Flow(s),veh/h/ln	818	1777	1585	1005	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.5	3.1	9.9	25.7	11.2	8.8	17.5	12.6	8.7	5.6	9.7	1.7
Cycle Q Clear(g_c), s	13.7	3.1	9.9	35.6	11.2	8.8	17.5	12.6	8.7	5.6	9.7	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	328	763	681	399	803	681	372	1715	484	324	1054	298
V/C Ratio(X)	0.10	0.14	0.40	0.78	0.44	0.36	1.38	0.58	0.43	0.75	0.66	0.13
Avail Cap(c_a), veh/h	328	763	681	399	803	681	372	2402	679	361	1800	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	14.5	16.5	28.7	16.8	16.2	33.2	24.6	23.2	37.2	31.6	28.3
Incr Delay (d2), s/veh	0.1	0.1	0.4	9.3	0.4	0.3	188.1	0.3	0.6	6.5	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.2	3.5	7.0	4.7	3.2	26.5	5.2	3.1	2.6	4.2	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	21.8	14.6	16.8	38.1	17.2	16.5	221.3	24.9	23.8	43.7	32.3	28.5
LnGrp LOS	C	B	B	D	B	B	F	C	C	D	C	C
Approach Vol, veh/h		411			911			1718			979	
Approach Delay, s/veh		16.7			24.1			83.5			35.0	
Approach LOS		B			C			F			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.0	21.3		40.5	12.1	31.2		40.5				
Change Period (Y+Rc), s	4.5	5.6		4.5	4.5	5.6		4.5				
Max Green Setting (Gmax), s	17.5	26.9		36.0	8.5	35.9		36.0				
Max Q Clear Time (g_c+I1), s	19.5	11.7		37.6	7.6	14.6		15.7				
Green Ext Time (p_c), s	0.0	4.1		0.0	0.0	7.6		2.7				

Intersection Summary		
HCM 6th Ctrl Delay		51.4
HCM 6th LOS		D

Notes

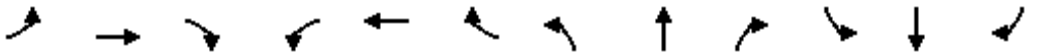
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	1050	0	0	1496	312	916	0	1305	0	0	0
Future Volume (vph)	44	1050	0	0	1496	312	916	0	1305	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.4			5.4	5.4	5.4	5.4	5.4			
Lane Util. Factor	1.00	*1.00			*1.00	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1770	3725			5588	1583	1681	1681	2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	1770	3725			5588	1583	1681	1681	2787			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	46	1105	0	0	1575	328	964	0	1374	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	179	0	0	544	0	0	0
Lane Group Flow (vph)	46	1105	0	0	1575	149	482	482	830	0	0	0
Turn Type	Prot	NA			NA	custom	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						8	8		8			
Actuated Green, G (s)	5.5	45.2			35.0	33.8	33.8	33.8	33.8			
Effective Green, g (s)	5.5	45.2			35.0	33.8	33.8	33.8	33.8			
Actuated g/C Ratio	0.05	0.38			0.29	0.28	0.28	0.28	0.28			
Clearance Time (s)	4.7	5.4			5.4	5.4	5.4	5.4	5.4			
Vehicle Extension (s)	2.0	2.0			3.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	81	1405			1632	446	474	474	786			
v/s Ratio Prot	0.03	c0.30			c0.28							
v/s Ratio Perm						0.09	0.29	0.29	c0.30			
v/c Ratio	0.57	0.79			0.97	0.33	1.02	1.02	1.06			
Uniform Delay, d1	56.0	33.0			41.8	34.1	43.0	43.0	43.0			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	5.3	2.8			14.7	0.2	45.7	45.7	47.8			
Delay (s)	61.3	35.8			56.5	34.2	88.7	88.7	90.8			
Level of Service	E	D			E	C	F	F	F			
Approach Delay (s)		36.8			52.7			89.9			0.0	
Approach LOS		D			D			F			A	

Intersection Summary			
HCM 2000 Control Delay	65.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	119.8	Sum of lost time (s)	18.5
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	633	470	0	1674	527	0	0	0	273	0	113
Future Volume (veh/h)	0	633	470	0	1674	527	0	0	0	273	0	113
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1945	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	0	828	387	0	1762	0				287	0	119
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	0	2	2				2	2	2
Cap, veh/h	0	2103	857	0	3034					389	0	346
Arrive On Green	0.00	0.54	0.54	0.00	0.54	0.00				0.22	0.00	0.22
Sat Flow, veh/h	0	3890	1585	0	5611	1585				1781	0	1585
Grp Volume(v), veh/h	0	828	387	0	1762	0				287	0	119
Grp Sat Flow(s),veh/h/ln	0	1945	1585	0	1870	1585				1781	0	1585
Q Serve(g_s), s	0.0	5.2	6.2	0.0	8.8	0.0				6.3	0.0	2.7
Cycle Q Clear(g_c), s	0.0	5.2	6.2	0.0	8.8	0.0				6.3	0.0	2.7
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2103	857	0	3034					389	0	346
V/C Ratio(X)	0.00	0.39	0.45	0.00	0.58					0.74	0.00	0.34
Avail Cap(c_a), veh/h	0	5760	2347	0	8308					761	0	678
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.6	5.8	0.0	6.4	0.0				15.3	0.0	13.8
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.1	0.0				1.0	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.1	1.1	0.0	1.7	0.0				2.2	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.7	6.0	0.0	6.5	0.0				16.3	0.0	14.1
LnGrp LOS	A	A	A	A	A					B	A	B
Approach Vol, veh/h		1215			1762	A					406	
Approach Delay, s/veh		5.8			6.5						15.6	
Approach LOS		A			A						B	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		28.0		13.8		28.0						
Change Period (Y+Rc), s		5.4		* 4.7		5.4						
Max Green Setting (Gmax), s		62.0		* 18		62.0						
Max Q Clear Time (g_c+I1), s		8.2		8.3		10.8						
Green Ext Time (p_c), s		4.7		0.9		11.8						

Intersection Summary	
HCM 6th Ctrl Delay	7.3
HCM 6th LOS	A

Notes

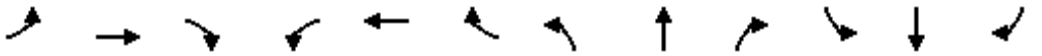
User approved volume balancing among the lanes for turning movement.

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

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

Michael Baker
INTERNATIONAL

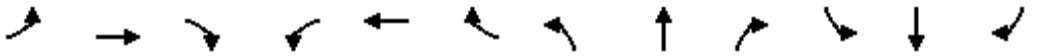
Appendix I: Cumulative Year 2040 Plus Project Synchro Worksheets



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	164	232	696	218	114	88	498	350	59	462	29
Future Volume (veh/h)	41	164	232	696	218	114	88	498	350	59	462	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	43	173	244	733	229	120	93	524	368	62	486	31
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	63	312	278	732	1031	873	106	679	939	80	580	37
Arrive On Green	0.04	0.18	0.18	0.41	0.55	0.55	0.06	0.18	0.18	0.04	0.17	0.17
Sat Flow, veh/h	1781	1777	1585	1781	1870	1585	1781	3741	1585	1781	3479	221
Grp Volume(v), veh/h	43	173	244	733	229	120	93	524	368	62	261	256
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1870	1585	1781	1870	1585	1781	1870	1831
Q Serve(g_s), s	2.3	8.5	14.4	39.5	6.0	3.5	5.0	12.8	11.8	3.3	13.0	13.0
Cycle Q Clear(g_c), s	2.3	8.5	14.4	39.5	6.0	3.5	5.0	12.8	11.8	3.3	13.0	13.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.12
Lane Grp Cap(c), veh/h	63	312	278	732	1031	873	106	679	939	80	312	305
V/C Ratio(X)	0.68	0.56	0.88	1.00	0.22	0.14	0.88	0.77	0.39	0.78	0.84	0.84
Avail Cap(c_a), veh/h	124	333	297	732	1031	873	106	759	973	93	366	358
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.8	36.2	38.6	28.3	11.0	10.5	44.8	37.4	10.4	45.4	38.7	38.8
Incr Delay (d2), s/veh	12.0	1.8	23.5	33.5	0.1	0.1	51.8	4.4	0.3	29.5	13.6	14.3
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	3.9	7.4	21.9	2.2	1.1	3.7	6.3	3.6	2.1	6.8	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.8	38.0	62.1	61.8	11.1	10.6	96.6	41.9	10.7	74.9	52.3	53.0
LnGrp LOS	E	D	E	F	B	B	F	D	B	E	D	D
Approach Vol, veh/h		460			1082			985			579	
Approach Delay, s/veh		52.6			45.4			35.4			55.1	
Approach LOS		D			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.8	21.9	44.0	21.3	10.2	20.5	7.9	57.4
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	19.5	39.5	18.0	5.7	18.8	6.7	50.8
Max Q Clear Time (g_c+I1), s	5.3	14.8	41.5	16.4	7.0	15.0	4.3	8.0
Green Ext Time (p_c), s	0.0	2.1	0.0	0.4	0.0	1.0	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	45.1
HCM 6th LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	539	5	77	608	188	29	49	114	472	18	186
Future Volume (veh/h)	110	539	5	77	608	188	29	49	114	472	18	186
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	116	567	5	81	640	198	31	52	120	497	19	196
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	884	375	104	794	336	39	66	152	554	582	493
Arrive On Green	0.08	0.24	0.24	0.06	0.21	0.21	0.15	0.15	0.15	0.31	0.31	0.31
Sat Flow, veh/h	1781	3741	1585	1781	3741	1585	256	430	992	1781	1870	1585
Grp Volume(v), veh/h	116	567	5	81	640	198	203	0	0	497	19	196
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1679	0	0	1781	1870	1585
Q Serve(g_s), s	4.8	10.2	0.2	3.4	12.1	8.4	8.7	0.0	0.0	19.9	0.5	7.3
Cycle Q Clear(g_c), s	4.8	10.2	0.2	3.4	12.1	8.4	8.7	0.0	0.0	19.9	0.5	7.3
Prop In Lane	1.00		1.00	1.00		1.00	0.15		0.59	1.00		1.00
Lane Grp Cap(c), veh/h	147	884	375	104	794	336	257	0	0	554	582	493
V/C Ratio(X)	0.79	0.64	0.01	0.78	0.81	0.59	0.79	0.00	0.00	0.90	0.03	0.40
Avail Cap(c_a), veh/h	179	936	397	162	901	382	427	0	0	656	689	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.6	25.7	21.8	34.7	28.0	26.5	30.5	0.0	0.0	24.6	17.9	20.2
Incr Delay (d2), s/veh	17.2	1.4	0.0	11.7	4.9	1.9	5.4	0.0	0.0	13.5	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	4.3	0.1	1.7	5.6	3.1	3.8	0.0	0.0	9.8	0.2	2.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.8	27.0	21.9	46.4	32.8	28.3	35.9	0.0	0.0	38.1	17.9	20.7
LnGrp LOS	D	C	C	D	C	C	D	A	A	D	B	C
Approach Vol, veh/h		688			919			203			712	
Approach Delay, s/veh		31.0			33.1			35.9			32.8	
Approach LOS		C			C			D			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		15.9	8.9	22.2		27.8	10.7	20.4				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.0	6.8	18.7		27.5	7.5	18.0				
Max Q Clear Time (g_c+I1), s		10.7	5.4	12.2		21.9	6.8	14.1				
Green Ext Time (p_c), s		0.7	0.0	1.9		1.3	0.0	1.7				

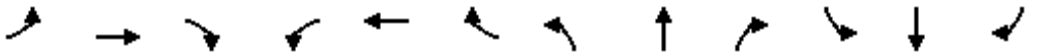
Intersection Summary												
HCM 6th Ctrl Delay			32.7									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	20	495	328	286	325	278	32	277	211	207	165	404
Future Volume (veh/h)	20	495	328	286	325	278	32	277	211	207	165	404
Number	7	4	14	3	8	18		5	2	12	1	6
Initial Q (Qb), veh	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	
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	21	521	345	301	342	293		292	222	218	174	425
Adj No. of Lanes	1	2	1	1	2	1		2	1	1	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2	2	2
Cap, veh/h	32	1062	451	170	1352	574		719	378	321	330	693
Arrive On Green	0.02	0.28	0.28	0.10	0.36	0.36		0.20	0.20	0.20	0.19	0.19
Sat Flow, veh/h	1774	3725	1583	1774	3725	1583		3548	1863	1583	1774	3725
Grp Volume(v), veh/h	21	521	345	301	342	293		292	222	218	174	425
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583		1774	1863	1583	1774	1863
Q Serve(g_s), s	1.0	10.3	17.6	8.5	5.7	12.8		6.3	9.6	11.3	7.8	9.3
Cycle Q Clear(g_c), s	1.0	10.3	17.6	8.5	5.7	12.8		6.3	9.6	11.3	7.8	9.3
Prop In Lane	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	32	1062	451	170	1352	574		719	378	321	330	693
V/C Ratio(X)	0.65	0.49	0.76	1.77	0.25	0.51		0.41	0.59	0.68	0.53	0.61
Avail Cap(c_a), veh/h	120	1767	751	170	1873	796		1487	781	664	741	1557
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.2	26.3	28.9	40.0	19.8	22.1		30.7	31.9	32.6	32.5	33.1
Incr Delay (d2), s/veh	7.9	0.4	3.3	368.0	0.1	0.8		0.5	2.1	3.6	1.9	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.3	8.1	21.5	3.0	5.8		3.1	5.2	5.3	4.0	4.9
LnGrp Delay(d),s/veh	51.1	26.7	32.2	408.0	19.9	22.9		31.2	34.0	36.2	34.4	34.4
LnGrp LOS	D	C	C	F	B	C		C	C	D	C	C
Approach Vol, veh/h		887			936				732			656
Approach Delay, s/veh		29.4			145.7				33.5			34.1
Approach LOS		C			F				C			C

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		23.2	13.0	30.5		21.8	6.1	37.4
Change Period (Y+Rc), s		5.3	4.5	5.3		5.3	4.5	5.3
Max Green Setting (Gmax), s		37.1	8.5	42.0		37.0	6.0	44.5
Max Q Clear Time (g_c+I1), s		13.3	10.5	19.6		11.3	3.0	14.8
Green Ext Time (p_c), s		4.7	0.0	5.6		5.2	0.0	4.2

Intersection Summary	
HCM 2010 Ctrl Delay	65.2
HCM 2010 LOS	E

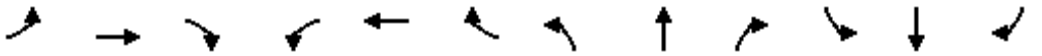
Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	62	92	254	26	90	43	856	268	108	1051	29
Future Volume (veh/h)	52	62	92	254	26	90	43	856	268	108	1051	29
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	55	65	97	267	27	95	45	901	282	114	1106	31
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	69	93	139	313	100	350	60	1240	526	145	1420	602
Arrive On Green	0.04	0.14	0.14	0.18	0.27	0.27	0.03	0.33	0.33	0.08	0.38	0.38
Sat Flow, veh/h	1781	677	1011	1781	363	1277	1781	3741	1585	1781	3741	1585
Grp Volume(v), veh/h	55	0	162	267	0	122	45	901	282	114	1106	31
Grp Sat Flow(s),veh/h/ln	1781	0	1688	1781	0	1640	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.1	0.0	6.3	10.0	0.0	4.0	1.7	14.6	9.9	4.3	17.9	0.9
Cycle Q Clear(g_c), s	2.1	0.0	6.3	10.0	0.0	4.0	1.7	14.6	9.9	4.3	17.9	0.9
Prop In Lane	1.00		0.60	1.00		0.78	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	69	0	233	313	0	450	60	1240	526	145	1420	602
V/C Ratio(X)	0.79	0.00	0.70	0.85	0.00	0.27	0.75	0.73	0.54	0.78	0.78	0.05
Avail Cap(c_a), veh/h	228	0	860	402	0	995	130	1556	659	184	1670	708
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	0.0	28.3	27.5	0.0	19.6	32.9	20.2	18.7	31.0	18.8	13.5
Incr Delay (d2), s/veh	7.3	0.0	4.5	11.0	0.0	0.4	6.9	1.4	1.0	12.0	2.2	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	1.0	0.0	2.8	5.1	0.0	1.5	0.8	5.8	3.6	2.2	7.1	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.1	0.0	32.8	38.5	0.0	19.9	39.9	21.7	19.7	43.0	21.0	13.5
LnGrp LOS	D	A	C	D	A	B	D	C	B	D	C	B
Approach Vol, veh/h		217			389			1228			1251	
Approach Delay, s/veh		34.6			32.7			21.9			22.8	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.1	28.1	16.6	14.0	6.8	31.4	7.2	23.4
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	7.1	28.6	15.5	35.0	5.0	30.7	8.8	41.7
Max Q Clear Time (g_c+I1), s	6.3	16.6	12.0	8.3	3.7	19.9	4.1	6.0
Green Ext Time (p_c), s	0.0	6.2	0.2	1.2	0.0	6.1	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	24.5
HCM 6th LOS	C



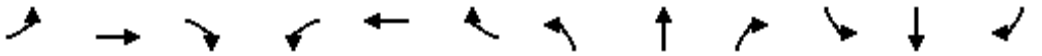
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	206	131	182	234	43	144	49	884	146	232	1333	62
Future Volume (veh/h)	206	131	182	234	43	144	49	884	146	232	1333	62
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	217	138	192	246	45	152	52	931	154	244	1403	65
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	253	291	247	279	318	270	67	1249	529	278	1692	717
Arrive On Green	0.14	0.16	0.16	0.16	0.17	0.17	0.04	0.33	0.33	0.16	0.45	0.45
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3741	1585	1781	3741	1585
Grp Volume(v), veh/h	217	138	192	246	45	152	52	931	154	244	1403	65
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	11.4	6.5	11.2	13.0	2.0	8.4	2.8	21.2	6.9	12.9	31.5	2.2
Cycle Q Clear(g_c), s	11.4	6.5	11.2	13.0	2.0	8.4	2.8	21.2	6.9	12.9	31.5	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	253	291	247	279	318	270	67	1249	529	278	1692	717
V/C Ratio(X)	0.86	0.47	0.78	0.88	0.14	0.56	0.78	0.75	0.29	0.88	0.83	0.09
Avail Cap(c_a), veh/h	459	682	578	312	528	448	98	1392	590	343	1906	808
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.2	36.9	38.9	39.6	33.8	36.5	45.8	28.3	23.6	39.6	23.0	15.0
Incr Delay (d2), s/veh	3.3	1.4	6.3	21.1	0.2	2.2	11.5	2.1	0.4	16.8	3.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	3.1	4.8	7.3	0.9	3.4	1.4	9.3	2.6	6.7	13.3	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.5	38.4	45.2	60.7	34.1	38.8	57.3	30.5	23.9	56.4	26.0	15.1
LnGrp LOS	D	D	D	E	C	D	E	C	C	E	C	B
Approach Vol, veh/h		547			443			1137			1712	
Approach Delay, s/veh		42.8			50.5			30.8			30.0	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	19.2	37.3	19.2	20.2	7.8	48.7	17.8	21.6
Change Period (Y+Rc), s	* 4.2	5.3	* 4.2	5.3	* 4.2	5.3	* 4.2	5.3
Max Green Setting (Gmax), s	* 19	35.7	* 17	35.0	* 5.3	48.9	* 25	27.1
Max Q Clear Time (g_c+I1), s	14.9	23.2	15.0	13.2	4.8	33.5	13.4	10.4
Green Ext Time (p_c), s	0.1	6.1	0.1	1.8	0.0	9.9	0.2	0.8

Intersection Summary	
HCM 6th Ctrl Delay	34.4
HCM 6th LOS	C

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	113	101	526	194	216	74	219	871	184	80	1294	246
Future Volume (veh/h)	113	101	526	194	216	74	219	871	184	80	1294	246
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	119	106	554	204	227	78	231	917	194	84	1362	259
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	141	486	412	208	557	472	233	1645	697	104	1374	582
Arrive On Green	0.08	0.26	0.26	0.12	0.30	0.30	0.13	0.44	0.44	0.06	0.37	0.37
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3741	1585	1781	3741	1585
Grp Volume(v), veh/h	119	106	554	204	227	78	231	917	194	84	1362	259
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	9.9	6.7	39.0	17.1	14.5	5.5	19.4	27.3	11.7	7.0	54.3	18.5
Cycle Q Clear(g_c), s	9.9	6.7	39.0	17.1	14.5	5.5	19.4	27.3	11.7	7.0	54.3	18.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	141	486	412	208	557	472	233	1645	697	104	1374	582
V/C Ratio(X)	0.85	0.22	1.34	0.98	0.41	0.17	0.99	0.56	0.28	0.81	0.99	0.44
Avail Cap(c_a), veh/h	164	486	412	208	557	472	233	1645	697	173	1374	582
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.2	43.5	55.5	66.1	42.1	38.9	65.1	31.2	26.8	69.8	47.2	35.9
Incr Delay (d2), s/veh	25.6	0.3	170.4	56.8	0.6	0.2	56.7	0.5	0.3	5.5	22.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	3.2	35.2	11.1	7.0	2.2	12.4	12.3	4.6	3.4	29.3	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.8	43.8	225.9	122.9	42.7	39.1	121.8	31.7	27.1	75.3	69.3	36.5
LnGrp LOS	F	D	F	F	D	D	F	C	C	E	E	D
Approach Vol, veh/h		779			509			1342			1705	
Approach Delay, s/veh		181.0			74.3			46.5			64.6	
Approach LOS		F			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	71.2	22.0	43.5	24.1	60.4	16.3	49.2
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	14.6	60.1	17.5	39.0	19.6	55.1	13.8	42.7
Max Q Clear Time (g_c+I1), s	9.0	29.3	19.1	41.0	21.4	56.3	11.9	16.5
Green Ext Time (p_c), s	0.0	9.6	0.0	0.0	0.0	0.0	0.0	2.0

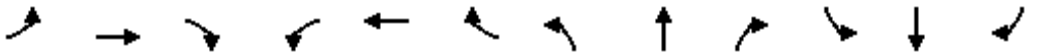
Intersection Summary	
HCM 6th Ctrl Delay	81.1
HCM 6th LOS	F

Intersection	
Intersection Delay, s/veh	139.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	49	0	59	2	0	0	23	1022	5	0	1268	25
Future Vol, veh/h	49	0	59	2	0	0	23	1022	5	0	1268	25
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	0	62	2	0	0	24	1076	5	0	1335	26
Number of Lanes	0	1	0	0	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	11.9	11.1	62.7	212.6
HCM LOS	B	B	F	F

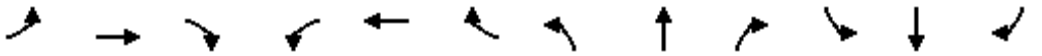
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	4%	0%	45%	100%	0%	0%
Vol Thru, %	96%	99%	0%	0%	100%	94%
Vol Right, %	0%	1%	55%	0%	0%	6%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	534	516	108	2	845	448
LT Vol	23	0	49	2	0	0
Through Vol	511	511	0	0	845	423
RT Vol	0	5	59	0	0	25
Lane Flow Rate	562	543	114	2	890	471
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	1.004	0.965	0.214	0.005	1.623	0.854
Departure Headway (Hd)	7.103	7.074	7.035	8.078	6.566	6.526
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	517	516	514	446	561	556
Service Time	4.803	4.774	5.035	6.078	4.309	4.269
HCM Lane V/C Ratio	1.087	1.052	0.222	0.004	1.586	0.847
HCM Control Delay	67.4	57.9	11.9	11.1	305.9	36.4
HCM Lane LOS	F	F	B	B	F	E
HCM 95th-tile Q	13.9	12.5	0.8	0	49.2	9.2



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	43	191	108	36	126	52	963	26	113	1236	0
Future Volume (veh/h)	49	43	191	108	36	126	52	963	26	113	1236	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	52	45	201	114	38	133	55	1014	27	119	1301	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	60	52	231	149	50	174	100	1426	38	148	1573	0
Arrive On Green	0.21	0.21	0.21	0.11	0.11	0.11	0.06	0.39	0.39	0.08	0.42	0.00
Sat Flow, veh/h	289	250	1116	1352	451	1585	1781	3627	97	1781	3741	0
Grp Volume(v), veh/h	298	0	0	152	0	133	55	523	518	119	1301	0
Grp Sat Flow(s),veh/h/ln	1655	0	0	1803	0	1585	1781	1870	1853	1781	1870	0
Q Serve(g_s), s	16.8	0.0	0.0	7.9	0.0	7.9	2.9	22.8	22.8	6.3	29.9	0.0
Cycle Q Clear(g_c), s	16.8	0.0	0.0	7.9	0.0	7.9	2.9	22.8	22.8	6.3	29.9	0.0
Prop In Lane	0.17		0.67	0.75		1.00	1.00		0.05	1.00		0.00
Lane Grp Cap(c), veh/h	342	0	0	198	0	174	100	735	729	148	1573	0
V/C Ratio(X)	0.87	0.00	0.00	0.77	0.00	0.76	0.55	0.71	0.71	0.80	0.83	0.00
Avail Cap(c_a), veh/h	582	0	0	634	0	557	129	888	879	204	1934	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)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	37.1	0.0	0.0	41.8	0.0	41.8	44.5	24.7	24.7	43.6	24.9	0.0
Incr Delay (d2), s/veh	3.4	0.0	0.0	2.3	0.0	2.6	1.8	2.1	2.1	10.3	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	0.0	0.0	3.6	0.0	3.1	1.3	9.8	9.7	3.1	12.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	40.5	0.0	0.0	44.2	0.0	44.4	46.3	26.8	26.8	53.9	27.5	0.0
LnGrp LOS	D	A	A	D	A	D	D	C	C	D	C	A
Approach Vol, veh/h		298			285			1096			1420	
Approach Delay, s/veh		40.5			44.3			27.8			29.7	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	12.5	43.5		25.0	9.9	46.2		15.6				
Change Period (Y+Rc), s	4.5	5.5		5.0	4.5	5.5		5.0				
Max Green Setting (Gmax), s	11.1	45.9		34.0	7.0	50.0		34.0				
Max Q Clear Time (g_c+I1), s	8.3	24.8		18.8	4.9	31.9		9.9				
Green Ext Time (p_c), s	0.0	6.5		1.2	0.0	8.8		0.7				

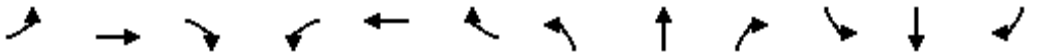
Intersection Summary			
HCM 6th Ctrl Delay		31.4	
HCM 6th LOS		C	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	114	1613	419	13	724	263	344	186	44	252	131	44
Future Volume (veh/h)	114	1613	419	13	724	263	344	186	44	252	131	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	1698	441	14	762	277	362	196	46	265	138	46
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	142	1425	604	37	843	306	399	328	77	253	132	44
Arrive On Green	0.08	0.38	0.38	0.02	0.32	0.32	0.22	0.22	0.22	0.24	0.24	0.24
Sat Flow, veh/h	1781	3741	1585	1781	2618	951	1781	1465	344	1053	549	183
Grp Volume(v), veh/h	120	1698	441	14	544	495	362	0	242	449	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1699	1781	0	1808	1785	0	0
Q Serve(g_s), s	9.4	54.0	33.8	1.1	39.5	39.5	28.0	0.0	17.0	34.0	0.0	0.0
Cycle Q Clear(g_c), s	9.4	54.0	33.8	1.1	39.5	39.5	28.0	0.0	17.0	34.0	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.56	1.00		0.19	0.59		0.10
Lane Grp Cap(c), veh/h	142	1425	604	37	602	547	399	0	405	428	0	0
V/C Ratio(X)	0.84	1.19	0.73	0.38	0.90	0.90	0.91	0.00	0.60	1.05	0.00	0.00
Avail Cap(c_a), veh/h	163	1425	604	88	633	575	452	0	459	428	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(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	64.3	43.9	37.6	68.5	46.0	46.0	53.5	0.0	49.2	53.9	0.0	0.0
Incr Delay (d2), s/veh	25.4	93.4	4.5	2.3	16.0	17.3	20.7	0.0	2.0	56.8	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	5.2	42.7	13.6	0.5	20.6	18.9	15.0	0.0	8.0	22.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.7	137.3	42.1	70.8	62.0	63.3	74.2	0.0	51.2	110.7	0.0	0.0
LnGrp LOS	F	F	D	E	E	E	E	A	D	F	A	A
Approach Vol, veh/h		2259			1053			604			449	
Approach Delay, s/veh		116.2			62.7			65.0			110.7	
Approach LOS		F			E			E			F	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.3	50.6		36.8	7.0	59.0		39.0				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s	13.0	48.0		36.0	7.0	54.0		34.0				
Max Q Clear Time (g_c+I1), s	11.4	41.5		30.0	3.1	56.0		36.0				
Green Ext Time (p_c), s	0.0	3.4		1.7	0.0	0.0		0.0				

Intersection Summary			
HCM 6th Ctrl Delay		95.6	
HCM 6th LOS		F	



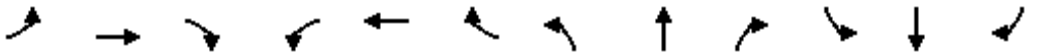
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	656	561	114	371	78	548	552	175	198	593	52
Future Volume (veh/h)	131	656	561	114	371	78	548	552	175	198	593	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	138	691	0	120	391	0	577	581	0	208	624	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	172	916		304	874		638	1169		327	842	
Arrive On Green	0.10	0.24	0.00	0.09	0.23	0.00	0.18	0.31	0.00	0.09	0.23	0.00
Sat Flow, veh/h	1781	3741	1585	3563	3741	1585	3563	3741	1585	3563	3741	1585
Grp Volume(v), veh/h	138	691	0	120	391	0	577	581	0	208	624	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	5.7	12.9	0.0	2.4	6.7	0.0	12.0	9.5	0.0	4.2	11.7	0.0
Cycle Q Clear(g_c), s	5.7	12.9	0.0	2.4	6.7	0.0	12.0	9.5	0.0	4.2	11.7	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	172	916		304	874		638	1169		327	842	
V/C Ratio(X)	0.80	0.75		0.39	0.45		0.90	0.50		0.64	0.74	
Avail Cap(c_a), veh/h	177	1365		331	1340		638	1504		482	1340	
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	33.3	26.3	0.0	32.6	24.7	0.0	30.3	21.1	0.0	33.0	27.2	0.0
Incr Delay (d2), s/veh	22.0	1.3	0.0	0.8	0.4	0.0	16.4	0.3	0.0	2.1	1.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	5.4	0.0	1.0	2.8	0.0	6.2	3.8	0.0	1.8	5.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.4	27.7	0.0	33.4	25.1	0.0	46.7	21.4	0.0	35.1	28.5	0.0
LnGrp LOS	E	C		C	C		D	C		D	C	
Approach Vol, veh/h		829	A		511	A		1158	A		832	A
Approach Delay, s/veh		32.3			27.0			34.0			30.1	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.0	22.5	11.8	23.1	11.4	29.1	10.9	24.0
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5
Max Green Setting (Gmax), s	13.5	27.0	7.5	27.0	10.2	30.3	7.0	27.5
Max Q Clear Time (g_c+I1), s	14.0	13.7	7.7	8.7	6.2	11.5	4.4	14.9
Green Ext Time (p_c), s	0.0	3.3	0.0	2.1	0.2	3.5	0.1	3.6

Intersection Summary	
HCM 6th Ctrl Delay	31.5
HCM 6th LOS	C

Notes

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



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	59	464	291	101	152	414	1043	131	150	1182	18
Future Volume (veh/h)	26	59	464	291	101	152	414	1043	131	150	1182	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	62	488	206	246	160	436	1098	138	158	1244	19
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	365	688	613	175	724	613	335	2144	606	264	1503	425
Arrive On Green	0.39	0.39	0.39	0.39	0.39	0.39	0.19	0.38	0.38	0.07	0.27	0.27
Sat Flow, veh/h	979	1777	1585	858	1870	1585	1781	5611	1585	3563	5611	1585
Grp Volume(v), veh/h	27	62	488	206	246	160	436	1098	138	158	1244	19
Grp Sat Flow(s),veh/h/ln	979	1777	1585	858	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.9	2.1	25.4	10.6	8.6	6.4	17.5	14.0	5.5	4.0	19.4	0.8
Cycle Q Clear(g_c), s	10.5	2.1	25.4	36.0	8.6	6.4	17.5	14.0	5.5	4.0	19.4	0.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	365	688	613	175	724	613	335	2144	606	264	1503	425
V/C Ratio(X)	0.07	0.09	0.80	1.17	0.34	0.26	1.30	0.51	0.23	0.60	0.83	0.04
Avail Cap(c_a), veh/h	365	688	613	175	724	613	335	2165	612	326	1623	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.8	18.1	25.3	43.5	20.1	19.4	37.8	22.1	19.5	41.7	32.0	25.2
Incr Delay (d2), s/veh	0.1	0.1	7.2	122.7	0.3	0.2	155.7	0.2	0.2	0.8	3.5	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	0.9	10.5	10.0	3.8	2.4	21.8	5.8	1.9	1.7	8.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	18.2	32.5	166.2	20.4	19.7	193.5	22.3	19.6	42.6	35.5	25.3
LnGrp LOS	C	B	C	F	C	B	F	C	B	D	D	C
Approach Vol, veh/h		577			612			1672			1421	
Approach Delay, s/veh		30.5			69.3			66.7			36.2	
Approach LOS		C			E			E			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.0	30.5		40.5	11.4	41.1		40.5				
Change Period (Y+Rc), s	4.5	5.6		4.5	4.5	5.6		4.5				
Max Green Setting (Gmax), s	17.5	26.9		36.0	8.5	35.9		36.0				
Max Q Clear Time (g_c+I1), s	19.5	21.4		38.0	6.0	16.0		27.4				
Green Ext Time (p_c), s	0.0	3.5		0.0	0.1	7.9		2.7				

Intersection Summary			
HCM 6th Ctrl Delay		52.1	
HCM 6th LOS		D	

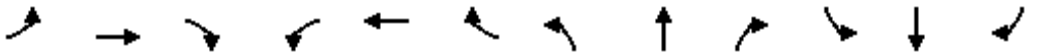
Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	128	1650	0	0	2079	232	358	0	595	0	0	0
Future Volume (vph)	128	1650	0	0	2079	232	358	0	595	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.4			5.4	5.4	5.4	5.4	5.4			
Lane Util. Factor	1.00	*1.00			*1.00	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1770	3725			5588	1583	1681	1681	2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	1770	3725			5588	1583	1681	1681	2787			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	135	1737	0	0	2188	244	377	0	626	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	99	0	0	533	0	0	0
Lane Group Flow (vph)	135	1737	0	0	2188	145	188	189	93	0	0	0
Turn Type	Prot	NA			NA	custom	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						8	8		8			
Actuated Green, G (s)	9.3	59.2			45.2	17.5	17.5	17.5	17.5			
Effective Green, g (s)	9.3	59.2			45.2	17.5	17.5	17.5	17.5			
Actuated g/C Ratio	0.08	0.50			0.38	0.15	0.15	0.15	0.15			
Clearance Time (s)	4.7	5.4			5.4	5.4	5.4	5.4	5.4			
Vehicle Extension (s)	2.0	2.0			3.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	140	1876			2149	235	250	250	415			
v/s Ratio Prot	0.08	c0.47			c0.39							
v/s Ratio Perm						0.09	0.11	0.11	0.03			
v/c Ratio	0.96	0.93			1.02	0.62	0.75	0.76	0.22			
Uniform Delay, d1	53.9	27.1			36.1	46.9	47.9	48.0	44.0			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	64.4	8.2			24.1	3.4	10.8	11.0	0.1			
Delay (s)	118.3	35.3			60.2	50.2	58.7	58.9	44.1			
Level of Service	F	D			E	D	E	E	D			
Approach Delay (s)		41.3			59.2			49.6			0.0	
Approach LOS		D			E			D			A	

Intersection Summary			
HCM 2000 Control Delay	51.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	117.5	Sum of lost time (s)	18.5
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	1395	1305	0	872	1254	0	0	0	184	0	38
Future Volume (veh/h)	0	1395	1305	0	872	1254	0	0	0	184	0	38
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1945	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	0	2108	947	0	918	0				194	0	40
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	0	2	2				2	2	2
Cap, veh/h	0	2795	1139	0	4031					247	0	220
Arrive On Green	0.00	0.72	0.72	0.00	0.72	0.00				0.14	0.00	0.14
Sat Flow, veh/h	0	3890	1585	0	5611	1585				1781	0	1585
Grp Volume(v), veh/h	0	2108	947	0	918	0				194	0	40
Grp Sat Flow(s),veh/h/ln	0	1945	1585	0	1870	1585				1781	0	1585
Q Serve(g_s), s	0.0	23.5	29.5	0.0	3.9	0.0				7.4	0.0	1.6
Cycle Q Clear(g_c), s	0.0	23.5	29.5	0.0	3.9	0.0				7.4	0.0	1.6
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2795	1139	0	4031					247	0	220
V/C Ratio(X)	0.00	0.75	0.83	0.00	0.23					0.79	0.00	0.18
Avail Cap(c_a), veh/h	0	3412	1390	0	4922					451	0	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	6.1	7.0	0.0	3.4	0.0				29.4	0.0	26.9
Incr Delay (d2), s/veh	0.0	0.6	3.1	0.0	0.0	0.0				2.1	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.3	6.2	0.0	0.8	0.0				3.1	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	6.7	10.1	0.0	3.4	0.0				31.5	0.0	27.0
LnGrp LOS	A	A	B	A	A					C	A	C
Approach Vol, veh/h		3055			918	A					234	
Approach Delay, s/veh		7.7			3.4						30.7	
Approach LOS		A			A						C	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		56.2		14.5		56.2						
Change Period (Y+Rc), s		5.4		* 4.7		5.4						
Max Green Setting (Gmax), s		62.0		* 18		62.0						
Max Q Clear Time (g_c+I1), s		31.5		9.4		5.9						
Green Ext Time (p_c), s		19.2		0.5		4.5						

Intersection Summary		
HCM 6th Ctrl Delay	8.1	
HCM 6th LOS	A	

Notes

User approved volume balancing among the lanes for turning movement.

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

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

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	863	4	4	834	55	11
Future Vol, veh/h	863	4	4	834	55	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	100	-	0	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	0	0	2	0	0
Mvmt Flow	908	4	4	878	58	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	912	0	1794	908
Stage 1	-	-	-	-	908	-
Stage 2	-	-	-	-	886	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	755	-	90	336
Stage 1	-	-	-	-	397	-
Stage 2	-	-	-	-	406	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	755	-	90	336
Mov Cap-2 Maneuver	-	-	-	-	224	-
Stage 1	-	-	-	-	397	-
Stage 2	-	-	-	-	404	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	24.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	224	336	-	-	755	-
HCM Lane V/C Ratio	0.258	0.034	-	-	0.006	-
HCM Control Delay (s)	26.6	16.1	-	-	9.8	-
HCM Lane LOS	D	C	-	-	A	-
HCM 95th %tile Q(veh)	1	0.1	-	-	0	-

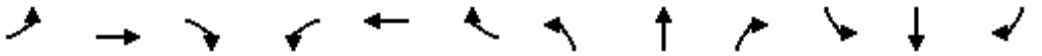
Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	44	948	25	4	1172
Future Vol, veh/h	0	44	948	25	4	1172
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	150	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	46	998	26	4	1234

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1623	499	0	0	1024	0
Stage 1	998	-	-	-	-	-
Stage 2	625	-	-	-	-	-
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	93	517	-	-	674	-
Stage 1	317	-	-	-	-	-
Stage 2	496	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	92	517	-	-	674	-
Mov Cap-2 Maneuver	92	-	-	-	-	-
Stage 1	317	-	-	-	-	-
Stage 2	493	-	-	-	-	-

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

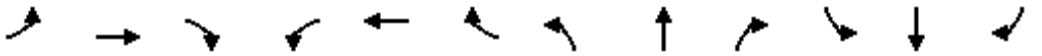
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	517	674	-
HCM Lane V/C Ratio	-	-	0.09	0.006	-
HCM Control Delay (s)	-	-	12.6	10.4	-
HCM Lane LOS	-	-	B	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	56	271	134	392	250	36	234	371	618	148	467	74
Future Volume (veh/h)	56	271	134	392	250	36	234	371	618	148	467	74
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	59	285	141	413	263	38	246	391	651	156	492	78
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	84	388	187	471	719	609	136	976	833	119	793	125
Arrive On Green	0.05	0.17	0.17	0.26	0.38	0.38	0.08	0.26	0.26	0.07	0.25	0.25
Sat Flow, veh/h	1781	2325	1120	1781	1870	1585	1781	3741	1585	1781	3154	498
Grp Volume(v), veh/h	59	216	210	413	263	38	246	391	651	156	291	279
Grp Sat Flow(s),veh/h/ln	1781	1777	1669	1781	1870	1585	1781	1870	1585	1781	1870	1781
Q Serve(g_s), s	2.4	8.6	9.0	16.6	7.5	1.1	5.7	6.4	19.5	5.0	10.3	10.4
Cycle Q Clear(g_c), s	2.4	8.6	9.0	16.6	7.5	1.1	5.7	6.4	19.5	5.0	10.3	10.4
Prop In Lane	1.00		0.67	1.00		1.00	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	84	297	279	471	719	609	136	976	833	119	470	448
V/C Ratio(X)	0.70	0.73	0.75	0.88	0.37	0.06	1.81	0.40	0.78	1.31	0.62	0.62
Avail Cap(c_a), veh/h	160	428	402	941	1271	1077	136	976	833	119	470	448
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.1	29.5	29.7	26.3	16.5	14.5	34.5	22.8	14.3	34.9	24.8	24.8
Incr Delay (d2), s/veh	10.1	3.5	4.8	5.3	0.3	0.0	392.5	0.3	4.9	186.8	2.5	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	3.9	3.9	7.0	2.9	0.4	17.2	2.8	8.1	8.2	4.4	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.2	33.1	34.4	31.7	16.8	14.6	427.0	23.1	19.1	221.7	27.2	27.5
LnGrp LOS	D	C	C	C	B	B	F	C	B	F	C	C
Approach Vol, veh/h		485			714			1288			726	
Approach Delay, s/veh		35.1			25.3			98.2			69.1	
Approach LOS		D			C			F			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.5	24.0	24.3	17.0	10.2	23.3	8.0	33.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	5.0	19.5	39.5	18.0	5.7	18.8	6.7	50.8
Max Q Clear Time (g_c+I1), s	7.0	21.5	18.6	11.0	7.7	12.4	4.4	9.5
Green Ext Time (p_c), s	0.0	0.0	1.2	1.5	0.0	1.7	0.0	1.6

Intersection Summary	
HCM 6th Ctrl Delay	65.9
HCM 6th LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	198	654	11	148	554	265	13	7	61	218	13	103
Future Volume (veh/h)	198	654	11	148	554	265	13	7	61	218	13	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	208	688	12	156	583	279	14	7	64	229	14	108
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	251	1047	444	197	935	396	25	13	115	317	333	282
Arrive On Green	0.14	0.28	0.28	0.11	0.25	0.25	0.09	0.09	0.09	0.18	0.18	0.18
Sat Flow, veh/h	1781	3741	1585	1781	3741	1585	269	135	1231	1781	1870	1585
Grp Volume(v), veh/h	208	688	12	156	583	279	85	0	0	229	14	108
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1635	0	0	1781	1870	1585
Q Serve(g_s), s	6.1	8.7	0.3	4.6	7.4	8.5	2.6	0.0	0.0	6.5	0.3	3.2
Cycle Q Clear(g_c), s	6.1	8.7	0.3	4.6	7.4	8.5	2.6	0.0	0.0	6.5	0.3	3.2
Prop In Lane	1.00		1.00	1.00		1.00	0.16		0.75	1.00		1.00
Lane Grp Cap(c), veh/h	251	1047	444	197	935	396	153	0	0	317	333	282
V/C Ratio(X)	0.83	0.66	0.03	0.79	0.62	0.70	0.55	0.00	0.00	0.72	0.04	0.38
Avail Cap(c_a), veh/h	251	1312	556	227	1263	535	583	0	0	919	965	818
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.3	16.9	13.9	23.1	17.8	18.2	23.1	0.0	0.0	20.7	18.2	19.3
Incr Delay (d2), s/veh	20.3	0.8	0.0	15.1	0.7	2.6	3.1	0.0	0.0	3.1	0.1	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	3.6	3.1	0.1	2.5	2.8	2.9	1.1	0.0	0.0	2.7	0.1	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.6	17.8	14.0	38.2	18.4	20.8	26.2	0.0	0.0	23.8	18.2	20.2
LnGrp LOS	D	B	B	D	B	C	C	A	A	C	B	C
Approach Vol, veh/h		908			1018			85			351	
Approach Delay, s/veh		23.4			22.1			26.2			22.5	
Approach LOS		C			C			C			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		9.5	10.4	19.4		14.0	12.0	17.8				
Change Period (Y+Rc), s		4.5	4.5	4.5		4.5	4.5	4.5				
Max Green Setting (Gmax), s		19.0	6.8	18.7		27.5	7.5	18.0				
Max Q Clear Time (g_c+I1), s		4.6	6.6	10.7		8.5	8.1	10.5				
Green Ext Time (p_c), s		0.3	0.0	2.7		1.0	0.0	2.8				

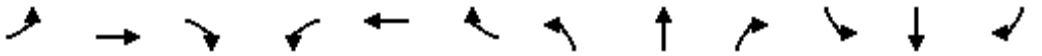
Intersection Summary												
HCM 6th Ctrl Delay			22.8									
HCM 6th LOS			C									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (veh/h)	16	444	364	188	544	178	21	400	270	128	137	193
Future Volume (veh/h)	16	444	364	188	544	178	21	400	270	128	137	193
Number	7	4	14	3	8	18		5	2	12	1	6
Initial Q (Qb), veh	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	
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863		1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	17	467	383	198	573	187		421	284	135	116	243
Adj No. of Lanes	1	2	1	1	2	1		2	1	1	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95		0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2		2	2	2	2	2
Cap, veh/h	28	1146	487	180	1466	623		812	426	362	211	443
Arrive On Green	0.02	0.31	0.31	0.10	0.39	0.39		0.23	0.23	0.23	0.12	0.12
Sat Flow, veh/h	1774	3725	1583	1774	3725	1583		3548	1863	1583	1774	3725
Grp Volume(v), veh/h	17	467	383	198	573	187		421	284	135	116	243
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1863	1583		1774	1863	1583	1774	1863
Q Serve(g_s), s	0.8	8.3	18.5	8.5	9.2	6.8		8.7	11.6	6.0	5.2	5.2
Cycle Q Clear(g_c), s	0.8	8.3	18.5	8.5	9.2	6.8		8.7	11.6	6.0	5.2	5.2
Prop In Lane	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	28	1146	487	180	1466	623		812	426	362	211	443
V/C Ratio(X)	0.61	0.41	0.79	1.10	0.39	0.30		0.52	0.67	0.37	0.55	0.55
Avail Cap(c_a), veh/h	127	1866	793	180	1977	840		1569	824	700	783	1643
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
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	23.0	26.5	37.7	18.2	17.5		28.3	29.4	27.3	34.8	34.8
Incr Delay (d2), s/veh	8.0	0.3	3.4	96.8	0.2	0.3		0.7	2.6	0.9	3.2	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	4.3	8.5	8.9	4.7	3.0		4.4	6.3	2.7	2.7	2.8
LnGrp Delay(d),s/veh	49.0	23.3	29.9	134.5	18.4	17.8		29.0	32.0	28.2	38.0	36.3
LnGrp LOS	D	C	C	F	B	B		C	C	C	D	D
Approach Vol, veh/h		867			958				840			366
Approach Delay, s/veh		26.7			42.3				29.9			36.8
Approach LOS		C			D				C			D

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		24.5	13.0	31.1		15.3	5.8	38.3
Change Period (Y+Rc), s		5.3	4.5	5.3		5.3	4.5	5.3
Max Green Setting (Gmax), s		37.1	8.5	42.0		37.0	6.0	44.5
Max Q Clear Time (g_c+I1), s		13.6	10.5	20.5		7.2	2.8	11.2
Green Ext Time (p_c), s		5.6	0.0	5.3		2.8	0.0	5.9

Intersection Summary	
HCM 2010 Ctrl Delay	33.7
HCM 2010 LOS	C

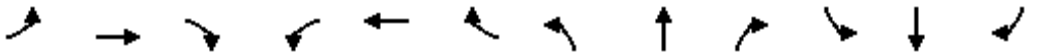
Notes



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	18	20	74	118	31	52	103	985	210	62	802	26
Future Volume (veh/h)	18	20	74	118	31	52	103	985	210	62	802	26
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	19	21	78	124	33	55	108	1037	221	65	844	27
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	33	37	138	161	113	188	138	1522	645	82	1405	595
Arrive On Green	0.02	0.11	0.11	0.09	0.18	0.18	0.08	0.41	0.41	0.05	0.38	0.38
Sat Flow, veh/h	1781	347	1291	1781	630	1051	1781	3741	1585	1781	3741	1585
Grp Volume(v), veh/h	19	0	99	124	0	88	108	1037	221	65	844	27
Grp Sat Flow(s),veh/h/ln	1781	0	1638	1781	0	1681	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	0.6	0.0	3.1	3.7	0.0	2.4	3.2	12.2	5.2	1.9	9.8	0.6
Cycle Q Clear(g_c), s	0.6	0.0	3.1	3.7	0.0	2.4	3.2	12.2	5.2	1.9	9.8	0.6
Prop In Lane	1.00		0.79	1.00		0.63	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	33	0	175	161	0	300	138	1522	645	82	1405	595
V/C Ratio(X)	0.58	0.00	0.57	0.77	0.00	0.29	0.78	0.68	0.34	0.79	0.60	0.05
Avail Cap(c_a), veh/h	292	0	1067	514	0	1305	166	1992	844	235	2138	906
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.2	0.0	22.8	23.9	0.0	19.1	24.3	13.1	11.0	25.4	13.5	10.7
Incr Delay (d2), s/veh	5.9	0.0	3.5	2.9	0.0	0.6	14.7	0.7	0.4	6.2	0.5	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	0.3	0.0	1.3	1.6	0.0	0.9	1.8	4.1	1.7	0.9	3.3	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.1	0.0	26.3	26.8	0.0	19.8	39.0	13.8	11.4	31.5	14.0	10.7
LnGrp LOS	C	A	C	C	A	B	D	B	B	C	B	B
Approach Vol, veh/h		118			212			1366			936	
Approach Delay, s/veh		27.2			23.9			15.4			15.1	
Approach LOS		C			C			B			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.0	27.1	9.4	10.2	8.7	25.5	5.5	14.1
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	7.1	28.6	15.5	35.0	5.0	30.7	8.8	41.7
Max Q Clear Time (g_c+I1), s	3.9	14.2	5.7	5.1	5.2	11.8	2.6	4.4
Green Ext Time (p_c), s	0.0	7.6	0.1	0.7	0.0	6.5	0.0	0.6

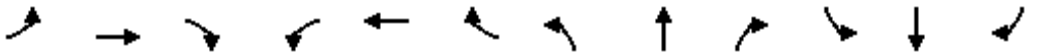
Intersection Summary	
HCM 6th Ctrl Delay	16.5
HCM 6th LOS	B



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	44	54	92	134	67	139	128	1208	186	85	964	44
Future Volume (veh/h)	44	54	92	134	67	139	128	1208	186	85	964	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	46	57	97	141	71	146	135	1272	196	89	1015	46
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	186	158	180	311	264	131	1668	707	115	1635	693
Arrive On Green	0.03	0.10	0.10	0.10	0.17	0.17	0.07	0.45	0.45	0.06	0.44	0.44
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3741	1585	1781	3741	1585
Grp Volume(v), veh/h	46	57	97	141	71	146	135	1272	196	89	1015	46
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	1.7	1.9	4.0	5.2	2.2	5.7	5.0	19.4	5.3	3.3	14.2	1.1
Cycle Q Clear(g_c), s	1.7	1.9	4.0	5.2	2.2	5.7	5.0	19.4	5.3	3.3	14.2	1.1
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	61	186	158	180	311	264	131	1668	707	115	1635	693
V/C Ratio(X)	0.76	0.31	0.61	0.78	0.23	0.55	1.03	0.76	0.28	0.77	0.62	0.07
Avail Cap(c_a), veh/h	666	964	817	459	746	633	131	1912	810	477	2639	1118
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.5	28.4	29.3	29.8	24.5	26.0	31.5	15.8	11.9	31.3	14.8	11.1
Incr Delay (d2), s/veh	6.9	1.1	4.6	2.8	0.4	2.2	86.6	1.7	0.3	4.1	0.5	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	0.9	0.9	1.7	2.3	1.0	2.3	5.2	7.7	1.8	1.5	5.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.4	29.5	33.9	32.6	25.0	28.2	118.0	17.5	12.1	35.3	15.2	11.1
LnGrp LOS	D	C	C	C	C	C	F	B	B	D	B	B
Approach Vol, veh/h		200			358			1603			1150	
Approach Delay, s/veh		33.9			29.3			25.3			16.6	
Approach LOS		C			C			C			B	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	8.9	35.6	11.4	12.1	9.5	35.0	6.8	16.6
Change Period (Y+Rc), s	4.5	5.3	4.5	5.3	4.5	5.3	4.5	5.3
Max Green Setting (Gmax), s	18.2	34.7	17.5	35.0	5.0	47.9	25.4	27.1
Max Q Clear Time (g_c+I1), s	5.3	21.4	7.2	6.0	7.0	16.2	3.7	7.7
Green Ext Time (p_c), s	0.1	8.9	0.1	0.8	0.0	10.0	0.0	1.0

Intersection Summary	
HCM 6th Ctrl Delay	23.2
HCM 6th LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	59	38	134	123	103	132	270	1276	139	77	894	204
Future Volume (veh/h)	59	38	134	123	103	132	270	1276	139	77	894	204
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	62	40	141	129	108	139	284	1343	146	81	941	215
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	80	226	192	163	314	266	324	1866	791	105	1406	596
Arrive On Green	0.04	0.12	0.12	0.09	0.17	0.17	0.18	0.50	0.50	0.06	0.38	0.38
Sat Flow, veh/h	1781	1870	1585	1781	1870	1585	1781	3741	1585	1781	3741	1585
Grp Volume(v), veh/h	62	40	141	129	108	139	284	1343	146	81	941	215
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.8	1.6	7.0	5.8	4.2	6.5	12.7	23.0	4.2	3.7	17.2	8.0
Cycle Q Clear(g_c), s	2.8	1.6	7.0	5.8	4.2	6.5	12.7	23.0	4.2	3.7	17.2	8.0
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	80	226	192	163	314	266	324	1866	791	105	1406	596
V/C Ratio(X)	0.78	0.18	0.74	0.79	0.34	0.52	0.88	0.72	0.18	0.77	0.67	0.36
Avail Cap(c_a), veh/h	301	892	756	381	976	827	427	2749	1165	318	2520	1068
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.7	32.3	34.7	36.4	30.1	31.1	32.6	16.0	11.3	38.0	21.3	18.4
Incr Delay (d2), s/veh	5.9	0.4	6.5	3.2	0.8	1.9	12.5	0.6	0.1	4.5	0.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.7	3.0	2.6	1.9	2.6	6.3	8.6	1.4	1.7	7.2	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.6	32.7	41.1	39.6	30.9	33.0	45.0	16.7	11.4	42.5	22.0	18.9
LnGrp LOS	D	C	D	D	C	C	D	B	B	D	C	B
Approach Vol, veh/h		243			376			1773			1237	
Approach Delay, s/veh		40.6			34.6			20.8			22.8	
Approach LOS		D			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.3	46.1	12.0	14.4	19.4	36.0	8.2	18.2
Change Period (Y+Rc), s	4.5	5.3	4.5	4.5	4.5	5.3	4.5	4.5
Max Green Setting (Gmax), s	14.6	60.1	17.5	39.0	19.6	55.1	13.8	42.7
Max Q Clear Time (g_c+I1), s	5.7	25.0	7.8	9.0	14.7	19.2	4.8	8.5
Green Ext Time (p_c), s	0.1	15.8	0.1	0.9	0.2	11.3	0.0	1.4

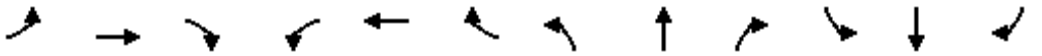
Intersection Summary	
HCM 6th Ctrl Delay	24.2
HCM 6th LOS	C

Intersection	
Intersection Delay, s/veh	65.2
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	0	18	0	0	0	31	1214	5	2	859	31
Future Vol, veh/h	23	0	18	0	0	0	31	1214	5	2	859	31
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	0	19	0	0	0	33	1278	5	2	904	33
Number of Lanes	0	1	0	0	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	10.6	0	90.5	32.3
HCM LOS	B	-	F	D

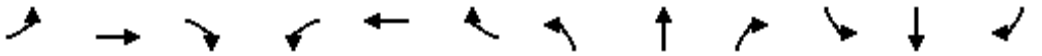
Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	5%	0%	56%	0%	0%	0%
Vol Thru, %	95%	99%	0%	100%	100%	93%
Vol Right, %	0%	1%	44%	0%	0%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	638	612	41	0	432	461
LT Vol	31	0	23	0	2	0
Through Vol	607	607	0	0	430	430
RT Vol	0	5	18	0	0	31
Lane Flow Rate	672	644	43	0	454	485
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	1.125	1.074	0.083	0	0.791	0.838
Departure Headway (Hd)	6.03	6	6.882	7.228	6.631	6.581
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	604	612	520	0	550	553
Service Time	3.73	3.7	4.939	5.31	4.331	4.281
HCM Lane V/C Ratio	1.113	1.052	0.083	0	0.825	0.877
HCM Control Delay	98.9	81.7	10.6	10.3	29.9	34.6
HCM Lane LOS	F	F	B	N	D	D
HCM 95th-tile Q	21.2	18.6	0.3	0	7.4	8.7



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	11	92	36	31	110	124	1274	41	52	839	2
Future Volume (veh/h)	16	11	92	36	31	110	124	1274	41	52	839	2
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	17	12	97	38	33	116	131	1341	43	55	883	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	22	16	127	98	86	160	164	1685	54	113	1637	4
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.09	0.47	0.47	0.06	0.44	0.44
Sat Flow, veh/h	220	156	1257	975	847	1585	1781	3604	115	1781	3731	8
Grp Volume(v), veh/h	126	0	0	71	0	116	131	695	689	55	443	442
Grp Sat Flow(s),veh/h/ln	1633	0	0	1822	0	1585	1781	1870	1850	1781	1870	1869
Q Serve(g_s), s	5.6	0.0	0.0	2.7	0.0	5.3	5.4	23.6	23.7	2.2	13.0	13.0
Cycle Q Clear(g_c), s	5.6	0.0	0.0	2.7	0.0	5.3	5.4	23.6	23.7	2.2	13.0	13.0
Prop In Lane	0.13		0.77	0.54		1.00	1.00		0.06	1.00		0.00
Lane Grp Cap(c), veh/h	164	0	0	184	0	160	164	874	864	113	821	820
V/C Ratio(X)	0.77	0.00	0.00	0.39	0.00	0.72	0.80	0.80	0.80	0.48	0.54	0.54
Avail Cap(c_a), veh/h	742	0	0	827	0	720	167	1147	1134	264	1249	1248
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	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.8	0.0	0.0	31.5	0.0	32.6	33.3	16.9	16.9	33.9	15.4	15.4
Incr Delay (d2), s/veh	2.8	0.0	0.0	0.5	0.0	2.3	21.2	3.0	3.0	1.2	0.6	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	0.0	1.2	0.0	2.1	3.2	9.3	9.2	1.0	5.0	5.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.6	0.0	0.0	32.0	0.0	35.0	54.5	19.9	20.0	35.0	16.0	16.0
LnGrp LOS	D	A	A	C	A	C	D	B	B	D	B	B
Approach Vol, veh/h		126			187			1515			940	
Approach Delay, s/veh		35.6			33.8			22.9			17.1	
Approach LOS		D			C			C			B	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.3	40.5		12.5	11.4	38.3		12.6				
Change Period (Y+Rc), s	4.5	5.5		5.0	4.5	5.5		5.0				
Max Green Setting (Gmax), s	11.1	45.9		34.0	7.0	50.0		34.0				
Max Q Clear Time (g_c+I1), s	4.2	25.7		7.6	7.4	15.0		7.3				
Green Ext Time (p_c), s	0.0	9.3		0.5	0.0	5.9		0.4				

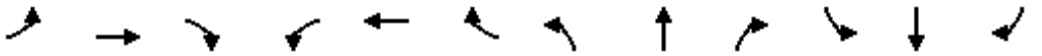
Intersection Summary												
HCM 6th Ctrl Delay			22.2									
HCM 6th LOS			C									



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	827	308	23	1108	88	526	113	26	36	49	18
Future Volume (veh/h)	26	827	308	23	1108	88	526	113	26	36	49	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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	871	324	24	1166	93	554	119	27	38	52	19
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	63	1444	612	58	1311	104	597	494	112	49	67	24
Arrive On Green	0.04	0.39	0.39	0.03	0.38	0.38	0.33	0.33	0.33	0.08	0.08	0.08
Sat Flow, veh/h	1781	3741	1585	1781	3419	272	1781	1475	335	622	851	311
Grp Volume(v), veh/h	27	871	324	24	637	622	554	0	146	109	0	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1821	1781	0	1810	1783	0	0
Q Serve(g_s), s	1.7	21.1	17.8	1.5	36.0	36.2	34.0	0.0	6.6	6.8	0.0	0.0
Cycle Q Clear(g_c), s	1.7	21.1	17.8	1.5	36.0	36.2	34.0	0.0	6.6	6.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.15	1.00		0.18	0.35		0.17
Lane Grp Cap(c), veh/h	63	1444	612	58	717	698	597	0	606	140	0	0
V/C Ratio(X)	0.43	0.60	0.53	0.41	0.89	0.89	0.93	0.00	0.24	0.78	0.00	0.00
Avail Cap(c_a), veh/h	118	1571	666	118	786	765	662	0	672	536	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(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	53.4	27.8	26.8	53.6	32.6	32.7	36.3	0.0	27.2	51.2	0.0	0.0
Incr Delay (d2), s/veh	1.7	0.6	0.7	1.7	11.5	11.9	18.8	0.0	0.2	3.5	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	0.8	9.2	6.6	0.7	17.8	17.5	17.8	0.0	2.9	3.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.1	28.4	27.5	55.3	44.1	44.6	55.1	0.0	27.5	54.7	0.0	0.0
LnGrp LOS	E	C	C	E	D	D	E	A	C	D	A	A
Approach Vol, veh/h		1222			1283			700			109	
Approach Delay, s/veh		28.7			44.5			49.4			54.7	
Approach LOS		C			D			D			D	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.0	48.3		42.9	7.7	48.6		13.9				
Change Period (Y+Rc), s	4.0	5.0		5.0	4.0	5.0		5.0				
Max Green Setting (Gmax), s	7.5	47.5		42.0	7.5	47.5		34.0				
Max Q Clear Time (g_c+I1), s	3.7	38.2		36.0	3.5	23.1		8.8				
Green Ext Time (p_c), s	0.0	5.2		1.9	0.0	7.5		0.4				

Intersection Summary			
HCM 6th Ctrl Delay		40.1	
HCM 6th LOS		D	



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	364	230	204	480	61	482	626	175	206	604	132
Future Volume (veh/h)	88	364	230	204	480	61	482	626	175	206	604	132
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	93	383	0	215	505	0	507	659	0	217	636	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	796		349	851		611	1150		349	875	
Arrive On Green	0.08	0.21	0.00	0.10	0.23	0.00	0.17	0.31	0.00	0.10	0.23	0.00
Sat Flow, veh/h	1781	3741	1585	3563	3741	1585	3563	3741	1585	3563	3741	1585
Grp Volume(v), veh/h	93	383	0	215	505	0	507	659	0	217	636	0
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	3.6	6.3	0.0	4.1	8.5	0.0	9.7	10.4	0.0	4.1	11.1	0.0
Cycle Q Clear(g_c), s	3.6	6.3	0.0	4.1	8.5	0.0	9.7	10.4	0.0	4.1	11.1	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	148	796		349	851		611	1150		349	875	
V/C Ratio(X)	0.63	0.48		0.62	0.59		0.83	0.57		0.62	0.73	
Avail Cap(c_a), veh/h	190	1460		354	1434		683	1609		516	1434	
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	31.2	24.3	0.0	30.5	24.3	0.0	28.2	20.5	0.0	30.5	24.9	0.0
Incr Delay (d2), s/veh	4.3	0.5	0.0	3.1	0.7	0.0	7.8	0.5	0.0	1.8	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
%ile BackOfQ(50%),veh/ln	1.6	2.6	0.0	1.8	3.5	0.0	4.5	4.1	0.0	1.7	4.6	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	24.8	0.0	33.6	25.0	0.0	36.0	21.0	0.0	32.3	26.1	0.0
LnGrp LOS	D	C		C	C		D	C		C	C	
Approach Vol, veh/h		476	A		720	A		1166	A		853	A
Approach Delay, s/veh		26.9			27.6			27.5			27.7	
Approach LOS		C			C			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.6	22.0	10.4	21.5	11.4	27.2	11.4	20.5
Change Period (Y+Rc), s	4.5	5.5	4.5	5.5	4.5	5.5	4.5	5.5
Max Green Setting (Gmax), s	13.5	27.0	7.5	27.0	10.2	30.3	7.0	27.5
Max Q Clear Time (g_c+I1), s	11.7	13.1	5.6	10.5	6.1	12.4	6.1	8.3
Green Ext Time (p_c), s	0.4	3.4	0.0	2.7	0.3	4.0	0.1	2.2

Intersection Summary	
HCM 6th Ctrl Delay	27.5
HCM 6th LOS	C

Notes

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

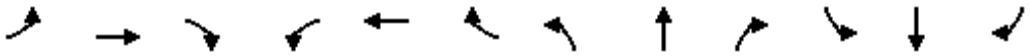
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	31	108	257	401	193	238	494	991	196	232	688	36
Future Volume (veh/h)	31	108	257	401	193	238	494	991	196	232	688	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	114	271	312	356	251	520	1043	206	244	724	38
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	323	758	676	393	798	676	369	1737	491	323	1083	306
Arrive On Green	0.43	0.43	0.43	0.43	0.43	0.43	0.21	0.31	0.31	0.09	0.19	0.19
Sat Flow, veh/h	813	1777	1585	998	1870	1585	1781	5611	1585	3563	5611	1585
Grp Volume(v), veh/h	33	114	271	312	356	251	520	1043	206	244	724	38
Grp Sat Flow(s),veh/h/ln	813	1777	1585	998	1870	1585	1781	1870	1585	1781	1870	1585
Q Serve(g_s), s	2.5	3.3	10.0	26.0	11.4	9.1	17.5	13.3	8.7	5.6	10.1	1.7
Cycle Q Clear(g_c), s	13.9	3.3	10.0	36.0	11.4	9.1	17.5	13.3	8.7	5.6	10.1	1.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	323	758	676	393	798	676	369	1737	491	323	1083	306
V/C Ratio(X)	0.10	0.15	0.40	0.79	0.45	0.37	1.41	0.60	0.42	0.75	0.67	0.12
Avail Cap(c_a), veh/h	323	758	676	393	798	676	369	2387	674	359	1789	505
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.1	14.8	16.7	29.4	17.1	16.5	33.4	24.7	23.1	37.4	31.5	28.2
Incr Delay (d2), s/veh	0.1	0.1	0.4	10.7	0.4	0.3	199.0	0.3	0.6	6.6	0.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	1.3	3.6	7.3	4.8	3.3	27.5	5.5	3.1	2.7	4.4	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.2	14.9	17.1	40.0	17.5	16.8	232.4	25.0	23.7	44.1	32.3	28.3
LnGrp LOS	C	B	B	D	B	B	F	C	C	D	C	C
Approach Vol, veh/h		418			919			1769			1006	
Approach Delay, s/veh		16.9			25.0			85.8			35.0	
Approach LOS		B			C			F			C	

Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	22.0	21.9		40.5	12.2	31.7		40.5				
Change Period (Y+Rc), s	4.5	5.6		4.5	4.5	5.6		4.5				
Max Green Setting (Gmax), s	17.5	26.9		36.0	8.5	35.9		36.0				
Max Q Clear Time (g_c+I1), s	19.5	12.1		38.0	7.6	15.3		15.9				
Green Ext Time (p_c), s	0.0	4.2		0.0	0.0	7.8		2.7				

Intersection Summary		
HCM 6th Ctrl Delay		52.8
HCM 6th LOS		D

Notes

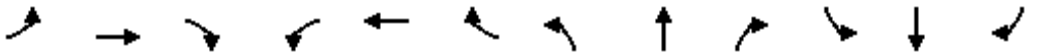
User approved volume balancing among the lanes for turning movement.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	44	1069	0	0	1514	323	916	0	1336	0	0	0
Future Volume (vph)	44	1069	0	0	1514	323	916	0	1336	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.4			5.4	5.4	5.4	5.4	5.4			
Lane Util. Factor	1.00	*1.00			*1.00	1.00	0.95	0.95	0.88			
Frt	1.00	1.00			1.00	0.85	1.00	1.00	0.85			
Flt Protected	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (prot)	1770	3725			5588	1583	1681	1681	2787			
Flt Permitted	0.95	1.00			1.00	1.00	0.95	0.95	1.00			
Satd. Flow (perm)	1770	3725			5588	1583	1681	1681	2787			
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	46	1125	0	0	1594	340	964	0	1406	0	0	0
RTOR Reduction (vph)	0	0	0	0	0	183	0	0	561	0	0	0
Lane Group Flow (vph)	46	1125	0	0	1594	157	482	482	845	0	0	0
Turn Type	Prot	NA			NA	custom	Perm	NA	Perm			
Protected Phases	5	2			6			8				
Permitted Phases						8	8		8			
Actuated Green, G (s)	5.5	44.2			34.0	33.7	33.7	33.7	33.7			
Effective Green, g (s)	5.5	44.2			34.0	33.7	33.7	33.7	33.7			
Actuated g/C Ratio	0.05	0.37			0.29	0.28	0.28	0.28	0.28			
Clearance Time (s)	4.7	5.4			5.4	5.4	5.4	5.4	5.4			
Vehicle Extension (s)	2.0	2.0			3.0	2.0	2.0	2.0	2.0			
Lane Grp Cap (vph)	82	1387			1600	449	477	477	791			
v/s Ratio Prot	0.03	c0.30			c0.29							
v/s Ratio Perm						0.10	0.29	0.29	c0.30			
v/c Ratio	0.56	0.81			1.00	0.35	1.01	1.01	1.07			
Uniform Delay, d1	55.4	33.5			42.3	33.8	42.5	42.5	42.5			
Progression Factor	1.00	1.00			1.00	1.00	1.00	1.00	1.00			
Incremental Delay, d2	5.1	3.5			21.4	0.2	43.8	43.8	51.7			
Delay (s)	60.6	37.0			63.7	34.0	86.3	86.3	94.2			
Level of Service	E	D			E	C	F	F	F			
Approach Delay (s)		37.9			58.5			91.0			0.0	
Approach LOS		D			E			F			A	

Intersection Summary			
HCM 2000 Control Delay	68.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	118.7	Sum of lost time (s)	18.5
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	633	470	0	1674	545	0	0	0	292	0	113
Future Volume (veh/h)	0	633	470	0	1674	545	0	0	0	292	0	113
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Work Zone On Approach		No			No						No	
Adj Sat Flow, veh/h/ln	0	1945	1870	0	1870	1870				1870	1870	1870
Adj Flow Rate, veh/h	0	828	387	0	1762	0				307	0	119
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	0	2	2				2	2	2
Cap, veh/h	0	2084	849	0	3005					407	0	362
Arrive On Green	0.00	0.54	0.54	0.00	0.54	0.00				0.23	0.00	0.23
Sat Flow, veh/h	0	3890	1585	0	5611	1585				1781	0	1585
Grp Volume(v), veh/h	0	828	387	0	1762	0				307	0	119
Grp Sat Flow(s),veh/h/ln	0	1945	1585	0	1870	1585				1781	0	1585
Q Serve(g_s), s	0.0	5.4	6.4	0.0	9.1	0.0				6.9	0.0	2.7
Cycle Q Clear(g_c), s	0.0	5.4	6.4	0.0	9.1	0.0				6.9	0.0	2.7
Prop In Lane	0.00		1.00	0.00		1.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2084	849	0	3005					407	0	362
V/C Ratio(X)	0.00	0.40	0.46	0.00	0.59					0.75	0.00	0.33
Avail Cap(c_a), veh/h	0	5635	2296	0	8127					745	0	663
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	5.9	6.1	0.0	6.7	0.0				15.4	0.0	13.8
Incr Delay (d2), s/veh	0.0	0.0	0.1	0.0	0.1	0.0				1.1	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	1.2	1.1	0.0	1.9	0.0				2.4	0.0	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	5.9	6.2	0.0	6.8	0.0				16.5	0.0	14.0
LnGrp LOS	A	A	A	A	A					B	A	B
Approach Vol, veh/h		1215			1762	A					426	
Approach Delay, s/veh		6.0			6.8						15.8	
Approach LOS		A			A						B	

Timer - Assigned Phs		2		4		6						
Phs Duration (G+Y+Rc), s		28.3		14.5		28.3						
Change Period (Y+Rc), s		5.4		* 4.7		5.4						
Max Green Setting (Gmax), s		62.0		* 18		62.0						
Max Q Clear Time (g_c+I1), s		8.4		8.9		11.1						
Green Ext Time (p_c), s		4.7		1.0		11.8						

Intersection Summary	
HCM 6th Ctrl Delay	7.6
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

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

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

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	583	12	12	828	37	7
Future Vol, veh/h	583	12	12	828	37	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	100	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	614	13	13	872	39	7

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	627	0	1512	614
Stage 1	-	-	-	-	614	-
Stage 2	-	-	-	-	898	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	955	-	132	492
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	398	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	955	-	130	492
Mov Cap-2 Maneuver	-	-	-	-	265	-
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	392	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	20
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	286	-	-	955	-
HCM Lane V/C Ratio	0.162	-	-	0.013	-
HCM Control Delay (s)	20	-	-	8.8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.6	-	-	0	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	29	853	87	12	871
Future Vol, veh/h	0	29	853	87	12	871
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	150	150	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	31	898	92	13	917

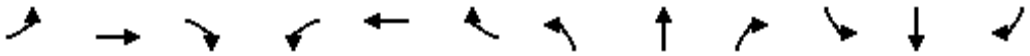
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1383	449	0	0	990	0
Stage 1	898	-	-	-	-	-
Stage 2	485	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	135	557	-	-	694	-
Stage 1	358	-	-	-	-	-
Stage 2	585	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	132	557	-	-	694	-
Mov Cap-2 Maneuver	132	-	-	-	-	-
Stage 1	358	-	-	-	-	-
Stage 2	574	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	0.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	557	694	-
HCM Lane V/C Ratio	-	-	0.055	0.018	-
HCM Control Delay (s)	-	-	11.8	10.3	-
HCM Lane LOS	-	-	B	B	-
HCM 95th %tile Q(veh)	-	-	0.2	0.1	-

Michael Baker
INTERNATIONAL

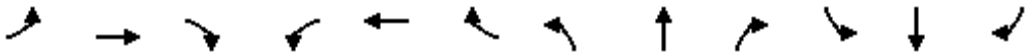
Appendix J: Queuing & Signal Warrant Worksheets & VMT Maps



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	12	432	249	108	250	161	100	206	250	137	285	32
v/c Ratio	0.10	0.53	0.45	0.52	0.18	0.23	0.35	0.35	0.52	0.44	0.44	0.08
Control Delay	40.4	28.3	6.6	45.1	17.4	4.8	32.7	29.9	8.5	33.0	29.7	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.4	28.3	6.6	45.1	17.4	4.8	32.7	29.9	8.5	33.0	29.7	0.5
Queue Length 50th (ft)	5	87	0	46	35	0	43	45	0	59	61	0
Queue Length 95th (ft)	21	131	28	#102	74	25	90	76	31	113	98	0
Internal Link Dist (ft)		331			596			432			263	
Turn Bay Length (ft)	180		180	130		85	180		180	180		160
Base Capacity (vph)	123	2072	1030	209	2244	1063	833	1718	939	830	1731	860
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.21	0.24	0.52	0.11	0.15	0.12	0.12	0.27	0.17	0.16	0.04

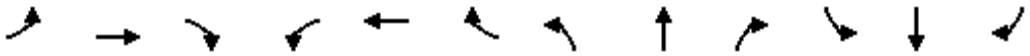
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	7	194	209	56	247	81	111	226	59	48	101	3
v/c Ratio	0.04	0.27	0.43	0.23	0.24	0.15	0.30	0.29	0.13	0.16	0.16	0.01
Control Delay	28.0	22.0	7.4	27.1	16.2	5.3	22.3	20.2	3.3	24.3	22.9	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.0	22.0	7.4	27.1	16.2	5.3	22.3	20.2	3.3	24.3	22.9	0.0
Queue Length 50th (ft)	2	29	0	17	27	0	35	35	0	15	15	0
Queue Length 95th (ft)	14	64	51	53	74	26	86	72	15	50	41	0
Internal Link Dist (ft)		331			596			432			263	
Turn Bay Length (ft)	180		180	130		85	180		180	180		160
Base Capacity (vph)	197	2892	1332	336	3015	1362	1201	2474	1204	1199	2504	1202
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.07	0.16	0.17	0.08	0.06	0.09	0.09	0.05	0.04	0.04	0.00

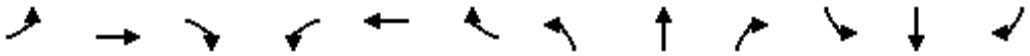
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	12	437	251	167	261	163	119	244	250	139	291	32
v/c Ratio	0.11	0.54	0.45	0.82	0.19	0.23	0.39	0.39	0.50	0.45	0.46	0.09
Control Delay	42.4	29.5	6.8	69.4	18.5	4.9	32.9	30.0	8.0	34.6	31.1	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.4	29.5	6.8	69.4	18.5	4.9	32.9	30.0	8.0	34.6	31.1	0.5
Queue Length 50th (ft)	5	93	0	77	39	0	53	54	0	62	65	0
Queue Length 95th (ft)	22	138	29	#195	81	26	104	90	30	119	105	0
Internal Link Dist (ft)		331			596			432			263	
Turn Bay Length (ft)	180		180	130		85	180		180	180		160
Base Capacity (vph)	119	2011	1007	203	2178	1037	807	1660	918	805	1681	837
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.22	0.25	0.82	0.12	0.16	0.15	0.15	0.27	0.17	0.17	0.04

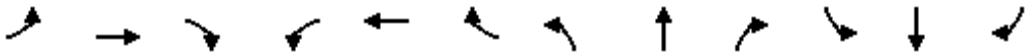
Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	7	206	216	88	252	82	121	246	59	50	104	3
v/c Ratio	0.05	0.33	0.47	0.34	0.19	0.12	0.36	0.36	0.15	0.19	0.19	0.01
Control Delay	29.3	24.0	8.0	29.5	15.5	5.0	24.8	22.4	3.4	26.1	24.8	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.3	24.0	8.0	29.5	15.5	5.0	24.8	22.4	3.4	26.1	24.8	0.0
Queue Length 50th (ft)	2	33	0	28	28	0	40	41	0	17	17	0
Queue Length 95th (ft)	14	68	52	76	76	27	94	79	15	52	43	0
Internal Link Dist (ft)		331			596			432			263	
Turn Bay Length (ft)	180		180	130		85	180		180	180		160
Base Capacity (vph)	162	2661	1243	276	2823	1281	1096	2254	1107	1094	2286	1104
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.08	0.17	0.32	0.09	0.06	0.11	0.11	0.05	0.05	0.05	0.00

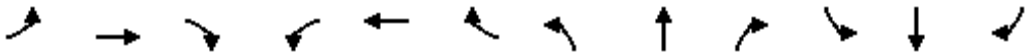
Intersection Summary



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	28	547	359	168	293	163	143	271	254	139	292	38
v/c Ratio	0.26	0.59	0.53	0.91	0.23	0.24	0.45	0.42	0.49	0.47	0.47	0.10
Control Delay	51.6	30.8	6.4	89.1	22.2	5.3	37.0	33.1	8.0	38.9	35.1	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.6	30.8	6.4	89.1	22.2	5.3	37.0	33.1	8.0	38.9	35.1	0.6
Queue Length 50th (ft)	14	127	1	86	58	0	71	67	0	70	73	0
Queue Length 95th (ft)	43	187	27	#231	97	26	135	109	30	134	120	0
Internal Link Dist (ft)		331			596			432			263	
Turn Bay Length (ft)	180		180	130		85	180		180	180		160
Base Capacity (vph)	109	1833	992	185	1985	959	736	1510	861	734	1533	772
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.30	0.36	0.91	0.15	0.17	0.19	0.18	0.30	0.19	0.19	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	10	257	299	91	341	82	193	320	61	51	106	8
v/c Ratio	0.08	0.40	0.57	0.40	0.27	0.13	0.50	0.41	0.14	0.23	0.22	0.03
Control Delay	34.8	27.1	8.3	35.9	18.2	5.4	27.3	23.2	3.1	30.9	29.0	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	34.8	27.1	8.3	35.9	18.2	5.4	27.3	23.2	3.1	30.9	29.0	0.1
Queue Length 50th (ft)	4	47	0	34	46	0	72	58	0	19	20	0
Queue Length 95th (ft)	21	94	63	91	115	29	151	106	15	61	50	0
Internal Link Dist (ft)		331			596			432			263	
Turn Bay Length (ft)	180		180	130		85	180		180	180		160
Base Capacity (vph)	136	2288	1129	231	2479	1136	919	1880	943	917	1919	940
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.11	0.26	0.39	0.14	0.07	0.21	0.17	0.06	0.06	0.06	0.01

Intersection Summary

EXISTING PLUS PROJECT CONDITIONS
PEAK HOUR VOLUME WARRANT
URBAN CONDITIONS

Peak Hour: AM

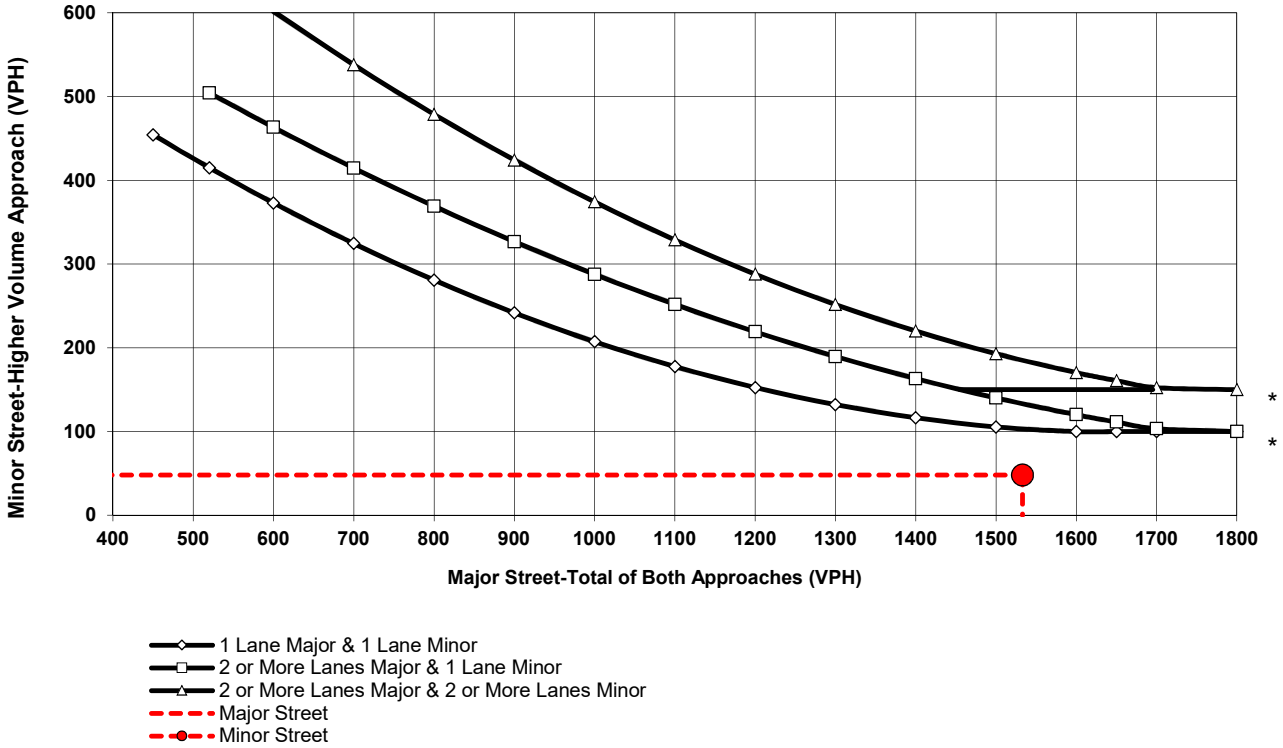
Major Street: Joiner Parkway

Minor Street: Moore Road

Total of Both Approaches (VPH):	1533	Higher Volume Approach (VPH):	48
Number of Approach Lanes:	2	Number of Approach Lanes:	1

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:
150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: California MUTCD 2014 Revision 1

EXISTING + APPROVED/PENDING PROJECTS + PROJECT CONDITIONS
PEAK HOUR VOLUME WARRANT
URBAN CONDITIONS

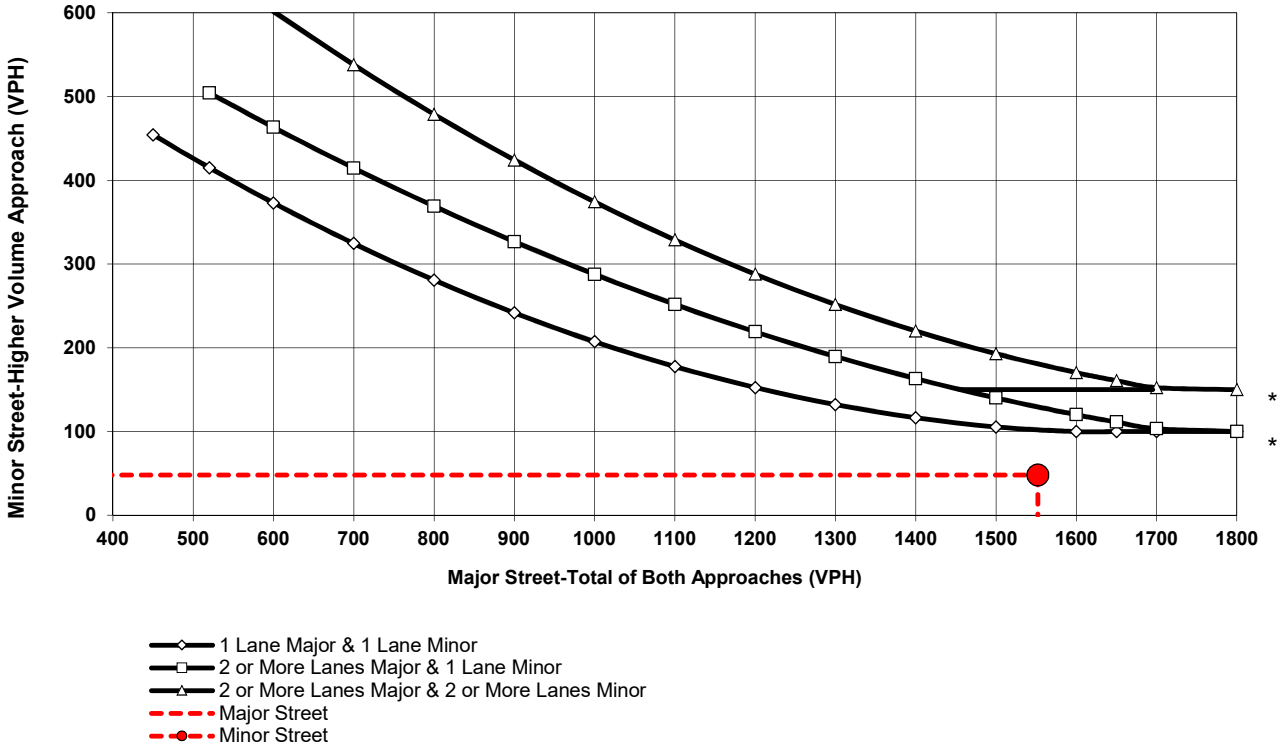
Peak Hour: AM

Major Street: Joiner Parkway **Minor Street:** Moore Road

Total of Both Approaches (VPH):	1552	Higher Volume Approach (VPH):	48
Number of Approach Lanes:	2	Number of Approach Lanes:	1

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:
150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: California MUTCD 2014 Revision 1

EXISTING + APPROVED/PENDING PROJECTS + PROJECT CONDITIONS
PEAK HOUR VOLUME WARRANT
URBAN CONDITIONS

Peak Hour: AM

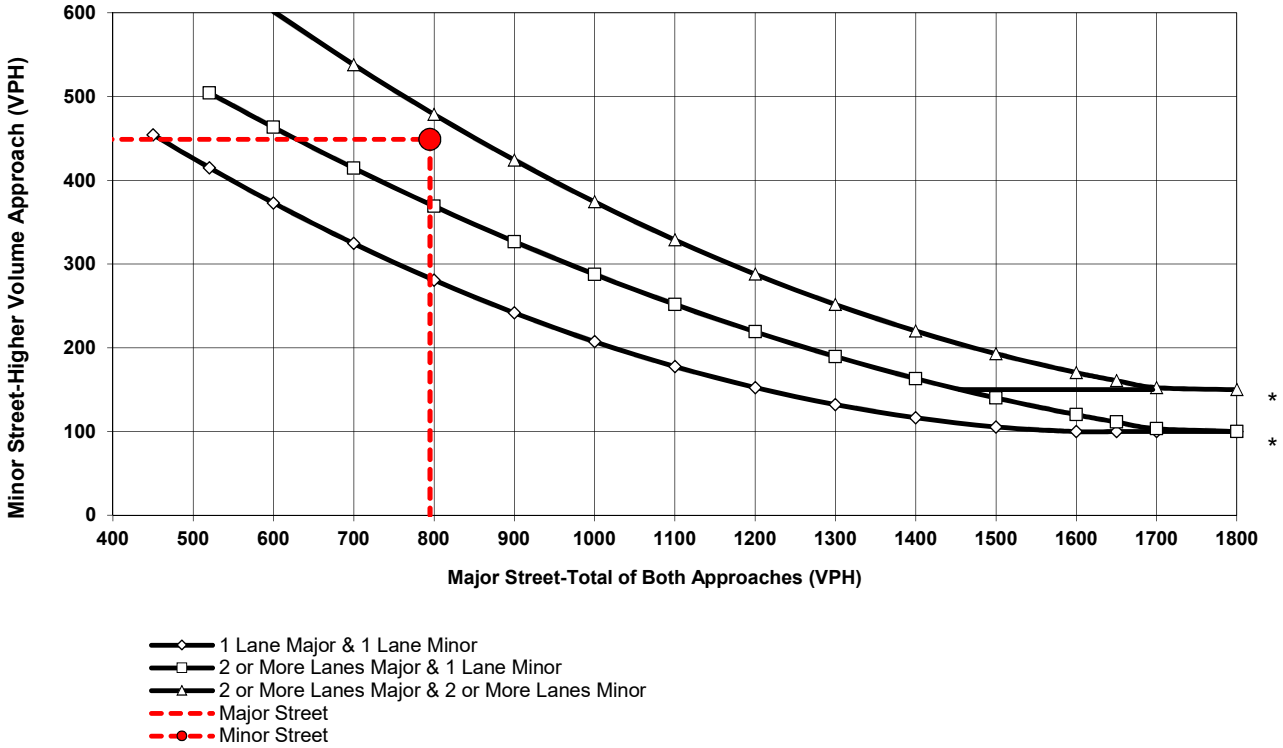
Major Street: Nicolaus Road

Minor Street: Nelson Lane

Total of Both Approaches (VPH):	795	Higher Volume Approach (VPH):	449
Number of Approach Lanes:	2	Number of Approach Lanes:	2

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:
150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: California MUTCD 2014 Revision 1

CUMULATIVE YEAR 2040 + PROJECT CONDITIONS
PEAK HOUR VOLUME WARRANT
URBAN CONDITIONS

Peak Hour: AM

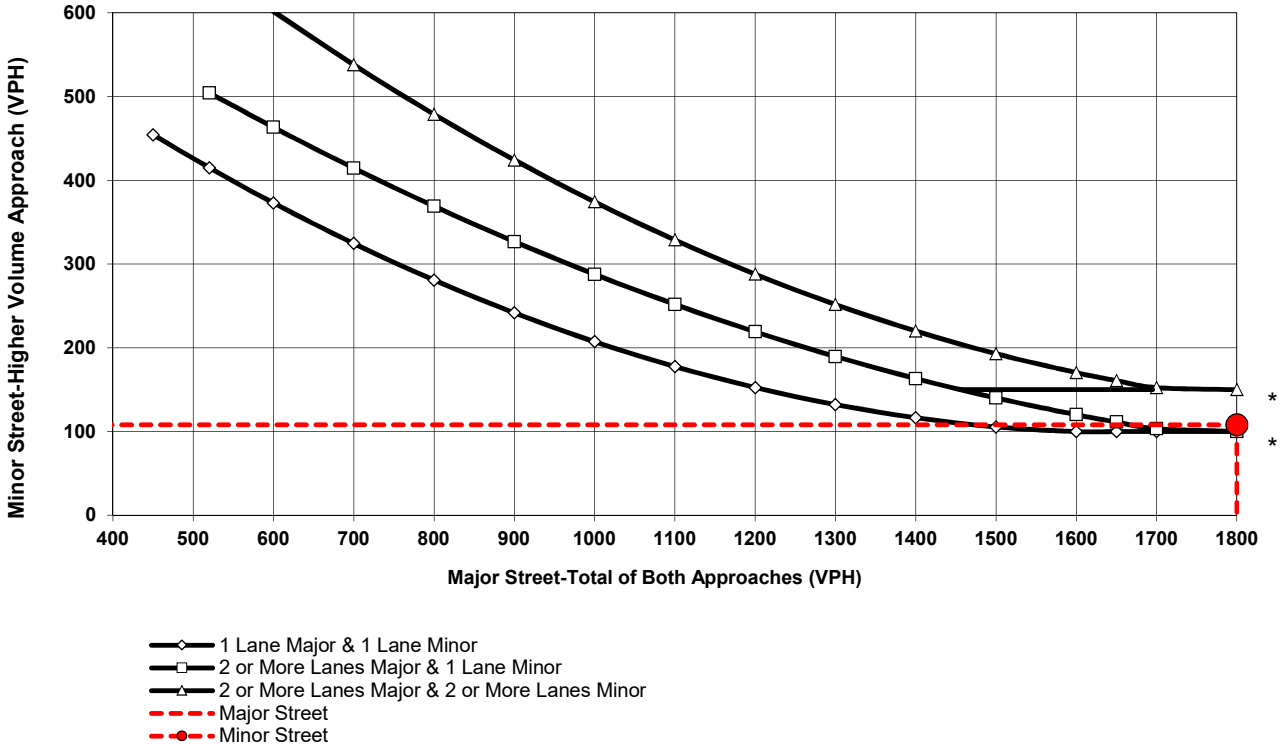
Major Street: Joiner Parkway

Minor Street: Moore Road

Total of Both Approaches (VPH):	2343	Higher Volume Approach (VPH):	108
Number of Approach Lanes:	2	Number of Approach Lanes:	1

SIGNAL WARRANT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:
150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: California MUTCD 2014 Revision 1

CUMULATIVE YEAR 2040 + PROJECT CONDITIONS
PEAK HOUR VOLUME WARRANT
URBAN CONDITIONS

Peak Hour: PM

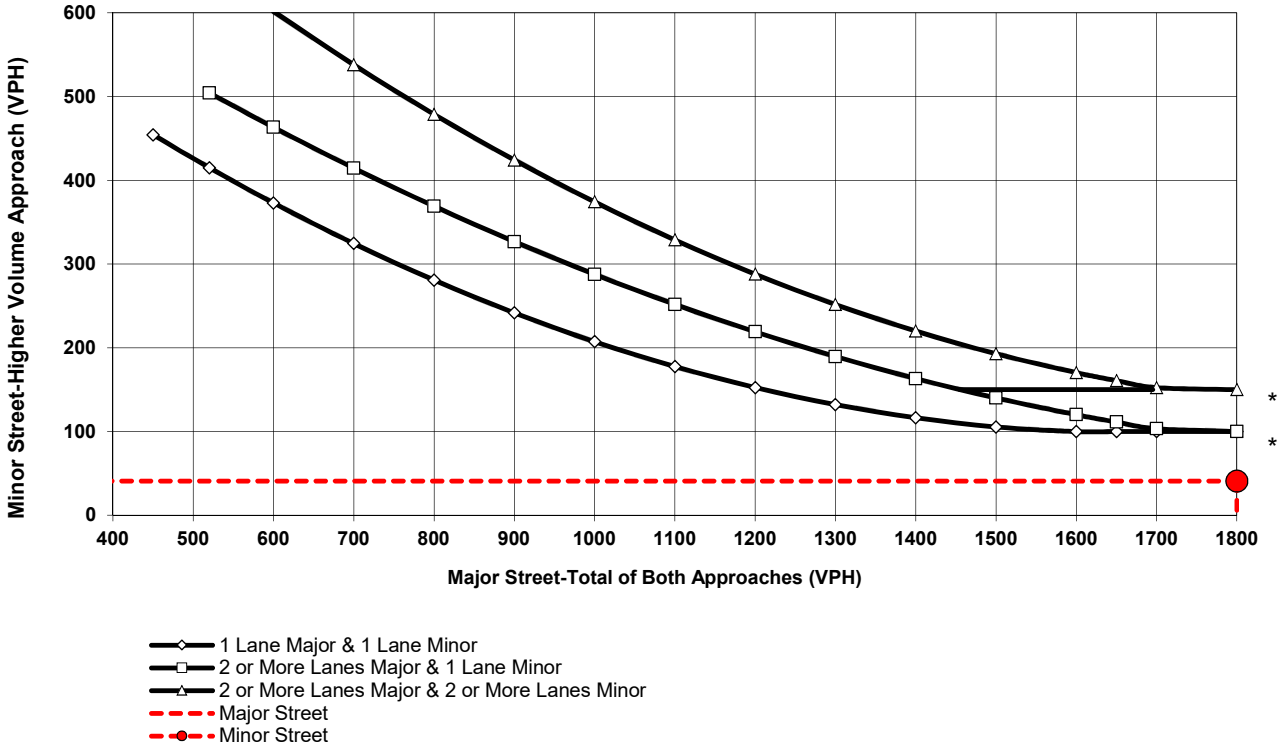
Major Street: Joiner Parkway

Minor Street: Moore Road

Total of Both Approaches (VPH):	2142	Higher Volume Approach (VPH):	41
Number of Approach Lanes:	2	Number of Approach Lanes:	1

SIGNAL WARRANT NOT SATISFIED

Figure 4C-3. Peak Hour Warrant (Urban)



* Note:
150 vph Applies as the Lower Threshold Volume for a Minor Street Approach with Two or More Lanes and 100 vph Applies as the Lower Threshold Volume for a Minor Street Approach with One Lane.

Source: California MUTCD 2014 Revision 1

2020

MTP/SCS

METROPOLITAN TRANSPORTATION PLAN
SUSTAINABLE COMMUNITIES STRATEGY

SACOG

FIGURE 3.10 **2016 Vehicle Miles Traveled per Capita**

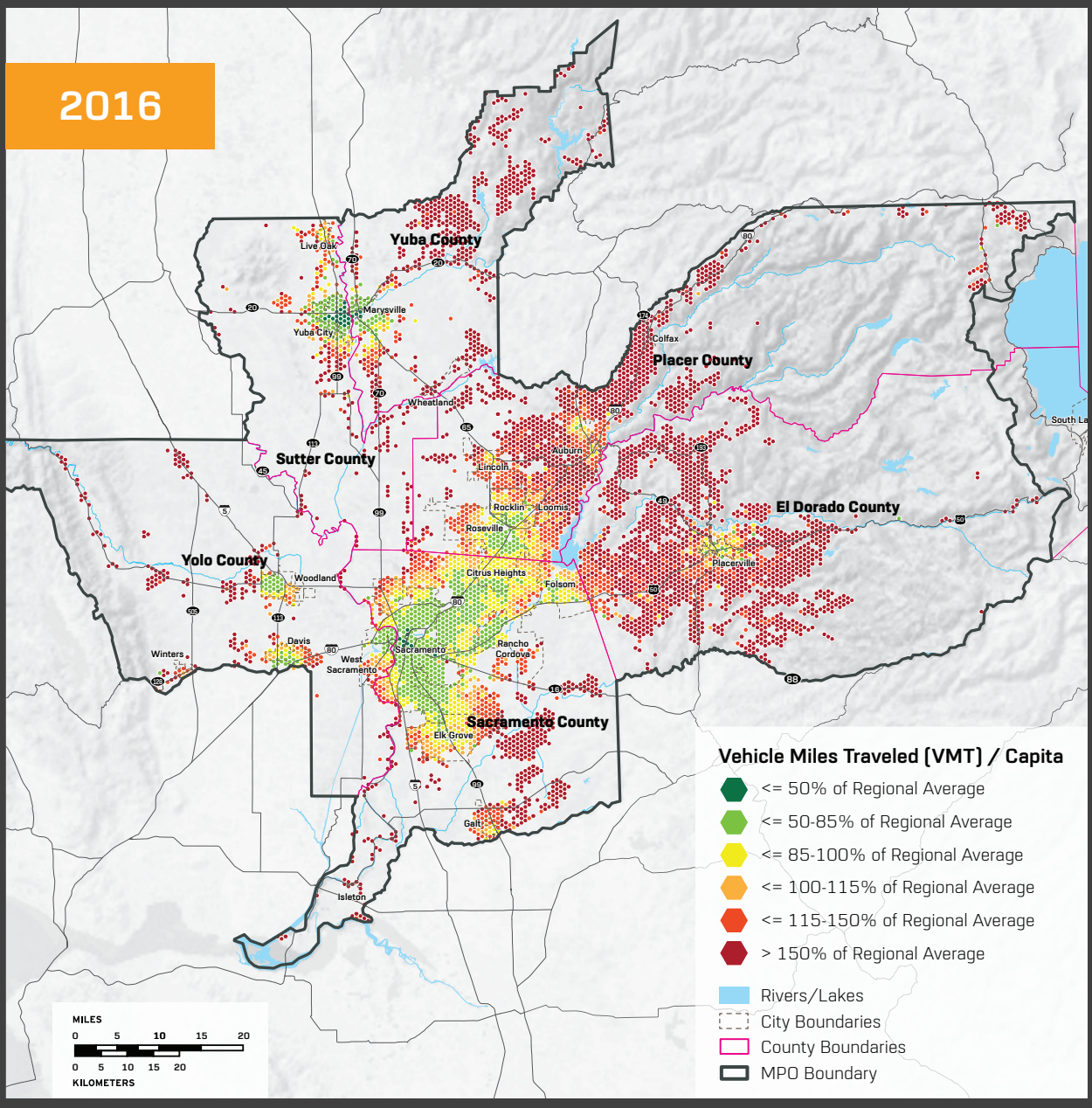


FIGURE 3.11 **2040 Vehicle Miles Traveled per Capita**